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FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 2009

HEARING

BEFORE THE

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

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

ON

OVERSIGHT ON THE MONETARY POLICY REPORT TO CONGRESS PURSUANT TO THE FULL EMPLOYMENT AND BALANCED GROWTH ACT OF 1978

FEBRUARY 24, 2009

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C O N T E N T S

TUESDAY, FEBRUARY 24, 2009

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TUESDAY, FEBRUARY 24, 2009

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

The Committee met at 10:11 a.m., in room SH–216, Hart Senate Office Building, Senator Christopher J. Dodd (Chairman of the Committee) presiding.

OPENING STATEMENT OF CHAIRMAN CHRISTOPHER J. DODD

Chairman DODD. Mr. Chairman, welcome. I hope that was instructive for you, Mr. Chairman.

[Laughter.]

Chairman DODD. I am sure the Federal Reserve operates in a similar pattern as we do here on the Banking Committee. Do you get as much luck as the Chairman as I just did on that?

Well, let me tell you how we will proceed here this morning, and we welcome you, Mr. Chairman, to the Committee. We have got a good turnout of our Members here for all the obvious reasons. When the Chairman of the Federal Reserve comes before our Committee, it is obviously of deep interest to the country, and we welcome you here this morning. I will take a few minutes for some opening comments, turn to Senator Shelby for any opening comments he may have, and then we will go right to you, Mr. Chairman, for your statement this morning, and we will try and follow the 5-minute rule so that everybody gets a chance to raise questions with you. And if we need a second round, we will do so. The record will stay open for a few days to submit questions, and any and all statements, documents, and other materials that my colleagues and others feel would be important to include in the record will be considered included at this moment, without objection.

Well, Chairman Bernanke, we welcome you to the Committee to present the Fed's semiannual monetary policy report to the U.S. Congress. We meet obviously at a very important moment for our country, with our Nation in the midst of the worst economic crisis in generations. Since the end of World War II, America's business cycles have oscillated between periods of growth and rising inflation, with the Fed raising interest rates to slow the economy, creating a recession, which then caused inflation to slow. The Fed then typically lowered interest rates, restarting the Nation's economy again. And while the Fed manages our recessions, our economic recoveries have typically been led by the housing and automobile sectors, which are highly sensitive to interest rates.

In the past, the typical American worker saved during the good times for rainy days, and when recession hit, they may have been laid off. But once the recession receded, they not only had some savings hopefully stored up, but also a reasonably good chance of getting their jobs back or finding new employment.

This time, however, Mr. Chairman, our housing and auto sectors are leading us not out of recession but into it in many ways. This time our recession is being caused not by rising interest rates but, rather, a massive credit crunch, resulting from years of reckless spending and, as the Banking Committee has uncovered during the 80 hearings and meetings in the last Congress, regulatory neglect as well. Such neglect allowed for and even encouraged a problem that began in the subprime mortgage market to spread throughout our Nation and the entire global financial system like a cancer.

This time, nearly half the jobs we have lost are not likely to come back, we are told, and that is why the American Recovery and Reinvestment Act is so essential. This time, the American people entered this recession with a negative personal savings rate and a false sense of confidence that we can count on the value of our homes and stocks to go up forever.

In fact, Mr. Chairman, I read with great interest that your own boyhood home recently went into foreclosure. I am saddened by that, as I am sure you are. Most recently, that home was owned by a soldier in the South Carolina Army National Guard, who reportedly volunteered to go on active duty during wartime in order to try and save his home and your former home.

Mr. Chairman, I do not suggest that you are to blame for any of this. Quite the contrary. I happen to commend your conduct of monetary policy during your tenure. Last year, you began to cut interest rates in the face of opposition from some regional bank presidencies at the Fed. You followed through on your commitment that you made, a meeting which I will never, ever forget in August of 2007, when you were in my office with Hank Paulson. And I will never forget the words you spoke to me that day when asked what we could about the problems, and you said at that time you would use all the tools at your disposal to attack the problems in the global financial market. And I commended you for those comments then, and your efforts, through aggressive and often innovative monetary policy.

You have worked creatively to adapt the Fed to handle the greatest financial market crisis in any of our lifetimes. If, as it is said, those who do not study history are doomed to repeat its mistakes, I am relieved we have one of the foremost scholars of the Great Depression at the helm of the Fed at this moment.

But for all the successes the Fed has had in carrying out its core mission—monetary policy—its regulation and consumer protection missions have been abject failures, in my view. And while many of these failures predate your arrival, they cannot be ignored.

When I am approached by a constituent in New London, Connecticut, for instance, who was outraged that some of these banks were allowed to grow into behemoths and given a clean bill of health, only to turn around months later on the verge of bankruptcy, asking for billions of dollars in taxpayer funding, I am reminded of the shortcomings in the Fed's regulation of bank holding companies.

When a family in Bridgeport, Connecticut, with their 5,000 foreclosures in that one city in my home State pending, who have lost everything ask me where the cops were on the beat, where were they to stop the abusive predatory mortgages from being written, I am reminded of the Fed's failure to implement the law Congress passed in 1994 to protect consumers and regulate mortgage lending practices.

When I learn a direct marketing business in greater Hartford has to close its doors, not because they missed a payment to their bank but because the bank is having capital problems, I cannot help but remember your predecessor's fondness for "regulatory competition," as he called it, for actually encouraging bank regulators to compete with one another to see who could provide the most effective regulation of our banks, but apparently at the least.

As a result, today countless banks are left with dangerously low cash reserves and a massive buildup of leverage, which have created a veritable boomerang of debt that has now snapped back, ensnaring countless honest small businesses in the process.

Finally, when I am asked how our Government could have allowed these toxic financial products to proliferate, products that served to dilute the appearance of risk rather than the risk itself, I remember the Federal Reserve's mantra of financial innovation and its leaders' repeated warnings against any additional Government regulation of any kind. I remember very, very clearly the mood in January of 2007 when I became Chairman of this Committee and the mantra—the mantra in those months was, "Deregulate, fast, before everyone runs to London."

Mr. Chairman, you have an extraordinarily difficult task ahead of you, not only to fulfill the Fed's primary mandate to conduct monetary policy to create maximum economic growth, full employment, and price stability, you do so in the face of an economy in deep recession, closing credit markets and unemployment rising at its fastest pace in a generation, having already cut interest rates to almost zero. You do so managing a balance sheet that has spiked to $2 trillion and now includes the remnants of an investment bank and the control of the world's largest insurance company. You do so having to conduct monetary policy in ways never tried before to unlock frozen credit markets, and you do so with an agency whose structure is virtually unchanged since its creation in 1913, when nearly a third of the Americans worked on farms, even as your mission has expanded exponentially from regulating the smallest banks in the country to the largest bank holding companies, from protecting consumers to being the lender of last resort for any company in the Nation.

Mr. Chairman, I would say your plate is full, to put it mildly. As this Committee works to modernize our Nation's financial regulatory structure, the question is whether we should be giving you a bigger plate or whether we should be putting the Fed on a diet. I do not question your track record on monetary policy, as I have said—the Fed's primary goal. But when you keep asking an agency to take on more and more and more, it becomes less and less and less likely that the agency will succeed at any of it. And at the same moment, in my view, nothing will be more important for the Federal Reserve than getting monetary policy right. It is absolutely paramount, and I know you know that as well.

So we welcome you to this Committee, and let me turn to Senator Shelby for any opening comments he may have.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you, Chairman Dodd.

Chairman Bernanke, we welcome you back to the Committee. You have spent a lot of time with us.

The economic and financial climate has deteriorated significantly since our last monetary policy hearing in July of 2008. In response to the Congress, the administration and the Federal Reserve have taken dramatic steps to navigate our way through this crisis. Since last summer, the Federal Reserve's balance sheet has more than doubled in size and presently stands at about $2 trillion. This expansion is a result of extraordinary actions taken by you and the members of the Board of Governors. Some of these actions were institution specific while others involved establishing new programs aimed at providing liquidity to the banking system and unfreezing credit markets.

Because it would take too much of our time this morning to describe each action and program in detail, I will be brief and only discuss a few of them. I would, however, strongly encourage Chairman Dodd to conduct hearings on all of these programs. The Federal Reserve has provided assistance to several large financial entities, according to their words, "in order to ensure financial market stability."

Acting along with Treasury and the FDIC, the Federal Reserve has intervened to rescue Citigroup and Bank of America by providing a backstop for large pools of their loans. The Federal Reserve has extended the safety net beyond the banking system by establishing two new lending facilities in connection with the bailout of AIG. These facilities are winding down AIG's holdings and mortgage-backed securities and credit default swap contracts. The Federal Reserve will continue to run a virtual alphabet soup of liquidity facilities through April 30, 2009, at the least.

In more recent months, the Federal Reserve announced initiatives aimed specifically at stabilizing our housing and securitization markets. The Fed has announced that it will purchase up to $100 billion in debt obligations of Fannie Mae, Freddie Mac, and Federal home loan banks, as well as up to $500 billion of mortgage-backed securities backed by Fannie Mae, Freddie Mac, and Ginnie Mae.

Most recently, with securitization markets for all types of consumer credit virtually frozen, the Federal Reserve has announced the establishment of the Term Asset-backed Securities Loan Facility, or TALF. Under the TALF, the Federal Reserve Bank of New York will lend up to $200 billion on a non-recourse basis to holders of certain AAA-rated asset-backed securities backed by newly and recently originated consumer and small business loans. The New York Fed will lend an amount equal to the market value of the ABS less a haircut. The U.S. Treasury Department under the

TARP will provide $20 billion of credit protection to the New York Fed in connection with the TALF.

Given the scope of the Federal Reserve's recent actions, it seems unlikely that any future student will conclude that today's Federal Reserve was too timid in the face of this crisis, Mr. Chairman. Whether the Federal Reserve pursued the most effective actions will be another question, and that will also be the case for the efforts of the administration and the Congress, too.

I hope that this Committee will use today's hearing to explore the effectiveness of the Federal Reserve's recent actions. One of the questions foremost in my mind, Mr. Chairman, is whether the Federal Reserve has thought about the long-term implications of its programs, its new programs.

Chairman Bernanke, you have already begun discuss the need for an exit strategy, some of which will happen as credit conditions return to normal. Some of the new programs, however, have longer maturities. This presents a problem not only to you but for us. How do you decide when and how to remove the Federal Reserve from the market? This uncertainty may require the Fed to provide more clarity on when and how it will terminate these programs. In addition, Mr. Chairman, the Federal Reserve is likely to take more credit risk through the TALF than is customarily the case of its lending operations.

This raises additional questions about transparency and what taxpayers should expect, and perhaps demand, from the Federal Reserve. Hopefully, Chairman Bernanke can begin to address these and other questions today.

Thank you, Chairman.

Chairman DODD. Thank you very much, Senator.

Let me just inform my colleagues, by the way, that there will be a vote at 11:15 on the D.C. voting rights bill, and, Senator Menendez, we will try and work it so we just continue with the hearing and go in tranches. We use the word "tranche" a lot these days, so we go in tranches to vote and continue the process of the Committee.

Mr. Chairman, we thank you again for being before us this morning, and we welcome your statement.

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

Mr. BERNANKE. Thank you. Chairman Dodd, Senator Shelby, and Members of the Committee, I appreciate the opportunity to discuss monetary policy and the economic situation and to present the Federal Reserve's monetary policy report to the Congress.

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

In contrast to the first half of last year, when robust foreign demand for U.S. goods and services provided some offset to weakness in domestic spending, exports slumped in the second half as our major trading partners fell into recession and some measures of global growth turned negative the first time in more than 25 years.

In all, U.S. real gross domestic product declined slightly in the third quarter of 2008, and that decline steepened considerably in the fourth quarter. The sharp contraction in economic activity appears to have continued into the first quarter of 2009.

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

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

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

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

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

Concerns about potential losses also undermined confidence in wholesale bank funding markets, leading to further increases in bank borrowing costs and a tightening of credit availability from banks.

Recognizing the critical importance of the provision of credit to businesses and households from financial institutions, the Congress passed the Emergency Economic Stabilization Act last fall. Under the authority granted by this act, the Treasury purchased preferred shares in a broad range of depository institutions to shore up their capital basis. During this period, the FDIC introduced its Temporary Liquidity Guarantee Program, which expanded its guarantees of bank liabilities to include selected senior unsecured obligations and all non-interest-bearing transactions deposits. The Treasury, in concert with the Federal Reserve and the FDIC, provided packages of loans and guarantees to ensure the continued stability of Citigroup and Bank of America, two of the world's largest banks.

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

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

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

In response to the heightened stress in bank funding markets, we increased the size of the Term Auction Facility to help ensure that banks could obtain the funds they need to provide credit to their customers, and we expanded our network of swap lines with foreign central banks to ease conditions in interconnected dollar funding markets at home and abroad. We also established new lending facilities to support the functioning of the commercial paper market and to ease pressures on money market mutual funds.

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

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

Conditions in the commercial paper market also have improved, even for lower-rated borrowers, and the sharp outflows from money market mutual funds seen in September have been replaced by modest inflows. Corporate risk spreads have declined somewhat from extraordinarily high levels, although these spreads remain elevated by historical standards.

Likely spurred by the improvements in pricing and liquidity, issuance of investment-grade corporate bonds has been strong, and speculative-grade issuance, which was near zero in the fourth quarter, has picked up somewhat. As I mentioned earlier, conforming fixed mortgage rates for households have declined. Nevertheless, despite these favorable developments, significant stresses persist in many markets. Notably, most securitization markets remain shut other than that for conforming mortgages, and some financial institutions remain under pressure.

In light of ongoing concerns over the health of financial institutions, the Secretary of the Treasury recently announced a plan for further actions. This plan includes four principal elements.

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

Second is a Private–Public Investment Fund in which private capital will be leveraged with public funds to purchase legacy assets from financial institutions.

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

And, fourth, the plan includes a range of measures to help prevent unnecessary foreclosures.

Together, over time, these initiatives should further stabilize our financial institutions and markets, improving confidence and helping to restore the flow of credit needed to promote economic recovery.

The Federal Reserve is committed to keeping the Congress and the public informed about its lending programs and balance sheet. For example, we continue to add to the information shown in the Fed's H41 statistical release, which provides weekly detail on the balance sheet and the amounts outstanding for each of the Federal Reserve's lending facilities. Extensive additional information about each of the Federal Reserve's lending programs is available online.

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

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

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

First, to improve public access to information concerning Fed policies and programs, we recently unveiled a new section of our

Web site that brings together in a systematic and comprehensive way the full range of information that the Federal Reserve already makes available, supplemented by explanations, discussions, and analyses. We will use that Web site as one means of keeping the public and the Congress fully informed about Fed programs.

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

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

The central tendency for the unemployment rate in the fourth quarter of 2009 was marked up to a range of eight-and-a-half percent to eight-and-three-quarters percent. Federal Reserve policymakers continue to expect moderate expansion next year, with a central tendency of two-and-a-half percent to three-and-a-quarter percent growth in real GDP and a decline in the unemployment rate by the end of 2010 to a central tendency of 8 percent to eight-and-a-quarter percent.

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

This outlook for economic activity is subject to considerable uncertainty, and I believe that, overall, the downside risks probably outweigh those on the upside. One risk arises from the global nature of the slowdown, which could adversely affect U.S. exports and financial conditions to an even greater degree than currently expected.

Another risk arises from the destructive power of the so-called adverse feedback loop in which weakening economic and financial conditions become mutually reinforcing. To break the adverse feedback loop, it is essential that we continue to complement fiscal stimulus with strong government action to stabilize financial institutions and financial markets.

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

To further increase the information conveyed by the quarterly projections, FOMC participants agreed in January to begin publishing their estimates of the values to which they expect key economic variables to converge over the longer run, say at a horizon of 5 to 6 years, under the assumption of appropriate monetary policy and in the absence of new shocks to the economy. The central tendency for the participants' estimates of a longer run growth rate of real GDP is two-and-a-half percent to two-and-three-quarters percent. As to the longer rate of unemployment, it is four-and-three-quarter percent to 5 percent. And as to the longer rate of inflation, it is one-and-three-quarter percent to 2 percent, with the majority of participants looking for 2 percent inflation in the long run.

These values are all notably different from the central tendencies of the projections for 2010 and 2011, reflecting the view of policymakers that a full recovery of the economy from the current recession is likely to take more than 2 or 3 years.

The longer-run projections for output growth and unemployment may be interpreted as the Committee's estimates of the rate of growth of output and the unemployment rate that are sustainable in the long run in the United States, taking into account important influences such as the trend in growth rates of productivity in the labor force, improvements in worker education and skills, the efficiency of the labor market at matching workers and jobs, government policies affecting technological development, or the labor market and other factors.

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

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

At the time of our last monetary policy report, the Federal Reserve was confronted with both high inflation and rising unemployment. Since that report, however, inflation pressures have receded dramatically while the rise in the unemployment rate has accelerated and financial conditions have deteriorated. In light of these developments, the Federal Reserve is committed to using all available tools to stimulate economic activity and to improve financial market functioning.

Toward that end, we have reduced the target for the Federal Funds Rate close to zero and we have established a number of programs to increase the flow of credit to key sectors of the economy.

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

Thank you, Mr. Chairman.

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

I am going to try to follow this 5-minute rule pretty carefully today with a lot of Members here so we get around the table as quickly as we can.

I am not a Pollyanna, nor are you, and so I don't want to overstate the case, but I found the paragraph, the second paragraph on page four, in reading your statement last evening, and the words on page seven, where you talk about the possibility of coming out of this recession in 2010, to be encouraging. I wanted, in the context of your responses today—because obviously, the risk is on the downside. Your statement is pretty stark and certainly a bleak picture, but there is some hope that I think it is important for us to transmit to the American people, as well, that we can and we will get out of this along the way. I think confidence and building that confidence, not false confidence but confidence based on tough decisions that we can make and should make, I think are important to communicate, as well.

Let me, if I can, raise two quick questions with you. I had a town hall meeting on Sunday in Manchester, Connecticut, at Manchester Community College, on higher education, how to navigate student loans. A couple raised a question after we had a presentation of what steps could be taken and the kind of information available for people and they got up and they said, look, we have put aside. We bought stock. We did things to prepare for our children's education and all of a sudden it is gone. Here we are with children age 15, 16, or 17 getting ready now to go on and the very nest egg we were building for them is no longer there.

In a sense, what I would like to ask you, given the fact that we have seen an 18 percent decline in the housing values, a 40 percent decline in the stock market over the last several years, can people who are in an age group—put aside education for a minute, the student loans—can people on the brink of retirement, in your view, can they retire? Are people going to be prohibited from retiring because of what they have lost in the value of their homes and in the stock market, 401(k), for instance?

Mr. BERNANKE. Well, Mr. Chairman, it is going to depend on individual circumstances. I am afraid it is the case that some people will find that their assets are not, at this point, adequate to allow them to retire as they had planned. Many people have suffered from losses in asset values. It is in part related to a correction relative to perhaps inflated asset values, particularly in the housing market, prior to this time. But we are also seeing very heavy risk aversion and liquidity premiums, that is, people are just very, very averse to risk at this point and that is also driving down asset prices.

So I understand that this is a very difficult situation for savers as it is for workers and homeowners, and all I can say is the Federal Reserve is committed to doing everything we can to restore economic stability. I do believe that once the economy begins to recover, we will see improvements in financial markets. In fact, I think those two things go very closely together.

Chairman DODD. So your statement or your response would be that, one, it would depend on individual cases, but that you believe that people will be able to retire with some security.

Mr. BERNANKE. Well, I certainly hope so. Certainly, Social Security and other programs, defined benefit plans, still remain. But I know from my own case and my friends and relatives that losses in defined contribution retirement funds have been significant, particularly in stock portfolios, and that is certainly going to affect people's plans in the short term. I am hopeful that we will see some improvement as the economy improves over the next year or two.

Chairman DODD. Did I sense a sigh of relief that we didn't privatize Social Security?

Mr. BERNANKE. Well, we never got that far on that proposal, Mr. Chairman.

Chairman DODD. Gratefully, would you agree?

Mr. BERNANKE. Well, it depends on the details. There were so many different plans being proposed.

Chairman DODD. Can you imagine if your Social Security were tied into the stock market today, what it would be like?

Mr. BERNANKE. Well, if they were all tied to the stock market, that would certainly be a problem, right.

Chairman DODD. Yes. Let me, if I can in the minute or so left here, I noted in my opening comments that housing and autos have historically led us out of recessions in many ways. I don't know if you agree or not, but it is ironic that housing, and to a lesser degree autos, have led us into this recession. Who is going to lead us out of this recession? What sector of the economy?

Mr. BERNANKE. Well, we have seen a very broad-based weakness. Housing is very central. At this point, the housing market has reversed the boom that we saw earlier in the decade. In fact, we are now at levels of construction and price declines that we have not seen for a very long time, if ever, and so I would anticipate some stabilization in the housing market going forward and eventually demographic trends, household formation, economic growth will begin to create recovery in the housing market.

Likewise, people are very reluctant right now to make commitments to consumer durables like automobiles. I think the current rates of auto sales are below what we will see once the economy begins to normalize. So I think those sectors will be part of the recovery. But in general, as we see confidence coming back, particularly consumer spending on discretionary items, those areas will begin to strengthen and we will see a broad-based recovery.

Chairman DODD. I should have mentioned in prefacing my question, I am, at least for my part, anyway, grateful to the administration for stepping up on the housing issue, the $75 billion that has been committed in the mitigation on foreclosures. I wish we had done that a year ago. It might have made the situation less dramatic than it is today, but I welcome that move, as well.

With that, let me turn to Senator Shelby, and look at that, right on the money here, so 5 minutes.

Senator SHELBY. I will try to do the same, Mr. Chairman. Thank you.

Adequacy of bank capital, I would like to get into that. Mr. Chairman, regulators from each part of the banking industry, including the Federal Reserve, have testified multiple times before the Banking Committee in the past few years that the banking industry was healthy and strong, yet we are now discussing taking very drastic measures to recapitalize the very same system. A lot of people wonder, where were the regulators in the past 5 or 6 years, including the Federal Reserve.

For example, in 2004, before the Banking Committee, FDIC Chairman Powell said, and I quote, "I am pleased to report"—that is to the Banking Committee—"that the FDIC insured institutions are as healthy and sound as they have ever been."

Additionally, in 2004, OTS Director James Gilleran stated before the Banking Committee, and I quote, "It is my pleasure to report on a thrift industry that is strong and growing in asset size. While we continue to maintain a watchful eye on interest rate risk in the thrift industry, profitability, asset quality, and other key measures of financial health are at or near record levels."

Also before this committee in 2004, Comptroller of the Currency John Hawke testified, "National banks continue to display strong earnings, improving credit quality following the recent recession and sound capital positions." He even said that banks have adopted better risk management techniques.

In 2005, your predecessor of the Fed, Chairman Alan Greenspan, said before the Banking Committee here, "Nationwide banking and widespread securitization of mortgages make financial intermediation less likely to be impaired than it was in some previous episodes of lethal house price correction."

In fact, as recently as 2008, Chairman of the FDIC Bair testified and said, and I quote, "The vast majority of institutions remain well capitalized, which will help them withstand the difficult challenges in 2008 while broader economic conditions improve."

Comptroller Dugan, Comptroller of the Currency, said here before the Banking Committee in 2008, and I will quote, "Despite these strains, the banking system remains fundamentally sound, in part because it entered this period of stress in a much stronger condition."

Finally, in 2008, Federal Reserve Vice Chairman Kohn testified before this Committee, and I quote, "The U.S. banking system is facing some challenges, but it remains in sound overall condition, having entered the period of recent financial turmoil with solid capital and strong earnings. The problems in the mortgage and housing markets have been highly unusual and clearly some banking organizations have failed to manage their exposures well and have suffered losses as a result. But in general, these losses should not threaten their viability."

Chairman Bernanke, are your capital measures and amounts of capital adequate? You are regulator of the largest banks. What does the present state of the banking industry tell us about our capital regime, and what does it mean if banks are adequately capitalized, yet somehow we need to spend billions, if not trillions, of dollars to stabilize the system?

Mr. BERNANKE. Well, that is a very long question, Senator Shelby.

Chairman DODD. You have a minute and 30 seconds to answer the question.

Mr. BERNANKE. The banks did have extensive capital coming into this crisis, but, of course, the crisis itself was extraordinary in its size. We could talk at some length about the failures of regulators, including the Federal Reserve, to prevent the credit crisis and prevent the losses that have been affected.

Going forward, we need to think about the Basel II regime, on which capital rules are now set. The general principles of the Basel II regime are that capital should be related to the risks of the assets which are being held.

But I think we have learned several things. First, that we need to be more aggressive in figuring out what the risks are and make sure that we are stress testing, making sure that we are being conservative in terms of assigning capital to individual kinds of assets. There certainly were some assets that were underweighted in terms of their risk characteristics when the capital was assigned. We need to look at a variety of other things, like off-balance sheet exposures and other things that were not adequately represented in the Basel II framework.

And there are other elements which the Basel Committee is looking at. Just to mention two, there probably were improvements in risk management and risk measurement over the period discussed, but they weren't adequate, obviously, and we need to do a lot more work for making sure that bank companies have enterprise-wide comprehensive risk management techniques. In addition, and this is something that the Basel Committee has been focused on, we need to make sure they have adequate liquidity, as well as capital.

So there is a lot to be done. You are absolutely right in pointing out the deficiencies and there is a lot of work that we regulators, the international community, has to do to strengthen that capital standard.

Senator SHELBY. Thank you. My time is up.

Chairman DODD. Thank you, Senator.

Senator Reed.

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

Let me associate myself with Chairman Dodd's remarks about in a crisis, you have been providing very helpful and thoughtful leadership. I also would associate myself with consumer protections and other supervisory activities which we will correct going forward, but thank you for your leadership in this crisis.

You point out repeatedly in your comments and the Open Market Committee statement that unemployment is a significant problem in the country. In fact, the Open Market Committee indicates that it could reach 9.2 percent in 2009 and 2010, even with an improving financial market and the credit markets. Is that the conclusion, for the record?

Mr. BERNANKE. The actual forecast was a little under—was under 9 percent.

Senator REED. Under 9 percent?

Mr. BERNANKE. But certainly within the range of error is 9 percent would be included.

Senator REED. One of the things that has been done in the stimulus package is extended unemployment benefits. Many economists indicate that that is a very wise investment, since for every dollar of benefits, you get roughly $1.60 in GDP growth. Is that your presumption or your conclusion also?

Mr. BERNANKE. I don't have a precise number. From a spending perspective, though, it is certainly true that unemployment benefits are much more likely to be spent than the average dollar because people don't have the income. They need those benefits.

Senator REED. Also, in the Open Market Committee report, they indicate that the labor market is very weak but the declines might be tempered a bit because of the availability of extended unemployment benefits, that, in fact, people are still in the market looking for jobs because they have the benefits to sustain them in that search. Again, I assume you share that conclusion?

Mr. BERNANKE. Well, unemployment benefits can have the effect of slightly raising the unemployment rate because people have a little bit more time to look. That is a negative in one sense—that the unemployment rate is a bit higher. On the other hand, it gives people more time and more resources so they can find a better job and not take the first thing necessarily that they see.

But unemployment benefits are obviously a very useful policy tool and have been used in every recession. In a situation like the present, where unemployment is very high, it is certainly understandable that Congress would want to provide some relief for the unemployed.

Senator REED. There has been some discussion that certain States would decline to participate fully. If that was not a few individual States but a significant number, that would effectively contradict the stimulus effect of the unemployment benefits, let alone not help people who need help, is that a——

Mr. BERNANKE. Which effect? I am sorry.

Senator REED. It would contradict the stimulus effects, that if a widespread declining of extended unemployment benefits by States refusing to participate in programs, if that was done on a——

Mr. BERNANKE. If unemployment benefits are not distributed to the unemployed, then obviously they won't spend them and it won't have that particular element of stimulus.

Senator REED. So if this was done on a wide basis, it would be counterproductive, not productive?

Mr. BERNANKE. It would reduce the stimulus effect of the package, yes.

Senator REED. Let me follow up briefly, because my time is short, on Senator Shelby's comments about capital standards. Yesterday, the regulators said, currently, the major U.S. banking institutions have capital in excess of the amount required to be considered well capitalized, which begs the question, what is the measure, Tier I capital, or tangible common equity, or any other measure? Can you help us understand?

Mr. BERNANKE. Well, the major banks all meet current regulatory capital standards, and well capitalized is a well defined regulatory term. The purpose of these assessments we are going to do going forward is to make sure that banks have enough capital not only to be well capitalized in what we expect to be the weak conditions that we will see in the next year, but even under conditions that are weaker than expected. And moreover, we want to make sure that they have good quality capital, that is that a sufficient portion of their capital is in common stock and not in other forms of capital.

So the purpose of these tests is to try to assess how much additional capital and what kind of capital they need so they will be able to lend and support the economy even in a situation worse than we currently expect.

Senator REED. Listening to your response to Senator Shelby, though, you seem to be skeptical about the adequacy of the current test, the current capital test, capital definitions. So even if we move through this very difficult moment, someone passes the stress test or gets help if they can't pass the stress test, there is real question in your mind about how regulators measures capital, what should be included, is that a fair assessment?

Mr. BERNANKE. We need to do work on that, certainly. For the moment now, we are trying to be conservative and trying to make sure that the banks will be able to fulfill their functions going forward.

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

Chairman DODD. Thank you, Senator, very much.

Senator Bunning.

Senator BUNNING. Thank you, Mr. Chairman.

Welcome, Chairman Bernanke. Outstanding Fed lending hit about $2.3 trillion in December. It has fallen to about $1.9 trillion, but you have pledged another $1 trillion in new lending. The total volume of loans made over the last months may be many times higher than that, but those of us outside the Fed do not have access to that information.

Your testimony before this Committee on TARP was that we needed transparency so the American people could understand. One of the causes of the recession is the American people don't believe you or anybody sitting here is telling them the truth. That is one of the problems. But you have not been open about the Fed's balance sheet. I think the American people have a right to know where that money is going. When are you going to tell the public who is borrowing from the Fed and what they have pledged as collateral? When are we going to get the transparency from the Fed?

Mr. BERNANKE. Well, Senator, as I mentioned in my testimony, we are going to go beyond what is best practice among the world's central banks and go a step further and make sure we provide all the information we can. We have just unveiled the new Web site, which has extensive information, including information about collateral, including descriptions and discussions of each of the programs, and——

Senator BUNNING. To whom the money is going?

Mr. BERNANKE. We are looking at all aspects. By the way, it is not all lending. Half-a-trillion is just Treasury securities we hold, so you could count that as lending to the Treasury, I guess. But about half the money we hold is short-term collateralized recourse loans to financial institutions which assures them of sufficient liquidity so that they will be stable and able to make loans and know that there is liquidity there when it is available.

Now, hundreds of years of central banking experience shows that if you publish the names of the banks that receive those loans, there is a risk that the market will say that there is something wrong with them, that there is a stigma of some kind, and they will refuse to come to the window in the first place and that causes the whole purpose of the program to break down.

So we can provide a great deal of information about the number of institutions. There are hundreds of them. They are well collateralized, short-term loans. They provide an important public purpose. But to provide the names of each borrower, and it would include most of the, or many of the banks in the United States, would defeat the important purpose of the policy.

Senator BUNNING. OK. I have been trying to get to the bottom of who signed off on the original TARP loans to Citigroup and the Bank of America for several months. Those loans were only supposed to go to healthy—that is in the legislation—healthy banks. Did you approve those initial loans, or who did if you didn't?

Mr. BERNANKE. Well, Senator, that would be the Treasury's approval, but as I recall, the programs had several components. There was a broad-based CPP, Capital Purchase Program, that was aimed at so-called healthy or viable banks, and that was widely available to any bank that wanted to apply for it. But there was also a special targeted program that was for banks that were in significant trouble and needed support to remain viable and healthy, and that particular program included, among other things, tougher conditions and tougher restrictions on executive compensation, for example. So that was a different component of the TARP.

Senator BUNNING. Well, we know all those things, but we don't know who approved the amount of money that went——

Mr. BERNANKE. The Treasury. The Treasury.

Senator BUNNING. The Treasury. You are telling me the Treasury?

Mr. BERNANKE. Yes.

Senator BUNNING. Do you believe the chaos that followed Lehman Brothers' bankruptcy was a result of the bankruptcy itself or the market realization that not everyone would be bailed out?

Mr. BERNANKE. Well, Senator, as I discussed in my testimony, the whole period from mid-September to early October was an intense financial crisis that was, in turn, triggered to some extent by a weakening economic condition both in the United States and around the world. To some extent, Lehman was a result of the broad financial crisis that was hitting a number of firms. You know, quite a number of large firms came under pressure during that period. And so in some sense, Lehman was a symptom as well as a cause. But I do think that the failure of Lehman was a major——

Senator BUNNING. But there was picking and choosing between winner and loser here. You picked Bear Stearns to save and you let Lehman Brothers go down the tubes.

Mr. BERNANKE. Two points, Senator. First, we did not choose to let Lehman fail. We had no option because we had no authority to stop it.

But second, I do believe that the failure of Lehman Brothers and its impact on the world financial market confirms that we made the right judgment with Bear Stearns, that the failure of a large international financial institution has enormously destructive effects on the financial system and consequently on——

Senator BUNNING. In other words, there are too many—there are some banks that are too big to fail?

Mr. BERNANKE. Absolutely.

Senator BUNNING. Thank you.

Chairman DODD. Thank you, Senator.

Senator Schumer.

Senator SCHUMER. Thank you, Mr. Chairman. Thank you, Mr. Chairman.

First question, it is clear one of the key problems over the past few years has been excessive risk taken by financial institutions. Some of that was by big depository institutions. Some was by smaller hedge funds, private equity funds.

Do you agree with me we need to more greatly supervise smaller players, such as hedge funds and private equity funds, particularly in terms of transparency and systemic risk which we find smaller and smaller places can cause? And do you agree more broadly we need to put in place stronger curbs on risk taking in particular on the amount of leverage that financial institutions, whether large or small, use in their investing strategies?

Mr. BERNANKE. Well, Senator, I think we need a more macroprudential oversight approach, which means that we need to be looking at the whole market, the whole financial system, not just each individual institution thought of as an individual entity. And that would require, I think, at least gathering information about a range of financial institutions and markets to understand what is developing in those markets.

Senator SCHUMER. Isn't it true that smaller institutions can cause systemic risk because there are counterparties, it is almost like a ping-pong ball bouncing from one place to another?

Mr. BERNANKE. Well, they can, but it is more likely if either there is a large number of them in the same boat——

Senator SCHUMER. In the same——

Mr. BERNANKE. For example, mortgage companies a couple years ago. Or, on the other hand, I think for a given institution, a much larger, more complex institution is more likely to——

Senator SCHUMER. But you do not rule out some regulation of the smaller——

Mr. BERNANKE. Well, we already have regulation. I think we should have an oversight of the whole system. But, Senator, I guess I would say that given the "too big to fail" problem, and agreeing with Senator Bunning that that exists, I was not saying that I in any way approved of it. I think it is a major issue, a major problem. One approach to dealing with "too big to fail" is to strengthen the oversight of those firms which may be considered too big to fail.

Senator SCHUMER. Well, that does not answer my question. I asked you about the small ones, and you are giving me an answer about the big ones.

Mr. BERNANKE. Well, you know, I think if you are going to prioritize resources, you have to look where the biggest risks are. And I think big risks are in the big firms. But you also have to look at the system as a whole, and that would involve looking perhaps not so much at the individual bank on the corner, but maybe at an industry group. It is like mortgage brokers, for example.

Senator SCHUMER. Yes. You know, one of them might not have caused the problem, but a whole bunch did.

Mr. BERNANKE. That is what I was trying to convey, yes.

Senator SCHUMER. The same thing with smaller institutions as well, and you do have to look at them—for instance, registration?

Mr. BERNANKE. No, I think that clearly one of the lessons is that uneven oversight and regulation of mortgage extension was a big issue.

Senator SCHUMER. And would you address the leverage question I asked?

Mr. BERNANKE. Well, leverage is the inverse of the capital ratio, and that boils down to making sure that our capital standards are strong and appropriately adjust for risk and the like. And as I said to Senator Shelby, we need to make sure going forward that our capital standard is——

Senator SCHUMER. There are a lot of institutions with no capital standards, but they were not banks and regulated by you, who used huge leverage, 30:1, 40:1, 50:1. So even the lowly mortgage became very risky at that level.

Mr. BERNANKE. Whose leverage are you referring to?

Senator SCHUMER. You know, when somebody would put $1 of capital and borrow $30 and invest $31, and yet they lose that $1 and they are kaput.

Mr. BERNANKE. I think you do need to make sure there is adequate capital in financial institutions, and when they extend loans—for example, mortgages—they need to do a good job of underwriting. And that would involve adequate downpayments and verification of income, for example.

Senator SCHUMER. But, again, I am saying there are institutions that use this leverage that you did not have any capital standards for because you were not statutorily required to do it.

Mr. BERNANKE. If I may——

Senator SCHUMER. How do we deal with the leverage issue for non-depository institutions is what I am asking.

Mr. BERNANKE. Well, I think more broadly——

Senator SCHUMER. If at all.

Mr. BERNANKE. More broadly, the Congress needs to think about how to create a more uniform regulatory oversight over the entire system and avoid existing gaps or uneven coverage. And that is a problem not just for leverage, but for all other aspects.

Senator SCHUMER. Right. Another question, a broader question. You, of course, studied the Great Depression. Many people say that we are in a different type of an economy because it is more interconnected; knowledge is more interconnected; financial relationships are more interconnected. It means in a certain sense things go down quicker because it does not take time to spread from one place to the other, whether it be countries, industries, or whatever. But then when things change, the psychology changes, you hit bottom, it goes up quicker.

Do you buy that? I am asking you, were you more a student of the V theory or the L theory in terms of where we are? We know we are going down now, and we have not hit bottom yet. But will we bounce up quickly, in all likelihood, or just stay flat?

Mr. BERNANKE. Senator, if there is one message I would like to leave you, it is that if we are going to have a strong recovery, it has to be on the back of a stabilization of the financial system, and it is basically black and white. If we stabilize the financial system adequately, we will get a reasonable recovery. It might take some time. If we do not stabilize the financial system, we are going to founder for some time.

Senator SCHUMER. Just one final comment. Saying that we will be back moving forward in 2010 is pretty much a V theory, not an L theory, if we stabilize the system.

Mr. BERNANKE. Well, the projections we gave are for the labor market still to be weak through 2010. We have seen in the last few recessions that the labor market has been slow to recover after the real economy, in terms of total output, has begun to recover.

Senator SCHUMER. Thank you, Mr. Chairman.

Chairman DODD. Thank you very much, Senator.

Senator Corker.

Senator CORKER. Thank you, Mr. Chairman, and, Chairman Bernanke, thank you for your service, and certainly that last comment, which I think many people have been saying. The cure is stabilizing the financial system, and I know we have done a lot of different things over the last 5 or 6 weeks. But that, in essence, is the cure.

I wonder if there is a vision or some kind of integrated discussion that is taking place between what you are doing and Treasury. I get the sense that we continue to sort of create programs, which I appreciate some of, but is there a vision or some kind of integrated sense of purpose that is being discussed and an outcome, I guess, that the two of you and others are arriving at?

Mr. BERNANKE. Yes, sir. The Treasury plan that Secretary Geithner proposed recently is a Treasury product. They are the lead on that. But it was developed in close consultation with the Federal Reserve and with the other regulatory agencies, like the OCC and the FDIC. And we are all going to work together on it, and we see it as having the major components.

If you look at historical examples of recoveries of financial systems, you have supervisory review to make sure that you understand what is on the balance sheets. You have capital being injected. You have taking bad assets off the balance sheet, the asset purchases. In our case, we are doing also the asset-backed securities program, foreclosure mitigation—all those things. So it is a multiple-component plan, and we are all working together on it to try to make it as effective as possible.

Senator CORKER. You have talked about the stress test, and I guess I am—you know, the markets roil because they do not know really know what that means exactly. Can you expand a little bit so maybe for the first time we would be educated as to what that stress test is going to be comprised of?

Mr. BERNANKE. Yes. There will be more information, I believe, very soon, but let me give you my view of that.

The assessment will look at the balance sheets and the capital needs of each of our 19 largest, $100 billion plus banks over the next 2-year horizon, under both a consensus forecast of where we think the economy is likely to be, based on private sector forecasts, and an alternative which is worse, that is, a more stressed situation. I should emphasize that the outcome of this test is not going to be, say, you pass, you fail. That is not the outcome. The outcome is going to be: Here is how much capital this institution needs to guarantee that it will have high-quality capital and to be well capitalized sufficient to be able to lend and to support the economy, even if the stress scenario arises.

So the purpose of the test is to try to ensure that even in a bad scenario, banks will have enough capital, including enough common equity, to meet their obligations to lend.

Senator CORKER. So what I would take from that is, in earlier comments about—I guess our concern still is about systemic risk and that there are organizations and institutions that are too large to fail. That is what you said earlier. And so, if I am to understand this right, the stress test would simultaneously in many cases, my assumption would be, show there is a need for additional large amounts of capital; and what you are saying is you are going to solve that problem—I think what you are saying is you have a plan to solve that problem simultaneously.

Mr. BERNANKE. That is correct.

Senator CORKER. And we know that the private markets right now are not funding that, so I think this is pretty educational. Could you lay out how exactly that is going to occur? And then what is the term that we use to describe that? You know, there has been a lot of words that have been thrown around in the last week or so, again, that have concerned the markets. So when you find there is stress and when we simultaneously agree that we are going to put public dollars into these institutions, what is it that we call that?

Mr. BERNANKE. Providing sufficient capital to make sure that the banks in private hands can continue to provide the lending and liquidity needed for the economy to recover.

If I might, Senator, if I may, the way this will be provided——

Senator CORKER. Well, let me ask you this: What is the role of the common shareholders at that point?

Mr. BERNANKE. The common shareholders will still have ownership shares and still be co-investors in the bank.

Senator CORKER. And they would be, I guess, hugely diluted under that scenario?

Mr. BERNANKE. Well, to the extent that there is more common put in, then depending on existing expectations and pricing, it may or may not affect the prices of the common. It depends on expectations where the price is today——

Senator CORKER. But I guess—and I know my time is up, and I think you know I have a great deal of respect and I appreciate the way the interaction has been. So, in essence, we have decided that there are a number of institutions in our country that are too large to fail. We are going to stress test them—and really, to me, it is not so much about capital. It is our ability to calculate risk in the past, and I think we are going to look at that risk in a much different way. And then simultaneous to that, as a Government entity, we are going to be providing capital to these institutions on a go-forward basis. And so the signal to us and to the markets—and I am just clarifying—is that there are institutions in this country that absolutely will not fail, and we will go to whatever lengths necessary with public sector dollars to ensure that that does not occur.

Mr. BERNANKE. Well, we are committed to ensuring the viability of all the major financial institutions. Fortunately, it does not come up in the sense that none of the major institutions are subject at this point to any kind of FIDICIA or prompt corrective action rules, so——

Senator CORKER. But they will be when these stress tests take place.

Mr. BERNANKE. No, I do not think so. Remember, we are looking not just at the main-line scenario; we are asking how much additional capital would be needed if you get this worse case, a stressed case. And it is important to add—Mr. Chairman, if I could have just a moment.

Chairman DODD. Please.

Mr. BERNANKE. That the way the capital we provided will be in the form of a convertible preferred stock, so this capital is available to the bank, but it does not have an ownership implication until such time as those losses which are forecast in the bad scenario actually occur. At that time, then the bank could convert the preferred to common to make sure it has sufficient common equity, and only at that time going forward, if those losses do occur, would the ownership implications become relevant.

Senator CORKER. Thank you, Mr. Chairman.

Chairman DODD. Thank you, Senator. Very important set of questions. Thank you, Mr. Chairman, for your responses.

Senator Menendez.

Senator MENENDEZ. Thank you, Mr. Chairman.

Thank you, Chairman Bernanke. Let me ask you, on page 7 of your testimony, you were talking about the economic outlook, and you said, "Another risk derives from the destructive power of the so-called adverse feedback loop in which weakening economic and financial conditions become mutually reinforcing." And to break that loop, it is—these are your words—"essential that we continue to complement fiscal stimulus with strong Government action to stabilize financial institutions and financial markets."

My question is: Is what is already being done sufficient? Are those the strong actions that you are talking about, or is there more to be done? And do those actions require greater capital infusions? And if so, there are some who suggest that some of the major banks in the country already are somewhat in a frozen state because they may continue to lose significant amounts, and they are frozen. And what we ultimately want to see them do, which is lend into the marketplace. And if that is going to take even greater infusions of capital from the Government, at what point are we not ultimately being the entity that is running those banks?

So give me a sense of what strong Government actions you are talking about here, because it is not about—I read your comments about it is not just simply about the financial institutions, it is about our economy as a whole that will depend upon whether or not these financial institutions are strengthened.

Mr. BERNANKE. Well, I think if the basic elements in the Treasury plan, supported by Federal Reserve actions of the type we discussed, our lending programs and so on, are effectively executed, patiently executed, that it will lead to stabilization of the financial system. We do not know exactly what the costs will be. It will be up to Treasury to make the determination. We will have to see how the economy evolves. We will have to see how the assessments evolve.

But I think we need to follow through and understand that it is going to take a bit of time and certainly some resources to make sure that these institutions and markets are functioning again, because we all know—and we can see this in many, many other historical examples—that if the financial system is dysfunctional, the economy cannot recover.

Senator MENENDEZ. But isn't it true that, largely speaking, at least at this point in time, these banks cannot raise the type of private capital that they need? And if they cannot raise the private capital that they need and all we are doing is a flow and infusion of capital, wouldn't we be better off in getting to where we are going to have to get anyhow, to do it sooner rather than later? I think it will be less costly. We will begin to see the recovery a lot sooner. But it seems to me that we have a reticence to come forth to the American people and say, look, this is the true picture of the nature of what we face, and here is what it is going to cost. And at the end of the day, let's quantify that and then let's deal with it so that if we are going to have to get there by dribs and drabs at the end in a torturous process that will be increasingly more difficult politically, increasingly more difficult for the economy, and increasingly less likely to produce the turnaround as quickly as we would like to see, even understanding it is going to take time, isn't that really what we should be doing right now?

Mr. BERNANKE. Well, Senator, I think it is very important that we do our very best to assess the costs and the need for capital as accurately as we can, recognizing that since we do not know exactly how the economy is going to evolve and how the housing market is going to evolve, you cannot put an exact number on the value of a mortgage asset, for example, but we can do the best we can.

I would like to address, I think, a perception that we are putting capital into the banks and we are letting them do whatever they want. That is absolutely not the case. First of all, the regulators are now very actively engaged, particularly with the more troubled institutions, working with them to restructure, to sell assets, to take whatever steps they need to be viable again and profitable again. We are not going to let them do what they want. We are going to be very, very vigilant and make sure that they are taking the tough decisions they need to get back to viability.

Beyond that, we have the TARP, which also has its own set of rules and oversight, and beyond that, if the Government has some ownership rights, that also has an effect.

Senator MENENDEZ. So are you telling the Committee that what you have already—you collectively, the Federal Reserve, the administration, Treasury—what you have announced, if implemented well, will be sufficient to meet our challenge? Or are there other chapters yet to be had?

Mr. BERNANKE. Well, nobody's record in forecasting this thing has been particularly good, but I think that this——

Senator MENENDEZ. We are agreed on that.

Mr. BERNANKE. We are agreed on that. I think, as I said earlier to Senator Corker, that this program has all the major components, including tough supervisory and Government oversight, of previous successful financial stabilization plans. If it is well executed and forcefully executed, it is our best hope of stabilizing the system.

Senator MENENDEZ. Thank you, Mr. Chairman.

Chairman DODD. Thank you very much, Senator.

Senator Johanns.

Senator JOHANNS. Thank you, Mr. Chairman.

Chairman Bernanke, yesterday I had the privilege actually of reading the farewell address from George Washington on the Senate floor. And it is hard to read; it is kind of a tough read, so I spent some time with it. And one of the things President Washington warned the very young Nation about was debt and the calamity that that can create for a nation.

I want to turn to page 23 of the document that we got today to talk to you a little bit about maybe a big-picture issue, and that is the national savings rate.

According to this document, in the third quarter of 2008, net national savings stood at a negative 1.75 percent of the GDP. But this is what I found most alarming by this report. It goes on to say, "National savings will likely remain low this year"—that is not very surprising—"in light of the weak economy and the recently enacted fiscal stimulus package. Nonetheless, if not boosted over the longer run, persistent low levels of national saving will be associated with low rates of capital formation, which is the engine that drives our economy, certainly in part, and heavy borrowing from abroad, which would limit the rise in the standard of living of U.S. residents over time and hamper the ability of the Nation to meet the retirement needs of an aging population."

I find those statements enormously concerning because what we are saying here is, with all that we are doing—and I agree with others. I think you are doing everything you can to try to get out in front of this problem. But all we are doing is borrowing money, borrowing money, TARP was financed with borrowed money, stimulus financed with borrowed money, national deficit will be $1 trillion or more this year, borrowed money, and it goes on and on and on.

Tell me how we deal with that, because if we don't, I think what this report says is our children will suffer, and this aging population—baby boomers I think is what you are referring to—we may not be able to deal with their retirement. So give me the big picture here.

Mr. BERNANKE. Well, Senator, you are absolutely right. Your point is very well taken. The short story is that for the last decade or so, Americans have been made wealthy by either their stockholdings if they had a 401(k) or by the value of their house. And if the value of your home goes up, you feel richer, but you do not save more because you feel richer. Your house is saving for you in some sense. And as a result, over that period, as asset prices were rising, Americans saved less and borrowed more from abroad.

Now, earlier Senator Dodd asked me about asset values. As those asset values have come down, that means there has been a very painful adjustment. People, in order to rebuild their balance sheets, are going to have to save again. And in a way, that is good because we will turn over the next few years to a higher rate of national saving, less foreign borrowing, lower current account deficits, and that is a desirable place to go.

The transition, though, is very difficult because as people switch from being high-spending to trying to save, the decline in consumer spending has contributed to this great weakness in the economy, and we have a situation where instead of saving more, we are just getting a deeper and deeper recession.

So we have currently an emergency situation that includes both a very severe recession and a significant financial crisis, which must be addressed or else we will not have the kind of growth we need to support saving and investment going forward.

So we need to address that in the short term, but as we do that, we also have to keep a very close eye on the need to reestablish fiscal discipline, to increase Americans' savings, to reduce our current account deficit. And in doing all those things, over time we will be able better to address those issues that you referred to. But we are in the middle of a transition where, frankly, if we were to try to balance the Federal budget this year, it would be very contractionary and probably counterproductive.

Chairman DODD. Thank you, Senator, very much.

Senator Bayh, you get a chance here. You were at the end of the line.

Senator BAYH. Sneaking in under the wire.

Chairman DODD. Sneaking in under the wire. Have you voted yet, Senator?

Senator BAYH. I have not.

Chairman DODD. I will let you decide whether or not you——

Senator BAYH. I will, quickly.

Mr. Chairman, my first question involves the importance of confidence in resolving the crisis that we face. It seems to me that an understanding of human psychology on both the individual and the group level is at least as important as quantitative analysis in getting this resolved. We have taken extraordinary action—you at the Fed, the Treasury, the Congress. We have tried to stabilize our financial institutions. We have moved to prop up consumer demand. We are trying to mitigate the adverse effects of home foreclosure. And yet confidence has not improved. As a matter of fact, very often the markets sell off the day that these programs are announced, suggesting that the public either does not have confidence in the solution or in our ability to implement the solution correctly.

What will it take, in your opinion, to improve confidence and to improve the psychology that will be necessary to ultimately heading in a better direction?

Mr. BERNANKE. Well, I think ultimately the words are not enough to inspire confidence. You have to start to show results. So I think we have to have a bit of patience to see fiscal stimulus, to see the financial program.

Senator BAYH. It is a bit of a dilemma, isn't it? The results are somewhat dependent on confidence, which, of course, is affected by results.

Mr. BERNANKE. That is right. But, nevertheless, I think as, say, the Federal Reserve's programs begin to open up some of our key credit markets—and we have—to give you an example, we have seen significant improvement in the commercial paper market, money market mutual funds, and some other areas where we have intervened. And those improvements have been sustained despite the general deterioration in the stock market and some other financial markets.

So I think enough concerted effort and finding our way forward, history will perhaps put this whole episode into some context. It has been a very, very difficult episode. Obviously, many people have failed to anticipate all the twists and turns of this crisis. But it is an extraordinarily complex crisis, and being able to solve it immediately is really beyond human capacity.

As we move forward, as we show commitment to solving the problem, as we take credible steps in that direction and we begin to see progress, I think the confidence will come back. And I agree with you 100 percent that a lot of this is confidence.

Senator BAYH. So perhaps there is a lag between material improvement, albeit modest and gradual, and the popular appreciation of that improvement. There is some lag there before people have comprehended and, therefore, confidence——

Mr. BERNANKE. There well could be, yes.

Senator BAYH. My second question involves the popular anger at the crisis that we face and some of the steps that have been proposed to deal with it, and it really gets to the dilemma between balancing the risk of contagion versus the risk of moral hazard. It has been said by some that some of the steps that we have taken to contain the damage in the aggregate have had the unintended consequence of absolving some individuals of mistakes that they have made in their individual capacity. This has been expressed by commentators on the financial shows and that sort of thing, and one this last week asked a question or basically made the statement: "Our policies are rewarding bad behavior."

A lot of people feel that way who behaved in prudent fashion, who did not extend themselves. They were not working on Wall Street taking these enormous risks.

What would you say to them when we seem to absolve the people who created the crisis from bearing its full effects?

Mr. BERNANKE. First of all, Senator, I hear that all the time, and I fully understand the sentiment. A lot of this goes against American values of self-reliance and responsibility. And I am very, very aware of that.

I think I would give the following example: If your neighbor smokes in bed and sets his house afire, and you live in a neighborhood of closely packed wooden houses, you could punish him very severely by refusing to send the fire department, and then he would probably learn his lesson about smoking in bed. But, unfortunately, in the process you would have the entire neighborhood burning down.

I think the smart way to deal with a situation like that is to put out the fire, save him from the consequences of his own action, but then going forward, enact penalties and set tougher rules about smoking in bed or the fire code or whatever it may be.

So as we talk about these financial actions to the public, we have to say this is really a two-legged program. On the one hand, we are doing what we have to do now to prevent the economy from going into a deeper, protracted downturn associated with the financial crisis; but we have to commit, as part of this going forward, that we will do a substantial reform of financial regulation, that we will take all the steps necessary to make sure that this does not happen again and that the same situations do not arise in the future.

Senator BAYH. Thank you, Chairman. I am going to need to run to vote. I have got 15 seconds left. The question I was going to ask, which I think Chairman Shelby raised in the course of his comments, it is going to take the wisdom of a Solomon to know when to change course on our current policies dealing with the crisis that we face, dealing with the longer-run risk of inflation and so forth. I would be interested at some point in knowing what sort of metrics you will be looking at to assess when a recovery has achieved enough momentum to begin to then shift the policy. But a question for another day, and that would be a happy state of affairs to face.

Mr. BERNANKE. We have put extensive work into that, Senator.

Senator BAYH. Thank you, Mr. Chairman.

Senator REED [presiding]. Senator Tester.

Senator TESTER. Thank you, Senator Reed.

Thank you, Mr. Chairman, for being here. You have mentioned several times in your testimony and through some of the questions that you have answered about the global nature of this economic downturn. Could you give me any insight into what the European banks' status are? Is it similar, worse shape, and are all the skeletons out of their closets?

Mr. BERNANKE. Well, the stories that relate this purely to the United States have to account for the fact that the entire industrial world has suffered from this credit crisis and many banks in Europe and in the U.K. have taken very significant losses. The U.K., Irish, and Germans have been involved in some interventions. So I think it depends really country by country. I don't want to generalize and create any misperceptions.

But it is obvious that there have been very significant problems in the European banking system, and they face some issues which we may not face to the same degree. For example, there has been recent concern about Eastern Europe and the exposure they may have in that direction. So they are contending with the same set of issues that we are here.

Senator TESTER. OK. And you made the statement several times that the only way we are going to get out of this is if our financial markets are healthy, to pull us out of this. What impact does Europe, and as far as that goes, the Pacific Rim have if they don't do anything or do far less than they need to do on our economy?

Mr. BERNANKE. Well, it will have impacts because of the interconnected nature of our global financial system and the interconnected nature of our global economy, as we depend on each other for trade and other terms.

Senator TESTER. Right.

Mr. BERNANKE. The Europeans have been somewhat more reluctant to engage in fiscal expansion than we have, although they have taken steps in that direction. The Germans, for example, after initially being disinclined, actually took a fairly significant step. But they are working also along similar lines as the United States to deal with bad assets, to deal with capitalization, and they are addressing many of the same situations.

Senator TESTER. Do we have the ability to get out of this financial situation if they don't make proper investments financially if they are in, regardless of what we do at this end?

Mr. BERNANKE. I think we can improve our situation. I will give you an example——

Senator TESTER. But can we get out of the situation?

Mr. BERNANKE. I think a complete recovery would require a global recovery and that would require——

Senator TESTER. Have you gotten any assurances from the banking markets that they are inclined to do that?

Mr. BERNANKE. Senator, they are very aware of the situation. I talk frequently with Europeans. We were just at the G-7, the Secretary and I, in Rome and we discussed all these issues——

Senator TESTER. Right.

Mr. BERNANKE. ——and they are quite interested in addressing them.

Senator TESTER. Injection of capital is something that we have been talking about now for 6 months or so. Can you give me any sort of prediction, under the assumption that Europe does what they need to do and the Asian markets do what they need to do, can you give me any sort of prediction on how much money it will cost, how much capital do we need to inject into the marketplace?

Mr. BERNANKE. Well, we have already done quite a bit.

Senator TESTER. Yes.

Mr. BERNANKE. We have done quite a bit. Honestly, Senator, I think it is not up to me to make that judgment. That is going to depend on the economy, on the scenarios, and on the amount of margin of safety that the decision is made to address. Ultimately the Treasury and the administration have to make that proposal.

Senator TESTER. OK. I would sure like your input on that, if that is possible. I mean, we are going to be talking about some—I mean, we have already directed some serious dollars and it is, from everything I am hearing, it is going to require some more. The worst thing that could happen is if we don't get cooperation from Europe, from Asia, we end up pumping a bunch of money in and then all it does is increase the debt. We don't get out of the situation we are in.

Mr. BERNANKE. I hear what you are saying.

Senator TESTER. OK. The other issue revolves around, just very quickly, the dollars that came from TARP, and Senator Bunning talked about for a little bit, you know, who is getting the money and where is it going to. Somebody pointed out to me in the banking industry that the banks aren't loaning this money out because they are using it to buy Treasury notes with, which is an interesting concept. Could you give me any insight into that? Is that what is occurring? Is that what they are doing with the TARP dollars?

Mr. BERNANKE. Senator, the direct impact of the TARP dollars is to expand the capital bases of these companies which allows them to do all the activities they do, including lending——

Senator TESTER. But the lending hasn't freed up, from everybody I have talked to.

Mr. BERNANKE. Well, a big part of that is the non-bank component, is the securitized markets, for example, which is what the Fed is working on right now. Let me just say that the Treasury's new proposal does involve more concentrated attempts to get banks to document how much they are lending, how much they would have lent without the TARP, and so on. It is a difficult problem, though, because you don't know what they would have done in the absence of the TARP money.

Senator TESTER. OK. Thank you very much, Mr. Chairman.

Senator REED. Senator Martinez.

Senator MARTINEZ. Thank you very much, Senator.

Mr. Chairman, thank you for being with us and thank you for the terrific work that you are doing in very difficult stress circumstances.

I wanted to ask about the housing market. You indicated that one of the things, and I agree with you, that we need in order to stabilize the entire situation in our economy is to stabilize the housing market and that it will help—I am not trying to paraphrase what you said, I may have said it wrong, but in any way, that it may help in the recovery.

What additional steps can we undertake, in your estimation, that would help stabilize the housing market? I continue to be concerned by the rate of foreclosures. I welcome some of the ideas that the administration put forth last week. I continue to be concerned in places like Florida about a tremendous inventory of unsold homes that obviously needs to be drawn down before there will be vitality in the marketplace again. And obviously the same issues of credit continue to creep into the problem, particularly if we look at nonconforming loans and things of that nature. Any additional steps you think could or should be taken?

Mr. BERNANKE. Well, the two principal steps that are being taken, first, is the set of measures to try to reduce preventable foreclosures, which will reduce the supply of homes in the market and would be helpful to prices and construction.

The other step has been the Federal Reserve's concerted efforts to lower mortgage rates by the purchase of GSE securities. We have had some success in that direction. So house prices are down quite a bit, obviously, and interest rates are pretty low. So affordability is not the issue it was a few years ago.

So at this point, I would recommend focusing broadly on the economy and the financial system as a whole. People are not likely to buy houses when they are feeling very unsure about their jobs, for example. So the more we can do to strengthen the overall economy and stabilize the financial system, and along Senator Bayh's line, restore confidence, I think that will be the best thing to get the housing market going again.

Senator MARTINEZ. In December, the Federal Reserve reduced the fund rates further, and then obviously you noted on February 18 that widening credit spreads, more restrictive lending standards, and credit market dysfunction have all worked against the monetary easing and have led to tighter financial conditions overall. What other tools is the Fed employing to ease credit conditions and to support the broader economy?

Mr. BERNANKE. Senator, we have gone beyond interest rate policy to try to find new ways to ease credit markets, and I have talked about in some recent speeches and testimonies three general types of things we have done.

The first is to make sure that there is plenty of liquidity available for banks and other financial institutions, not only in the United States, but around the world in dollars. So we have been lending to banks to make sure they have enough cash liquidity so they won't be afraid of loss of liquidity as they plan to make commitments on the credit side.

Second, as I already indicated, we have been involved in purchasing GSE securities, which has brought down mortgage rates.

The third group of activities encompasses a number of different programs which have been focused primarily on getting non-bank credit markets functioning again. We were involved, for example, in doing some backstop lending to try to stabilize the money market mutual funds and also to stabilize the commercial paper market, and we have had some success in bringing down commercial paper rates and commercial paper spreads and giving firms access to longer-term money than they were getting in September and October.

Likewise, one of our biggest programs is just commencing now, which is an attempt to provide backstop support to the asset-backed securities market. That market is one where the financing for many of our most popular types of credit—auto loans, student loans, small business loans, credit card loans, all those things—have historically been financed through the asset-backed securities market. Those markets are largely shut down at this point. Through our TALF facility which is about to open, we, working with the Treasury, expect to get those markets going again and help provide new credit availability in those areas.

So it is not just the banks. If we are going to get the credit system going again, we need to address the non-bank credit sources and we are aggressively looking at all the possible ways we can to do that.

Senator MARTINEZ. Speaking about the TALF and the credit facilities that have been opened, at some point, the concern shifts to what happens after a recovery begins to unfold in anticipation of perhaps in the latter part of this year, with some good fortune, and perhaps in the beginning of the next if not, that we will be in the recovery mode. At that point, how long will it take to phaseout those types of facilities like the TALF and what factors will determine the timing and the process by which you will do that?

Mr. BERNANKE. Senator, that is a very important question, the exit strategy. We have been spending a lot of time working on that. In order to be able to start raising interest rates again and going back to more normal monetary policy, we are going to have to bring down the size of our balance sheet. Fortunately, a very large part of our balance sheet, well over half of our lending, is in very short-term types of loans, 3 months or even in some cases just a few days, so as the need for that credit weakens, is reduced by the strengthening economy, those programs will naturally tend to contract and the balance sheet will naturally tend to decline.

So a lot of it will just happen as the economy strengthens, as the need for that credit dissipates, and in particular, since for many of the program we have created, the terms are somewhat more punitive than would be normal under normal circumstances, as the markets begin to normalize, then borrowers will tend to move away from the Fed facilities and into the private sector facilities. So we think that those markets, those programs will tend to contract on their own to some extent and we can always, of course, contract them ourselves as we determine that we need to reduce the size of the balance sheet.

We have a number of other tools, and I don't want to take all your time, Senator, but just to give one example. In the EESA bill last October, the Congress gave the Fed the ability to pay interest on excess reserves, and our ability to do that will help us raise interest rates at the time it is needed even if the balance sheet is not all the way back down to where it was when we started this process. So we are very, very focused on making sure that we are able to normalize monetary conditions at the appropriate time. At the same time, we also don't want to give up opportunities where we think we can help the markets function better and provide some support for this economy.

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

Senator REED. Senator Kohl.

Senator KOHL. Thank you very much.

Chairman Bernanke, I am sure you have given this some thought and perhaps discussed it with many people down at the Federal Reserve. How much money do you think we will have to invest in our banks in order to make them stable and to resume their normal functions?

Mr. BERNANKE. Well, Senator, as I said to Senator Tester, we have already put in quite a bit. How much more we will have to do depends on the state of the banks. It depends on how the economy evolves. And it depends on the margin of safety we want to have. So I am afraid I can't give you a number. I am going to have to leave that to the Treasury and administration. They are going to have to come up with a view on what is needed. But obviously, I think we have already done quite a bit and it has been helpful. It has stabilized the system to some extent.

Senator KOHL. One of the assessments that you make with respect to our recovery is based on the stimulus. How would you assess the stimulus in terms of its size, its priorities, the amount of money we are spending quickly? If you would have written it yourself, what are some of the things you might have done differently?

Mr. BERNANKE. Well, Senator, last October, in front of the House Budget Committee, I did indicate that given the weakness of the economy, given that the Federal Reserve was running out of space to lower interest rates, it was appropriate for Congress to consider a significant fiscal program. But I have deferred to Congress's prerogatives and not involved myself in adjudicating these elements which are obviously contentious.

There is a tradeoff between the size of the program, the amount of debt that is incurred in the program, the efficiency of the spending. So it really depends a lot on Congress's judgments about how effective the spending will be, how quickly it can be put out. So I would prefer not to involve myself in that other than to say that I did agree and acknowledge that some substantial fiscal action was appropriate in helping get the economy moving again in the current environment.

Senator KOHL. So you, in a general way, might have supported the stimulus plan that we finally passed?

Mr. BERNANKE. I supported a substantial fiscal program, but I recognize the legitimate disputes and controversies about the size and the composition and the like and I, frankly, don't feel that it is my place in my particular role to try to intervene on that.

Senator KOHL. Sure. Chairman Bernanke, one of the biggest reasons that we got into such a difficult situation obviously is the home buyers, the mortgage mess, and the loans that they were receiving that they could not afford from unsupervised lenders, and most of these lenders were overseen at the State level. In 2008, the Federal Reserve finalized rules to better protect home buyers from unfair and deceptive practices in the mortgage market which will take effect in October of this year.

While these new rules will apply to all mortgage lenders, those who are not routinely subject to Federal oversight might not adhere to the new rules closely enough to make them, in effect, work. So what steps is the Federal Reserve taking to ensure full understanding and compliance with the new regulations by mortgage lenders which are not routinely examined by Federal regulators?

Mr. BERNANKE. Well, Senator, we have a mismatch of the regulatory authority and the enforcement authority, as you point out, and we have worked hard to try to address that. The Federal Reserve has a very good relationship, for example, with the Conference of State Bank Supervisors, which brings together bank supervisors from around the country. We have engaged in a number of outreach efforts to work with them, and we have also conducted joint examinations with the State bank supervisors and other State authorities to provide each other information on how we go about our own assessments and try and establish some degree of consistency across State and Federal oversight.

So we are doing as much as we can to try to increase the cooperation and communication between the Federal Reserve and the various State regulators. Having said that, it is certainly inevitable that some States will put more resources and effort and personnel into these oversight functions than others and so there is inevitably going to be a certain amount of unevenness in oversight. But we are doing what we can to work with the State authorities as best we can.

Senator KOHL. But you would agree that, going forward, it is critical that we have this kind of oversight, and regulatory oversight, it was the lack of it that created the mess that we are in right now?

Mr. BERNANKE. Well, it is by no means the only factor. There are plenty of things that went wrong. But it was certainly one factor, and as we look at regulatory reform, we need to ask the question, are all the sectors of the economy that need oversight, are they being watched by somebody or are there major gaps where there is no effective oversight where there needs to be, and that is, I think, a very basic aspect of the reform that Congress needs to address.

Senator KOHL. Thank you. Thank you, Mr. Chairman.

Chairman DODD [presiding]. Thank you very much, Senator.

Senator Hutchison.

Senator HUTCHISON. Thank you, Mr. Chairman and Mr. Chairman.

I want to go back to the inflation threat, which I think today and also previously you have said that it is not a worry, that half of your obligations are short-term. But I am looking at the overall picture, where some economists are beginning to look at the $10.6 trillion debt that we have plus last week's stimulus, or 2 weeks' ago stimulus with interest is another trillion, and starting to look at the tipping point. Twenty-five percent of our debt is held by foreign entities. What if they start saying, hey, this risk is too high and they want a higher interest rate? That, on top of half of your obligations being somewhat long-term.

Are you concerned in looking at the overall picture about the possibility of inflation and what could you do to keep that from happening through any kind of policy, because obviously that would be a devastating turn for our country.

Mr. BERNANKE. Well, inflation is primarily the responsibility of the Federal Reserve and we consider that to be a critical element of our mandate. Our view is that over the next couple of years, inflation, if anything, is going to be lower than normal, given how much commodity prices have come down, given how much slack there is in the economy. When the economy begins to recover, it is important that we raise interest rates and do what is necessary to prevent an overheating that would lead to inflation down the road, and as I have mentioned, we are confident that we can do that. Every time we use our balance sheet to try to support the economy, we are thinking about how can we unwind that in a way that will be kindly and allow us to take the actions we need to take.

That is a somewhat separate issue from the debt issue. It seems to be, at least for now, that the dollar and U.S. debt are still very attractive around the world and there is a lot of demand for holding our Treasuries. That said, it is self-evident that we can't run trillion-dollar deficits indefinitely. It is going to be very important, as we emerge from the crisis and begin to go into a recovery stage, that we get control of the fiscal situation and begin to bring down the deficit to a sustainable level.

So I agree with you that we do need to address that issue. For the moment, foreign demand for U.S. securities is strong, but you are absolutely right. If we don't get control of it, eventually, they are going to lose confidence.

Senator HUTCHISON. Let me shift to the issue that many of us have talked about and that is getting credit into the marketplace. Because the balance sheet of the banks has gone up so much now, holding their reserves in the Fed, and you are still paying interest to the banks, do you think that is having an impact on banks leaving their money in the Fed to get interest and having the reverse effect on what we all want, which is getting credit out into the marketplace?

Mr. BERNANKE. No, Senator. I don't think it works that way. If you like, one way of thinking about what is happening is that the banks are nervous about lending given their concerns about their own capital positions and about risk aversion and credit issues in the marketplace. So in a way, what the Fed is doing is borrowing by paying interest on reserves to the banks, and that is where we get the money, and then we are standing in between the banks and the marketplace, using that money, recycling it into commercial paper, asset-backed securities, and other forms of credit. So in a way, we are becoming the counterparty between the markets and the banks.

Right now, we are paying one-fourth of 1 percent interest on reserves. When banks feel they have any kind of good opportunity to invest at better than one-fourth of 1 percent, they will. That will begin to create expansion in credit and money supply and will be the signal for the Fed to begin to pull back. But right now, it is clear that the banks are more willing to hold reserves at one-quarter of 1 percent than they are to make loans, so therefore we are stepping in to try to stimulate credit markets.

Senator HUTCHISON. Let me just ask you, then, what practical advice would you give us to try to help get that credit out into the marketplace, because no matter what we say in Washington, go visit any person in a small business or medium-sized business that is trying to get credit for their business and they say it is impossible.

Mr. BERNANKE. That is why the economy is under such pressure. Absolutely. There is—it is useful to think about credit as coming from two places, the banks and then the non-bank sources like asset-backed securities and commercial paper.

On the banking side, our objectives, for example, working with the Treasury, are to try to stabilize the banking system, make sure they have enough capital to lend, and make sure they have enough liquidity. In addition, as part of our supervisory oversight, we want to make sure there is an appropriate balance between caution, which is critical—banks need to be cautious in their loans—but on the other hand, we want to make sure that they make loans to credit-worthy borrowers and are not turning down good borrowers because their regulator told them they can't make a loan. We don't want that to happen. We know sometimes it does happen, so we are trying hard to tell our examiners if the bank has a good loan to make and it is a good customer, let them make that loan. We want that to happen. So that is the banking side.

On the non-bank side, again, it is a difficult problem, but the Fed is doing its best to work through some of these markets together with the Treasury to try to get credit flowing again through asset-backed securities markets and other types of non-bank markets.

Senator HUTCHISON. My time is up. Thank you, Mr. Chairman.

Chairman DODD. Thank you very much, Senator.

Senator Warner.

Senator WARNER. Thank you, Mr. Chairman, and thank you, Chairman Bernanke, for your comments this morning.

I have got two areas I would like to press on. One is that we talk about the stress test process, and I was happy to hear this morning a little more clarity on that. I understand you are talking about now 19 banks. I have heard 14 banks, 20 banks, 19 banks. I think the sooner we lay out to us and the markets which banks are actually going to go through this stress test so that we can make clear that there are hosts of many community-based banks and local banks recognizing it is not your regulatory oversight for these smaller banks, that these banks are still healthy and in good shape, I think we take an important step forward, at least to the markets, because in my State and I know so many of my colleagues' States, our local-based banks are getting drubbed down by this overall tower that is hanging over the industry at large.

But as we go through this stress test, I guess you in some of the press reports yesterday gave us a little more clarity, but it seems like you are going to do a stress test that is going to say, if conditions get worse, will these banks have adequate capital. But that presumes, I suppose, that you are going to accept the banks' current recognition of what bad assets they may have and how they are marking them on their current balance sheets. You are not going to go in—I tried to press Secretary Geithner a little bit on this—you are not going to go in in the stress test and try to evaluate the so-called toxic assets or put a pricing on them.

Mr. BERNANKE. We are going to evaluate them but according to the accepted accounting principles. So there are two classes of assets, broadly speaking, the mark-to-market assets, and we try to evaluate whether they are using appropriate models or information to do that. There is also banking broker accrual assets, which banks don't have to mark to market because they are holding them to maturity. They do have to recognize credit losses and the like. We want to make sure that they are applying the right GAAP procedures there, and we are going to be looking not just at 1 year ahead, but 2 years ahead. The usual practices focus on the first year, but we want to make sure that even 2 years ahead, they are looking at projected losses and taking that into account.

So we are going to be doing, as we always do, examinations based on Generally Accepted Accounting Principles, and we are not allowing the banks to hide anything or not provide adequate information. Indeed, we are going to make a special effort to coordinate among the supervisory agencies to make sure as much as possible that we have consistency across banks so there won't be any view that some banks are laggards and others are leaders in terms of writing down appropriate assets. We want to get a clear estimate of the capital needs.

And the way we want to address the stress scenario is, again, by providing this convertible capital which starts off as preferred. It is in the bank, but only if the losses actually materialize that we are projecting and that capital gets eaten into will they need to make the conversion from preferred to common so to ensure that even in this bad scenario they have both enough capital to meet well-capitalized standards, but also enough common equity to meet high-quality standards that enough of their Tier I capital is in common.

Senator WARNER. If I understand you correctly, you are saying these banks that through the potential of falling below their minimum capital requirements will require some additional infusion. This additional infusion, you are assuming, would be entirely public funds that would be in this preferred position, correct? Is that correct?

Mr. BERNANKE. Preferred, but convertible to common.

Senator WARNER. Convertible. But the other piece of the program that Secretary Geithner outlined, which was the effort to try to get a public–private partnership of some level of private capital in here to help us, in effect, price some of these bad assets and buy them out, you don't think the stress test will divide the line between those banks that are going to get public capital and those banks that are going to end up falling into this public–private purchase program?

Mr. BERNANKE. So if the public–private program, which will take a bit of time to get up and running, works well, it will improve the situations of some banks by removing bad assets from their balance sheets. We are not taking that into account at this stage because we don't know exactly what effect that will have.

Senator WARNER. So the bank will be——

Mr. BERNANKE. So we are going to look at the current balance sheets as we do that evaluation.

Senator WARNER. And the bank will then have, in effect, two options. It can either unload some of its assets to this public–private purchasing entity or——

Mr. BERNANKE. We will start with the capital. If it turns out that the bank, because of good economic outcomes or because they are able to sell assets, doesn't need all the capital we gave them, then they can pay it back eventually.

Senator WARNER. I know my time is up. Can I ask one more quick question, though? I was happy to see yesterday your Web site and some of your comments this morning about more transparency, but one of the things, Dr. Elmendorf was in recently and did a pretty good outline of all of the various initiatives that have been started, and we realize you are fighting multiple fires on multiple fronts, but my count was there are eight new initiatives that the Fed has started since last fall.

You have made investments or potential investments in four separate institutions, as some of my colleagues mentioned, increased the balance sheet by about a trillion dollars with the potential of going up to $4 trillion. Some of these are clearly purchasing of normal Treasury securities, but there is a whole series of new areas where you are taking on assets, AIG in particular and others, where the role of the Fed seems to be evolving into not only monetary policy and regulatory oversight, but more and more a holder of debt or equities in a series of institutions.

Do you have the capabilities inside the institution to play this role, and looking back on the Bear Stearns when it looked like we had to bring in what at that point, now in retrospect $29 billion looks like a fairly minor challenge, but now with this potential of a trillion dollars added to your balance sheet, the potential of going to $4 trillion, how do you have the capabilities to manage all these assets inside the Fed?

Mr. BERNANKE. Senator, I want to make a very clear distinction between our programs that address broad credit markets—like asset-backed securities and commercial paper—and the rescue efforts we were involved for a couple of large firms. Those rescue efforts make up about 5 percent of our balance sheet. We got involved in them, frankly, because there is no clear resolution authority, in the United States for dealing with systemically critical failing institutions except for banks. But in the case of an investment bank or an insurance company, for example, there is no such regime, and we and the Treasury believe that if we allowed those institutions to fail, it would have done enormous damage to the world financial system and to the world economy.

So we did what we had to do. We were very unhappy about doing it. We do not want to do it anymore. We would be delighted if the Congress would pass a substantial resolution regime that would create a set of rules and expectations for how you deal with a firm of this type that is failing and leave the central bank out of it entirely. So I hope very much that it will happen as you——

Senator WARNER. And I do not think I am—at least my intent is not to be critical, and I know the Chairman has the intention to pass legislation about it. But you still have these assets that you have got to manage in this ensuing time.

Mr. BERNANKE. Yes.

Senator WARNER. Do you have the capabilities to——

Mr. BERNANKE. We do. We do, and we have hired private sector firms as needed to manage——

Senator WARNER. I would like to see some more information on that.

Thank you, Mr. Chairman.

Chairman DODD. Before I turn to Senator Merkley, I was just going over the—this is a form that has forms of Federal Reserve lending to financial institutions. I count 15 of them, 12 of which have been started since August of—the earliest was August of 2007, most of them in 2008. So it is a rather elaborate chart and sort of daunting as well, from my point of view.

Senator Merkley.

Senator MERKLEY. Thank you, Mr. Chair, and thank you, Mr. Bernanke, for your testimony.

A year ago, March 4 a year ago, you were giving a speech to bankers primarily about the challenges we face in the mortgage world, and you called for very vigorous response. You called for lenders to pursue aggressively renegotiation of loans. You also in that speech pointed out some of the challenges that exist to renegotiation. Those challenges included the fractured ownership of mortgages and the potential for lawsuits from those who owned different cash-flows, the fact that ownership trusts vary in the type and scope of modifications they are legally permitted to make. And in addition to your points that you made, there has been a lot of discussion of the fact that in general, when we start looking at the number of borrowers all seeking renegotiation at the same time, that lenders are ill equipped with the kind of trained workforce to be able to pursue those negotiations.

In fact, I held a foreclosure mitigation workshop out in Oregon last week, and the single message that came through was the enormous frustration of homeowners trying to get in contact with anyone who could actually have the authority to talk to them about renegotiating their loan.

My concern has been that these obstacles are worse now than a year ago and that they remain a significant obstacle to date of the type of strategy that we are pursuing that is embedded in the plan that the Treasury Secretary put out last week.

Could you just comment on how you see the evolution of these obstacles, whether we can overcome them?

Mr. BERNANKE. Well, securitization remains a severe problem. The one element of the administration proposal which could address potentially both of the issues is the fact that they propose bounties or payments to the servicers who renegotiate loans. That aligns better their incentives with the incentives of the borrower in the sense that, without that, they do not necessarily have the incentive to try to get a better arrangement for the borrower. And, second, it gives them the funding to provide the manpower to go out and get in touch with the borrowers, work with them, and so on. So that is one element that may help on that side.

There has been some progress in terms of accounting verifications and the like about getting loans out of MBS, and to the extent that MBS are being acquired more and more by Government agencies, we are working now toward a uniform renegotiation and protocol for all mortgages held by Fannie and Freddie and by the Fed or any other Treasury or any other Government-related body.

But that still remains a problem, the existence of the securitization trust and the restrictions they place on when you can renegotiate a loan.

Senator MERKLEY. Thank you. And I do hope those incentives and perhaps also the club that was laid out in the President's plan could be helpful, that club being the possibility of bankruptcy judges to be able to renegotiate the terms.

In your speech, you also laid out the refinancing option as another strategy, and I keep wondering if indeed we are not able to—if we do not make progress, significant progress on the loan-by-loan modification, the different type of class actions, if you will—not lawsuits in this sense, but addressing the problem systematically. And you laid out one such idea, which was the Hope Now Alliance's potential freeze on subprime loans at the introductory rate, keeping that frozen for 5 years.

Yesterday, I was up on Wall Street, and a banker was saying another strategy would be—a very bold strategy would be for the U.S. Government to guarantee essentially every home loan in America, and the basic math was $10 trillion, 10-percent failure, it is $1 trillion, you lose 50 percent on each transaction, so it is half a trillion dollars. But it is not only helping the homeowners, it is reinforcing—it is setting—kind of restoring a foundation, if you will, for the derivatives related to those loans and, therefore, also compensation not just for the mortgage strategy, but also the strategy to reinforce our financial institutions.

Any thoughts about that kind of action?

Mr. BERNANKE. Well, obviously, as your calculations suggest, it could be extremely costly, particularly if—and I hate to say it, but there might be some people who would say, well, if I am guaranteed anyway I will not lose my house, why don't I stop paying my mortgage? Unfortunately, that might be in some cases the response.

That seems to me to be a very costly way to go about doing it. I think you are better off, for example, by the administration plan and other plans, like Sheila Bair's FDIC plan, which is closely related, which focuses not on every mortgage but looks at people according to their characteristics. So, for example, in the administration plan, you start with people who have very high ratios of payments to incomes, and then you try to get those down to, say, 31 percent, which is a more sustainable level.

So you are better off focusing on subpopulations where there is obviously a lot of stress, and that would probably be a more cost-effective way to get improvements in the foreclosure rate.

Senator MERKLEY. Well, other strategies—I believe my time has expired. I will just leave you with a thought, which is that we need to continue to think about if the loan-by-loan modification approach simply cannot handle the volume of change that we need, what group strategies are worthy of consideration?

Thank you.

Chairman DODD. Senator Bennet.

Senator BENNET. Thank you, Mr. Chairman. Chairman Bernanke, thank you for your testimony and endurance here today. It is getting to me.

I appreciate your comments about the commercial paper market because I think that was a place where the intervention seemed to be pretty effective, and I wanted to use my time to do a couple things today. One was to mention the crisis at our local governments and our public-oriented nonprofits like schools and hospitals are facing. As you know, that is an enormous segment of our economy, $2 trillion of shovel-ready projects, and with real capacity to help spur this recovery, I think. Those markets also are locked down. They are frozen, just as many of the other credit markets area. The markets for short-term auction rate and variable rate bonds have been particularly hard hit, and a lack of liquidity, which, as I said, is a problem plaguing all segments of the market, has stymied the local bond market, too. And banks receiving TARP money, nevertheless, have remained on the sidelines, unwilling to venture back into the local bond market. The variable-rate market is frozen. To borrow from the statute that empowers the Fed, the lack of liquidity results from the unusual and exigent circumstances facing financial institutions.

It seems to me that the Fed could make an enormous difference by providing temporary support for liquidity in these markets just as it did in the commercial paper market that you mentioned earlier. In those case, those issuers happen to be taxpayers of States and localities, and the corporations happen to be public, not private. I do not know why we should restrict ourselves to cases of private investors but not also help local schools and hospitals in Colorado and across the Nation.

This is not a matter of making loans to State and local governments. I am asking your consideration to supporting regulated financial institutions in cases where their letters of credit or other obligations provide liquidity to our financial markets, markets in this case which happen to involve State and local governments.

So I wonder if you have got any thoughts about that piece of our economy.

Mr. BERNANKE. Well, the auction rate securities market is pretty much defunct. It was a class of markets that were essentially trying to finance long-term credit with short-term borrowing, and the appetite of investors for those kinds of markets has greatly diminished. So that particularly attractive, relatively cheap form of credit for States and localities has largely dried up, as you correctly point out. The State and local bond market in general still remains strained. It has improved somewhat, and we are watching that very carefully.

I am not quite sure I follow the issue on banks. Going back to my earlier comment to Senator Hutchison, we certainly want to encourage banks to make loans to creditworthy borrowers wherever that is consistent with safety and soundness. That would include, of course, States and localities.

From the Fed's perspective, there are a couple of reasons why we have not prioritized those markets with commercial paper. For example, we do, in fact, have a capacity constraint, which, as I discussed with Senator Hutchison and Senator Bunning and others, is the need for us to unwind our portfolio at an appropriate time. And so we cannot expand, particularly for longer-term liabilities, indefinitely. And in looking at various areas where we thought we could be helpful, for technical reasons first we thought we could do more, say, in the commercial paper market but, in addition, two other reasons.

One is that the Congress obviously has been very involved in addressing State and local fiscal issues, including in the recent fiscal package, and it seems more appropriate, given the close relationship between the Federal and State governments, for that to be the locus of addressing those issues.

And the other point I would make is that our extraordinary authority which we have invoked to make these loans, say, in the commercial paper market, does not include States and localities. So it would take some stretch beyond, I think, congressional intent to include them in some of these programs.

But we understand the issue, and we are obviously paying very close attention to it, because, as you correctly point out, the inability of States and localities to finance themselves is having a direct impact on the services they provide and on the economy.

Senator BENNET. Then if I could just say on that—and I want to see if the Chairman will let me ask my other question as well—it just seems like such a tough case, because there is no issue with the underlying credit here, unlike in some of the other things that we are talking about. It is purely the consequence of the loss of liquidity in the market. And at a time when we are spending, you know, $800 billion from here to do these shovel-ready projects, it would seem that if there were a way to create an environment, some sort of backstop of some kind to be able to get these governments in a position to be able to do the work they are intending to do anyway, with balance sheets and credit ratings that we know are good, that seems to me to be a really lost opportunity to leverage what we are doing here, which is the only reason I raise it.

The second question I had, Mr. Chairman, if—I have got a couple seconds left.

Chairman DODD. As quick as you can, Senator.

Senator BENNET. Very quick. You talked about how critical it was to stabilize the financial institutions as a way of getting our market going, and which everybody here agrees with. Can you give us some thoughts about how to ensure that the right level of rigor is applied to make sure that we really are valuing these assets and liabilities in a way that does not create a stasis where we are stuck in this for many years because we have not done an honest assessment of where things really are?

Mr. BERNANKE. That is very, very important. We learned from other examples that you need to figure out what these assets are worth. The supervisory efforts are using all our tools to get good valuations, but in this respect, I think the idea of using a public–private partnership in an asset purchase facility is potentially appealing. If you set up a program where both private sector investors and the public purse contribute capital to a facility, and then the purchases and pricing are done by private sector investors who are interested in making a profit, then there is a much better reason to think that the prices that come out will reflect true market realities rather than accounting fictions. So that is one reason to try to involve the private sector in this asset purchase program.

But it is a very hard problem, and as I said earlier, it is not just a question of going in and saying this is the truth. Because the fact is that a mortgage could be worth X today, and then tomorrow you get news about the housing sector then maybe it is only worth 0.9X. So it is more difficult than just coming clean. It is really trying to make judgments about the whole future of the economy and the housing market as you try to assess the value of a given piece of paper.

Senator BENNET. Thank you.

Chairman DODD. Thank you, Senator.

Mr. Chairman, before I just turn to Senator Brown, on the major question—the first question raised by Senator Bennet, Senator Warner has done a lot of work on this as well, on this whole issue involving municipal bonds and AAA-rated where you are talking about investors, and the purchasing of those by the TALF, we are doing floor plans for cars, we are doing student loans. It seems to me AAA-rated bonds out of municipalities for schools and hospitals has got to be at least as creditworthy as a student loan, with all due respect to students and the car plan, the floor plan for cars.

I would like to recommend, if we could, that Senator Bennet and Senator Warner—there are others who are interested—maybe could spend some time with you or your staff to talk about this, because I think we did give the congressional authority to that. As the Chairman of the Committee—and I joined them in their letter they sent down, and I believe the authority exists under the Congress for you to be able to do that under TALF with municipal issues.

Now, that is my opinion. That is not a deciding opinion, but that is my conclusion, and I would be appreciative if some people could maybe sit from the Federal Reserve and talk to these Senators about this idea and explore it further if we could.

Mr. BERNANKE. Senator, if I may, of course, the TALF is a joint Federal Reserve Treasury program.

Chairman DODD. We will involve the Treasury.

Mr. BERNANKE. They would need to be involved in any kind of discussion.

Chairman DODD. We will involve the Treasury as well. I think it is just worthy—they came to me with the idea, and it made all the sense in the world to me, and I would like to see us possibly pursue that.

Senator Brown.

Senator BROWN. Thank you, and, Chairman Bernanke, thank you.

Let me share what I think is one of the most dramatic measures of our economy. Twenty years ago, in 1987—these numbers are 1987 and 2007. In 1987, manufacturing made up 17.1 percent of our GDP; financial services made up 5.6 percent. In 2007, manufacturing made up 11.7 percent, and financial services, 8 percent, before all the meltdown. So manufacturing, the percent of GDP—granted that GDP grew hugely in those 20 years, but the percent of GDP, manufacturing dropped by about a third, and financial services went up about 40 percent, roughly.

We spend a lot of time talking about the financial services industry, as we should. Manufacturing seems to be relatively ignored—not so much certainly in these discussions, not as important, but generally in Government policy. Talk to me, if you would, as we talk about reviving the credit markets, how much focus we should bring to credit markets to help the auto industry, whether it is individual car buyers, whether it is for the dealers, and then perhaps more broadly, your comments on manufacturing generally as our economy shifts in the years ahead.

Mr. BERNANKE. Well, the auto companies have obviously a number of issues, long-term structural issues and the like, but part of the——

Senator BROWN. I am talking more on the demand side here, on the demand side for buyers.

Mr. BERNANKE. Right. I was just going to say that part of the problems recently have to do with the credit markets and demand, and we have tried to address that. First, you know, our program in the commercial paper market has tried to improve financing for companies. Even though we lend only to the highest-rated companies, even the lower-rated companies have seen their rates come down quite considerably, and that also relates to our interest rate policy.

In our Asset-Backed Securities program, as Chairman Dodd was just noting, among the things that we are allowing in the ABS program are auto loans, which has been an issue, and floor plans and RVs, things related to the demand for automobile production.

So to the extent that credit markets are the problem, we are doing our best to try to address those and to lower interest rates. As Senator Dodd also mentioned, traditionally autos respond well to low interest rates. Obviously, there are a lot of other issues right now affecting the demand for autos.

I think on the issue of manufacturing, in general, you do not want to set specific percentage targets for different industries. Obviously, there is an international division of labor which takes place over time, and different industries migrate to different parts of the world, depending on the relative complements of labor and capital in each area. But I think it may be that part of the impact on our manufacturing has been the trade deficit, which has been associated with a reduction in manufacturing because trade is very much conducted in manufacturing. So the movement in the trade deficit has been associated with greater imports of manufacturing, and that to some extent has been a competitive issue. And I realize that I am going to contradict myself here, but on the other hand, we should not put U.S. manufacturing down. It has actually had a pretty good performance overall. Productivity gains in U.S. manufacturing have been quite extraordinary over the last 10 years. And, in fact, that is part of the reason why manufacturing employment has been so weak. It is that even as output stays more or less stable, the number of workers needed to produce that output has gone down.

So in the short term, we are doing what we can to improve credit markets to help support autos and other industries. In the longer term, relating back to Senator Hutchison and others, if we have a better saving rate and more balanced trade flows, that may redound to some extent to the benefit of U.S. manufacturing. But in many States—Senator Tester was here. I have been to Montana and seen some of their manufacturing innovations. U.S. manufacturing has in many cases filled high-level niches, very sophisticated niches, and very high-value production. So I would not write U.S. manufacturing off. There is a lot of value there. But clearly there are a lot of challenges as well.

Senator BROWN. I would make the case—and then one real quick question after that—that manufacturing, while productivity has gone up immensely in the last many years in manufacturing, wages have not kept pace with that productivity, which is the first time we have seen that disconnect, at least since your writing on the Great Depression—which, speaking of that, all—and I will not ask you a question about—this is just—well, listen to a quick comment about this. All my life I have sort of—when I have read about Roosevelt and the New Deal, there is almost unanimity, almost consensus from darn near everybody, that most of what Roosevelt did worked, the regulatory structure, the Government spending, and all that. Only in the last few months has it become so politicized and we have seen some revisionism in our history that Roosevelt and the New Deal were failures. I mean, it has come from some newspaper columnists, some pundits, some ideologues.

Specifically what worked that Roosevelt did? What did we learn from that? What worked that applies to now?

Mr. BERNANKE. Well, there were two things that he did within months of taking office that were extremely important. One was the bank holiday and subsequent measures like the deposit insurance program that stabilized the banking system. This is a point I have been making all morning, that we need to stabilize the banks. The second thing he did was to take the U.S. off the gold standard, which allowed the Federal Reserve to ease monetary policy, allowed for a rise in prices, which, after 3 years of horrible deflation, allowed for recovery. So those were the two perhaps most important measures that he took.

He did some counterproductive things, like the National Recovery Act, which put the floors under prices and wages and prevented necessary adjustment. The most controversial issue recently, of course, has been fiscal policy, and I think there are two sides to that. The classic work on this by an old teacher of mine from MIT, E. Cary Brown, said that fiscal policy under Roosevelt was not successful but only because it was not tried, and he argued that it was not big enough relative to the size of the problem. Other writers have argued that this was not the right medicine. So that one is more controversial, but if you asked me what I think the most important things were, I think they had to do with stabilizing monetary policy and stabilizing the financial system.

Chairman DODD. Maybe what we ought to do with the Committee sometime is maybe have just an informal dinner one night with interested Members and have a discussion about those days. I think it would be an interesting conversation.

Senator Akaka.

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

Welcome, Chairman Bernanke. It is good to see you. I can recall back on September 23, 2008, when we had a Banking meeting with four of you: Treasury Secretary Paulson, Cox, and you, and also with Jim Lockhart. At that time we were trying to learn what the crisis was all about and what we were going to do about it. And as I recall, we came out—really, what came out of it was the $700 billion was to bring confidence to Wall Street. But since then, many things have happened, and well before the current economic crisis, the financial regulatory system was failing to adequately protect working families from predatory practices and exploitation.

Families were being pushed into mortgage products with associated risks and costs that they could not afford. Instead of utilizing affordable, low-cost financial services found at regulated banks and credit unions, too many working families have been exploited by high-cost, fringe financial service providers such as payday lenders and check cashers.

Additionally, too many Americans lack the financial literacy, knowledge, and skills to make informed financial decisions, and I have two questions for you. What I am asking is what must be done. What must be done as we work toward reforming the regulatory structure for financial services to better protect and educate consumers?

Mr. BERNANKE. Well, I think this is absolutely critical because, as you point out, it was bad products that created a lot of the problem that consumers took, either knowingly or unknowingly. One direction which the Federal Reserve has taken is just to try to outlaw certain practices.

We found, for example, in the context of credit cards, that people just do not understand double-cycle billing. I am not sure I fully understand it myself, to tell you the truth. And it is probably not worth the effort of trying to teach people what that means. It is probably better just to get rid of that practice because it is deceptive and people do not know how to understand it or work with it.

There are other issues, though, relating to just the simple arithmetic of interest rates and so on that people really need to understand. It is not just a school issue. It is very much an issue for life. You know, people's hopes and dreams are tied into buying a house or sending a child to college and so on. And if they want to do that, they have to become reasonably acquainted with financial products and how to make choices and how to make good decisions. And it is good for the economy, too, because you get more competition, you get better products from that.

So you and I, Senator, we have discussed this many times in the past. I think we strongly agree with each other that financial literacy is crucially important, and it is something that should get more attention than it already does in the schools.

The Federal Reserve is very involved in this. We have done a lot of programs. We have worked with a lot of community organizations and others to try to create programs, to try to support efforts to spread financial literacy. I have to concede, though, that we have not got the magic bullet yet. It is difficult. People—kids, particularly—do not tend to be that involved or that interested in the topic until the actual time comes when they have to make some kind of financial decision. And so the most effective time is typically around the time at which the person is making their mortgage decision or their car-buying decision.

So there is some case, I think, to do it in schools, but I think there is also a case to have better counseling so that people who are making financial decisions have access to some help and assistance so they can make better choices. But I absolutely agree with you that, just as in any other market, if you do not have informed consumers, you are not going to have an effective market. And that is very important.

Senator AKAKA. And what must be done to improve access to mainstream financial institutions in economically unserved communities?

Mr. BERNANKE. This is the issue of the unbanked, or the underbanked, again, an important issue. You have many people who, for whatever reason, haven't bothered or don't know how to open up a checking account and they end up paying money to cash their checks or to get a very short-term loan.

We encourage banks and other financial institutions to do outreach, to try to provide services in underserved neighborhoods, to have multilingual tellers and so on, and I think that is not only good public policy, it is good business for them to reach out to broader groups in the population. So I think that is another important issue in which we bring people into the banking system.

One way to do that, as I talked about in the past, in many cases, you have immigrants who want to make remittances back to their home country and some of the vehicles for making remittances are costly. Bringing them into the regular financial system, they can find cheaper, more effective, safer ways to send money home, and in doing so, they become acquainted with their local financial institution and become able to partake of the other services, like a checking account and a savings account.

So that is very closely related to the financial literacy issue, about bringing people into the financial mainstream. Once again, that is one of the best things we can do for people, to allow them to make better use of their incomes and they get to have a better life.

Senator AKAKA. Thank you for your response.

Thank you, Mr. Chairman.

Chairman DODD. Thank you very much, Senator. That completes the round.

I know my colleagues—I have a couple of questions for you, Mr. Chairman, as well. I think Senator Shelby, and I see Senator Corker here, as well, and I don't know if Senator Bennet may want to follow up, and I apologize to you, but you have seen the interest obviously in the membership showing up.

I want to raise a couple of questions, one about bank holding companies, one about the potential of the Fed to buy Treasury bonds, and maybe one or two others.

I mentioned in my opening comments some of the largest institutions that are experiencing significant problems were regulated by the Fed at the bank holding company level. Now, in addition to the bank holding companies that you historically regulated, we have many new companies that are applying for and been granted the bank holding company status by the Fed, including Goldman Sachs, Morgan Stanley, American Express, GMAC.

Let me ask you a couple of questions. One is a basic question. I think I know the answer you want to give me, but I want to give you the chance to do so. As Chairman of the Federal Reserve, are you still committed to maintaining the separation between banking and commerce? And then second, given the problems that we have just seen with the more traditional bank holding companies, what assurances can you give the Committee that these new companies, the new applications that are coming through, which in many ways are different than the traditional bank holding companies, are going to be adequately regulated?

Mr. BERNANKE. Well, I do support the separation of banking and commerce, and in recent examples like GMAC, for example, we imposed very tough conditions about disentangling themselves from General Motors and from other commerce activities to become a finance company, essentially. So in that respect, we have been consistent.

On bank holding companies, on the general principle, I think that consolidated supervision of large, complicated organizations is still very important, even more so important than we thought it was before because of the potential for a consumer finance company there or broker-dealer there to create a risk for the entire organization. So consolidated supervision, I think, is very important.

We at the Fed are committed to doing that. I think, if anything, what we need to do is be even more aggressive at looking not only at the holding company level, but going down into the underlying companies beneath the holding company to make sure that they are observing consumer protections, safety and soundness, and the like. There was some tendency, I think, to defer entirely to the functional regulators who are responsible for the companies underneath the holding company. Indeed, we want to respect those priorities in the way that the Congress set up the rules, but the holding company supervisor, I think, does have a responsibility to make sure that not just at the holding company level, not just at the level of the policies that are being set by the top management, but down in the various organizations below that level that the policies are being followed and that companies are safe and sound.

Chairman DODD. Well, I welcome that and I would hope there is no additional authority that you need at the Fed in order to be able to exercise that authority.

Mr. BERNANKE. There has been some ambiguity. An example I would give would be consumer protection. What authority does the Fed have to look into a consumer finance company which is a subsidiary of a bank holding company when technically the primary regulator might be the FTC, for example.

Chairman DODD. Well, if it goes to the systemic safety and soundness and systemic risk of that institution, it would seem to me you have all the authority in the world.

Mr. BERNANKE. Well, before now, there were legal issues about what the appropriate priority was, who was primarily responsible, and so on, and what I am saying is that I think that what we have learned from this episode is that the holding company supervisor must have some ability, in conjunction with the functional regulator, to look at the condition and behavior of the firms below the holding company level, and that is something I have started doing and we intend to do.

In terms of the new holding companies that have come in, we have been very assiduous in making sure they have adequate capital, that they have restricted themselves to the activities which are appropriate for holding companies, so they are not involving in all kinds of other commercial activities, and we believe we are able to deal with those companies. But more generally, we are revisiting and rethinking our whole holding company supervision approach to make sure that we have a really comprehensive enterprise-wide approach that looks at all the risk factors, not just at the holding company level but also throughout the organization.

Chairman DODD. Well, we need to stay closely in touch with you on that because that will be part of it.

The second question I have has to do with, over the years, the Fed has not been active as a public trader in Treasury notes. In fact, it has been decades, I guess you could say, going back maybe to the very time that you are talking about historically, preferring instead to use the short-term Fed funds rate to manage interest rates. With the Fed's target interest rate basically at zero, you have been forced to consider other means of conducting monetary policy.

In December, the FOMC said it was, and I quote, "evaluating the benefits of purchasing long-term Treasury securities." In January, FOMC said it is now prepared to do this if, quote, "evolving circumstances indicate that such transactions would be particularly effective in improving conditions in private sector markets." Can you be more specific about those conditions that would lead the Federal Reserve to purchase long-term Treasury securities?

Mr. BERNANKE. Well, Senator, our objective is to improve the functioning of private credit markets so that people can borrow for all kinds of purposes. We are prepared, and we want to keep the option open to buy Treasury securities if we think that is the best way to improve the functioning or reduce interest rates in private markets. So we are certainly going to keep that option open.

I should say, though, that we do obviously have a couple of other things going on right now. One is the purchases of the agency MBS and securities. The other is the proposed expansion of the TALF. So those are two directions that are certainly going to be taking up a lot of our attention in the short run. So we will keep that option open, but we are looking at some other ways of addressing the private markets, as well.

Chairman DODD. And just in that regard, raising the question, is it your view that an unacceptable rise in longer-term Treasury rates slow economic growth, resulting in the Fed actually buying longer-term Treasury securities?

Mr. BERNANKE. Well, we want to look at the overall state of the economy, and I would just note that one possible scenario would be the Japanese, where there was a more general quantitative easing approach, and the focus was not on specific credit markets but broadening the monetary base in general. In that case, the Japanese have and currently are buying long-term government bonds. That would be one possible scenario.

But again, the basic goal here is to improve the functioning of private credit markets. We are not trying to affect the cost of government finance, per se, rather the private sector.

Chairman DODD. I have gone over a little bit. Let me turn to Senator Shelby and then Senator Corker.

Senator SHELBY. Mr. Chairman, Secretary Geithner stated that the Treasury will direct bank regulators, including the Federal Reserve, to begin a form of stress testing. Now, I believe it was a writer with the *New York Times,* Gretchen Morgenson, she wrote a week or so ago something that said, you know, before you can do a stress test on somebody, you have got to find the pulse, indicating that some of these banks were walking dead. I believe that was a term that Senator Corker used one time.

If you are propping them up, how long can you prop them up and should you prop them up, because a lot of us don't believe anything is too big to fail. Obviously, you think some institutions are too big to fail. But your predecessor, one of your predecessors, Dr. Volcker, who is a well respected economist, he testified before this same Committee several weeks ago that he thought some institutions, some banks were too big to exist, you know, too big.

Now, having said that, I think you can fool the market a little bit every now and then, but not for long. The market basically has looked at a lot of these banks and they know they are in deep trouble. They know that some of them, or at least the market thinks some of them are basically gone, or should be gone. So this begs the question of nationalization. You know, this has been brought up.

I think you can take over a bank by converting the preferred, as you are talking about CitiCorp or some of them are talking about doing, and if you had 40 percent working control of CitiCorp, you basically would—you wouldn't own it all, but you would own working control, probably, and you would be the big power in the boardroom, so to speak. Or you could take over a bank by taking it over, do away with stockholders and it becomes totally owned by the government, so to speak. Neither one of those options, to me, is very desirable.

I guess, where are you going? Can you say that today? Where are we going?

Mr. BERNANKE. Well, what we are doing is trying to assess how much capital these banks need in order to fulfill their function even in the stress scenario. So we are going to do an honest evaluation. We are going to do a tough evaluation, try to figure out how much hole there is, if there is a hole. In many cases, there is not a hole.

Senator SHELBY. Do you believe that most of those banks can withstand the stress test, a real stress test?

Mr. BERNANKE. The outcome of the stress test is not going to be fail or pass. The outcome of the stress test is, how much capital does this bank need in order to meet the needs of the credit—the credit needs of borrowers in our economy.

You mentioned having majority ownership and so on. We don't need majority ownership to work with the banks. We have very strong supervisory oversight. We can work with them now to get them to do whatever is necessary to restructure, take whatever steps are needed to become profitable again, to get rid of bad assets. We don't have to take them over to do that. We have always worked with banks to make sure that they are healthy and stable, and we are going to work with them. I don't see any reason to destroy the franchise value or to create the huge legal uncertainties of trying to formally nationalize a bank when it just isn't necessary.

I think what we can do is make sure they have enough capital to fulfill their function and at the same time exert adequate control to make sure that they are doing what is necessary to become healthy and viable in the longer term.

With respect to your question about too big to exist, as I have said before, there is a too big to fail problem which is very severe. We need to think hard going forward how we are going to address that problem, but right now, we are in the middle of the crisis.

Senator SHELBY. Have you thought about ways to deal with it? We understand that some banks pose, or some institutions like AIG, systemic risk to the whole financial system——

Mr. BERNANKE. Well, we are working right now on some proposals on resolution. One of the big problems is that if we wanted to close down a major institution, we don't have the legal authorities and the framework to do it. So the Congress needs, in my opinion, to set forward a much more elaborate version of FDICIA, if you like, that would apply to large financial institutions of various types that would give guidance to regulators, under appropriate checks and balances, about under what circumstances the regulators could shut down that firm in a safe way that doesn't disrupt the financial markets. But absent those kinds of powers and that kind of framework, we really are having to play it by ear.

Senator SHELBY. I know a lot of people have got different proposals for the economy and how do you rectify the economy. I was told the other day there are about 155 million people gainfully employed. We would like for it to be six or seven or eight million more. I understand that. But do you believe that the biggest challenge to our economic system today is rectifying and bringing competence and capital from the private sector, trust to the banking system?

Mr. BERNANKE. Absolutely, Senator. Somebody asked me before, how would we know when things were starting to turn around? When some major banks start going out and raising significant private capital——

Senator SHELBY. In the private sector?

Mr. BERNANKE. In the private sector, that will be a major indicator that we are moving in the right direction.

Senator SHELBY. And how do you do that with transparency, with closing some banks, consolidating some banks, letting the market know or believe in the banking system?

Mr. BERNANKE. Well, the various steps that I have described, including making sure they have enough capital to give themselves some breathing space to do restructuring as needed, to have a program to buy assets off the balance sheets. Some of those steps that I have talked about will, if properly executed and forcefully executed, lead to a situation where it will be safe to come back in the water and private investors will be more confident about the futures of the banks.

Senator SHELBY. You are the Chairman of the Federal Reserve, which is the central bank, but you are also the regulator of our largest banks, is that correct?

Mr. BERNANKE. Of the holding companies, yes.

Senator SHELBY. Do you believe, and I know you haven't been in the Fed that long, but do you believe that the Fed has adequately supervised our banks as a regulator, or do you believe there were problems there that were not known or uncovered?

Mr. BERNANKE. Well, I think the Fed was a very active and conscientious regulator. It did identify a lot of the problems. Along with our other fellow regulators, we identified issues with non-traditional mortgages, with commercial real estate, with leveraged lending and other things. But what nobody did was understand how big and powerful this credit boom and the ensuing credit collapse was going to be, and routine supervision was just insufficient to deal with the size of this crisis. So clearly, going forward, we need to think much more broadly, more macroprudentially, about the whole system and think about what we need to do to make sure that the system as a whole doesn't get subjected to this kind of broad-based crisis in the future.

Senator SHELBY. Does that include insurance, too, because insurance has been regulated under the McCarran-Ferguson Act by the States, but then you had AIG, which caused systemic stress, to say the least, to our banking system, and they were regulated primarily by the New York State Insurance Commission.

Mr. BERNANKE. AIG had a Financial Products Division which was very lightly regulated and was the source of a great deal of systemic trouble. So I think that we do need to have broader-based coverage, more even coverage, more even playing field, to make sure that there aren't—as our system evolves, that there aren't markets and products and approaches that get out of the line of vision of the regulators, and that was a problem we had in the last few years.

Senator SHELBY. Thank you, Mr. Chairman.

Chairman DODD. Senator Corker.

Senator CORKER. Thank you, Mr. Chairman, and thank you for the second round of questioning.

How many major banks, I mean, is the definition 19 or 20, is that what we determine to be major banks in this country?

Mr. BERNANKE. There are about 20 banks or so that are $100 billion in assets or bigger.

Senator CORKER. OK.

Mr. BERNANKE. Those are basically the ones that we are going to be looking at in the next few——

Senator CORKER. So I want to spend just a minute on the stress test and then move to a bigger issue. You mentioned that on the accrual loans, we were going to use existing accounting, which is GAAP accounting. My understanding is the banks actually take losses on those loans as they occur.

Mr. BERNANKE. Well, there is some provisioning for future losses and we will be looking at a 2-year horizon and asking the question, what are the expected losses over that whole horizon.

Senator CORKER. So what you really will be doing, then, is going in and ensuring that they are actually provisioning properly, and the fact is that I think most—a lot of smart people in the country believe that that is where the huge losses exist that have not been taken, obviously because of GAAP accounting, and what you are going to do is actually get them to increase those reserves substantially. At that point, they will be insolvent, and so, therefore, then you would be providing public funding to make up that capital deficiency, is that correct?

Mr. BERNANKE. I don't agree necessarily that they will be insolvent, but clearly——

Senator CORKER. Well, some of them obviously will.

Mr. BERNANKE. Clearly, we have to look at their provisioning. The rules are that you can account for those expected losses either through provision or through more capital, but essentially it is the same point.

Senator CORKER. And the reason for additional—their capital will be too low, so they might not be insolvent, but the fact is they would need in some cases substantial public investment to get their capital ratios where they need to be so they would be considered solvent, let me put it that way.

Mr. BERNANKE. So they would be considered well capitalized.

Senator CORKER. OK. So I guess as I hear that, there seems to be sort of two schools of thought. One is that we need to take our medicine and that there needs to be some failures or maybe we need to have a bad bank scenario under these major banks, because in some cases, they could actually support their own bad bank. And then there is another that says we are just sort of going to meter out losses over time and continue sort of what we have been doing, and I am not criticizing, I am just making the observation that I think what I heard you say is, in essence, we are sort of going to continue doing what we are doing. We are going to go in and create this mechanism, these convertible preferred shares, and as the banks actually take these losses which we know are coming, they will convert that into common equity. But in essence, we are sort of continuing what we have been doing with TARP funding. We are just calling it something a little different to get the tangible common equity up where it needs to be, is that correct?

Mr. BERNANKE. And to make the banks well capitalized so there will be some public ownership in terms of the shares of the common equity, but we want them to have enough capital.

Senator CORKER. Mr. Chairman, just for what it is worth, I think that is incredibly enlightening, probably the most enlightening thing that has been said in the last 5 weeks as far as where we are going, which again I don't criticize. I think we need to get it right.

But it seems to me that this has been creating this sort of dead man walking, this sort of zombie-like banking scenario, and while I have been not using these words out and around, it seems to me that what you have explained is a creeping nationalism of our banks. I mean, in essence, many of them don't have appropriate capital. You are going to stress test them, which means you are going to make them reserve up properly, which they should do and I applaud that. And then you are going to provide the public funding to meet that capital requirement. I don't like saying things like this and squirmed a little bit when I was asked about Chairman Dodd's comments about nationalization, but in essence, this is a form of sort of creeping nationalism, right?

Mr. BERNANKE. Senator, there are two sides to this. One side is providing the capital they need to provide credit to the economy, which is essential. But we are not just handing them this capital and saying, go do your thing. We also have on the other side the supervisory oversight, the TARP oversight, to make sure that they are not just sitting around but that they are taking the steps necessary to clean themselves up so that they will be profitable in the future. At that point, private capital will come in and public capital can go out. And as I was saying before, the best sign of success will be when the government can start taking its capital out, or the banks can start replacing the public capital with private sector capital. That is what we are aiming for.

Senator CORKER. I just took your comment earlier, you know, there are a lot of assumptions about what our public policy is and I think people understand about the condition that Senator Shelby mentioned about too big to fail. But when you stated earlier, we are committed to ensuring the viability of all major U.S. financial institutions, that is a statement that I guess I have never heard said that clearly before and I think that some of us have expected that there is at least a possibility if a financial institution is not performing properly they might be seized, which is certainly a form of nationalization, for a period of time, but it is different. It is under different circumstances.

But what I hear you saying today—again, I am not being critical, I might be later, but I am just observing right now—is that we are going to get them to sort of take their medicine. We are going to go in and make them reserve up for these accrual loans that we know is where the next huge hole is, but we are going to give them public dollars. I mean, that, to me, and I certainly haven't been around that long here, but that, to me, is nationalization. I mean, that—I would like for you to give me a term to use as I leave here as to what we would call that.

Mr. BERNANKE. Call it public–private partnership. It is not nationalization because the banks will not be wholly owned or probably not even majority owned by the government. The government will be a shareholder, along with private shareholders——

Senator CORKER. But you are putting in a mechanism to where our common equity holdings will be large by virtue of creating this convertible preferred situation and you know that the losses are coming because you are going to do this stress test. I mean, that is why you are putting this vehicle in place. And I do wonder how we ever get to the end game where in essence there are, in fact, people willing to buy common shares. I mean, I can't imagine in these 19 or 20 institutions anybody, after hearing this statement today, which maybe you have said it before and I hadn't heard it, but why would anybody go buy common shares in banks today in those 19 or 20? Why would anybody do it?

Mr. BERNANKE. Well, they wouldn't today, but I think eventually they will. It is all the elements of the program working together to take off the bad assets, to recapitalize them, to get them restructured. I think part of this is that, remember, we do have a legal procedure. We do have the FDICIA laws and prompt corrective action. If a bank does become insolvent, then the FDIC will, of course, intervene. But we are not close to that. All the banks are above their regulatory——

Senator CORKER. Well, they are only there because we are continuing—I mean, the statement has been made that we are going to keep putting public dollars in to keep that occurring, so they are never going to get to a point, these 19 or 20 banks will never get to a point where the seizure occurs because you are putting in place a mechanism to keep that from happening, and I am just saying that is a really bold statement and something that I guess I haven't deciphered until today. Have you heard this, Mr. Chairman?

Chairman DODD. Well, I just say, look, I mean, we are in—as the Senator from Connecticut learned a few days ago, a full statement saying that I thought this was a bad choice to go to. The administration, in my view, is opposed to it. But when pressed, could something like this happen, I should have been more careful in my selection of words. We need to be careful here in the language we are using at this very hearing.

And as I hear my colleague, he is raising some very good questions. But I think I heard the Chairman also describing this is not a desirable result we are looking at here. The desirable result is these institutions to be run and managed in private hands. That is the goal we are trying to achieve here. I think we need to be careful to make sure we are not going to contribute to the very outcome we are trying to avoid.

Senator CORKER. But I think the mechanism that is being put in place is a mechanism that absolutely means that none of the 20 major—19, 20 major banks in our country ever have the chance of being seized, and, in essence, that we are going to put whatever public capital in place once they do the appropriate amount of reserving that needs to take place, and I applaud you for doing that, to make sure that that doesn't occur, that they have proper capital ratios. That is what I am hearing——

Mr. BERNANKE. Senator, it is not a statement of principle or forever. Based on our knowledge of those banks and where they are and where we think they are going to come out, we believe this is the best way forward.

Senator CORKER. Isn't that tantamount to saying that for a period of time while all of this is occurring, in essence, the—and again, it is not a criticism, it is an observation—there is no need for private investment in these institutions, that we are going to go through a period of time where, in essence, the public sector, as it has been, but we are making now this sort of a statement now that for a period of time, the only viable avenue for these institutions is going to be the public sector, and we are just acknowledging that that is the case.

Mr. BERNANKE. It has been the case. If we hadn't had the TARP money in October, we would have had a global banking crisis. Many, many banks would have failed and the results would have been extremely bad.

Senator CORKER. And it seems to me that what we are throwing out is that notion that some folks have put forth—again, I am just observing—of creating some mechanism for these banks to actually be healthy now that is not going to happen, that in essence this good bank/bad bank scenario where someone actually proposed for the four largest banks they just create their own, where in essence the assets are separated from these institutions and people might actually invest in them. That idea is definitely not one of pursuit today.

Mr. BERNANKE. Senator, let me be clear. If there is a private sector solution, including private capital raised, that is great——

Senator CORKER. No, no, no, no.

Mr. BERNANKE. That is great.

Senator CORKER. This will be a public—I mean, the public sector would have to be involved, it seems, in helping create a good bank/bad bank, where they are separated. But the point is you are making a statement today that things of that nature, where we are actually going to try to separate these bad assets in that mechanism and actually calls people to invest in the good side of the bank, that thought process is not the pursuit of today.

Mr. BERNANKE. Senator, I don't want to speak for the Treasury about what might happen in terms of individual cases, but there is one issue with that bad bank that you are describing, which is that it is very difficult to value the assets that you put into the bad bank. One of the advantages of the private–public partnership asset purchase program is that we would hope to get market-based prices so the taxpayer wouldn't be overpaying for the assets which are, one way or another, made the responsibility of the government.

Senator CORKER. And I will stop. I know you have been very generous with the time, Mr. Chairman——

Chairman DODD. Let me ask this, if I can——

Senator CORKER. Let me just follow up with this last—I am stopping with this. It seems to me that all of us have talked about the need for the credit markets to function, and you have stated that on the front end and all the way through, and I know Chairman Dodd and Ranking Member Shelby have said the same thing. I see no event, based on what you just said, I see no event that changes the mix in any way to really cause that to occur. I mean, what I see is this sort of continuation of this sort of dead man walking, zombie bank, whatever you want, just sort of this going on for a period of time and there is nothing, no jolt of any kind that offers any kind of different scenario with our major institutions as I listen to what you are saying.

Mr. BERNANKE. I must not be very clear. I apologize. First of all, I think "zombie" was not an appropriate description for any of the banks. I think they all have substantial franchise value. They are all lending. They are all active. They have substantial international franchises. So I don't think that is an accurate description.

But the point I want to make is that even as we put capital into these banks, we are not standing by and letting them do what they want, to take risks or to continue to operate in an inefficient manner. We are going to be very tough on them to make sure, along with the private shareholders who still have an interest, that they take whatever drastic steps are necessary to restore themselves to profitability, and that is what is going to make them eventually interesting to private investors.

Chairman DODD. You know, I just want to—in picking up on the point, first of all—and this is, I think, a very important exchange because it is a critical question. The announcement of the stress itself has, I think, created stress in a sense in terms of how the private sector looks at the institutions, in terms of their willingness to provide the additional private capital, which is critical—ultimately what we are seeking here. So you might address that question.

And the public–private partnership idea is one that I think has some value, because if we are only talking about people coming and investing in entities that have Government guarantees to them one way or the other, whether it is treasuries or commercial paper, whatever the laundry list is of investments you can make and you are making them because there is a Government guarantee. Then it seems to me we are missing what ultimately needs to be done, and that is, getting capital to invest in those riskier investments that do not have the guarantees. Ultimately, that is the answer. And so the question is: How do we get closer to that model that attracts that private investment in the non-Government guaranteed instruments that are out there?

There are some ideas kicking around about creating a fund in a sense in the public–private partnership idea that would take qualified investors from hedge funds and money markets and others to begin to use their capital and public capital as a way of creating markets—a buyer and a seller. I mean, what we are missing here is the buyer and the seller. That is what creates a market. You do not create a market by Government action or Government regulation. You create a market when you have a buyer and a seller showing up and they decide to engage in a negotiation over the purchase of an instrument. And until that moment begins to happen, obviously we are buying the time to get to that point and trying to urge this along.

My colleague from Tennessee, who I have great admiration for and have immensely enjoyed my working relationship with, raises a very, very important question. I think we agree on where we are trying to get to, and I think you very cautiously raise the issues of which path are we sort of following here. What I hear you saying is, one, to try and make sure we have institutions around where we can actually perform, and simultaneously then create the opportunities through these public–private partnerships that have been suggested by some as a way of inducing that private capital to come in and that buyer and that seller to show up. And when the buyer and the seller show up, they start creating the markets, and these assets, then we can determine their value, these toxic assets, and credit begins to flow. And that to me is the heart of it all on how we get there.

Anyone who suggests that one path or the other guarantees us an outcome, but in the absence of providing the institutional framework by which you then can move seems to be a dangerous one if we do not be careful.

So I do not know if you want to comment on that at all or not, but I would give you a chance to respond to that.

Mr. BERNANKE. No, I think that is well put. I think we want to get as much certainty about the policy going forward so people understand the rules. There have been complaints about that, and it is well justified. We want to do what we can to both get the banks back on a profitable path, to get the bad assets off their books, and to make them attractive again. And I think you are absolutely right that that is the end game, when private money will start coming back in. And I am sure it will happen. The sooner, the better.

Chairman DODD. Let me ask you just one question I wanted to raise. And I appreciate, by the way, your point on the TARP, and I thank my colleague from Tennessee. He was critically helpful in that critical moment, those 14 days of trying to put something together that made some sense, and your point that had we not acted, we would be having a very different conversation in this room today, I think is what you are telling us. And we would be talking about not whether or not these institutions are going to be around. They would be gone, many of them. Is that correct?

Mr. BERNANKE. Yes.

Chairman DODD. Yes. The role of the Community Reinvestment Act, this item keeps on popping back up again. We had some lengthy debates in this Committee, as I was a junior Member of it when we went through with it. My good friend Phil Gramm of Texas was the Chair, and Phil and I did a lot of work together on a number of issues. But Phil the other day wrote another piece about the CRA is a fundamental issue, and yet I see in a February 12 study by the boss in the San Francisco Fed cited evidence showing that 60 percent of the higher-priced loans in that period of time we are talking about went to middle- and higher-income borrowers or neighborhoods not covered by the Community Reinvestment Act, that loans originated by the CRA-covered lenders were significantly less likely to be in foreclosure than those originated by lenders not covered by the CRA.

An October 14 study from the University of North Carolina and the Center for Community Capital showed that home loan borrowers with similar risk characteristics defaulted at much higher rates when they borrowed subprime mortgages than when they received community reinvestment loans.

Do you agree with that?

Mr. BERNANKE. Yes, that is what the Fed research shows. I think the number is that only 6 percent of the subprime delinquencies were based on mortgages made by CRA-covered institutions into CRA neighborhoods.

Chairman DODD. Yes.

Mr. BERNANKE. So, we know that mortgage brokers and others were very much involved in making those loans, and they are not covered by CRA.

Chairman DODD. But the underwriting standards in institutions dealing with community reinvestment are very tough. Do you agree with that? Well, not tough——

Mr. BERNANKE. I would not want to make a complete blanket statement, but certainly the banks which are more directly regulated, and Federal regulators, did a better job on average of underwriting mortgages than did the non-federally regulated lenders.

Chairman DODD. My colleague Senator Shelby has some comments.

Senator SHELBY. Mr. Chairman, a lot of people believe—and you have seen a lot of the writings—that the Fed and Treasury and others basically have exacerbated, compounded the problem for the banks by propping them up. In other words, I am going to back to the market. The market obviously believes that some of those banks—not all—maybe are insolvent, you know, have been insolvent basically by standard accounting stuff.

Wouldn't we be better off to close some of those banks rather than continue to prop them up and let the American people continue to believe—no confidence in them? In other words, they are not buying stock. They are not investing in the private banks because they do not trust them, you know, because they do not know what is in those portfolios. And when the Government, which is the Fed and others, get involved in that—I know you are the lender of last resort, and you are also a bank regulator. I understand all that. But aren't you sending a message out, like Senator Corker—that we are going to keep these banks open no matter what? How are you ever going to track private capital? And there is a lot of private capital, as you know, Mr. Chairman, on the sidelines now looking for an investment. But they are not investing in the banks because they do not trust the banks.

Mr. BERNANKE. The first step, Senator Shelby, I think is to get the clarity. Get the clarity.

Senator SHELBY. Transparency?

Mr. BERNANKE. Transparency. And there are two parts of this program that are going to do that. The first is the assessment that we are undertaking, and the second is what happens after the asset purchase program goes into place and takes assets off their balance sheets.

But, you know, Senator, we are following the law. The law has a very explicit set of rules under which we can go in and shut down a bank.

Senator SHELBY. We know that.

Mr. BERNANKE. We cannot just go shut down a bank that is well capitalized or meets capital standards.

Senator SHELBY. You should not ever do that. But we are talking about the banks that are insolvent or have no pulse, so to speak.

Mr. BERNANKE. I think there are a couple of issues, practical issues, that people need to pay attention to. One is just the great technical difficulty of shutting down an enormous holding company with many components, an international presence.

Senator SHELBY. We understand that.

Mr. BERNANKE. And the implications that would have for market function and market confidence. I think that would be enormous. And we saw some of that with Lehman Brothers, frankly.

The other is I think——

Senator SHELBY. We have seen some of that with AIG, haven't we?

Mr. BERNANKE. And with AIG. If I thought the banks were, you know, irrevocably damaged, I would have a different view. But I do believe that our major banks have significant franchise values. And one of the things that we have learned is that when the Government takes over a company, one of the things that happens immediately is that the counterparties start pulling away the franchise value, the brand name starts to erode very quickly.

And so I think, if through our regulatory process we can get the banks to perform better and to improve, then the time may come when, if they do not succeed in doing that, it will be appropriate to shut them down and so on. But for the moment, I think the right strategy is transparency, find out what we can about their true status, and to try to find the minimally disruptive way to get them into an improved condition. And I think those things are feasible right now.

Now, we certainly, as I said to Senator Corker, there is no commitment by any means to never shut down a big bank. Absolutely not. But I do believe that the major banks we have now can be stabilized, and in the near term, it is important to do so.

Senator SHELBY. Are we going down the road that Japan went down in a sense? Some people say we are. Some say we are not. In other words, they never confronted their banking problems in the 1990s. Have they——

Mr. BERNANKE. We have been very——

Senator SHELBY. Sir?

Mr. BERNANKE. I am sorry.

Senator SHELBY. Are we going down the same road in a sense?

Mr. BERNANKE. No, Senator. We——

Senator SHELBY. Propping up banks that are dead, so to speak?

Mr. BERNANKE. No, Senator. As I said, we are going to transparency. We want to find out what their true positions really are, and if we, the regulators, the Treasury, were to determine that a bank were really not viable, that would be a different question. But right now the view is that these assessments will determine how much capital they need to continue to lend and support the economy.

Senator SHELBY. Last, how do you get the market to believe that what you are doing is the right thing? Obviously, most of them do not. Most of the participants in the market that are keen observers do not believe in what you are doing with the banks, because look at the bank stocks.

Mr. BERNANKE. Well, there are a lot of factors affecting bank stocks, including uncertainty about what the Government might do.

Senator SHELBY. Sure.

Mr. BERNANKE. So I am not sure you can make that judgment. I think we have to go forward. We have to try to ascertain the state of the banks. We have to see what the situation really is. But my belief is that what we will come out with is capital that will allow these banks to continue and to provide the credit that we need and do so in a way that is not as disruptive to the markets as would be the alternative at this point.

Senator SHELBY. Thank you.

Chairman DODD. The last point I would make I think is very important. I think obviously the markets are skittish, and obviously there is a lot going on. And clarity is very important, the transparency you are talking about. I think the more people—Bob mentioned this earlier, and I wish I had said it myself at the outset. So much of what is missing is getting that sense of the framework, where are we. I think people understand how we got here. We can talk about that. But where are we? What needs to be done to get us moving in the right direction? And I think to the extent people understand that—they may not like it, but they understand it—then you do not get these kind of high volatility and jerking around that we see so often where one statement from one individual can have a significant impact on a market fluctuation. I think that is in a sense what happens when there is this lack of certainty or clarity, to the extent you can have certainty, obviously, in an environment like this.

I think these closing comments, while they have not involved a lot of people here, I think they have been tremendously valuable and important, and your responses to Senator Shelby I think have been very helpful as well on all of that. And I do think sometimes we—the markets are very important, obviously. We watch them every day. But I think too many times we look at only that every day as an indication of where things are going. And it is an important indication, but it is not the only indication of what is happening. And I think that is the point you were trying to make, and I welcome that.

We thank you very, very much——

Senator CORKER. Mr. Chairman, could I—this is not getting into an ideology discussion. The statement was made earlier that the Federal Reserve does not have the authority to close down a large institution. I think the Chairman may have been referring to AIG. I am not sure. But I am wondering if it would be good for him to clarify, and then since this Committee, I guess, would have something to do with that, if there is something that he is asking for, because what I would hate to happen is 2 years from now we end up in a situation, if it is AIG—he might have been talking about Citigroup. I do not know who he is talking about. I would love the clarification. But I would hate for us to wake up 2 years from now and the Fed be saying, well, we would have done it, but we did not have the authority to do it. And I am just wondering if he might clarify since that is an important——

Mr. BERNANKE. Senator, thank you. I have talked about this on a number of occasions. I think what is missing is a comprehensive resolution authority, a set of rules and guidelines which explains how the Government in general would address the potential failure of a systemically critical firm, like AIG, for instance.

Senator CORKER. So it could be Citigroup. It could be any firm.

Mr. BERNANKE. Right. The existing rules do not cover a Citigroup because that is a bank holding company with lots of different components. So we do not have a good framework for dealing with systemically critical firms. At the Fed we are working on some proposals. We would be happy to share them with you at some point. But I do think that that is the first step. Until it is safe to close down a big firm, you are going to be forced to take actions to avoid it. And as I said, I would be very happy to get rid of the 5 percent of my balance sheet which is tied up in these kinds of extraordinary rescue efforts.

So it is critical that we have a good resolution regime, and we are working hard on it and would be happy to share with you, Senator Corker——

Senator CORKER. So you are not asking—you are not going to come back in a year and say, well, we would have closed down X or AIG, but we do not have that authority, we are working toward that end?

Mr. BERNANKE. I am hoping this will be part of the broad reform package that is going forward.

Chairman DODD. And I think you made that clear in the past. The Lehman Brothers issue, I know there has been a highly controversial question, obviously. But there was a classic, where allowing that to default was certainly—that was within the authority.

Mr. BERNANKE. Well, we had no way to address it otherwise.

Chairman DODD. Yes. So there is, I think—it is a good question, but I think it has been answered by actions already that have occurred, as well as the statements you have made today.

Well, Mr. Chairman, it has been a long 4 hours, and I know you have got Budget Committee hearings later this week, so we hope this has been helpful in preparation for those hearings.

I would like as well at some point—stabilizing the financial system is obviously the critical question, and I think the Committee might be interested in the Fed's suggestions in terms of prioritizing the kinds of steps that we should be taking in this Committee. I would be very interested in your observations and those of your staff as to what sort of batting order you would like to see this Committee of jurisdiction over the financial institutions of the country to bring up and what are the most important issues we ought to address more quickly, and some will require probably some longer thought. And I privately have chatted with the Chairman about tapping into the expertise of the Federal Reserve System to talk about the modernization issues that many—or I think every Member of this Committee has an interest in, and how we proceed along those lines.

So we would like to call on the Federal Reserve's fine staff to get some sense of what you think we ought to be doing in what order as to how we ought to proceed. It would be helpful.

This has been very helpful, a good hearing. Thank you for being here.

[Whereupon, at 1:20 p.m., the hearing was adjourned.]

[Prepared statements, response to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF SENATOR TIM JOHNSON

Thank you, Chairman Bernanke for being here today. It is no exaggeration to say that our economy is currently undergoing a period of extraordinary stress and volatility. Unfortunately, I suspect we are not yet at the end of the road in terms the financial difficulties plaguing Americans.

I applaud the Federal Reserve for continuing to use its tools to lessen the impact of the recession, to decrease the volatility in the markets, and to unfreeze credit markets, but I have concerns that as the Federal Reserve expands its balance sheets and interest rates remain near zero, that the Fed will have fewer options and less flexibility than it has had over the past year. I am also concerned that some of these actions may perpetuate the idea that the government is in the business of propping up insolvent ventures when they go bad.

I am deeply interested in the Fed's economic forecast for 2009, and I look forward to hearing how the Fed will continue to address the problems plaguing our economy.

The crisis in our economy is real, and there is no question that more must be done to address the situation. I am committed to our Nation's economic recovery and to ensuring the safety and soundness of the financial sector without placing unnecessary burdens on the taxpayer. As this Committee works to address the crisis in our economy, we will continue to look to your expertise.

PREPARED STATEMENT OF BEN S. BERNANKE

CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

FEBRUARY 24, 2009

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

Recent Economic and Financial Developments and the Policy Responses

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

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

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

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

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

Faced with the significant deterioration in financial market conditions and a substantial worsening of the economic outlook, the Federal Open Market Committee (FOMC) continued to ease monetary policy aggressively in the final months of 2008, including a rate cut coordinated with five other major central banks. In December the FOMC brought its target for the federal funds rate to a historically low range of 0 to ¼ percent, where it remains today. The FOMC anticipates that economic conditions are likely to warrant exceptionally low levels of the Federal funds rate for some time.

With the Federal funds rate near its floor, the Federal Reserve has taken additional steps to ease credit conditions. To support housing markets and economic activity more broadly, and to improve mortgage market functioning, the Federal Reserve has begun to purchase large amounts of agency debt and agency mortgage-backed securities. Since the announcement of this program last November, the conforming fixed mortgage rate has fallen nearly 1 percentage point. The Federal Reserve also established new lending facilities and expanded existing facilities to enhance the flow of credit to businesses and households. In response to heightened stress in bank funding markets, we increased the size of the Term Auction Facility to help ensure that banks could obtain the funds they need to provide credit to their customers, and we expanded our network of swap lines with foreign central banks to ease conditions in interconnected dollar funding markets at home and abroad. We also established new lending facilities to support the functioning of the commercial paper market and to ease pressures on money market mutual funds. In an effort to restart securitization markets to support the extension of credit to consumers and small businesses, we joined with the Treasury to announce the Term Asset-Backed Securities Loan Facility (TALF). The TALF is expected to begin extending loans soon.

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

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

Federal Reserve Transparency

The Federal Reserve is committed to keeping the Congress and the public informed about its lending programs and balance sheet. For example, we continue to add to the information shown in the Fed's H.4.1 statistical release, which provides weekly detail on the balance sheet and the amounts outstanding for each of the Federal Reserve's lending facilities. Extensive additional information about each of the Federal Reserve's lending programs is available online. [1]The Fed also provides bimonthly reports to the Congress on each of its programs that rely on the section 13(3) authorities. Generally, our disclosure policies reflect the current best practices of major central banks around the world. In addition, the Federal Reserve's internal controls and management practices are closely monitored by an independent inspector general, outside private-sector auditors, and internal management and operations divisions, and through periodic reviews by the Government Accountability Office.

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

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

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

The Economic Outlook and the FOMC's Quarterly Projections

In their economic projections for the January FOMC meeting, monetary policy makers substantially marked down their forecasts for real GDP this year relative to the forecasts they had prepared in October. The central tendency of their most recent projections for real GDP implies a decline of ½ percent to 1¼ percent over the four quarters of 2009. These projections reflect an expected significant contraction in the first half of this year combined with an anticipated gradual resumption of growth in the second half. The central tendency for the unemployment rate in the fourth quarter of 2009 was marked up to a range of 8½ percent to 8¾ percent. Federal Reserve policymakers continued to expect moderate expansion next year, with a central tendency of 2½ percent to 3¼ percent growth in real GDP and a decline in the unemployment rate by the end of 2010 to a central tendency of 8 percent to 8¼ percent. FOMC participants marked down their projections for overall inflation in 2009 to a central tendency of ¼ percent to 1 percent, reflecting expected weakness in commodity prices and the disinflationary effects of significant economic slack. The projections for core inflation also were marked down, to a central tendency bracketing 1 percent. Both overall and core inflation are expected to remain low over the next 2 years.

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

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

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

To further increase the information conveyed by the quarterly projections, FOMC participants agreed in January to begin publishing their estimates of the values to which they expect key economic variables to converge over the longer run (say, at a horizon of 5 or 6 years), under the assumption of appropriate monetary policy and in the absence of new shocks to the economy. The central tendency for the participants' estimates of the longer-run growth rate of real GDP is 2½ percent to 2¾ percent; the central tendency for the longer-run rate of unemployment is 4¾ percent to 5 percent; and the central tendency for the longer-run rate of inflation is 1¾ percent to 2 percent, with the majority of participants looking for 2 percent inflation in the long run. These values are all notably different from the central tendencies of the projections for 2010 and 2011, reflecting the view of policymakers that a full recovery of the economy from the current recession is likely to take more than 2 or 3 years.

The longer-run projections for output growth and unemployment may be interpreted as the Committee's estimates of the rate of growth of output and the unemployment rate that are sustainable in the long run in the United States, taking into account important influences such as the trend growth rates of productivity and the labor force, improvements in worker education and skills, the efficiency of the labor market at matching workers and jobs, government policies affecting technological development or the labor market, and other factors. The longer-run projections of inflation may be interpreted, in turn, as the rate of inflation that FOMC participants see as most consistent with the dual mandate given to it by the Congress—that is, the rate of inflation that promotes maximum sustainable employment while also delivering reasonable price stability. This further extension of the quarterly projections should provide the public a clearer picture of the FOMC's policy strategy for promoting maximum employment and price stability over time. Also, increased clarity about the FOMC's views regarding longer-run inflation should help to better stabilize the public's inflation expectations, thus contributing to keeping actual inflation from rising too high or falling too low.

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

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

Q.1. The Federal Reserve announced the creation of a $200 billion Term Asset-Backed Securities Loan Facility in November 2008. Just 2 weeks ago, the Federal Reserve in conjunction with the Treasury Department, announced the expansion of the program to up to $1 trillion and the possible expansion of eligible collateral.

Given that we have not yet seen the first part of the program be an operational success, why did the Federal Reserve feel that it was necessary to announce an expansion of both volume and scope?

Why should we be convinced that this program is the most effective mechanism to unthaw securitization markets? Do we have a true understanding of why investors have pulled away to the degree they have? And if we don't know the reason, then how can we expect to design an appropriate remedy?

A.1. The Term Asset-Backed Securities Loan Facility (TALF) was initially announced on November 25, 2008. In its initial stage, eligible collateral for TALF loans included AAA-rated newly issued asset-backed securities (ABS) backed by student loans, auto loans, credit card loans, and Small Business Administration (SBA) guaranteed loan.

The first TALF operation took place on March 17, 2009. The 4 months between announcement and operation reflected in part the time necessary to design the operational infrastructure of the program, but during that period the Federal Reserve also consulted with investors, issuers, and rating agencies about the asset classes included as eligible collateral as we developed the specific terms and conditions for the program.

The initial set of eligible collateral was chosen with a view toward increasing the availability of credit to small businesses and households. The initial $200 billion ceiling for the program reflected our estimate of the likely activity with the approved collateral list over the announced period of operation—through December 31, 2009.

The dysfunction in the asset-backed securities markets has had adverse effects on credit markets other than those for consumer and small business credit. For example, secondary markets for securities backed by commercial and nonconforming residential mortgages have been experiencing severe strain, and the availability of other certain types of business credit that has often been securitized in the past has diminished greatly. The announced expansion of the program is intended to facilitate issuance of securities backed by loans to those other sectors. We recognized that in order to accommodate the potential lending against the broader set of collateral, an increase in the overall size of the facility could be necessary.

The announcement of the expansion preceded the first initial operation because of the urgency of encouraging lending to these other sectors. Our announcement that consideration was being given to expanding the facility likely provided some additional support, at the margin, for the residential and commercial mortgage-backed securities markets. Also, given the considerable lead time that it takes to develop terms and conditions for each asset class that both encourage ABS issuance and protect the taxpayer, it was important to announce the possible expansions as quickly as possible.

The abrupt decline in new issuance of ABS reflected in large part two developments. First, the availability of leverage to ABS investors has contracted significantly because of the balance-sheet constraints now being faced by many major banking firms. Second, many traditional investors in AAA tranches of ABS have exited the market because of concern about the possibility of a severe recession and a sharp rise in defaults on loans to business and households. The TALF provides leverage to encourage new investors to purchase ABS. In addition, because the loans are provided on a non-recourse basis, the facility limits the potential losses of the investors to the amount by which the value of the ABS financed by the TALF loan exceeded the loan amount (the haircut). Although those haircuts have been chosen to reduce to only negligible levels the odds that the government will incur a loss on the facility overall, the program provides a degree of downside protection for investors on each asset financed.

Q.2. According to information already released, the Term Asset-Backed Securities Lending Facility (TALF) will only accept newly originated assets and would require the credit rating agencies to rate the underlying securities. This system seems to attempt to mirror the general structure of the securitization market. There is concern, however, that the same credit rating agencies who were responsible for placing a "AAA" rating on now toxic structured products will be relied on once again to rate these securities.

What steps is the Federal Reserve taking to ensure that underlying assets are appropriately underwritten?

Is the Fed prepared to dictate the terms to ensure that these loans, at minimum, comply with federal underwriting guidelines?

A.2. The Federal Reserve has discussed with the rating agencies the methodologies that they follow to rate the ABS accepted as collateral at the program. In general, rating agencies have taken steps that have led to tighter underwriting standards and stricter ratings criteria. In addition, the Federal Reserve requires that each ABS issuer hire an external auditor that must provide an opinion, using examination standards, that management's assertions concerning key collateral eligibility requirements are fairly stated in all material respect.

TALF investors also serve an important ongoing role in price discovery and assessing risk through their ability to demand greater credit enhancements or price concessions. In particular, the sale of securities through TALF in an arms-length transaction is an independent check not only on the underwriting practices of the issuer, but also of the efficacy of rating agency methodologies.

There are no Federal underwriting standards for the loans backing the collateral accepted at the TALF. The TALF does not currently accept collateral backed by home mortgages. If residential mortgage-backed securities were to become eligible collateral for the TALF, we would require that the loans backing the securities comply with Federal underwriting standards.

Q.3. Your testimony notes that the United States has no well-specified set of rules for dealing with the potential failure of a systemically critical non-depository financial institution. I would agree that we need to address the too-big-to-fail issue, both for banks and other financial institutions. You have suggested the need for a resolution regime that allows the government to have a pre-defined process for resolving a non-bank financial firm that is systemically critical.

Are you suggesting that non-bank financial firms must be dealt with in a manner other than changes to the bankruptcy process; that is, do we have to go to a receiver-like approach similar to FDIC?

If so, how do we deal with the moral hazard implications?

If not, what are other tools we could look at to address the current lack of resolution regime?

A.3. Although the Bankruptcy Code works well in the vast majority of situations, it is not designed to mitigate systemic consequences and, in some cases, the bankruptcy process may exacerbate the shocks to the financial system that may result from the failure of a systemically important nonbank financial institution. For example, the delays in the bankruptcy process that are designed to give the debtor "breathing room" to develop and propose a reorganization plan can be especially harmful to financial firms because uncertainty with respect to any large financial firm can have negative consequences for financial markets which are compounded as the uncertainty persists. In addition, the bankruptcy process does not currently provide a clear mechanism for the government to ensure that the institution is resolved in a way that achieves financial market stability and limits costs to taxpayers. Congress has in the past established alternative resolution regimes outside of the Bankruptcy Code for financial institutions where the public has a strong interest in managing and ensuring an orderly resolution process, such as in the Federal Deposit Insurance Act for insured depository institutions and in the Housing and Economic Recovery Act for government-sponsored enterprises. As I have indicated, these frameworks can serve as a useful model for developing a framework for the resolution of systemically important nonbank financial institutions.

The issue of moral hazard is an extremely important consideration in developing any such regime for resolving systemically important nonbank financial institutions. Any proposed regime must carefully balance the need for swift and comprehensive government action to avoid systemic risk against the need to avoid creating moral hazard on the part of the large institutions that would be subject to the regime. A proposed regime could require a very high standard for invoking the resolution authority, because of the potential cost and to mitigate moral hazard. The process to invoke the authority could also include appropriate checks and balances, including input from multiple parts of the government, to ensure that it is invoked only when necessary while still maintaining the ability to act swiftly when needed to minimize systemic risk. The systemic risk exception to the least-cost resolution requirements of the Federal Deposit Insurance Act could provide a good example of the embodiment of such a process in existing law. Importantly, the establishment of a new resolution process for systemically important nonbank financial institutions may help reduce moral hazard by providing the government with the tools needed to resolve even the largest financial institutions in a way that both addresses systemic risks and allows the government to impose haircuts on creditors in appropriate circumstances. While a new framework for systemically important nonbank financial institutions is a critical component of any agenda to address systemic risk and the too-big-to-fail problem, other steps also need to be taken to address these issues. These include ensuring that all systemically important nonbank financial institutions are subject to a robust framework for consolidated supervision; strengthening the financial infrastructure; and providing the Federal Reserve explicit authority to oversee systemically important payment, clearing and settlement systems for prudential purposes.

Q.4. The Obama administration, along with several of my colleagues here in the Senate, have proposed allowing bankruptcy judges to cramdown the value of mortgages to reflect declines in home prices. The Federal Reserve, primarily through its purchases of GSE MBS, is becoming one of the largest holders of residential MBS.

Has the Federal Reserve estimated the size of potential losses to the Fed's MBS holdings, if judges were allowed to cramdown mortgages?

What signal do you believe this sends to potential investors in MBS, were Congress to re-write the contractual environment underlying these mortgages?

A.4. As noted by your question, the vast majority of mortgage-backed securities (MBS) held by the Federal Reserve are agency MBS. The payment of principal and interest on agency MBS is guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae. Bankruptcy cramdowns do not affect investors in MBS guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae because the agency MBS investors would be made whole by the government-sponsored enterprises. Thus, the Federal Reserve holdings of agency MBS would not be affected by bankruptcy cramdowns for mortgages, although such legislation might have negative consequences for Fannie Mae, Freddie Mac, and the Federal Housing Administration (FHA). (The FHA insures the mortgages securitized by Ginnie Mae.)

Private-label MBS are governed by trust agreements. Some private-label MBS contain so-called "bankruptcy carve-out" provisions requiring that losses stemming from bankruptcies be shared across the different tranches of the securities. The implication is that the investors holding the AAA-rated tranches would bear some of the losses from these principal write-downs, depending on the nature of the trusts agreements. The Federal Reserve has made loans to support its Maiden Lane Facilities, which were used to offset the systemic risks associated with recent financial market disruptions. Among the collateral for these loans are AAA-rated tranches of private-label securities, as well as some collateralized debt obligations (CDOs) that are backed by AAA-rated tranches of private-label securities. At present, our assessment is that the possible loss associated with these MBS holdings from possible bankruptcy cramdown legislation is relatively small.

With respect to current mortgage borrowers, providing bankruptcy judges with the ability to adjust mortgage terms and reduce outstanding principal could potentially result in more sustainable mortgage obligations for some borrowers and thus help reduce preventable foreclosures. Such an approach has several advantages. In particular, because of the costs and stigma of filing for bankruptcy, mortgage borrowers who do not need help may be unlikely to turn to the bankruptcy system for relief. In addition, bankruptcy judges may also be able to assess the extent to which a borrower truly needs assistance. Moreover, because the bankruptcy system is already in place, this approach could be implemented with little financial outlay from the taxpayer.

Whether mortgage cramdowns are advantageous in the long-run is less clear. Such cramdowns could potentially restrict access to mortgage credit for some borrowers, and might have implications for investors in other types of loans because of the change in the loan's relative status during the course of bankruptcy. Potential investors, either in private-label MBS investors or in other types of loans, might view these changes in the bankruptcy code as raising the costs associated with servicing defaulted borrowers in the future if investors perceived such changes as permanent and broad-ranging, or if these changes altered investors' expectations about the government's willingness to make similar changes in the future. In this case, mortgage cramdowns might have longer-lasting effects on credit availability, and possibly impose higher costs on future borrowers through higher interest rates and more stringent lending standards.

Q.5. In a recent speech, you stated that the Fed's new longer-term projections of inflation should be interpreted as the rate of inflation that FOMC participants believe will promote maximum sustainable employment and reasonable price stability. Some commentators have said that central banks using a long-term inflation target should incorporate the adverse consequences of asset-price bubbles in their deliberations.

Does the FOMC presently incorporate the possibility of asset price bubbles during deliberations on the inflation target?

Did the FOMC include asset price bubbles in past deliberations?

A.5. Conditions in financial markets, including the possibility that asset prices exceed fundamental values, are always discussed at FOMC meetings. High asset values tend to put upward pressure on economic activity and the broader price level. In order to achieve its mandated objectives, the FOMC may need to tighten policy when this pressure threatens to push inflation above desired levels. However, it is exceedingly difficult to judge in real time whether asset prices are deviating from their fundamental values. Indeed, if such a judgment were easy, bubbles would never happen. However, regardless of whether a bubble exists or not, the FOMC does factor in the effects of asset prices on the economy when it sets monetary policy. Generally speaking, this means that interest rates tend to rise when asset prices are increasing to offset the inflationary impact of high asset prices and that interest rates tend to fall after bubbles burst to offset the contractionary effects of falling asset prices on employment.

Q.6. I have some concerns about the pro-cyclicality of our present system of accounting and bank capital regulation. Some commentators have endorsed a concept requiring banks to hold more capital when good conditions prevail, and then allow banks to temporarily hold less capital in order to not restrict access to credit during a downturn. Advocates of this system believe that counter cyclical policies could reduce imbalances within financial markets and smooth the credit cycle itself.

What do you see as the costs and benefits of adopting a more counter cyclical system of regulation?

Do you see any circumstances under which the Federal Reserve would take a position on the merits of counter cyclical regulatory policy?

A.6. The Federal Reserve has long advocated the need for banks to maintain sufficient levels of capital so they can weather unexpected shocks without interrupting the provision of credit and other financial services to customers. Historically, the challenge has been translating this broad principle into regulatory and supervisory standards that are workable, balanced, and compatible with a level, competitive playing field, both domestically and internationally. Capital is a relatively costly source of funding for banks, and higher capital requirements for banks will tend to raise their costs relative to those of competitors. Against this cost, there is a need to balance the benefits of higher capital in terms of lower risk to the safety net and enhanced financial and economic stability. However, these benefits are more uncertain and difficult to quantify. Likewise, while most would agree that a bank should maintain capital commensurate with its underlying risk taking, the quantification of risk is imprecise and inherently subjective. There is also uncertainty regarding how financial markets would react to changes in the capital framework and, in particular, whether higher capital buffers accumulated in good times would simply result in higher *de facto* minimum standards during downturns. In the past, it has been difficult reaching agreement on major changes to the bank capital framework, reflecting different views on how best to deal with these uncertainties (*e.g.,* Pillar 1 versus Pillar 2 versus Pillar 3; hardwired formulas versus discretion; simple rules-of-thumb versus sophisticated risk models).

Nevertheless, an international consensus appears to be emerging that the bank regulatory capital framework needs to be made more counter-cyclical, and such an initiative is currently being undertaken by the Basel Committee on Banking Supervision and Regulation. The Federal Reserve strongly supports and is actively involved in this initiative. While this effort faces many of the same challenges noted above, there is now greater appreciation of both the importance of promoting more counter-cyclical capital policies at banks and, we believe, the need to find a workable way forward on this issue.

The Federal Reserve also supports initiatives currently under way at the Financial Accounting Standards Board and the International Accounting Standards Board (consistent with the recommendations of the Financial Stability Forum, now Financial Stability Board) to consider improvements to loan loss provisioning standards. These improvements would consider a broader range of credit quality information over the economic cycle to recognize losses earlier in the cycle. Similar to the requirements for capital buffers, the requirements for provisions would need to be set at a practical level and calculated in a readily transparent manner. Ideally, the requirement would need to be applied internationally to have the desired effect. In addition, enhancements to the income tax code to allow greater deductibility of provisions in line with the accounting treatment would also aid in this effort.

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

Q.1. I am very concerned that the Fed's tools could become limited and less flexible, and that the Fed's ability to stimulate the economy given an effective zero interest rate is hindered. What role will the Fed play going forward in our economic recovery?

A.1. The Federal Reserve does not lose its ability to provide macroeconomic stimulus when short-term interest rates are at zero. However, when rates are this low, monetary stimulus takes nontraditional forms. The Federal Reserve has announced many new programs over the past year-and-a-half to support the availability of credit and thus help buoy economic activity. These programs are helping to restore the flow of credit to banks, businesses, and consumers. They are also helping to keep long-term interest rates and mortgage rates at very low levels. The Federal Reserve will continue to use these tools as needed to help the economy recover and prevent inflation from falling to undesirably low levels.

Q.2. As part of the White House's new housing plan, the administration suggests changes to the bankruptcy law to allow judicial modification of home mortgages. Do you believe "cramdown" could affect the value of mortgage backed securities and how they are rated? Will bank capital be impacted if ratings on securities change? Is it better for consumers to get a modification from their servicer or through bankruptcy?

A.2. The Federal Reserve Board and other banking agencies have encouraged federally regulated institutions to work constructively with residential borrowers at risk of default and to consider loan modifications and other prudent workout arrangements that avoid unnecessary foreclosures. Loss mitigation techniques, including loan modifications, that preserve homeownership are generally less costly than foreclosure, particularly when applied before default. Such arrangements that are consistent with safe and sound lending practices are generally in the long-term best interest of both the financial institution and the borrower. (See *Statement on Loss Mitigation Strategies for Servicers of Residential Mortgages,* released by banking agencies on September 5, 2007.)

Modifications in these contexts would be voluntary on the part of the servicer or holder of the loan. Although various proposals have circulated regarding so-called "cramdown," the common theme of the proposals would permit judicial modification of the mortgage contract in circumstances where the borrower has filed for bankruptcy. These proposals present a number of challenging and potentially competing issues that should be carefully weighed. These issues include whether borrower negotiation with the servicer or loan holder is a precondition to judicial modification, the impact on risk assessment of the underlying obligation by holders of mortgage loans, and the appropriateness of permitting modification decisions by parties other than the holders of the loan or their servicers. Whether a borrower would be better off with a modification from a servicer or through bankruptcy would depend on many factors including the circumstances of the individual borrower, the terms of the modification, and the conditions governing any judicial modification in a bankruptcy proceeding.

In general, when a depository institution is a holder of a security, the capital of the institution would likely be affected if the security is downgraded. How bankruptcy would impact the servicer would depend in part on the securitization documents treatment of the mortgage loans affected by bankruptcies under the relevant pooling and servicing agreements and the obligations of the servicer with respect to those loans. In addition, because the terms that might govern judicial modification in a bankruptcy proceeding have not been established, it is not clear how the value of mortgage-backed securities in general would be affected by changes to the bankruptcy laws that would permit judicial modification of mortgages.

Q.3. There is pressure to move quickly and reform our financial regulatory structure. What areas should we address in the near future and which areas should we set aside until we realize the full cost of the economic fallout we are currently experiencing?

A.3. The experience over the past 2 years highlights the dangers that systemic risks may pose not only to financial institutions and markets, but also for workers, households, and non-financial Businesses. Accordingly, addressing systemic risk and the related problem of financial institutions that are too big to fail should receive priority attention from policymakers. In doing so, policymakers must pursue a multifaceted strategy that involves oversight of the financial system as a whole, and not just its individual components, in order to improve the resiliency of the system to potential systemic shocks.

This strategy should, among other things, ensure a robust framework for consolidated supervision of all systemically important financial firms organized as holding companies. The current financial crisis has highlighted that risks to the financial system can arise not only in the banking sector, but also from the activities of financial firms, such as insurance firms and investment banks, that traditionally have not been subject to the type of consolidated supervision applied to bank holding companies. Broad-based application of the principle of consolidated supervision would also serve to eliminate gaps in oversight that would otherwise allow risk-taking to migrate from more-regulated to less-regulated sectors.

In addition, a critical component of an agenda to address systemic risk and the too-big-to-fail problem is the development of a framework that allows the orderly resolution of a systemically important nonbank financial firm and includes a mechanism to cover the costs of such a resolution. In most cases, the Federal bankruptcy laws provide an appropriate framework for the resolution of nonbank financial institutions. However, the bankruptcy laws do not sufficiently protect the public's strong interest in ensuring the orderly resolution of nondepository financial institutions when a failure would pose substantial systemic risks. Besides reducing the potential for systemic spillover effects in case of a failure, improved resolution procedures for systemically important firms would help reduce the too-big-to-fail problem by narrowing the range of circumstances that might be expected to prompt government intervention to keep a firm operating.

Policymakers and experts also should carefully review whether improvements can be made to the existing bankruptcy framework that would allow for a faster and more orderly resolution of financial firms generally. Such improvements could reduce the likelihood that the new alternative regime would need to be invoked or government assistance provided in a particular instance to protect financial stability and, thereby, could promote market discipline.

Another component of an agenda to address systemic risks involves improvements in the financial infrastructure that supports key financial markets. The Federal Reserve, working in conjunction with the President's Working Group on Financial Markets, has been pursuing several initiatives designed to improve the functioning of the infrastructure supporting credit default swaps, other OTC derivatives, and tri-party repurchase agreements. Even with these initiatives, the Board believes additional statutory authority is needed to address the potential for systemic risk in payment and settlement systems. Currently, the Federal Reserve relies on a patchwork of authorities, largely derived from our role as a banking supervisor, as well as on moral suasion to help ensure that critical payment and settlement systems have the necessary procedures and controls in place to manage their risks. By contrast, many major central banks around the world have an explicit statutory basis for their oversight of these systems. Given how important robust payment and settlement systems are to financial stability, and the functional similarities between many such systems, a good case can be made for granting the Federal Reserve explicit oversight authority for systemically important payment and settlement systems.

The Federal Reserve has significant expertise regarding the risks and appropriate risk-management practices at payment and settlement systems, substantial direct experience with the measures necessary for the safe and sound operation of such systems, and established working relationships with other central banks and regulators that we have used to promote the development of strong and internationally accepted risk management standards for the full range of these systems. Providing such authority would help ensure that these critical systems are held to consistent and high prudential standards aimed at mitigating systemic risk.

Financial stability could be further enhanced by a more explicitly macroprudential approach to financial regulation and supervision in the United States. Macroprudential policies focus on risks to the financial system as a whole. Such risks may be crosscutting, affecting a number of firms and markets, or they may be concentrated in a few key areas. A macroprudential approach would complement and build on the current regulatory and supervisory structure, in which the primary focus is the safety and soundness of individual institutions and markets. One way to integrate a more macroprudential element into the U.S. supervisory and regulatory structure would be for the Congress to direct and empower a governmental authority to monitor, assess, and, if necessary, address potential systemic risks within the financial system.

Such a systemic risk authority could, for example, be charged with (1) monitoring large or rapidly increasing exposures—such as to subprime mortgages—across firms and markets; (2) assessing the potential for deficiencies in evolving risk-management practices, broad-based increases in financial leverage, or changes in financial markets or products to increase systemic risks; (3) analyzing possible spillovers between financial firms or between firms and markets, for example through the mutual exposures of highly interconnected firms; (4) identifying possible regulatory gaps, including gaps in the protection of consumers and investors, that pose risks for the system as a whole; and (5) issuing periodic reports on the stability of the U.S. financial system, in order both to disseminate its own views and to elicit the considered views of others. A systemic risk authority likely would also need an appropriately calibrated ability to take measures to address identified systemic risks—in coordination with other supervisors, when possible, or independently, if necessary. The role of a systemic risk authority in the setting of standards for capital, liquidity, and risk-management practices for the financial sector also would need to be explored, given that these standards have both microprudential and macroprudential implications.

Q.4. How should the government and regulators look to mitigate the systemic risks posed by large interconnected financial companies? Do we risk distorting the market by identifying certain institutions as systemically important? Should the Federal Reserve step into the role as a systemic regulator or should this task be given to a different entity.

A.4. As discussed in response to Question 3, I believe there are several important steps that should be part of any agenda to mitigate systemic risks and address the problem caused by institutions that are viewed as being too big to fail. Some of these actions—such as an improved resolution framework—would be focused on systemically important financial institutions, that is, institutions the failure of which would pose substantial risks to financial stability and economic conditions. A primary—though not the sole focus—of a systemic risk authority also likely would include such financial institutions.

Publicly identifying a small set of financial institutions as "systemically important" would pose certain risks and challenges. Explicitly and publicly identifying certain institutions as systemically important likely would weaken market discipline for these firms and could encourage them to take excessive risks—tendencies that would have to be counter-acted by strong supervisory and regulatory policies. Similarly, absent countervailing policies, public designation of a small set of firms as systemically important could give the designated firms a competitive advantage relative to other firms because some potential customers might prefer to deal with firms that seem more likely to benefit from government support in times of stress. Of course, there also would be technical and policy issues associated with establishing the relevant criteria for identifying systemically important financial institutions especially given the broad range of activities, business models and structures of banking organizations, securities firms, insurance companies, and other financial institutions.

Some commentators have proposed that the Federal Reserve take on the role of systemic risk authority; others have expressed concern that adding this responsibility might overburden the central bank. The extent to which this new responsibility might be a good match for the Federal Reserve depends a great deal on precisely how the Congress defines the role and responsibilities of the authority, as well as on how the necessary resources and expertise complement those employed by the Federal Reserve in the pursuit of its long-established core missions. As a practical matter, effectively identifying and addressing systemic risks would seem to require the involvement of the Federal Reserve in some capacity, even if not in the lead role. The Federal Reserve traditionally has played a key role in the government's response to financial crises because it serves as liquidity provider of last resort and has the broad expertise derived from its wide range of activities, including its role as umbrella supervisor for bank and financial holding companies and its active monitoring of capital markets in support of its monetary policy and financial stability objectives.

Q.5. The largest individual corporate bailout to date has not been a commercial bank, but an insurance company. What steps has the Federal Reserve taken to make sure AIG is not perceived as being guaranteed by the Federal government?

A.5. In light of the importance of the American International Group, Inc (AIG) to the stability of financial markets in the recent deterioration of financial markets and continued market turbulence generally, the Treasury and the Federal Reserve have stated their commitment to the orderly restructuring of the company and to work with AIG to maintain its ability to meet its obligations as they come due. In periodic reports to Congress submitted under section 129 of the Emergency Economic Stabilization Act of 2008, in public reports providing details on the Federal Reserve financial statements, and in testimony before Congress and other public statements, we have described in detail our relationship to AIG, which is that of a secured lender to the company and to certain special purpose vehicles related to the company. These disclosures include the essential terms of the credit extension, the amount of AIG's repayment obligation, and the fact that the Federal Reserve's exposure to AIG will be repaid through the proceeds of the company's disposition of many of its subsidiaries. Neither the Federal Reserve, nor the Treasury, which has purchased and committed to purchase preferred stock issued by AIG, has guaranteed AIG's obligations to its customers and counterparties.

Moreover, the Government Accountability Office has inquired into whether Federal financial assistance has allowed AIG to charge prices for property and casualty insurance products that are inadequate to cover the risk assumed. Although the GAO has not drawn any final conclusions about how financial assistance to AIG has impacted the overall competitiveness of the property and casualty insurance market, the GAO reported that the state insurance regulators the GAO spoke with said they had seen no indications of inadequate pricing by AIG's commercial property and casualty insurers. The Pennsylvania Insurance Department separately reported that it had not seen any clear evidence of under-pricing of insurance products by AIG to date.

Q.6. Given the critical role of insurers in enabling credit transactions and insuring against every kind of potential loss, and the size and complexity of many insurance companies, do you believe that we can undertake serious market reform without establishing federal regulation of the insurance industry?

A.6. As noted above, ensuring that all systemically important financial institutions are subject to a robust framework—both in law and practice—for consolidated supervision is an important component of an agenda to address systemic risks and the too-big-to-fail problem. While the issue of a Federal charter for insurance is a complex one, it could be useful to create a Federal option for insurance companies, particularly for large, systemically important insurance companies.

Q.7. What effect do you believe the new Fed rules for credit cards will have on the consumer and on the credit card industry?

A.7. The final credit card rules are intended to allow consumers to access credit on terms that are fair and more easily understood. The rules seek to promote responsible use of credit cards through greater transparency in credit card pricing, including the elimination of pricing practices that are deceptive or unfair. Greater transparency will enhance competition in the marketplace and improve consumers' ability to find products that meet their needs From the perspective of credit card issuers, reduced reliance on penalty rate increases should spur efforts to improve upfront underwriting. While the Board cannot predict how issuers will respond, it is possible that some consumers will receive less credit than they do today. However, these rules will benefit consumers overall because they will be able to rely on the rates stated by the issuer and can therefore make informed decisions regarding the use of credit.

Q.8. The Fed's new credit card rules are not effective until July 2010. We have heard from some that this is too long and that legislation needs to be passed now to shorten this to a few months. Why did the Fed give the industry 18 months put the rules in place?

A.8. The final rules represent the most comprehensive and sweeping reforms ever adopted by the Board for credit card accounts and will apply to more than 1 billion accounts. Given the breadth of the changes, which affect most aspects of credit card lending, card issuers must be afforded ample time for implementation to allow for an orderly transition that avoids unintended consequences, compliance difficulties, and potential liabilities.

- To comply with the final rules, card issuers must adopt different business models and pricing strategies and then develop new credit products. Depending on how business models evolve, card issuers may need to restructure their funding mechanisms.

- In addition to these operational changes, issuers must revise their marketing materials, application and solicitation disclosures, credit agreements, and periodic statements so that the documents reflect the new products and conform to the rules.
- Changes to the issuers' business practices and disclosures will involve extensive reprogramming of automated systems which subsequently must be tested for compliance, and personnel must receive appropriate training.

Although the Board has encouraged card issuers to make the necessary changes as soon as practicable, an 18-month compliance period is consistent with the nature and scope of the required changes.

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

Q.1. Under the $700 billion TARP package and the recent $788 billion stimulus bill, the Federal government is spending hundreds of billions of taxpayer dollars to support the financial institutions at the center of the economic storm. Many of these same companies are now targets of securities class action lawsuits seeking hundreds of billions of dollars. In fact, the companies that, to date, have received the most governmental assistance have been deluged with a wave of lawsuits—suits that typically duplicate ongoing enforcement investigations by Federal prosecutors and the SEC.

- I'm told that private securities class action filings in 2008 reached their highest levels in 6 years; the number of filings increased almost 40 percent from the previous year.
- Also, financial institutions were named as defendants in half of the new private class actions filed in 2008 (*Cornerstone Research, Securities Class Action Filings, 2008: A Year in Review* 2 (Jan. 6, 2009)) and nearly every single entity that has obtained more than $100 million in governmental assistance is already a defendant in one or more securities class actions based on allegations related to the current economic crisis.
- Almost 75 percent of the TARP funds expended have gone to financial institutions named as defendants in recent securities class actions.

The huge costs associated with these lawsuits mean that billions of dollars in taxpayer funds will not be used to increase lending, but rather will be paid out in legal fees—both plaintiff and defense—and lawsuit settlements. And taxpayers will be less likely to recover their investments in companies weakened by large costs imposed by these class actions.

I strongly support government enforcement actions against wrongdoers, accompanied by stiff penalties. Federal prosecutors and the SEC today have broad power to initiate such actions; to the extent there are gaps in their authority, those gaps should be filled.

But I wonder whether we should be doing something to guard against the risk that taxpayer dollars intended to support increased lending will be drained from TARP recipients by the tremendous legal expenses—including the high costs of settlement—caused by private securities class action lawsuits? Aren't these lawsuits effectively job destroyers by diverting the TARP funds from their job creating purposes—won't taxpayers have to invest still more money to reinvigorate lending to businesses and consumers? And won't the diversion of these funds mean an increased risk that taxpayers may not get their money back from some TARP-assisted institutions, or at least that the time for repayment will be longer?

A.1. The financial institutions that receive funds from the Troubled Asset Relief Program (TARP) continue to operate as private enterprises and continue to be subject to the same laws and regulations that apply to institutions that do not receive funds from the TARP. The institutions that have received TARP funds must bear any costs associated with compliance with applicable laws. Concerns about abusive practices in the filing of private lawsuits arising under the securities laws prompted Congress to enact litigation reform legislation several years ago. We believe that any additional legislative initiatives to consider securities litigation reform should cover all institutions that are subject to those laws.

Q.2. Chairman Bernanke, I want to thank you and the dedicated professionals at the Fed for all your hard work on the credit card rules—UDAP, Reg AA, Reg Z—released on December 18, 2008. As with several of my colleagues, we appreciate the delicate balance the Fed is trying to reach in protecting consumers against unfair practices while trying to make sure the regulations do not further limit the availability of credit.

Along those lines, can you please provide for me background on the UDAP rule's impact on the ability of retailers in my state to offer "no interest" financing? I have heard from them that this financing option is very popular with consumers—especially now—and helps them be able to afford large ticket items like appliances, home repairs, computers, *etc.* Simply put, will retailers be able to continue to offer this type of financing option to their customers after the July 1, 2010, effective date? What about the millions of accounts in place—some of which may expire after the effective date? I would appreciate the Fed working with retailers and credit providers to come up with a simple and fair way for them to offer "no interest" financing going forward. Thank you.

A.2. In the final rule addressing unfair and deceptive credit card practices, the Board, the Office of Thrift Supervision (OTS), and the National Credit Union Administration (NCUA) (collectively, the Agencies) expressed concern regarding deferred interest programs that are marketed as "no interest" but charge the consumer interest if purchases made under the program are not paid in full by a specified date or if the consumer violates the account terms prior to that date (which could include a "hair trigger" violation such as paying one day late). In particular, the Agencies noted that, although these programs provide substantial benefits to consumers who pay the purchases in full prior to the specified date, the "no interest" marketing claims may cause other consumers to be unfairly surprised by the increase in the cost of those purchases. Accordingly, the Agencies concluded that prohibiting deferred interest programs as they are currently marketed and structured would improve transparency and enable consumers to make more informed decisions regarding the cost of using credit.

The Agencies specifically stated, however, that the final rule permits institutions to offer promotional programs that provide similar benefits to consumers but do not raise concerns about unfair surprise. For example, the Agencies noted that an institution could offer a program where interest is assessed on purchases at a disclosed rate for a period of time but the interest charged is waived or refunded if the principal is paid in full by the end of that period.

The Board understands that the distinction in the final rule between "deferred interest" and "waived or refunded interest" has caused confusion regarding how institutions should structure these types of promotional programs where the consumer will not be obligated to pay interest that accrues on purchases if those purchases are paid in full by a specified date. For this reason, the Board is consulting with the OTS and NCUA regarding the need to clarify that the focus of the final rule is not on the technical aspects of these promotional programs (such as whether interest is deferred or waived) but instead on whether the programs are disclosed and structured in a way that consumers will not be unfairly surprised by the cost of using the programs. The Agencies are also considering whether clarification is needed regarding how existing deferred interest plans should be treated as of the final rule's July 1, 2010, effective date. If the Agencies determine that clarifications to the final rule are necessary, those changes will assist institutions in understanding and complying with the new rules and should not reduce protections for consumers.

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

Q.1. Chairman Bernanke, as you may know, I strongly support comprehensive credit card reform, including S. 414 introduced by Chairman Dodd which would strengthen and expedite (up from July 1, 2010) many of the provisions in the final UDAP-Reg AA-Reg Z rule published last December by the Federal Reserve such as universal default, double-cycle billing, exorbitant overdraft fees, *etc.* S. 414 does not address the issue of "deferred interest" or "no interest" financing but I understand the final UDAP rule does attempt to address it and the complexity of the issue has some retailers concerned. Can you please clarify for me the impact of this proposal on consumers and businesses who use "no interest" financing? I understand the impact to be very large and I would appreciate the Fed working with retailers to clarify that "no interest" financing can be used in the future albeit with revised disclosures and marketing.

A.1. In the final rule addressing unfair and deceptive credit card practices, the Board, the Office of Thrift Supervision (OTS), and the National Credit Union Administration (NCUA) (collectively, the Agencies) expressed concern regarding deferred interest programs that are marketed as "no interest" but charge the consumer interest if purchases made under the program are not paid in full by a specified date or if the consumer violates the account terms prior to that date (which could include a "hair trigger" violation such as paying one day late). In particular, the Agencies noted that, although these programs provide substantial benefits to consumers who pay the purchases in fill prior to the specified date, the "no interest" marketing claims may cause other consumers to be unfairly surprised by the increase in the cost of those purchases. Accordingly, the Agencies concluded that prohibiting deferred interest programs as they are currently marketed and structured would improve transparency and enable consumers to make more informed decisions regarding the cost of using credit.

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The Board understands that the distinction in the final rule between "deferred interest" and "waived or refunded interest" has caused confusion regarding how institutions should structure these types of promotional programs where the consumer will not be obligated to pay interest that accrues on purchases if those purchases are paid in full by a specified date. For this reason, the Board is consulting with the OTS and NCUA regarding the need to clarify that the focus of the final rule is not on the technical aspects of these promotional programs (such as whether interest is deferred or waived) but instead on whether the programs are disclosed and structured in a way that consumers will not be unfairly surprised by the cost of using the programs. The Agencies are also considering whether clarification is needed regarding how existing deferred interest plans should be treated as of the final rule's July 1, 2010, effective date. If the Agencies determine that clarifications to the final rule are necessary, those changes will assist institutions in understanding and complying with the new rules and should not reduce protections for consumers.

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

Q.1. What is it going to take to encourage private investment in our banks and drawing private capital that is now on the sidelines to ensuring that our financial institutions are stable and that our capital markets can return to more normal and healthy functioning?

A.1. We believe that attracting private capital to recapitalize the financial industry is very important and steps to encourage private capital should be taken. Several factors have contributed to the reluctance of private capital providers from investing in financial institutions in recent months, including uncertainty about the health of financial institutions, broader macroeconomic and financial market conditions, and how private capital claims might be treated given existing or additional government support. The Federal Reserve has taken various actions to support financial market liquidity and economic activity, which are important steps to encourage private capital flows to the financial sector. In recent weeks, indicators of market and firm risks have fallen and share prices of financial institutions have risen, suggesting some reduction in investor uncertainty. In addition, a number of institutions have issued new equity shares following the release of the results of the Supervisory Capital Assessment Program in early May.

Q.2. To what extent do you believe that government and central bank policies led to the credit bubble?

A.2. The fundamental causes of the ongoing financial turmoil remain in dispute. In my view, however, it is impossible to understand this crisis without reference to the global imbalances in trade and capital flows that began in the latter half of the 1990s. In the simplest terms, these imbalances reflected a chronic lack of saving relative to investment in the United States and some other industrial countries, combined with an extraordinary increase in saving relative to investment in many emerging market nations. The increase in excess saving in the emerging world resulted in turn from factors such as rapid economic growth in high-saving East Asian economies accompanied, outside of China, by reduced investment rates; large buildups in foreign exchange reserves in a number of emerging markets; and substantial increases in revenues received by exporters of oil and other commodities. Saving flowed from where it was abundant to where it was deficient, with the result that the United States and some other advanced countries experienced large capital inflows for more than a decade, even as real long-term interest rates (both here and abroad) remained low.

These capital inflows and low global interest rates interacted with the U.S. housing market and overall financial system in ways that eventually proved to be dysfunctional. As outlined in a report by the President's Working Group on Financial Markets (PWG) released last year,[1] the most evident of those was clearly a breakdown in underwriting standards for subprime mortgages. But that was symptomatic of a much broader erosion of market discipline: Competition and the desire to maintain high returns created significant demand for structured credit product by investors, and all market participants involved in the securitization process, including originators, underwriters, asset managers, credit rating agencies, and global investors, failed to obtain sufficient information or to conduct comprehensive risk assessments on instruments that were quite complex. Investors relied excessively on credit ratings, and rating agencies relied on faulty assumptions to produce those ratings. These developments revealed serious weaknesses in risk management practices at several large U.S. and European financial institutions (some of which were widely perceived to be "too big to fail"), especially with respect to the concentration of risks, the valuation of illiquid instruments, the pricing of contingent liquidity facilities, and the management of liquidity risk.

In some cases, regulatory policies failed to mitigate those risk management weaknesses. For example, existing capital require-

[1] Policy Statement on Financial Market Developments by the President's Working Group on Financial Markets, March 13, 2008.

ments encouraged the securitization of assets through facilities with very low capital requirements and failed to provide adequate incentives for firms to maintain capital and liquidity buffers sufficient to absorb extreme systemwide shocks. Further, supervisory authorities did not insist on appropriate disclosures of firms' potential exposure to off-balance sheet vehicles.

To address these weaknesses, I believe reforms to the financial architecture are needed to help prevent a similar crisis to develop in the future. First, the problem of financial firms that are considered too big, or perhaps too interconnected, to fail must be addressed. This perception reduces market discipline, encourages excessive risk taking by the firms, and creates the incentive for any firm to grow in order to be perceived as too big to fail.

Second, the financial infrastructure, including the systems, rules, and conventions that govern trading, payment, clearing, and settlement in financial markets, needs to be strengthened. In this respect, the aim should be not only to make the financial system as a whole better able to withstand future shocks, but also to mitigate moral hazard and the problem of too big to fail by reducing the range of circumstances in which systemic stability concerns might prompt government intervention. Third, a review of regulatory policies and accounting rules is desirable to ensure that they do not induce excessive procyclicality—that is, do not overly magnify the ups and downs in the financial system and the economy. And finally, consideration should be given to the creation of an authority specifically charged with monitoring and addressing systemic risk, with the objective of helping to protect the system from financial crises like the one we are currently experiencing.

Reforming the structure of the financial system would go a long way towards mitigating the risk that other severe episodes of financial instability would arise in the future. Reducing this risk would in turn allow the Federal Reserve to continue to direct monetary policy towards the pursuit of the goals for which it is best suited—the legislated objectives of maximum employment, stable prices, and moderate long-term interest rates. With hindsight, an argument could be made, and has been made by some, that tighter monetary policy earlier in the decade might have helped limit the rise in house prices and checked the development of the subprime mortgage market, thereby containing the damage to the economy that later occurred when the housing market collapsed. However, the rise in the Federal funds rate required to accomplish this task would likely have had to be quite large, and thus would have significantly impaired economic growth, boosted unemployment, and probably led to an undesirably low rate of core inflation. All those would have been outcomes clearly at odds with the Federal Reserve's objectives. Rather than redirecting monetary policy in this manner, a better approach going forward would be to have a stronger supervisory system in place to greatly reduce the risk that credit bubbles will merge in the first place, or at least to contain their expansion and limit the fallout from their eventual collapse. This would significantly help in the prevention of financial crises like the current one while at the same time still allowing macroeconomic performance to be as strong as earlier in the decade.

Q.3. At what point does an institution or a product pose systemic risk?

A.3. Identifying whether a given institution's failure is likely to impose systemic risks on the U.S. financial system and our overall economy is a very complex task that inevitably depends on the specific circumstances of a given situation and requires substantial judgment by policymakers. That being said, a number of key principles should guide policymaking in this area.

First, no firm should be considered too big to fail in the sense that existing stockholders cannot be wiped out, existing senior management and boards of directors cannot be replaced, and over time the organization cannot be wound down or sold in whole or in part. In addition, from the point of view of maintaining financial stability, it is critical that such a wind down occur in an orderly manner. Unfortunately, the current resolution process for systemically important nonbank financial institutions does not facilitate such a wind down, and thus my testimony's recommendation for improved resolution procedures for potentially systemic financial firms. Still, even without improved procedures, it is important to try to resolve the firm in an orderly manner without guaranteeing the longer-term existence of any individual firm.

Second, and as I indicated in my statement, the core concern of policymakers is whether the failure of the firm would be likely to have contagion, or knock-on, effects on other key financial institutions and markets and ultimately on the real economy. Thus, in making a systemic risk determination, we look as carefully as we can at the interconnections, or interdependencies, between the failing firm and other participants in the financial system and the implications for these other participants of the troubled firm's failure. Such interdependencies can be direct, such as through deposit and loan relationships, or indirect, such as through concentrations in similar types of assets. Interdependencies can extend to broader financial markets and can also be transmitted through payment and settlement systems. In addition, we consider the extent to which the failure of the firm and other interconnected firms would affect the real economy through, for example, a sharp reduction in the supply of credit, rapid declines in the prices of key financial and nonfinancial assets, or a large drop in the sense of confidence that financial market participants, households, and nonfinancial businesses bring to their activities. Of course, contagion effects are typically more likely in the case of a very large institution than with a smaller institution. However, I would emphasize that size is far from the only criterion for determining whether a firm is potentially systemic. Moderate-sized, or even relatively small firms, could be systemic if, in a given situation, a firm is critical to the functioning of key markets or, for example, critical payment and settlement systems. I would also reiterate that while traditionally the concern was that a run on a troubled bank could inspire contagious runs on other banks, recent financial crises have shown us that systemic risks can arise in other financial institutions and markets. For example, we now understand that highly destabilizing runs can occur on investment banks and money market funds.

Third, the nature of the overall financial and economic environment is a core factor in deciding whether a given institution's failure is likely to impose systemic risks. If the overall environment is highly uncertain and troubled, as was clearly the case last fall, then the likelihood of systemic effects is typically much greater than if the economy is growing and market participants are generally optimistic and confident about the future. Indeed, and as I indicated above, the potential effects of a firm's failure on the confidence of not only financial market participants, but a wide spectrum of households and businesses is a key decision variable in policymakers' assessment of whether a given firm's failure is likely to pose systemic risks.

Q.4. In a statement Monday, AIG said it is continuing to work with the government to evaluate potential new alternatives for addressing AIG's financial challenges. AIG's rescue package has already been increased twice since September, from $85 billion to nearly $123 billion in October and then to $150 billion in November. According to today's *WSJ,* AIG is seeking an overhaul of its $150 billion government bailout package that would substantially reduce the insurer's financial burden, while further exposing U.S. taxpayers to its fortunes. Are you and Treasury considering changing our approach to AIG from that of a creditor to one of a potential owner?

A.4. As explained in the reports submitted to Congress under section 129 of the Emergency Economic Stabilization Act of 2008, the Federal Reserve, in conjunction with the Treasury Department, has taken a series of steps since September 2008, to address the liquidity and capital needs of the American International Group, Inc. (AIG) and thereby to help stabilize the company, prevent a disorderly failure, and protect financial stability, which is a prerequisite to resumption of economic activity. In particular, in September and November 2008, the Federal Reserve established several credit facilities, including a Revolving Credit Facility, to further these objectives. As part of the November restructuring, the Treasury purchased $40 billion in AIG preferred stock.

In light of the significant challenges faced by AIG in the last months of 2008 and the continued risk it poses to the financial system, on March 2, 2009, the Federal Reserve and the Treasury announced a restructuring of the government's assistance to the company. The March actions announced by the Federal Reserve include partial repayment of the Revolving Credit Facility with preferred stock interests in two of AIG's life insurance subsidiaries and with the proceeds of new loans that would be secured by net cash flows from designated blocks of existing life insurance policies held by other life insurance subsidiaries of AIG. These actions were undertaken in the context of the Federal Reserve's role as a creditor of AIG. As part of the March restructuring, the Treasury established a capital facility that allows AIG to draw down up to approximately $30 billion as needed over time in exchange for additional preferred stock. For more detail, please see *Federal Reserve System Monthly Report on Credit and Liquidity Programs and The Balance Sheet* (June 2009) at 13–16, *http://www.federalreserve.gov/monetarypolicy/files/monthlyclbsreport200906.pdf.*

Q.5. Recent events in the credit markets have highlighted the need for greater attention to settling credit default swaps by creating a central clearing system. While central counterparty clearing and exchange trading of relatively standardized contracts have the potential to reduce risk and increase market efficiency, market participants must be permitted to continue to negotiate customized bilateral contracts in over-the-counter markets. Do you agree that market participants should have the broadest possible range of standardized and customized options for managing their financial risk and is there a danger that a one-size-fits-all attitude will harm liquidity and innovation?

A.5. The Federal Reserve supports central counterparty (CCP) clearing of credit default swaps and other over-the-counter (OTC) derivatives because, if properly designed and managed, CCPs can reduce risks to market participants and to the financial system. Counterparties to OTC derivatives trades sometimes seek to customize the terms of trades to meet very specific risk management needs. These trades may not be amenable to clearing because, for example, the CCP could have difficulty liquidating the positions in the event a clearing member defaulted. A requirement to clear all OTC derivative trades thus offers the uncomfortable alternatives of asking CCPs to accept business lines with difficult-to-manage risks or of asking customers to accept terms that do not meet their risk-management needs. A hybrid system in which standardized OTC derivative contracts are centrally cleared and in which more customized contracts are executed and managed on a bilateral, decentralized basis is a means for allowing product innovation while mitigating systemic risks. The Federal Reserve recognizes, however, that a key part of this strategy is improvements in the risk management practices for OTC derivatives by the financial institutions that are the counterparties to bilateral trades.

Q.6. What is the impact of the final UDAP rule issued last December on consumers and businesses who use "no interest" financing? I understand the impact to be very large and I would appreciate the Federal Reserve Board working to clarify that "no interest" financing can be used in the future albeit perhaps with revised disclosures and marketing.

A.6. In the final rule addressing unfair and deceptive credit card practices, the Board, the Office of Thrift Supervision (OTS), and the National Credit Union Administration (NCUA) (collectively, the Agencies) expressed concern regarding deferred interest programs that are marketed as "no interest" but charge the consumer interest if purchases made under the program are not paid in full by a specified date or if the consumer violates the account terms prior to that date (which could include a "hair trigger" violation such as paying one day late). In particular, the Agencies noted that, although these programs provide substantial benefits to consumers who pay the purchases in full prior to the specified date, the "no interest" marketing claims may cause other consumers to be unfairly surprised by the increase in the cost of those purchases. Accordingly, the Agencies concluded that prohibiting deferred interest programs as they are currently marketed and structured would improve transparency and enable consumers to make more informed decisions regarding the cost of using credit.

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The Board understands that the distinction in the final rule between "deferred interest" and "waived or refunded interest" has caused confusion regarding how institutions should structure these types of promotional programs where the consumer will not be obligated to pay interest that accrues on purchases if those purchases are paid in full by a specified date. For this reason, the Board is consulting with the OTS and NCUA regarding the need to clarify that the focus of the final rule is not on the technical aspects of these promotional programs (such as whether interest is deferred or waived) but instead on whether the programs are disclosed and structured in a way that consumers will not be unfairly surprised by the cost of using the programs. The Agencies are also considering whether clarification is needed regarding how existing deferred interest plans should be treated as of the final rule's July 1, 2010, effective date. If the Agencies determine that clarifications to the final rule are necessary, those changes will assist institutions in understanding and complying with the new rules and should not reduce protections for consumers.

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

Monetary Policy Report to the Congress

February 24, 2009

Board of Governors of the Federal Reserve System

Monetary Policy Report to the Congress

Submitted pursuant to section 2B of the Federal Reserve Act

February 24, 2009

Board of Governors of the Federal Reserve System

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

Washington, D.C., February 24, 2009

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

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

Sincerely,

Ben Bernanke, Chairman

Contents

Part 1
Overview: Monetary Policy and the Economic Outlook

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

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

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

The downturn in sales and production, along with steep declines in the prices of energy and other commodities and a strengthening in the exchange value of the dollar, has contributed to a substantial lessening of inflation pressures in the past several months. Indeed, overall inflation, as measured by the price index for personal consumption expenditures, turned negative in the fourth quarter of 2008; over the first three quarters of the year, overall inflation had averaged nearly 4½ percent at an annual rate, largely because of sharp increases in food and energy prices. Core inflation—which excludes the direct effects of movements in food and energy prices—also slowed significantly late last year and entered 2009 at a subdued pace. Mirroring the drop in headline inflation, survey measures of near-term inflation expectations have fallen to very low levels in recent months, while the latest readings on longer-term inflation expectations are similar to those in 2007 and early 2008.

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

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

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

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

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

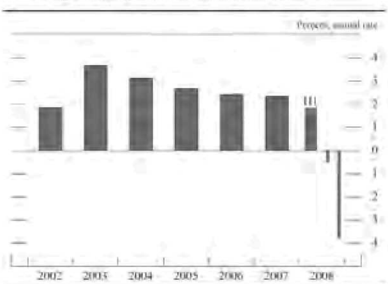
1. A list of abbreviations is available at the end of this report.

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

Part 2
Recent Financial and Economic Developments

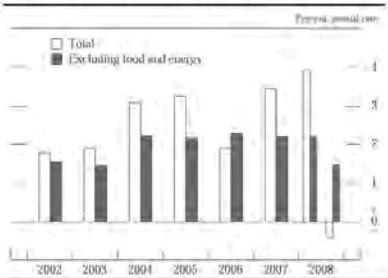
The downturn in economic activity that has been unfolding since late 2007 steepened appreciably in the second half of 2008 as the strains in financial markets intensified. After the financial difficulties experienced by Fannie Mae and Freddie Mac during the summer and the bankruptcy of Lehman Brothers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

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



NOTE: Here and in subsequent figures, except as noted, change for a given period is measured to its final quarter from the final quarter of the preceding period.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

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



SOURCE: Department of Commerce, Bureau of Economic Analysis.

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

Financial Stability Developments

Evolution of the Financial Turmoil

The current period of pronounced turmoil in financial markets began in the summer of 2007 after a rapid deterioration in the performance of subprime mortgages caused largely by a downturn in house prices in some parts of the country. Investors pulled back from risk-taking, and liquidity diminished sharply in the markets for interbank funding and structured credit products more generally. House prices continued to fall rapidly in the first part of 2008, mortgage delinquencies and defaults continued to climb, and concerns about credit risk mounted. The increased financial strains led to a liquidity crisis in March at The Bear Stearns Companies, Inc., a major investment bank, and to its acquisition by JPMorgan Chase & Co. Subsequent aggressive monetary policy easing and measures taken by the Federal Reserve to bolster the liquidity of financial institutions contributed to some recovery in financial markets during the spring.

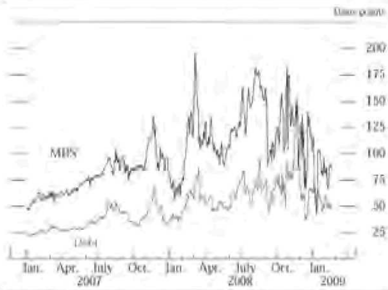
Nevertheless, strains in financial conditions intensified going into the second half of the year. In particular, amid worries that the capital of Fannie Mae and Freddie Mac would be insufficient to absorb mounting losses on their mortgage portfolios, the stock prices of the two government-sponsored enterprises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

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

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

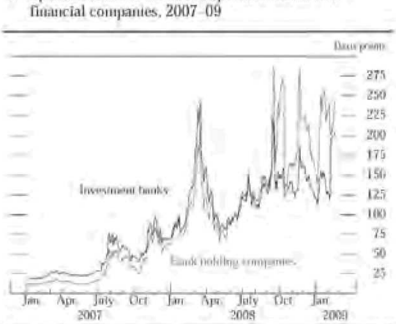
2. Typically, the relative cost is measured by comparing the Libor rate with the rate on comparable-maturity overnight index swaps.

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



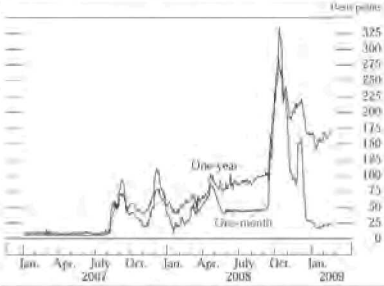
NOTE: The data are daily and extend through February 18, 2009. The spreads are over Treasury securities of comparable maturities. MBS are mortgage-backed securities.
SOURCE: For MBS, Bloomberg; for debt, Merrill Lynch and the Federal Reserve Bank of New York.

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



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

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



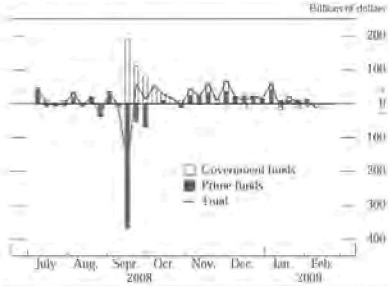
NOTE: The data are daily and extend through February 19, 2009. An overnight index swap (OIS) is an interest rate swap with the floating rate tied to an index of daily overnight rates, such as the effective federal funds rate. At maturity, two parties exchange, on the basis of the agreed notional amount,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

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

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

Amid this broad downturn in investor confidence, and after large mortgage-related losses in the third quarter, Lehman Brothers came under pressure as counterparties refused to provide short-term funding to the investment bank, even on a secured basis. Eventually, with no other firm willing to acquire it and with its borrowing capacity limited by a lack of collateral, Lehman Brothers filed for bankruptcy on September 15.[3] Over the previous weekend, Bank of America announced its intention to acquire Merrill Lynch, which had also come

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



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

SOURCE: iMoneyNet.

under severe funding pressures. In large part because of losses on Lehman Brothers' debt, the net asset value of a major money market mutual fund fell below $1 per share—also known as "breaking the buck," an event that had not occurred in many years—thereby prompting rapid and widespread investor withdrawals from prime funds (that is, money market mutual funds that hold primarily private assets) (figure 6). Prime funds responded to the surge in redemptions by reducing their purchases of short-term assets, including commercial paper—which many businesses use to obtain working capital—and by shortening the maturity of those instruments that they did purchase, leading to a deterioration of the commercial paper market (figure 7). Meanwhile, investors increasingly demanded safe assets, and funds that hold only Treasury securities experienced a sharp increase in inflows, which caused yields on Treasury bills to plummet. Intense demands among investors to hold Treasury securities, coupled with increased concerns about counterparty credit risk, reportedly led to a substantial scaling back of activity among traditional securities lenders in the Treasury market. The decreased activity contributed, in turn, to disruptions in the Treasury repo and cash markets that were evidenced by a very high volume of fails-to-deliver. Redemptions from prime funds slowed after the Treasury and the Federal Reserve took actions in September and October to support these funds (see the appendix).

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

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

7. Commercial paper, 2007–09

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

Source: Depository Trust and Clearing Corporation.

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

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

Source: Keefe, Bruyette & Woods (KBW) and Bloomberg.

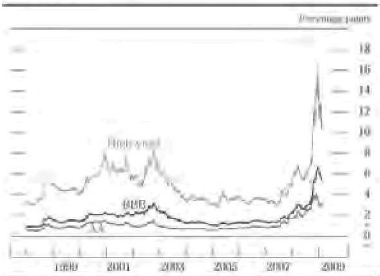
of the likely spillover effects to other financial institutions of a disorderly failure of AIG and the potential for significant pass-through effects to the broader economy, the Federal Reserve Board on September 16, with the full support of the Treasury, authorized the Federal Reserve Bank of New York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

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

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

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

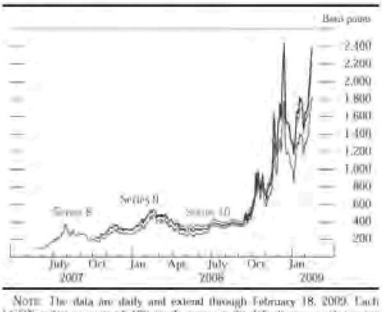
9. Spreads of corporate bond yields over comparable off-the-run Treasury yields, by securities rating, 1998–2009



NOTE: The data are daily and extend through February 18, 2009. The spreads shown are the yields on 10-year bonds less the 10-year Treasury yield.
SOURCE: Derived from smoothed corporate yield curves using Merrill Lynch bond data.

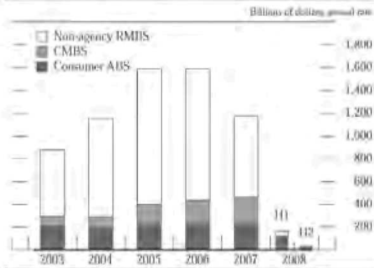
widened to record levels (figure 10). Bid-asked spreads on high-yield corporate bonds and leveraged loans increased significantly, and liquidity and price discovery in the CDS market remained impaired, especially for contracts involving financial firms. Spreads on commercial mortgage-backed securities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

10. LCDX indexes, 2007–09



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

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



NOTE: Non-agency RMBS are residential mortgage-backed securities issued by institutions other than Fannie Mae, Freddie Mac, and Ginnie Mae. CMBS are commercial mortgage-backed securities; consumer ABS (asset-backed securities) are securities backed by credit card loans, nonrevolving consumer loans, and auto loans.
SOURCE: For RMBS and ABS, *Inside MBS & ABS* and Merrill Lynch; for CMBS, Commercial Mortgage Alert.

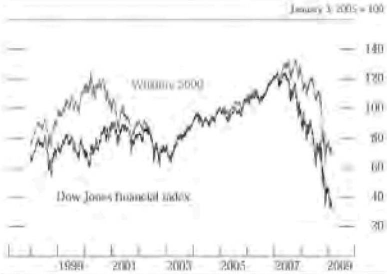
Treasury securities and yields on comparable-maturity off-the-run securities (that is, those securities that were previously issued)—an indicator of the liquidity in this market—surged from already elevated levels. Foreign financial markets experienced many of the same disturbances as domestic markets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

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

Policy Actions and the Market Response

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

12. Stock price indexes, 1998–2009

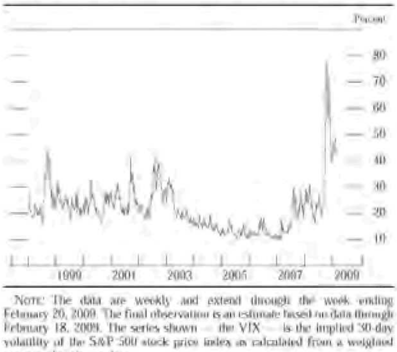


NOTE: The data are daily and extend through February 18, 2009.
SOURCE: Dow Jones Indexes.

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

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

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



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

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

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

Conditions in debt markets continued to ease after the passing of year-end, although most of these markets remain much less liquid than normal. Yields and spreads on corporate bonds and commercial paper have decreased noticeably in recent weeks, but activity in the leveraged loan market continues to be very weak. Equity prices for financial firms have continued to trend downward, and CDS spreads for such firms have fluctuated around extremely elevated levels. Investors expressed renewed concern over financial institutions in January after a number of firms, most notably Bank of America Corporation, reported large net losses for the fourth quarter. The Treasury, the FDIC, and the Federal Reserve announced on January 16 that they had entered into an agreement with Bank of America to provide a package of capital, guarantees, and liquidity access (see the appendix). Although markets responded favorably to this action, the uncertain prospects of the financial sector continue to weigh heavily on market sentiment.

Banking Institutions and the Availability of Credit

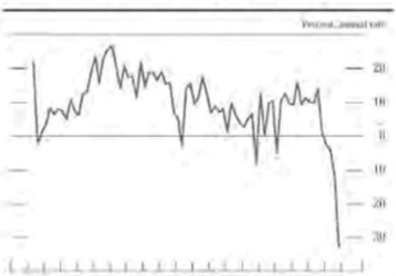
Commercial bank credit grew moderately over 2008 as a whole as both businesses and households at times drew heavily on existing lending commitments, but it contracted noticeably toward the end of the year and in early 2009. In the face of the severe financial market disruptions, some companies turned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

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

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

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

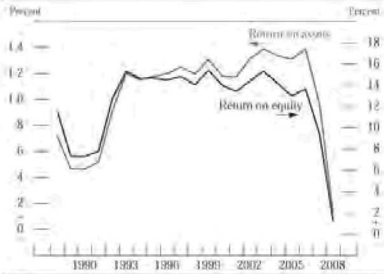
14. Change in unused bank loan commitments to businesses and households, 1990:Q2–2008:Q4



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

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

15. Commercial bank profitability, 1988–2008



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

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

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

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

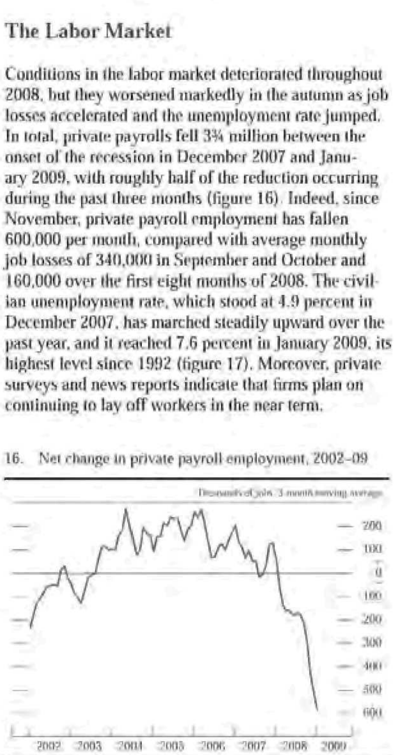
Domestic Developments

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

The Labor Market

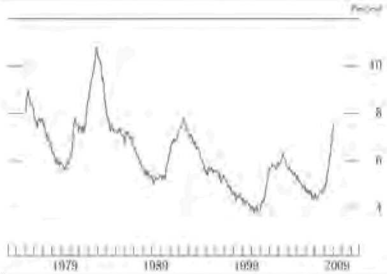
Conditions in the labor market deteriorated throughout 2008, but they worsened markedly in the autumn as job losses accelerated and the unemployment rate jumped. In total, private payrolls fell 3¾ million between the onset of the recession in December 2007 and January 2009, with roughly half of the reduction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

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



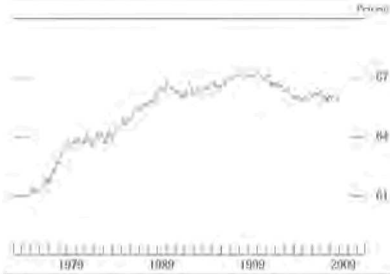
NOTE: Nonfarm business sector. The data are monthly and extend through January 2009.
SOURCE: Department of Labor, Bureau of Labor Statistics.

17. Civilian unemployment rate, 1975–2009



Note: The data are monthly and extend through January 2009.
Source: Department of Labor, Bureau of Labor Statistics.

18. Labor force participation rate, 1975–2009



Note: The data are monthly and extend through January 2009.
Source: Department of Labor, Bureau of Labor Statistics.

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

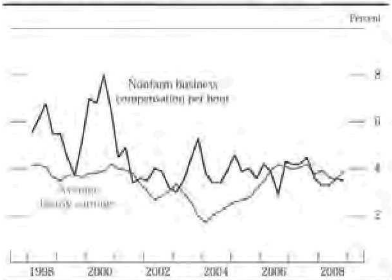
The increase in joblessness has been widespread across demographic, educational, and occupational groups. In January 2009, the unemployment rate for men aged 25 years and older was 3 percentage points above its average level in the fourth quarter of 2007, while the rate for women aged 25 years and older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

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

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

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

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



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

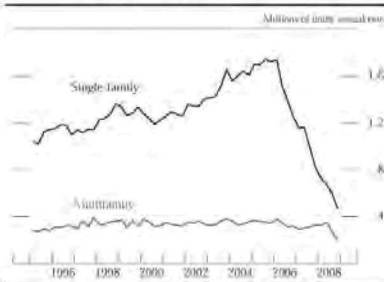
The wage component of hourly compensation also rose moderately in nominal terms in 2008, and because consumer price inflation over the year as a whole was low, much of the gain in nominal wages was reflected in higher real wages. For example, over the four quarters of last year, average hourly earnings,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

The Household Sector

Residential Investment and Housing Finance

Housing activity remained on a steep downward trend in the second half of 2008. Home sales and prices slumped further, and homebuilders continued to curtail new construction in response to weak demand and elevated backlogs of unsold new homes. In the single-family sector, new units were started at an average annual rate of just 460,000 units in the fourth quarter of 2008—roughly 75 percent below the quarterly high reached in mid-2005 (figure 20). Starts in the multifamily sector averaged just 200,000 units in the fourth

20. Private housing starts, 1995–2008

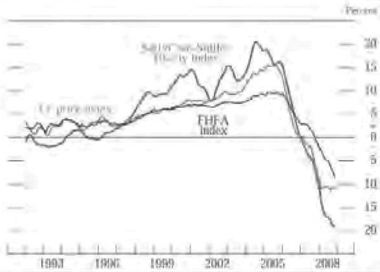


NOTE: The data are quarterly and extend through 2008:Q4.
SOURCE: Department of Commerce, Bureau of the Census.

quarter; for 2008 as a whole, multifamily starts totaled 285,000, the lowest level in more than a decade. In all, the decline in residential investment, as measured in the NIPA, subtracted ¾ percentage point from the annual rate of change in GDP in the second half of 2008, about as much as in the first half. The further drop in housing starts and residential building permits in January suggests that housing will continue to exert a substantial drag on the change in real GDP in early 2009.

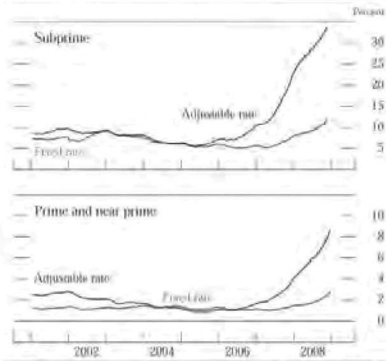
The further contraction in housing demand in the second half of 2008 partly reflected the bleaker picture for household income and wealth. Potential homebuyers may also have been deterred by concerns about the likelihood of additional declines in house prices and fears of buying into a falling market.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

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



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

22. Mortgage delinquency rates, 2001–08



NOTE: The data are monthly and extend through November 2008 for subprime and through December 2008 for prime and near prime. Delinquency rate is the percent of loans 90 days or more past due or in foreclosure.
SOURCE: For subprime, First American LoanPerformance. For prime and near prime, Lender Processing Services, Inc.

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

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

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

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

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

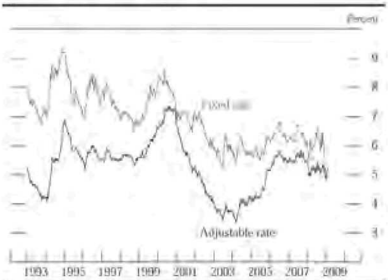
5. A mortgage is defined as seriously delinquent if the borrower is 90 days or more behind in payments or the property is in foreclosure.

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

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

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

23. Mortgage rates, 1993–2009



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

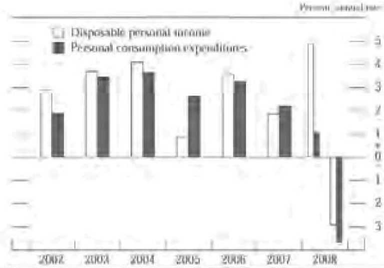
Consumer Spending and Household Finance

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

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

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

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



SOURCE: Department of Commerce, Bureau of Economic Analysis.

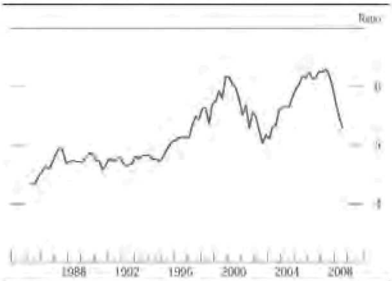
salaries was outweighed by the negative effects of the contraction in employment and the decrease in hours worked by those who retained jobs. Apart from transfer payments, most types of nonwage income performed poorly as well. Measured on a per capita basis, average real after-tax income was essentially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

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

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

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

25. Wealth-to-income ratio, 1985–2008



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

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

26. Consumer sentiment, 1995–2009

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

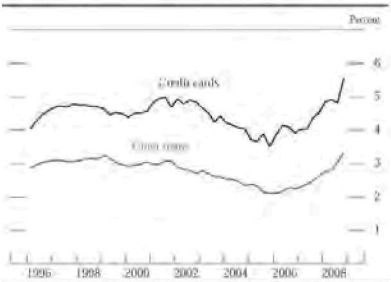
SOURCE: The Conference Board and Reuters/University of Michigan Surveys of Consumers.

27. Personal saving rate, 1985–2008

NOTE: The data are quarterly and extend through 2008:Q4.

SOURCE: Department of Commerce, Bureau of Economic Analysis.

28. Delinquency rates on consumer loans, 1996–2008



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

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

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

The Business Sector

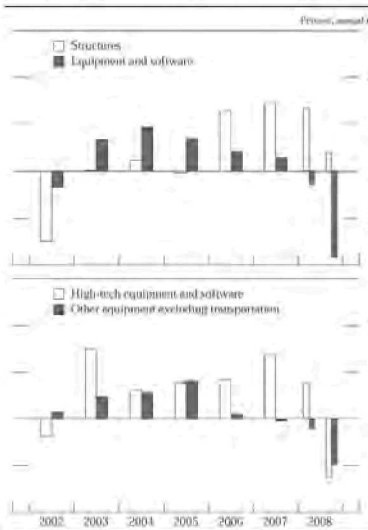
Fixed Investment

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

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

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

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



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

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

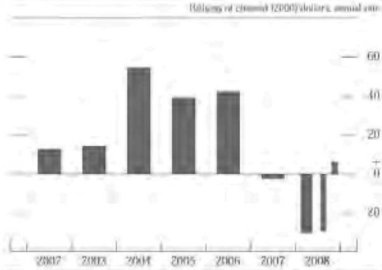
On net, real outlays for nonresidential construction posted a small increase in the second half of 2008. However, gains were concentrated in energy-related sectors—drilling and mining structures, petroleum refineries, and transmission and distribution facilities—and likely reflected the earlier run-up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

Inventory Investment

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

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

30. Change in real business inventories, 2002–08



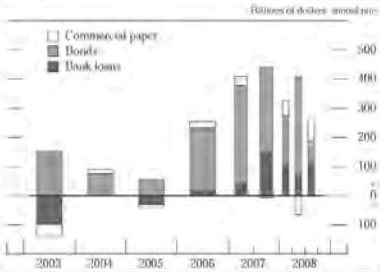
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Corporate Profits and Business Finance

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

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

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



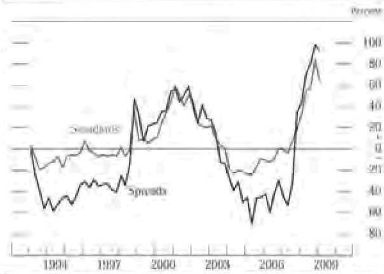
NOTE: The data for the components except bonds are seasonally adjusted.
SOURCE: Federal Reserve Board, flow of funds data.

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

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

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

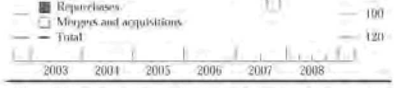
32. Net percentage of domestic banks tightening standards and increasing spreads on commercial and industrial loans to large and medium-sized borrowers, 1993–2009



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

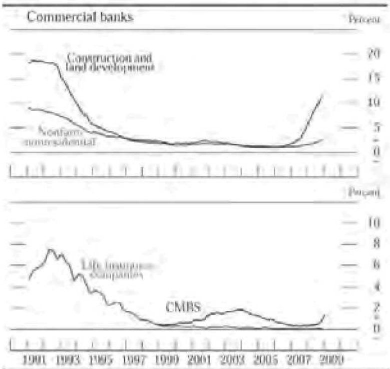
The credit quality of nonfinancial firms deteriorated in the second half of the year. The aggregate ratio of debt to assets climbed further, and the aggregate ratio of liquid assets to total assets declined notably. Ratings downgrades on nonfinancial corporate bonds picked up and outpaced upgrades, and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

33. Components of net equity issuance, 2003–08



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

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



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

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

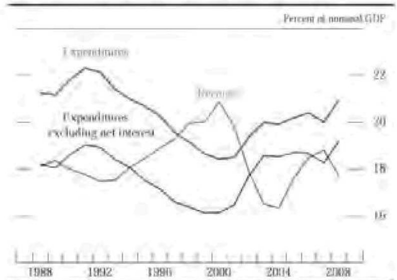
6½ percent. Delinquency rates on C&I loans increased noticeably in the fourth quarter, and delinquency rates on CRE loans rose further, mainly because of continued rapid weakening in the performance of residential and commercial construction loans (figure 34).

The Government Sector

Federal Government

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

35. Federal receipts and expenditures, 1988–2008



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

SOURCE: Office of Management and Budget.

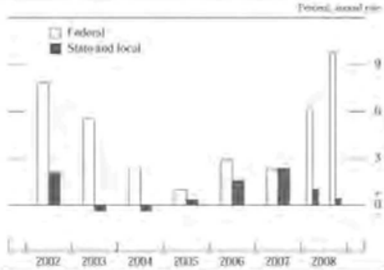
Budget Office estimated that the deficit for fiscal 2009 as a whole would total more than $1 trillion under the spending and taxation policies in place at that time, a figure that excludes the budgetary impact of the American Recovery and Reinvestment Act of 2009.

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

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

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

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



Source: Department of Commerce, Bureau of Economic Analysis.

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

State and Local Government

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

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

The External Sector

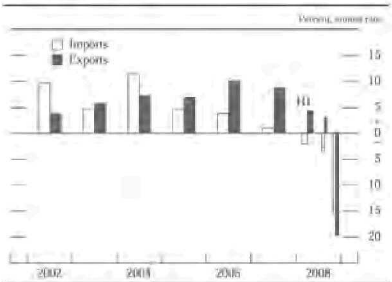
In contrast to the first half of 2008—when robust exports provided some offset to the softness in domestic demand—the external sector provided little support to economic activity in the second half of the year. After decelerating in the third quarter, real exports declined sharply in the fourth quarter,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

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

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

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

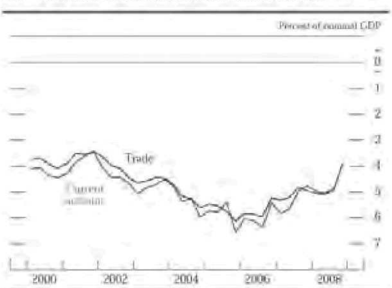
37. Change in real imports and exports of goods and services, 2002–08



SOURCE: Department of Commerce, Bureau of Economic Analysis.

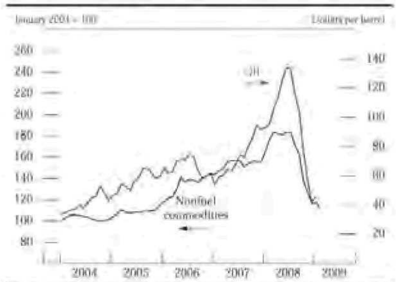
The price of crude oil in world markets was extremely volatile in 2008. After ending 2007 at about $95 per barrel, the spot price of West Texas intermediate (WTI) crude oil surged to more than $145 by mid-July amid both surprisingly robust oil demand, especially from emerging market economies, and continued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

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



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

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



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

have fallen somewhat less, which likely reflects the view that OPEC actions will eventually reduce supply and that global oil demand will rebound in the medium term.

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

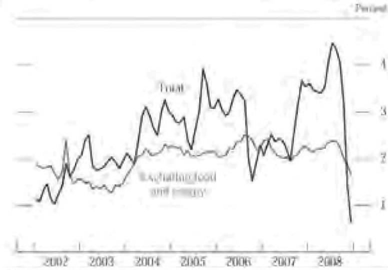
National Saving

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

40. Net saving, 1988–2008

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

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



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

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

Prices and Labor Productivity

Prices

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

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

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

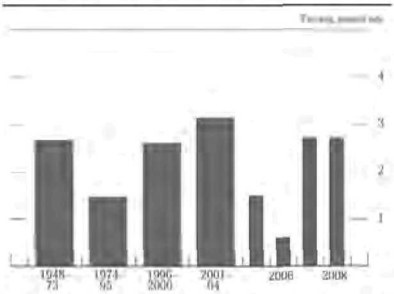
The slowdown in core inflation in late 2008 was widespread, although it was particularly steep for motor vehicles, apparel, and other consumer goods that were heavily discounted by retailers in an environment of weak demand and excess inventories. In addition, the cost pressures that seemed to be boosting core inflation earlier in the year ebbed as pass-throughs of the previous large increases in the prices of energy and materials ran their course and the effects of recent declines in these prices started to show through to consumer prices. The strengthening in the exchange value of the dollar and the deceleration of import prices also helped ease the upward pressure on core inflation.

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

Productivity and Unit Labor Costs

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

42. Change in output per hour, 1948–2008



NOTE: Nonfarm business sector. Change for each multiyear period is measured to the fourth quarter of the final year of the period from the fourth quarter of the year immediately preceding the period.

SOURCE: Department of Labor, Bureau of Labor Statistics.

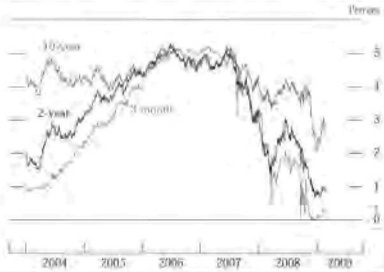
Reflecting the solid gain in labor productivity, along with the subdued increase in nominal hourly compensation noted earlier, unit labor costs in the nonfarm business sector rose just ¾ percent in 2008. The increase in unit labor costs was about the same as that recorded in 2007.

Monetary Policy Expectations and Treasury Rates

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

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

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



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

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

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

Federal Borrowing

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

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

State and Local Government Borrowing

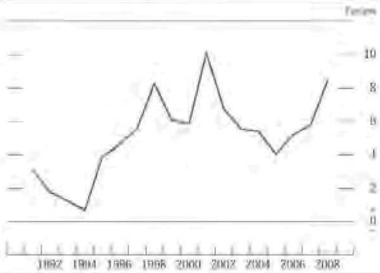
On net, borrowing by state and local governments in the market for municipal securities was subdued in the second half of 2008. The issuance of short-term municipal debt was robust, boosted in part by the need to fund operating expenditures at a time of weak revenues. However, issuance of long-term debt,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

Monetary Aggregates

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

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

44. M2 growth rate, 1991–2008



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

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

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

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

INTERNATIONAL DEVELOPMENTS

International Financial Markets

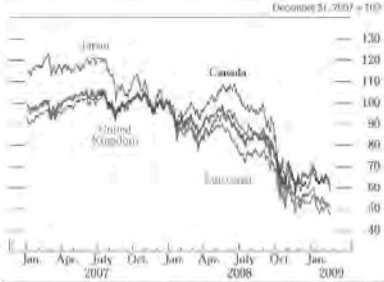
Although foreign banks continued to report losses over the summer and funding conditions remained strained, global financial markets were relatively calm in July and August of 2008. This situation changed abruptly in September, as global interbank and other funding markets seized up and lending came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

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

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

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

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

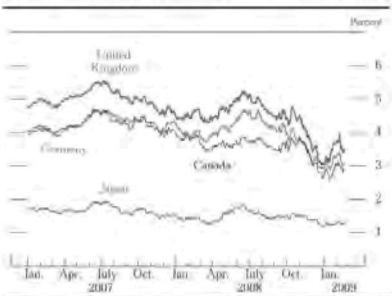


NOTE: The data are daily. The last observation for each series is February 18, 2009. Because the Tokyo Exchange was closed on December 31, 2007, the Japan index is scaled so that the December 28, 2007, closing value equals 100.

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

Japan, and Canada fell 20 percent to 40 percent over the second half of last year and have continued to decline this year (figure 45). Long-term sovereign bond yields fell sharply in Europe and Canada in the latter part of 2008, which reflected both the easing of monetary policy and diminished growth prospects, but have risen somewhat, on balance, in early 2009 (figure 46). In contrast, yields on inflation-protected long-term securities rose in many countries, and inflation compensation

46. Yields on benchmark government bonds in selected advanced foreign economies, 2007–09



NOTE: The data, which are for 10-year bonds, are daily. The last observation for each series is February 18, 2009.

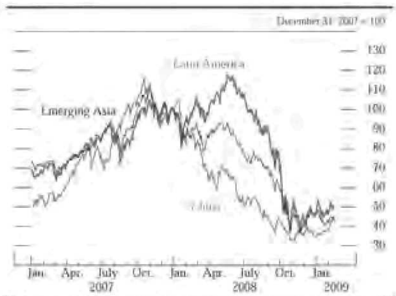
SOURCE: Bloomberg.

(the difference between yields on nominal securities and those on inflation-protected securities) fell sharply. As in the United States, measures of inflation compensation were quite volatile, however, as the liquidity of inflation-protected securities fell markedly.

Although in early 2008 the emerging market economies looked as if they might escape the most serious consequences of the financial crisis, the intensification of financial strains in September 2008 led to sharp and sudden capital outflows from many emerging markets as investors in the advanced economies sought to repatriate funds. Downdrafts in financial markets were reinforced by concerns over the effects of declining exports to the advanced economies and, for commodity exporters, plummeting commodity prices. Most stock markets in the emerging economies fell 20 percent to 40 percent, on net, over the second half of the year, and risk spreads on emerging market debt rose sharply (figure 47).

The Federal Reserve's broadest measure of the nominal trade-weighted foreign exchange value of the dollar rose about 12 percent, on net, over the second half of 2008 (figure 48). Much of this rise reflected gains against major foreign currencies. The dollar appreciated 13 percent against the euro, 20 percent against the Canadian dollar, and 36 percent against sterling (figure 49). The dollar's strength was attributable to several factors, including the realization by many inves-

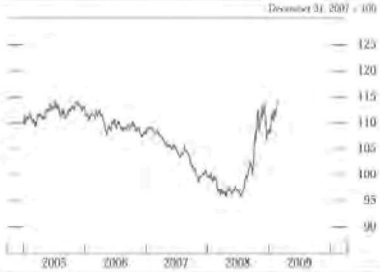
47. Equity indexes in selected emerging market economies, 2007–09



NOTE: The data are daily. The last observation for each series is February 18, 2009. Because the Shanghai Stock Exchange was closed on December 31, 2007, the China index is scaled so that the December 28, 2007, closing value equals 100. The Latin American economies are Argentina, Brazil, Chile, Colombia, Mexico, and Peru. The emerging Asian economies are China, India, Indonesia, Malaysia, Pakistan, the Philippines, South Korea, Taiwan, and Thailand.

SOURCE: For Latin America and emerging Asia, Morgan Stanley Capital International (MSCI) index; for China, Shanghai Composite Index, as reported by Bloomberg.

48. U.S. dollar nominal exchange rate, broad index, 2005–09

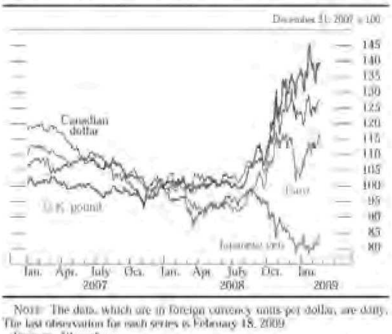


NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for the series is February 18, 2009. The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of the most important U.S. trading partners. The index weights, which change over time, are derived from U.S. export shares and from U.S. and foreign import shares.
SOURCE: Federal Reserve Board.

tors that foreign growth would slow much more sharply than had been earlier anticipated as well as an increase in demand for the relative safety of U.S. assets such as Treasury securities. In contrast to its strength against other major currencies, the dollar depreciated 14 percent against the yen, as market volatility led many Japanese investors to sell foreign assets.

The dollar also rose against the currencies of most emerging market economies, including appreciation of more than 30 percent against both the Mexican peso and the Brazilian *real*. The dollar appreciated much less against most emerging Asian currencies, although it did rise more than 20 percent against the Korean won. In response to these pressures, many central banks in both Latin America and Asia intervened in support of their currencies.

49. U.S. dollar exchange rate against selected major currencies, 2007–09



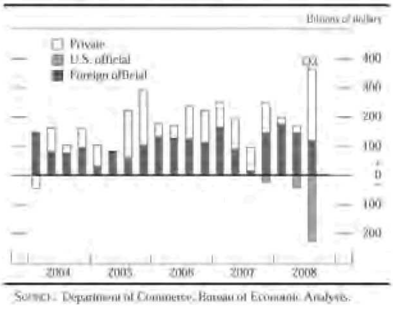
NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for each series is February 18, 2009.
SOURCE: Bloomberg.

The Financial Account

Although the current account deficit is estimated to have narrowed in 2008, it remains sizable. Turbulence in global financial markets has noticeably changed the composition of the associated financial flows. Before the turmoil, financial inflows were primarily in the form of net purchases of U.S. securities by foreign private investors and somewhat smaller net purchases by foreign official institutions. Since late 2007, however, foreign private net purchases of U.S. securities have dropped sharply, leaving foreign official inflows to play a much larger role (figure 50). Furthermore, whereas before the turmoil private foreign investors purchased large sums of U.S. assets issued by private entities, since then foreign investments—both official and private—have been dominated by a "flight to safety" to U.S. Treasury securities. Finally, in the third quarter of 2008, reductions in holdings of foreign assets by private U.S. residents played an unusual role, which added significantly to net private inflows.

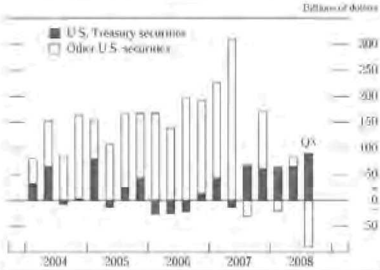
Overall, inflows from foreign private acquisitions of U.S. securities in 2008 were just one-fifth of the flows obtained in the previous two years, on average. Although purchases of U.S. Treasury securities rose considerably, there were unprecedented net sales in other U.S. securities in 2008 (figure 51). Foreign demand was particularly weak for U.S. agency and corporate

50. U.S. net financial inflows, 2004–08



SOURCE: Department of Commerce, Bureau of Economic Analysis.

51. Net private foreign purchases of U.S. securities, 2004–08



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

bonds, with the weakness especially pronounced in the second half of the year.

Foreign official net purchases of U.S. assets remained relatively steady in 2008, at a pace slightly above that of 2007. However, the composition of official net purchases in the third and fourth quarters moved sharply away from U.S. agency securities and was concentrated almost exclusively in U.S. Treasury securities. Foreign official acquisitions continued to be dominated by Asian institutions in 2008.

Prior to the turmoil, U.S. investors' net purchases of foreign securities typically generated a financial outflow. These purchases slowed following the turmoil and more recently have turned to sizable net sales—generating a financial inflow—as U.S. investors have pulled out of foreign investments. In addition, U.S. residents considerably reduced their deposits in foreign banks in 2008.

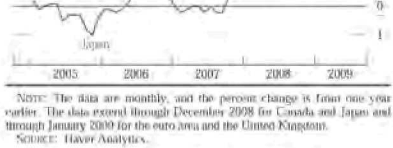
The turmoil also led to unusual flows from the banking sector and from official transactions in the form of the Federal Reserve's liquidity swap arrangements with foreign central banks. Net flows reported by banking offices in the United States are typically small. Since the onset of the turmoil through mid-2008, however, banks have generated unusually large outflows, in part reflecting a response to heightened demand resulting from interbank funding pressures in European markets. As central banks acted to address these concerns with the expansion of the swap arrangements in September 2008, the private banking outflows slowed to a halt. Foreign central banks eased dollar pressures abroad by lending to their domestic banks the dollar liquidity acquired from the Federal Reserve. Further drawings on the swap lines in October and December contributed to a strong reversal of banking flows (back toward the United States, on net) in the fourth quarter.

Advanced Foreign Economies

Economic performance in the major advanced foreign economies weakened sharply in the second half of 2008, as global financial market turbulence, shrinking world trade, and collapsing business and consumer confidence weighed on activity. Across the advanced foreign economies, credit conditions and lending standards tightened considerably, industrial production declined, and retail sales slowed. Housing markets weakened everywhere and performed particularly poorly in countries that earlier had experienced housing booms, such as Ireland, Spain, and the United Kingdom. By the third quarter of last year, both Japan and the euro area had entered recessions, and output fell sharply in all the major advanced foreign economies in the fourth quarter, with most countries experiencing especially severe declines in exports and private investment.

After surging in response to accelerating commodity prices in the first half of last year, headline rates of inflation fell noticeably as a result of collapsing commodity prices and worsening economic conditions. The 12-month change in consumer prices peaked in the third quarter of 2008 for all the major economies, and the peak values ranged from a high of 5¼ percent in the United Kingdom to 2¼ percent in Japan. The most recent figures are substantially lower and range from 3 percent in the United Kingdom to below 1 percent in Japan (figure 52). Excluding food and energy prices,

52. Change in consumer prices for major foreign economies, 2005–09

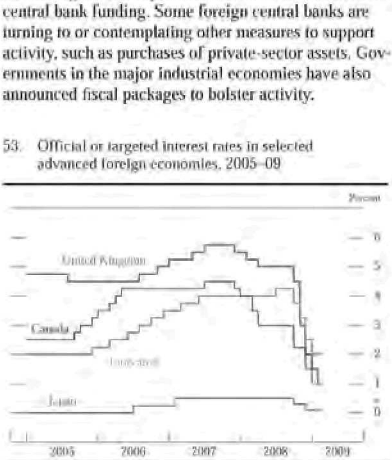


NOTE: The data are monthly, and the percent change is from one year earlier. The data extend through December 2008 for Canada and Japan and through January 2009 for the euro area and the United Kingdom.
SOURCE: Haver Analytics.

the swings in consumer price inflation have been more subdued. After moving up somewhat during most of 2008, core inflation is now declining in most advanced foreign economies.

Official monetary policy rates have been lowered significantly since the beginning of 2008 in response to severe financial market turbulence, decelerating economic activity, and waning inflation. After some easing early last year by the Bank of England and the Bank of Canada, rapidly rising food and energy costs led these central banks to pause, and, in the case of the European Central Bank (ECB), raise rates in the summer. However, in the fall, as financial conditions deteriorated and commodity prices fell, policymakers in the major industrial economies cut rates sharply, including a coordinated move in October. In total, the Bank of England has lowered its policy rate from 5½ percent in January of 2008 to 1 percent. The Bank of Canada and the ECB have also dropped rates to 1 percent and 2 percent, respectively. In Japan, interest rates were lowered to near zero in December (figure 53). In addition to substantial reductions in policy rates, central banks in the major advanced economies have taken a number of extraordinary measures to improve liquidity in financial markets, including the large-scale provision of term funding in local currency and dollar markets and the significant expansion of allowable collateral for central bank funding. Some foreign central banks are turning to or contemplating other measures to support activity, such as purchases of private-sector assets. Governments in the major industrial economies have also announced fiscal packages to bolster activity.

53. Official or targeted interest rates in selected advanced foreign economies, 2005–09



NOTE: The data are daily and extend through February 18, 2009. The data shown are: for Canada, the overnight rate; for the euro area, the minimum bid rate on main refinancing operations; for Japan, the call money rate; and, for the United Kingdom, the official bank rate paid on commercial reserves.
SOURCE: The central bank of each area or country shown.

Emerging Market Economies

Economic performance weakened dramatically in emerging market countries in the second half of 2008. In the first half of the year, growth in many emerging market economies was relatively robust, and as food and energy prices soared, policymakers focused on containing inflationary pressure. However, in the second half, weaker demand from the advanced economies weighed on the export sectors of these countries, global financial turmoil led to tighter credit conditions, and in some cases, plunging commodity prices contributed to economic difficulties. By the end of the year, output in emerging market economies was dropping sharply, and inflationary pressures were moderating. These developments prompted policymakers in many countries to shift their focus to more stimulative monetary and fiscal policies to mitigate the effects of the economic downturn.

In China, the pace of activity slowed substantially in 2008, and concerns regarding high inflation and an overheating economy receded and gave way to efforts to bolster activity. Since September, Chinese authorities have lowered benchmark lending and deposit rates as well as bank reserve requirements several times. In November, a large fiscal stimulus plan that focused on infrastructure investment was announced, and Chinese authorities also enacted other policies designed to support the export sector, the real estate market, and small and medium-sized enterprises. After appreciating significantly in the first half of the year, the exchange value of the renminbi vis-à-vis the dollar was relatively stable in the second half of 2008.

Elsewhere in emerging Asia, the downturn in activity has been dramatic. Hong Kong, Singapore, South Korea, and Taiwan all posted substantial contractions in real GDP at the end of last year. Demand for these countries' goods from the advanced economies and China plunged in the second half of 2008, and authorities across emerging Asia have introduced more stimulative monetary and fiscal policies to bolster their economies.

In Mexico, growth was anemic in the first half of last year, but it improved in the third quarter, largely because of strong activity in the agricultural and service sectors. However, output is estimated to have declined sharply in the fourth quarter, as weakness in the U.S. manufacturing sector and financial stress have begun to weigh on the Mexican economy. In Brazil, economic activity remained firm through much of the year, but indicators suggest that output fell sharply in the fourth quarter.

Russia's economy and financial system experienced considerable stress over the second half of the year because of the steep drop in oil and other commodity prices, the turmoil in global financial markets, and geopolitical tensions resulting from the conflict with Georgia. Russian international reserves fell substantially, largely because of interventions to support the currency and the financial and corporate sectors more broadly. Several countries in emerging Europe also came under significant financial pressures in the fourth quarter of 2008, which reflected the aftermath of a period of very high rates of credit expansion as well as large current account deficits and external financing needs. Hungary, Latvia, Serbia, and Ukraine received official assistance from the International Monetary Fund.

Part 3
Monetary Policy in 2008 and Early 2009

After easing the stance of monetary policy 225 basis points over the first half of 2008, the Federal Open Market Committee (FOMC) lowered the target federal funds rate further in the second half, ultimately bringing it to a range of 0 to ¼ percent (figure 54).[12] The Federal Reserve also took a number of additional actions to increase liquidity and improve market functioning. Some of these measures resulted in a substantial increase in the size of the Federal Reserve's balance sheet; further, the FOMC announced at its December meeting that the focus of policy going forward would be to support the functioning of financial markets and stimulate the economy through open market operations and other measures that would sustain the size of the Federal Reserve's balance sheet at a high level.

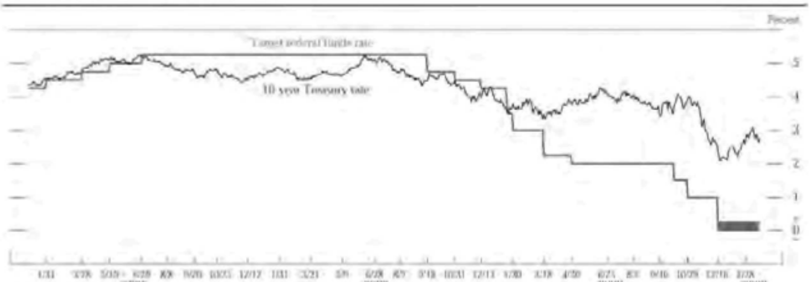
Information available last summer indicated that residential construction remained on a downward trend, the labor market had weakened further, and industrial production had declined. Although aggregate output was reported to have expanded in the second quarter, financial market developments suggested that the economy would likely come under considerable stress in the near future—in particular, tight credit conditions, the ongoing housing contraction, and the rise in energy prices were expected to weigh on economic growth over the subsequent few quarters. Core consumer price inflation remained relatively stable, but headline inflation was elevated as a result of large increases in food and energy prices.

With these considerations in mind, the FOMC kept the target federal funds rate unchanged at 2 percent at its August meeting. The accompanying policy statement indicated that, although downside risks to growth remained, the upside risks to inflation were also of significant concern to the Committee. This risk assessment, which many market participants reportedly interpreted as essentially balanced, was in line with expectations at the time. Accordingly, the expected path for policy was little changed in the wake of the announcement, and the response in broader financial markets was minimal.

By the time of the meeting on September 16, the outlook for inflation had moderated as a result of substantial declines in the prices of oil and other commodities as well as weakening aggregate demand. Various measures of inflation expectations declined between the two

12. *Members* of the FOMC in 2008 consisted of members of the Board of Governors of the Federal Reserve System plus the presidents of the Federal Reserve Banks of Cleveland, Dallas, Minneapolis, New York, and Philadelphia; in 2009, FOMC members consist of members of the Board of Governors plus the presidents of the Federal Reserve Banks of Atlanta, Chicago, New York, Richmond, and San Francisco. *Participants* at FOMC meetings consist of members of the Board of Governors and all Reserve Bank presidents.

54. Selected interest rates, 2006–09



NOTE: The data are daily and extend through February 18, 2009. The 10-year Treasury rate is the constant-maturity yield based on the most actively traded securities. The dates on the horizontal axis are those of regularly scheduled Federal Open Market Committee meetings.
SOURCE: Department of the Treasury and the Federal Reserve.

meetings, nominal wage increases continued to be moderate, and productivity growth remained solid. In addition, declining employment and softening final sales contributed to a weaker outlook for near-term economic activity. Still, some firms reportedly were continuing to pass through to their customers previous increases in the costs of energy and raw materials, and readings on core and headline inflation remained elevated. In this environment, the Committee was concerned that high inflation might become embedded in expectations and thereby impart considerable momentum to overall inflation. Financial strains had increased over the intermeeting period, although the consequences of the bankruptcy of Lehman Brothers Holdings on September 15 were not yet clear at the time of the meeting. Indeed, the substantial easing of monetary policy over the previous year, combined with ongoing measures to foster market liquidity, was seen as likely to support activity going forward. Thus, members agreed that keeping the federal funds target rate unchanged at 2 percent at the September meeting was appropriate.

Over the following weeks, stresses in financial markets continued to mount. Interest rate spreads in interbank funding markets widened markedly, corporate and municipal bond yields rose, and equity prices dropped sharply. The decline in the net asset value of a major money market mutual fund below $1 per share sparked a flight out of prime money market funds and caused a severe impairment of the functioning of the commercial paper market. In response to the extraordinary stresses in financial markets, the Federal Reserve, together with U.S. government entities and many foreign central banks and governments, implemented a number of unprecedented policy initiatives. Measures taken by the Federal Reserve around this time, discussed in detail in the appendix, included the establishment of the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, Commercial Paper Funding Facility, and Money Market Investor Funding Facility, which were intended to improve the liquidity in short-term debt markets and ease the strains in credit markets more broadly. In addition, to address the sizable demand for dollar funding in foreign jurisdictions, the FOMC authorized increases in its existing liquidity swap lines with foreign central banks and established lines with additional central banks. In domestic markets, the Federal Reserve raised the regular auction amounts of the 28- and 84-day maturity Term Auction Facility (TAF) auctions and announced two forward TAF auctions to provide funding over year-end.

The expansion of existing liquidity facilities and the creation of new facilities contributed to a substantial increase in the size of the Federal Reserve's balance sheet. Two initiatives were introduced to help manage the expansion of the balance sheet and promote control of the federal funds rate. First, on September 17, the Treasury announced a temporary Supplementary Financing Program at the request of the Federal Reserve. Under this program, the Treasury issues short-term bills over and above its regular borrowing program, with the proceeds deposited at the Federal Reserve. Second, using authority granted under the Emergency Economic Stabilization Act, the Federal Reserve announced on October 6 that it would begin paying interest on required and excess reserve balances. The payment of interest on excess reserves was intended to assist in maintaining the federal funds rate close to the target set by the Committee by creating a floor on interbank market rates. Initially, the interest rate paid on required reserve balances was set as a spread below the average targeted federal funds rate established by the FOMC over each reserve maintenance period, and the rate paid on excess balances was set as a spread below the lowest targeted federal funds rate for each reserve maintenance period. Subsequently, with the federal funds rate trading consistently below the target rate, the spreads were eliminated.

In late September and into October, macroeconomic conditions deteriorated in both the United States and Europe, prices of crude oil and other commodities dropped substantially, and some measures of expected inflation declined. In light of these developments and the extraordinary turmoil in financial markets, the Committee members agreed that downside risks to economic growth had increased and that upside risks to inflation had diminished; at an unscheduled meeting in early October, the FOMC cut its target to 1½ percent in an unprecedented coordinated policy action with five other major central banks. This action, along with the accompanying statement, led investors to mark down further the expected path for the federal funds rate.

At its October 28–29 meeting, the FOMC lowered its target for the federal funds rate an additional 50 basis points, to 1 percent. The Committee's statement noted that economic activity appeared to have slowed markedly, a development due importantly to weakening consumer and business spending and softening demand from many foreign economies. Moreover, the intensification of financial market turmoil was likely to exert additional restraint on spending by further tightening credit conditions for households and businesses. The Committee noted that, in light of the declines in the prices of energy and other commodities and the weaker prospects for economic activity, it expected inflation to moderate in coming quarters to levels consistent with price stability. With risks to economic activity to the downside, the Committee indicated that it would monitor economic and financial developments carefully and act as needed to promote sustainable economic growth and price stability.

The decision of the FOMC at its October meeting was broadly in line with market expectations and elicited only a modest reaction in financial markets. However, subsequent economic data releases suggested that economic activity was weaker and inflation lower than had been earlier anticipated. Those readings, along with continued strains in financial markets that weighed on investor sentiment, contributed to a sharp downward revision in the expected path of policy over the following weeks. Reflecting investor concerns about the condition of financial institutions, spreads on credit default swaps for U.S. banks widened sharply, and those for insurance companies remained very elevated.

Available evidence also suggested further tightening in consumer and small business credit conditions; in view of this tightening, the Federal Reserve announced on November 25 plans for the Term Asset-Backed Securities Loan Facility (TALF) to support lending to these borrowers. The Federal Reserve also announced on November 25 that, to help reduce the cost and increase the availability of residential mortgage credit, it would initiate a program to purchase up to $100 billion in direct obligations of housing-related government-sponsored enterprises and up to $500 billion in mortgage-backed securities (MBS) backed by Fannie Mae, Freddie Mac, and Ginnie Mae. The announcement and implementation of the agency purchase program appeared to reduce spreads on agency debt; conditions for high-quality borrowers in the primary residential mortgage market subsequently recovered somewhat.

Although some financial markets exhibited signs of improved functioning ahead of the December meeting, financial conditions generally remained very strained. Credit conditions had continued to tighten for both households and businesses, and ongoing declines in equity and house prices further reduced household wealth. Against this backdrop, indicators of aggregate economic activity continued to worsen. The Committee expected economic activity to contract sharply in the fourth quarter of 2008 and in early 2009; it noted that the uncertainty surrounding the outlook was considerable and that the downside risk to even this dour trajectory for economic activity was a serious concern. Inflation pressures had diminished appreciably as energy and other commodity prices dropped and economic activity slumped. Looking forward, members agreed that inflation pressures appeared set to moderate further in coming quarters, and some saw risks that inflation could drop below rates they viewed as most consistent over time with the Federal Reserve's dual mandate for maximum employment and price stability.

With the federal funds rate already trading at very low levels as a result of the large volume of excess reserves associated with the Federal Reserve's liquidity operations, participants agreed that the Committee would soon need to use other tools to impart additional monetary stimulus to the economy. The Federal Reserve had already adopted a series of programs that were providing liquidity support to a range of institutions and markets, and a continued focus on the quantity and the composition of Federal Reserve assets appeared to be necessary and desirable. Participants agreed that maintenance of a low level of short-term interest rates for some time and reliance on the use of balance sheet policies and communications about monetary policy could be effective and appropriate, in light of the sharp deterioration in the economic outlook and the appreciable easing of inflationary pressures.

Accordingly, the Committee announced a target range for the federal funds rate of 0 to ¼ percent and indicated that weak economic conditions were likely to warrant exceptionally low levels of the federal funds rate for some time. The statement also noted that the size of the Federal Reserve's balance sheet would be maintained at a high level through open market operations and other measures to support financial markets and stimulate the economy. In addition, the statement indicated that the Committee stood ready to expand purchases of agency debt and agency MBS and that it was evaluating the potential benefits of purchasing longer-term Treasury securities. The FOMC members emphasized that their expectation about the path of the federal funds rate was conditioned on their view of the likely path of economic activity. The interest rates on required reserve balances and excess reserve balances were both set at 25 basis points. These monetary policy decisions apparently were more aggressive than investors had been expecting. Market participants were somewhat surprised both by the size of the reduction in the target federal funds rate and by the statements that policy rates would likely remain low for some time and that the FOMC might engage in additional nontraditional policy actions such as the purchase of longer-term Treasury securities.

Incoming data over the following weeks indicated a continued sharp contraction in economic activity. The housing market remained on a steep downward trend, consumer spending continued its significant decline, the slowdown in business equipment investment intensified, and foreign demand weakened. Conditions in the labor market continued to deteriorate rapidly, and the drop in industrial production accelerated. Headline consumer prices fell in November and December, which reflected declines in consumer energy prices; core consumer prices were about flat in those months. Credit conditions generally remained tight, with financial markets fragile and some parts of the banking sector under substantial stress. However, modest signs of improvement were evident in some financial markets—particularly those that were receiving support from Federal Reserve liquidity facilities and other government actions.

At the meeting in January 2009, participants anticipated that a gradual recovery in U.S. economic activity would begin in the second half of the year in response to monetary easing, another dose of fiscal stimulus, relatively low energy prices, and continued efforts by the government to stabilize the financial sector and increase the availability of credit. As of late January, however, with financial conditions strained and the near-term economic outlook weak, most participants agreed that the Committee should continue to focus on supporting the functioning of financial markets and stimulating the economy through purchases of agency debt and MBS and other measures—including the implementation of the TALF—that will keep the size of the Federal Reserve's balance sheet at a high level for some time. Committee members agreed that keeping the target range for the federal funds rate at 0 to ¼ percent would be appropriate. They also agreed to continue using liquidity and asset-purchase programs to support the functioning of financial markets and to stimulate the economy.

In its January statement, the FOMC reemphasized that the Federal Reserve will use all available tools to promote the resumption of sustainable economic growth and to preserve price stability. The Committee also stated that, in addition to the purchases of agency debt and MBS already under way, it was prepared to purchase longer-term Treasury securities if evolving circumstances indicated that such transactions would be particularly effective in improving conditions in private credit markets. The Committee will continue to monitor carefully the size and composition of the Federal Reserve's balance sheet in light of evolving financial market developments. It will also continue to assess whether expansions of, or modifications to, lending facilities would serve to further support credit markets and economic activity and help preserve price stability.

Part 4
Summary of Economic Projections

The following material appeared as an addendum to the minutes of the January 27–28, 2009, meeting of the Federal Open Market Committee.

In conjunction with the January 27–28, 2009 FOMC meeting, the members of the Board of Governors and the presidents of the Federal Reserve Banks, all of whom participate in deliberations of the FOMC, provided projections for economic growth, unemployment, and inflation in 2009, 2010, 2011, and over the longer run. Projections were based on information available through the conclusion of the meeting, on each participant's assumptions regarding a range of factors likely to affect economic outcomes, and on his or her assessment of appropriate monetary policy. "Appropriate monetary policy" is defined as the future policy that, based on current information, is deemed most likely to foster outcomes for economic activity and inflation that best satisfy the participant's interpretation of the Federal Reserve's dual objectives of maximum employment and price stability. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge over time under appropriate monetary policy and in the absence of further shocks.

FOMC participants viewed the outlook for economic activity and inflation as having weakened significantly since last October, when their last projections were made. As indicated in Table 1 and depicted in Figure 1, participants projected that real GDP would contract this year, that the unemployment rate would increase substantially, and that consumer price inflation would be significantly lower than in recent years. Given the strength of the forces currently weighing on the economy, participants generally expected that the recovery would be unusually gradual and prolonged: All participants anticipated that unemployment would remain substantially above its longer-run sustainable rate at the end of 2011, even absent further economic shocks; a few indicated that more than five to six years would be needed for the economy to converge to a longer-run path characterized by sustainable rates of output growth and unemployment and by an appropriate rate of inflation. Participants generally judged that their projections for both economic activity and inflation were subject to a degree of uncertainty exceeding historical norms. Nearly all participants viewed the risks to the growth outlook as skewed to the downside, and all participants saw the risks to the inflation outlook as either balanced or tilted to the downside.

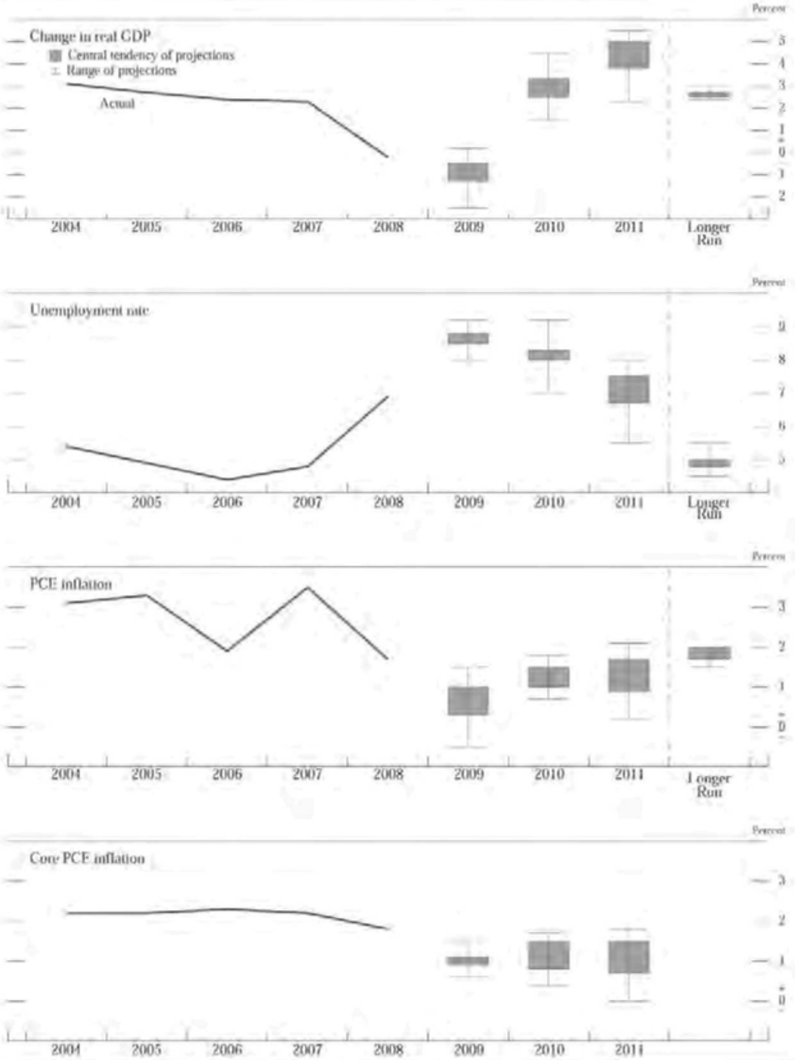
Table 1. Economic projections of Federal Reserve Governors and Reserve Bank presidents, January 2009
Percent

Variable	Central tendency[1]				Range[2]			
	2009	2010	2011	Longer Run	2009	2010	2011	Longer Run
Change in real GDP	-1.3 to -0.5	2.5 to 3.3	3.8 to 5.0	2.5 to 2.7	-2.5 to 0.2	1.5 to 4.5	2.3 to 5.5	2.4 to 3.0
October projection	-0.2 to 1.1	2.3 to 3.2	2.8 to 3.6	n.a.	-1.0 to 1.8	1.5 to 4.5	2.0 to 5.0	n.a.
Unemployment rate	8.5 to 8.8	8.0 to 8.3	6.7 to 7.5	4.8 to 5.0	8.0 to 9.2	7.0 to 9.2	5.5 to 8.0	4.5 to 5.5
October projection	7.1 to 7.6	6.5 to 7.3	5.5 to 6.6	n.a.	6.6 to 8.0	5.5 to 8.0	4.9 to 7.3	n.a.
PCE inflation	0.3 to 1.0	1.0 to 1.5	0.9 to 1.7	1.7 to 2.0	-0.5 to 1.5	0.7 to 1.8	0.2 to 2.1	1.5 to 2.0
October projection	1.3 to 2.0	1.4 to 1.8	1.4 to 1.7	n.a.	1.0 to 2.2	1.1 to 1.9	0.8 to 1.8	n.a.
Core PCE inflation[3]	0.9 to 1.1	0.8 to 1.5	0.7 to 1.5		0.6 to 1.5	0.4 to 1.7	0.0 to 1.8	
October projection	1.5 to 2.0	1.3 to 1.8	1.3 to 1.7		1.3 to 2.1	1.1 to 1.9	0.8 to 1.8	

NOTE: Projections of change in real gross domestic product (GDP) and of inflation are from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The October projections were made in conjunction with the FOMC meeting on October 28–29, 2008.

1. The central tendency excludes the three highest and three lowest projections for each variable in each year.
2. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
3. Longer-run projections for core PCE inflation are not collected.

Figure 1. Central tendencies and ranges of economic projections, 2009–11 and over the longer run



NOTE: Definitions of variables are in the notes to table 1. The data for the actual values of the variables are annual.

The Outlook

Participants' projections for the change in real GDP in 2009 had a central tendency of -1.3 to -0.5 percent, compared with the central tendency of -0.2 to 1.1 percent for their projections last October. In explaining these downward revisions, participants referred to the further intensification of the financial crisis and its effect on credit and wealth, the waning of consumer and business confidence, the marked deceleration in global economic activity, and the weakness of incoming data on spending and employment. Participants anticipated a broad-based decline in aggregate output during the first half of this year; they noted that consumer spending would likely be damped by the deterioration in labor markets, the tightness of credit conditions, the continuing decline in house prices, and the recent sharp reduction in stock market wealth, and they saw reductions in consumer demand contributing to further weakness in business investment. However, participants expected that the economy would begin to recover—albeit gradually—during the second half of the year, mainly reflecting the effects of fiscal stimulus and of Federal Reserve measures providing support to credit markets.

Looking further ahead, participants' growth projections had a central tendency of 2.5 to 3.3 percent for 2010 and 3.8 to 5.0 percent for 2011. Participants generally expected that strains in financial markets would ebb only slowly and hence that the pace of recovery in 2010 would be damped. Nonetheless, participants generally anticipated that real GDP growth would gain further momentum in 2011, reaching a pace that would temporarily exceed their estimates of the longer-run sustainable rate of economic growth and would thereby help reduce the slack in resource utilization. Most participants expected that, absent further shocks, economic growth would eventually converge to a rate of 2.5 to 2.7 percent, reflecting longer-term trends in the growth of productivity and the labor force.

Participants anticipated that labor market conditions would deteriorate substantially further over the course of this year, and nearly all expected that unemployment would still be well above its longer-run sustainable rate at the end of 2011. Participants' projections for the average unemployment rate during the fourth quarter of 2009 had a central tendency of 8.5 to 8.8 percent, markedly higher than last December's actual unemployment rate of 7.2 percent—the latest available figure at the time of the January FOMC meeting. Nearly all participants' projections were more than a percentage point higher than their previous forecasts made last October, reflecting the sharp rise in actual unemployment that occurred during the final months of 2008 as well as participants' weaker outlook for economic activity this year. Most participants anticipated that output growth in 2010 would not be substantially above its longer-run trend rate and hence that unemployment would decline only modestly next year. With economic activity and job creation generally projected to accelerate in 2011, participants anticipated that joblessness would decline more appreciably that year, as is evident from the central tendency of 6.7 to 7.5 percent for their unemployment rate projections. Participants expected that the unemployment rate would decline further after 2011, and most saw it settling in at a rate of 4.8 to 5.0 percent over time.

The central tendency of participants' projections for total PCE inflation this year was 0.3 to 1.0 percent, about a percentage point lower than the central tendency of their projections last October. Many participants noted that recent readings on inflation had been surprisingly low, and some anticipated that the unexpected declines in the prices of energy and other commodities that had occurred in the latter part of 2008 would continue to hold down inflation at the consumer level in 2009. Participants also marked down their projections for core PCE inflation this year in light of their views about the indirect effects of lower energy prices and the influence of increased resource slack.

Looking beyond this year, participants' projections for total PCE inflation had a central tendency of 1.0 to 1.5 percent for 2010, 0.9 to 1.7 percent for 2011, and 1.7 to 2.0 percent over the longer run. Participants' longer-run projections for total PCE inflation reflected their individual assessments of the measured rates of inflation consistent with the Federal Reserve's dual mandate for promoting price stability and maximum employment. Most participants judged that a longer-run PCE inflation rate of 2 percent would be consistent with the dual mandate; others indicated that 1½ or 1¾ percent inflation would be appropriate. Modestly positive longer-run inflation would allow the Committee to stimulate economic activity and support employment by setting the federal funds rate temporarily below the inflation rate when the economy is buffeted by a large negative shock to demands for goods and services. Participants generally expected that core and overall inflation would converge over time, and that persistent economic slack would continue to weigh on inflation outcomes for the next few years and hence that total PCE inflation in 2011 would still be below their assessments of the appropriate inflation rate for the longer run.

Risks to the Outlook

Participants continued to view uncertainty about the outlook for economic activity as higher than normal.[13] The risks to their projections for real GDP growth were judged as being skewed to the downside and the associated risks to their projections for the unemployment rate were tilted to the upside. Participants highlighted the considerable degree of uncertainty about the future course of the financial crisis and its impact on the real economy; for example, rising unemployment and weaker growth could exacerbate delinquencies on household and business loans, leading to higher losses for financial firms and so to a further tightening of credit conditions that would in turn put further downward pressure on spending to a greater degree than currently foreseen. In addition, some participants noted that a substantial degree of uncertainty was associated with gauging the stimulative effects of nontraditional monetary policy tools that are now being employed given that conventional policy easing was limited by the zero lower bound on nominal interest rates. Others referred to uncertainties regarding the size, composition, and effectiveness of the fiscal stimulus package—which was still under consideration at the time of the FOMC meeting—and of further measures to stabilize the banking system.

As in October, most participants continued to view the uncertainty surrounding their inflation projections as higher than historical norms. A slight majority of participants judged the risks to the inflation outlook as roughly balanced, while the rest viewed these risks as skewed to the downside. Participants indicated that elevated uncertainty about global growth was clouding the outlook for prices of energy and other commodities and hence contributing to greater uncertainty in their inflation projections. Many participants stated that their assessments regarding the level of uncertainty and balance of risks to the inflation outlook were closely linked to their judgments about the uncertainty and risks to the outlook for economic activity. Some participants noted the risk that inflation expectations might become unanchored and drift downward in response to persistently low inflation outcomes, while others pointed to the possibility of an upward shift if investors became concerned that stimulative policy measures might not be unwound in a timely fashion once the economy begins to recover.

13. Table 2 provides estimates of forecast uncertainty for the change in real GDP, the unemployment rate, and total consumer price inflation over the period from 1987 to 2007. At the end of this summary, the box "Forecast Uncertainty" discusses the sources and interpretation of uncertainty in economic forecasts and explains the approach used to assess the uncertainty and risks attending participants' projections.

Table 2. Average historical projection error ranges

Percentage points

Variable	2009	2010	2011
Change in real GDP[1]	±1.2	±1.4	±1.3
Unemployment rate[1]	±0.5	±0.8	±1.0
Total consumer prices[2]	±0.9	±1.0	±0.9

NOTE: Error ranges shown are measured as plus or minus the root mean squared error of projections that were released in the winter from 1987 through 2007 for the current and following two years by various private and government forecasters. As described in the box "Forecast Uncertainty," under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, and consumer prices will be in ranges implied by the average size of projection errors made in the past. Further information is in David Reifschneider and Peter Tulip (2007), "Gauging the Uncertainty of the Economic Outlook from Historical Forecasting Errors," Finance and Economics Discussion Series 2007-60 (Board of Governors of the Federal Reserve System, November).

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

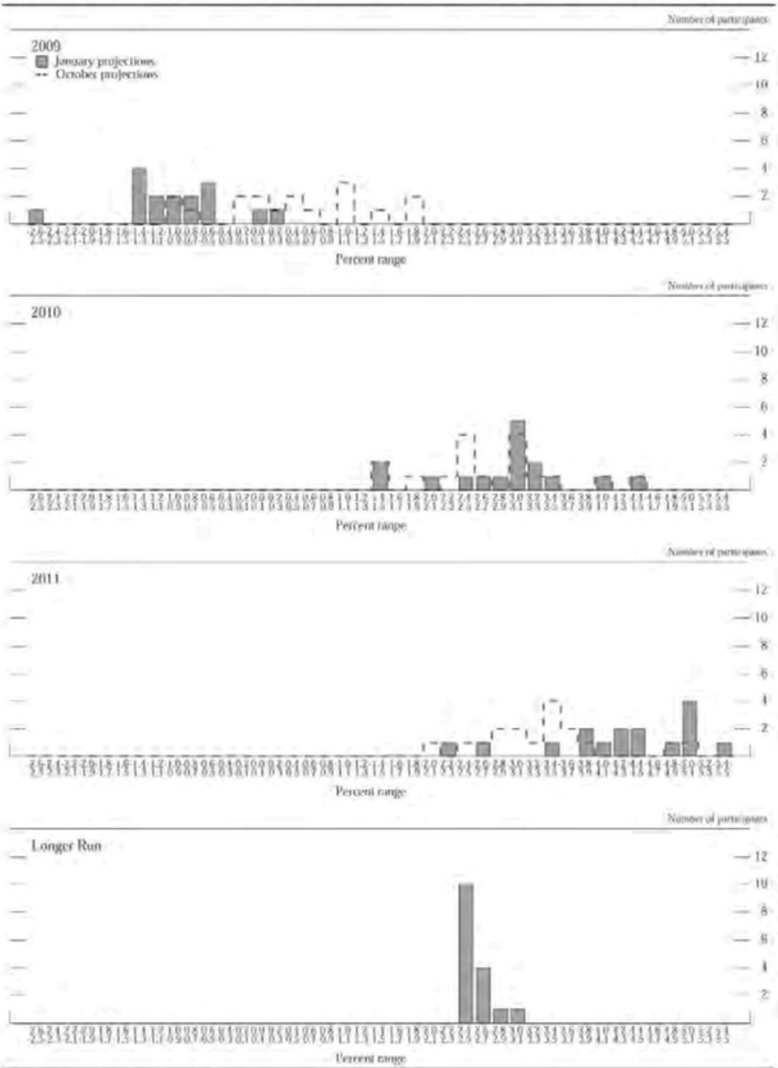
2. Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projection is percent change, fourth quarter of the previous year to the fourth quarter of the year indicated. The slightly narrower estimated width of the confidence interval for inflation in the third year compared with that for the second year is likely the result of using a limited sample period for computing these statistics.

Diversity of Views

Figures 2.A and 2.B provide further details on the diversity of participants' views regarding likely outcomes for real GDP growth and the unemployment rate, respectively. For 2009 to 2011, the dispersion in participants' projections for each variable was roughly the same as for their projections last October. This dispersion mainly indicated the diversity of participants' assessments regarding the stimulative effects of fiscal policy, the pace of recovery in financial markets, and the evolution of households' desired saving rates. The dispersion in participants' longer-run projections reflected differences in their estimates regarding the sustainable rates of output growth and unemployment to which the economy would converge under appropriate policy and in the absence of any further shocks.

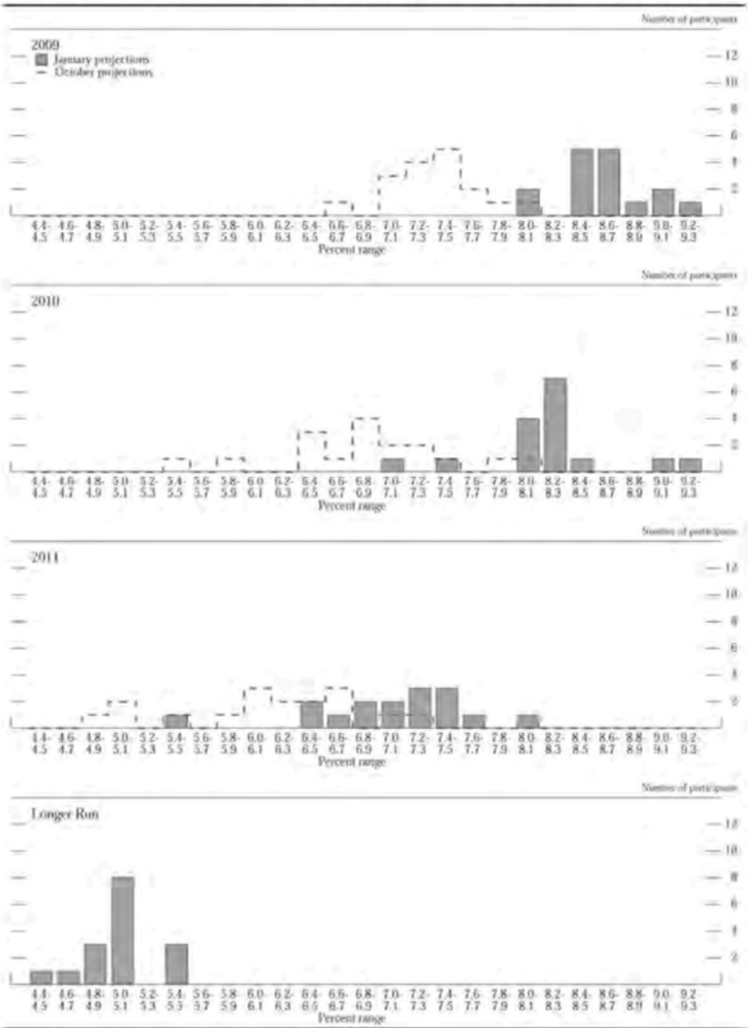
Figures 2.C and 2.D provide corresponding information regarding the diversity of participants' views regarding the inflation outlook. The dispersion in participants' projections for total PCE inflation in 2009 was substantially greater than for their projections made last October, due to increased diversity of participants' views regarding the near-term evolution of prices of energy and raw materials and the extent to which changes in those prices would be likely to pass through into overall inflation. The dispersion in participants' projections for core PCE inflation in 2009 was noticeably lower than last October, but the dispersion in their projections for core inflation in 2010 and 2011 was markedly wider, reflecting varying assessments about the timing and pace of economic recovery, the sensitivity of inflation to slack in resource utilization, the prevalence of downward nominal wage rigidity, and the likelihood that inflation expectations will remain firmly anchored. A few participants anticipated that inflation in 2011 would be close to their longer-run projections. However, most participants' projections for total PCE inflation in 2011 were below their longer-run projections, primarily reflecting the anticipated effects of substantial slack over the next three years; this inflation gap was about ¼ to ½ percentage point for some participants but exceeded a full percentage point for others.

Figure 2.A. Distribution of participants' projections for the change in real GDP, 2009–11 and over the longer run



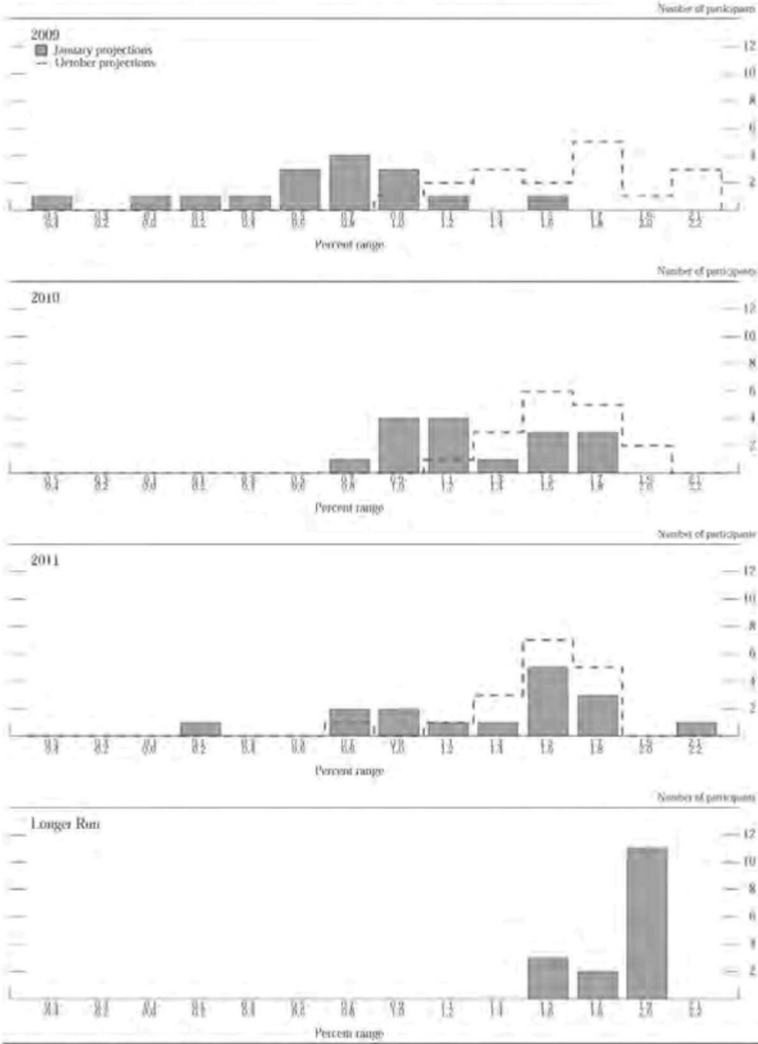
NOTE: Definitions of variables are in the general note to table 1.

Figure 2.B. Distribution of participants' projections for the unemployment rate, 2009–11 and over the longer run



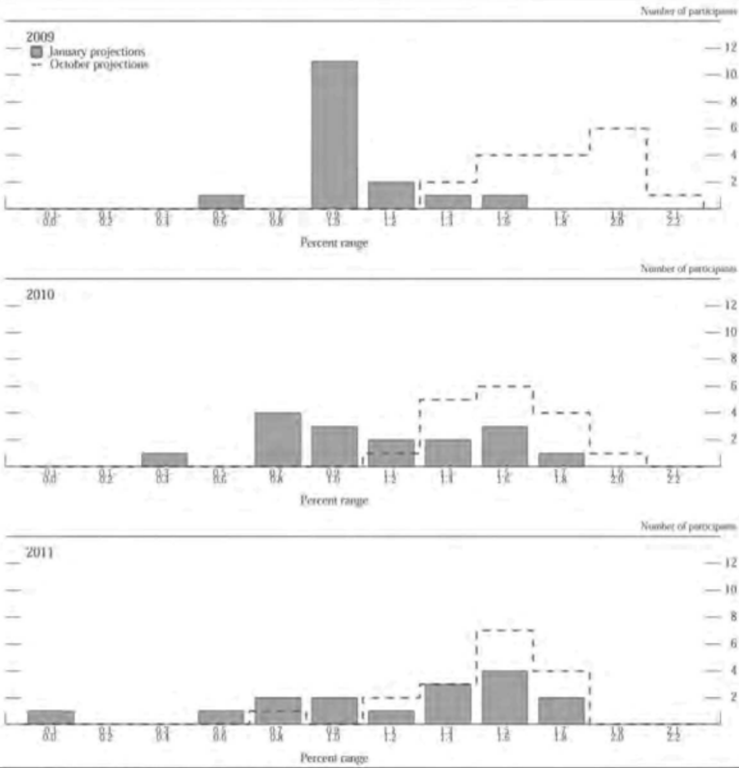
NOTE: Definitions of variables are in the general note to table 1.

Figure 2.C. Distribution of participants' projections for PCE inflation, 2009–11 and over the longer run



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

Figure 2.D. Distribution of participants' projections for core PCE inflation, 2009–11



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

Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world. And the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 summarizes the average historical accuracy of a range of forecasts, including those reported in past Monetary Policy Reports and those prepared by Federal Reserve Board staff in advance of meetings of the Federal Open Market Committee. The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real GDP and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand between 1.8 percent to 4.2 percent in the current year and 1.6 percent to 4.4 percent in the second and third years. The corresponding 70 percent confidence intervals for overall inflation would be 1.1 percent to 2.9 percent in the current year, 1.0 percent to 3.0 percent in the second year, and 1.1 percent to 2.9 percent in the third year.

Because current conditions may differ from those that prevailed on average over history, participants provide judgments as to whether the uncertainty attached to their projections of each variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty in the past as shown in table 2. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, downside, or are broadly balanced. That is, participants judge whether each variable is more likely to be above or below their projections of the most likely outcome. These judgments about the uncertainty and the risks attending each participant's projections are distinct from the diversity of participants' views about the most likely outcomes. Forecast uncertainty is concerned with the risks associated with a particular projection, rather than with divergences across a number of different projections.

Appendix
Federal Reserve Initiatives to Address Financial Strains

Since the onset of the financial turmoil in the summer of 2007, the Federal Reserve has announced several new measures to address the strains in financial markets, as well as enhancements to its existing liquidity facilities. (For outstanding balances related to these facilities, see table.)

Federal Reserve provision of liquidity and credit, 2007–09
Millions of dollars

Asset	Dec. 31, 2007	June 30, 2008	Feb. 18, 2009
Provision of liquidity to banks and dealers			
Primary credit program	8,620	24,095	65,144
Term Auction Facility	40,000	150,000	447,563
Liquidity swaps with foreign central banks	21,000	62,000	375,005
Securities lent under the Term Securities Lending Facility	n.a.	104,097	115,280
Primary Dealer Credit Facility and other broker-dealer credit	n.a.	1,455	25,268
Provision of liquidity to other market participants			
Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility	n.a.	n.a.	12,722
Net portfolio holdings of Commercial Paper Funding Facility	n.a.	n.a.	248,671
Net portfolio holdings of LLCs funded through the Money Market Investor Funding Facility	n.a.	n.a.	0
Support of critical institutions			
Net portfolio holdings of Maiden Lane I, II, and III LLCs[1]	n.a.	29,970	72,231
Credit extended to American International Group, Inc.	n.a.	n.a.	37,357

Note: LLC is a limited liability company.

1. The Federal Reserve has extended credit to several LLCs in conjunction with efforts to support critical institutions. Maiden Lane LLC was formed to acquire certain assets of The Bear Stearns Companies, Inc. Maiden Lane II LLC was formed to purchase residential mortgage-backed securities from the U.S. securities lending reinvestment portfolio of subsidiaries of American International Group, Inc. (AIG). Maiden Lane III LLC was formed to purchase multi-sector collateralized debt obligations on which the Financial Products group of AIG has written credit default swap contracts.

n.a. Not available.

Source: Federal Reserve Board.

Provision of Liquidity to Banks and Dealers

Modifications to the Primary Credit Program

Following the onset of the financial turmoil, the Federal Reserve Board announced temporary changes to its primary credit discount window facility on August 17, 2007. These changes were designed to provide depositories with greater assurance about the cost and availability of funding. First, the Federal Reserve Board approved a 50 basis point reduction in the primary credit rate to narrow the spread between the primary credit rate and the Federal Open Market Committee's target federal funds rate to 50 basis points. Second, the Federal Reserve Board announced a change to the Reserve Banks' usual practices to allow the provision of term financing for as long as 30 days, renewable by the borrower.

To bolster market liquidity further in the face of increasing financial strains, on March 16, 2008, the Federal Reserve Board unanimously approved a request by the Federal Reserve Banks to decrease the spread of the primary credit rate over the FOMC's target federal funds rate to ¼ percentage point. The Board also approved an increase in the maximum maturity of primary credit loans to 90 days from 30 days.

The Term Auction Facility

To address elevated pressures in short-term funding markets, in December 2007 the Board of Governors of the Federal Reserve System approved the establishment of a Term Auction Facility (TAF). Under this program, the Federal Reserve auctions term funds to depository institutions against the wide variety of collateral that can be used to secure loans at the discount window. By increasing the access of depository institutions to funding, the TAF has supported the ability of such institutions to meet the credit needs of their customers.

Each depository institution that is judged to be in generally sound financial condition by its Reserve Bank (and likely to remain so over the term of the loan) can participate in TAF auctions. All advances must be fully collateralized. Each TAF auction is for a fixed amount of funds, with the rate determined by the auction process (subject to a minimum bid rate). A depository institution submits bids through its Reserve Bank. The minimum bid rate for the auctions was initially established at the overnight index swap (OIS) rate corresponding to the maturity of the credit being auctioned. In January 2009, the minimum bid rate was changed to the interest rate paid by the Federal Reserve on excess reserve balances.

Initially, TAF auctions were in amounts of $20 billion and provided primarily 28-day term funds. Over the course of 2008, the Federal Reserve extended the term of some auctions to 84 days and raised the regular amounts of both the 28- and 84-day TAF auctions to $150 billion. The Federal Reserve also conducted two forward TAF auctions in November for $150 billion each, which provided funding over year-end.

Liquidity Swap Lines with Foreign Central Banks

To address the increasing demand for dollar funding in foreign jurisdictions, in December 2007, the Federal Open Market Committee (FOMC) authorized temporary reciprocal currency arrangements (swap lines) with the European Central Bank (ECB) and the Swiss National Bank (SNB). These arrangements initially provided dollars in amounts of up to $20 billion and $4 billion to the ECB and the SNB, respectively, for use in their jurisdictions. The FOMC approved these liquidity swap lines for a period of up to six months and later extended this term to October 30, 2009.

As demand for dollar funding rose further over the course of 2008, the FOMC authorized the expansion of its existing swap lines with the ECB and SNB. In the fall, the formal quantity limits on these lines, as well as on swap lines that were set up with the Bank of Japan and the Bank of England, were eliminated. The FOMC also authorized new liquidity swap lines with 10 other central banks: the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Canada, the Danmarks Nationalbank, the Bank of Korea, the Bank of Mexico, the Reserve Bank of New Zealand, the Norges Bank, the Monetary Authority of Singapore, and the Sveriges Riksbank.

The Term Securities Lending Facility

On March 11, 2008, to address increasing liquidity pressures in funding markets, the Federal Reserve announced the establishment of a Term Securities Lending Facility (TSLF). Under the TSLF, the Federal Reserve lends up to $200 billion of Treasury securities to primary dealers for a term of 28 days (rather than overnight, as in the regular securities lending program); the lending is secured by a pledge of other securities. Initially, the eligible collateral included other Treasury securities, federal agency debt, federal agency residential mortgage-backed securities (MBS), and non-agency AAA/Aaa-rated private-label residential MBS. In September, this list was broadened to include all investment-grade debt securities. The TSLF is intended to strengthen the financing position of primary dealers and foster improved conditions in financial markets more generally. Securities are made available through weekly auctions. This facility is currently scheduled to expire on October 30, 2009.

The Primary Dealer Credit Facility

To bolster market liquidity and promote orderly market functioning, on March 16, 2008, the Federal Reserve Board voted unanimously to authorize the Federal Reserve Bank of New York to create a lending facility—the Primary Dealer Credit Facility—to improve the ability of primary dealers to provide financing to participants in securitization markets. This facility became available for business on Monday, March 17, and was originally instituted for a term of six months; this term was subsequently extended, and the facility is currently set to expire on October 30, 2009. Collateral pledged to secure loans under this facility was initially limited to investment-grade debt securities; subsequently, eligible collateral was expanded to include all collateral eligible for pledge in triparty funding arrangements through the major clearing banks. The interest rate charged on such credit is the same as the primary credit rate at the Federal Reserve Bank of New York.

Provision of Liquidity to Other Market Participants

The Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility

On September 19, 2008, the Federal Reserve announced the creation of the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF). Under this program, the Federal Reserve extends nonrecourse loans at the primary credit rate to U.S. depository institutions and bank holding companies to finance their purchases of high-quality asset-backed commercial paper (ABCP) from money market mutual funds. This initiative is intended to assist money funds that hold such paper in meeting demands for redemptions by investors and to foster liquidity in the ABCP markets and broader money markets. Although the AMLF was initially authorized through January 2009, the Board subsequently extended its operation through October 30, 2009.

The Commercial Paper Funding Facility

On October 7, the Federal Reserve authorized the creation of the Commercial Paper Funding Facility (CPFF) to provide a liquidity backstop to U.S. issuers of commercial paper. The CPFF is intended to improve liquidity in short-term funding markets and thereby increase the availability of credit for businesses and households. The CPFF is currently authorized to purchase commercial paper through October 30, 2009.

Under the CPFF, Federal Reserve credit is provided to a special purpose vehicle (SPV) that, in turn, purchases commercial paper of eligible issuers. The Federal Reserve Bank of New York has committed to lend to the SPV on a recourse basis, with such loans secured by all the assets of the SPV. The SPV purchases from eligible issuers three-month U.S. dollar-denominated commercial paper through the Federal Reserve Bank of New York's primary dealers. Eligible issuers are U.S. issuers of commercial paper, including U.S. issuers with a foreign parent company. The SPV purchases only U.S. dollar-denominated commercial paper (including ABCP) that is rated at least A-1/P-1/F1.

The maximum amount of a single issuer's commercial paper that the SPV may own at any time is the greatest amount of U.S. dollar-denominated commercial paper the issuer had outstanding on any day between January 1 and August 31, 2008. The SPV will not purchase additional commercial paper from an issuer whose total commercial paper outstanding to all investors (including the SPV) equals or exceeds the issuer's limit. Pricing is based on the three-month OIS rate plus fixed spreads. At the time of its registration to use the CPFF, each issuer must pay a facility fee equal to 0.1 percent of the maximum amount of its commercial paper the SPV may own.

The Money Market Investor Funding Facility

On October 21, 2008, the Federal Reserve announced the creation of the Money Market Investor Funding Facility (MMIFF). Under the MMIFF, the Federal Reserve Bank of New York will provide senior secured funding to a series of SPVs to facilitate an industry-supported private-sector initiative to finance the purchase of eligible assets from eligible investors. Eligible assets include U.S. dollar-denominated certificates of deposit and commercial paper issued by highly rated financial institutions and having remaining maturities of 90 days or less. Eligible investors currently include U.S. money market mutual funds and other similar entities. By backstopping the sales of money market instruments in the secondary market, the MMIFF should improve the liquidity of money market investors, thus increasing their ability to meet redemption requests and their willingness to invest in money market instruments. Improved money market conditions enhance the ability of banks and other financial intermediaries to accommodate the credit needs of businesses and households.

The SPVs will purchase eligible money market instruments from eligible investors using financing from the MMIFF and from the issuance of ABCP. The SPVs will issue to the seller of each eligible asset ABCP equal to 10 percent of the asset's purchase price, with the remaining 90 percent of the transaction funded in cash. The Federal Reserve Bank of New York will commit to lend to each SPV 90 percent of the purchase price of each eligible asset. These loans will be on an overnight basis and at the primary credit rate. The loans will be senior to the ABCP, with recourse to the SPV, and secured by all the assets of the SPV. At the time of an SPV's purchase of a debt instrument issued by a financial institution, the debt instruments of that financial institution may not constitute more than 15 percent of the assets of the SPV, except during an initial ramp-up period when the concentration limit may be 20 percent. The SPVs financed by the MMIFF are scheduled to enter a wind-down process on October 30, 2009.

The Term Asset-Backed Securities Loan Facility

On November 25, 2008, the Federal Reserve Board announced plans for the Term Asset-Backed Securities Loan Facility (TALF), a facility that will help market participants meet the credit needs of households and small businesses by supporting the issuance of asset-backed securities (ABS) collateralized by student loans, auto loans, credit card loans, and loans guaranteed by the Small Business Administration. The TALF is designed to increase credit availability and support economic activity by facilitating renewed issuance of consumer and small business ABS at more normal interest rate spreads.

Under the current design of the TALF, the Federal Reserve Bank of New York will lend up to $200 billion on a nonrecourse basis to holders of certain AAA-rated ABS backed by consumer and small business loans.

Eligible securities must have been issued on or after January 1, 2009, and all or substantially all of the credit exposures underlying eligible ABS must be newly or recently originated exposures to U.S.-domiciled obligors. Originators of the credit exposures underlying eligible ABS must have agreed to comply with, or already be subject to, the executive compensation requirements of the Emergency Economic Stabilization Act of 2008.

On February 10, 2009, the Federal Reserve Board announced that it is prepared to undertake a substantial expansion of the TALF. The expansion could increase the size of the TALF to as much as $1 trillion and could broaden the eligible collateral to encompass other types of newly issued AAA-rated asset-backed securities, such as commercial MBS and private-label residential MBS. An expansion of the TALF would be supported by the provision by the Treasury of additional funds from the Troubled Asset Relief Program (TARP).

All U.S. persons who own eligible collateral may participate in the TALF, and each borrower must use a primary dealer to access the TALF. The Federal Reserve Bank of New York will offer a fixed amount of loans under the TALF on a monthly basis. Via a competitive, sealed-bid auction process, the Federal Reserve Bank of New York will award loans in amounts equal to the market value of the ABS less a haircut. The loans will be nonrecourse, will be secured at all times by the ABS, and will have a three-year term, with interest payable monthly. The Treasury, under the TARP, will provide credit protection to the Federal Reserve Bank of New York in connection with the TALF. The facility will cease making new loans on December 31, 2009, unless the Board agrees to extend the facility.

Direct Purchases of Assets

On September 19, 2008, the Federal Reserve announced that, to support market functioning, the Open Market Trading Desk would begin purchasing federal agency discount notes in the secondary market for the System Open Market Account. These instruments are short-term debt obligations issued by Fannie Mae, Freddie Mac, and the Federal Home Loan Banks. Similar to secondary-market purchases of Treasury securities, purchases of Fannie Mae, Freddie Mac, and Federal Home Loan Bank debt are conducted with the Federal Reserve's primary dealers through a series of competitive auctions.

To help reduce the cost and increase the availability of residential mortgage credit, the Federal Reserve announced on November 25 a program to purchase up to $100 billion in direct obligations of housing-related government-sponsored enterprises (GSEs) and up to $500 billion in MBS backed by Fannie Mae, Freddie Mac, the Federal Home Loan Banks, and Ginnie Mae. Purchases of agency debt obligations began in December, and purchases of MBS began in January.

The program to purchase GSE direct obligations has initially focused on fixed-rate, noncallable, senior benchmark securities issued by Fannie Mae, Freddie Mac, and the Federal Home Loan Banks. Over the course of the program, the Federal Reserve may change the scope of purchasable securities. Purchases will be made through a multiple-price competitive auction process. Primary dealers are eligible to transact directly with the Federal Reserve and are encouraged to submit offers for themselves and their customers.

Support of Critical Institutions

Bear Stearns

In mid-March of 2008, The Bear Stearns Companies, Inc., a major investment bank and primary dealer, was pushed to the brink of failure after losing the confidence of investors and finding itself without access to short-term financing markets. A bankruptcy filing would have forced the secured creditors and counterparties of Bear Stearns to liquidate underlying collateral, and given the illiquidity of markets, those creditors and counterparties might well have sustained substantial losses. If they had responded to losses or the unexpected illiquidity of their holdings by pulling back from providing secured financing to other firms and by dumping large volumes of illiquid assets on the market, a much broader financial crisis likely would have ensued. Thus, the Federal Reserve judged that a disorderly failure of Bear Stearns would have threatened overall financial stability and would most likely have had significant adverse implications for the U.S. economy.

After discussions with the Securities and Exchange Commission and in close consultation with the Treasury, the Federal Reserve determined that it should invoke emergency authorities to provide special financing to facilitate the acquisition of Bear Stearns by JPMorgan Chase & Co. JPMorgan Chase agreed to purchase Bear Stearns and assume the company's financial obligations. The Federal Reserve agreed to supply term funding, secured by $30 billion in Bear Stearns assets, to facilitate the purchase. A limited liability company, Maiden Lane LLC, was formed to facilitate the arrangements associated with the purchase by acquiring certain assets of Bear Stearns and managing those assets through time to maximize repayment of the credit extended and to minimize disruption to financial markets. JPMorgan Chase completed the acquisition of Bear Stearns on June 26, and the Federal Reserve extended approximately $29 billion of funding to Maiden Lane on that date.

American International Group

In early September, the condition of American International Group, Inc. (AIG), a large, complex financial institution, deteriorated rapidly. In view of the likely systemic implications and the potential for significant adverse effects on the economy of a disorderly failure of AIG, on September 16, the Federal Reserve Board, with the support of the Treasury, authorized the Federal Reserve Bank of New York to lend up to $85 billion to the firm to assist it in meeting its obligations and to facilitate the orderly sale of some of its businesses. This facility had a 24-month term, with interest accruing on the outstanding balance at a rate of 3-month Libor plus 850 basis points, and was collateralized by all of the assets of AIG and its primary nonregulated subsidiaries. On October 8, the Federal Reserve announced an additional program under which it would lend up to $37.8 billion to finance investment-grade, fixed-income securities held by AIG. These securities had previously been lent by AIG's insurance company subsidiaries to third parties.

In November, the Treasury announced that it would purchase $40 billion of newly issued AIG preferred shares under the TARP, which allowed the Federal Reserve to reduce from $85 billion to $60 billion the total amount available under the credit facility. Further, the interest rate on that facility was reduced to Libor plus 300 basis points, the fee on undrawn funds was reduced to 75 basis points, and the term of the facility was lengthened from two years to five years. The Federal Reserve also announced plans to restructure its lending related to AIG by extending credit to two newly formed limited liability companies. The first, Maiden Lane II LLC, received a $22.5 billion loan from the Federal Reserve and a $1 billion subordinated loan from AIG and purchased residential mortgage-backed securities from AIG. As a result of these actions, the securities lending facility established on October 8 was subsequently repaid and terminated. The second new company, Maiden Lane III LLC, received a $30 billion loan from the Federal Reserve and a $5 billion subordinated loan from AIG and purchased multisector collateralized debt obligations on which AIG has written credit default swap contracts.

Citigroup

Market anxiety about the condition of Citigroup intensified in November 2008, especially in the wake of the firm's announcement that it would lay off 52,000 workers and absorb $17 billion in distressed assets from structured investment vehicles that it sponsored, and concerns about the firm's access to funding mounted. To support financial market stability, the U.S. government on November 23 entered into an agreement with Citigroup to provide a package of capital, guarantees, and liquidity access. As part of the agreement, the Treasury and Federal Deposit Insurance Corporation (FDIC) are providing capital protection against outsized losses on a pool of about $306 billion in residential and commercial real estate and other assets. Citigroup has issued preferred shares to the Treasury and FDIC, and the Treasury has purchased an additional $20 billion in Citigroup preferred stock using TARP funds. In addition and if necessary, the Federal Reserve stands ready to backstop residual risk in the asset pool by providing nonrecourse credit.

Bank of America

Despite the improvement in bank funding markets after year-end, Bank of America also came under intense pressure. In mid-January 2009, the firm reported a $1.8 billion net loss for the fourth quarter, and it was further strained by its merger on January 2 with Merrill Lynch, which reported a fourth-quarter loss of $23 billion on a pretax basis and $16 billion on an after-tax basis. On January 16, Bank of America entered into an agreement with the Treasury, the FDIC, and the Federal Reserve similar to that arranged with Citigroup in November. Under the arrangement, the Treasury and the FDIC provide protection against the possibility of unusually large losses on a pool of approximately $118 billion of financial instruments. In addition, and if necessary, the Federal Reserve will provide nonrecourse credit to Bank of America against this pool of financial instruments. As a fee for this arrangement, Bank of America issued preferred shares to the Treasury and the FDIC.

Abbreviations

ABS	asset-backed securities
AMLF	Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility
C&I	commercial and industrial
CMBS	commercial mortgage-backed securities
CPFF	Commercial Paper Funding Facility
CRE	commercial real estate
FOMC	Federal Open Market Committee; also, the Committee
GSE	government-sponsored enterprise
Libor	London interbank offered rate
MBS	mortgage-backed securities
MMIFF	Money Market Investor Funding Facility
OIS	overnight index swap
PDCF	Primary Dealer Credit Facility
SFP	Supplementary Financing Program
TAF	Term Auction Facility
TALF	Term Asset-Backed Securities Loan Facility
TARP	Troubled Asset Relief Program
TLGP	Temporary Liquidity Guarantee Program
TSLF	Term Securities Lending Facility