S. HRG. 112–723

FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 2012

HEARING

BEFORE THE

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

ONE HUNDRED TWELFTH CONGRESS

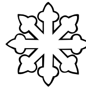
SECOND SESSION

ON

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

JULY 17, 2012

Printed for the use of the Committee on Banking, Housing, and Urban Affairs



Available at: http://www.fdsys.gov/

U.S. GOVERNMENT PRINTING OFFICE

78–978 PDF WASHINGTON : 2013

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

TIM JOHNSON, South Dakota, *Chairman*

JACK REED, Rhode Island
CHARLES E. SCHUMER, New York
ROBERT MENENDEZ, New Jersey
DANIEL K. AKAKA, Hawaii
SHERROD BROWN, Ohio
JON TESTER, Montana
HERB KOHL, Wisconsin
MARK R. WARNER, Virginia
JEFF MERKLEY, Oregon
MICHAEL F. BENNET, Colorado
KAY HAGAN, North Carolina

RICHARD C. SHELBY, Alabama
MIKE CRAPO, Idaho
BOB CORKER, Tennessee
JIM DEMINT, South Carolina
DAVID VITTER, Louisiana
MIKE JOHANNS, Nebraska
PATRICK J. TOOMEY, Pennsylvania
MARK KIRK, Illinois
JERRY MORAN, Kansas
ROGER F. WICKER, Mississippi

DWIGHT FETTIG, *Staff Director*
WILLIAM D. DUHNKE, *Republican Staff Director*

CHARLES YI, *Chief Counsel*
LAURA SWANSON, *Policy Director*
MARC LABONTE, *Detailed CRS Economist*

ANDREW OLMEM, *Republican Chief Counsel*
MICHAEL PIWOWAR, *Republican Chief Economist*
DANA WADE, *Republican Professional Staff Member*
GREGG RICHARDS, *Republican Professional Staff Member*

DAWN RATLIFF, *Chief Clerk*
RYKER VERMILYE, *Hearing Clerk*
SHELVIN SIMMONS, *IT Director*
JIM CROWELL, *Editor*

C O N T E N T S

TUESDAY, JULY 17, 2012

	Page
Opening statement of Chairman Johnson	1
Opening statements, comments, or prepared statements of:	
Senator Shelby	
Prepared statement	42
Senator Crapo	2

WITNESS

Ben S. Bernanke, Chairman, Board of Governors of the Federal Reserve System	4
Prepared statement	43
Responses to written questions of:	
Chairman Johnson	46
Senator Reed	51
Senator Warner	52
Senator Merkley	55
Senator Vitter	59
Senator Toomey	61
Senator Kirk	64

Additional Material Supplied for the Record

Monetary Policy Report to the Congress dated July 17, 2012	68

FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 2012

TUESDAY, JULY 17, 2012

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

The Committee met at 10:03 a.m., in room SD–G50, Dirksen Senate Office Building, Hon. Tim Johnson, Chairman of the Committee, presiding.

OPENING STATEMENT OF CHAIRMAN TIM JOHNSON

Chairman JOHNSON. I call the hearing to order. Today we welcome Chairman Bernanke back to the Committee to deliver the Federal Reserve's semiannual Monetary Policy Report.

The legacy of the financial crisis still weighs heavily on our Nation's economy and financial system today. Following the longest and deepest recession since the Great Depression, the economy has grown slowly but steadily since 2009. We have come a long way, but there is still a lot of work left to be done to get our economy back to the point where jobs are readily available and wages are rising for American workers.

While the economy is not growing as fast as we would like, it is important to recognize that it would not be growing at all if Congress and the Federal Reserve had not taken action to restore financial stability.

The Wall Street Reform Act created a framework for a financial system that is stable, works in the consumers' interest, and never again allows bank bailouts. Recent events such as CFTC ordering Barclays to pay a $200 million penalty for LIBOR manipulation are reminders that we need tough, fair rules in place and strong, adequately funded financial regulators to enforce those rules.

Some critics say that the cost of financial regulation is too high, but those same critics seek to underfund our regulators and ignore the reality that today's high unemployment and battered economy were caused by inadequate and ineffective regulations. That is why we passed the Wall Street Reform Act, and that is why we are safer today than before the crisis.

Any cost that Wall Street bears from playing by the rules pales in comparison to the trillions of dollars that Americans lost as a result of the last financial crisis. As we recognize the second anniversary of the Wall Street Reform Act, I look forward to hearing from Chairman Bernanke on the Fed's progress in carrying out its new responsibilities and how these efforts have further stabilized the financial system.

Though policy makers can make the financial system more stable and resilient to negative shocks to the economy, they cannot prevent those shocks from occurring in the first place. While recent policy actions taken in Europe are welcome, the eurozone economy remains fragile. I would like to hear the Chairman's thoughts on the progress that has been made in the eurozone and how U.S. policy makers can protect our economy from the potential fallout if the situation were to worsen.

While the Fed's role in the economy is important, we need to acknowledge that the Fed cannot solve all of the economy's problems. The housing market has been holding back the economy for too long, and I ask this Committee to support efforts of my colleagues to enact legislation to give responsible homeowners the opportunity to refinance their mortgages. This legislation is fair because it helps homeowners who have been playing by the rules, is market-friendly because it eliminates barriers to competition and is a cost-effective way to jump-start the economy because it keeps more of workers' paychecks in their pockets.

Congress also needs to reach a sensible resolution to the fiscal cliff problem at the end of the year. I support the President's plan to extend expiring tax cuts for the middle class. Today's hearing underlines the importance of effective oversight, which has been a leading priority of mine as Chairman of the Committee. In the past 18 months, we have conducted frequent oversight hearings with all of the financial regulators. In the coming weeks, we will conduct oversight hearings with Secretary Geithner, in his role as the head of the Financial Stability Oversight Council, and with the Director of the Consumer Financial Protection Bureau, Richard Cordray.

I have welcomed the steps that Chairman Bernanke has taken to make the Fed more transparent, including the decision to release its communications with Barclays on LIBOR. I also believe that the Wall Street Reform Act's enhancements to Fed transparency and oversight have had a positive impact.

I now turn to Senator Crapo.

STATEMENT OF SENATOR MIKE CRAPO

Senator CRAPO. Thank you very much, Chairman Johnson. I appreciate your holding this hearing today. And, Chairman Bernanke, we appreciate having you with us for your semiannual Monetary Policy Report to Congress.

Senator Shelby is unable to attend today because of a family obligation, but I ask that his statement be made a part of the record and note that he will be submitting questions for the record.

Chairman JOHNSON. Without objection.

Senator CRAPO. Thank you, Mr. Chairman.

The U.S. economy continues to experience disappointing job growth and faces significant challenges with the eurozone debt crisis, the tax cliff, and our broader fiscal crisis, which includes the need to address the impending insolvency of the entitlement programs. A disappointing 80,000 jobs were added in June, holding unemployment steady at 8.2 percent.

In June, Chairman Bernanke warned Congress about what could happen if it does not address the so-called fiscal cliff, noting that this would have a very significant impact on the near-term recov-

ery. According to CBO, if all of the tax and spending measures under current law were to occur together, the economy would grow at just 0.5 percent in 2013 compared to a 4.4 percent expectation absent these measures.

Recently, one of the largest private owners of U.S. debt said that we have until 2016 to contain our borrowing before bond investors revolt and drive up interest rates. Others suggest the timetable could be much sooner.

The lack of economic growth has caused some to call for further expansion of the Federal Reserve's $2.9 trillion balance sheet through a third round of so-called quantitative easing. However, there are a lot of questions about how effective the first two rounds of quantitative easing have been, what their long-term impacts will be, and how effective an additional round of quantitative easing could be. I am interested in learning what more can be done with Government bond yields that have been so low for so long.

Following the June FOMC meeting, the Federal Reserve announced it would continue its maturity extension program, the Operation Twist, through the end of the year. I am interested in learning what have been the results so far and what are the expectations going forward.

Another drag on the economy are the hundreds of Dodd-Frank proposed rules that will increase the cost of capital formation in the long run and in the short term add to the climate of uncertainty and complexity. The concern that I hear most is that the regulators do not understand the cumulative effect of the hundreds of proposed rules and that there is a lack of coordination between our domestic and international regulators. That is why it is so important that the regulators perform meaningful cost/benefit analysis so that we can understand how these rules will affect the economy as a whole, interact with one another, and impact our global competitiveness.

Ultimately, we need to have rules that are strong enough to protect our economy but that can adapt to changing market conditions to promote credit availability and spur job growth for millions of Americans.

Also, like many of my colleagues, I am learning about the issues related to the setting of the London Interbank Offered Rate, or LIBOR, which serves as a benchmark for trillions of dollars of loans and derivatives, including the cost of many mortgages in the United States. Recently, Barclays agreed to pay a $450 million fine to settle manipulation charges brought by the U.S. Department of Justice, the Commodity Futures Trading Commission, and the United Kingdom's Financial Service Authority.

Investigations that banks manipulated the LIBOR process are continuing, and questions are being asked whether international and domestic regulators, including the Federal Reserve, took sufficient action. I look forward to hearing from Chairman Bernanke on all of these issues, and, again, Mr. Chairman, I welcome you here for your report today.

Chairman JOHNSON. Thank you, Senator Crapo.

To preserve time for questions, opening statements will be limited to the Chair and Senator Crapo. However, I would like to re-

mind my colleagues that the record will be open for the next 7 days for additional statements and other materials.

With that, I would like to welcome Chairman Bernanke. Dr. Bernanke is currently serving a second term as Chairman of the Board of Governors of the Federal Reserve System. His first term began under President Bush in 2006. Before that, Dr. Bernanke was Chairman of the Council of Economic Advisers and served as a member of the Board of Governors of the Federal Reserve System.

Chairman Bernanke, please begin your testimony.

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

Mr. BERNANKE. Thank you. Chairman Johnson, Senator Crapo, and other Members of the Committee, I am pleased to present the Federal Reserve's semiannual Monetary Policy Report to the Congress. I will begin with a discussion of current economic conditions and the outlook before turning to monetary policy.

The U.S. economy has continued to recover, but economic activity appears to have decelerated somewhat during the first half of this year. After rising at an annual rate of 2.5 percent in the second half of 2011, real GDP increased at a 2-percent rate in the first quarter of 2012, and available indicators point to a still smaller gain in the second quarter.

Conditions in the labor market improved during the latter part of 2011 and early this year, with the unemployment rate falling about a percentage point over that period. However, after running at nearly 200,000 per month during the fourth and first quarters, the average increase in payroll employment shrank to 75,000 per month during the second quarter. Issues related to seasonal adjustment and the unusually warm weather this past winter can account for a part, but only a part, of this loss of momentum in job creation. At the same time, the jobless rate has recently leveled out at just over 8 percent.

Household spending has continued to advance, but recent data indicate a somewhat slower rate of growth in the second quarter. Although declines in energy prices are now providing some support to consumers' purchasing power, households remain concerned about their employment and income prospects, and their overall level of confidence remains relatively low.

We have seen modest signs of improvement in housing. In part because of historically low mortgage rates, both new and existing home sales have been gradually trending upward since last summer, and some measures of house prices have turned up in recent months. Construction has increased, especially in the multifamily sector. Still, a number of factors continue to impede progress in the housing market. On the demand side, many would-be buyers are deterred by worries about their own finances or about the economy more generally. Other prospective homebuyers cannot obtain mortgages due to tight lending standards, impaired creditworthiness, or because their current mortgages are underwater—that is, they owe more than their homes are worth. On the supply side, the large number of vacant homes, boosted by the ongoing inflow of fore-

closed properties, continues to divert demand from new construction.

After posting strong gains over the second half of 2011 and into the first quarter of 2012, manufacturing production has also slowed in recent months. Similarly, the rise in real business spending on equipment and software appears to have decelerated from the double-digit pace seen over the second half of 2011 to a more moderate rate of growth over the first part of this year. Forward-looking indicators of investment demand—such as surveys of business conditions and capital spending plans—suggest further weakness ahead. In part, slowing growth in production and capital investment appears to reflect economic stresses in Europe, which, together with some cooling in the economies of other trading partners, is restraining the demand for U.S. exports.

At the time of the June meeting of the Federal Open Market Committee—FOMC—my colleagues and I projected that, under the assumption of appropriate monetary policy, economic growth will likely continue at a moderate pace over coming quarters and then pick up very gradually. Specifically, our projections for growth in real GDP prepared for the meeting had a central tendency of 1.9 to 2.4 percent for this year and 2.2 to 2.8 percent for 2013. These forecasts are lower than those we made in January, reflecting the generally disappointing tone of the recent incoming data. In addition, financial strains associated with the crisis in Europe have increased since earlier this year, which—as I already noted—are weighing on both global and domestic economic activity. The recovery in the United States continues to be held back by a number of other headwinds, including still tight borrowing conditions for some businesses and households, and—as I will discuss in more detail shortly—the restraining effects of fiscal policy and fiscal uncertainty. Moreover, although the housing market has shown improvement, the contribution of this sector to the recovery is less than has been typical of previous recoveries. These headwinds should fade over time, allowing the economy to grow somewhat more rapidly and the unemployment rate to decline toward a more normal level. However, given that growth is projected to be not much above the rate needed to absorb new entrants into the labor force, the reduction in the unemployment rate seems likely to be frustratingly slow. Indeed, the central tendency of participants' forecasts now has the unemployment rate at 7 percent or higher at the end of 2014.

The Committee made comparatively small changes in June to its projections for inflation. Over the first 3 months of 2012, the price index for personal consumption expenditures rose about 3.5 percent at an annual rate, boosted by a large increase in retail energy prices that in turn reflected the higher cost of crude oil. However, the sharp drop in crude oil prices in the past few months has brought inflation down. In all, the PCE price index rose at an annual rate of 1.5 percent over the first 5 months of this year, compared with a 2.5 percent rise over 2011 as a whole. The central tendency of the Committee's projections is that inflation will be between 1.2 to 1.7 percent this year and at or below the 2-percent level that the Committee judges to be consistent with its statutory mandate in 2013 and 2014.

Participants at the June FOMC meeting indicated that they see a higher degree of uncertainty about their forecasts than normal and that the risks to economic growth have increased. I would like to highlight two main sources of risk: The first is the euro-area fiscal and banking crisis, and the second is the U.S. Fiscal situation.

Earlier this year, financial strains in the euro area moderated in response to a number of constructive steps by the European authorities, including the provision of 3-year bank financing by the European Central Bank. However, tensions in euro-area financial markets intensified again more recently, reflecting political uncertainties in Greece and news of losses at Spanish banks, which in turn raised questions about Spain's fiscal position and the resilience of the euro-area banking system more broadly. Euro-area authorities have responded by announcing a number of measures, including funding for the recapitalization of Spain's troubled banks, greater flexibility in the use of the European financial backstops (including, potentially, the flexibility to recapitalize banks directly rather than through loans to sovereigns), and movement toward unified supervision of euro-area banks. Even with these announcements, however, Europe's financial markets and economy remain under significant stress, with spillover effects on financial and economic conditions in the rest of the world, including the United States. Moreover, the possibility that the situation in Europe will worsen further remains a significant risk to the outlook.

The Federal Reserve remains in close communication with our European counterparts. Although the politics are complex, we believe that the European authorities have both strong incentives and sufficient resources to resolve the crisis. At the same time, we have been focusing on improving the resilience of our financial system to severe shocks, including those that might emanate from Europe. The capital and liquidity positions of U.S. banking institutions have improved substantially in recent years, and we have been working with U.S. financial firms to ensure they are taking steps to manage the risks associated with their exposures to Europe. That said, European developments that resulted in a significant disruption in global financial markets would inevitably pose significant challenges for our financial system and our economy.

The second important risk to our recovery, as I mentioned, is the domestic fiscal situation. As is well known, U.S. Fiscal policies are on an unsustainable path, and the development of a credible medium-term plan for controlling deficits should be a high priority. At the same time, fiscal decisions should take into account the fragility of the recovery. That recovery could be endangered by the confluence of tax increases and spending reductions that will take effect early next year if no legislative action is taken. The Congressional Budget Office has estimated that, if the full range of tax increases and spending cuts were allowed to take effect—a scenario widely referred to as the "fiscal cliff"—a shallow recession would occur early next year and about 1¼ million fewer jobs would be created in 2013. These estimates do not incorporate the additional negative effects likely to result from public uncertainty about how these matters will be resolved. As you recall, market volatility spiked and confidence fell last summer, in part as a result of the protracted debate about the necessary increase in the debt ceiling.

Similar effects could ensue as the debt ceiling and other difficult fiscal issues come into clearer view toward the end of the year.

The most effective way that the Congress could help to support the economy right now would be to work to address the Nation's fiscal challenges in a way that takes into account both the need for long-run sustainability and the fragility of the recovery. Doing so earlier rather than later would help reduce uncertainty and boost household and business confidence.

In view of the weaker economic outlook, subdued projected path for inflation, and significant downside risks to economic growth, the FOMC decided to ease monetary policy at its June meeting by continuing its maturity extension program, or MEP, through the end of this year. The MEP combines sales of short-term Treasury securities with an equivalent amount of purchases of longer-term Treasury securities. As a result, it decreases the supply of longer-term Treasury securities available to the public, putting upward pressure on the prices of those securities and downward pressure on their yields, without affecting the overall size of the Federal Reserve's balance sheet. By removing additional longer-term Treasury securities from the market, the Fed's asset purchases also induce private investors to acquire other longer-term assets, such as corporate bonds and mortgage backed-securities, helping to raise their prices and lower their yields and thereby making broader financial conditions more accommodative.

Economic growth is also being supported by the exceptionally low level of the target range for the Federal funds rate of 0 to ¼ percent and the Committee's forward guidance regarding the anticipated path of the funds rate. As I reported in my February testimony, the FOMC extended its forward guidance at its January meeting, noting that it expects that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant exceptionally low levels for the Federal funds rate at least through late 2014. The Committee has maintained this conditional forward guidance at its subsequent meetings. Reflecting its concerns about the slow pace of progress in reducing unemployment and the downside risks to the economic outlook, the Committee made clear at its June meeting that it is prepared to take further action as appropriate to promote a stronger economic recovery and sustained improvement in labor market conditions in a context of price stability.

Thank you. I would be pleased to take your questions.

Chairman JOHNSON. Thank you for your testimony.

We will now begin the questioning of our witness. Will the clerk please put 5 minutes on the clock for each Member?

Chairman Bernanke, I am going to lead off with a question about the LIBOR scandal. Last week, you released documents showing that the Fed provided early warnings on manipulation in the LIBOR market. Then-New York Fed President Timothy Geithner raised concerns with President Bush's Presidential Working Group and offered reform recommendations to the British authorities.

Can you tell the American people, what did you know, when did you know it, and what did you do about it? What can we do to restore confidence in the system?

Mr. BERNANKE. Thank you, Mr. Chairman. As you know, LIBOR is a critical benchmark for many financial contracts, so the actions of traders and banks that have been disclosed are not only very troubling in themselves, but they have the effect of undermining public confidence in financial markets.

Regarding the Federal Reserve's role, the Federal Reserve Bank of New York takes the lead in gathering market intelligence for the Federal Reserve System. It was in the process of gathering market intelligence when it received information about LIBOR submissions, notably a phone call on April 11, 2008, in which a trade in Barclays New York told an employee of the Federal Reserve that he thought that Barclays was underreporting its rate.

About that same time, stories began to appear in the media as well. There was an April 16th story in the *Wall Street Journal*, and the *Financial Times* also had a number of stories.

I would like to make two preliminary points before talking about the Federal Reserve's response to that information.

First, the information the Fed received was about the banks possibly submitting low rates in order to avoid appearing weak during the period of the crisis. The transcripts of the phone calls that were released have no reference to the manipulation of rates for profit by derivatives traders, as alleged by the recent decision.

The second point I would like to make is that this issue was complicated during the crisis by the fact that there were very few transactions occurring other than overnight, and so banks were asked to report what they would pay if they were borrowing at a certain term. It may have been in many cases that transactions were not taking place at that term. We will get more information on that as the investigations continue. But it is clear that, beyond these disclosures, the LIBOR system is structurally flawed, and part of the response was to address those flaws.

The Federal Reserve Bank of New York, after receiving this information from its market inquiries, responded very quickly. It set up an internal working group to address the issue. Importantly, it informed all the relevant authorities in both the U.K. and the United States. Notably, on May 1st, then-President Geithner briefed the President's Working Group, which consisted of the Treasury, the Fed, the CFTC, and the SEC, among other participants. The New York Fed briefed the Treasury separately on May 6th. The PWG meeting was followed up with interagency staff briefings to provide more information to the staffs of the various agencies. And the New York Fed also communicated with the FSA and the Bank of England in the United Kingdom. So there was active effort to report to all the relevant policymakers and enforcement agencies the information that had been received.

The second step that the Federal Reserve Bank of New York took was to develop recommendations to address the structural problems with LIBOR that I mentioned before. The New York Fed released a memorandum, a list of suggested changes that they submitted to the Bank of England on June 1st and following earlier discussions with the Bank of England. There were also communications with the British Bankers Association, which is the private group that constructs LIBOR, prior to June 1st.

So the Federal Reserve Bank of New York took the lead here. They released a good bit of information. They are looking for additional information, and they will certainly release it if they find it.

On the Board's side, we were in supporting mode. We provided analytic support, notably about the issues related to the construction of LIBOR. Our staff were in contact with the CFTC in April and May to provide analytical support. And Governor Kroszner on the Board at that time was in contact with the British authorities and the BBA during May and June.

I think it is important to note that, following the Federal Reserve Bank of New York's disclosures to the appropriate authorities, there was rapid followup. The CFTC was making inquiries as early as April 2008. It sent requests for information to U.S. banks in the fall of 2008. The SEC initiated inquiry in 2009 and the DOJ in 2010. Currently, the European Commission and a range of other foreign regulators, including British regulators, of course, are also investigating. And, of course, we know about the June 27th settlement with Barclays.

So there was a substantial response by the Federal Reserve Bank of New York both in terms of informing all the appropriate authorities. That information led to investigations. The Federal Reserve Bank of New York also contributed substantially to thinking about how to better structure the LIBOR panel and the LIBOR information collection to avoid some of the weaknesses in the system that became evident during the crisis.

Chairman JOHNSON. Chairman Bernanke, what are the factors that led you to support the extension of the so-called Operation Twist program? And what changes in economic conditions might lead you to consider a strong policy response in the future? If further extensions of Operation Twist are not possible in the future, what other policy tools are available if the Fed decided to provide additional monetary support?

Mr. BERNANKE. Well, as you know, Mr. Chairman, the Federal Reserve in December 2008 brought rates down close to zero, and since then we have had to rely on a number of less conventional policy tools in order to achieve additional financial accommodation, and those included, of course, as was mentioned, quantitative easing programs, and the Operation Twist, which, as I discussed in my remarks, also provides extra financial accommodation and provides support for the recovery.

The other type of tools that we have include communication tools, notably our forward guidance, which gives the markets some sense of where we think—or how long we think that rates will be kept at their current low level.

So those are the principal types of tools that we have. We are looking very carefully at the economy, trying to judge whether or not the loss of momentum we have seen recently is enduring and whether or not the economy is likely to continue to make progress toward lower unemployment and more satisfactory labor market conditions.

If that does not occur, obviously we have to consider additional steps. We have looked at a range of possible tools, mostly, again, involving the balance sheet and communication. The Committee meets in a couple of weeks, and we will be discussing those tools.

We have not really come to a specific choice at this point, but we are looking for ways to address the weakness in the economy should more action be needed to promote a sustained recovery in the labor market.

Chairman JOHNSON. Senator Crapo.

Senator CRAPO. Thank you, Mr. Chairman.

Chairman Bernanke, ever since the Dodd-Frank conference, there has been a debate about whether nonfinancial end users were exempt from margin reforms. Then-Chairman Dodd and Chairman Lincoln acknowledged that the language for end users was not perfect and tried to clarify the intent of the language with a joint letter. In the letter, they stated, "The legislation does not authorize the regulators to impose margin on end users, those exempt entities that use swaps to hedge or mitigate commercial risk."

In April 2011, prudential regulator issued a joint proposal that would, in fact, require nonfinancial end users to post margin to their bank counterparties.

According to the proposed rule, the proposal to require margin stems directly from what they view to be a legal obligation under Title VII. Recently, I offered an amendment with Senator Johanns to fulfill congressional intent by providing an explicit exemption from margin requirements for nonfinancial end users that qualify for the clearing exemption. The amendment is identical to the House bill which passed the House by a vote of 370–24.

Is it accurate, in your opinion, that regardless of congressional intent, the banking regulator view the plain language of the statute as requiring them to impose some kind of margin requirement on nonfinancial end users unless Congress changes the statute?

Mr. BERNANKE. We believe that the statute does require us to impose some type of margin requirement. We tried to mitigate the effect as much as possible by allowing for exemptions when the credit risk associated with the margin was viewed as being sufficiently small. So many small end users would be exempt in practice.

Senator CRAPO. Do you agree that the nonfinancial end users' hedging does not contribute to systemic risk, that the economic benefits from their risk management activity—excuse me, that the economy benefits from their hedging activity and that it is appropriate for Congress to provide an explicit exemption from margin requirements for nonfinancial end users that qualify for the clearing exemption?

Mr. BERNANKE. I certainly agree that nonfinancial end users benefit and that the economy benefits from the use of derivatives. It seems to be the sense of a large portion of the Congress that that exemption should be made explicit, and speaking for the Federal Reserve, we are very comfortable with that proposal.

Senator CRAPO. Well, thank you, Mr. Chairman.

I want to shift gears for just a minute back to the question that the Chairman asked with regard to what actions you can take. You indicated in your response to his question about what tools you still have and how you may approach them that you still have some possible tools to deal with. There is obviously a lot of speculation and concern about whether you are considering another round of quantitative easing. There are a lot of questions about how effec-

tive quantitative easing has been to date and what more can be done.

Could you discuss for us a moment how effective you feel that the quantitative easing has been so far and whether you feel that it is one of those tools that you should seriously consider going forward?

Mr. BERNANKE. So as I mentioned to the Chairman, we ran out of space to lower short-term rates in the normal way, and we had to look for other tools. Like a number of other major central banks, we have used asset purchases as a way of providing additional support to the economy.

Economists differ on terms of how effective the tools have been. My own assessment is that the quantitative easing and the Operation Twist so-called tools have been effective in easing financial conditions and in promoting strength in the economy, and it was most evident in the so-called QE1 in March 2009, which was followed a few months later by the beginning of the recovery and, by a few days, by the trough in the stock market.

QE2 was certainly effective at addressing what was beginning to become a worrisome amount of risk of deflation in the fall of 2010. That issue was addressed. My view and the view of our analysts at the Fed is that it also contributed to economic growth. It is hard to judge because it depends on what you think would have happened in the absence of those actions.

So there is a range of views about the efficacy of these programs. There are also questions about side effects, risks that might be associated with their use, and, therefore, I think they should not be used lightly. Nevertheless, my own view is that these tools and other nonstandard tools still do have some capacity to support the economy, and what we will be looking at in thinking about this is, I think, really two things: The first is, as mentioned in our statement, whether or not there is, in fact, a sustained recovery going on in the labor market or are we stuck in the mud, so to speak, in terms of employment. That is, of course, our maximum employment mandate. And then the other issue would be price stability, and notably we would certainly want to react against any increase in deflation risk.

Senator CRAPO. Thank you,

Chairman JOHNSON. Senator Reed.

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

Let me return for a moment to the issue of LIBOR. Can you give us and the millions of Americans who depend upon LIBOR because it tells them how much they have to pay for their car loan or their student loan, et cetera, that the current LIBOR is reliable, that the changes that were made or suggested by the New York Fed or others have been put in place, and that this is an index that is, in fact, reliable and not being subject to manipulation going forward?

Mr. BERNANKE. I cannot give that assurance with full confidence because the British Bankers Association did not adopt most of the suggestions that were made by the Federal Reserve Bank of New York. They made a relatively small number of changes. I think it is likely that concerns are less now because we are no longer in the crisis period, and that, as I mentioned, was a period in which

transactions and many maturities were not taking place. I would like to see additional reforms to the LIBOR process, assuming that LIBOR will continue to be a benchmark for financial contracts.

Alternatively, there are a number of people looking at alternative benchmarks, like repo rates or the overnight index swap rate or other types of interest rates which have the advantage over LIBOR that they are market rates as opposed to simply reported rates.

Senator REED. What steps are you taking, though, given that concern you have expressed, right now, not retrospectively, how we got here and who did what to do, but to provide as much certainty as you can—there are several banking institutions you directly regulate that contribute to LIBOR. There is your relationship directly with the Bank of England. What are you doing—not just you personally but the Federal Reserve—to ensure this index is appropriate? And, again, I encourage you to study these alternatives, but the LIBOR is so deeply interwoven and embedded into thousands and thousands of contractual arrangements throughout the world that it is going to be hard to next week shift to something else.

Mr. BERNANKE. Well, again, I think we are and need to continue advocating for reforms to the LIBOR process. It is constructed by a private organization in the U.K., and so our direct ability to influence that is limited.

With respect to the three banks in the United States which contribute to the LIBOR panel, two of those banks have reported in their SEC filings that they have been asked for information by investigating agencies. We are following that very carefully. We will see what happens, and we will provide any support and help we can to those investigators.

Senator REED. Let me turn to more the monetary issue. The Federal Reserve has been in some cases sort of pursuing aggressive monetary policy while fiscal policy has not kept up in some respects, and I presume you are prepared to continue to do that given the unemployment numbers, inflation numbers, et cetera. That is regardless of what we are doing on the fiscal end.

Mr. BERNANKE. Our mandate tells us to do the best we can for employment and price stability, and we will continue to do that. Of course, we would appreciate other policymakers playing appropriate roles themselves as well.

Senator REED. One of the comments that you made—and will give you a chance to amplify it—is that there will be a need, I think in your view, next year for continued stimulus, for want of a better term, if we are going to reduce unemployment, which is one of your mandates, and that if we reach a solution that is heavy on cuts to spending, that is heavy perhaps even on cuts to entitlements, that would not provide stimulus, in my view, and it could further impact unemployment in the country. Is that an accurate assessment?

Mr. BERNANKE. Well, the position we have taken is, I would say, at a first cut is do no harm. What we need is a strategy which addresses the long-run sustainability issues. We cannot forget about that. At the same time, if the fiscal cliff is allowed to happen, it will certainly have major negative effects on the recovery. The CBO, the IMF, and many other observers have made similar rec-

ommendations, and we feel that is a reasonable balance between the short and long term.

Senator REED. Some of the specific issues that we face at the end of the year are filling a gap in 2013 in terms of spending, in terms of revenues. And if that 2013, if we avoid the cliff by taking another route, but that route significantly decreases spending, decreases other stimulative effects, would your view be that we could have avoided a cliff but still found ourselves in a very perilous economic situation because employment will continue to decline?

Mr. BERNANKE. It is a question of the timeframe. In the very near term, we already have a lot of fiscal drag coming from State and local governments, for example, as you know, and some coming inevitably from the Federal side. So in no way am I saying that we should not be making strong efforts to achieve long-term sustainability and make a credible plan as soon as possible for doing that. But it would be better to make that plan soon but to have the effects come in more gradually to allow the recovery the air it needs in the short term.

Senator REED. Thank you, Mr. Chairman.

Chairman JOHNSON. Senator Corker.

Senator CORKER. Thank you, Mr. Chairman. And thank you, Mr. Chairman, for being here. I was listening to the last dialog there, and I know in your statement you talked about the fiscal cliff that is coming up. And to be clear about the spending reductions, it is $1.2 trillion over the next 10 years that the sequestration amounts to. We are going to spend about $45 to $47 trillion of taxpayer money over the next 10 years. And while I agree we should come up with a much better solution that deals with entitlements and revenues and hopefully something that is much larger, are you seriously concerned that we are talking about $108 billion next year in reductions, half between defense, half in other mandatory spending, you are seriously concerned that that small amount of spending reductions is something that is going to damage the economy?

Mr. BERNANKE. The fiscal cliff includes both the spending reductions and the tax increases.

Senator CORKER. I am talking about just the spending piece. It is hard for me to believe——

Mr. BERNANKE. Obviously, a smaller fiscal contraction will have a smaller effect. But, you know, I do not want to make a judgment about—I realize it is very contentious, taxes versus spending. I do not want to get into that. But, clearly, a smaller reduction in the fiscal position would have less effect on the economy than a larger one.

Senator CORKER. Yes. But as we look at the economy, would you not also say that the best thing we could do to stimulate the economy, including any actions the Fed might take, is for us to have real balanced fiscal reform? Is that not the thing that would cause our economy to take off more than anything else and alleviate the uncertainty that people have, the investing community?

Mr. BERNANKE. Fiscal reform is very important, not only the control of deficits over the long period but also the quality of fiscal policy: What are we spending our money on? What does our Tax Code look like? I think those things are extremely important.

But I think the way the current law is written, we have the maximum impact right in the very short run on January 1, 2013, and much less happening over the next decade or the next two decades. So I am not advocating an overall increase in fiscal spending or anything like that. I am just saying that the timing should be adjusted to allow the recovery a little bit more space to continue, but to make a serious efforts to improve our fiscal policy over the next decade.

Senator CORKER. So, look, I agree that we should have a better policy than we now have, and I think most of the people on this dais are trying to seek that, and it is unbelievable to me that we have not already done that. But I think, on the other hand, for us to potentially kick the can down the road on sequestration creates even more—if we do not come up with another solution, which I hope we will, but to say that you are recommending in some ways that we kick the can down the road, not do sequestration, and make us look even more irresponsible to me is worse than the $108 billion that might be reduced out of the spending that the Federal Government is going to be doing this next year. Do you understand what I am saying?

Mr. BERNANKE. Yes, sir, and I think just delaying everything, just saying we are not going to do it, put it off a year, I think that would be a very bad outcome.

Senator CORKER. So I think the actions that you are taking at the Fed—and I understand you have a dual mandate. I think we should have a single mandate, and I know we have talked about that. I know that it creates bipolar activity because you are trying to juggle the two, and we have created that, not you. But I think the actions that you are taking really take the—or you are potentially considering—I know QE2 was in response to potential deflation. I think further actions actually take the impetus off us to act responsibly. And I candidly wish we had a Chairman of the Fed that sometimes would say, look, we are not doing anything else, we are pushing rope, and it is up to you to act responsibly to deal with these fiscal issues, quit looking to us.

I mean, are you tempted ever to say that to Congress? Would you not say that now?

Mr. BERNANKE. I do not think that is my responsibility. I have been assigned to focus on maximum employment and price stability, not to hold threats over Congress' head. Congress is in charge here, not the Federal Reserve.

Senator CORKER. A very politic answer. I would say that, you know, you have members that are concerned about the policies that you are putting in place being disruptive. You do have members who are concerned about that. Is that correct?

Mr. BERNANKE. We have a range of views on the Committee, yes.

Senator CORKER. And let me ask it a different way. If we were to act responsible and to do something in a balanced way that deal with not only the next 10 years but 20 and 30, which most of the plans that have been in the mainstream do that, would that alleviate the need possibly for the Fed to consider additional quantitative easing?

Mr. BERNANKE. Well, possibly. As I said, the fiscal issues are a major concern, a major downside risk, and if Congress addressed

those issues and the economy was—the outlook was better, then it is certainly very possible that that would abrogate any need to take further action.

Senator CORKER. You have been a little vague on what additional tools you have, and I understand that. I know the whole world watches when you speak. It does appear that most of the toolkit is utilized at this moment.

If you were to consider additional tools at the Fed in the next meeting, what would be the range of options that might exist with rates being where they are today and Operation Twist being in effect? I mean, what else is there that the Fed can responsibly do since the Fed is the biggest lender to the Federal Government already, far more than China and Japan?

Mr. BERNANKE. Well, there are a range of possibilities, and I do not want to give any signal that we are choosing one——

Senator CORKER. Well, what is the range?

Mr. BERNANKE. The logical range includes different types of purchase programs that could include Treasurys or include Treasurys and mortgage-backed securities. Those are the two things we are allowed to buy. We could also use our discount window for lending purposes, but, you know, that is another possibility. We could use communication to talk about our future plans regarding rates or our balance sheet. And a possibility that we have discussed in the past is cutting the interest rate we pay in excess reserves. That is a range of things that we could do. Each one of them has costs and benefits, and that is an important part of the calculation.

Senator CORKER. Thank you for your service and for being here.

Chairman JOHNSON. Senator Schumer.

Senator SCHUMER. Well, thank you, Mr. Chairman.

I, too, thank you for your service. I think you have done a superb job in one of the most difficult periods to be Chairman of the Fed.

Now, I do not quite agree with my good friend Mr. Corker. I think you have told Congress what you want us to do in your own Fed-speak way of doing it. Just last month, you said you would be "more comfortable if Congress took off some of the burden in terms of helping the Fed in our economic recovery."

What he meant there is not deficit reduction. He meant stimulus. He meant some kind of stimulus, which is the opposite side of the Fed.

Now, I agree with you. Under current conditions, fiscal policy should be our first choice. It would be more effective. Unfortunately, we can talk all we want—everyone gives speeches how fiscal policy should be the way to go, and we do not do anything. We have had a hard getting the cooperation necessary to get anything done on the fiscal side. We have tried tax cuts, which supposedly our colleagues on the other side of the aisle like. We have tried increased investments in infrastructure, a traditional way of priming the pump. We have tried support for State and local governments where jobs are declining, and we have run into opposition on all fronts.

Just last week, on two things that our colleagues have often supported—a tax credit for job creation and accelerated depreciation for capital purchases—we got no support.

So the bottom line is very simple. We are not going to get the fiscal relief we want, at least over the next short while. Maybe after November we will.

So given the political realities—and the President has been calling for this repeatedly. When the President last fall proposed short-term fiscal support combined with long-term deficit reduction, which to me is the right way to go, a 10-year plan that really reduces our deficit but a 1- or 2-year plan that pumps the economy up a little bit, he did not get a single Republican vote. And we know the reality. You cannot do it if it is not bipartisan.

So given the political realities, Mr. Chairman, particularly in this election year, I am afraid the Fed is the only game in town. And I would urge you to take whatever actions you think would be most helpful in supporting a stronger economic recovery.

You have received some harsh criticism for past efforts to help the economy. Republican leadership in the House and Senate, even as they were blocking jobs bills in Congress, sent you a letter opposing more monetary support as well. Well, I would urge you now more than ever to take whatever actions are warranted by the economic conditions, regardless of the political pressure.

To that end, the minutes of your last FOMC meeting notes that the forecast for real GDP growth was revised down, the unemployment rate remained elevated, and consumer price inflation declined. Moreover, the economy showed that not a single member of the Committee thought employment would be back to normal levels by the end of 2014. Not a single member forecast inflation even modestly above your 2-percent target in the same timeframe. So the recession is deeper, more prolonged, and stickier than anyone thought. And let us remember, the Fed has a dual mandate: first and foremost to guard against inflation, but also to keep unemployment up and—sorry, to keep employment up and unemployment down. So, to me, these conditions would certainly motivate the Fed to seriously consider taking further action to bolster the economy.

What is your opinion about that?

Mr. BERNANKE. We take the dual mandate very seriously. We will act in an apolitical, nonpartisan manner to do what is necessary for the economy. We have said we are prepared to take further action. The complication, of course, is that we are dealing with less conventional tools, and we have to make assessments about their efficacy and whatever costs and risks may be associated with them. But it is very important that we see sustained progress in the labor market and avoid deflation risk, and those are the things we will be looking at as the Committee meets later this month and later this summer.

Senator SCHUMER. And you still do—I mean, you have used QE1 and QE2, but you still have some other tools in your toolkit?

Mr. BERNANKE. I believe we do, yes.

Senator SCHUMER. OK. And do you agree that at least for the next few years the danger of inflation is quite low?

Mr. BERNANKE. Well, our projection of inflation is that it will be close to or below our 2-percent target, and, yes, so I think inflation risk is relatively low now. Not everyone agrees with that, but my personal opinion is that that risk is reasonably low right now. And indeed, as I mentioned, there is a modest risk—not a large risk but

a modest risk—of going in the other direction, which is toward the deflationary side.

Senator SCHUMER. And you certainly agree that unemployment has been too high and is sticky, and despite two false starts, we are having a much rougher time than we ever imagined getting unemployment down?

Mr. BERNANKE. Yes, that is true.

Senator SCHUMER. So get to work, Mr. Chairman.

Chairman JOHNSON. Senator DeMint.

Senator DEMINT. Thank you. Thank you, Mr. Chairman, for being here. It is interesting to hear my colleagues talk, and they seem puzzled why our short-term temporary stimulus gimmicks do not seem to work. And by any analysis, the cliff that is at the end of this year was created by all of these temporary policies that expire at the same time.

Clearly, we are throwing a lot on you, but at the same time it appears that we are forcing you into temporary, short-term ideas. And I am concerned that—you mentioned costs and benefits, some of the things that you are clearly considering, such as quantitative easing, as costs that we do not talk about, at least on our side, as well as keeping the interest rates low. I mean, you are well aware that keeping interest rates where they are is costing Americans about $400 billion a year in lost interest on any savings that they might have. So there is a real cost, and over the last 4 years, probably about $1 trillion in loss. So people who are actually trying to save and put aside dollars are on a negative treadmill in the sense that they are losing the value on their dollars. So there is a cost to that stimulus effect. And also a quantitative easing, which you are clearly considering, our own Federal Reserve Bank of New York estimates that about 50 percent of the value of the S&P over the last decade is related to Fed action and the buildup around Fed action of quantitative easing.

My concern now is that what we are seeing is not an increase in the value of stock but a projection and a loss of value of our dollar. And while we talk about no inflation, I think what we are talking about is no visible inflation at this time, because clearly, if we are printing more money to buy more of our national debt—and I think you will agree the Federal Reserve through intermediaries has bought over half of our debt the last couple of years—we are diluting the value of our dollar over time. And while it may not show up today or tomorrow, it is inevitable that it will show up. And I think we see that in the reflection of the price of stocks because it is obvious that that does not reflect long-term projections of value and profits as much as it does playing a market and what is coming out of the Federal Reserve.

So my concern very much now is another announcement of quantitative easing, which might inflate the stock market temporarily, but another short-term effort that might help employment in the short term but actually reduce the value of the dollar and, therefore, everything we have worked for here in the country. So how are you gauging the cost of another round of quantitative easing?

Mr. BERNANKE. Well, let me respond to the specifics that you raised. On savings, we understand that low interest rates are a hardship for many people. The reason the interest rates are low,

of course, is that we are trying to promote a recovery in the economy. People hold fixed-income types of securities, like CDs or Treasury bonds, but they also hold stocks or corporate bonds or small businesses or other types of assets which depend on the strength of the economy. And raising interest rates might help some folks, but if it caused the economy to weaken considerably, it would be bad for investors broadly speaking.

So what we are trying to do, of course, as our mandate suggests is to strengthen the economy, which in turn should make America a more attractive place to invest, provide higher returns for everyone investing in the United States.

On the dollar and inflation, I appreciate your concern, and that is obviously one of the things we have paid very close attention to. We have not seen inflation yet, though, and the dollar has been, in fact, recently a good bit stronger. And we are comfortable that we have the tools to unwind these policies in a way that will not threaten inflation. But as I said to Senator Schumer, we take both sides of the mandate very seriously, and as we are looking to try to help reduce unemployment, we also want to be confident that we maintain price stability in the United States. And thus far we have been successful in doing that.

Senator DEMINT. The dollar is stronger relative to the euro, but comparative values inside the United States just cause some concerns at this point. But, again, I appreciate what you do. I would just ask caution in diluting our dollar even further for temporary action.

Thank you, Mr. Chairman.

Chairman JOHNSON. Senator Menendez.

Senator MENENDEZ. Thank you, Mr. Chairman.

Thank you, Chairman Bernanke, for your service. I want to speak to you about interest rate manipulations by large banks since the Fed plays a role, a key role in ensuring the integrity of interest rates that affect consumers, small businesses, and cities and towns across the country.

You know, I look at this most recent set of allegations on the LIBOR manipulation, and once again it exposes to me a culture of greed, a culture of cheating, of lying, at least at one large bank, and probably many more, which is why nine of my colleagues and I wrote to you and other banking regulators and the Department of Justice last week asking for a robust investigation in the role of these banks and how this ultimately affected consumers in this country, investors in this country, cities in this country, because LIBOR is a very—it is far more than a benchmark. It is a very significant indicator here that is used.

I know that the Federal Reserve Bank of Cleveland found that 45 percent of prime adjustable rate mortgages are indexed to LIBOR; 80 percent of the subprime ARMs use LIBOR as a benchmark. So this is a huge issue, and it again goes to the integrity of our financial system, and the lack of faith, I think, increasingly that the American public and, for that fact, many of us are having in the system.

I looked at the internal emails during 2005 and 2007 of Barclays' derivative traders asking other employees to submit false survey responses in order to benefit their trading positions, changing

them, preferring certain LIBOR outcomes on certain days, sometimes for it to be higher, sometimes for it to be lower, depending upon how it would benefit their position.

Now, I look at this, and I say to myself this is about trying to manipulate a key economic indicator for the purposes of profit. Am I wrong on that?

Mr. BERNANKE. No, I agree absolutely. This is unacceptable behavior.

Senator MENENDEZ. Well, let me ask you, clearly, then, banks like Barclays were trying to profit from the LIBOR manipulation, but that profit came not at, you know—actually, it came at the expense of the public in general.

Mr. BERNANKE. Some of the public. It is actually an interesting question. You mentioned borrowers. Borrowers may have benefited because LIBOR was underreported. We will probably find out via a number of lawsuits that have been filed, and investigations, exactly how much effect there was.

Senator MENENDEZ. But if you got caught in that period of time in which the traders wanted the higher LIBOR and that was a time in which your adjustment was going on, you had a detriment to yourself. Investors obviously had a detriment in not knowing the integrity of the institutions, not knowing the—you know, LIBOR, if it is lower, it means things are working pretty well. When it goes higher, it is sort of like a warning sign, is it not?

Mr. BERNANKE. I am not defending it. I think it is a major problem for our financial system and for the confidence in the financial system, and we need to address it.

Senator MENENDEZ. So how do we address it? For example, I know that some of my colleagues here bristle at regulation, but it seems that this is an industry that on its own will not work with the integrity that the public deserves. We are talking about pension fund investments, mutual fund investments, investments by regular investors, as well as the consequences to consumers. I am sure that we are talking about billions in effect, if not trillions in effect.

For example, do you think that we need additional internal controls or firewalls between reporting personnel and trading employees at these banks so that we do not have this work to manipulate as one example of—I would like to hear what it is we are going to do now that we know all of this, and may have known it before. We are we going to do to ensure the integrity of this banking system?

Mr. BERNANKE. Well, first, it is going to have to be an international effort because—LIBOR is constructed by the U.K. organization, and, of course, LIBOR is constructed for about ten different currencies as well. So it has to be an international effort.

I think there are broadly two approaches. One would be to fix LIBOR, to make changes to it to increase the visibility, to reduce the ability of individual banks or traders to affect the overall LIBOR, and to increase monitoring of the reporting process that is done. So that would be one strategy.

The other strategy, which many people are thinking about, is going from what is essentially a reported rate to an observable market rate as the index, and there are a number of possible can-

didates that have been advanced that might ultimately replace LIBOR. As you point out, though, LIBOR is very deeply ingrained in many contracts, and so that change will be not a simple one to make. But I agree with you that we need to address this problem.

Senator MENENDEZ. Well, I would look forward to the Fed's leadership in this regard and suggestions of how we, in fact, make a system that cannot be manipulated, that has consequences to millions of consumers, investors, pension funds, municipalities, counties, Governments, all affected by LIBOR. And so it may be an international response that we need, but we need to understand what we can do here in the United States to ensure for these investors and these consumers.

Chairman JOHNSON. Senator Vitter.

Senator VITTER. Thank you, Mr. Chairman, and thank you, Chairman Bernanke, for your report.

On the LIBOR issue, from everything I have read, reports as well as documents, it seems like in 2008, when the New York Fed learned of this potential scandal, potential misreporting, it reacted on the policy side with various discussions, recommendations, with their British counterparts. I have not seen anything about it reacting as a regulator of U.S. large banks. Did it do anything to investigate whether U.S. banks were guilty of the same practice?

Mr. BERNANKE. Well, what it did was it informed the responsible authorities—the CFTC in particular—very quickly. The Bank of New York made a presentation to the President's Working Group that included the SEC and the CFTC, provided supporting information, as did the Board. So the investigations took place, but they were taken up quite quickly by not the Fed, which is a safety and soundness regulator, but by the authorities that had the most direct responsibility for those issues.

I have to say that the Federal Reserve Bank of New York is still investigating the situation itself, digging up documents and the like. I do not know what communications or conversations were had with the three U.S. banks that were on the panel, but the actual enforcement actions were taken by the CFTC and SEC and DOJ.

Senator VITTER. So as we sit here today, do we know definitively that no U.S. banks were guilty of the same manipulation?

Mr. BERNANKE. No, we do not know that.

Senator VITTER. Well, it seems to me that goes back to my question and my concern. If we do not know that, it seems like somebody dropped the ball, the fact that we are 4 years later and we do not know that.

Mr. BERNANKE. Well, I mean, as I said, two banks have reported that they have been asked to disclose information to the investigating agencies, and so a robust process is certainly underway.

Senator VITTER. It is underway 4 years later. My point is that knowledge of this occurred in 2008, and neither the New York Fed nor other regulators did a sufficient investigation so that we could know one way or the other as we speak today 4 years later that the U.S. banks did not do the same thing. Am I missing something?

Mr. BERNANKE. Only that, again, I think the responsibility of the New York Fed was to make sure that the appropriate authorities had the information, which is what they did.

Senator VITTER. Do you think it was a reasonable responsibility for the New York Fed to follow up and say did U.S. banks that we are a primary regulator of do the same thing?

Mr. BERNANKE. I do not know what conversations they had. Of course, the New York Fed is the regulator of some banks and of holding companies. There are other regulators, like the OCC and so on.

Senator VITTER. But certainly the New York Fed is the primary regulator of the biggest banks with regard to—U.S. banks engaged in LIBOR that we are talking about, correct?

Mr. BERNANKE. Two of the three.

Senator VITTER. Right. Let me move on to another topic that I am concerned about. The Fed is in the process of rulemaking with regard to the term "predominantly engaged in financial activities" under Dodd-Frank. The rule that has been published and the Fed is now taking comments on seems to me absolutely ignores a very specific criteria that we in Congress placed in Dodd-Frank in Section 102(a)(6). I know about it because it was a Vitter-Pryor amendment, and it is very specific. It uses an 85-percent test. And it seems to me the rule the Fed is in the process of adopting ignores that specific metric.

How can the Fed adopt a rule that ignores specific statutory language?

Mr. BERNANKE. We would not want to do that, and I will check on that question for you.

Senator VITTER. OK. If you could check on that, again, it is 102(a)(6). And I believe the Fed rule that has been published for comment ignores a specific metric in the law, which I would short term call the 85-percent rule, which was a Vitter-Pryor amendment, which is in final law.

Mr. BERNANKE. Thank you for that.

Senator VITTER. Thank you very much.

Finally, capital standards for the largest banks. As I have read your comments in the past, it seems to me that you support somewhat larger capital requirements for mega banks, but that you seem to think where we are headed, about 9.5 percent under Basel III, which is about 2.5 percent more for the mega banks, is roughly appropriate. Is that a fair summary or not?

Mr. BERNANKE. Well, there is an international standard which it is not the same for every big bank. It starts at virtually zero for the medium-size banks and then increases up to the largest banks. But it is based on some formulas and some calculations that try to establish parity across banks around the world.

Senator VITTER. Well, I guess what I am asking is: To the extent that imposes higher capital standards on the largest U.S. banks, do you think those higher standards are good enough to ensure stability in the future and protection in the future?

Mr. BERNANKE. I think they are very useful, very important. Basel III in general is going to increase everybody's capital and increase the quality of capital, and this will mean that the largest banks have even additional capital. But it is not just capital. It is also going to be the market discipline that comes from orderly liquidation authority, stronger supervision, liquidity requirements, and so on. I think it is extremely important that we address too

big to fail, and this is one way to make banks take into account that their own size does impose a cost on the rest of society and make them respond to that.

Senator VITTER. Beyond the path we are on, do you think we should be looking at higher capital requirements for the biggest banks?

Mr. BERNANKE. Well, we will continue to have international discussions. It has been our approach to try to have capital requirements that are broadly consistent with the international standards, and these numbers were based on calculations that drew from the crisis. But we are always open to further discussions, and we will see how effects of the higher capital work through the credit system as we go forward. We are phasing this in relatively slowly, as you know, so we will get a chance to see what the impact is on banks and credit costs.

Senator VITTER. My time is up, but I would encourage you to look at that, and I would encourage you to place safety and stability ahead of—I understand the desire for uniformity across the globe, but I do not think it should trump what is best for——

Mr. BERNANKE. You are looking forward to higher capital requirements.

Senator VITTER. Yes.

Chairman JOHNSON. Senator Akaka.

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

Let me add my welcome to Chairman Bernanke to the Committee and to thank you so much for your tireless leadership in these challenging times.

Recent economic events in Europe and China show us how dependent the United States is on the international markets when it comes to our economic recovery. Despite concerns about the overall rate of recovery, some sectors are beginning to turn around and we are beginning to see some bright spots, as indicated in your opening statement.

Hawaii, for example, had record tourism numbers in May, and nationally we see spending by foreign travelers continue to rise, helping to reduce our deficit.

My question is: How do you think that current policies and those regarding tourism and exports have affected the recovery? And, also, do you have any suggestions on how to further encourage growth in these areas?

Mr. BERNANKE. Well, first, Senator, tourism has been something of a bright spot. We have seen improvements in tourism in not just Hawaii but in a number of places around the country. And you mentioned the international trade deficit. People may not appreciate that when a foreigner comes and visits Hawaii, that actually counts as a U.S. export because we are exporting the tourism services. And the export of tourism services has actually been growing very quickly, something like 14 percent in the last year, faster than other types of exports. And so it contributes to our trade balance as well as to overall economic activity. So it is a positive.

With respect to policies that address it, you know, I think there is a lot of incentive. We see that individual States, for example, compete with each other to try to attract visitors. But we can consider issues like visa policies; we can look at any tax or other impli-

cations that might affect the cost of tourism. So it is an area where I think there is a lot of benefit and a lot of scope for economic benefit to Hawaii and the rest of the country. And it has so far been, as I said, a bright spot among the various service industries that we have.

Senator AKAKA. Thank you.

As you know, I am concerned with the well-being of consumers. During previous hearings, you and I have discussed the importance of improving financial literacy to empower consumers while we work to grow the economy. So my question is: In what ways have you seen financial decision making by individual Americans improve during this recovery? And what more needs to be done, do you think?

Mr. BERNANKE. Well, there are two sides to improving decision making. On the one hand, there is education and that effort has continued. The Federal Reserve is continuing its efforts toward promoting financial literacy and economic education. I have an upcoming meeting with teachers across the country, and I will be talking about financial literacy and answering their questions and talking about how to introduce students to these topics.

Some of the activities that we had have moved over to the CFPB, which some personnel and some functions went over there, but they are also engaged in those activities. So education is one side.

On the other side, it is important that disclosures and the types of products that are offered are such that people have a reasonable chance of understanding what it is that they are buying or investing in. The Federal Reserve pioneered a few years ago the use of consumer testing to improve disclosures for credit card statements and a variety of other types of disclosures, and we hope to see that type of activity continue.

I think in general that the experience of the crisis has made many people more aware of the need to be financially literate, schools more aware, and more cautious as well. But it is an ongoing battle. We cannot declare victory. We have to continue to work to try to make sure that both kids in school and also adults who are making financial decisions have access to good advice and good education.

Senator AKAKA. Thank you very much for your responses, Mr. Chairman.

Chairman JOHNSON. Senator Johanns.

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

The forecasts that you have testified about today I am assuming do not factor in the results of the fiscal cliff that is headed our way between now and the end of the year. Is that a safe assumption?

Mr. BERNANKE. That is correct.

Senator JOHANNS. So because of the fact that all of the various items that are included in the so-called fiscal cliff would take affirmative action by Congress to pull us back, which typically means 60 votes in the Senate, a majority in the House, a Presidential signature, my assumption is that if that does not happen, we get caught in a situation where those forecasts would be revised yet again, and it would be even more pessimistic than your testimony today. Would that be correct?

Mr. BERNANKE. Absolutely.

Senator JOHANNS. As you think about the sequester, the $1 trillion sequester, as you think about returning to the 2001, 2003 tax policy, as you think about the estate tax and all of the various factors that we are looking at between now and the end of the year, if you were to give a recommendation to Congress as to where to act, would it be act on everything or is there a priority that you would set for action?

Mr. BERNANKE. No. I think the choice is between spending and taxes, and the mix and the kinds of taxes and so on, I think that is really a congressional responsibility. I am just pointing to the collective impact of all these different things happening at the same time, and there may be many different ways to mitigate that effect, and I am sure Members of Congress have different views on the best way to do that, which is one of the problems, because you are going to have to come to some kind of agreement.

So, no, I do not have a specific recommendation other than to think about not just the individual policies but their collective impact if they all happen at the same time.

Senator JOHANNS. Let me talk to you a little bit about the mitigation piece of this. As you know, some of us—in fact, some of us on this Banking Committee—have been meeting for many, many months—in fact, for some members they have been meeting for over a year—talking about an approach, and I would guess the best way of describing that is the outline for the approach is the Simpson-Bowles plan, which came out a year ago.

Thinking about that plan, would you be comfortable in testifying today that that at least is an acceptable alternative to what we are facing between now and the end of the year if Congress could see its way to adopting that approach?

Mr. BERNANKE. Well, it does have a profile that seems reasonable in terms of addressing longer-term sustainability over the longer period. But, again, I do not want to endorse the individual components, in part because, again, choices between taxes and spending are a congressional prerogative, and also because the Bowles-Simpson plan is not really a complete plan. It does not, for example, say very much about health care and how those costs will be controlled, but it does have the feature that, like many other plans that have been suggested—and there are others, Rivlin and others as well—introduce this discipline, fiscal discipline, in a rigorous way but over a longer period of time to allow the economy to adjust more easily.

Senator JOHANNS. You know, Mr. Chairman, I think if the average citizen were to listen in on the political debate that will occur between now and November—and political debate is certainly appropriate; that is how democracies work—you would get very discouraged. But having said that, give us your thoughts. If Congress were able to put a plan in place, whether it is Bowles-Simpson or another approach, that provided that stimulus maybe for a period of time—in my judgment, pull back on the sequester—provided economic stability in terms of tax policy and revenue policy and started stabilizing things with a view toward trying to deal with the deficit over a period of time, what kind of signal would that send to the marketplace? And do you think that would be a positive signal?

Mr. BERNANKE. It would be very positive. It would reduce a lot of the uncertainty that we see. It would address a very important problem, and it would show the ability of our political system to deliver important results.

You may recall that when the U.S. Government was downgraded last summer, the putative reason was the concern about the ability of Congress to come to a solution, not a lack of resources for the country as a whole, but it really was this issue about whether the Congress can work together to deliver a satisfactory outcome.

So I think something like that, even if it was only an outline, you know, a set of guidelines or guideposts that Congress would fill in as it went forward, I think that would go a long way to reducing uncertainty, increasing confidence, and addressing one of our biggest longer-term problems.

Senator JOHANNS. Thank you, Mr. Chairman.

Chairman JOHNSON. Senator Brown.

Senator BROWN. Thank you, Mr. Chairman.

Chairman Bernanke, nice to see you. As you know, as a result of Dodd-Frank, the Federal Reserve has gained a great deal more authority to oversee U.S. banks. Regulators, we know, all of us agree bipartisanly, have a responsibility to ensure that firm rules are in place, that rules are being followed, that bad actors are being punished. Unfortunately, as we all know and read day after day after day, since 2008 we have seen too many examples of Wall Street again breaking rules and laws and common standards of ethical behavior. I follow up on some issues that Senator Vitter talked about, and I want to just run through it for the sake of repetition because it is so important to continue to recognize what these problems are: investor lawsuits; SEC enforcement actions over mortgage-backed securities; municipalities sold overpriced credit derivatives, bankrupting some of them; five of the Nation's largest servicers found to have forged foreclosure documents and mortgage security legal documents.

The Nation's largest bank in January halted all consumer debt collection lawsuits over concerns about poorly maintained and inaccurate paperwork; the Nation's largest bank has lost $5.8 billion to date on large, complex derivative trades the regulators either did not know about or looked the other way; it appears their employees misreported losses; 16 global banks are suspected of manipulating LIBOR that is used as a benchmark for mortgages and credit cards and student loans and, as you know, even derivatives.

In June, one publication reported on a criminal bid-rigging trial exposing illegal practices by many Wall Street banks and arranging bids so that banks could underpay for municipal bonds.

Two weeks ago, former employees of the Nation's largest bank told the *New York Times* the company urged them to steer clients to their own mutual funds because they were more profitable for the bank even though they paid investors lower returns than other funds.

The Federal Energy Regulatory Commission is investigating whether the biggest U.S. bank manipulated prices in the energy market.

I mean, this goes on and on and on and on, not to mention wrongdoing in institutions over which the Fed has no jurisdiction:

MF Global, PFG Best, the problematic Facebook IPO, recent reports that analysts at Wall Street's biggest banks are sharing secret information.

No wonder the public does not trust you or us or any of the banks—whether the banks on Wall Street, the bank regulatory system. So I do not know any other answer, Mr. Chairman, other than to put out there and again say I think so many of our biggest banks are too big to manage and too big to regulate. I think this behavior shows they are too big to manage and too big to regulate. True?

Mr. BERNANKE. There have been many bad practices, I agree. Many of them were tied to the crisis period, a period of excess. I think that is bad business. I think it is important for us to address those issues through enforcement. And, of course, part of the reason—I am not overclaiming here, but part of the reason you could make such a long list is that so many of these things have been turned up by various enforcement——

Senator BROWN. And perhaps many have not.

Mr. BERNANKE. Perhaps many have not, that is true. On——

Senator BROWN. Well, Mr. Chairman—and I apologize for interrupting. It is not really fair. But you said this is bad business. Well, for a lot of them, it has been kind of good business. It has been a way for—it has been embarrassing to some, but it has also meant bigger and bigger profits and bigger and bigger bonuses. And to say it is bad business, from an academic viewpoint, from a perch at Princeton perhaps, but it is not good for our economy, but there have been far too many rewards for some of the bad actors.

Mr. BERNANKE. It is very shortsighted. It is not the way you build a long-term relationship with customers and not the way you have long-term profits.

On the size of banks, I think the real issue is too big to fail. If you conquer too big to fail, then there will be strong market pressures for banks that are too big to manage, too big to operate, to break up. There was a story about that in the media this morning about the benefits of providing shareholders with additional value by breaking up in situations where you do not have good controls and you do not have good synergies between different parts of the bank.

And so what Dodd-Frank does is it provides a blueprint for attacking too big to fail, and that includes the liquidation authority, it includes the living wills—which, by the way, do provide a blueprint. If you wanted to break up banks or hive off parts of banks, the living wills provide some information about, you know, how you would do that in a sensible way.

So I think it is very important to attack too big to fail, and we are addressing that through capital, through supervision, through orderly liquidation authorities, through living wills. And I think if banks are really exposed to the discipline of the market, we will see some breakups of banks.

Senator BROWN. Living wills seem to take effect, at least in the nonfinancial world, only close to somebody's deathbed, and I do not think these living wills address the issue, nor does this other regulation—other kinds of regulations seem to address the issues of all this litany of problems I mentioned. In the end, if these banks can

be regulated, then it seems clear to me that the Fed and other regulators—that includes the far too often captured by the regulators OCC—that they are either not up to the job, or they are complicit in Wall Street's activities. I guess I beg of you to figure out how we are going to restore the confidence of the American people in the financial markets, because we certainly have not yet.

Mr. BERNANKE. That is a high priority. I agree.

Senator BROWN. Thank you.

Chairman JOHNSON. Senator Toomey.

Senator TOOMEY. Thank you, Mr. Chairman, and thank you, Chairman Bernanke, for being here. I just want to touch briefly on monetary policy before moving on to the LIBOR scandal.

Mr. Chairman, you acknowledged that there is a range of views about the efficacy of the policy that you have been pursuing. I am sure you would also acknowledge that there is a range of views about the risks that are associated with the policies you have been pursuing. And I will acknowledge that I am sympathetic to the fact that we have given you a dual mandate, which I think intrinsically creates the risk that you will be put in a position where you have to deal with the conflict over two conflicting goals.

But I just want to stress—and I know you and I disagree on this. We have had this conversation. But I just feel strongly that the problems facing our economy are not monetary in nature. They result from this ongoing deleveraging process that we are suffering through, a regulatory avalanche, completely unsustainable fiscal policy, which you have acknowledged, and the threat of huge tax increases. And so to address this with ever easier monetary policy, I worry very much about the unintended consequences, including the fact that it has the effect of masking the true cost of these deficits and making it easier for us to continue this very imprudent fiscal policy.

So I just want to reiterate that point, but what I would like to ask you about, if I could, is this LIBOR scandal. And I will tell you I am very disturbed about this. I am disturbed about the destruction of what little confidence might remain in our financial system. I am very concerned about the direct impact to American citizens, including my constituents, among many. I think of the city of Bethlehem that engaged in interest rate swaps where they were paying a fixed rate, receiving floating rates based on LIBOR, and I wonder whether they were systematically receiving payments that were lower than what they should have gotten because of this.

You had mentioned in your testimony or perhaps in answer to a question that Fed officials became aware of Barclays' manipulating this index in April of 2008. The *Wall Street Journal* has an editorial today in which they recount an email exchange that occurred in August of 2007 between—or perhaps it was a phone conversation between a Barclays employee and a Fed official.

I am just wondering. When did you become aware that there was some lack of integrity in the report of LIBOR rates?

Mr. BERNANKE. So on your first point, let me just say that there is not as much disagreement as you imply. Monetary policy is not a panacea. It is not the ideal tool in many cases, and we look forward to having partnerships with other parts of economic policy.

On the telephone contacts, I would just note that these were phone calls, and these were calls made by junior employees whose job was to call and get so-called market color, get information about what was happening in the markets. And I think in one of those calls it was clear that the person calling the Fed employee—not an official, the Fed employee—did not know what LIBOR was or how it was constructed, and so there were some issues about how that was communicated.

In any case, I learned about it, to my recollection, at the time when it became covered in the media, which would have been, I guess, in April 2008.

Senator TOOMEY. OK. Here is what I do not understand. I know you fully appreciate the importance of this index, how widely used it is for all kinds of transactions and how the American financial system—I do not want to say it is dependent on it, but it is totally integrated into this. And you and many other regulators understood that there were serious questions about the integrity of this, perhaps even systemic problems with the integrity of this, and yet everybody allowed these transactions to continue. Did it not occur to somebody to bring the financial institutions together and say, hey, you probably ought to consider a different way of establishing your floating rate resets because there is this integrity problem? Did that conversation happen with any financial institutions or the public?

Mr. BERNANKE. Well, financial institutions are not the only participants in this LIBOR-based market.

Senator TOOMEY. OK. Yes, how about making it more broad?

Mr. BERNANKE. So I think the best way to address the problem and given all the issues that were occurring during the crisis at that point in time, the best way to address the problem, at least in the near term, would be to reform the way those numbers were collected so that the LIBOR rate that was set would be, in fact, an accurate representation.

Senator TOOMEY. I agree. My question, though—and you mentioned observable market transactions would seem like a better way of doing it than a survey of banks. That sounds sensible to me. The question is: Why have we allowed it to go on the old way when we knew it was flawed for the last 4 years, with trillions of dollars of transactions?

Mr. BERNANKE. Because the Federal Reserve has no ability to change it.

Senator TOOMEY. You have enormous influence over the institutions engaging in this.

Mr. BERNANKE. We have been in communication with the British Bankers Association. They made some changes, but not as much as we would like. It is not that market participants do not understand how this thing is collected. It is a freely chosen rate. We were uncomfortable with it. We have talked to the Bank of England.

Senator TOOMEY. But I am not sure that market participants were aware of the problem with the integrity of the mechanism by which it is established. And as you point out, there are other ways you could establish a perfectly viable floating rate that would not have these problems. I am just very surprised that this was al-

lowed to continue for so long when the problem with the integrity was known.

Mr. BERNANKE. Well, again, Senator, the New York Fed took the lead in making, I think, some very good suggestions about how to clean up the LIBOR process.

Senator TOOMEY. Thank you.

Chairman JOHNSON. Senator Kohl.

Senator KOHL. Chairman Bernanke, last July we discussed how the United States is experiencing a jobless recovery. You agreed then that the long-term unemployment was a major problem and recommended that Congress take a look at ways to help the unemployed through things like training and education. Of course, the Federal Reserve has its own mandate to keep unemployment low, and we continue to see very disappointing jobs numbers.

I am sure we agree that the consequences of long-term unemployment are enormous. So why has the Fed been so slow to tackle unemployment? Over the past year, why hasn't the Fed issued a third round of quantitative easing? And could you expand on your current maturity extension program?

Mr. BERNANKE. Certainly. So first, just briefly, of course, we have taken a wide range of extraordinary actions to support the economy. In June, we took the step of continuing the maturity extension program, which has many of the features of quantitative easing in that it involves purchases of longer-term securities which provides financial accommodation and additional support to the economy. And we made clear that we were prepared to take further actions, and we are looking to see if we are going to get sustainable improvements in labor markets. If we are not getting sustainable improvements, we will have to seriously consider taking additional action.

The reason that there is any question is really, again, the range of views about efficacy, costs, and risks associated with these nonconventional measures. But that being said, as we said in June, we are prepared to take further action, and we will evaluate our options as we go forward.

Senator KOHL. I appreciate that. However, given that unemployment has remained over 8 percent for 41 months, a long enough time for it to be clear, now is the time to be more aggressive, I believe, in your approach to unemployment. And I think we agree the consequences of long-term unemployment are too great for this to go on very much longer.

On LIBOR, Mr. Bernanke, one chief executive of a multinational bank was quoted in The Economist as saying that LIBOR is "the banking industry's tobacco moment," citing the 1998 federally negotiated settlement that cost American tobacco companies over $200 billion.

Can you foresee a scenario where banks would seek any type of taxpayer assistance in order to compensate parties that were victims of LIBOR rigging? Do you believe that potential court cases against banks that participated in LIBOR manipulation could indeed result in another federally negotiated settlement?

Mr. BERNANKE. Well, there are many court cases already in progress. I think it is too soon to make any guess at what the outcome of those courts' cases will be. There have been a few esti-

mates by private analysts of potential costs, but those are admittedly very much back-of-the-envelope types of calculations. So I think we have to let this play out. I do not know what the cost will be, and I really do not think is responsible for me to guess until we get more information about the impact of these actions on the actual LIBOR rate and the implications of that for rates that people paid.

So it is obviously very serious, but I think it is too early to judge what the costs will be.

Senator KOHL. Yes, and recent press reports indicate that the scandal could cost the banking industry millions, if not trillions of dollars. And as you know, there is no appetite here or anywhere else to do another bailout for the banks. Given the increasing amount of money that is at stake, I would urge you to work, when the time comes, closely with the Justice Department on this, and I think you would agree that you will.

Mr. BERNANKE. If we can contribute to a global settlement, as we did in the case of the servicers, we would, of course.

Senator KOHL. Thank you.

Thank you, Mr. Chairman.

Chairman JOHNSON. Senator Moran.

Senator MORAN. Mr. Chairman, thank you. Chairman Bernanke, thank you for your testimony.

In advance of the crisis, the financial crisis of 2008, at least to many observers of our country's economy, it came out of the blue, came as a surprise. What is it that you are worried about now? What is out there now that we ought to be paying attention to that has the potential of being the next crisis to the economy of the United States? I often read about credit card debt. You read about student loan debt. What are the things that you are most worried about? And what are we doing to remediate the problem?

Mr. BERNANKE. Well, I think the two items—and I mentioned these in my testimony—would first be the European sovereign and banking situation, which remains unresolved. There is still a lot of financial stress associated with that and I think still some distance before they get to a solution. That poses an ongoing drag on our economy, and although I have every hope and expectation that European leaders will find solutions, there is the risk of a more serious financial blowup. And we have been—I do not want to take all your time, but we have been taking appropriate steps here in the United States to try to strengthen our banks and provide—to prepare for whatever events might occur.

The other, just briefly, is the domestic fiscal situation which we have been talking about, and I think it is important that in the short term Congress work effectively to address the debt limit and the fiscal cliff and those issues and in the medium term establish a strong, credible plan for fiscal sustainability.

Senator MORAN. At what point in time do we have a sense of whether the European crisis is going to have huge consequences to the U.S. economy? What timeframe are we on in which we know whether Europe has appropriately responded to resolve their own problem?

Mr. BERNANKE. Well, we appear to be in a muddling-through type of environment, which is costly to everybody, Europe even

more so than us. They are already in a recession, or at least many countries in Europe are already in recession.

I think based on all I can observe, it seems like it could take a very long time because the structural and institutional changes that Europe is trying to make are not ones that take place quickly. For example, they have recently agreed in principle to create a single bank regulator for eurozone banks. To do that could well take— I do not have any inside information here, but obviously it could take some time—it could go into next year—before they have a single bank regulator.

Likewise, they are trying to establish a set of fiscal rules and fiscal agreements, and they have made some progress there. But given that there are 17 Governments that have to agree to every major change, it could be some time before they come to a fully satisfactory fiscal arrangement.

So it appears to be something that could go on for quite a while, unfortunately.

Senator MORAN. Let me ask a more specific question, a more narrow question. The Kaufmann Foundation is a foundation in Kansas City that considers entrepreneurship, and its facts, it studies demonstrate that between 1980 and 2005, companies that are less than 5 years old accounted for nearly all of the net new jobs created in the U.S. economy. In fact, new businesses create an average of 3 million jobs each year.

Unfortunately, our own Census Bureau now indicates that the startup engine is engine is slowing down. In 2010, there were about 394,000 new businesses started in the United States. This is the lowest level of new startups since 1977.

I would like to hear your perspective on the importance of startups and what policies Congress and the administration should pursue to return to the days in which the United States is at the forefront of innovation and entrepreneurship.

Mr. BERNANKE. Well, those facts I believe are correct. Young companies, so-called gazelles, are a big contributor to job creation because if they are successful, they grow quickly, and they add a lot of employees. I do not know the data you cited; I do not know how accurate they are. It is obviously very difficult to measure startups. Many of them are very small enterprises. But I think it is clear that both because of the weak economic conditions but also because of problems relating, for example, to the availability of credit and venture capital and the fact that many entrepreneurs use equity in their home as a form of startup capital, which is not as available now as it was before the crisis, it is very plausible that those companies are not starting up at the rate they have in the past.

I do not have a really good program here to suggest other than to try to create as favorable a tax environment, as favorable a credit environment as possible for startup firms, to write regulations in a way that serves their purpose but allows small firms to flourish.

According to international agencies who calculate these sorts of things, the U.S. has got a pretty small business friendly environment here in terms of the cost and time required to startup a small business. So it is not like we are in very bad shape on that. But any kind of improvement that would make it easier for small busi-

nesses to get the necessary capital to meet the regulatory and other requirements and to avoid early tax burdens, all those things are obviously approaches that can help these companies startup and provide employment.

Senator MORAN. Mr. Chairman, thank you. One would think that we would have significant startups, particularly in light of the unemployment numbers, which creates the opportunity or the necessity for someone to go startup a business on their own.

Mr. BERNANKE. Sure.

Senator MORAN. Mr. Chairman, thank you.

Chairman JOHNSON. Senator Warner.

Senator WARNER. Thank you, Mr. Chairman. And, Mr. Chairman, the end is near. Thank you for hanging in this morning. I would echo what my colleague Senator Moran just said. We actually have legislation to try to promote these startup activities, Startup Act 2.0, which addresses the very issues you talked about as well as the issue of talent. We are in a global competition for talent, and I commend Senator Moran's leadership on this issue. We did make some movement on access to capital earlier.

I know most of my colleagues have left, but I would also point out for some of my colleagues that because of the actions we took as this Congress in Dodd-Frank and otherwise, we have seen an increase in capital in American banks in excess of $300 billion, more in capital reserves, since the crisis, and clearly I think that has helped our banking industry relative to some of the banks that are under assault around the world.

I also want to commend you for your continuing urging of us to act on fiscal policies. Waiting for Congress is a little bit like waiting for Godot. Hopefully we will see some actions later this year, and a number of us have been working on this.

I guess one of the things I—my first question would be: As we grapple with this issue of trying to get an appropriate balance of revenues and entitlement reform to generate at least that $4 trillion, to drive our debt-to-GDP back down, and because, as you have pointed out, we can do this on a moderate—an intermediate basis and have the ability to phase these things in, I sometimes scratch my head, because what is being asked of the American people is so much smaller than what is being asked of the folks within the U.K. or folks within Europe or even folks in India and elsewhere where they are going through policy changes. Have you done any kind of sizing of what a $4 trillion deal relative to the size of our economy and the ask of the American people versus what is being asked of folks all around the rest of the world as they try to move forward and get their own fiscal houses in order?

Mr. BERNANKE. Well, I have not done that exercise exactly, but in terms of percentage of GDP, you know, some of the fiscal shifts that are taking place in countries like Spain, Portugal, and Italy are very substantial and in the near term, which is part of the reason why their economies are so weak in the near term. So it is certainly true in terms of the fiscal step that is being taken that it is larger in these countries which are under fiscal stress. But I am not quite sure what the implication of that is. We are lucky that we can borrow at a very low interest rate. We are not currently in the same situation as a Greece or a Portugal. And, therefore, if we

can intelligently combine a gradual glide path with a strong, credible plan for stabilizing our deficits in the longer term, we can avoid that kind of painful contraction and do it more gradually.

Senator WARNER. It almost seems to me that it is remarkable—and I think this is why Congress is at record low levels of approval—that we cannot step up, almost un-American that we cannot do our job relative to what is being asked of other people around the world.

One of the things that—I know we have had some policy debate this morning on, additional actions you might take to stimulate the economy. I guess one question I would say for those who have questioned taking these actions, if we look at the European Central Bank's recent actions in terms of—if we look at the Bank of England, if we look at the Chinese financial institutions, what effect of their stimulus activities or loosening activities does that have on the world economy and in terms of your decision making?

Mr. BERNANKE. Well, there has been a global slowdown. A lot of it is emanating from Europe, which through export demand is affecting Asia and other parts of the world, the United States as well. There has been some slowing in Asia as well. The Chinese GDP statistics have been weaker this year than in previous years. Partly that was intentional as they sought to cool their housing market and address inflation concerns.

But there is a slowing in the global economy. To the extent that actions taken by our trading partners strengthen those economies, it will help us on the margin because it will increase our markets and provide an overall better economic environment.

But I would say at this point that compared to what we saw during the aftermath of the crisis, nothing is happening globally of that kind of scale. There are relatively modest steps being taken in both of those jurisdictions to try to offset some of the slowing.

Senator WARNER. But those actions are similar to what you may take in the Fed, and I guess the point I would simply make is that there seems to be a consensus opinion around major economies around the world to take these type of stimulative actions.

Mr. BERNANKE. The world is in an easing cycle. That is correct. And in terms of the specific actions, the U.K., for example, has been adding to its quantitative easing program and doing other things as well. So the U.S. is—it should be very clear the United States—the Federal Reserve is not the only central bank that has been using these unconventional policies as a tool for trying to strengthen their economies.

Senator WARNER. Thank you, Mr. Chairman.

Chairman JOHNSON. Senator Wicker.

Senator WICKER. Thank you very much. And, Chairman Bernanke, thank you so much for being here. I have been back in my office listening to most of this on television.

I appreciate the fact that you have talked about fiscal policy as well as monetary policy and the overall economy. You note that your forecast is lower than it was back in January, and you say that you now forecast that we will have over 7 percent unemployment on through the end of 2014. I think we would all agree this is not the kind of economic growth that we need and that Americans have had in the past.

If taxes are raised on individuals making over $250,000, many of whom are small business people, many of whom are job creators, what effect will that have on the projection that you have in your written testimony?

Mr. BERNANKE. Well, we have not done that specific exercise. I have been focusing on the overall size of the fiscal shock. That includes the expiration of all the 2001 and 2003 tax cuts as well as the end of the payroll tax cut, UI payments, and the sequestration. You put all those things together, and you get a shock which is about 4.5 percent of GDP.

Senator WICKER. OK. Because the President came out and reiterated last week his request that we simply raise taxes on $250,000 and above. I think you will agree that in terms of the Federal deficit, that is a relatively small amount. That would be a tax on job creators and would make your numbers worse, wouldn't it?

Mr. BERNANKE. It could, if it reduced incentives and if it reduced aggregate demand, both of those channels. But as often is the case in tax policy, you have got efficiency and growth concerns, and you have also got equity concerns, and all those things feed into tax decisions.

Senator WICKER. I realize it is hard to predict with certainty, and I think we have seen that over time. But I would simply suggest to you that you are correct in saying that it could have an adverse effect.

Let me ask you about the fiscal shock. I think we have got to do something on the spending side, and I know what you are saying. The economy is fragile, and you do not want it to happen quite so quickly.

Senator Kyl and Senator McCain came up with a proposal to dealing with sequestration, and let me just ask you—it went over like a lead balloon, but let me go back to it and ask you what your general impression is of the proposal. It would have raised—it would have saved, rather, $127 billion in spending by simply doing two things:

Number one, freezing Federal pay for Federal workers until June of 2014. That would be the first thing.

The second thing would have been a 5-percent reduction in the Federal workforce—not a 5-percent reduction in Federal spending but a 5-percent reduction in the Federal workforce—by hiring only two workers to replace every three that are leaving through attrition. And this reduction would have taken up to 10 years to achieve.

That is not the sort of thing that you view as a fiscal shock, is it? We could absorb that type of modest spending reduction in order to save us from the meat axe approach of sequestration at the end of this year.

Mr. BERNANKE. Well, again, without endorsing the specific program, a spending program that comes in more gradually over a period of time but also is tied to a plan, a credible plan to achieve fiscal sustainability in the medium term is what I am recommending, is something that would avoid this very, very sharp change in the Government's fiscal position, you know, on 1 day, on January 1, 2013.

Senator WICKER. Let me see if I can squeeze in one more thing. Unemployment rates, unacceptably high, and you have predicted now 7 percent of more by the end of 2014.

In January of 2002, unemployment rate 5.7 percent; October of 2003, unemployment rate 6 percent; by October of 2004 down to 5.5 percent. Boy, wouldn't we love to see that kind of unemployment right now in the United States of America. Down to 4.9 percent by August of 2005; 4.4 percent unemployment rate—these are actual figures—by October of 2006; as late as May of 2007, unemployment rate 4.4 percent; and then, of course, by the end of 2008, it is up to 7.3 percent.

We hear a lot of discussion and a lot of warnings by people in this city about not going back to those disastrous policies that got us into the situation we are in in the first place. The fact is we had relatively low and a relatively acceptable unemployment rate for much of the decade until 2008, and we had real GDP growth in 2006, 2007, and 2008. Isn't that correct?

Mr. BERNANKE. Until the end of 2008, yes.

Senator WICKER. Now, what happened in 2008? Was it tax cuts for the rich?

Mr. BERNANKE. No. We had a major financial crisis, as you know, and it created a global recession.

Senator WICKER. Right.

Mr. BERNANKE. A very deep one.

Senator WICKER. Thank you very much.

Chairman JOHNSON. Senator Merkley.

Senator MERKLEY. Thank you, Mr. Chair, and thank you, Chairman. In your opening comments, you mentioned the issue of housing refinancing and families that are underwater. We have about 8 million families whose mortgages are underwater. Some can refinance through HARP, but it has been a pretty small number, only about 200,000 so far, in part because of the complexity with second mortgages. But if families who are underwater could refinance from those higher interest rates they are trapped in to lower interest rates, could that be a significant factor and a substantial tool, if you will, in helping to move the construction economy forward and stabilizing those 8 million families?

Mr. BERNANKE. If that were possible, it would be helpful because it would both reduce payments and, therefore, reduce defaults and foreclosures, and it would improve the income of the people who could refinance.

Senator MERKLEY. Thank you, Mr. Chairman.

Let me switch to another comment I believe you made in response to Chairman Johnson, and I did not catch the exact words, but I think you said you had emails about fixing the interest rates to make the banks look more healthy, but we did not have emails related to collusion with derivative traders, or something like that. Could you help clarify what you said there?

Mr. BERNANKE. Yes. There have been two somewhat different types of violations: one which was very much intense—that was most intense during the crisis was banks underreporting the cost of their borrowing in order to avoid looking weak in the market. That is the kind of information that people were talking about in the markets and that the New York Fed heard about in 2008.

The other kind of activity is the kind that the investigations have just recently revealed in the case of Barclays involved this very large fine where there was clear evidence of individual traders conspiring with others to manipulate the LIBOR submissions in order to improve or increase their profits from short-term derivatives trades. That is a different type—I am not making a judgment but just a different activity. And I was only making the point that it was only the former that came to the attention of the New York Fed.

Senator MERKLEY. And so in terms of the latter, the collaboration between the traders and those who were reporting the LIBOR rates, when did that first come to the attention of the Fed?

Mr. BERNANKE. Not until relatively recently. This was something that was discovered by the joint investigation of the CFTC, I think the SEC was involved, the DOJ, and the British authorities.

Senator MERKLEY. Thank you. It was very stark to read some of these emails that were reported, such as, "Hi, Mate. We have an unbelievably large set on Monday. We need a really low 3-month fix. It could potentially cost a fortune." Or another trader who wrote, "We need a 4.17 fix on the 1-month low fix. We need a"—the print is a little small for me—"4.41 fix on the 3-month high fix." And certainly this type of activity, does this constitute fraud? Does this fall into a criminal area as well as just really unacceptable manipulation, if you will?

Mr. BERNANKE. Based on what I know about it. What I have read about it, it does seem to be so, yes.

Senator MERKLEY. I think the point that my colleague Senator DeMint was making earlier was when you know that someone has a thumb on the scale, isn't there a responsibility to alert the customers about that thumb being on the scale? I know that you all did send this advice to the Bank of England or to others that there are ways to fix the thumb on the scale, get the thumb off the scale. But if you had it to do over again, would you also be alerting the customers, the municipalities that are making swaps, the folks who are getting mortgages based on LIBOR and so forth that something is not quite right here and you should be aware of our concerns?

Mr. BERNANKE. Well, it is important that people know about it, but I am not sure I would agree that this was something that was unknown. The financial press was full of stories about it, and the reform proposals that the New York Fed made were also reported in the press. So I think that there was a good bit of knowledge, at least among more sophisticated investors, about this problem.

Senator MERKLEY. I do think the municipalities that were involved are feeling that perhaps they were not as aware of the thumb on the scale as they might have been, but that will all be, I guess, sorted out in due course.

Mr. BERNANKE. That is right.

Senator MERKLEY. If my colleague will just bear with me for 30 seconds, I just want to mention an issue I will follow up with you on, which is related to the growing role of banks in providing crude oil to refineries and then buying the products. We have Goldman that is doing this with a refinery operating in three States. JPMorgan is doing it with the largest east coast supplier. Morgan Stanley is now doing it in several States with PBF Energy. It re-

minds me a little bit of the situation when—and at this point there is no sign of wrongdoing of any kind, but it reminds me of the potential for problems that occurred when Enron was both supplying electricity and running electricity trading markets, because we have that here. We have now the banks involved as a supplier and purchaser of large quantities, but we also have them involved in all kinds of trading, in part because at this point regulators have exempted the spot markets, or at least the draft rules, from the Volcker firewall.

Is this an issue that we should be concerned about, this substantial conflict of interest of being a supplier and also kind of, if you will, involved in the trading side?

Mr. BERNANKE. Am I mistaken, Senator? I thought that the statute exempted the spot market as opposed to the regulation.

Senator MERKLEY. Let us follow up on that.

Mr. BERNANKE. Let us follow up on that.

Senator MERKLEY. Let us follow up on that because there is also a lot of letters that have been submitted on the futures spot markets, if you will, not futures themselves. The "forward" I think is the right term.

Mr. BERNANKE. Correct.

Senator MERKLEY. And I believe that that is a gray area.

Mr. BERNANKE. Well, except insofar as the statute exempts certain activities, I assume that proprietary trading in this area would be subject to the Volcker rule.

Senator MERKLEY. The spot is not excluded in the statute. It does give regulators authority over that.

Mr. BERNANKE. All right. We will look at that.

Senator MERKLEY. OK. Thank you.

Chairman JOHNSON. Senator Bennet.

Senator BENNET. Thank you, Mr. Chairman. Sorry. One would have thought I could have gotten the frog out of my throat 2 hours into this hearing.

Mr. Chairman, thank you for being here, and thank you for your testimony. I want to make one observation, and then I have got a couple of questions, because there have been traces of a discussion in here today about the nature of the economic growth we need to see in this country, and it really is not just about GDP growth. It is about job growth and wage growth in the United States and whether we can recouple those things together. They decoupled in the last recovery. They are not coupled in this recovery. And as you observed, there are things that we can do in our Tax Code and our regulatory code and our statutes that actually would provide an ecosystem that would deliver on that promise again for the American people.

We have been having a hard time getting to that conversation in this Congress, but we need to. That is the fundamental work, in my view, why we were sent here.

We spend a lot of time talking about how to avert crisis now, and you are a historian of the Great Depression, I know, and I think 100 years from now, if we do not get our act together here, no historian will be able to fairly record your tenure without saying that you came to the Senate and to the Congress and you very clearly said, "Here are the things I am most worried about, and if you do

not deal with it, you risk a real disaster." One is Europe, which you talked a little bit about. I would like to hear on that score a little more about what you say in your testimony are the strong incentives to resolve the crisis that the Europeans have. The IMF, as you know, came out with a report yesterday about some of the challenges they face.

Maybe I will start there. What are those strong incentives to resolve the crisis? They have a lot of political dysfunction there, as we do here, but they also have, as you pointed out, a less elegant institutional arrangement right now for dealing with it.

Mr. BERNANKE. That is right. Well, they have both economic and political incentives. The European Union and all those European-wide institutions that include now the common currency area were created after World War II in part to try to avoid any future war on the European continent, and obviously that is an extremely important objective that people put a lot of weight on. And so closer political union is something that many European leaders consider to be important, and so this is part of—maintaining the currency and achieving stability there is part of that.

In addition, both the North and the South, so to speak, benefit from the common currency. In particular, for example, the Germans have an exchange rate in the euro which is probably weaker than they would have if they had a deutsche mark, and, therefore, they have both a weaker currency, a more competitive currency, and, if you will, a captive market for selling their exports, both of which would not be there if the eurozone was not an integrated, stable structure.

So even from the point of view of the Germans, who have, you know, the most concern about the potential fiscal costs of greater coordination within the eurozone, they have both very substantial political and economic reasons to try to make this happen, and throughout Europe, the general opinion polls in most cases are that people would still rather have the euro, despite all the problems that they have been facing.

Now, as you point out, there are many difficult political problems. We have one Congress here, and we have difficulty coming to decisions. They have 17.

Senator BENNET. I cannot even imagine.

Mr. BERNANKE. They have 17 different parliaments, and they have a treaty which requires broad if not unanimous agreement. So there are some very substantial problems in getting to agreement.

Senator BENNET. Let me, because I do not want the Senator from North Carolina to have to wait on me. Let me come to the second point, the stuff that is actually in our control. This is your testimony today, [Page 45]. "The most effective way that the Congress could help to support the economy right now would be to work to address the Nation's fiscal challenges in a way that takes into account both the need for long-run sustainability and the fragility of the recovery. Doing so earlier rather than later would help reduce uncertainty and boost household and business confidence."

Tell us what that 100-year history would record if we do not do this.

Mr. BERNANKE. Well, in the short term——

Senator BENNET. And I mean short and medium and long.

Mr. BERNANKE. Well, as I was saying as the CBO and others have pointed out, if the fiscal cliff is allowed to happened, as is now programmed in the law, it would probably knock the recovery back into a recession and cost a lot of jobs and would greatly delay the recovery that we are hoping to facilitate.

In the longer term, it is simply not possible for deficits to continue along the path that they are currently projected, so either some solution would have to be found that could be very, very painful at some point in the future because of the size of the cuts—we were talking about comparing us to Europe, and some of the countries that are making very, very deep cuts right now and how painful that is. Either we would have to have those kinds of cuts, or we might face a financial crisis where interest rates would rise, as we are seeing now in Europe, and that would feed through to other interest rates, like mortgages and other kinds of rates. And it would be very costly to our economy.

So both in the short term and in the longer term, it is important for us as a Nation to create a fiscal policy that achieves both the short-term and long-term objectives.

Senator BENNET. I wish I had more time, but I will come back to you with other questions.

Thank you, Mr. Chairman.

Chairman JOHNSON. Senator Hagan.

Senator HAGAN. Thank you, Mr. Chairman. And you, Chairman Bernanke, for enduring the long hearing today. I do want to say thank you, too, for your great work and your sacrifice.

Mr. BERNANKE. Thank you.

Senator HAGAN. We have talked a lot about LIBOR today. LIBOR, as I understand it, is simply a benchmark that lenders voluntarily use to represent the cost of borrowing by large banks. But there are alternative metrics. You mentioned in your testimony that financial institutions could use alternative benchmarks for loans and derivative contracts, such as commercial paper rates, the Fed funds rates, and the yield on U.S. Treasury.

Can you discuss some of these alternatives? What might be a preferable benchmark?

Mr. BERNANKE. Well, as you say, there have been a number of different ones. One that has been considered is the so-called general collateral repo rate. It is the rate at which repurchase agreements are done. It has the advantage of being a very thick market. A lot of trades take place, and trades take place at a number of different maturities, which is also important. So that would be a possibility that people are considering.

Another possibility is the OIS rate, the so-called overnight index swap rate, which is a measure of expected central bank interest rates, essentially. It is like a measure of—a market-based measure of the longer-term Federal funds rate. And it has some advantages as well.

I think the main thing that distinguishes these rates, the ones you mentioned, and the repo rate and others from LIBOR is, of course, that there are observable transactions every day, which means there is no ambiguity about what the rate is. And there would not be any of these issues raised by the LIBOR process that involve verifying whether the reported rates are indeed accurate.

Senator HAGAN. Could you see financial institutions voluntarily adopting an alternate to LIBOR.

Mr. BERNANKE. I suspect that it will be seriously considered, unless, of course, measures are taken that restore confidence in LIBOR. The problem is that, of course, we have enormous amounts of existing contracts, not just derivatives contracts but a variety of other kinds of loans and securities, which are based on LIBOR. And until those negotiated away or they expire, we have this huge legacy issue of LIBOR-based financial contracts. So it might be— it is just like the QWERTY typewriter. You know, it is not very efficient, but everybody is used to it, so it is hard to change. You might have the same phenomenon there. But if we are going to keep LIBOR, it is important to make sure that it has the confidence of people in the markets.

Senator HAGAN. Thank you.

Chairman Bernanke, Section 941 of Dodd-Frank requires the Federal Reserve Board of Governors, along with other Federal agencies, to jointly prescribe regulations that require securitizers to retain credit risk. The proposed rule was issued in March of 2011, and the comment period was subsequently extended.

Could you describe the role that the Federal Reserve Bank of New York and its staff are playing in the drafting and completion of that rule?

Mr. BERNANKE. Well, we sometimes draw on reserve banks for specialized expertise. For example, in securitization laws, rules, we tried to look at existing arrangements for credit risk retention for different types of markets, and people in New York who deal with those markets on a regular basis would be helpful in providing that kind of information.

But, of course, the responsibility for drawing up the regulations and making the final determination lies with the Board of Governors in Washington, and although we may use some expertise from New York, it is a Board decision.

Senator HAGAN. Thank you.

A last question. When discussing the nonstandard monetary policy tools that the FOMC is currently implementing, you have consistently said that the level of accommodation that the economy is receiving is based on the total stock of outstanding securities in your portfolio. In June, the FOMC announced that it was taking steps to extend the maturity of its Treasury portfolio rather than to expand its size or change its composition.

Can you discuss why the FOMC would choose to extend the maturity of its Treasury portfolio and not acquire additional mortgage-backed securities which would have the added benefit of supporting the housing sector?

Mr. BERNANKE. Well, when we say that the stock is what matters, we are referring to the stock of longer-term securities specifically. And so what this is doing is replacing very short-term securities with longer-term securities, increasing our stock of longer-term securities, putting downward pressure on longer-term interest rates, and by taking duration risk out of the market, pushing investors into related assets like corporate bonds and lowering the yields there as well.

So this was an effective step, and it was a relatively natural one since the previous program was just coming to an end in June, so we extended it for 6 months. But we continue to look at alternative approaches, including approaches that involve buying MBS, and trying to assess both the efficacy, costs, and risks of those programs as well as the outlook and the extent to which we think we can get a better outcome in the U.S. economy.

Senator HAGAN. In the FOMC's last policy statement, the Committee indicated that it was prepared to take additional steps if it did not see a continued improvement in the labor market. My question is: What would you describe as an improvement in the labor market if the FOMC does not project unemployment to fall much below the current levels before 2013?

Mr. BERNANKE. Well, we would want to see unemployment going down. We do not want to see it stuck.

Senator HAGAN. Right. We all do.

Mr. BERNANKE. We do not want to see it going up. We want to see continued improvement. We had significant improvement between the fall of 2011 and earlier this year. Lately, we have been leveled out, and we would like to see the economy return to a situation where we are making progress on unemployment.

Senator HAGAN. What I think about each and every day.

Thank you, Mr. Chairman.

Chairman JOHNSON. Chairman Bernanke, I want to thank you for your testimony today on the Fed's economic forecast and its recent actions. Thank you.

Mr. BERNANKE. Thank you.

Chairman JOHNSON. This hearing is adjourned.

[Whereupon, at 12:25 p.m., the hearing was adjourned.]

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

PREPARED STATEMENT OF SENATOR RICHARD C. SHELBY

Thank you Mr. Chairman.

Today, we will hear Federal Reserve Chairman Bernanke testify on monetary policy and the state of the U.S. economy.

Four years ago, President Obama campaigned on restoring economic growth and job creation. Today, both remain too weak to produce a meaningful recovery.

At less than 2 percent, economic growth appears to be stuck at an anemic level.

In June, only 80,000 jobs were added to employer payrolls, not enough to put a dent in the stubbornly high 8.2 percent unemployment rate.

The Administration's policy of more spending, more taxes, and more regulation has clearly impeded an economic recovery.

Dodd-Frank rulemaking, of which 63 percent is behind schedule, has cast a dark cloud over the financial system, further chilling consumer and business lending and holding back growth.

Housing recovery, too, has been hemmed in by the lack of a clear plan to resolve Fannie Mae and Freddie Mac and to reduce the Federal Government's 99 percent share of the market.

These policy failures are costly and compound the dangers already brought on by our mounting fiscal problems.

Concerns of spillover from the European crisis remain front-and-center in the U.S. economy, but Europe also serves as a warning of what could happen if we do not change our own fiscal course.

There is no doubt that we face challenging times for our economy and our prosperity as a Nation.

In response to the dismal economic forecast, Chairman Bernanke has said that the Federal Reserve is "prepared to take further steps if necessary to promote sustainable growth and recovery in the labor market."

I hope that the Fed weighs carefully the medium- and long-term consequences of further action.

Questions remain on the efficacy of additional so-called monetary stimulus, and many wonder what tools the Fed has left to use.

The Federal funds rate has been at or near zero for almost 3½ years.

The Fed's balance sheet stands at over $2.9 trillion, almost identical to its size a year ago when Chairman Bernanke delivered his last Humphrey-Hawkins testimony. This is more than three times its pre-crisis size.

The Fed has conducted two rounds of balance sheet expansions called "Quantitative Easing" and a maturity extension program called "Operation Twist" that the Fed announced will continue through the end of the year.

Even members of the Federal Open Market Committee (FOMC) have their doubts about this decision. Minutes from the June FOMC meeting indicate that several members thought the impact of another round of Operation Twist "was likely to be modest."

One may wonder if the downside risks outweigh the limited upside benefit of continuing the program.

Some FOMC members even noted that it "could lead to deterioration in the functioning of the Treasury securities market."

Considering the risks presented by the Fed's more unconventional programs and the need to unwind the Fed's balance sheet without causing major economic disruption, some have questioned the prudence of undertaking a new program to provide monetary easing, especially when there appears to be no clear exit strategy.

During last year's Humphrey-Hawkins hearing, I expressed concerns over the lack of transparency of balance sheet operations.

The Fed has yet to disclose a plan on how it would reduce its balance sheet holdings, which must be carefully done to avoid dire outcomes like sparking inflation and eroding the dollar's value.

Because so much is at stake for the U.S. economy, the Fed as a public entity has the responsibility to make as much information available as possible on its actions and the risks they entail.

Some authorities think there is cause for concern. In its annual report, the Bank of International Settlements laid out the risks entailed with the worldwide expansion of central bank balance sheets and their extended low interest rate policies.

Not only did the report conclude that such actions create "longer-term risks to [central banks'] credibility and operational independence," but they "may delay the return to a self-sustaining recovery."

I hope that Chairman Bernanke will reassure our financial markets during his testimony of the Fed's credibility and independence, that the actions the Fed takes will not hurt economic recovery.

Recent events have already shaken confidence in our financial system.

In particular, the issue that bankers manipulated the London Interbank Offered Rate (LIBOR) is one that must be fully examined by this Committee.

LIBOR is an important interest rate benchmark. It affects nearly every interest rate calculation for consumers, businesses, and banks around the world.

While only one bank has admitted its involvement in the manipulation of LIBOR so far, it has been widely reported that the U.S. Department of Justice and regulators are building cases against other banks involved in the LIBOR-fixing process.

The American people deserve answers to important questions about the LIBOR manipulation.

For example, to what extent were consumers, business, and municipalities harmed by the manipulation of LIBOR?

Which financial institutions were involved?

When did U.S. regulators, including the Fed, first learn about the manipulation? What steps did the Fed take to restore integrity to the LIBOR market?

Could the Fed or other regulators have done more to prevent it?

I hope that Chairman Bernanke can provide answers to these critical questions in his testimony before us today. Thank you Mr. Chairman.

PREPARED STATEMENT OF BEN S. BERNANKE

CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

JULY 17, 2012

Chairman Johnson, Ranking Member Shelby, and other Members of the Committee, I am pleased to present the Federal Reserve's semiannual Monetary Policy Report to the Congress. I will begin with a discussion of current economic conditions and the outlook before turning to monetary policy.

The Economic Outlook

The U.S. economy has continued to recover, but economic activity appears to have decelerated somewhat during the first half of this year. After rising at an annual rate of 2½ percent in the second half of 2011, real gross domestic product (GDP) increased at a 2 percent pace in the first quarter of 2012, and available indicators point to a still-smaller gain in the second quarter.

Conditions in the labor market improved during the latter part of 2011 and early this year, with the unemployment rate falling about a percentage point over that period. However, after running at nearly 200,000 per month during the fourth and first quarters, the average increase in payroll employment shrank to 75,000 per month during the second quarter. Issues related to seasonal adjustment and the unusually warm weather this past winter can account for a part, but only a part, of this loss of momentum in job creation. At the same time, the jobless rate has recently leveled out at just over 8 percent.

Household spending has continued to advance, but recent data indicate a somewhat slower rate of growth in the second quarter. Although declines in energy prices are now providing some support to consumers' purchasing power, households remain concerned about their employment and income prospects and their overall level of confidence remains relatively low.

We have seen modest signs of improvement in housing. In part because of historically low mortgage rates, both new and existing home sales have been gradually trending upward since last summer, and some measures of house prices have turned up in recent months. Construction has increased, especially in the multifamily sector. Still, a number of factors continue to impede progress in the housing market. On the demand side, many would-be buyers are deterred by worries about their own finances or about the economy more generally. Other prospective homebuyers cannot obtain mortgages due to tight lending standards, impaired creditworthiness, or because their current mortgages are underwater—that is, they owe more than their homes are worth. On the supply side, the large number of vacant homes, boosted by the ongoing inflow of foreclosed properties, continues to divert demand from new construction.

After posting strong gains over the second half of 2011 and into the first quarter of 2012, manufacturing production has slowed in recent months. Similarly, the rise in real business spending on equipment and software appears to have decelerated from the double-digit pace seen over the second half of 2011 to a more moderate rate of growth over the first part of this year. Forward-looking indicators of investment demand—such as surveys of business conditions and capital spending plans—suggest further weakness ahead. In part, slowing growth in production and capital investment appears to reflect economic stresses in Europe, which, together with

some cooling in the economies of other trading partners, is restraining the demand for U.S. exports.

At the time of the June meeting of the Federal Open Market Committee (FOMC), my colleagues and I projected that, under the assumption of appropriate monetary policy, economic growth will likely continue at a moderate pace over coming quarters and then pick up very gradually. Specifically, our projections for growth in real GDP prepared for the meeting had a central tendency of 1.9 to 2.4 percent for this year and 2.2 to 2.8 percent for 2013.[1] These forecasts are lower than those we made in January, reflecting the generally disappointing tone of the recent incoming data.[2] In addition, financial strains associated with the crisis in Europe have increased since earlier in the year, which—as I already noted—are weighing on both global and domestic economic activity. The recovery in the United States continues to be held back by a number of other headwinds, including still-tight borrowing conditions for some businesses and households, and—as I will discuss in more detail shortly—the restraining effects of fiscal policy and fiscal uncertainty. Moreover, although the housing market has shown improvement, the contribution of this sector to the recovery is less than has been typical of previous recoveries. These headwinds should fade over time, allowing the economy to grow somewhat more rapidly and the unemployment rate to decline toward a more normal level. However, given that growth is projected to be not much above the rate needed to absorb new entrants to the labor force, the reduction in the unemployment rate seems likely to be frustratingly slow. Indeed, the central tendency of participants' forecasts now has the unemployment rate at 7 percent or higher at the end of 2014.

The Committee made comparatively small changes in June to its projections for inflation. Over the first 3 months of 2012, the price index for personal consumption expenditures (PCE) rose about 3½ percent at an annual rate, boosted by a large increase in retail energy prices that in turn reflected the higher cost of crude oil. However, the sharp drop in crude oil prices in the past few months has brought inflation down. In all, the PCE price index rose at an annual rate of 1½ percent over the first 5 months of this year, compared with a 2½ percent rise over 2011 as a whole. The central tendency of the Committee's projections is that inflation will be 1.2 to 1.7 percent this year, and at or below the 2 percent level that the Committee judges to be consistent with its statutory mandate in 2013 and 2014.

Risks to the Outlook

Participants at the June FOMC meeting indicated that they see a higher degree of uncertainty about their forecasts than normal and that the risks to economic growth have increased. I would like to highlight two main sources of risk: The first is the euro-area fiscal and banking crisis; the second is the U.S. fiscal situation.

Earlier this year, financial strains in the euro area moderated in response to a number of constructive steps by the European authorities, including the provision of 3-year bank financing by the European Central Bank. However, tensions in euro-area financial markets intensified again more recently, reflecting political uncertainties in Greece and news of losses at Spanish banks, which in turn raised questions about Spain's fiscal position and the resilience of the euro-area banking system more broadly. Euro-area authorities have responded by announcing a number of measures, including funding for the recapitalization of Spain's troubled banks, greater flexibility in the use of the European financial backstops (including, potentially, the flexibility to recapitalize banks directly rather than through loans to sovereigns), and movement toward unified supervision of euro-area banks. Even with these announcements, however, Europe's financial markets and economy remain under significant stress, with spillover effects on financial and economic conditions in the rest of the world, including the United States. Moreover, the possibility that the situation in Europe will worsen further remains a significant risk to the outlook.

The Federal Reserve remains in close communication with our European counterparts. Although the politics are complex, we believe that the European authorities have both strong incentives and sufficient resources to resolve the crisis. At the same time, we have been focusing on improving the resilience of our financial sys-

---

[1] *See,* table 1, "Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents, June 2012", of the Summary of Economic Projections, available at the Board of Governors of the Federal Reserve System (2012), "Federal Reserve Board and Federal Open Market Committee Release Economic Projections from the June 19–20 FOMC Meeting", press release, June 20, *www.federalreserve.gov/newsevents/press/monetary/20120620b.htm;* table 1 is also available in Part 4 of the July "Monetary Policy Report to the Congress".

[2] Ben S. Bernanke (2012), "Semiannual Monetary Policy Report to the Congress", statement before the Committee on Financial Services, U.S. House of Representatives, February 29, *www.federalreserve.gov/newsevents/testimony/bernanke20120229a.htm*.

tem to severe shocks, including those that might emanate from Europe. The capital and liquidity positions of U.S. banking institutions have improved substantially in recent years, and we have been working with U.S. financial firms to ensure they are taking steps to manage the risks associated with their exposures to Europe. That said, European developments that resulted in a significant disruption in global financial markets would inevitably pose significant challenges for our financial system and our economy.

The second important risk to our recovery, as I mentioned, is the domestic fiscal situation. As is well known, U.S. fiscal policies are on an unsustainable path, and the development of a credible medium-term plan for controlling deficits should be a high priority. At the same time, fiscal decisions should take into account the fragility of the recovery. That recovery could be endangered by the confluence of tax increases and spending reductions that will take effect early next year if no legislative action is taken. The Congressional Budget Office has estimated that, if the full range of tax increases and spending cuts were allowed to take effect—a scenario widely referred to as the fiscal cliff—a shallow recession would occur early next year and about 1¼ million fewer jobs would be created in 2013.[3] These estimates do not incorporate the additional negative effects likely to result from public uncertainty about how these matters will be resolved. As you recall, market volatility spiked and confidence fell last summer, in part as a result of the protracted debate about the necessary increase in the debt ceiling. Similar effects could ensue as the debt ceiling and other difficult fiscal issues come into clearer view toward the end of this year.

The most effective way that the Congress could help to support the economy right now would be to work to address the Nation's fiscal challenges in a way that takes into account both the need for long-run sustainability and the fragility of the recovery. Doing so earlier rather than later would help reduce uncertainty and boost household and business confidence.

Monetary Policy

In view of the weaker economic outlook, subdued projected path for inflation, and significant downside risks to economic growth, the FOMC decided to ease monetary policy at its June meeting by continuing its maturity extension program (or MEP) through the end of this year. The MEP combines sales of short-term Treasury securities with an equivalent amount of purchases of longer-term Treasury securities. As a result, it decreases the supply of longer-term Treasury securities available to the public, putting upward pressure on the prices of those securities and downward pressure on their yields, without affecting the overall size of the Federal Reserve's balance sheet. By removing additional longer-term Treasury securities from the market, the Fed's asset purchases also induce private investors to acquire other longer-term assets, such as corporate bonds and mortgage backed-securities, helping to raise their prices and lower their yields and thereby making broader financial conditions more accommodative.

Economic growth is also being supported by the exceptionally low level of the target range for the Federal funds rate of 0 to ¼ percent and the Committee's forward guidance regarding the anticipated path of the funds rate. As I reported in my February testimony, the FOMC extended its forward guidance at its January meeting, noting that it expects that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant exceptionally low levels for the Federal funds rate at least through late 2014. The Committee has maintained this conditional forward guidance at its subsequent meetings. Reflecting its concerns about the slow pace of progress in reducing unemployment and the downside risks to the economic outlook, the Committee made clear at its June meeting that it is prepared to take further action as appropriate to promote a stronger economic recovery and sustained improvement in labor market conditions in a context of price stability.

Thank you. I would be pleased to take your questions.

---

[3] Congressional Budget Office (2012), "Economic Effects of Reducing the Fiscal Restraint That Is Scheduled To Occur in 2013" (Washington: CBO, May), available at *www.cbo.gov/publication/43262*. The effect of the fiscal cliff on real GDP is shown in table 2 (p.6). The effect of the fiscal cliff on employment, relative to a less restrictive alternative fiscal scenario that assumes that most expiring tax provisions are extended and that the spending sequestration does not take effect, is shown in table 3 (p.7).

RESPONSES TO WRITTEN QUESTIONS OF CHAIRMAN JOHNSON FROM BEN S. BERNANKE

Q.1. At the hearing you mentioned potential alternatives to LIBOR. What next steps should be taken to either reform or replace LIBOR as a benchmark for the interest rates on financial products? What should the Fed's role be in any international process to reform or replace it?

A.1. Answer not received by time of publication.

Q.2. Critics of Wall Street Reform claim that the law is holding back the economic recovery. What has had a greater impact on high unemployment today—the Wall Street Reform Act or the ineffective regulations that led to the financial crisis? Can you offer examples of how the financial system is now safer as a result of policies that the Fed has implemented pursuant to the Wall Street Reform Act?

A.2. The recent financial crisis demonstrated that some financial companies had grown so large, leveraged, and interconnected, that their failure could pose a threat to overall financial stability. The crisis also exposed significant weaknesses in banking organizations' internal management and stress testing practices, as well as deficiencies in the regulators' toolkit to address them. In addition, the amount of high-quality capital held by banking organizations globally was insufficient to absorb losses that banking organizations experienced during that period. Insufficient liquidity and associated risk management practices also directly contributed to the failure or near failure of many companies and exacerbated the crisis. To address these and other weaknesses, the Federal Reserve has taken various steps to improve the regulation and supervision of individual firms to enhance their resiliency in times of stress, as well as the resiliency of the financial system as a whole. These measures have been taken pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), as well as the Federal Reserve's authority as the supervisor of various financial institutions.

For example, in January 2012, the Board published for comment proposed rules that would implement the enhanced prudential standards and early remediation requirements of sections 165 and 166 of the Dodd-Frank Act. The proposal generally applies to all U.S. bank holding companies with total consolidated assets of $50 billion or more and nonbank financial companies that the Financial Stability Oversight Council has designated for supervision by the Board (covered companies). The proposal addresses issues such as capital, liquidity, single counterparty credit limits, stress testing, risk management, and early remediation requirements. The Board intends to supplement the enhanced risk-based capital and leverage requirements proposed in January 2012 with a subsequent proposal to implement a quantitative risk-based capital surcharge for covered companies or a subset of covered companies. To further implement the provisions of sections 165 and 166 of the Dodd-Frank Act, the Board issued proposed rules in December 2012 to strengthen the oversight of the U.S. operations of large foreign banking organizations, including measures regarding early remediation, capital stress testing, overall risk management, and enhanced risk-

based and leverage requirements for these organizations. These proposals are aimed at strengthening the regulatory framework to address the risks that large, interconnected financial institutions pose to U.S. financial stability.

In addition, in June 2012, the Board and the other Federal banking agencies issued three notices of proposed rulemaking that would effectively result in increasing the quantity and quality of capital held by banking organizations. The proposed rules would introduce a new common equity tier 1 capital requirement, raise existing minimum tier 1 capital requirements, and implement a capital conservation buffer to increase the resiliency of all banking organizations during times of economic and financial stress. The proposed rules would also be incorporated into the enhanced standards for covered companies discussed above. These measures are designed to help address the shortcomings in the international capital standards exposed during the crisis and build additional capacity into the banking system to absorb losses in times of future market and economic stress. The proposals also would enhance the risk-sensitivity of the agencies' capital requirements by revising the calculation of risk-weighted assets for certain exposures to address weaknesses identified in the capital framework in recent years.

The Federal Reserve has also been working to embed its supervisory practices within a broader macroprudential framework that focuses not only on the conditions of individual firms but also on the health of the financial system as a whole. Even before the enactment of the Dodd-Frank Act, the Federal Reserve had begun to overhaul its approach to supervision to better achieve both microprudential and macroprudential goals. For example, in 2009, the Federal Reserve created the Large Institution Supervision Coordinating Committee, which oversees the supervision of the most systemically important financial firms. Another important example of the Federal Reserve's strengthened, cross-firm supervisory approach is the Comprehensive Capital Analysis and Review, through which the Federal Reserve assesses the internal capital planning processes of the largest bank holding companies and evaluates their capital adequacy under a very severe hypothetical stress scenario. Largely as a result of these efforts and the Federal Reserve's action during the crisis, the aggregate amount of tier 1 common for the 19 largest bank holding companies increased by more than $300 billion between 2009 and 2012. The Federal Reserve also routinely uses macroprudential tools in analyzing the potential consequences of significant economic events for the individual firms it supervises and for the financial system as a whole.

The proposed enhanced prudential standards and regulatory capital requirements, as well as other additional steps that the Federal Reserve has taken in response to the crisis and pursuant to the Dodd-Frank Act, are designed to strengthen the banking system and the financial system as a whole by strengthening regulatory requirements and the supervision of the most systemically important financial firms.

Q.3. Do you think that the policy changes announced at the recent EU summit go far enough toward solving the European financial crisis? How will U.S. banks be affected by the proposed eurozone banking union?

A.3. At their late June summit, European leaders agreed on a number of measures to address the financial crisis. These included, among other steps, establishing a single supervisory mechanism for European banks and, once such a mechanism is in place, enabling the European Stability Mechanism (ESM), the permanent euro-area backstop facility, to recapitalize banks directly. Subsequently, European leaders have also made progress in enhancing regional policy support for vulnerable euro-area countries. The European Central Bank (ECB) has announced a program that would enable it to purchase sovereign debt in order to address market distortions and contain bond yields. Countries benefiting from ECB support will have to enter into assistance programs and commit to achieving appropriate conditions prior to ECB assistance.

These developments have helped ease stresses in European financial markets and hold out the hope of further progress toward resolution of the crisis. However, European leaders must follow through on their commitments by agreeing to specific, detailed plans and then implementing them. Market participants have reacted favorably to announcements of the ECB's new bond purchase framework, but more work must be done to operationalize this strategy. By the same token, further agreements among European authorities will be required before the single supervisory mechanism for banks can be put in place. Additionally, if a full resolution of Europe's difficulties is to be achieved, these regional initiatives must be complemented by further actions in the vulnerable countries themselves to improve public finances, strengthen banking systems, and promote pro-growth structural reforms.

Euro-area banks currently are supervised by 17 national supervisors. Establishing a single supervisory mechanism should help to streamline supervisory compliance costs, further the integration of the European financial market and make it easier for international banks, including U.S. banks, to conduct business within and across euro-area countries. Moreover, tougher and more consistent bank supervision in Europe should reduce the frequency and severity of financial distress of European banks and hence contribute to global financial stability.

Q.4. What are the barriers preventing homeowners who are current on their mortgage payments from refinancing? Could legislation address those barriers, and how would such legislation help with economic recovery?

A.4. Low credit scores or levels of home equity make it difficult for many borrowers to refinance their mortgages. Initiatives such as the Home Affordable Refinance Program (HARP) and the streamlined refinance program offered by the Federal Housing Administration (FHA) have reduced or eliminated these barriers for many borrowers with loans guaranteed or insured by Fannie Mae, Freddie Mac, or FHA. However, borrowers whose loans are held in bank portfolios or private-label mortgage-backed securities, as well as borrowers who have already refinanced through HARP, often face significant obstacles to refinancing if their credit scores or home equity fall below certain levels. The *Monetary Policy Report* submitted to the Congress on July 17, 2012, and the staff housing

paper sent to the Committee on Banking, Housing, and Urban Affairs on January 4, 2012, provide further discussion of these issues.

The Congress could facilitate refinancing for these borrowers by legislating changes to HARP or the FHA refinancing program or by creating a new refinancing program. In designing such legislation, the Congress would have to consider how to balance the interests of borrowers, taxpayers, and investors. A refinancing program might provide a small boost to aggregate consumer spending, decrease the incidence of mortgage default, and improve consumer confidence, but the size of such effects is difficult to predict.

Q.5. The Fed is proposing a set of rules implementing Sections 165 and 171 of the Wall Street Reform Act and the Basel III agreements. These rules would apply to insurance companies organized as thrift holding companies or designated as nonbank financial SIFIs. Did the Fed consult with the Federal Insurance Office (FIO)? Do you anticipate that you will consult regularly with FIO as you engage in rulemakings that impact insurance companies? What else is the Fed doing to develop its insurance expertise? As part of these rulemakings, what steps did the Fed take to analyze the differences between banks and insurance companies and to incorporate those findings into the rulemakings? Do you think that the recent actions and rulemakings of the Fed appropriately recognize the differences between insurance companies and banks?

A.5. Board staff has consulted with the Federal Insurance Office on issues related to capital requirements, stress testing, and insurance matters generally. Board staff also met with industry representatives and with the National Association of Insurance Commissioners on several occasions to discuss insurance-related issues. The Board also sought public comment on capital and accounting issues as well as on regulatory and supervisory requirements for savings and loan holding companies when it published a notice of intent regarding these institutions on April 22, 2011. The Board expects to continue this practice of consultations with other regulators and standard-setters, as well as the industry and the public, to further the Board's expertise and to gain additional perspectives on the regulation and supervision of insurance companies as appropriate.

In June 2012, the Board and the other Federal banking agencies proposed to revise risk-based and leverage capital requirements in three notices of proposed rulemaking. In proposing the regulatory capital requirements, the Board sought to meet several legal requirements and policy goals. Section 171 of the Dodd-Frank Act, requires that the Board establish minimum consolidated risk-based and leverage capital requirements for savings and loan holding companies that are not less than the "generally applicable" risk-based and leverage capital requirements for insured depository institutions. Accordingly, the proposals include consistent treatment for similar types of exposures, whether held at a depository institution or a savings and loan holding company, as well as provide flexibility for certain insurance-related assets that generally are not held by depository institutions. For example, the proposals include specific risk-weights for policy loans and nonguaranteed sepa-

rate accounts, which are typically held by insurance companies but not depository institutions.

The Board has received numerous comments from the public on the proposals with regard to the application of the proposed rules to insurance-centric savings and loan holding companies. The Board will carefully consider all the comments received while finalizing the regulatory capital rules.

Q.6. The recent losses at JPMorgan have renewed focus on risk management practices. Additionally, JPMorgan has stated that the firm changed its risk models and trading positions in anticipation of new capital requirements under Basel III. Please provide your comments on how new capital requirements will strengthen the financial system, as well as any potential risks that may arise from these new capital standards. If the new standards encourage institutions to shift their activities into other risky activities, or have other unintended consequences, please comment on how you plan to address those shifts. In your answer, please also include any expectations you may have regarding institutional risk management and the Fed's supervision of risk management at institutions.

A.6. In June 2012, in addition to issuing the proposed rules described in the answer to Question 2 above, the Federal banking agencies approved a final rule to implement changes to the market risk capital rule that applies to banking organizations with significant trading activity.[1] The changes are primarily designed to ensure appropriate capital is held against trading positions, reduce the procyclicality of the capital requirements, and enhance the measure of credit risk of traded positions. Thus, the rule is expected to help ensure that banking organizations maintain stronger capital positions and improve the resilience of the U.S. banking system in times of stress, thus contributing to the overall health of the U.S. economy.

There are risks that banking organizations may alter their practices and engage in different activities as a result of new and proposed capital rules. However, the Federal Reserve has a comprehensive supervisory framework and regulations beyond the regulatory capital rules to help address these risks. For example, a supervisory assessment of banking organizations' capital adequacy takes into account a banking organization's internal processes for capital adequacy, as well as risks and other factors that can affect the banking organization's financial condition, including the level and severity of problem assets and the organization's exposure to operational and interest rate risk.[2] For internationally active institutions, the supervisory review process for capital adequacy (the so-called Pillar 2 approach based on the international Basel II standards) is even more rigorous and comprehensive as it emphasizes the need for these institutions to look beyond the regulatory capital standards and to help institution's ensure that they maintain adequate capital levels in relation to their risk profiles. Further, for the largest U.S. bank holding companies, the Federal Reserve has

[1] 77 FR 53060.

[2] *See*, for example, SR 09-04, "Applying Supervisory Guidance and Regulations on the Payment of Dividends, Stock Redemptions, and Stock Repurchases at Bank Holding Companies"; see also June 2012 proposed regulatory capital rule, 77 FR 52792).

established regulatory requirements for regular stress testing and capital planning and conducts supervisory assessments of the capital planning processes and capital adequacy of these firms.

The Federal Reserve has also put forth other guidance for banking organizations related to risk management in Supervision and Regulation Letters. For example, the Federal banking agencies finalized stress testing guidance in May 2012 for banking organizations with total consolidated assets of more than $10 billion that focuses on the importance of banking organizations conducting forward-looking assessments of their risks to better equip them to address a range of adverse outcomes. The supervisory guidance on model risk management, issued in April 2011, describes key aspects of the effective model risk management, as well as key principles of sound governance and internal controls governing the use of models. These and other supervisory guidance and regulations are designed to improve banking organizations' risk management practices, as well as the supervisory toolkit to enforce robust procedures and sound risk management so that banking organizations manage their risks effectively and hold adequate capital commensurate with their risk profiles.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR REED FROM BEN S. BERNANKE

Q.1. It is my understanding that the Federal Reserve supervises Citigroup, JPMorgan Chase, Bank of America Corp, and the U.S. branches of foreign banks. As these institutions face potentially billions of dollars in fines, legal costs, and settlements due to their involvement in the LIBOR setting process, why did the Federal Reserve not consider this to be a safety and soundness concern?

A.1. Answer not received by time of publication.

Q.2. How does the Federal Reserve define an unsafe or unsound practice? What authority does the Federal Reserve have to end an unsafe and unsound practice in institutions it supervises?

A.2. Answer not received by time of publication.

Q.3. Do you have "cease and desist" authority which could, for example, be used to stop traders and employees responsible for determining LIBOR submissions at supervised institutions from manipulating and falsely reporting LIBOR? If so, why did the Federal Reserve decide not to use it?

A.3. Answer not received by time of publication.

Q.4. Does the Federal Reserve have authority to require supervised institutions to adopt better internal controls to prevent traders and others from making unlawful requests to employees responsible for determining LIBOR? If so, why did you decide not to use this authority?

A.4. Answer not received by time of publication.

Q.5. Did analysts with the New York Federal Markets Group analysts engage with Federal Reserve supervisory staff overseeing Citigroup, JPMorgan Chase, or Bank of America regarding potential issues with the accuracy of LIBOR reporting? If so, on what

dates did these interactions happen and what was the general substance of those conversations. If not, why not?

A.5. Answer not received by time of publication.

Q.6. Were the April 2008 briefing notes and the May 20, 2008, report prepared by the Federal Markets Group regarding the accuracy of LIBOR reporting circulated to the staff responsible for supervising these institutions at the New York Fed or the Federal Reserve? Why or why not?

A.6. Answer not received by time of publication.

Q.7. Were appropriate internal controls in place at the Federal Reserve to make sure that appropriate and timely actions were taken regarding potential LIBOR fraud? Are you reviewing the conduct and behavior of your analysts and supervisory staff with responsibility for overseeing institutions involved in the LIBOR setting process? If not, why not? If so, what changes and remedial actions have you taken?

A.7. Answer not received by time of publication.

Q.8. Regardless of the fact that direct supervision for the setting of LIBOR was under the purview of U.K. regulators, the Federal Reserve had supervisory responsibility for three of the institutions involved in setting the rate. Was it the policy of the Federal Reserve to defer to foreign regulators even though there was evidence that institutions supervised by the Fed were involved in potential manipulation of LIBOR?

A.8. Answer not received by time of publication.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR WARNER FROM BEN S. BERNANKE

Q.1. The Bank Supervision Groups of the 12 Federal Reserve Banks include approximately 3,600 staff, and they are scattered across the country. The banking and financial industries, however, are concentrated in New York where 7 of the 10 largest bank holding companies are located. Why are the examination resources of the Federal Reserve System still split up evenly over the 12 regional banks? Should the resources be dispersed in a more proportional manner to the location and size of regulated entities?

A.1. The Federal Reserve supervises state-chartered banks that have chosen to become members of the Federal Reserve System (state member banks); bank holding companies and savings and loan holding companies and any nonbanking subsidiary of such companies that is not functionally regulated by another federal or state regulator; foreign branches of member banks; Edge Act and agreement corporations; U.S. State-licensed branches, agencies, and representative offices of foreign banks; and the U.S. nonbanking activities of foreign banks. Supervisory resources and expertise are dispersed across the Federal Reserve System as needed to effectively supervise these institutions based on their number, size, complexity, and activities. The Federal Reserve Bank of New York has the largest number of supervision staff. More than half of all the Reserve Bank supervision staff is located in the New York, Chicago, Richmond, and Atlanta districts. Where cost and su-

pervisory efficiencies can be gained by consolidating or sharing expertise, the Federal Reserve has developed a program for sharing subject matter experts and other staff among the Reserve Banks.

Q.2. In 2005, a peer group of other Federal Reserve Banks found that the supervision team at the New York Fed appeared to have "insufficient resources to conduct continuous supervisory activities in a consistent manner" for certain institutions. In 2009, another peer group study concluded that "there have been significant weaknesses in the execution of the supervisory program" at the New York Fed. When the Financial Crisis Inquiry Commission (FCIC) made these criticisms public, the New York Fed responded by increasing the resources applied.

Can you give additional detail on how examiners and other supervisory resources have been increased or reallocated since 2005? How many examiners out of 3,600 supervision staff are embedded at each of the 10 largest banks? Are published reports accurate that say about 200 examiners total are embedded at the 5 largest Wall Street banks?

A.2. Since 2005, and especially since the financial crisis, the Federal Reserve has sharpened its supervisory focus by increasing its depth of understanding of the supervised organizations and key vulnerabilities and by enhancing the level and size of the embedded onsite teams at the largest institutions. The published reports on the number of examiners cited in the question are generally correct. Resources allocated to the largest organizations have increased and are currently numbered at approximately 230. In addition, a wide range of subject matter experts support the on-site embedded teams. The Federal Reserve's consolidated supervision framework for large financial institutions is described in greater detail in Supervision and Regulation Letter 12-17 issued on December 17, 2012 (*http://www.federalreserve.gov/bankinforeg/srletters/sr1217.htm*).

It is also important to note that, by law, the Federal Reserve must rely to the fullest extent possible on examinations conducted by the OCC, the FDIC, and the SEC. Each of these agencies deploys substantial resources in the examination and supervision of large subsidiaries owned by the largest bank holding companies.

Q.3. When the term "unsafe or sound practice" was added to Federal law to authorize cease and desist orders, the following was stated to be the working definition of an unsafe or sound practice.

Generally speaking, an "unsafe or unsound practice" embraces any action, or lack of action, which is contrary to generally accepted standards of prudent operation, the possible consequences of which, if continued, would be abnormal risk or loss or damage to an institution, its shareholders, or the agencies administering the insurance fund. Financial Institutions Supervisory Act of 1966: Hearings on S.3158 Before the House Committee on Banking and Currency, 89th Cong., 2d Sess. at 49-50 (1966) (statement of Chairman Horne).

Given the litigation and other penalties that Barclays and additional banks are confronting, do you believe that the allegedly purposeful false LIBOR reports British Banking Association raise a "safety and soundness" concern?

A.3. Answer not received by time of publication.

Q.4. In 2008, the New York Federal Reserve Bank had evidence that Barclays was intentionally manipulating LIBOR, and as you said in your testimony, there were numerous reports in the financial press about other apparent misbehavior with respect to LIBOR. The examination and supervision model used by the Federal Reserve relies extensively on the internal risk management reports and internal audit reports of the banking organizations it exams and supervises.

Since 2008, has the New York Federal Reserve Bank, or any other Federal Reserve Bank, ever conducted an examination of the internal controls of any banking organization with respect to its provision of LIBOR indications? Could examinations of internal controls have prevented inaccurate reports from Barclays and other LIBOR reporters during the last 5 years?

A.4. Answer not received by time of publication.

Q.5. I have heard concerns from constituent savings and loan holding companies regarding the length of the comment period and the burden of the accounting changes required by the "Advanced Approaches Risk-based Capital Rule; Market Risk Capital Rule" released on June 7th. Can you discuss the expected costs and additional impacts to insurers that own savings and loan banks based on the accounting change to GAAP? Was the Federal Office of Insurance consulted with during the drafting process?

A.5. As you know, the Board and the other Federal banking agencies proposed to revise the risk-based and leverage capital requirements in three notices of proposed rulemaking (NPRs) and the Board proposed to apply the revised requirements to SLHCs. [1] The proposals in the NPRs, in part, would apply consolidated risk-based capital requirements to a depository institution holding company and its subsidiaries. Currently, capital requirements for insurance companies are imposed by State insurance laws on a legal entity basis and there are no State-based, consolidated capital requirements that cover subsidiaries and noninsurance affiliates of insurance companies.

In developing the NPRs, the Board sought to meet several legal requirements and policy goals. The NPRs are consistent with section 171 of the Dodd-Frank Act, which requires consolidated minimum risk-based and leverage capital requirements for depository institution holding companies, including SLHCs, that are no less than the generally applicable capital requirements that apply to insured depository institutions under the prompt corrective action framework. The current "generally applicable" capital requirements for insured depository institutions are calculated and reported based on the U.S. generally accepted accounting principles (GAAP). This approach is consistent with section 37 of the Federal Deposit Insurance Act which requires that accounting principles applicable to reports or statements that insured depository institutions file with their Federal regulators be "uniform and consistent" with GAAP. If an alternative accounting standard is required by the Federal regulator, it must, by statute, be "no less stringent" than

[1] *See,* 77 *Federal Register* 52888, 52909, 52958 (August 30, 2012).

GAAP.[2] Accordingly, the Board, consistent with section 171 of Dodd-Frank Act and section 37 of the FDI Act, proposed that savings and loan holding companies, like insured depository institutions and bank holding companies, calculate and report their regulatory capital ratios on a consolidated basis using a framework that is based on GAAP.

The NPRs also are consistent with the Board's long-standing practice of applying consolidated minimum capital requirements to bank holding companies, including those that control functionally regulated subsidiary insurance companies. This practice eliminates incentives to engage in capital arbitrage by booking individual exposures in the legal entity in which they receive the most favorable capital requirement.

In developing the proposals, Board staff consulted with the Federal Insurance Office on issues related to capital requirements and stress testing. The Board also sought public comment on capital-related and accounting-related issues that may affect savings and loan holding companies when the Board published a notice of intent regarding these companies on April 22, 2011. Board staff also has met with a number of industry representatives to discuss challenges associated with applying consolidated capital requirements to savings and loan holding companies, including those challenges related to using GAAP.

The Board has received numerous public comments on the potential cost and implementation challenges for savings and loan holding companies, including those savings and loan holding companies that do not currently use GAAP. Board staff and Board members have also met with representatives of savings and loan holding companies with large insurance operations about the concerns raised in their comment letters. The Board is carefully reviewing all the public comments on the proposal, including those related to potential costs and burdens related to accounting, and will continue to take these concerns into consideration over the course of the rulemaking.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR MERKLEY FROM BEN S. BERNANKE

Q.1. During the hearing, I asked you to address concerns I have regarding the increasing role that banks are playing in our spot energy markets, including the crude oil markets. I particularly asked this in light of the regulators' October proposal on the Volcker Rule that would exclude all spot commodities and physically settled forwards from coverage of the Volcker Rule's trading account. You responded by suggesting that Dodd-Frank had excluded spot commodities from Volcker Rule coverage, and I indicated that this was not the case.

I would like take you up on your offer of further conversation and analysis of the issue. First, let me share some of my views on this matter, and I would like to understand your views in light of them.

[2] *See,* 12 U.S.C. 1831n(a)(2).

Although Dodd-Frank does not explicitly name spot commodities and physically settled commodity forwards in the trading account definition under the statutory Volcker Rule, that definition is exceedingly broad and expresses a clear Congressional intent to cover all instruments banks use in the course of their trading activities. Moreover, Dodd-Frank provides regulators broad authority to include "any other security or financial instrument." In other words, the text of the statute might not explicitly include the items in question, but it does not take that ability away from the regulators. Indeed, any explicit decision to exclude them would be made by the regulators, and I would assert would be a misreading of Congressional intent.

For your reference, below is the pertinent statutory text:

> (4) PROPRIETARY TRADING.—The term "proprietary trading", when used with respect to a banking entity or nonbank financial company supervised by the Board, means engaging as a principal for the trading account of the banking entity or nonbank financial company supervised by the Board in any transaction to purchase or sell, or otherwise acquire or dispose of, any security, any derivative, any contract of sale of a commodity for future delivery, any option on any such security, derivative, or contract, or any other security or financial instrument that the appropriate Federal banking agencies, the Securities and Exchange Commission, and the Commodity Futures Trading Commission may, by rule as provided in subsection (b)(2), determine.

Senator Levin and I further make this clear in our February 13 comment letter on this subject:

> The law provides no statutory authority to exclude transactions involving spot commodities or forward contract transactions that are to be physically settled from the Merkley-Levin Provisions, nor should they be excluded. Until relatively recently, banks and their affiliates were not major players in physical commodities. Today, some banks have become major traders of physical commodities, using transactions which can be high risk, give rise to off balance sheet or other hidden liabilities, and involve difficult risk analysis. For example, some banks such as JPMorgan and Morgan Stanley are reportedly trading and storing physical quantities of crude oil and other physical commodities,[1] and engaging in trading activities and investments that regulators may be hard pressed to analyze for risk or conflicts of interest.
>
> In addition, these transactions invite the very types of conflicts of interest that the Merkley-Levin Provisions are de-

[1] *See,* e.g., Ned Molloy, "Energy Risk Oil & Products House of the Year 2011: JPMorgan", Risk.net, Jun. 9, 2011, available at *http://www.risk.net/energy-risk/feature/2072271/energy-risk-oil-products-house-2011-jp-morgan*; Morning Zhou, "Traders Boost Oil Storage on Offshore Tankers by 75%, Morgan Stanley Says", Bloomberg, Apr. 26, 2010, available at *http://www.bloomberg.com/news/2010-04-26/traders-boost-oil-storage-on-offshore-tankers-by-75-morgan-stanley-says.html*; Wall Street Banks Quarterly Commodities Trading Risk, Reuters, Oct. 18, 2011, available at *http://www.reuters.com/article/2011/10/18/commodities-banks-risk-idUSN1 E79H0M920111018*.

signed to prevent, since those same banks frequently engage in commodity transactions with and on behalf of their clients.[2] Although these types of transactions are not explicitly named in the statute, they are covered under the "any other security or financial instrument" language of Section 13(h)(4). In addition, excluding these types of transactions from the statute would create incentives for banks to circumvent the law by designing transactions utilizing these exclusions. In addition, given the strong relationships between spot commodities and their corresponding futures, excluding spot commodities would create a significant loophole that would undermine the intent of the provisions. Given the risk of evasion, all of these transactions should be subject to the Volcker Rule safeguards.

Not only do I believe the statutory approach is clear, but the policy basis for being concerned about banks' spot commodities and physically settled forwards trading is very strong. Recent events, including the JPMorgan Chief trading loss, the trader manipulation of LIBOR cases, and the on-going investigation by the Federal Energy Regulatory Commission into energy manipulation by several large national banks, all highlight how the culture of proprietary trading is so rife with conflicts of interest and risk that it is highly incompatible with client-oriented, economy-serving traditional banking. Indeed, many trading activities may even be so risky as to be beyond cost-effective regulation—a point suggested by Federal Reserve Governor Sarah Bloom Raskin in a recent speech in Colorado.

Given these lessons, I am highly concerned the regulators would seek to ignore the statute and pass up the opportunity to use the Volcker Rule to hopefully prevent potential problems in our energy and other commodity markets, including possibly preventing another Enron.

Please share any additional views you may have in light of this information.

A.1. Section 619 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) generally prohibits banking entities from engaging in proprietary trading. As you noted, section 619(h)(4) of that Act defines "proprietary trading" to mean "engaging as a principal for the trading account of the banking entity or nonbank financial company supervised by the Board in any transaction to purchase or sell, or otherwise acquire or dispose of, any security, any derivative, any contract of sale of a commodity for future delivery, any option on any such security, derivative, or contract, or any other security or financial instrument that the appropriate Federal banking agencies, the Securities and Exchange Commission, and the Commodity Futures Trading Commission may, by rule as provided in subsection (b)(2), determine." See 12 U.S.C. 1851(h)(4). By its terms, section 619(h)(4) does not mention or specifically apply to spot transactions in commodities.

As you point out, the Act permits the Federal Reserve, OCC, FDIC, SEC, and CFTC (the "Agencies") to extend the prohibition

[2] *See,* Saule Omarova, 63 *U. Miami L. Rev.* 1041 (2009).

on proprietary trading to "any other security or financial instrument that the [Agencies] may, by rule as provided in subsection (b)(2) [of section 619], determine." See, id., The Agencies invited comment on the appropriate scope of this definition, including whether the Agencies should extend the definition to include spot commodities. The Agencies received over 19,000 comments regarding the proposed implementing rules, including, as noted in our discussion, comments that specifically addressed the definition of covered financial position and the scope of instruments that should be subject to the ban on proprietary trading. The Agencies are currently considering these comments as we work to finalize implementing rules, and will carefully consider your comments in implementing these important provisions.

Q.2. Similar to the concern I have with the exclusion of spot commodities and forwards from the definition of the trading account is the proposal to exclude repurchase agreements and "liquidity management" positions from the trading account—and hence the entire coverage of the Volcker Rule.

As I indicated in Question 1, the statute does not provide a path for excluding items from, the definition of the trading account. It provides only one avenue for avoiding from the prohibitions of the Volcker Rule: an additional "permitted activity" under subsection (d)(1)(J) of the statute. This path was expressly provided so that regulators could, if needed, add permitted activities. Although these activities would not be subject to the prohibition on proprietary trading, they would remain subject to other protections under the Volcker Rule, including data collection and backstops on high-risk activities and conflicts of interest.

Senator Levin and I, in our February comment letter, made this point clearly:

> The Merkley-Levin Provisions do not provide any statutory authority to create exclusions from the definition of "trading account". To the contrary, it authorizes the regulators only to expand the definition of "trading account" to include "any such other accounts" as they determine. Thus, regulatory discretion is only in one direction.
>
> Positions held outside of the "trading account", as defined by the statute and [ ] should [they] be expanded by the regulators, are not directly covered by the restrictions in the Merkley-Levin Provisions against proprietary trading, much less their protections against high-risk assets, conflicts of interest, and other protections.
>
> The definition of "trading account" was carefully worded in the statute to take into account multiple concerns and deliberately designed to have a broad reach. The statute does not contemplate or provide for exclusions from this definition. If regulators want to allow a new permitted activity, then they must do so pursuant to the authority under Section 13(d)(1)(J), which would ensure that the new activity remained subject to the other limitations in the law applicable to all permitted activities. In short, there is no legal standing for these regulatory-created exclusions from the

definition of “trading account,” and they should be removed.

Given that many of JPMorgan’s Chief Investment Office positions were held, they claimed, as liquidity management positions, complete exclusion of liquidity management positions from the Volcker Rule would not only be contrary to the statutory text but also highly troubling from a policy perspective.

Please comment on whether you intend to close the liquidity management and other exclusions from the Volcker Rule trading account definition.

A.2. The proposal by the Agencies to implement section 619 of the Dodd-Frank Act requested public comment on a definition of “trading account” that generally restates the statutory definition, with the addition of certain details to provide greater clarity regarding the scope of positions that fall within the definition. That definition covers trading activity conducted principally for the purpose of selling in the near term or profiting from short-term price movements. The Agencies proposed to clarify that transactions taken as part of bona fide liquidity management activities, repurchase or reverse repurchase arrangements, or securities lending programs are not covered within the trading account because the banking entity’s purpose for engaging in such transactions is not to engage in selling in the near term or profiting from short-term price movements. For instance, banking entities conduct liquidity management activities as part of a program reviewed by the Agencies to ensure that each banking entity maintains sufficient, readily marketable assets to meet its expected short-term liquidity needs, and thereby enhance the safe and sound operation of the banking entity and reduce its risk to the financial system. Similarly, repurchase or reverse repurchase arrangements and securities lending transactions operate in substance as a secured loan with set terms agreed upon at the start of the arrangement, and are not based on expected or anticipated short-term movements in asset prices.

The Agencies invited comment on the proposed exclusions and the Agencies received over 19,000 comments regarding the proposed implementing rules, including comments that specifically addressed the issues you noted in your question. The Federal Reserve and other rulemaking agencies are carefully reviewing those comments and considering the suggestions and issues they raise in light of the statutory restrictions and provisions as we work to finalize implementing rules.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR VITTER FROM BEN S. BERNANKE

Q.1. I am concerned about the April 10th supplemental notice of proposed rulemaking issued by the Fed. In this NPR, the Fed ignores the letter of the law in Dodd Frank, and proposes to vastly expand its own authority to designate nonfinancial firms as SIFIs “predominantly engaged in financial services” by adopting a broad definition of the term “activities that are financial in nature.”

During the Senate’s consideration of the Dodd-Frank Act a bipartisan amendment that significantly tightened the bill’s language regarding SIFI designation for nonbanks. My concern was that the

committee-reported bill gave the Fed and the FSOC broad discretion to adopt a drag-net approach to SIFI designation—and in doing so, pull in many commercial firms that Congress did not want included.

The Vitter-Pryor amendment cured this defect by limiting the designation process to only those firms that are "predominantly engaged" in financial services. This amendment created a new standard for SIFI designation. Under it, a firm must be predominantly engaged in activities that are financial in nature to be subject to FSOC designation. It also linked the "predominantly engaged" definition to the tight definition of "financial activities" in the Bank Holding Company Act. The language is crystal clear—"activities that are financial in nature as defined in section 4(k) of the Bank Holding Company Act of 1956" qualify as "financial in nature." The Senate rejected adding a clause to this amendment granting the Board the additional discretion to consider activities "incidental to a financial activity" as defined in section 4(k). Nevertheless, the Fed in its April 10th NPR, has decided to ignore the clear letter of the law and unilaterally expand the definition of this term.

In that NPR the Fed rationalizes its action as necessary to not "severely undermine the purposes of Title I." This is not the Fed's decision to make. Given the explicit language of the statute, the Fed is not empowered to try to divine the "purposes" of Title I by sifting through the legislative history of Dodd-Frank. The language of Section 102 and the legislative history of this provision make it abundantly clear that the language of Section 4(k) controls, and the Fed has no discretion to bend the law. Moreover, the debate surrounding our Amendment make clear that the Congress intended this language to mean exactly what it says.

The Supreme Court has repeatedly upheld the proposition that agencies must defer to clear Congressional intent. In *K Mart v. Cartier, Inc.,* the Court wrote that "if a statute is clear and unambiguous that is the end of the matter . . . the agency must give effect to the unambiguously expressed intent of Congress." Given the precedents, what basis does the Federal Reserve have for its attempt to qualify the clear language of Section 102(a)(6)?

A.1. Questions 1 through 3 relate to the provision of the Dodd-Frank Act that requires the Board to establish, by regulation, the requirements for determining if a company is predominantly engaged in financial activities. Companies that are predominantly engaged in financial activities can be designated by the Financial Stability Oversight Council for supervision by the Board if the FSOC finds that the firm could pose a threat to the financial stability of the United States.

In April 2012, the Board invited public comment on proposed rules implementing these provisions. The public provided a number of comments on the proposed rules, including with respect to the proposed interpretation of section 102 of the Dodd-Frank Act and the treatment of physically settled derivatives transactions. We are carefully considering these comments as we formulate the final rule.

Q.2. Chairman Bernanke, in the April 10th release, the Federal Reserve attempts to justify its proposed action by citing section

102(b) of the Dodd Frank Act. That provision permits the Fed to establish "requirements" for determining whether a company falls within the definition of "predominantly engaged in financial activities". This provision explicitly notes that this term is fully defined in section 102(a)(6) of Dodd Frank, correct? Where in this provision does the Fed get the authority to override clear statutory language and qualify the definition of predominantly engaged in financial activities?

A.2. Please see response to Question 1.

Q.3. Mr. Chairman, will you assure this Committee that the Federal Reserve will abandon this effort at unilaterally expanding its legislative fiefdom, and comply with clear letter of the law in Section 102?

A.3. Please see response to Question 1.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR TOOMEY FROM BEN S. BERNANKE

Q.1. As you know, the Volcker Rule becomes effective under the statute on July 21, 2012, regardless of whether a final implementing rule has been finalized. As you suggested before this Committee several weeks ago, the agencies are unlikely to meet that deadline. Also, in the interim, the Fed has issued guidance on actions "banking entities" should take during the 2-year conformance period in preparation for complying with a rule that doesn't exist.

With that as background, can you give us a status report on the interagency negotiations on the Volcker Rule and some idea as to when the agencies are likely to release the next version? Can you give us any insight as to what will be released?

A.1. Last year, the Federal Reserve Board (FRB), the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC), Securities and Exchange Commission (SEC), and Commodity Futures Trading Commission (CFTC) (also known as the "Agencies") proposed rules to implement section 619 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act); as part of those proposals, the Agencies met with many interested representatives of the public, including banking firms, trade associations and consumer advocates, and provided an extended period of time for the public to submit comments to the agencies. To enhance uniformity in both rules that implement section 619 and administration of the requirements of section 619, the Agencies have been regularly consulting with each other in the development of rules and policies that implement section 619 and will continue to do so.

The Agencies have received over 19,000 comments addressing a wide variety of aspects of the proposal. The Board and other rulemaking agencies are carefully reviewing those comments and considering the suggestions and issues they raise in light of the statutory restrictions and provisions as we work to finalize implementing rules. The Agencies are also carefully considering different options in order to effectively implement section 619 of the Dodd-Frank Act in a timely manner.

Q.2. Given the sheer number of questions you asked in the Notice of Proposed Rulemaking (NPR) (several hundred), is it feasible to go forward at this point with a final rule? Or will you need to issue a revised NPR with a comment period?

A.2. Please see response to Question 1.

Q.3. I disagree with the premise of designating any entity a "systemically important financial institution" (SIFI). However, it is my understanding that, although not perfect, the SIFI designation process in the United States is more transparent than the G–SIFI (Globally Systemically Important Financial Institution) designation process. I am especially troubled that confidential company data is being collected to make G–SIFI determinations without a clearly defined G–SIFI methodology in place.

Given that the Federal Reserve is a member of the Financial Stability Board (FSB), which will make G–SIFI determinations, can you clarify how a company that is designated a G–SIFI but not designated a SIFI in the U.S. will be regulated? For instance, how would an insurance company that is currently regulated at the State level be regulated as a G–SIFI?

A.3. In considering whether to determine that a nonbank financial company could pose a threat to U.S. financial stability and subject the company to Board supervision and prudential standards, the FSOC is required by statute to consider various factors set forth in the statute that could result in a different determination (either including or excluding a firm) by the FSOC under the Dodd-Frank Act than a determination that may be made by the FSB. For instance, one factor that the FSOC must consider is the degree to which a firm is already regulated by another financial regulatory agency.

The Board and the FSOC are working with the FSB on a number of initiatives, including the process for identifying globally systemically important financial institutions and financial market infrastructures. Furthermore, the Board and the FSOC are working to ensure the consistency of the approaches used by the FSB and the FSOC for assessing whether a nonbanking company is systemically important and to better understand the potential for different determinations.

Systemically important nonbank firms designated by the FSOC and bank holding companies with total consolidated assets greater than $50 billion will be subject to enhanced prudential standards established by the Board. By contrast, firms that are not designated by the FSOC and are not bank holding companies with total assets greater than $50 billion that are designated as G–SIFIs by the Financial Stability Board would be subject to internationally agreed-upon standards.

Q.4. In a hearing on March 22, 2012, I asked Treasury's Under Secretary for International Affairs, Lael Brainard, if she anticipated a situation where a U.S. company is not designated a SIFI by FSOC, but is designated a G–SIFI by the FSB, and how such an institution would be regulated. In her response, she noted that "U.S. financial institutions will be regulated in accordance with U.S. laws and regulations." She also said: "Through its membership on both the Financial Stability Oversight Council and Inter-

national Association of Insurance Supervisors (IAIS) committees involved with the development of the criteria and methodology, Treasury's Federal Insurance Office (FIO) is pursuing an international consensus that aligns the IAIS criteria, methodology, and timing with the Council (FSOC)."

How will you ensure that the U.S. SIFI designation process is coordinated with the G–SIFI designation process so that the integrity of U.S. law is protected?

A.4. Please see response to Question 3.

Q.5. The Federal Reserve's recently proposed capital standards implementing Basel 3 and section 171 of the Dodd-Frank Act include an effective date of January 2013 for insurance companies organized as thrift holding companies. However, section 171 of the Dodd-Frank Act states that any requirements of that section shall be effective 5 years from date of enactment (July 2015).

Can you clarify these effective dates as they apply to insurers?

A.5. As you know, the Board and the other Federal banking agencies proposed to revise the risk-based and leverage capital requirements in three notices of proposed rulemaking (NPRs) and the Board proposed to apply the revised requirements to SLHCs.[1] The proposals in the NPRs, in part, would apply consolidated risk-based capital requirements to a depository institution holding company and its subsidiaries. Currently, capital requirements for insurance companies are imposed by State insurance laws on a legal entity basis and there are no State-based, consolidated capital requirements that cover subsidiaries and noninsurance affiliates of insurance companies.

In developing the NPRs, the Board sought to meet several legal requirements and policy goals. The NPRs are consistent with section 171 of the Dodd-Frank Act, which requires consolidated minimum risk-based and leverage capital requirements for depository institution holding companies, including SLHCs, that are no less than the generally applicable capital requirements that apply to insured depository institutions under the prompt corrective action framework. The NPRs are also consistent with the Board's longstanding practice of applying consolidated minimum capital requirements to bank holding companies, including those that control functionally regulated subsidiary insurance companies. This practice eliminates incentives to engage in capital arbitrage by booking individual exposures in the legal entity in which they receive the most favorable capital requirement.

The requirements under section 171 generally apply to depository institutions holding companies that were not previously supervised by the Board, including any savings and loan holding company, beginning on July 21, 2015. Separately, section 616(b) of the Dodd-Frank Act modified section 10(g)(1) of the Home Owners' Loan Act (HOLA) to authorize the Board to establish regulations and orders relating to capital requirements for savings and loan holding companies. Thus, section 10(g)(1) of HOLA provides the Board with separate authority to establish by rule capital requirements for savings and loan holding companies, apart from the spe-

[1] *See,* 77 *Federal Register* 52888, 52909, 52958 (August 30, 2012).

cific minimum requirements and other limitations that are imposed by statute in section 171.

Consistent with the Board's authority under section 10(g)(1) of HOLA, the NPRs provide that savings and loan holding companies would be subject to consolidated minimum capital requirements beginning on January 1, 2013. The Board received numerous comments expressing concern regarding this proposed effective date, including from savings and loan holding companies. In light of the comments and the wide range of views expressed during the comment period, the agencies issued a joint statement on November 9, 2012, noting that the agencies do not expect that any of the proposed rules would become effective on January 1, 2013. The Board is considering carefully all comments received, including potential implementation challenges for savings and loan holding companies with insurance company subsidiaries and the appropriateness of an extended effective date, and will take them into account over the course of the rulemaking.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR KIRK FROM BEN S. BERNANKE

Q.1. The Federal Reserve's strategy of keeping interest rates low through "Operation Twist" has been aided by global uncertainty, which has risk-averse investors seeking the safety of U.S. Treasuries. At the 10-year Treasury note auction on July 11, investors accepted the lowest yields in history, just 1.459 percent. These low rates have neither spurred economic growth nor materially lowered unemployment. Rather, they are creating "unintended consequences": (a) Retirees are facing personal budget cuts as their savings yield next to nothing; (b) Businesses, which finance much of their working capital on a floating rate basis, are reluctant to expand; although their cost of funds is low currently, it is likely to rise just as any expansion plans are implemented and their working capital needs rise; and (c) Independent banks are struggling to remain profitable while managing difficult conditions caused by the combination of artificially low interest rates, weak commercial demand, lower debit card fees, and the rising cost and capital requirements for interest-bearing customer accounts.

Since yields are already at historic lows, what purpose will further quantitative easing serve? How much lower could rates reasonably be expected to go with further easing?

A.1. It is true that Treasury yields are very low, but there is scope for the Federal Reserve to ease financial conditions further in order to strengthen the economic recovery using nontraditional policy tools, including purchases of longer-term assets. The unconventional easing measures undertaken by the Federal Reserve in recent years have been effective in contributing to lower longer-term interest rates, higher asset prices, and generally more accommodative financial conditions than would have otherwise been the case. More accommodative financial conditions, in turn, stimulate economic growth by reducing the cost of borrowing for businesses and households, and by raising household and business net worth, thereby boosting aggregate demand and reducing unemployment.

At its December meeting, the Committee announced that it was increasing policy accommodation by purchasing additional mortgage-backed securities at a pace of $40 billion per month and would purchase longer-term Treasury securities at a pace of $45 billion per month after the completion of the maturity extension program at the end of the year. The Committee indicated that unless it sees evidence of a substantial improvement in labor market conditions in coming months, it will purchase additional agency MBS securities, undertake additional asset purchases, and employ its other policy tools as appropriate until such an improvement is achieved in a context of price stability. The Committee also indicated that, as always, it would take appropriate account of the likely efficacy and costs of its purchases in determining the size, pace, and composition of such purchases.

The conditioning of purchases on economic outcomes helps to create an automatic stabilizing effect in financial markets. If the economy weakens, market participants might expect additional Federal Reserve purchases and that expectation should contribute to a further easing in financial conditions. Conversely, if the economy strengthens, investors might anticipate that the Federal Reserve will scale back its purchase of securities and that should contribute to a firming of financial conditions. Thus, the ultimate extent of the Committee's purchases, and so their impact on yields, is uncertain at this point.

Q.2. How would further easing and low interest rates affect fixed-income seniors unable to move their money into higher risk investments? Given that this segment of the population is growing, could depressed consumer demand have negative effects on the economy?

A.2. The Federal Reserve recognizes that the accommodative policy the Fed has put in place means that individuals with savings invested in fixed-income assets may receive lower interest income for a time. However, the returns on fixed-income investments, as well as other assets, fundamentally depend on the strength of the economy. Moreover, the Federal Reserve's policy actions also boost stock prices, home values, and other assets that are held by many households, contributing to higher household net worth than would otherwise be the case. A stronger economy benefits savers and all Americans in myriad ways, including stronger income growth, improved job prospects, and improved access to credit.

Q.3. One major effect of the crisis in Europe is that European sovereign debt from many countries is no longer considered riskless. How has this affected demand for Treasuries? What effect might increased demand have on consideration for further easing?

A.3. It seems likely that investor concerns about the situation in Europe have boosted the demand for Treasury securities and put downward pressure on Treasury yields over recent years. In making its monetary policy decisions, the FOMC takes into account all of the factors that it believes are relevant to the U.S. economic outlook, including the effects of the fiscal and banking crisis in Europe on financial conditions and U.S. economic activity. As the FOMC has noted, strains in Europe and global financial markets represent a significant downside risk to the U.S. economic outlook. The relatively modest pace of the U.S. recovery and the associated down-

side risks, in turn, have been important factors underlying the FOMC's decision to provide further monetary policy accommodation over recent years.

Q.4. The State Budget Crisis Task Force just released a report identifying "Six Major Threats to Fiscal Sustainability" (*http://www.statebudgetcrisis.org/wpcms/wp-content/images/Report-of-the-State-Budget-Crisis-Task-Force-Full.pdf*). One key finding is that "Underfunded Retirement Promises Create Risks for Future Budgets." One factor that allowed state treasurers to underfund pensions is assuming unrealistically high rates of return for retirement investments. If the Federal Reserve extends "Operation Twist" again, what is a realistic rate of return for conservatively managed pension funds?

A.4. The returns to long-term investments depend crucially on the strength of economic activity, the rate of inflation, and the stability of the financial system. The Federal Reserve conducts monetary policy to foster its statutory objectives of maximum employment and stable prices. To this end, the Federal Reserve has reduced the Federal funds rate to its effective lower bound and has increased the size, and changed the composition, of its balance sheet in recent years to help make financial conditions more accommodative. These monetary policy actions have been motivated by the desire to support a more robust pace of economic recovery in a context of price stability. It is in the interest of everyone—including pension funds and their beneficiaries—to have an economy that is performing at its highest level of its capacity consistent with long-term price stability, which, in turn, would increase the returns on long-term investments.

Q.5. Recent statements by Barclays Bank and the Bank of England indicate that the LIBOR rate has been subject to manipulation since 2007. Can market confidence in this rate be restored? What is the appropriate role for the Federal Reserve in establishing a credible, transparent market-based interest rate index that protects American borrowers and lenders?

A.5. Answer not received by time of publication.

Q.6. The Federal Reserve has proposed risk-based capital rules that do not distinguish between Savings and Loan Holding Companies engaged primarily in banking and those engaged predominately in insurance. Considering the differences between these lines of business and their related risk-based capital requirements, is it realistic to expect that the complexity of issues related to this important rule can be adequately addressed in the current comment period, which is scheduled to end on September 7?

A.6. As you know, on June 7, 2012, the Board and the other Federal banking agencies (agencies) proposed to revise their risk-based and leverage capital requirements in three notices of proposed rulemaking and to apply the revised requirements to savings and loan holding companies (SLHCs).[1] The agencies jointly extended the comment period from September 7, 2012, until October 22, 2012, in response to requests from the public. The Board is considering

[1] 1 *See,* 77 *Federal Register* 52888, 52909, 52958 (August 30, 2012).

carefully all comments received, including potential implementation challenges for savings and loan holding companies with insurance company subsidiaries, and will take them into account over the course of the rulemaking.

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

For use at 10:00 a.m., EDT
July 17, 2012

Monetary Policy Report to the Congress

July 17, 2012

Board of Governors of the Federal Reserve System

Monetary Policy Report to the Congress

Submitted pursuant to section 2B of the Federal Reserve Act

July 17, 2012

Board of Governors of the Federal Reserve System

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

Washington, D.C., July 17, 2012

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 ... 1

Part 2
Recent Economic and Financial Developments ... 5

Domestic Developments ... 6
- The Household Sector ... 6
  - *Consumer Spending and Household Finance* ... 6
  - *Housing Activity and Housing Finance* ... 8
- The Business Sector ... 10
  - *Fixed Investment* ... 10
  - *Inventory Investment* ... 11
  - *Corporate Profits and Business Finance* ... 12
- The Government Sector ... 14
  - *Federal Government* ... 14
  - *State and Local Government* ... 16
- The External Sector ... 16
  - *Exports and Imports* ... 16
  - *Commodity and Trade Prices* ... 17
  - *The Current and Financial Accounts* ... 17
- National Saving ... 18
- The Labor Market ... 19
  - *Employment and Unemployment* ... 19
  - *Productivity and Labor Compensation* ... 20
- Prices ... 21

Financial Developments ... 22
- Monetary Policy Expectations and Treasury Rates ... 22
- Short-Term Funding Markets ... 23
- Financial Institutions ... 25
- Corporate Debt and Equity Markets ... 27
- Monetary Aggregates and the Federal Reserve's Balance Sheet ... 29

International Developments ... 32
- International Financial Markets ... 32
- Advanced Foreign Economies ... 35
- Emerging Market Economies ... 37

Part 3
Monetary Policy: Recent Developments and Outlook **39**
Monetary Policy over the First Half of 2012 39
FOMC Communications 41

Part 4
Summary of Economic Projections **43**
The Outlook for Economic Activity 46
The Outlook for Inflation 46
Appropriate Monetary Policy 49
Uncertainty and Risks 53

Abbreviations 57

List of Boxes
The Supply of Mortgage Credit 10
The Capital and Liquidity Position of Large U.S. Banks 24
Implementing the New Financial Regulatory Regime 28
An Update on the European Fiscal and Banking Crisis 34
Forecast Uncertainty 55

Part 1
Overview:
Monetary Policy and the Economic Outlook

The pace of economic recovery appears to have slowed during the first half of this year, with real gross domestic product (GDP) likely having risen at only a modest pace. In the labor market, the rate of job gains has diminished recently, and, following a period of improvement, the unemployment rate has been little changed at an elevated level since January. Meanwhile, consumer price inflation over the first five months of 2012 was lower, on net, than in 2011, and longer-term inflation expectations have remained stable. A number of factors will likely restrain economic growth in the period ahead, including weak economic growth abroad and a fiscal environment that looks set to become less accommodative. Uncertainty about these factors may also restrain household and business spending. In addition, credit conditions are likely to improve only gradually, as are still-elevated inventories of vacant and foreclosed homes. Moreover, the possibility of a further material deterioration of conditions in Europe, or of a particularly severe change in U.S. fiscal conditions, poses significant downside risks to the outlook.

Against this backdrop, the Federal Open Market Committee (FOMC) took steps to provide additional monetary policy accommodation during the first half of 2012. In particular, the Committee changed its forward guidance regarding the period over which it anticipates the federal funds rate to remain at exceptionally low levels and announced a continuation of its maturity extension program (MEP) through the end of the year. These policies put downward pressure on longer-term interest rates and made broad financial conditions more accommodative than they would otherwise be, thereby supporting the economic recovery.

The European fiscal and banking crisis has remained a major source of strain on global financial markets. Early in the year, financial stresses within the euro area moderated somewhat in light of a number of policy actions: The European Central Bank (ECB) provided ample liquidity to the region's banks, euro-area leaders agreed to increase the lending capacity of their rescue facilities, and a new assistance package for Greece was approved following a restructuring of Greek sovereign debt. However, tensions within the euro area increased again in the spring as political uncertainties rekindled fears of a disorderly Greek exit from the euro area and mounting losses at Spanish banks renewed questions about the sustainability of Spain's sovereign debt and the resiliency of the euro-area banking system. As yields on the government debt of Spain and other vulnerable European countries rose toward new highs, euro-area leaders responded with additional policy measures in late June, including increasing the flexibility of the region's financial backstops and making progress toward greater cooperation in the supervision and, as necessary, recapitalization of Europe's banks. Many critical details, however, remain to be worked out against a backdrop of continued economic weakness and political strain.

Financial markets were somewhat volatile over the first half of 2012 mostly due to fluctuating views regarding the crisis in the euro area and the likely pace of economic growth at home and abroad. As investors' concerns about the situation in Europe eased early in the year and with data releases generally coming in to the upside of market expectations, broad equity price indexes rose and risk spreads in several markets narrowed. Subsequently, however, market participants pulled back from riskier assets amid renewed concerns about the euro area and evidence of slowing global economic growth. Reflecting these developments but also owing to the lengthening of the forward rate guidance, continuation of the MEP, and increased expectations by market participants of additional balance sheet actions by the Federal Reserve, yields on longer-term Treasury securities and corporate debt as well as rates on residential mortgages declined, on net, and reached historically low levels at times during the first half of the year. On balance since the beginning of the year, broad equity prices rose as corporate earnings remained fairly resilient through the first quarter.

After rising at an annual rate of 2½ percent in the second half of 2011, real GDP increased at a 2 percent pace in the first quarter of 2012, and available indicators point to a still smaller gain in the second quarter. Private spending continues to be weighed down by a range of factors, including uncertainty about developments in Europe and the path for U.S. fiscal policy, concerns about the strength and sustainability of the recovery, the still-anemic state of the housing market, and the difficulties that many would-be borrowers con-

tinue to have in obtaining credit. Such considerations have made some businesses more cautious about increasing investment or materially expanding their payrolls and have led households to remain quite pessimistic about their income and employment prospects. Smoothing through the effects of unseasonably warm weather this past winter, activity in the housing sector appears to have been a little stronger so far this year. However, the level of housing activity remains low and continues to be held down by tight mortgage credit. Meanwhile, the drag on real GDP growth from government purchases is likely to persist, as budgets for state and local governments remain strained and federal fiscal policy is likely to become more restrictive in 2013.

In the labor market, gains in private payroll employment averaged 225,000 jobs per month in the first quarter, up from 165,000 jobs per month in the second half of last year, but fell back in the second quarter to just 90,000 jobs per month. Although the slowing in the pace of net job creation may have been exaggerated by issues related to swings in the weather and to seasonal adjustment difficulties associated with the timing of the sharpest job losses during the recession, those factors do not appear to fully account for the slowdown. The unemployment rate declined from about 9 percent last summer to a still-elevated 8¼ percent in January, and it has remained close to that level since then. Likewise, long-term joblessness has shown little net improvement this year, with the share of those unemployed persons who have been jobless for six months or longer remaining around 40 percent. Further meaningful reductions in unemployment are likely to require some pickup in the pace of economic activity.

Consumer price inflation moved down, on net, during the first half of the year. The price index for overall personal consumption expenditures (PCE) rose rapidly in the first three months of the year, reflecting large increases in oil prices, but inflation turned down in the spring when oil prices more than reversed their earlier run-ups. In all, the PCE price index increased at an annual rate of about 1½ percent over the first five months of the year, compared with a rise of 2½ percent during 2011. Excluding food and energy, consumer prices rose at about a 2 percent rate over the first five months of the year, close to the pace recorded over 2011. In addition to the net decline in crude oil prices over the first half of the year, factors contributing to low consumer price inflation this year include the deceleration of non-oil import prices in the latter part of 2011, subdued labor costs associated with the weak labor market, and stable inflation expectations.

In the household sector, credit conditions have generally remained tight for all but highly rated borrowers; among other factors, this tightness reflects the uncertain economic outlook and the high unemployment rate. Total mortgage debt decreased further as the pace of mortgage applications to purchase a new home was sluggish. Refinancing activity increased over the course of the second quarter but remained below levels reached in previous refinancing booms despite historically low mortgage interest rates. The increase in refinancing was partially attributable to recent enhancements made to the Home Affordable Refinance Program that appeared to boost refinancing activity somewhat for borrowers with underwater mortgages—that is, for those who owed more on their mortgages than their homes were worth. Consumer credit expanded moderately mainly because of growth in federal student loans.

Firms in the nonfinancial corporate sector continued to raise funds at a generally moderate pace in the first half of the year. Those with access to capital markets took advantage of low interest rates to refinance existing debt. As a result, corporate debt issuance was solid over the first part of the year, although issuance of speculative-grade corporate bonds weakened notably in June as investors pulled back from riskier assets. Commercial and industrial loans on the books of banks expanded briskly, but borrowing conditions for small businesses have improved more slowly than have those for larger firms. Financing conditions for commercial real estate stayed relatively restrictive, and fundamentals in that sector showed few signs of improvement.

Market sentiment toward major global banks fluctuated in the first half of 2012. In March, the release of the results from the Comprehensive Capital Analysis and Review, which investors interpreted as indicating continued improvements in the health of domestic banks, provided a significant boost to the equity prices of U.S. financial institutions. Those gains partially reversed when market sentiment worsened in May, driven in large part by concerns about Europe and potential spillovers to the United States and its financial institutions. On balance, however, equity prices of banks rose significantly from relatively low levels at the start of the year. An index of credit default swap spreads for the large bank holding companies declined about 60 basis points, but those spreads remained at a high level. Despite the swings in market sentiment about global banking organizations, conditions in unsecured short-term dollar funding markets were fairly stable in the first half of 2012. European financial institutions have reduced their demand for dollar

funding over recent quarters, and general funding pressures apparently were alleviated by the ECB's longer-term refinancing operations.

With the Committee anticipating only slow progress in bringing unemployment down toward levels that it judges to be consistent with its dual mandate and strains in global financial markets continuing to pose significant downside risks to the economic outlook, the FOMC took additional steps to augment the already highly accommodative stance for monetary policy during the first half of 2012. In January, the Committee modified its forward rate guidance, noting that economic conditions were likely to warrant exceptionally low levels for the federal funds rate at least through late 2014. And in June, the FOMC decided to continue the MEP until the end of the year rather than completing the program at the end of June as previously scheduled.

The June Summary of Economic Projections is presented in Part 4 of this report. At the time of the Committee's June meeting, FOMC participants (the 7 members of the Board of Governors and the presidents of the 12 Federal Reserve Banks) saw the economy expanding at a moderate pace over coming quarters and then picking up gradually under the assumption of appropriate monetary policy. Most participants marked down their projections for economic growth in 2012 and 2013 relative to what they anticipated in January and April largely as a result of the adverse developments in Europe and the associated effects on financial markets. Moreover, headwinds from the fiscal and financial situation in Europe, from the still-depressed housing market, and from tight credit for some borrowers were cited as likely to hold back the pace of economic expansion over the forecast period.

FOMC participants also projected slower progress in reducing unemployment than they had anticipated in January and April. Committee participants' projections for the unemployment rate had a central tendency of 8.0 to 8.2 percent in the fourth quarter of this year and then declined to 7.0 to 7.7 percent at the end of 2014; those levels are still generally well above participants' estimates of the longer-run normal rate of unemployment. Meanwhile, participants' projections for inflation had a central tendency of 1.2 to 1.7 percent for 2012 and 1.5 to 2.0 percent for both 2013 and 2014; these projections are lower, particularly in 2012, than participants reported in January and April, in part reflecting the effects of the recent drop in crude oil prices.

With the unemployment rate expected to remain elevated over the projection period and inflation generally expected to be at or under the Committee's 2 percent objective, most participants expected that, under their individual assessments of appropriate monetary policy, the federal funds rate would remain extraordinarily low for some time. In particular, 11 of the 19 participants placed the target federal funds rate at 0.75 percent or lower at the end of 2014; only 4 of them saw the appropriate rate at 2 percent or higher. All participants reported levels for the appropriate target federal funds rate at the end of 2014 that were well below their estimates of the level expected to prevail in the longer run. In addition to projecting only slow progress in bringing down unemployment, most participants saw the risks to the outlook as weighted mainly toward slower growth and higher unemployment. In particular, participants noted that strains in global financial markets, the prospect of reduced fiscal accommodation in the United States, and a general slowdown in global economic growth posed significant risks to the recovery and to a further improvement in labor market conditions.

Part 2
Recent Economic and Financial Developments

Economic activity appears to have expanded at a somewhat slower pace over the first half of 2012 than in the second half of 2011. After rising at an annual rate of 2½ percent in the second half of 2011, real gross domestic product (GDP) increased at a 2 percent pace in the first quarter of 2012, and available indicators point to a still smaller gain in the second quarter (figure 1). An important factor influencing economic and financial developments this year is the unfolding fiscal and banking crisis in Europe. Indeed, the economic outlook for the second half of 2012 depends crucially on the extent to which current and potential disruptions in Europe directly reduce U.S. net exports and indirectly curtail private domestic spending through adverse spillover effects on U.S. financial markets and institutions and on household and business confidence. At the same time, the economy continues to face other headwinds, including restricted access to some types of household and small business credit, a still sizable inventory of vacant homes, and less-accommodative fiscal policy.

The labor market remains weak. Private payroll employment stepped up early in the year but then slowed in the second quarter (though those moves may have been exaggerated by issues related to swings in the weather and to seasonal adjustment), and the unemployment rate hovered around 8¼ percent after a significant decrease over the latter months of 2011 and in January. Meanwhile, consumer price inflation, in part buffeted by sharp swings in the price of gasoline, stepped up early in the year but subsequently turned down, and longer-term inflation expectations remained stable (figure 2).

Financial markets were somewhat volatile over the first half of 2012 mostly due to fluctuating views regarding the crisis in the euro area and the likely pace of economic growth at home and abroad. Yields on longer-term Treasury securities have declined significantly, reflecting greater monetary policy accommodation, the weaker outlook, and safe-haven flows. Broad indexes of U.S. equity prices rose, on net, risk spreads on corporate bonds were generally unchanged or slightly lower, and unsecured short-term dollar funding markets were fairly stable. Debt issuance by U.S. corporations was solid, and bank lending to larger firms was brisk. In the household sector, consumer credit expanded and mortgage refinancing activity increased modestly, reflecting the decline in mortgage rates to historically low levels as well as recent changes to the Home Affordable Refinance Program (HARP).

1. Change in real gross domestic product, 2006–12

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, 2006–12

NOTE: The data are monthly and extend through May 2012; changes are from one year earlier.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

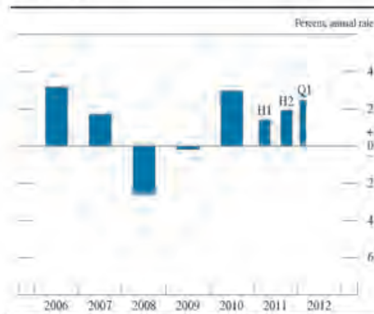
Domestic Developments

The Household Sector

Consumer Spending and Household Finance

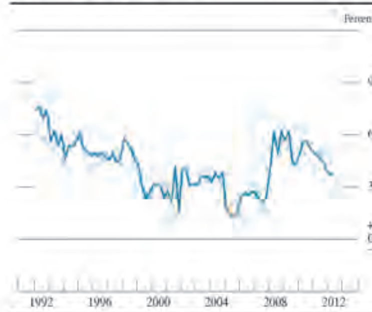
After rising at an annual rate of about 2 percent in the second half of 2011, real personal consumption expenditures (PCE) increased 2½ percent in the first quarter, but available information suggests that real PCE decelerated some in the second quarter (figure 3). The first-quarter increase in spending occurred across a broad array of goods and services with the notable exception of outlays for energy services, which were held down by reduced demand for heating because of the unseasonably warm winter. Spending on energy services appears to have rebounded in the second quarter as the temperate winter gave way to a relatively more typical spring. In contrast, the pace of motor vehicle sales edged down in the second quarter, and reports on retail sales suggest that consumer outlays on a wide range of items rose less rapidly than they did in the first quarter. The moderate rise in consumer spending over the first half of the year occurred against the backdrop of the considerable economic challenges still facing many households, including high unemployment, sluggish gains in employment, tepid growth in income, still-stressed balanced sheets, tight access to some types of credit, and lingering pessimism about job and income prospects. With increases in spending outpacing growth in income so far this year, the personal saving rate continued to decline, on net, though it remained well above levels that prevailed before the recession (figure 4).

3. Change in real personal consumption expenditures, 2006–12



NOTE: The data are quarterly and extend through 2012:Q1.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

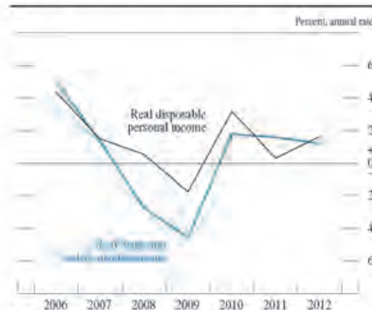
4. Personal saving rate, 1992–2012



NOTE: The data are quarterly and extend through 2012:Q2; the reading for 2012:Q2 is the average for April and May.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Aggregate real disposable personal income (DPI)—personal income less personal taxes, adjusted for changes in prices—rose more rapidly over the first five months of the year than it did in 2011, in part because of declining energy prices (figure 5). The wage and salary component of real DPI, which reflects both the number of hours worked and average hourly wages adjusted for inflation, rose at an annual rate of nearly 1¼ percent through May of this year after having increased at a similar pace in 2011. The increase in real wage and salary income so far in 2012 is largely attributable to the modest improvement in employment and

5. Change in real disposable personal income and in real wage and salary disbursements, 2006–12



NOTE: Through 2011, change is from December to December; for 2012, change is from December to May. The real wage and salary disbursements series is nominal wage and salary disbursements deflated by the personal consumption expenditures deflator.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

hours worked; real average hourly earnings are little changed thus far this year.

The ratio of household net worth to income, in the aggregate, moved up slightly further in the first quarter, reflecting increases in both house prices and equity prices (figure 6). Taking a longer view, this ratio has been on a slow upward trend since 2009, and while it remains far below levels seen in the years leading up to the recession, it is about equal to its average over the past 20 years. Household-level data through 2010 indicate that wealth losses were proportionately larger for the middle portion of the wealth distribution—not a surprising result, given the relative importance of housing among the assets of those households. Meanwhile, indicators of consumer sentiment are above their lows from last summer but have yet to return to pre-recession levels (figure 7).

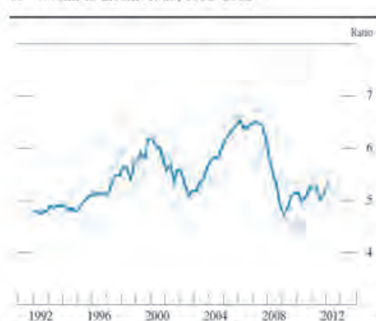
Household debt—the sum of mortgage and consumer debt—edged down again in the first quarter of 2012 as the continued contraction in mortgage debt was almost offset by solid expansion in consumer credit. With the reduction in household debt, low level of most interest rates, and modest growth of income, the debt-service ratio—the aggregate required principal and interest payments on existing household debt relative to income—decreased further, and, at the end of the first quarter, it stood at a level last seen in 1994 (figure 8).

Consumer credit expanded at an annual rate of about 6¼ percent in the first five months of 2012, driven by an increase in nonrevolving credit. This component accounts for about two-thirds of total consumer credit and primarily consists of auto and student loans. The rise in nonrevolving credit so far this year was primarily due to the strength in student loans, which were almost entirely originated and funded by the federal government. Meanwhile, auto loans maintained a steady pace of increase. Revolving consumer credit (primarily credit card lending) remained much more subdued in the first five months of the year in part because nonprime borrowers continued to face tight underwriting standards. Overall, the increase in consumer credit is consistent with recent responses to the Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS) indicating that demand

7. Consumer sentiment indexes, 2002–12

NOTE: The Conference Board data are monthly and extend through June 2012; the series is indexed to equal 100 in 1985. The Thomson Reuters/University of Michigan data are monthly and extend through a preliminary estimate for July 2012; the series is indexed to equal 100 in 1966.
SOURCE: The Conference Board and Thomson Reuters/University of Michigan Surveys of Consumers.

6. Wealth-to-income ratio, 1992–2012



NOTE: The data are quarterly and extend through 2012:Q1. 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.

8. Household debt service, 1984–2012

NOTE: The data are quarterly and extend through 2012:Q1. Debt service payments consist of estimated required payments on outstanding mortgage and consumer debt.
SOURCE: Federal Reserve Board, "Household Debt Service and Financial Obligations Ratios," statistical release.

had strengthened and standards had eased, on net, for all consumer loan categories.[1]

Interest rates on consumer loans generally edged down in the first half of 2012, and spreads on these loans relative to Treasury securities of comparable maturity held fairly steady. In particular, interest rates on new auto loans continued to be quite low. However, the spread of rates on credit card loans relative to the two-year Treasury yield has remained wide since the end of 2008 in part because of pricing adjustments made in response to provisions included in the Credit Card Accountability Responsibility and Disclosure Act of 2009.[2]

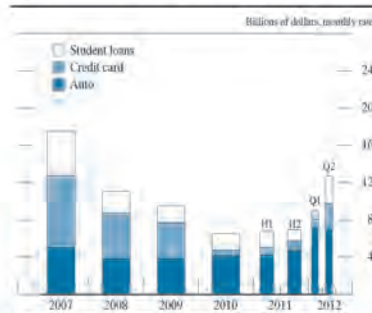
Aggregate indicators of consumer credit quality improved further in the first quarter of 2012. The delinquency rate on credit card loans registered its lowest level since the series began in 1991. The recent improvement importantly reflects an ongoing compositional shift in total credit card balances toward borrowers with higher credit scores, due in part to tighter lending standards. Charge-offs on credit card loans also declined, reaching levels last seen at the end of 2007. Delinquencies and charge-offs on nonrevolving consumer loans at commercial banks also edged lower, to levels slightly below their historical averages. In addition, the delinquency rate on auto loans at finance companies decreased slightly to a level that is near the middle of its historical range.

Issuance of consumer asset-backed securities (ABS) in the first half of 2012 exceeded issuance for the same period in 2011 but was still below pre-crisis levels (figure 9). Issuances of securities backed by auto loans dominated the market for most of the first half, while student loan ABS issuance was about the same as in the past two years. In contrast, issuance of credit card ABS remained weak for most of the first half of 2012 as growth of credit card loans continued to be somewhat subdued and most major banks have chosen to fund such loans on their balance sheets. Yields on ABS and their spreads over comparable-maturity swap rates were little changed, on net, over the first half of 2012 and held steady in the low ranges that have prevailed since early 2010.

Housing Activity and Housing Finance

Activity in the housing sector appears to be on a gradual uptrend, albeit from a very depressed level.

9. Gross consumer asset-backed security issuance, 2007–12



Source: Bloomberg.

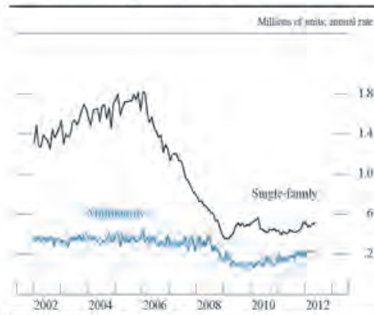
Sales of new and existing homes have risen so far this year, likely supported by the low level of house prices and by low interest rates for conventional mortgages. Nonetheless, the factors that have restrained demand for owner-occupied housing in recent years have yet to dissipate. Many potential buyers are reluctant to purchase homes because of ongoing concerns about future income, employment, and the direction of house prices. In addition, tight mortgage finance conditions preclude many borrowers from obtaining mortgage credit. Much of the home purchase demand that does exist has been channeled to the abundant stock of vacant houses, thereby limiting the response of new construction activity to such expansion of demand as has occurred. Given the large numbers of properties still in, or at risk of being in, foreclosure, this overhang seems likely to continue to weigh on new construction activity for some time.

Despite these factors, housing starts have risen gradually so far this year (figure 10). From January to May, single-family houses were started at an annual rate of about 495,000 units, up from 450,000 in the second half of 2011 but less than half of the average pace of the past 50 years. Although the unseasonably warm winter may have contributed to the increase, the underlying pace of activity likely rose some as well. Indeed, data on single-family permit issuance, which is less likely to be affected by weather, also moved up a little from its level late last year. In the multifamily sector, demand has remained robust, as many individuals and families that are unable or unwilling to purchase homes have sought out rental units. As a result, the vacancy rate for rental housing has fallen to its lowest level since 2002, putting upward pressure on rents and spurring new construction. Over the first five months

1. The SLOOS is available on the Federal Reserve Board's website at www.federalreserve.gov/boarddocs/SnLoanSurvey.

2. The act includes some provisions that place restrictions on issuers' ability to impose certain fees and to engage in risk-based pricing.

10. Private housing starts, 2002–12

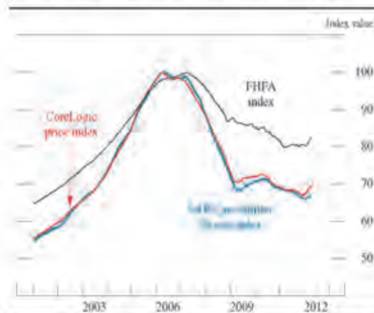


NOTE: The data are monthly and extend through May 2012.
SOURCE: Department of Commerce, Bureau of the Census.

of the year, new multifamily projects were started at an average annual rate of about 225,000 units, up from about 200,000 in the second half of 2011 but still below the 300,000-unit rate that prevailed for much of the previous decade.

House prices, as measured by several national indexes, turned up in recent months after edging down further, on balance, in 2011 (figure 11). For example, the CoreLogic repeat-sales index rose 4 percent (not an annual rate) over the first five months of the year. This recent improvement notwithstanding, this measure of house prices remains 30 percent below its peak in 2006.

11. Prices of existing single-family houses, 2001–12



NOTE: The S&P/Case-Shiller and FHFA data are monthly and extend through April 2012. The CoreLogic data are monthly and extend through May 2012. Each index has been normalized so that its peak is 100. Both the CoreLogic price index and the FHFA index (formerly calculated by the Office of Federal Housing Enterprise Oversight) include purchase transactions only. The S&P/Case-Shiller index reflects all arm's-length sales transactions in selected metropolitan areas.
SOURCE: For CoreLogic, CoreLogic; for FHFA, Federal Housing Finance Agency; for S&P/Case-Shiller, Standard & Poor's.

The same factors that are restraining single-family housing construction also continue to weigh on house prices, including the large inventory of vacant homes, tight mortgage credit conditions, and lackluster demand.

Mortgage rates declined to historically low levels during the first half of 2012 (figure 12). While significant, the drop in mortgage rates generally did not keep pace with the declines in the yields on Treasury and mortgage-backed securities (MBS), probably reflecting still-elevated risk aversion and some capacity constraints among mortgage originators. Despite the drop in mortgage rates, many potentially creditworthy borrowers have had difficulty obtaining mortgages or refinancing because of tight standards and terms (see the box "The Supply of Mortgage Credit"). Another factor impeding the ability of many borrowers to refinance, or to sell their home and purchase a new one, has been the prevalence of underwater mortgages. Overall, refinancing activity increased in the second quarter but was still less than might be expected, given the level of interest rates, and the pace of mortgage applications for home purchases remained sluggish. However, refinancing activity attributed to recent changes to the HARP—one of which eliminated caps on loan-to-value ratios for those who were refinancing mortgages already owned by government-sponsored enterprises (GSEs)—has picked up over the first half of the year.

Indicators of credit quality in the residential mortgage sector continued to reflect strains on homeowners confronting depressed home values and high unemployment. The fraction of current prime mortgages becoming delinquent remained at a high level but

12. Mortgage interest rates, 1995–2012

NOTE: The data, which are weekly and extend through July 11, 2012, are contract rates on 30-year mortgages.
SOURCE: Federal Home Loan Mortgage Corporation.

The Supply of Mortgage Credit

Access to mortgage credit is among the important factors that affect the demand for housing and thus the recovery in the housing sector. Lending standards appear to be considerably tighter than they were even before the housing boom, likely preventing many households from purchasing homes.

According to the Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS), from mid-2007 into 2009, many lenders tightened their standards for residential mortgages originated to borrowers with prime credit scores, and very few have eased standards since then (figure A). Moreover, the market for nontraditional mortgages continues to be impaired, while the market for subprime mortgages remains effectively closed. Similarly, the range of credit scores on newly originated prime mortgages has remained elevated since lenders shifted toward higher-rated borrowers in 2008 (figure B). The upward shift in credit scores is also evident for prime borrowers who refinanced their mortgages and for Federal Housing Administration mortgages.

A. Net percentage of domestic respondents tightening standards for residential mortgage loans, 1990–2012

Note: For data starting in 2007:Q1, changes in standards for prime and nontraditional mortgage loans are reported separately. Data are quarterly; the last observation is from the April 2012 survey, which covers 2012:Q1.
Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

inched lower, on net, over the first five months of the year, likely reflecting in part stricter underwriting of more-recent originations. Additionally, measures of late-stage mortgage delinquency, such as the inventory of properties in foreclosure, continued to linger near the peak in the first quarter of 2012 (figure 13).

Gross issuance of MBS guaranteed by GSEs remained moderate in the first half of 2012, consistent with the slow pace of mortgage originations. In contrast, the securitization market for mortgage loans not guaranteed by a housing-related GSE or the Federal Housing Administration—an important source of funding before the crisis for prime-grade mortgages that exceeded the conforming loan size limit—continued to be essentially closed.

The Business Sector

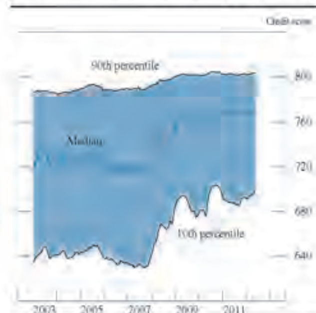
Fixed Investment

Real business spending for equipment and software (E&S) rose at an annual rate of 3½ percent in the first quarter of 2012 after having risen at a double-digit pace, on average, in the second half of 2011 (figure 14). The slowdown in E&S investment growth in the first quarter was fairly widespread across categories of equipment and software. This deceleration in E&S spending along with the recent softening in indicators of investment demand, such as surveys of business sentiment and capital spending plans, may signal some

Mortgage credit standards were clearly too lax in the middle of the previous decade, and some tightening of lending policies was warranted. Nonetheless, industry data indicate that only about one-half of lenders currently even so much as offer a mortgage to borrowers with credit scores and loan-to-value ratios toward the lower ends of the ranges allowed by the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac. That fraction has improved only slightly from 2010.

Respondents to the April SLOOS were asked to identify reasons for their lack of willingness to originate some GSE-eligible mortgages. The factor most frequently cited as "most important" or "very important" was the elevated risk of "putbacks" of delinquent mortgages by the GSEs—that is, the possibility that the GSEs might require originators to repurchase loans with any underwriting irregularities—suggesting that the incomplete transfer of credit risk to the GSEs is an important consideration. Two other factors were cited as most important or very important by almost one-half of respondents: (1) issues related to private mortgage insurance, including the greater difficulty that borrowers faced in obtaining coverage or the higher premiums that they paid for it, and (2) the outlook for house prices. Greater concern about their bank's existing exposure to residential real estate loans and increased concerns about effects of legislative changes, supervisory actions, or changes in accounting standards were also cited relatively frequently as very important factors.

B. Credit scores on new prime mortgages, 2003–12



NOTE: Includes purchase mortgages only. The data are monthly and extend through May 2012.
SOURCE: LPS Applied Analytics.

An additional constraint hindering households' access to mortgage credit is negative equity that has resulted from the decline in house prices in recent years. Roughly one in four mortgage borrowers is underwater on his or her mortgage—nearly 13 million households in all. Underwater borrowers are restricted in their ability to refinance into a lower mortgage rate; they may also find their mobility limited by the difficulty of selling their current home.

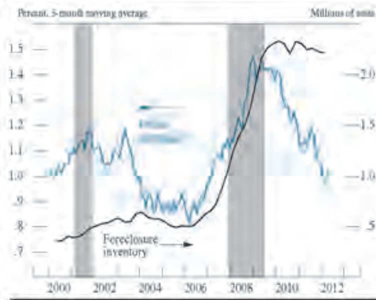
renewed caution on the part of businesses, perhaps related to the situation in Europe.

After posting robust gains throughout much of 2011, investment in nonresidential structures edged up in the first quarter of this year. A drop in outlays for drilling and mining structures was probably related to the low level of natural gas prices. Outside of the drilling and mining segments, investment increased at an annual rate of 7 percent in the first quarter, broadly similar to its gain in the fourth quarter of 2011. Although financing conditions for existing properties have eased some, they remain tight; moreover, high vacancy rates, low commercial real estate prices, and difficult financing conditions for new construction will likely weigh on building activity for the foreseeable future.

Inventory Investment

Firms accumulated inventories in the first quarter at about the same pace as in the fourth quarter of last year (figure 15). Motor vehicle inventories surged in the first quarter, as automakers rebuilt dealers' inventories to comfortable levels after natural disasters disrupted global supply chains in 2011. Stockbuilding outside of motor vehicles moderated somewhat from the fourth-quarter pace of accumulation. Inventory-to-sales ratios for most industries covered by the Census Bureau's book-value data, as well as surveys of private inventory satisfaction and plans, generally suggest that stocks are fairly well aligned with the pace of sales.

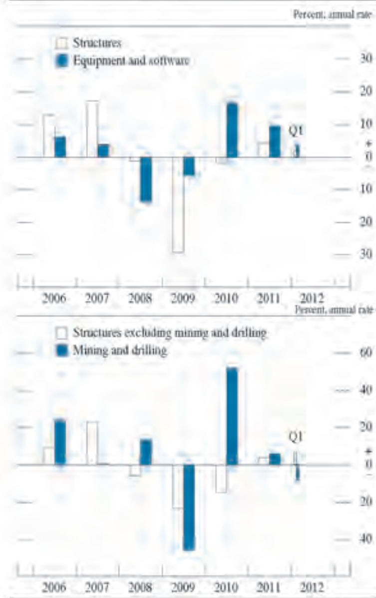
13. Current prime mortgages becoming delinquent and foreclosure inventory, 2000–12



NOTE: The data for prime mortgages are monthly and extend through May 2012. The data for foreclosure inventory are quarterly and extend through 2012:Q1. Percentage of mortgages that transition from being current to being at least 30 days delinquent each month. The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.

SOURCE: For prime mortgages, LPS Applied Analytics; for foreclosure inventory, Federal Reserve Board staff calculations based on data from Mortgage Bankers Association.

14. Change in real business fixed investment, 2006–12



SOURCE: Department of Commerce, Bureau of Economic Analysis.

15. Change in real business inventories, 2006–12

SOURCE: Department of Commerce, Bureau of Economic Analysis.

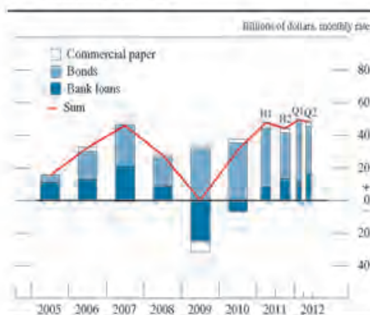
Corporate Profits and Business Finance

Aggregate operating earnings per share for S&P 500 firms rose about 7 percent at a seasonally adjusted quarterly rate in the first quarter of 2012. Financial firms accounted for most of the gain, while profits for firms in the nonfinancial sector were about unchanged from the high level seen in the fourth quarter of last year. As of the end of June, private-sector analysts projected moderate earnings growth through the end of the year.

The ratio of corporate profits to gross national product in the first quarter of 2012 hovered around its historical high, and cash flow remained solid. In addition, the ratio of liquid assets to total assets continued to be near its highest level in more than 20 years, and the share of corporate cash flow needed to cover interest expenses remained low. Against this backdrop of generally strong corporate earnings and balance sheets, credit rating upgrades continued to outpace downgrades for nonfinancial corporations, and the bond default rate for nonfinancial firms remained low in the first half of the year. The delinquency rate on commercial and industrial (C&I) loans decreased further in the first quarter and approached the lower end of its historical range.

With corporate credit quality remaining robust, nonfinancial firms were able to continue to raise funds at a generally strong pace in the first half of the year (figure 16). So far this year, nonfinancial commercial paper (CP) outstanding was about unchanged. Bond issuance by both investment- and speculative-grade nonfinancial firms was strong over the first four months of the year, but speculative-grade issuance weakened some in May and notably further in June.

16. Selected components of net financing for nonfinancial businesses, 2005–12



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

The institutional segment of the syndicated leveraged loan market remained solid in the first half of the year, reportedly supported by continued demand for loans from nonbank investors, such as pension plans and insurance companies (figure 17). In addition, the volume of newly established collateralized loan obligations so far this year has already surpassed 2011 levels. Much of the bond and loan issuance was reportedly used to refinance, and likely also to extend the maturity of, existing debt, given the low level of long-term interest rates.

C&I loans outstanding at commercial banking organizations in the United States expanded at a brisk pace in the first half of 2012 despite declines in the holdings of such loans by U.S. branches and agencies of European institutions. The strength is consistent with a relatively large number of banks, on balance, that have reported stronger demand for C&I loans in the recent SLOOS (figure 18). Moreover, in the April SLOOS, banks continued to report having eased both price and nonprice terms for C&I loans, largely in response to strong competition from other banks and nonbank lenders. The extent of easing generally has been greater for large and middle-market firms. That said, according to the Survey of Terms of Business Lending (STBL), spreads on C&I loans over banks' cost of funds, while continuing to trend down gradually in the February and May surveys, are still quite high in historical terms. Spreads on newly issued syndicated loans have also remained somewhat wide.

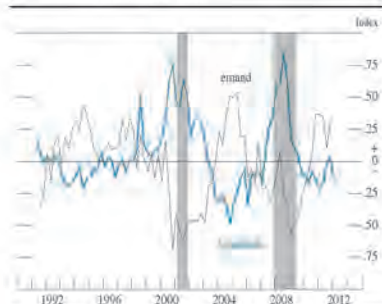
17. Issuance of institutional leveraged loans, 2006–12

NOTE: The reading for 2012:Q2 is the average for April and May. New money loans are new syndicated loans. Refinancing loans are syndicated loans that are used to repay existing debt.
SOURCE: Reuters Loan Pricing Corporation.

Borrowing conditions for small businesses generally have improved over the past few years but have done so much more gradually than have conditions for larger firms; moreover, the demand for credit from small firms apparently remains subdued. C&I loans with original amounts of $1 million or less—a large share of which likely consists of loans to small businesses—were about unchanged in the first quarter.[3] According to results from surveys conducted by the National Federation of Independent Business during the first half of this year, the fraction of firms with borrowing needs stayed low (figure 19). The net percentage of respondents that found credit more difficult to obtain than

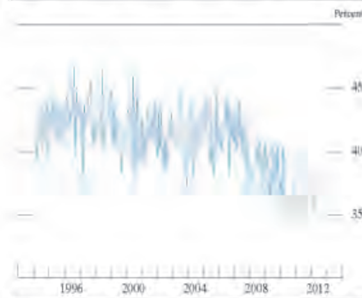
3. The original amount for a C&I loan is defined in the Call Report as the maximum of the amount of the loan or the amount of the total commitment.

18. Change in standards and demand for commercial and industrial loans, 1991–2012



NOTE: The data are drawn from a survey generally conducted four times per year; the last observation is from the April 2012 survey, which covers 2012:Q1. Each series represents the net percent of commercial and industrial loans held by surveyed banks that reported a tightening of standards or stronger demand over the past three months. The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.
SOURCE: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices, and Call Reports.

19. Net percentage of firms with borrowing needs, 1994–2012



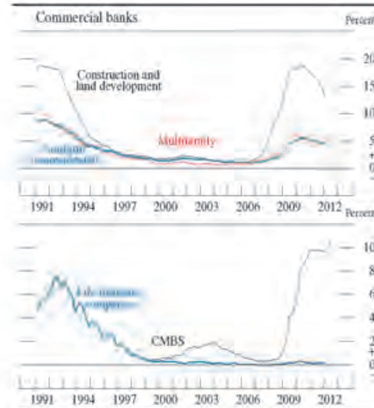
Note: The data are drawn from a survey conducted monthly and are seasonally adjusted; the last observation is from the June 2012 survey. The data represent the proportion of businesses with borrowing needs over the past three months regardless of whether those needs were satisfied or not satisfied. This number is seasonally adjusted.
Source: National Federation of Independent Business.

three months earlier and that expected tighter credit conditions over the next three months have both declined, but they remained at relatively high levels in the June survey. In addition, recent readings from the STBL indicate that the spreads charged by commercial banks on newly originated C&I loans with original amounts less than $1 million remained quite high, even on loans with the strongest credit ratings.

Financial conditions in the commercial real estate (CRE) sector have eased some but stayed relatively tight amid weak fundamentals. According to the April SLOOS, some domestic banks reported having eased standards on CRE loans and, on balance, a significant number of domestic banks reported increased demand for such loans. While banks' holdings of CRE loans continued to contract in the first half of this year, they did so at a slower pace than in the second half of last year. The weakest segment of CRE lending has been the portion supporting construction and land development; some other segments have recently expanded modestly. Issuance of commercial mortgage-backed securities (CMBS) has also increased recently from the low levels observed last year. Nonetheless, the delinquency rate on loans in CMBS pools continued to set new highs in June, as some five-year loans issued in 2007 at the height of the market were unable to refinance at maturity because of their high loan-to-value ratios (figure 20). While delinquency rates for CRE loans at commercial banks improved slightly in the first quarter, they remained elevated, especially for construction and land development loans.

In the corporate equity market, gross public equity issuance by nonfinancial firms was strong in the first

20. Delinquency rates on commercial real estate loans, 1991–2012



Note: The data for commercial banks and life insurance companies are quarterly and extend through 2012:Q1. The data for commercial mortgage-backed securities (CMBS) are monthly and extend through June 2012. 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.

five months of 2012, boosted by a solid pace of initial public offerings (IPOs).[4] Data for the first quarter of 2012 indicate that share repurchases and cash-financed mergers by nonfinancial firms remained robust, and net equity issuance remained deeply negative (figure 21). However, fewer mergers and new share repurchase programs were announced in the second quarter.

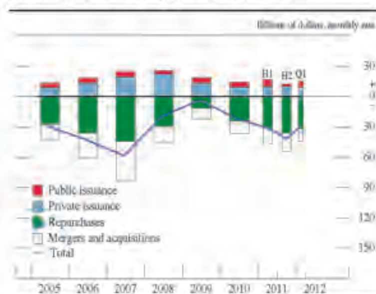
The Government Sector

Federal Government

The deficit in the federal unified budget remains elevated. The Congressional Budget Office projects that the deficit for fiscal year 2012 will be close to $1.2 trillion, or about 7½ percent of nominal GDP. Such a deficit would be a narrower share of GDP than those recorded over the past several years though still

4. Indeed, the second largest IPO on record began trading in mid-May. However, the price performance of those shares in the days following that offering was sharply negative on net, and IPO activity subsequently weakened significantly.

21. Components of net equity issuance, 2005–12



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.

22. Federal receipts and expenditures, 1992–2012

NOTE: Through 2011, receipts and expenditures are for fiscal years (October through September); gross domestic product (GDP) is for the four quarters ending in Q3. For 2012, receipts and expenditures are for the 12 months ending in June, and GDP is the average of 2011:Q4 and 2012:Q1. Receipts and expenditures are on a unified-budget basis.

SOURCE: Office of Management and Budget.

sharply higher than those recorded in the few years prior to the onset of the financial crisis and recession. The narrowing of the budget deficit expected to occur in the current fiscal year mostly reflects increases in tax revenues as the economy continues to recover, although the growth in outlays is being held back by the winding down of expansionary fiscal policies enacted in response to the recession, as well as some budgetary restraint in defense and other discretionary spending programs.

Federal receipts increased 5 percent in the first nine months of fiscal 2012 compared with the same period in fiscal 2011. Receipts were bolstered thus far this fiscal year by a robust rise in corporate tax revenues that is largely attributable to a scaling back in the favorable tax treatment of some business investment. In addition, individual income and payroll tax receipts have moved higher, reflecting increases in nominal wage and salary income. Nonetheless, at only about 15½ percent, the ratio of federal receipts to national income is near the lowest reading for this ratio over the past 60 years (figure 22).

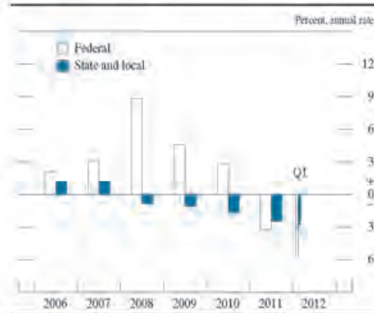
Total federal outlays moved sideways in the first nine months of fiscal 2012 relative to the comparable year-earlier period. Outlays were reduced by the winding down of stimulus-related programs (including the American Recovery and Reinvestment Act of 2009), lower payments for unemployment insurance, and falling defense expenditures. In addition, outlays for Medicaid so far this fiscal year were unusually weak, apparently reflecting in part the implementation of cost-containment measures by many state governments to reduce spending growth for that program. In contrast, Social Security outlays rose in part because of the first cost-of-living adjustments since 2009, and outlays for financial transactions were boosted by the revaluation of the expected cost of previous Troubled Asset Relief Program transactions and an increase in net outlays for deposit insurance.[5] Net interest payments increased moderately, reflecting the rising level of the federal debt.

As measured in the national income and product accounts (NIPA), real federal expenditures on consumption and gross investment—the part of federal spending included in the calculation of GDP—fell at an annual rate of close to 6 percent in the first quarter (figure 23). Defense spending, which tends to be erratic from quarter to quarter, contracted more than 8 percent, and nondefense purchases edged down.

Federal debt held by the public rose to about 72 percent of nominal GDP in the second quarter of 2012, 3½ percentage points higher than at the end of last year (figure 24). Treasury auctions generally continued to be well received by investors. Indicators of demand at Treasury auctions, such as bid-to-cover ratios and indirect bidding ratios, were within their historical ranges.

5. The subsidy costs of outstanding Troubled Asset Relief Program assistance are reestimated annually by updating cash flows for actual experience and new assumptions about the future performance of the programs; any changes in these estimated subsidy costs are recorded in the federal budget in the current fiscal year.

23. Change in real government expenditures on consumption and investment, 2006–12



SOURCE: Department of Commerce, Bureau of Economic Analysis.

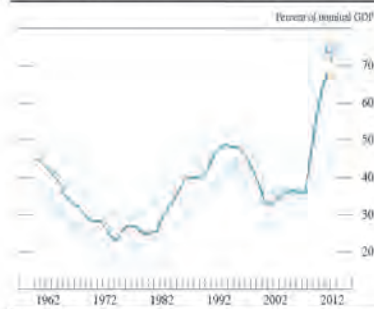
State and Local Government

State and local government budgets remain strained, but overall fiscal conditions for these governments may be slowly improving. In particular, state and local tax receipts appeared to increase moderately over the first half of this year. Census Bureau data indicate that state revenue collections rose 4 percent in the first quarter relative to a year earlier, and anecdotal evidence suggests that collections during April and May were well maintained. Moreover, only a few states reported budget shortfalls during fiscal 2012 (which ended on June 30 in most states). The improvement is less evident at the local level, where property tax receipts—the largest source of tax revenue for these governments—were roughly flat in 2011 and early 2012, reflecting the crosscutting effects of the earlier declines in home prices and increases in property tax rates. Moreover, federal aid to both state and local governments has declined as stimulus-related grants have been almost completely phased out.

One of the ways that state and local governments have addressed their tight budget situations has been through cuts in their employment and construction spending. After shedding jobs at an average pace of 19,000 per month in 2011, these governments reduced their employment over the first half of the year at a slower pace by trimming 3,000 jobs per month on average. However, real construction expenditures fell sharply in the first quarter after having edged down in the latter half of 2011, and available information on nominal construction spending through May points to continued declines in recent months. The decreases in employment and construction are evident in the Bureau of Economic Analysis (BEA) estimate for real state and local purchases, which fell at an annual rate of 2¾ percent in the first quarter, about the same pace as in 2011.

Gross issuance of bonds by states and municipalities picked up in the second quarter of 2012. Credit quality in the sector continued to deteriorate over the first half of the year. For instance, credit rating downgrades by Moody's Investors Service substantially outpaced upgrades, and credit default swap (CDS) indexes for municipal bonds rose on net. Yields on long-term general obligation municipal bonds were about unchanged over the first half of the year.

24. Federal government debt held by the public, 1960–2012



NOTE: The data for debt through 2011 are as of year-end, and the corresponding values for gross domestic product (GDP) are for Q4 at an annual rate. The observation for 2012:Q2 is based on an estimate for debt in that quarter and GDP in the first quarter. Excludes securities held as investments of federal government accounts.

SOURCE: Federal Reserve Board, flow of funds data.

The External Sector

Exports and Imports

Both real exports and imports grew moderately in the first quarter of 2012 (figure 25). Real exports of goods and services rose at an annual rate of 4¼ percent, supported by relatively strong foreign economic growth. Exports of services, automobiles, computers, and aircraft expanded rapidly, while those of consumer goods declined. The rise in exports was particularly strong to Canada and Mexico. Data for April and May suggest that exports continued to rise at a moderate pace in the second quarter.

Real imports of goods and services rose a relatively modest 2¾ percent in the first quarter, reflecting slower growth in U.S. economic activity. Imports of services, automobiles, and computers rose significantly, while

25. Change in real imports and exports of goods and services, 2007–12

SOURCE: Department of Commerce, Bureau of Economic Analysis.

26. Prices of oil and nonfuel commodities, 2007–12

NOTE: The data are monthly. The oil price is the spot price of Brent crude oil, and the last observation is the average for July 1–13, 2012. The price of nonfuel commodities is an index of 45 primary-commodity prices and extends through June 2012.

SOURCE: For oil, the Commodity Research Bureau; for nonfuel commodities, International Monetary Fund.

those of petroleum, aircraft, and consumer goods fell. The rise in imports was broadly based across major trading partners, with imports from Japan and Mexico showing particularly strong growth. April and May data suggest that import growth picked up in the second quarter.

Altogether, net exports made a small positive contribution of one-tenth of 1 percentage point to real GDP growth in the first quarter.

Commodity and Trade Prices

After increasing earlier in the year, oil prices have subsequently fallen back (figure 26). Over much of the first quarter, an improved outlook for the global economy and increased geopolitical tensions—most notably with Iran—helped spur a run-up in the spot price of oil, with the Brent benchmark averaging $125 per barrel in March, about $15 above its January average. Since mid-March, however, oil prices have more than retraced their earlier gains amid an intensification of the crisis in Europe and increased concerns over the strength of economic growth in China. An easing of geopolitical tensions and increased crude oil supply—production by Saudi Arabia has been running at near-record high levels—have also likely contributed to the decline in oil prices. All told, the price of Brent has plunged $25 a barrel from March to about $100 per barrel in mid-July.

Prices of many nonfuel commodities followed a path similar to that shown by oil prices, albeit with less volatility. Early in 2012, commodity prices rallied, as global economic prospects and financial conditions improved along with a temporary abatement of stresses in Europe. However, as with oil prices, broader commodity prices fell in the second quarter, reflecting growing pessimism regarding prospects for the global economy.

Prices for non-oil imported goods increased less than ¼ percent in the first quarter, with the modest pace of increase likely reflecting the lagged effects of both the appreciation of the dollar and the decline in commodity prices that occurred late last year. Moving into the second quarter, import price inflation appears to have remained subdued, consistent with a further appreciation of the dollar.

The Current and Financial Accounts

Largely reflecting the run-up in oil prices early in the year, the nominal trade deficit widened slightly in the first quarter (figure 27). In addition, as the net investment income balance continued to decline, the current account deficit deteriorated from an annual average of $470 billion in 2011 to $550 billion in the first quarter, or 3½ percent of GDP.[6]

The financial flows that provide the financing of the current account deficit reflected the general trends in financial market sentiment and in reserve accumulation

6. In 1999, the BEA—while revisiting its methodology for the balance of payments accounts—redefined the current account to exclude capital transfers. In the process, the capital account was renamed the financial account, and a newly defined capital account was created to include capital transfers as well as the acquisition and disposal of nonproduced nonfinancial assets.

27. U.S. trade and current account balances, 2004–12

NOTE: The data are quarterly and extend through 2012:Q1. GDP is gross domestic product.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

by emerging market economies (EMEs). Consistent with a temporary improvement in the tone of financial markets in the first quarter, foreign private investors slowed their net purchases of U.S. Treasury securities and resumed net purchases of U.S. equities, although they continued to sell other U.S. bonds (figure 28). However, the tentative increase in foreign risk appetite abated early in the second quarter and foreign private investors showed renewed demand for U.S. Treasury securities and less demand for other U.S. securities.

U.S. investors' demand for foreign securities was flat, on net, in the first quarter and the early part of the second quarter, but this outcome nonetheless represents an increase relative to net sales of foreign securities in the fourth quarter of 2011 (figure 29).

Inflows from foreign official institutions strengthened in the first quarter as emerging market governments bought dollars to counter upward pressure on their currencies, resulting in increased accumulation of dollar-denominated reserves, which were then invested in U.S. securities (figure 30). Partial data for the second quarter suggest that foreign official inflows remained strong despite renewed dollar appreciation against emerging market currencies. U.S. official assets registered a $51 billion inflow during the first quarter as drawings on the Federal Reserve's dollar swap lines with the European Central Bank (ECB) and the Bank of Japan (BOJ) were partially repaid.

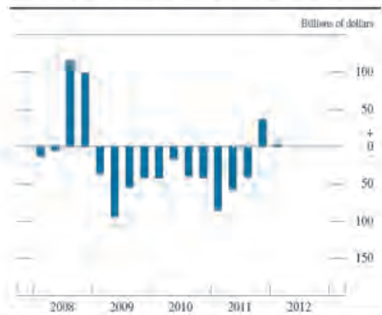
National Saving

Total U.S. net national saving—that is, the saving of U.S. households, businesses, and governments, net of depreciation charges—remains extremely low by historical standards (figure 31). Net national saving fell from 4 percent of nominal GDP in 2006 to negative 2 percent in 2009, as the federal budget deficit widened. The national saving rate subsequently increased to near zero, where it remained as of the first quarter of 2012 (the latest quarter for which data are available). The relative flatness of the saving rate over the past couple of years reflects the offsetting effects of a narrowing in the federal budget deficit as a share of nominal GDP

28. Net foreign purchases of U.S. securities, 2008–12

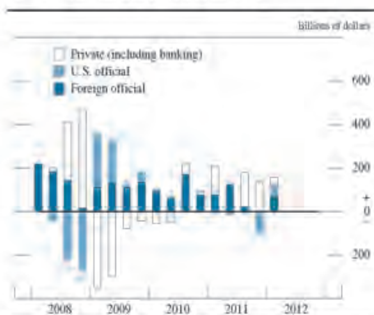
NOTE: Other U.S. securities include corporate equities and bonds, agency bonds, and municipal bonds.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

29. Net U.S. purchases of foreign securities, 2008–12



NOTE: Negative numbers indicate a balance of payments outflow, generated when U.S. residents, on net, purchase foreign securities. Positive numbers indicate a balance of payment inflow, generated when U.S. residents, on net, sell foreign securities.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

30. U.S. net financial inflows, 2008–12



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

and a downward movement in the private saving rate. National saving will likely remain low this year in light of the continuing large federal budget deficit. A portion of the decline in federal savings relative to pre-crisis levels is cyclical and would be expected to reverse as the economy recovers. However, if low levels of national saving persist over the longer run, they will likely be associated with both low rates of capital formation and heavy borrowing from abroad, limiting the rise in the standard of living for U.S. residents over time.

31. Net saving, 1992–2012

NOTE: The data are quarterly and extend through 2012:Q1. Nonfederal saving is the sum of personal and net business saving and the net saving of state and local governments. GDP is gross domestic product.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

The Labor Market

Employment and Unemployment

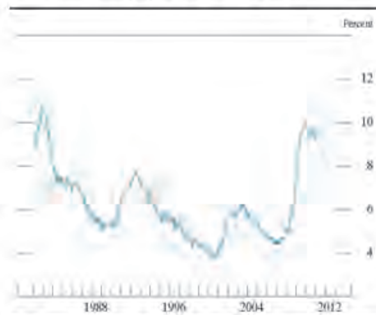
Labor market conditions remain weak. After averaging 165,000 jobs per month in the second half of 2011, private payroll employment gains increased to 225,000 jobs per month over the first three months of the year and then fell back to 90,000 jobs per month over the past three months (figure 32). The apparent slowing in the pace of net job creation may have been exaggerated by issues related to swings in the weather and to seasonal adjustment difficulties associated with the timing of the sharpest job losses during the recession. Moreover, employment gains during the second half of last year and into the early part of this year may have reflected some catch-up in hiring on the part of employers that aggressively pared their workforces during and just after the recession. The recent deceleration in employment may suggest that much of this catch-up has now taken place and that, consequently, more-rapid gains in economic activity will be required to achieve significant further increases in employment and declines in the unemployment rate.

The unemployment rate, though down from around 9 percent last summer, has held about flat at 8¼ percent since early this year and remains elevated relative to levels observed prior to the recent recession (figure 33). Moreover, long-term unemployment also remains elevated. In June, around 40 percent of those unemployed had been out of work for more than six months (figure 34). Meanwhile, the labor force participation rate has fluctuated around a low level so far this year after having moved down 2 percentage points since 2007.

32. Net change in private payroll employment, 2006–12

NOTE: The data are monthly and extend through June 2012.
SOURCE: Department of Labor, Bureau of Labor Statistics.

33. Civilian unemployment rate, 1982–2012



NOTE: The data are monthly and extend through June 2012.
SOURCE: Department of Labor, Bureau of Labor Statistics.

Other labor market indicators were consistent with little change in overall labor market conditions during the first half of the year. Initial claims for unemployment insurance were not much changed, on net, although their average level over the first half of the year was lower than in the second half of 2011. Measures of job vacancies edged up, on balance, and households' labor market expectations largely reversed the steep deterioration from last summer. However, indicators of hiring activity remained subdued.

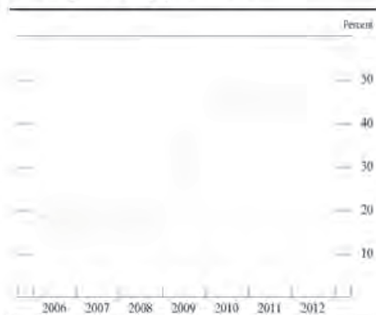
Productivity and Labor Compensation

Gains in labor productivity have continued to slow recently following an outsized increase in 2009 and a solid gain in 2010. According to the latest published data, output per hour in the nonfarm business sector rose just ½ percent in 2011 and declined in the first quarter of 2012 (figure 35). Although these data can be volatile from quarter to quarter, the moderation in productivity growth over the past two years suggests that firms have been adding workers not only to meet rising production needs but also to relieve pressures on their existing workforces, which were cut back sharply during the recession.

Increases in hourly compensation continue to be restrained by the very weak condition of the labor market. The 12-month change in the employment cost index for private industry workers, which measures both wages and the cost to employers of providing benefits, has been about 2 percent or less since the start of 2009 after several years of increases in the neighborhood of 3 percent (figure 36). Nominal compensation per hour in the nonfarm business sector—a measure derived from the labor compensation data in the NIPA—also decelerated significantly over the past few years; this measure rose just 1¼ percent over the year ending in the first quarter of 2012, well below the average increase of about 4 percent in the years before the recession. Similarly, average hourly earnings for all employees—the timeliest measure of wage developments—rose about 2 percent in nominal terms over the 12 months ending in June. According to each of these measures, gains in hourly compensation failed to keep up with increases in consumer prices in 2011 and again in the first quarter of this year.

The change in unit labor costs faced by firms—which measures the extent to which nominal hourly

34. Long-term unemployed, 2006–12



NOTE: The data are monthly and extend through June 2012. The series shown is the percentage of total unemployed persons who have been unemployed for 27 weeks or more.
SOURCE: Department of Labor, Bureau of Labor Statistics.

35. Change in output per hour, 1948–2012

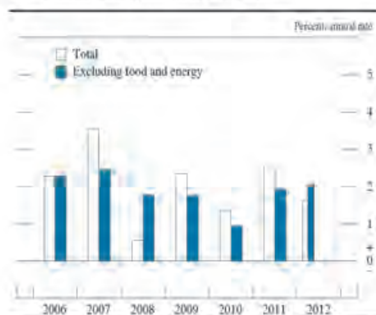
NOTE: Nonfarm business sector. Change for each multiyear period is measured to the fourth quarter of the final year of the period from the fourth quarter of the year immediately preceding the period.
SOURCE: Department of Labor, Bureau of Labor Statistics.

36. Measures of change in hourly compensation, 2002–12

NOTE: The data are quarterly and extend through 2012:Q1. For nonfarm business compensation, change is over four quarters; for the employment cost index (ECI), change is over the 12 months ending in the last month of each quarter. The nonfarm business sector excludes farms, government, nonprofit institutions, and households. The sector covered by the ECI used here is the nonfarm business sector plus nonprofit institutions.

SOURCE: Department of Labor, Bureau of Labor Statistics.

37. Change in the chain-type price index for personal consumption expenditures, 2006–12



NOTE: Through 2011, change is from December to December; for 2012, change is from December to May.

SOURCE: Department of Commerce, Bureau of Economic Analysis.

compensation rises in excess of labor productivity—remained subdued. Unit labor costs in the nonfarm business sector rose 1 percent over the year ending in the first quarter of 2012. Over the preceding year, unit labor costs increased 1½ percent.

Prices

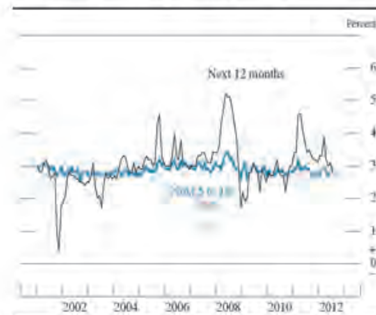
Consumer price inflation moved down, on net, during the first part of 2012. Overall PCE prices rose rapidly in the first three months of the year, reflecting large increases in oil prices, but inflation turned down in the spring as oil prices more than reversed their earlier run-ups. The overall chain-type PCE price index increased at an annual rate of about 1½ percent between December 2011 and May 2012, compared with a rise of 2½ percent over 2011 (figure 37). Excluding food and energy, consumer prices rose at a rate of about 2 percent over the first five months of the year, essentially the same pace as in 2011. In addition to the net decline in crude oil prices over the first half of the year, factors contributing to low consumer price inflation this year include the deceleration of non-oil import prices in the latter part of 2011, subdued labor costs associated with the weak labor market, and stable inflation expectations.

Consumer energy prices surged at an annual rate of over 20 percent in the first three months of 2012, as higher costs for crude oil were passed through to gasoline prices. In April, the national-average price for gasoline at the pump approached $4 per gallon. Since then, crude oil prices have tumbled, and gasoline prices have declined roughly in line with crude costs, more than reversing the earlier run-up. Consumer prices for natural gas plunged over the first five months of the year after falling late last year; this drop is attributable, at least in part, to the unseasonably warm winter, which reduced demand for natural gas. More recently, spot prices for natural gas have turned up as production has been cut back, but they still remain substantially lower than they were last summer.

Consumer food price inflation has slowed noticeably so far this year, as the effect on retail food prices from last year's jump in farm commodity prices appears to have largely dissipated. Indeed, PCE prices for food and beverages only edged up slightly, rising at an annual rate of about ½ percent from December to May after increasing more than 5 percent in 2011. Although farm commodity prices were tempered earlier this year by expectations of a substantial increase in crop output this growing season, grain prices rose rapidly in late June and early July as a wide swath of the Midwest experienced a bout of hot, dry weather that farm analysts believe cut yield prospects considerably.

Survey-based measures of near-term inflation expectations have changed little, on net, so far this year. Median year-ahead inflation expectations, as reported in the Thomson Reuters/University of Michigan Surveys of Consumers (Michigan survey), rose in March when gasoline prices were high but then fell back as those prices reversed course (figure 38). Longer-term expectations remained more stable. In the Michigan survey, median expected inflation over the next 5 to

38. Median inflation expectations, 2001–12



NOTE: The data are monthly and extend through a preliminary estimate for July 2012.
SOURCE: Thomson Reuters/University of Michigan Surveys of Consumers.

39. Inflation compensation, 2007–12

NOTE: The data are weekly averages of daily data and extend through July 13, 2012. Inflation compensation is the difference between yields on nominal Treasury securities and Treasury inflation-protected securities (TIPS) of comparable maturities, based on yield curves fitted by Federal Reserve staff to off-the-run nominal Treasury securities and on- and off-the-run TIPS. The 5-year measure is adjusted for the effect of indexation lags.
SOURCE: Federal Reserve Bank of New York; Barclays; Federal Reserve Board staff estimates.

10 years was 2.8 percent in early July, within the narrow range of the past 10 years. In the Survey of Professional Forecasters, conducted by the Federal Reserve Bank of Philadelphia, expectations for the increase in the price index for PCE over the next 10 years remained at 2¼ percent, in the middle of its recent range.

Measures of medium- and longer-term inflation compensation derived from nominal and inflation-protected Treasury securities—which not only reflect inflation expectations, but also can be affected by changes in investor risk aversion and by the different liquidity properties of the two types of securities—were little changed, on net, so far this year (figure 39). These measures increased early in the period amid rising prices for oil and other commodities, but they subsequently declined as commodity prices fell back and as worries about domestic and global economic growth increased.

Financial Developments

Financial markets were somewhat volatile over the first half of 2012. Early in the year, broad equity price indexes rose and risk spreads in several markets narrowed as investor sentiment regarding short-term European prospects and the economic outlook improved. Those gains partially reversed when market participants became more pessimistic about the European situation and global growth prospects in May and June. Yields on longer-term Treasury securities declined, on balance, over the first half of the year. Conditions in unsecured short-term dollar funding markets generally remained stable as European financial institutions reduced their demand for dollar funding and general funding pressures were alleviated by the longer-term refinancing operations of the ECB. In the domestic banking sector, the release of the results from the Comprehensive Capital Analysis and Review (CCAR) in March provided a significant boost to the equity prices of U.S. financial institutions (see the box "The Capital and Liquidity Position of Large U.S. Banks").

Monetary Policy Expectations and Treasury Rates

In response to the steps taken by the Federal Open Market Committee (FOMC) to provide additional monetary policy accommodation, and amid growing anxiety about the European crisis and a worsening of the economic outlook, investors pushed out further the date when they expect the federal funds rate to first rise above its current target range of 0 to ¼ percent. In addition, they apparently scaled back the pace at which they expect the federal funds rate subsequently to be increased. Market participants currently anticipate that the effective federal funds rate will be about 50 basis points by the middle of 2015, roughly 55 basis points lower than they expected at the beginning of 2012.

Yields on longer-term nominal Treasury securities declined, on balance, over the first half of 2012 (figure 40). Early in the year, longer-term Treasury yields rose, reflecting generally positive U.S. economic data, improved market sentiment regarding the crisis in Europe, and higher energy prices. More recently, however, longer-term yields have more than reversed their earlier increases. Investors sought the relative safety and liquidity of Treasury securities as the crisis in Europe intensified again and as weaker-than-expected economic data releases raised concerns about the pace of economic recovery both in the United States and abroad. In addition, those developments fostered expectations that the Federal Reserve would provide additional accommodation. And the Treasury yield curve flattened further following the FOMC's decision at its June meeting to continue the maturity extension program (MEP) through the end of 2012. On balance, yields on 5-, 10-, and 30-year nominal Treasury securities declined roughly 20, 40, and 35 basis points, respectively, from their levels at the start of this year. The Open Market Desk's outright purchases and sales of Treasury securities under the MEP did not appear to have any material adverse effect on Treasury market functioning.

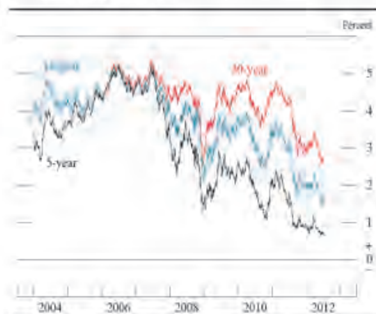
Short-Term Funding Markets

Despite the reemergence of strains in Europe, conditions in unsecured short-term dollar funding markets have remained fairly stable in the first half of 2012. Measures of stress in short-term funding markets have eased somewhat, on balance, since the beginning of the year. A few factors seem to have contributed to the relative stability of those markets. European institutions apparently reduced their demand for funds in recent quarters by selling dollar-denominated assets and exiting from business lines requiring heavy dollar funding. In addition, European banks reportedly switched to secured funding supported by various types of collateral. Further, the availability of funds from the ECB through its longer-term refinancing operations likely helped reduce funding strains and the need to access interbank markets more generally. Reflecting these developments, the amount of dollar swaps outstanding between the Federal Reserve and the ECB has declined substantially from its peak earlier this year.

Conditions in the CP market were also fairly stable. On net, 30-day spreads of rates on unsecured A2/P2 CP over comparable-maturity AA-rated nonfinancial CP declined a bit. The volume outstanding of unsecured financial CP issued in the United States by institutions with European parents decreased slightly in the first half of the year. The average maturity of unsecured financial CP issued by institutions with both U.S. and European parents is about 50 days, a level that is near the middle of its historical range (figure 41).

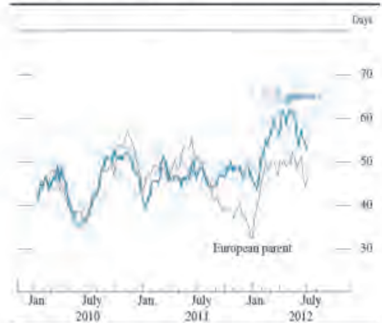
Signs of stress were also largely absent in secured short-term dollar funding markets. In the market for repurchase agreements, bid-asked spreads for most collateral types were little changed. However, short-term interest rates continued to edge up from the level observed around the turn of the year, likely reflecting in part the financing of the increase in dealers' inventories of shorter-term Treasury securities that resulted

40. Interest rates on Treasury securities at selected maturities, 2004–12



NOTE: The data are daily and extend through July 13, 2012.
SOURCE: Department of the Treasury.

41. Average maturity for unsecured financial commercial paper outstanding in the United States, 2010–12



NOTE: The data are weekly and extend through July 11, 2012.
SOURCE: Federal Reserve Board staff calculations based on data from the Depository Trust and Clearing Corporation.

The Capital and Liquidity Position of Large U.S. Banks

In mid-March, the Federal Reserve announced the results of the Comprehensive Capital Analysis and Review (CCAR) 2012. This program evaluated the capital planning processes and capital adequacy of 19 of the largest banks, a subset of those that will be required to undergo annual stress-testing exercises by the Board of Governors under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act).[1] These 19 bank holding companies (BHCs) also participated in the 2009 Supervisory Capital Assessment Program and the CCAR in 2011. The supervisory stress tests under CCAR 2012 evaluated whether the banks' proposed capital distribution plans would allow them to maintain sufficient capital to support lending to households and businesses even in the event of an extended period of highly adverse economic and financial conditions. The stress scenario incorporated a peak unemployment rate of 13 percent, a drop in equity prices of more than 50 percent, and a decline in house prices of 21 percent. The results indicated that 15 of the 19 BHCs would continue to meet supervisory expectations for several measures of capital adequacy through the end of 2013 despite large projected losses under this extremely adverse hypothetical scenario, given the firms' proposed capital distribution plans.[2]

These results reflect the significant steps these BHCs have taken to improve their capital positions over the past three years. In particular, the aggregate Tier 1 common ratio for these 19 firms has doubled from about 5½ percent in the first quarter of 2009 to close to 11 percent in the first quarter of 2012 (figure A). Much of the improvement over the intervening period can be attributed to increased retained earnings and issuance of common stock during a period of limited growth in risk-weighted assets.

The 19 BHCs subject to the CCAR have also reduced their vulnerabilities to disruptions in funding markets. For instance, they have significantly reduced their reliance on short-term wholesale liabilities relative to total assets since the height of

1. Board of Governors of the Federal Reserve System (2012), *Comprehensive Capital Analysis and Review 2012: Methodology and Results for Stress Scenario Projections* (Washington: Board of Governors, March 13), www.federalreserve.gov/newsevents/press/bcreg/bcreg20120313a1.pdf. The Dodd-Frank Act requires the Board, in coordination with the appropriate primary financial regulatory agencies and the Federal Insurance Office, to conduct annual analyses of nonbank financial companies supervised by the Board and bank holding companies with total consolidated assets equal to or greater than $50 billion to determine whether such companies have the capital necessary to absorb losses that might result from a period of adverse economic conditions. All other financial companies that have total consolidated assets of more than $10 billion and are regulated by a primary federal financial regulatory agency are required to conduct annual internal stress tests. Smaller community banks are not required to undertake stress tests, but any bank's primary regulator may subject the bank to a stress test if conditions warrant. See Board of Governors of the Federal Reserve System, Division of Banking Supervision and Regulation (2012), "Supervisory Guidance on Stress Testing for Banking Organizations with More Than $10 Billion in Total Consolidated Assets," Supervision and Regulation Letter SR 12-7 (May 14), www.federalreserve.gov/bankinforeg/srletters/sr1207.htm.

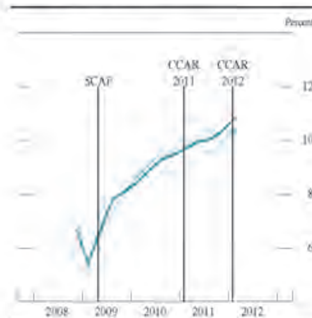
2. The development of sound models is crucial to the credibility of any type of stress-testing exercise. As a result, the Federal Reserve has developed formal procedures by which teams of staff members from around the Federal Reserve System validate the supervisory models used by the Federal Reserve during the CCAR process. Furthermore, in April 2012, the Board announced the formation of the Model Validation Council, composed of outside experts, which will provide the Federal Reserve with independent advice on the processes used for model assessment. See Board of Governors of the Federal Reserve System (2012), "Federal Reserve Board Announces the Formation of the Model Validation Council," press release, April 20, www.federalreserve.gov/newsevents/press/bcreg/20120420a.htm.

from the ongoing MEP and higher-than-expected bill issuance by the Treasury Department earlier in the year. In asset-backed commercial paper (ABCP) markets, volumes outstanding declined for programs with European sponsors, and spreads on ABCP with European bank sponsors remained a bit above those on ABCP with U.S. bank sponsors.

Respondents to the Senior Credit Officer Opinion Survey on Dealer Financing Terms (SCOOS) in both March and June indicated that credit terms applicable to important classes of counterparties have been relatively stable since the beginning of the year.[7] In addition, dealers reported that the use of financial leverage among hedge funds had decreased somewhat since the beginning of 2012. Moreover, respondents to the June SCOOS noted an increase in the amount of resources and attention devoted to the management of concentrated exposures to dealers and other financial interme-

7. The SCOOS is available on the Federal Reserve Board's website at www.federalreserve.gov/econresdata/releases/scoos.htm.

A. Aggregate Tier 1 common ratio of the CCAR institutions, 2008–12



NOTE: The data are quarterly and extend through 2012:Q1. For the definition of Tier 1 common capital and the list of the 19 Comprehensive Capital Analysis and Review (CCAR) institutions, see Board of Governors of the Federal Reserve System (2012), "Comprehensive Capital Analysis and Review 2012: Methodology for Stress Scenario Projections," paper, March 12, www.federalreserve.gov/newsevents/press/bcreg/bcreg20120312a1.pdf. SCAP is the Supervisory Capital Assessment Program.

SOURCE: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Bank Holding Companies.

B. Reliance on wholesale funding by CCAR institutions, 2008–12

NOTE: The data are quarterly and extend through 2012:Q1. Reliance on wholesale funding is measured as short-term wholesale liabilities to total assets. CCAR is Comprehensive Capital Analysis and Review. Short-term wholesale liabilities is defined as the sum of large time deposits with maturity less than one year, federal funds purchased and securities sold under agreements to repurchase, deposits in foreign offices, trading liabilities (excluding revaluation losses on derivatives), and other borrowed money with maturity less than one year.

SOURCE: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Bank Holding Companies.

the financial crisis (figure B). In addition, these BHCs have experienced significant inflows of relatively stable core deposits, owing in part to the availability of unlimited deposit insurance on noninterest-bearing transaction accounts from the Federal Deposit Insurance Corporation until the end of 2012, as well as the generally high demand for safe and liquid assets in the current environment.

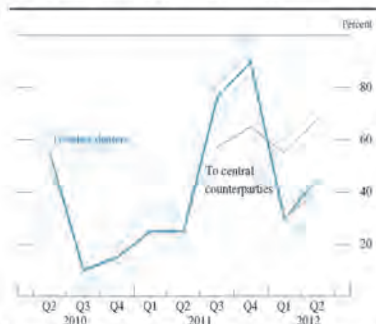
Overall, major U.S. financial institutions are much better positioned to weather an economic downturn while meeting the credit needs of potential borrowers than they were a few years ago, having substantially increased their capital buffers and improved their liquidity positions over the past several years. That said, a significant disruption in global financial markets, such as might occur if the European situation were to worsen markedly, would still pose considerable challenges to the U.S. banking and financial systems.

diaries as well as central counterparties and other financial utilities (figure 42). In response to a special question in the June SCOOS, dealers reported that despite the persistently low level of interest rates, only moderate fractions of their unlevered institutional clients had shown an increased appetite for credit risk or duration risk over the past year.

Financial Institutions

Market sentiment toward the banking industry fluctuated in the first half of 2012. Early in the year, after the actions of the European authorities to ease the euro-area crisis and the release of the results from the CCAR, equity prices for bank holding companies (BHCs) increased and their CDS spreads declined. In late spring—as investors reacted to concerns about Europe—equity prices reversed some of those gains, and CDS spreads rose for large BHCs, especially those with substantial investment-banking operations. More recently, Moody's downgraded the long- and short-term credit ratings of five of the six largest U.S. banks, but none of the banks lost their investment-grade status on long-term debt. The short-term debt ratings of

42. Net percentage of dealers reporting increased attention to management of exposures, 2010–12



NOTE: The data are drawn from a survey conducted four times per year; the last observation is from the June 2012 survey, which covers 2012:Q2. Net percentage equals the percentage of institutions that reported increasing attention ("increased considerably" or "increased somewhat") minus the percentage of institutions that reported decreasing attention ("decreased considerably" or "decreased somewhat").

SOURCE: Federal Reserve Board, Senior Credit Officer Opinion Survey on Dealer Financing Terms.

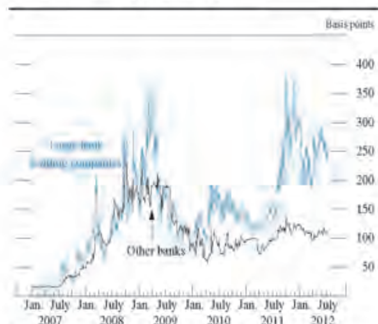
some banks were downgraded to Prime-2, which may affect the ability of some to place significant amounts of CP with money market funds, but the market effect appears to have been muted so far, as those banks currently have limited demand for such funding. On balance, equity prices of banks rose significantly from relatively low levels at the start of the year (figure 43); an index of CDS spreads for large BHCs declined about 60 basis points but remained at a high level (figure 44).

43. Equity price index for banks, 2009–12

NOTE: The data are daily and extend through July 13, 2012.

SOURCE: Standard & Poor's.

44. Spreads on credit default swaps for selected U.S. banking organizations, 2007–12



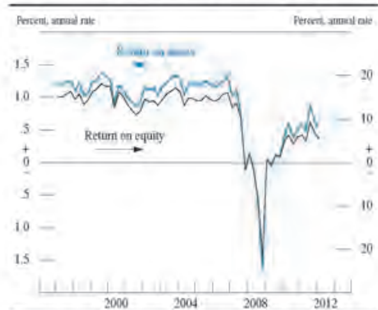
NOTE: The data are daily and extend through July 13, 2012. Median spreads for six large bank holding companies and nine other banks.

SOURCE: Markit.

The profitability of BHCs decreased slightly in the first quarter of 2012 and remained well below the levels that prevailed before the financial crisis (figure 45). Litigation provisions taken by some large banks in connection with the mortgage settlement reached earlier this year accounted for some of the downward pressure on bank profitability. The variability in earnings due to accounting gains and losses related to changes in the market value of banks' own debt amplified recent swings of bank profits.[8] Smoothing through

8. Under fair value accounting rules, changes in the creditworthiness of a BHC generate changes in the value of some of its liabilities. Those changes are then reflected as gains or losses on the income statement.

45. Profitability of bank holding companies, 1997–2012



NOTE: The data are quarterly and extend through 2012:Q1.

SOURCE: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Bank Holding Companies.

these special factors, profitability has been about flat in recent quarters. Net income continued to be supported by the release of loan loss reserves, albeit to a lesser extent than in the previous year, as charge-off rates decreased a bit further across most major asset classes. Still-subdued dividend payouts and share repurchases as well as reductions in risk-weighted assets pushed regulatory capital ratios higher in the first quarter of 2012 (see the box "Implementing the New Financial Regulatory Regime").

Credit provided by commercial banking organizations in the United States increased in the first half of 2012 at about the same moderate pace as in the second half of 2011. Core loans—the sum of C&I loans, real estate loans, and consumer loans—expanded modestly; as noted earlier, the upturn in lending was particularly noticeable for C&I loans (figure 46). The expansion in C&I lending has been broad based outside of U.S. branches and agencies of European banks and has been particularly evident at large domestic banks. This pattern is consistent with SLOOS results suggesting that a portion of the increase in C&I lending observed at large domestic banks reflected decreased competition from European banks and their affiliates and subsidiaries for either foreign or domestic customers. Banks' holdings of securities rose moderately, with purchases concentrated in Treasury securities and agency-guaranteed MBS. Given the still-depressed housing market, banks continued to be attracted by the government guarantee on agency securities, and some large banks may also have been accumulating government-backed securities to improve their liquidity positions.

46. Change in commercial and industrial loans and core loans, 1990–2012

NOTE: The data, which are seasonally adjusted, are quarterly and extend through 2012:Q2. Core loans consist of commercial and industrial loans, real estate loans, and consumer loans. Data have been adjusted for banks' implementation of certain accounting rule changes (including the Financial Accounting Standards Board's Statements of Financial Accounting Standards Nos. 166 and 167) and for the effects of large nonbank institutions converting to commercial banks or merging with a commercial bank.

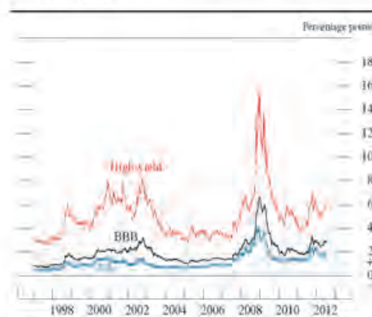
SOURCE: Federal Reserve Board, Statistical Release H.8, "Assets and Liabilities of Commercial Banks in the United States."

Corporate Debt and Equity Markets

Yields on investment-grade bonds reached record lows in June, partly reflecting the search by investors for relatively safe assets in light of rising concerns about Europe as well as the weakness in the domestic and global economic data releases. However, yields on speculative-grade corporate debt, which had reached record-low levels in February, rose somewhat in the second quarter reflecting those same concerns. The spread on investment-grade corporate bonds was about unchanged, on net, relative to the start of the year. Despite the backup in yields over the second quarter, spreads on speculative-grade corporate bonds decreased some, on balance, over the same period (figure 47). Prices in the secondary market for syndicated leveraged loans have changed little, on balance, since the beginning of the year; demand from institutional investors for these mostly floating-rate loans has remained strong despite the reemergence of anxiety about developments in Europe (figure 48).

Broad equity price indexes were boosted early in the year by improved sentiment stemming in part from relatively strong job gains as well as actions taken by major central banks to mitigate the financial strains

47. Spreads of corporate bond yields over comparable off-the-run Treasury yields, by securities rating, 1997–2012



NOTE: The data are daily and extend through July 13, 2012. 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.

Implementing the New Financial Regulatory Regime

The Board of Governors is involved in approximately 250 initiatives—including rulemakings, associated guidance, studies of various financial issues, and design of internal processes—related to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act). The Board is the lead agency responsible for implementing a significant number of rulemakings required under the act and is also, on many of these initiatives, working in conjunction with other federal agencies. For example, as a member of the Financial Stability Oversight Council (FSOC), the Board has contributed to FSOC studies mandated by the act and has assisted the FSOC with proposed and final rulemakings.

A number of the rulemakings are directed at enhancing bank supervision and prudential standards. In one recent action, the Board and the other federal bank regulatory agencies issued a final rule on June 7, 2012, that implements changes to the market risk capital rule. These changes bring it into conformance with international standards and replace agency credit ratings with alternative standards of creditworthiness in accordance with the requirements of section 939A of the Dodd-Frank Act.[1] In addition, "living wills" were prepared by bank holding companies with assets of $50 billion or more based on a final rule issued in October 2011.[2] On June 29, 2012, the Board and the Federal Deposit Insurance Corporation announced the process they will use to review, during the second half of 2012, the first set of these plans from some of the largest internationally active banking organizations.[3]

Also, several key notices of proposed rulemakings (NPRs) implementing the Dodd-Frank Act have been issued thus far in 2012. In particular, on June 7, 2012, the Board issued for comment three proposed rules that, taken together, integrate the capital provisions of section 171 of the act with those of Basel III capital standards in order to enhance financial stability while minimizing the burden on affected institutions.[4]

1. Board of Governors of the Federal Reserve System (2012), "Federal Reserve Board Approves Final Rule to Implement Changes to Market Risk Capital Rule," press release, June 7, www.federalreserve.gov/newsevents/press/bcreg/20120607b.htm.

2. Board of Governors of the Federal Reserve System (2011), "Federal Reserve Board Approves Final Rule Implementing the Resolution Plan Requirement of the Dodd-Frank Act," press release, October 17, www.federalreserve.gov/newsevents/press/bcreg/20111017a.htm.

3. Board of Governors of the Federal Reserve System and Federal Deposit Insurance Corporation (2012), "Federal Reserve Board and Federal Deposit Insurance Corporation Announce Process for Receiving and Evaluating Initial Resolution Plans, Also Known as Living Wills," joint press release, June 29, www.federalreserve.gov/newsevents/press/bcreg/20120629b.htm.

4. With the encouragement and support of the U.S. bank regulatory agencies, the Basel Committee on Banking Supervision has strengthened global capital requirements: raising risk weightings for traded assets, improving the quality of loss-absorbing capital through a new minimum common equity ratio standard, creating a capital conservation buffer, and introducing an international leverage ratio requirement. See Basel Committee on Banking Supervision (2010), *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems* (Basel, Switzerland: Bank for International

emanating from Europe. However, equity price indexes subsequently reversed a portion of their earlier gains as concerns about the European banking and fiscal crisis intensified again and economic reports suggested slower growth, on balance, at home and abroad (figure 49). The spread between the 12-month forward earnings–price ratio for the S&P 500 and a real long-run Treasury yield—a rough gauge of the equity risk premium—widened a bit more in the first half of 2012, and is now closer to the very high levels it reached in 2008 and again last fall (figure 50). Implied volatility for the S&P 500 index, as calculated from option prices, spiked at times this year but is currently toward the bottom end of the range that this indicator has occupied since the onset of the financial crisis (figure 51).

In the current environment of very low interest rates, mutual funds that invest in higher-yielding debt instruments (including speculative-grade corporate bonds and leveraged loans) continued to have significant inflows for most of the first half of 2012, while money market funds experienced outflows (figure 52). Equity mutual funds also recorded modest outflows early in the year and, as market sentiment deteriorated, both equity and high-yield mutual funds registered outflows in May.

The first NPR would increase the quantity and quality of capital by, in part, requiring a new minimum common equity Tier 1 ratio of 4.5 percent, instituting a common equity Tier 1 capital conservation buffer of 2.5 percent, and raising the minimum for the broader Tier 1 capital ratio from 4 percent to 6 percent.[5] The NPR does not address specific Basel III liquidity standards, which have not been finalized by the Basel Committee on Banking Supervision.[6]

The second NPR revises certain aspects of the risk-based capital requirements in order to enhance risk sensitivity and address weaknesses in the calculation of risk-weighted assets that have been identified over the past several years. The third NPR requires internationally active banks to improve the risk sensitivity of parts of their current advanced approaches to risk-based capital processes to better address counterparty credit risk and interconnectedness among financial institutions.

Several other actions taken with regard to the Dodd-Frank Act provided additional clarity to proposed rulemakings. For example, on April 2, 2012, the Board published an amendment to a proposed rulemaking clarifying the activities that are deemed to be financial for purposes of title I of the Dodd-Frank Act. This rulemaking is designed to provide clarity regarding firms that may be designated for enhanced supervision by the FSOC.[7] In addition, the Board, along with other regulatory agencies, is reviewing about 19,000 comment letters on the proposal to implement section 619 of the act, commonly known as the Volcker rule. The rule generally prohibits banking entities from engaging in proprietary trading or acquiring an ownership interest in, sponsoring, or having certain other relationships with a hedge fund or private equity fund. On April 19, the Board issued a clarification regarding the Volcker rule conformance period, stating that a banking entity has the full two-year period provided by statute (that is, until July 21, 2014), unless extended by the Board, to fully conform its activities and investments to the requirements of the Volcker rule.[8]

Settlements, December; rev. June 2011), www.bis.org/publ/bcbs189.htm.

5. The Tier 1 capital ratio is the ratio of Tier 1 capital to risk-weighted assets. Tier 1 capital consists primarily of common equity (excluding intangible assets such as goodwill and excluding net unrealized gains on investment account securities classified as available for sale) and certain perpetual preferred stock.

6. Basel Committee on Banking Supervision (2010), *Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring* (Basel, Switzerland: Bank for International Settlements, December), www.bis.org/publ/bcbs188.htm.

7. Under title I of the Dodd-Frank Act, a company generally can be designated for Board supervision by the FSOC only if 85 percent or more of the company's revenues or assets are related to activities that are financial in nature under the Bank Holding Company Act.

8. Board of Governors of the Federal Reserve System, Commodity Futures Trading Commission, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, and Securities and Exchange Commission (2012), "Volcker Rule Conformance Period Clarified," joint press release, April 19, www.federalreserve.gov/newsevents/press/bcreg/20120419a.htm.

Monetary Aggregates and the Federal Reserve's Balance Sheet

The growth rate of M2 slowed in the first half of 2012 to an annual rate of about 7 percent (figure 53).[9] However, the levels of M2 and its largest component, liquid deposits, remain elevated relative to what would have been expected based on historical relationships with nominal income and interest rates, likely reflecting investors' continued preference to hold safe and liquid assets. Currency in circulation increased robustly, reflecting solid demand both at home and abroad. Retail money market funds and small time deposits continued to contract. At the same time as currency in circulation was increasing, reserve balances held at the Federal Reserve were decreasing; as a result, the monetary base—which is equal to the sum of these two

9. M2 consists of (1) currency outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions; (2) traveler's checks of nonbank issuers; (3) demand deposits at commercial banks (excluding those amounts held by depository institutions, the U.S. government, and foreign banks and official institutions) less cash items in the process of collection and Federal Reserve float; (4) other checkable deposits (negotiable order of withdrawal, or NOW, accounts and automatic transfer service accounts at depository institutions; credit union share draft accounts; and demand deposits at thrift institutions); (5) savings deposits (including money market deposit accounts); (6) small-denomination time deposits (time deposits issued in amounts of less than $100,000) less individual retirement account (IRA) and Keogh balances at depository institutions; and (7) balances in retail money market mutual funds less IRA and Keogh balances at money market mutual funds.

48. Secondary-market bid prices for syndicated loans, 2007–12

NOTE: The data are daily and extend through July 13, 2012.
SOURCE: LSTA/Thomson Reuters Mark-to-Market Pricing.

items—changed little, on average, over the first half of the year.

Total assets of the Federal Reserve decreased to $2,868 billion as of July 11, 2012, about $60 billion less than at the end of 2011 (table 1). The small decrease since December largely reflects lower usage of foreign central bank liquidity swaps and declines in the net portfolio holdings of the Maiden Lane LLCs. The composition of Treasury security holdings changed over the course of the first half of this year as a result of the implementation of the MEP. As of July 13, 2012, the Open Market Desk at the Federal Reserve Bank of New York (FRBNY) had purchased $283 billion in Treasury securities with remaining maturities of 6 to 30 years and sold or redeemed $293 billion in Treasury securities with maturities of 3 years or less under the MEP.[10] Total Federal Reserve holdings of agency MBS increased about $18 billion as the policy of reinvesting principal payments from agency debt and agency MBS into agency MBS continued.

In the first half of 2012, the Federal Reserve continued to reduce its exposure to facilities established dur-

49. Stock price index, 1995–2012

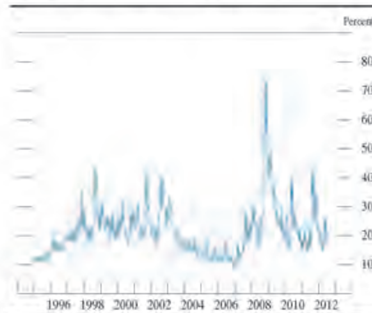
NOTE: The data are daily and extend through July 13, 2012.
SOURCE: Dow Jones Indexes.

50. Real long-run Treasury yield and 12-month forward earnings-price ratio for the S&P 500, 1995–2012

NOTE: The data are monthly and extend through June 2012. The expected real yield on 10-year Treasury is defined as the off-the-run 10-year Treasury yield less the Philadelphia Fed 10-year expected inflation.
SOURCE: Standard & Poor's; Federal Reserve Board.

10. Between the MEP's announcement in September 2011 and the end of that year, the Desk had purchased $133 billion in longer-term Treasury securities and had sold $134 billion in shorter-term Treasury securities.

51. mplied S&P 500 volatility, 1995–2012



NOTE: The data are weekly and extend through the week ending July 13, 2012. 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.

1. Selected components of the Federal Reserve balance sheet, 2010–12

Millions of dollars

Balance sheet item	Dec. 28, 2011	Feb. 22, 2012	July 11, 2012
Total assets	**2,928,485**	**2,935,149**	**2,868,387**
Selected assets			
Credit extended to depository institutions and dealers			
Primary credit	[illegible]	[illegible]	8
Central bank liquidity swaps	[illegible]	[illegible]	[illegible]
Credit extended to other market participants			
Term Asset-Backed Securities Loan Facility (TALF)	[illegible]	[illegible]	[illegible]
Net portfolio holdings of TALF LLC	811	[illegible]	[illegible]
Support of critical institutions			
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC[1]	[illegible]	80,822	[illegible]
Credit extended to American International Group, Inc.	...	...	...
Preferred interests in AIA Aurora LLC and ALICO Holdings LLC	...	...	...
Securities held outright			
U.S. Treasury securities	1,672,092	1,656,581	1,663,949
Agency debt securities	103,994	100,817	91,484
Agency mortgage-backed securities (MBS)[2]	837,295	853,045	855,044
Total liabilities	**2,874,686**	**2,880,556**	**2,813,713**
Selected liabilities			
Federal Reserve notes in circulation	1,034,520	1,048,004	1,073,732
Reverse repurchase agreements	88,674	89,824	89,689
Deposits held by depository institutions	1,569,267	1,622,800	1,527,556
Of which: Term deposits	0	0	0
U.S. Treasury, general account	91,418	36,033	75,287
U.S. Treasury, Supplementary Financing Account	0	0	0
Total capital	**53,799**	**54,594**	**54,674**

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 multisector collateralized debt obligations on which the Financial Products group of AIG has written credit default swap contracts.

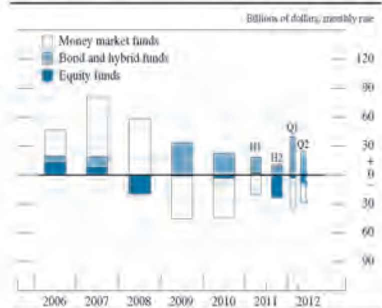
2. Includes only MBS purchases that have already settled.

... Not applicable.

SOURCE: Federal Reserve Board, Statistical Release H.4.1, "Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks."

ing the financial crisis to support specific institutions. The portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC—entities that were created during the crisis to acquire certain assets from The Bear Stearns Companies, Inc., and American International Group, Inc. (AIG), to avoid the disorderly failures of those institutions—declined, on net, primarily as a result of asset sales and principal payments. Of note, proceeds from the sales of all of the remaining assets in the Maiden Lane II LLC portfolio

52. Net flows into mutual funds, 2006–12



NOTE: The reading for 2012:Q2 is the average for April and May. The data exclude reinvested dividends and are not seasonally adjusted.
SOURCE: Investment Company Institute.

53. M2 growth rate, 2005–12

NOTE: For definition of M2, see text note 9.
SOURCE: Federal Reserve Board, Statistical Release H.6, "Money Stock Measures."

in January and February enabled the repayment of the entire remaining outstanding balance of the senior loan from the FRBNY to Maiden Lane II LLC in March, with interest and a $2.8 billion net gain. In addition, proceeds from the sales of assets from Maiden Lane LLC and Maiden Lane III LLC in April and May enabled the repayment, with interest, of the entire remaining outstanding balances of the senior loans from the FRBNY to Maiden Lane LLC and Maiden Lane III LLC in June. Proceeds from further asset sales from Maiden Lane III in June enabled repayment of the equity position of AIG in July. A net gain on the sale of the remaining assets in Maiden Lane III LLC is likely during the next few months. Sales of most of the remaining assets in Maiden Lane LLC should be completed by the end of the year, but a few legacy assets may take longer to dispose of. Loans outstanding under the Term Asset-Backed Securities Loan Facility (TALF) were slightly lower, reflecting, in part, the first maturity of a TALF loan with a three-year initial term.

On the liability side of the Federal Reserve's balance sheet, deposits held by depository institutions declined about $42 billion in the first half of 2012, while Federal Reserve notes in circulation increased roughly $39 billion. As part of its ongoing program to ensure the readiness of tools to drain reserves when doing so becomes appropriate, the Federal Reserve conducted a series of small-scale reverse repurchase transactions involving all eligible collateral types with its expanded list of counterparties. In the same vein, the Federal Reserve also continued to offer small-value term deposits through the Term Deposit Facility.

On March 20, the Federal Reserve System released its 2011 combined annual comparative audited financial statements. The Federal Reserve reported net income of about $77 billion for the year ending December 31, 2011, derived primarily from interest income on securities acquired through open market operations (Treasury securities, federal agency and GSE MBS, and GSE debt securities). The Reserve Banks transferred about $75 billion of the $77 billion in comprehensive income to the U.S. Treasury in 2011; though down slightly from 2011, the transfer to the U.S. Treasury remained historically very large.

International Developments

The European fiscal and banking crisis continued to affect international financial markets and foreign economic activity during the first half of 2012. Early in the year, aggressive action by the ECB and some progress in addressing the crisis by the region's leaders contributed to a temporary easing of financial stresses. (See the box "An Update on the European Fiscal and Banking Crisis.") However, amid ongoing political uncertainty in Greece and increased concerns about the health of Spanish banks, financial conditions deteriorated again in the spring. Foreign economic growth picked up in the first quarter, but this acceleration largely reflected temporary factors, and recent data point to widespread slowing in the second quarter.

International Financial Markets

Foreign financial markets have been volatile. Initially in the first quarter, encouraging macroeconomic data and some easing of tensions within the euro area led to an improvement in global financial conditions. This improvement was reversed in the spring as the boost from previous policy measures, including the ECB's longer-term refinancing operations, faded and political and banking stresses in vulnerable European countries resurfaced. Euro-area leaders responded to the worsening of the crisis by announcing additional measures at a summit on June 28–29. The market reaction was positive but short-lived.

Increased uncertainty and greater volatility have pushed up the foreign exchange value of the dollar about 4¼ percent on a trade-weighted basis against a broad set of currencies since its low in early February, with most of the appreciation occurring in May (figure 54). Typical of periods of flight to safety, the dollar has appreciated against most currencies but depreciated against the Japanese yen for most of the period (figure 55). The Swiss franc has moved very closely with the euro as the Swiss National Bank has intervened to maintain a ceiling for the franc relative to the euro.

During the second quarter of this year, flight-to-safety flows and the deteriorating global economic outlook helped push government bond yields for Canada, Germany, and the United Kingdom to record lows (figure 56). Likewise, Japanese yields on 10-year bonds fell well below 1 percent. By contrast, Spanish sovereign spreads over German bunds rose more than 250 basis points between February and June due to escalating concerns over Spain's public finances (figure 57). Italian sovereign spreads moved up as well over this period.

Equity prices abroad declined significantly in the second quarter, more so than in the United States. Indexes tumbled in the nations at the center of the euro-area fiscal and banking crisis, and the fall in value

54. U.S. dollar nominal exchange rate, broad index, 2007–12

NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for the series is July 13, 2012. The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of the most important U.S. trading partners. The index weights, which change over time, are derived from U.S. export shares and from U.S. and foreign import shares.
SOURCE: Federal Reserve Board, Statistical Release H.10, "Foreign Exchange Rates."

from their March peaks was more than 10 percent across the advanced foreign economies (AFEs) (figure 58). This fall was attenuated toward the end of the second quarter by the positive market reaction to the June summit. Equity markets in the EMEs were also markedly down in the second quarter (figure 59).

European banks faced renewed stresses in recent months. In Greece, after inconclusive elections in early May, deposit outflows from banks accelerated, generating concerns that deposit flight could spread to banking systems in the rest of the euro area. News that Spain had partly nationalized the troubled lender Bankia and would need to inject an additional €19 billion into the bank and its holding company added to unease about the region, eventually leading to plans for an official aid package of up to €100 billion to recapitalize Spanish banks. Apprehension about bank health was widespread, with major institutions in Italy, Germany, and several other European countries receiving credit ratings downgrades. As a result, European bank stock prices have tumbled since mid-March (figure 60). At the same time, reflecting market views of increased

55. U.S. dollar exchange rate against selected major currencies, 2010–12

NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for each series is July 13, 2012.
SOURCE: Federal Reserve Board, Statistical Release H.10, "Foreign Exchange Rates."

56. Yields on benchmark government bonds in selected advanced foreign economies, 2009–12

NOTE: The data, which are for 10-year bonds, are daily. The last observation for each series is July 13, 2012.
SOURCE: Bloomberg.

57. Government debt spreads for peripheral European economies, 2009–12

NOTE: The data are weekly. The last observation for each series is July 13, 2012. The spreads shown are the yields on 10-year bonds less the 10-year German bond yield.
SOURCE: Bloomberg.

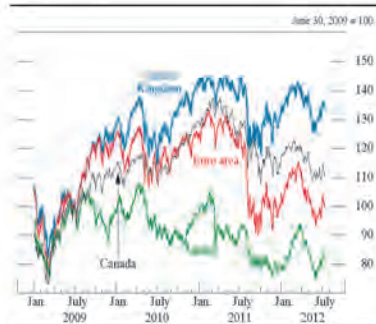
An Update on the European Fiscal and Banking Crisis

Over the past several months, the crisis in Europe has waxed and waned as stresses related to financing sovereigns and the condition of banking sectors have forced significant, but not definitive, policy responses. Late last year, the ongoing difficulties in the region, combined with deteriorating economic conditions, led to acute funding pressures for European financial institutions and a number of sovereigns. In response, the European Central Bank took actions in early December to ease credit conditions, including the provision of three-year refinancing to banks, and euro-area leaders agreed to strengthen fiscal rules and expand their rescue facilities. Those actions, along with the re-pricing and duration extension of the dollar liquidity swap lines with the Federal Reserve, reduced funding costs in euros and dollars for European banks and contributed to a marked improvement in financial conditions in the first few months of this year.

Early in 2012, euro-area authorities followed through on their commitment to put Greek finances on a more sustainable footing and to review the adequacy of the financial backstops for other vulnerable European countries. The Greek government concluded a restructuring of its privately held bonds, which reduced the face value of that debt by slightly more than half, and negotiated a second program with the European Union (EU) and the International Monetary Fund (IMF) worth about €170 billion. Around the same time, euro-area authorities lifted the ceiling on the combined lending of the region's rescue facilities, the European Financial Stability Facility and its successor, the European Stability Mechanism (ESM), from €500 billion to €700 billion, and they accelerated the schedule for capitalizing the ESM. In addition, leaders of the Group of Twenty countries and other IMF shareholders pledged about $450 billion in new financing to the IMF, which should enable the IMF to substantially increase its lending capacity.

Notwithstanding these initiatives, events in Greece and Spain during the spring again heightened financial stresses throughout the region. Political uncertainty in Greece increased considerably, and market concerns grew over the possibility of a Greek exit from the euro area, after the country's inconclusive parliamentary elections in early May. Amid increasing political fragmentation and strong electoral support for parties calling for a major renegotiation of the second EU-IMF program, elected representatives were unable to form a majority government and another round of elections was held on June 17. In the weeks leading up to the second election, withdrawals of deposits from Greek banks reportedly increased, adding to pressures on the domestic financial system. Ultimately, the two major parties that had negotiated the second EU-IMF program obtained sufficient votes to form the core of a coalition government. Uncertainty remains, however, over possible

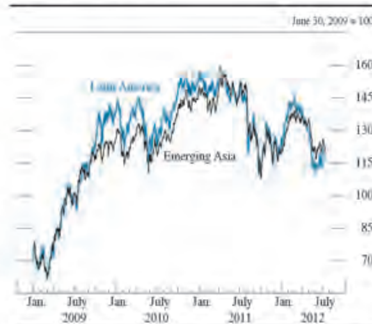
58. Equity indexes in selected advanced foreign economies, 2009–12



NOTE: The data are daily. The last observation for each series is July 13, 2012.

SOURCE: For Canada, Toronto Stock Exchange 300 Composite Index; for the euro area, Dow Jones Euro STOXX Index; for Japan, Tokyo Stock Exchange (TOPIX); and, for the United Kingdom, London Stock Exchange (FTSE 350); all via Bloomberg.

59. Aggregate equity indexes for emerging market economies, 2009–12



NOTE: The data are daily. The last observation for each series is July 13, 2012. 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: Bloomberg.

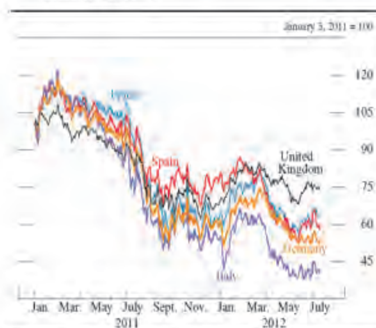
renegotiation of the terms of the EU-IMF program for Greece. Regardless of the outcome of those discussions, the Greek government must still implement difficult austerity measures to continue receiving official financing under the program.

Financial stresses also increased sharply in Spain as concerns about its public finances and the cost of stabilizing the banking system mounted. With economic activity declining, unemployment on the rise, and the budgets of regional governments under considerable strains, the Spanish government missed its 2011 budget deficit target by a wide margin and raised the country's deficit target for 2012 after contentious negotiations with euro-area authorities. Meanwhile, the ongoing bust in the Spanish real estate sector and the depressed economic conditions more generally continued to weigh on the profitability of regional and local banks, prompting market speculation that the public debt could be significantly boosted by further bank bailouts. As market pressures increased, in June the Spanish government requested European financial assistance of up to €100 billion for its banking system. Markets remained concerned, however, in part because the assistance would have the effect of increasing Spain's sovereign debt.

As pressures on Spain mounted and spilled over to Italy, there were renewed calls for euro-area countries to move toward greater fiscal and financial union. At their June 28–29 summit, EU officials announced additional measures toward that goal. Leaders pledged to further integrate the supervision of European banks, to allow the euro-area financial backstop facilities to directly recapitalize banks (as opposed to requiring sovereigns to borrow to support their banks), and to provide greater lending through the European Investment Bank in support of growth and employment. Essential details about implementation of such initiatives, however, have yet to be resolved.

All told, European economies still face significant challenges. In the near term, euro-area policymakers must restore confidence in the region's banks and in the sustainability of sovereign finances. Policy measures, including the steps to improve the availability of dollar and euro funds late last year, are supporting access to funding for European banks, but risks to the stability of domestic financial systems remain. The region must also find ways to stimulate economic growth and improve competitiveness in the most vulnerable countries even as they undertake major fiscal consolidations. Over the longer term, euro-area policymakers need to establish an effective institutional framework to foster economic, financial, and fiscal integration and, ultimately, to increase the resilience of the monetary union.

60. Bank stock price indexes for selected European countries, 2011–12



NOTE: The data are daily. The last observation for each series is July 13, 2012.
SOURCE: Bloomberg.

risk of default, the CDS premiums on the debt of many large banks in Europe have risen substantially (figure 61), while issuance of unsecured bank debt, which had previously recovered, has fallen. Notwithstanding these developments, funding market stresses have remained relatively muted, as many banks accessed funds from the Eurosystem—the system formed by the ECB and the national central banks of the euro-area member states—rather than interbank markets. A standard measure of the cost of this interbank funding, the implied basis spread from euro-dollar swaps, was little changed at shorter maturities.

Advanced Foreign Economies

The European fiscal and banking crisis was at the center of economic developments in the AFEs. Euro-area real GDP was flat in the first quarter of 2012 following a contraction in late 2011. Within the euro area, out-

61. Credit default swap premiums for banks in selected European countries, 2011–12

NOTE: The data are daily. The last observation for each series is July 13, 2012. Credit default swaps are on bank senior debt and weighted by bank total assets.
SOURCE: Markit; Bloomberg; Federal Reserve Board staff calculations.

62. Change in consumer prices for major foreign economies, 2008–12

NOTE: The data are monthly and extend through May 2012, except for the euro area for which the data extend through June 2012; the percent change is from one year earlier.
SOURCE: For the euro area, the European Central Bank; for the United Kingdom, the U.K. Office for National Statistics; for Japan, the Japan Statistics Bureau; and, for Canada, Statistics Canada; all via Haver Analytics.

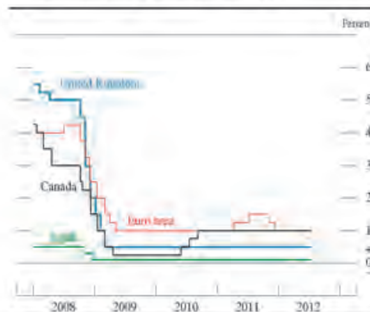
put fell sharply in more vulnerable countries, including Italy and Spain, whereas other countries, especially Germany, performed better. Mounting financial tensions and fiscal austerity measures appear to have further restrained the euro-area economy in the second quarter, as evidenced by declining business confidence and a further drift of purchasing managers indexes into contractionary territory.

Economic performance in the other AFEs has been uneven. In the United Kingdom, real GDP continued to fall early in the year, and indicators point to further weakness fueled by tight fiscal policy and negative spillover effects from the euro area. In Japan, output rose at a robust pace in the first quarter, reflecting fiscal stimulus measures as well as a recovery from the shortage of parts supplies caused by the floods in Thailand last year, but recent data suggest that activity decelerated in the second quarter. The Canadian economy continued to expand moderately in the first three months of the year, supported by solid domestic demand and a resilient labor market.

In most AFEs, headline inflation rates—measured on a 12-month change basis—continued to decline in the first half of the year as the effects of the large run-up in commodity prices in early 2011 waned. The smaller run-up in energy prices that took place early this year exerted a less marked effect on consumer prices, though it helped keep 12-month inflation rates above 2 percent in the euro area and in the United Kingdom (figure 62). Japan appears to be emerging from several years of deflation, but Japanese inflation remains below the 1 percent inflation goal introduced by the BOJ in February.

Several central banks eased further their monetary policy stances. The BOJ increased the size of its asset purchases from ¥30 trillion to ¥40 trillion in April, and then to ¥45 trillion in July. The ECB, after having conducted the second of its three-year longer-term refinancing operations in late February, cut its policy interest rates to record lows in early July (figure 63). In late June, the Bank of England (BOE) activated its

63. Official or targeted interest rates in selected advanced foreign economies, 2008–12



NOTE: The data are daily and extend through July 13, 2012. The data shown are, for Canada, the target for the overnight rate; for the euro area, the minimum bid rate on main refinancing operations; for Japan, the target for the call rate; and, for the United Kingdom, the official Bank Rate.
SOURCE: The central bank of each area or country shown.

Extended Collateral Term Repo facility, offering six-month funds against a wide set of collateral. In addition, in July, the BOE increased the size of its asset purchase program from £325 billion to £375 billion, and, together with the U.K. Treasury, introduced a new Funding for Lending Scheme designed to boost lending to households and firms.

Emerging Market Economies

Following a disappointing performance at the end of last year, real GDP growth rebounded in the first quarter in most EMEs. Economic activity expanded especially briskly in emerging Asia, largely reflecting the reconnection of supply chains damaged by the floods in Thailand. Economic growth, however, continued to slow in China and India. Moreover, recent indicators suggest that the pace of economic activity decelerated in most EMEs going into the second quarter amid headwinds associated with the European crisis and relatively subdued growth in China.

In China, real GDP increased at about a 7 percent pace in the first half of the year, down from an 8½ percent pace in the second half of last year. The slowdown reflected weaker demand for Chinese exports as well as domestic factors, including moderating consumer spending and the restraining effects on investment of previous government measures to cool activity in the property sector. Macroeconomic data for May and June suggest that economic activity was picking up a bit toward the end of the second quarter, with growth of investment, retail sales, and bank lending edging higher. Headline 12-month inflation fell to 2.2 percent in June, led by additional moderation in food prices. As inflationary pressures eased and concerns about growth mounted, the People's Bank of China lowered banks' reserve requirements by 50 basis points in both February and May and then reduced the benchmark one-year lending rate by 25 basis points in June and 31 basis points in July, the first changes in that rate since an increase in July of last year. Over the first half of the year, the renminbi was little changed, on net, against the dollar, but it appreciated about 1½ percent on a real trade-weighted basis, as the renminbi followed the dollar upward against China's other major trading partners.

In India, economic growth has also moderated as slow progress on fiscal and structural reforms and previous monetary tightening stalled investment. Noting rising vulnerabilities from the country's twin fiscal and current account deficits, some credit rating agencies warned that India's sovereign debt risks losing its investment-grade status.

In Mexico, economic activity rebounded briskly in the first quarter as the agricultural sector rebounded from the fourth-quarter drought, domestic demand gained momentum, and exports to the United States picked up. Economic indicators, however, suggest that growth moderated somewhat in the second quarter. On July 1, Enrique Peña Nieto of the Institutional Revolutionary Party, or PRI, won the Mexican presidential election, promising to pursue market-oriented reforms to bolster economic growth.

In Brazil, real GDP—restrained by flagging investment and weather-related problems in the agricultural sector—increased slightly in the first quarter, making it the fourth consecutive quarter of below-trend growth. Industrial production, which has been on a downward trend since early 2011, continued to fall through May, suggesting that economic activity in Brazil remained weak in the second quarter.

Headline inflation generally moderated in the EMEs reflecting lower food price pressures and weaker economic growth. In addition to China, several other central banks in the EMEs also loosened monetary policy, including those in Brazil, Chile, India, Indonesia, the Philippines, South Korea, and Thailand.

Part 3
Monetary Policy: Recent Developments and Outlook

Monetary Policy over the First Half of 2012

To promote the Federal Open Market Committee's (FOMC) objectives of maximum employment and price stability, the Committee maintained a target range for the federal funds rate of 0 to ¼ percent throughout the first half of 2012 (figure 64).[11] With the incoming data suggesting a somewhat slower pace of economic recovery than the Committee had anticipated, and with inflation seen as settling at levels at or below those consistent, over the long run, with its statutory mandate, the Committee took steps during the first half of 2012 to provide additional monetary accommodation in order to support a stronger economic recovery and to help ensure that inflation, over time, runs at levels consistent with its mandate. These steps included lengthening the horizon of the forward rate guidance regarding the Committee's expectations for the period over which economic conditions will warrant exceptionally low levels for the federal funds rate, continuing the Committee's maturity extension program (MEP) through the end of this year rather than completing the program in June as previously scheduled, retaining its existing policies regarding the reinvestment of principal payments on agency securities in agency-guaranteed mortgage-backed securities (MBS), and continuing to reinvest the proceeds of maturing Treasury securities.

The information reviewed at the January 24–25 meeting indicated that U.S. economic activity had expanded moderately, while global growth appeared to be slowing. Labor market indicators pointed to some further improvement in labor market conditions, but progress was gradual and the unemployment rate remained elevated. Household spending had continued to advance at a moderate pace despite diminished growth in real disposable income, but growth in business fixed investment had slowed. The housing sector remained depressed. Inflation had been subdued in recent months, and longer-term inflation expectations had remained stable. Meeting participants observed that financial conditions had improved and financial market stresses had eased somewhat during the intermeeting period, in part because of the European Central Bank's (ECB) three-year refinancing operation.

11. Members of the FOMC in 2012 consist of the members of the Board of Governors of the Federal Reserve System plus the presidents of the Federal Reserve Banks of Atlanta, Cleveland, New York, Richmond, and San Francisco. As of the June FOMC meeting, Governors Jerome H. Powell and Jeremy C. Stein joined the Board of Governors increasing the number of FOMC members to 12.

64. Selected interest rates, 2008–12

NOTE: The data are daily and extend through July 13, 2012. 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.

Nonetheless, participants expected that global financial markets would remain focused on the evolving situation in Europe, and they anticipated that further policy efforts would be required to fully address the fiscal and financial problems there.

With the economy facing continuing headwinds and growth slowing in several U.S. export markets, members generally expected a modest pace of economic growth over coming quarters, with the unemployment rate declining only gradually. At the same time, members thought that inflation would run at levels at or below those consistent with the Committee's dual mandate. Against this backdrop, members agreed to keep the target range for the federal funds rate at 0 to ¼ percent, to continue the program of extending the average maturity of the Federal Reserve's holdings of securities as announced in September, and to retain the existing policies regarding the reinvestment of principal payments from Federal Reserve holdings of securities. In light of the economic outlook, most members also agreed to indicate that the Committee anticipates that economic conditions are likely to warrant exceptionally low levels for the federal funds rate at least through late 2014, longer than had been indicated in recent FOMC statements. The Committee also stated that it is prepared to adjust the size and composition of its securities holdings as appropriate to promote a stronger economic recovery in a context of price stability.

The data in hand at the March 13 FOMC meeting indicated that U.S. economic activity had continued to expand moderately. Although the unemployment rate remained elevated, it had declined notably in recent months and payroll employment had increased. Household spending and business fixed investment had advanced. Signs of improvement or stabilization emerged in some local housing markets, but overall housing activity continued to be restrained by the substantial inventory of foreclosed and distressed properties, tight credit conditions for mortgage loans, and uncertainty about the economic outlook and future home prices. Inflation continued to be subdued, although prices of crude oil and gasoline had increased substantially. Longer-term inflation expectations had remained stable.

Many participants believed that policy actions in the euro area, notably the Greek debt swap and the ECB's longer-term refinancing operations, had helped ease strains in financial markets and reduced the downside risks to the U.S. and global economic outlook. Against that backdrop, equity prices had risen and conditions in credit markets improved, leading many meeting participants to see financial conditions as more supportive of economic growth than at the time of the January meeting.

Members viewed the information on U.S. economic activity as suggesting that the economy would continue to expand moderately. However, despite the easing of strains in global financial markets, members continued to perceive significant downside risks to economic activity. Members generally anticipated that the recent increase in oil and gasoline prices would push up inflation temporarily, but that inflation subsequently would run at or below the rate that the Committee judges most consistent with its mandate. As a result, the Committee decided to keep the target range for the federal funds rate at 0 to ¼ percent, to reiterate its anticipation that economic conditions were likely to warrant exceptionally low levels for the federal funds rate at least through late 2014, to continue the program of extending the average maturity of the Federal Reserve's holdings of securities that it had adopted in September, and to maintain the existing policies regarding the reinvestment of principal payments from Federal Reserve holdings of securities. The Committee again stated that it is prepared to adjust the size and composition of its securities holdings as appropriate to promote a stronger economic recovery in a context of price stability.

By the time of the April 24–25 FOMC meeting, the data again indicated that economic activity was expanding moderately. Payroll employment had continued to move up, and the unemployment rate, while still elevated, had declined a little further. Household spending and business fixed investment had continued to expand. The housing sector showed signs of improvement but from a very low level of activity. Mainly reflecting the increase in the prices of crude oil and gasoline earlier this year, inflation had picked up somewhat; however, measures of long-run inflation expectations remained stable. Meeting participants judged that, in general, conditions in domestic credit markets had improved further, but noted that investors' concerns about the sovereign debt and banking situation in the euro area intensified during the intermeeting period. Many U.S. financial institutions had been taking steps to bolster their resilience, including expanding their capital levels and liquidity buffers and reducing their European exposures.

Members expected growth to be moderate over coming quarters and then to pick up over time. Strains in global financial markets stemming from the sovereign debt and banking situation in Europe as well as uncertainty about U.S. fiscal policy continued to pose significant downside risks to economic activity both here and abroad. Most members anticipated that the

increase in inflation would prove temporary and that subsequently inflation would run at or below the rate that the Committee judges to be most consistent with its mandate. Against this backdrop, the Committee members reached the collective judgment that it would be appropriate to maintain the existing highly accommodative stance of monetary policy. In particular, the Committee agreed to keep the target range for the federal funds rate at 0 to ¼ percent, to continue the program of extending the average maturity of the Federal Reserve's holdings of securities as announced last September, and to retain the existing policies regarding the reinvestment of principal payments from Federal Reserve holdings of securities. The Committee left the forward guidance for the target federal funds rate unchanged at this meeting. Members emphasized that their forward guidance was conditional on expected economic developments, but they preferred adjusting the forward guidance only once they were more confident that the medium-term economic outlook or the risks to that outlook had changed significantly.

Data received over the period leading up to the June 19–20 FOMC meeting indicated that economic activity was expanding at a somewhat more modest pace than earlier in the year. Improvements in labor market conditions had slowed in recent months, and the unemployment rate seemed to have flattened out. Household spending appeared to be rising at a somewhat slower rate, and business investment had continued to advance. Despite some ongoing signs of improvement, the housing sector remained depressed. Consumer price inflation had declined, mainly reflecting lower prices of crude oil and gasoline, and longer-term inflation expectations remained well anchored. Meeting participants observed that financial markets were volatile over the intermeeting period and that investor sentiment was strongly influenced by the developments in Europe and evidence of slowing economic growth at home and abroad.

In the discussion of monetary policy, most members agreed that the outlook had deteriorated somewhat relative to the time of the April meeting, and that significant downside risks were present, importantly including the financial stresses in the euro area and uncertainty about the degree of fiscal restraint in the United States, and its effects on economic activity over the medium term. As a result, the Committee decided that providing additional monetary policy accommodation would be appropriate to support a stronger economic recovery and to help ensure that inflation, over time, was at a level consistent with the Committee's dual mandate. Specifically, the Committee agreed to continue the MEP through the end of the year, instead of ending the program in June as had been planned. In doing so, the Federal Reserve will purchase Treasury securities with remaining maturities of 6 years to 30 years and sell or redeem an equal par value of Treasury securities with remaining maturities of approximately 3 years or less. This continuation of the MEP will proceed at about the same pace as had been executed through the first phase of the program, increasing the Federal Reserve's holdings of longer-term Treasury securities by about $267 billion while reducing its holdings of shorter-term Treasury securities by the same amount. For the duration of this program, the Committee directed the Open Market Desk to suspend its current policy of rolling over maturing Treasury securities into new issues at auction (and instead purchase only additional longer-term securities with the proceeds of maturing securities). The Committee expected the continuation of the MEP to put downward pressure on longer-term interest rates and help make broader financial conditions more accommodative. In addition, the Committee decided to continue reinvesting principal payments from its holdings of agency debt and agency MBS in agency MBS. The Committee also decided to keep the target range for the federal funds rate at 0 to ¼ percent and to reaffirm its anticipation that economic conditions were likely to warrant exceptionally low levels for the federal funds rate at least through late 2014. In its statement, the Committee noted that it was prepared to take further action as appropriate to promote stronger economic recovery and sustained improvement in labor market conditions in a context of price stability.

FOMC Communications

Transparency is an essential principle of modern central banking because it contributes to the accountability of central banks to the government and to the public and because it can enhance the effectiveness of central banks in achieving their macroeconomic objectives. To this end, the Federal Reserve provides to the public a considerable amount of information concerning the conduct of monetary policy. Following each meeting of the FOMC, the Committee immediately releases a statement that lays out the rationale for its policy decision and issues detailed minutes of the meeting about three weeks later. Lightly edited transcripts of FOMC meetings are released to the public with a five-year lag.[12] Moreover, beginning in April

12. FOMC statements, minutes, and transcripts, as well as other related information, are available on the Federal Reserve Board's website at www.federalreserve.gov/monetarypolicy/fomc.htm.

2011, the Chairman has held press conferences on an approximately quarterly basis. At the press conferences, the Chairman presents the current economic projections of FOMC participants and provides additional context for the Committee's policy decisions.

The Committee continued to consider further improvements in its communications approach in the first half of 2012. At the January meeting, the FOMC released a statement of its longer-run goals and policy strategy in an effort to enhance the transparency, accountability, and effectiveness of monetary policy and to facilitate well-informed decisionmaking by households and businesses.[13] The statement did not represent a change in the Committee's policy approach, but rather was intended to help enhance the transparency, accountability, and effectiveness of monetary policy. The statement emphasizes the Federal Reserve's firm commitment to pursue its congressional mandate to promote maximum employment, stable prices, and moderate long-term interest rates. To clarify its longer-term objectives, the FOMC stated that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate. While noting that the Committee's assessments of the maximum level of employment are necessarily uncertain and subject to revision, the statement indicated that the central tendency of FOMC participants' current estimates of the longer-run normal rate of unemployment is between 5.2 and 6.0 percent. It stressed that the Federal Reserve's statutory objectives are generally complementary, but when they are not, the Committee will follow a balanced approach in its efforts to return both inflation and employment to levels consistent with its mandate.

In addition, in light of a decision made at the December meeting, the Committee provided, starting in the January Summary of Economic Projections (SEP), information about each participant's assessment of appropriate monetary policy. Specifically, the SEP included information about participants' estimates of the appropriate level of the target federal funds rate in the fourth quarter of the current year and the next few calendar years, and over the longer run; the SEP also reported participants' current projections of the likely timing of the appropriate first increase in the target federal funds rate given their assessments of the economic outlook. The accompanying narrative described the key factors underlying those assessments and provided some qualitative information regarding participants' expectations for the Federal Reserve's balance sheet.

At the March meeting, participants discussed a range of additional steps that the Committee might take to help the public better understand the linkages between the evolving economic outlook and the Federal Reserve's monetary policy decisions, and thus the conditionality in the Committee's forward guidance. Participants discussed ways in which the Committee might include, in its postmeeting statements and other communications, additional qualitative or quantitative information that could convey a sense of how the Committee might adjust policy in response to changes in the economic outlook. However, participants also observed that the Committee had introduced several important enhancements to its policy communications over the past year or so; these included the Chairman's postmeeting press conference as well as changes to the FOMC statement and the SEP. Against this backdrop, some participants noted that additional experience with the changes implemented to date could be helpful in evaluating potential further enhancements.

At the April meeting, the Committee discussed the relationship between the postmeeting statement, which expresses the collective view of the Committee, and the policy projections of individual participants, which are included in the SEP. The Chairman asked the subcommittee on communications to consider possible enhancements and refinements to the SEP that might help clarify the link between economic developments and the Committee's view of the appropriate stance of monetary policy. Following up on this issue at the June meeting, participants discussed several possibilities for enhancing the clarity and transparency of the Committee's economic projections as well as the role they play in policy decisions and policy communications. Many participants indicated that if it were possible to construct a quantitative economic projection and associated path of appropriate policy that reflected the collective judgment of the Committee, such a projection could potentially be helpful in clarifying how the outlook and policy decisions are related. However, many participants noted that developing a quantitative forecast that reflects the Committee's collective judgment could be challenging, given the range of their views about the economy's structure and dynamics. Participants agreed to continue to explore ways to increase clarity and transparency in the Committee's policy communications, but many emphasized that further changes in those communications should be considered carefully.

13. The FOMC statement of longer-run goals and policy strategy is available on the Federal Reserve Board's website at www.federalreserve.gov/monetarypolicy/fomccalendars.htm.

Part 4
Summary of Economic Projections

The following material appeared as an addendum to the minutes of the June 19–20, 2012, meeting of the Federal Open Market Committee.

In conjunction with the June 19–20, 2012, Federal Open Market Committee (FOMC) meeting, meeting participants—the 7 members of the Board of Governors and the 12 presidents of the Federal Reserve Banks, all of whom participate in the deliberations of the FOMC—submitted their assessments, under each participant's judgment of appropriate monetary policy, of real output growth, the unemployment rate, inflation, and the target federal funds rate for each year from 2012 through 2014 and over the longer run. These assessments were based on information available at the time of the meeting and participants' individual assumptions about the factors likely to affect economic outcomes. The longer-run projections represent each participant's judgment 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 to the economy. "Appropriate monetary policy" is defined as the future path of policy that participants deem most likely to foster outcomes for economic activity and inflation that best satisfy their individual interpretations of the Federal Reserve's objectives of maximum employment and stable prices.

Overall, the assessments that FOMC participants submitted in June indicated that, under appropriate monetary policy, the pace of economic expansion over the 2012–14 period would likely continue to be moderate and inflation would remain subdued (see table 1 and figure 1). Participants judged that the growth rate of real gross domestic product (GDP) would pick up gradually and that the unemployment rate would edge down very slowly. Participants projected that inflation, as measured by the annual change in the price index for personal consumption expenditures (PCE), would run close to or below the FOMC's longer-run inflation objective of 2 percent.

As shown in figure 2, most participants judged that highly accommodative monetary policy was likely to be warranted over the forecast period. In particular, 13 participants thought that it would be appropriate for the first increase in the target federal funds rate to occur during 2014 or later. A majority of participants judged that appropriate monetary policy would involve an extension of the maturity extension program (MEP) through the end of 2012.

Overall, participants judged the uncertainty associated with the outlook for real activity and the unemployment rate to be unusually high relative to historical norms, with the risks weighted mainly toward slower economic growth and a higher unemployment rate.

Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, June 2012

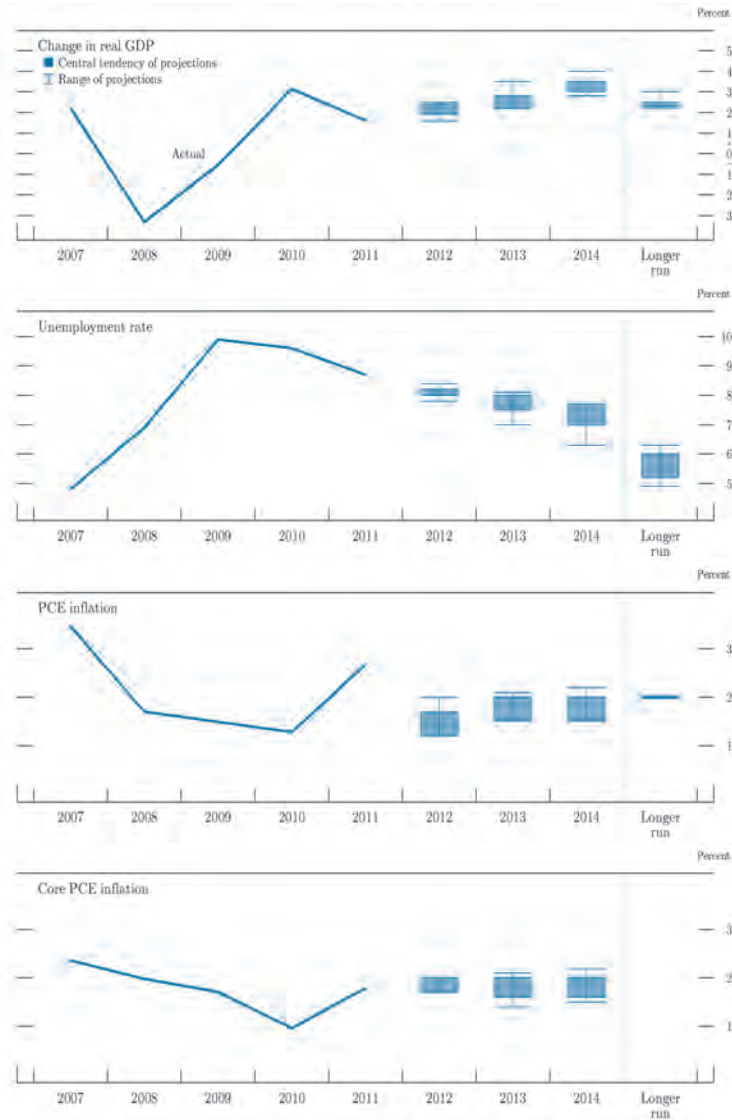
Percent

Variable	Central tendency[1]				Range[2]			
	2012	2013	2014	Longer run	2012	2013	2014	Longer run
Change in real GDP	1.9 to 2.4	2.2 to 2.8	3.0 to 3.5	2.3 to 2.5	1.6 to 2.5	2.2 to 3.5	2.8 to 4.0	2.2 to 3.0
April projection	2.4 to 2.9	2.7 to 3.1	3.1 to 3.6	2.3 to 2.6	2.1 to 3.0	2.4 to 3.8	2.9 to 4.3	2.2 to 3.0
Unemployment rate	8.0 to 8.2	7.5 to 8.0	7.0 to 7.7	5.2 to 6.0	7.8 to 8.4	7.0 to 8.1	6.3 to 7.7	4.9 to 6.3
April projection	7.8 to 8.0	7.3 to 7.7	6.7 to 7.4	5.2 to 6.0	7.8 to 8.2	7.0 to 8.1	6.3 to 7.7	4.9 to 6.0
PCE inflation	1.2 to 1.7	1.5 to 2.0	1.5 to 2.0	2.0	1.2 to 2.0	1.5 to 2.1	1.5 to 2.2	2.0
April projection	1.9 to 2.0	1.6 to 2.0	1.7 to 2.0	2.0	1.8 to 2.3	1.5 to 2.1	1.5 to 2.2	2.0
Core PCE inflation[3]	1.7 to 2.0	1.6 to 2.0	1.6 to 2.0		1.7 to 2.0	1.4 to 2.1	1.5 to 2.2	
April projection	1.8 to 2.0	1.7 to 2.0	1.8 to 2.0		1.7 to 2.0	1.6 to 2.1	1.7 to 2.2	

Note: Projections of change in real gross domestic product (GDP) and projections for both measures 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 April projections were made in conjunction with the meeting of the Federal Open Market Committee on April 24–25, 2012.

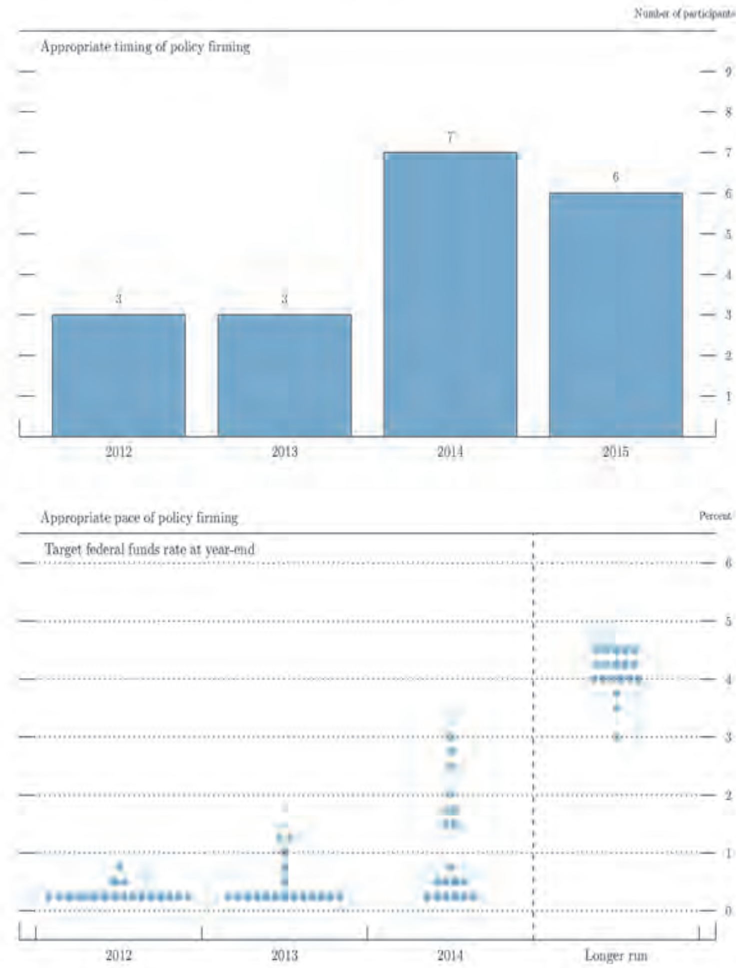
1. The central tendency excludes the three highest and three lowest projections for each variable in each year.
2. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
3. Longer-run projections for core PCE inflation are not collected.

Figure 1. Central tendencies and ranges of economic projections, 2012–14 and over the longer run



NOTE: Definitions of variables are in the general note to table 1. The data for the actual values of the variables are annual.

Figure 2. Overview of FOMC participants' assessments of appropriate monetary policy, June 2012



NOTE: In the upper panel, the height of each bar denotes the number of FOMC participants who judge that, under appropriate monetary policy, the first increase in the target federal funds rate from its current range of 0 to 1/4 percent will occur in the specified calendar year. In April 2012, the numbers of FOMC participants who judged that the first increase in the target federal funds rate would occur in 2012, 2013, 2014, and 2015 were, respectively, 3, 3, 7, and 4. In the lower panel, each shaded circle indicates the value (rounded to the nearest 1/4 percentage point) of an individual participant's judgment of the appropriate level of the target federal funds rate at the end of the specified calendar year or over the longer run.

Many participants also viewed the uncertainty surrounding their projections for inflation to be greater than normal, but most saw the risks to inflation to be broadly balanced.

The Outlook for Economic Activity

Conditional upon their individual assumptions about appropriate monetary policy, participants judged that the economy would continue to expand at a moderate pace in 2012 and 2013 before picking up in 2014 to a pace somewhat above what participants view as the longer-run rate of output growth. The central tendency of their projections for the change in real GDP in 2012 was 1.9 to 2.4 percent, lower than in April. Many participants characterized the incoming data—especially for household spending and the labor market—as having been weaker than they had anticipated in April. In addition, most noted that the worsening situation in Europe was leading to a slowdown in global economic growth and greater volatility in financial markets. Compared with their April submissions, most participants lowered their medium-run projections of economic activity somewhat. The central tendencies of participants' projections of real economic growth in 2013 and 2014 were 2.2 to 2.8 percent and 3.0 to 3.5 percent, respectively. The central tendency for the longer-run rate of increase of real GDP was 2.3 to 2.5 percent, little changed from April. Participants cited several headwinds that were likely to hold back the pace of economic expansion over the forecast period, including the difficult fiscal and financial situation in Europe, a still-depressed housing market, tight credit for some borrowers, and fiscal restraint in the United States.

Consistent with the downward revisions to their projections for real GDP growth in 2012 and 2013, nearly all participants marked up their assessments for the rate of unemployment. Participants projected the unemployment rate at the end of 2012 to remain at or slightly below recent levels, with a central tendency of 8.0 to 8.2 percent, somewhat higher than their April submissions. Participants anticipated gradual improvement in labor market conditions by 2014, but even so, they generally thought that the unemployment rate at the end of that year would still lie well above their individual estimates of its longer-run normal level. The central tendencies of participants' forecasts for the unemployment rate were 7.5 to 8.0 percent at the end of 2013 and 7.0 to 7.7 percent at the end of 2014. The central tendency of participants' estimates of the longer-run normal rate of unemployment that would prevail under the assumption of appropriate monetary policy and in the absence of further shocks to the economy was 5.2 to 6.0 percent, unchanged from April. Most participants projected that the gap between the current unemployment rate and their estimates of its longer-run normal rate would be closed in five or six years, a couple judged that less time would be needed, and one thought more time would be necessary because of the persistent headwinds impeding the economic expansion.

Figures 3.A and 3.B provide details on the diversity of participants' views regarding the likely outcomes for real GDP growth and the unemployment rate over the next three years and over the longer run. The dispersion in these projections reflects differences in participants' assessments of many factors, including appropriate monetary policy and its effects on the economy, the underlying momentum in economic activity, the spill-over effects of the fiscal and financial situation in Europe, the prospective path for U.S. fiscal policy, the extent of structural dislocations in the labor market, and the likely evolution of credit and financial market conditions. Compared with their April assessments, the range of participants' forecasts for the change in real GDP in 2012 and 2013 shifted lower, while the dispersion of individual forecasts for growth in 2014 was about unchanged. Consistent with the downward shift in the distribution of forecasts for economic growth, the distribution of projections for the unemployment rate shifted up in 2012 and 2013 and, to a lesser extent, in 2014. As in April, the dispersion of estimates for the longer-run rate of output growth was fairly narrow, generally in a range of 2.2 to 2.7 percent. In contrast, participants' views about the level to which the unemployment rate would converge in the longer run were more diverse, reflecting, among other things, different views on the outlook for labor supply and the structure of the labor market.

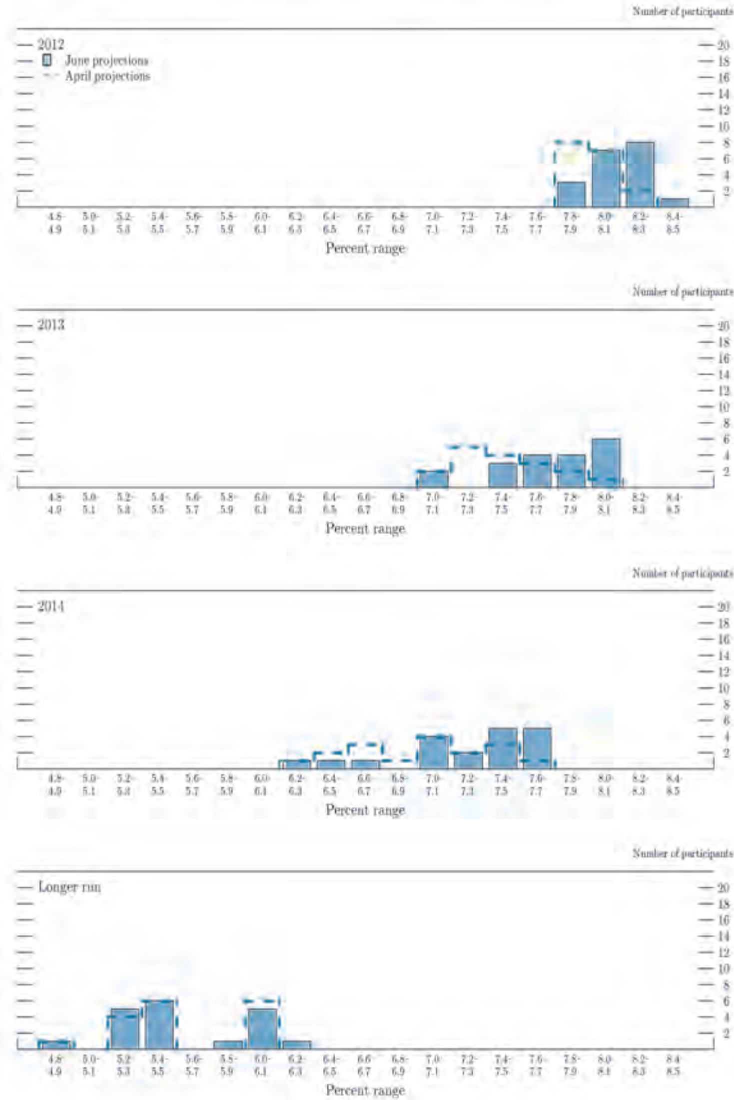
The Outlook for Inflation

Participants' views about the medium-run outlook for inflation under the assumption of appropriate monetary policy were little changed from April. However, nearly all of them marked down their assessment of headline inflation in the near term, pointing to recent declines in the prices of crude oil and gasoline that were sharper than previously projected. Almost all participants judged that both headline and core inflation would remain subdued over the 2012–14 period, running at rates at or below the FOMC's longer-run objective of 2 percent. Some participants noted that

Figure 3.A. Distribution of participants' projections for the change in real GDP, 2012–14 and over the longer run

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

Figure 3.B. Distribution of participants' projections for the unemployment rate, 2012–14 and over the longer run



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

inflation expectations had remained stable, and several pointed to resource slack and moderate increases in labor compensation as sources of restraint on prices. Specifically, the central tendency of participants' projections for inflation, as measured by the PCE price index, moved down in 2012 to 1.2 to 1.7 percent and was little changed in 2013 and 2014 at 1.5 to 2.0 percent. The central tendencies of the forecasts for core inflation were broadly the same as those for the headline measure in 2013 and 2014.

Figures 3.C and 3.D provide information about the diversity of participants' views about the outlook for inflation. Relative to the assessments compiled in April, the projections for headline inflation shifted down in 2012, reflecting the declines in energy prices. The distributions of participants' projections for headline and core inflation in 2013 and 2014 were slightly lower than those reported in April.

Appropriate Monetary Policy

As indicated in figure 2, most participants judged that exceptionally low levels of the federal funds rate would remain appropriate at least until late 2014. In particular, seven participants thought that it would be appropriate to commence policy firming in 2014, while another six participants thought that the first increase in the target federal funds rate would not be warranted until 2015 (upper panel). Eleven participants indicated that the appropriate federal funds rate at the end of 2014 would be 75 basis points or lower (lower panel), and those who judged that policy liftoff would not occur until 2015 thought the federal funds rate would be 1½ percent or lower at the end of that year. As in April, six participants judged that economic conditions would warrant an increase in the target federal funds rate in either 2012 or 2013 in order to achieve the Committee's statutory mandate. Those participants judged that the appropriate value for the federal funds rate would range from 1½ to 3 percent at the end of 2014.

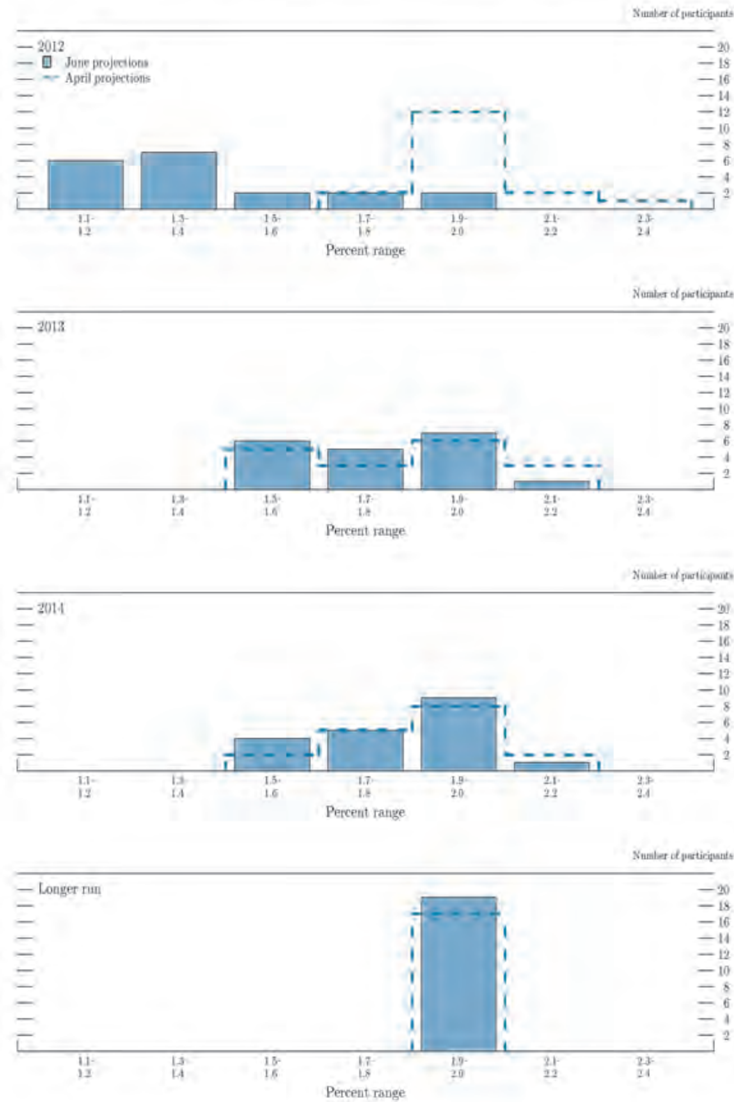
All participants reported levels for the appropriate target federal funds rate at the end of 2014 that were well below their estimates of the level expected to prevail in the longer run. Estimates of the longer-run target federal funds rate ranged from 3 to 4½ percent, reflecting the Committee's inflation objective of 2 percent and participants' judgments about the longer-run equilibrium level of the real federal funds rate.

Participants also provided qualitative information on their views regarding the appropriate path of the Federal Reserve's balance sheet. Of the 12 participants whose assessments of appropriate monetary policy included additional balance sheet policies, 11 indicated that their assumptions incorporated an extension through the end of 2012 of the MEP, and 2 participants conditioned their economic forecasts on a new program of securities purchases. Two indicated that they would consider such purchases in the event that the economy did not make satisfactory progress in improving labor market conditions or in the event of a significant deterioration in the economic outlook or a further increase in downside risks to that outlook. Almost all participants assumed that the Committee would carry out the normalization of the balance sheet according to the principles approved at the June 2011 FOMC meeting. That is, prior to the first increase in the federal funds rate, the Committee would likely cease reinvesting some or all principal payments on securities in the System Open Market Account (SOMA), and it would likely begin sales of agency securities from the SOMA sometime after the first rate increase, aiming to eliminate the SOMA's holdings of agency securities over a period of three to five years. In general, participants linked their preferred start dates for the normalization process to their views for the appropriate timing for the first increase in the target federal funds rate. One participant who thought that the liftoff of the federal funds rate should occur relatively soon indicated that the reinvestment of maturing securities should continue for a time after liftoff.

The key factors informing participants' individual assessments of the appropriate setting for monetary policy included their judgments regarding the maximum level of employment, the extent to which current conditions had deviated from mandate-consistent levels, and participants' projections of the likely time horizon necessary to return employment and inflation to such levels. Several participants noted that their assessments of appropriate monetary policy reflected the subpar pace of the economic expansion and the persistent shortfall in aggregate demand since the 2007–09 recession, and two commented that the neutral level of the federal funds rate was likely somewhat below its historical norm. One participant expressed concern that a protracted period of very accommodative monetary policy could lead to a buildup of risks in the financial system. Participants also noted that because the appropriate stance of monetary policy depends importantly on the evolution of real activity and inflation over time, their assessments of the appropriate future path of the federal funds rate and the balance sheet could change if economic conditions were to evolve in an unexpected manner.

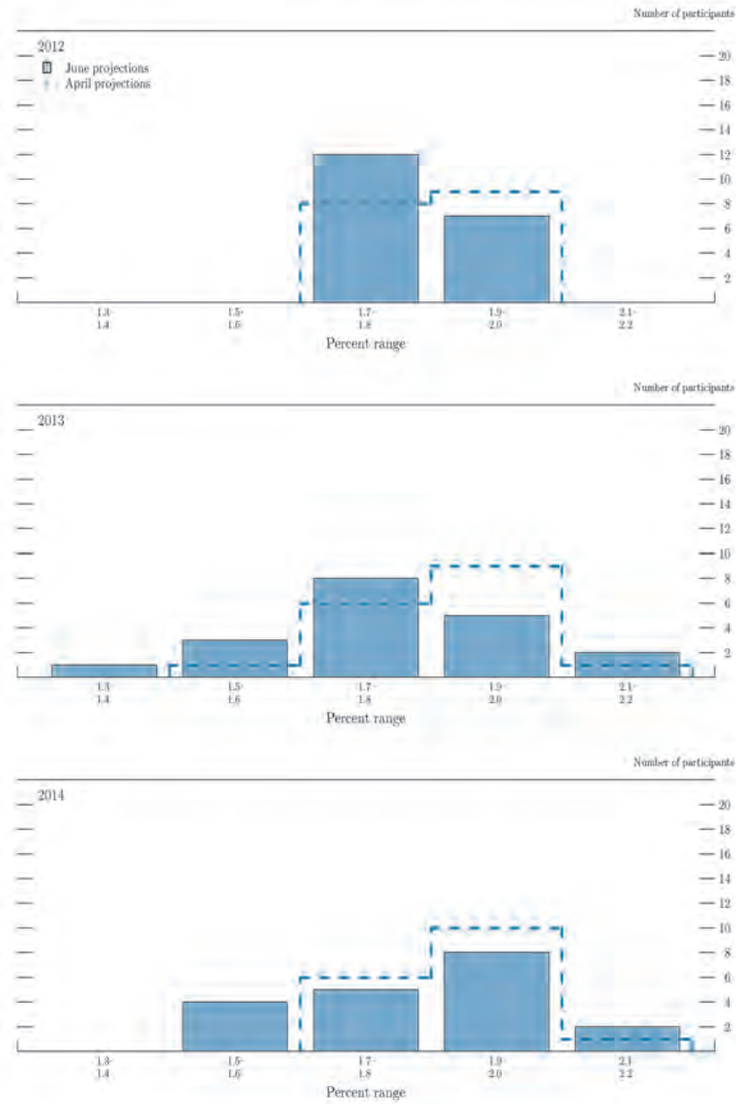
Figure 3.E details the distribution of participants' judgments regarding the appropriate level of the target

Figure 3.C. Distribution of participants' projections for PCE inflation, 2012–14 and over the longer run



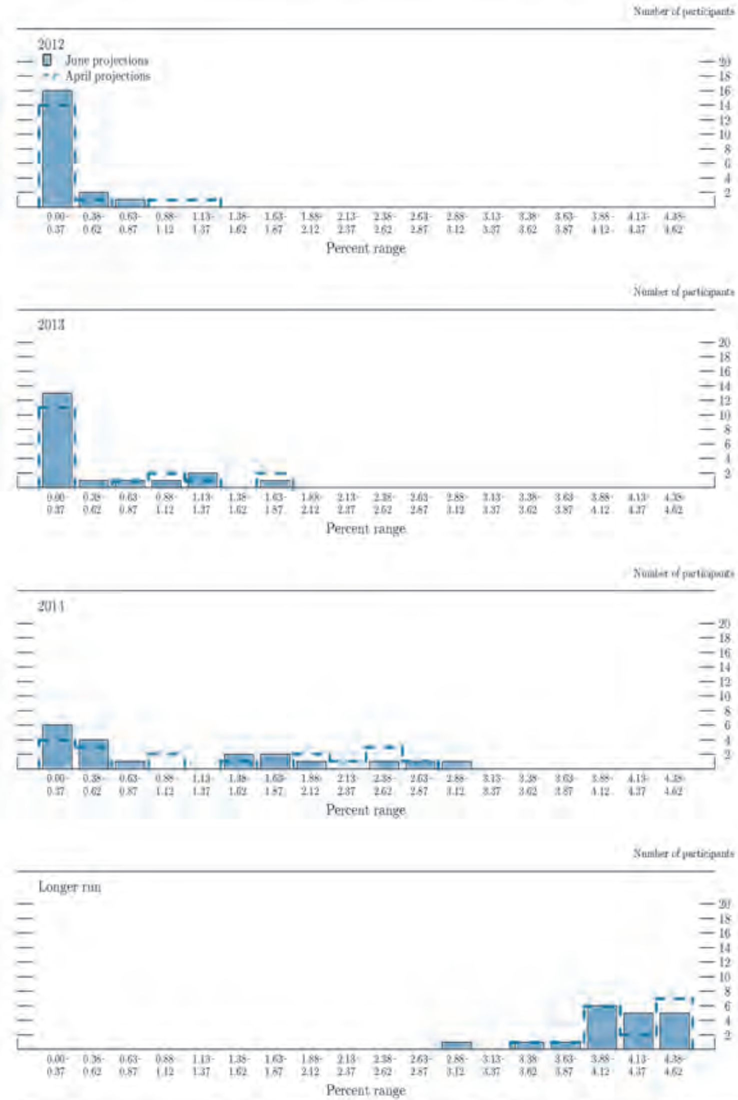
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.D. Distribution of participants' projections for core PCE inflation, 2012–14



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

Figure 3.E. Distribution of participants' projections for the target federal funds rate, 2012–14 and over the longer run



NOTE: The target federal funds rate is measured as the level of the target rate at the end of the calendar year or in the longer run.

federal funds rate at the end of each calendar year from 2012 to 2014 and over the longer run. Most participants judged that economic conditions would warrant maintaining the current low level of the federal funds rate through the end of 2013. Views on the appropriate level of the federal funds rate at the end of 2014 were more widely dispersed, with 11 participants seeing the appropriate level of the federal funds rate as ¾ percentage point or lower and 4 of them seeing the appropriate rate as 2 percent or higher. Those who judged that a longer period of very accommodative monetary policy would be appropriate generally projected that the unemployment rate would remain further above its longer-run normal level at the end of 2014. In contrast, the 6 participants who judged that policy firming should begin in 2012 or 2013 indicated that the Committee would need to act soon to keep inflation near the FOMC's longer-run objective of 2 percent and to prevent a rise in inflation expectations.

Uncertainty and Risks

Nearly all participants judged that their current level of uncertainty about GDP growth and unemployment was higher than was the norm during the previous 20 years (figure 4).[14] About half of all participants judged the level of uncertainty associated with their inflation forecasts to be higher as well, while another eight participants viewed uncertainty about inflation as broadly similar to historical norms. The main factors cited as underlying the elevated uncertainty about economic outcomes were the ongoing fiscal and financial situation in Europe, the outlook for fiscal policy in the United States, and a general slowdown in global economic growth, including the possibility of a significant slowdown in China. As in April, participants noted the difficulties associated with forecasting the path of the U.S. economic recovery following a financial crisis and recession that differed markedly from recent historical experience. Several commented that in the aftermath of the financial crisis, they were more uncertain about the level of potential output and its trend rate of growth.

A majority of participants reported that they saw the risks to their forecasts of real GDP growth as weighted toward the downside and, accordingly, the risks to their projections of the unemployment rate as tilted to the upside. The most frequently identified sources of risk were the situation in Europe, which many participants thought had the potential to slow global economic activity, particularly over the near term, and the fiscal situation in the United States.

Most participants continued to judge the risks to their projections for inflation as broadly balanced, with several highlighting the recent stability of inflation expectations. However, five participants saw the risks to inflation as tilted to the downside, a larger number than in April; a couple of them noted that slack in resource markets could turn out to be greater or could put more downward pressure on inflation than they were anticipating. Two participants saw the risks to inflation as weighted to the upside, in light of concerns about U.S. fiscal imbalances, the current highly accommodative stance of monetary policy, or the Committee's ability to effectively remove policy accommodation when it becomes appropriate to do so.

Table 2. Average historical projection error ranges

Percentage points

Variable	2012	2013	2014
Change in real GDP[1]	±1.0	±1.6	±1.7
Unemployment rate[1]	±0.4	±1.2	±1.7
Total consumer prices[2]	±0.8	±1.0	±1.1

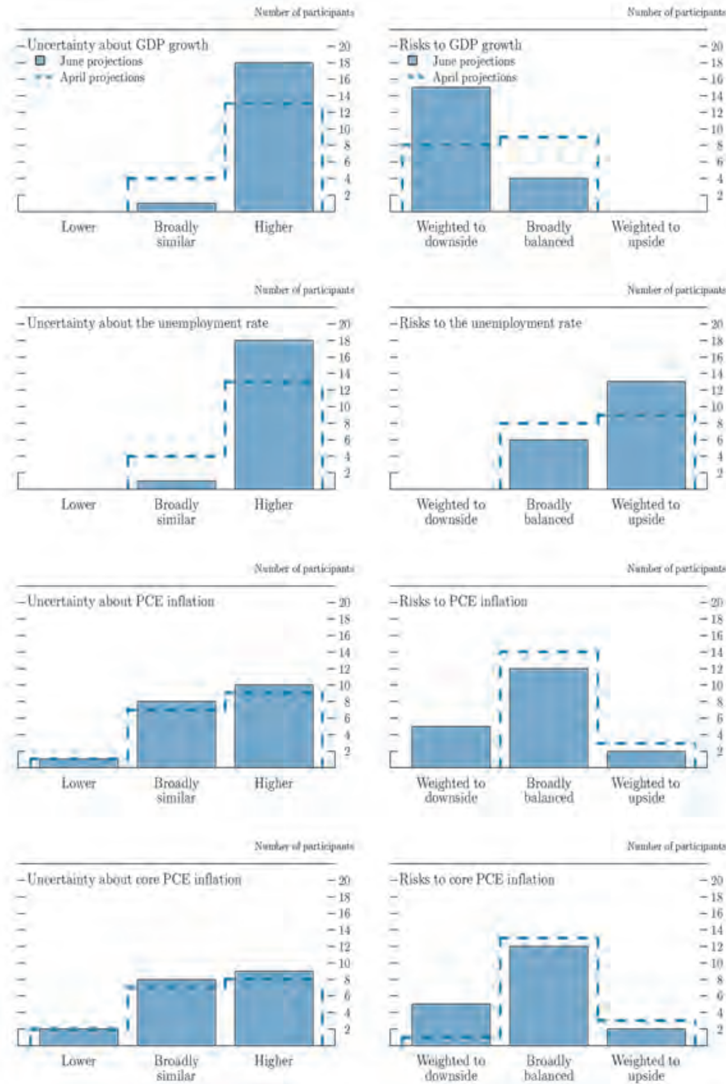
Note: Error ranges shown are measured as plus or minus the root mean squared error of projections for 1992 through 2011 that were released in the summer by various private and government forecasters. As described in the box "Forecast Uncertainty," under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, and consumer prices will be in ranges implied by the average size of projection errors made in the past. Further information is in David Reifschneider and Peter Tulip (2007), "Gauging the Uncertainty of the Economic Outlook from Historical Forecasting Errors," Finance and Economics Discussion Series 2007-60 (Washington: Board of Governors of the Federal Reserve System, November).

1. Definitions of variables are in the general note to 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.

14. Table 2 provides estimates of the forecast uncertainty for the change in real GDP, the unemployment rate, and total consumer price inflation over the period from 1992 to 2011. At the end of this summary, the box "Forecast Uncertainty" discusses the sources and interpretation of uncertainty in the economic forecasts and explains the approach used to assess the uncertainty and risks attending the participants' projections.

Figure 4. Uncertainty and risks in economic projections



NOTE: For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty." 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 the Federal Reserve Board's staff in advance of meetings of the Federal Open Market Committee. The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand within a range of 2.0 to 4.0 percent in the current year, 1.4 to 4.6 percent in the second year, and 1.3 to 4.7 percent in the third year. The corresponding 70 percent confidence intervals for overall inflation would be 1.2 to 2.8 percent in the current year, 1.0 to 3.0 percent in the second year, and 0.9 to 3.1 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, are weighted to the downside, or are broadly balanced. That is, participants judge whether each variable is more likely to be above or below their projections of the most likely outcome. These judgments about the uncertainty and the risks attending each participant's projections are distinct from the diversity of participants' views about the most likely outcomes. Forecast uncertainty is concerned with the risks associated with a particular projection rather than with divergences across a number of different projections.

As with real activity and inflation, the outlook for the future path of the federal funds rate is subject to considerable uncertainty. This uncertainty arises primarily because each participant's assessment of the appropriate stance of monetary policy depends importantly on the evolution of real activity and inflation over time. If economic conditions evolve in an unexpected manner, then assessments of the appropriate setting of the federal funds rate would change from that point forward.

Abbreviations

ABCP	asset-backed commercial paper
ABS	asset-backed securities
AFE	advanced foreign economy
AIG	American International Group, Inc.
BEA	Bureau of Economic Analysis
BHC	bank holding company
BOE	Bank of England
BOJ	Bank of Japan
CCAR	Comprehensive Capital Analysis and Review
CDS	credit default swap
C&I	commercial and industrial
CMBS	commercial mortgage-backed securities
CP	commercial paper
CRE	commercial real estate
DPI	disposable personal income
ECB	European Central Bank
EME	emerging market economy
E&S	equipment and software
ESM	European Stability Mechanism
EU	European Union
FOMC	Federal Open Market Committee; also, the Committee
FRBNY	Federal Reserve Bank of New York
FSOC	Financial Stability Oversight Council
GDP	gross domestic product
GSE	government-sponsored enterprise
HARP	Home Affordable Refinance Program
IMF	International Monetary Fund
IPO	initial public offering
MBS	mortgage-backed securities
MEP	maturity extension program
Michigan survey	Thomson Reuters/University of Michigan Surveys of Consumers
NIPA	national income and product accounts
NPR	notice of proposed rulemaking
PCE	personal consumption expenditures

PRI	Institutional Revolutionary Party
SCOOS	Senior Credit Officer Opinion Survey on Dealer Financing Terms
SEP	Summary of Economic Projections
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
SOMA	System Open Market Account
S&P	Standard & Poor's
STBL	Survey of Terms of Business Lending
TALF	Term Asset-Backed Securities Loan Facility