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Monetary Policy Report to the Congress

July 21, 2010

Board of Governors of the Federal Reserve System

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Submitted pursuant to section 2B of the Federal Reserve Act

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Board of Governors of the Federal Reserve System

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

Washington, D.C., July 21, 2010

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

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

Sincerely,

Ben Bernanke, Chairman

Contents

Boxes

Part 1
Overview: Monetary Policy and the Economic Outlook

Economic activity expanded at a moderate pace in the first half of 2010 after picking up in the second half of 2009. Some of the increase in real gross domestic product (GDP) in the first half of the year came from a continued turn in the inventory cycle. But more broadly, activity was bolstered by ongoing stimulus from monetary and fiscal policies and generally supportive financial conditions. In the labor market, payrolls rose modestly and hours per worker increased; nevertheless, employment remained significantly below pre-recession levels and unemployment receded only slightly from its recent high. Meanwhile, consumer price inflation edged lower.

Financial markets, although volatile, generally supported economic growth in the first half of 2010. Bank credit, however, remained tight for many borrowers. Moreover, in the second quarter, uncertainty about the consequences of the fiscal pressures in a number of European countries and about the durability of the global recovery led to large declines in equity prices around the world and produced strains in some short-term funding markets. According to the projections prepared in conjunction with the June meeting of the Federal Open Market Committee (FOMC), meeting participants (members of the Board of Governors and presidents of the Federal Reserve Banks) continue to expect that economic activity will expand at a moderate rate over the second half of 2010 and in 2011. However, participants' current projections for economic growth are somewhat weaker than those prepared for the April FOMC meeting, and unemployment is expected to fall even more slowly than had been anticipated in April. Largely because of uncertainty about the implications of developments abroad, the participants also indicated somewhat greater concern about the downside risks to the economic outlook than they had at the time of the April meeting.

After rising at an annual rate of about 4 percent, on average, in the second half of 2009, U.S. real GDP increased at a rate of 2¾ percent in the first quarter of 2010, and available information points to another moderate gain in the second quarter. Some of the impetus to the continued recovery in economic activity during the first half of the year came from inventory investment as businesses started to rebuild stocks after the massive liquidation in the latter part of 2008 and in 2009. In addition, final sales continued to firm as personal consumption expenditures (PCE) rose and as business fixed investment was spurred by capital outlays that had been deferred during the downturn and by the need of many businesses to replace aging equipment. In the external sector, exports continued to rebound, providing impetus to domestic production, while imports were lifted by the recovery in domestic demand. On the less favorable side, outlays for nonresidential construction have declined further this year, and despite a transitory boost from the homebuyer tax credit, housing construction has continued to be weighed down by weak demand, a large inventory of distressed or vacant houses, and tight credit conditions for builders and some potential buyers. In addition, state and local governments are still cutting spending in response to ongoing fiscal pressures.

The upturn in economic activity has been accompanied by a modest improvement in labor market conditions. On average, private-sector employment rose 100,000 per month over the first half of 2010, with increases across a wide range of industries; businesses also raised their labor input by increasing hours per worker. Nonetheless, the pace of hiring to date has not been sufficient to bring about a significant reduction in the unemployment rate, which averaged 9¾ percent in the second quarter, only slightly below its recession high of 10 percent in the fourth quarter of 2009. Long-term unemployment has continued to worsen.

On the inflation front, prices of energy and other commodities have declined in recent months, and underlying inflation has trended lower. The overall PCE price index rose at an annual rate of about ¾ percent over the first five months of 2010 (compared with an increase of about 2 percent over the 12 months of 2009), while price increases for consumer expenditures other than food and energy items—so-called core PCE—slowed from 1½ percent over the 12 months of 2009 to an annual rate of 1 percent over the first five months of 2010. FOMC participants expect that, with substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.

Domestic financial conditions generally showed improvement through the first quarter of 2010, but the fiscal strains in Europe and the uncertainty they engendered subsequently weighed on financial markets. As a result, foreign and domestic equity price indexes fell appreciably in the second quarter, and pressures emerged in dollar funding markets; safe-haven flows lowered sovereign yields in most of the major advanced economies and boosted the foreign exchange value of the dollar and the Japanese yen.

Over the first half of the year, investors marked down expectations for the path of U.S. monetary policy in response to economic and financial developments and to the FOMC's continued indication that it expected economic conditions to warrant exceptionally low levels of the federal funds rate for an extended period. These same factors, as well as safe-haven flows, contributed to a decline in Treasury rates. Some private borrowing rates, including mortgage rates, also fell. Broad equity price indexes declined, on net, over the first half of 2010.

Consumer credit outstanding continued to fall, though at a less rapid pace than in the second half of last year. Larger corporations with access to capital markets were able to issue bonds to meet their financing needs, although some smaller businesses reportedly had considerable difficulties obtaining credit. Standards on many categories of bank loans remained tight, and loans on banks' books continued to contract, although somewhat less rapidly than around year-end. Commercial bank profitability stayed low by historical standards, as loan losses remained at very high levels.

To support the economic expansion, the FOMC maintained a target range for the federal funds rate of 0 to ¼ percent throughout the first half of 2010. To complete the purchases previously announced, over the first three months of the year, the Federal Reserve also conducted large-scale purchases of agency mortgage-backed securities and agency debt in order to provide support to mortgage lending and housing markets and to improve overall conditions in private credit markets. In light of improved functioning of financial markets, the Federal Reserve closed by the end of June all of the special liquidity facilities that it had created to support markets in late 2007 and in 2008. However, in response to renewed dollar funding pressures abroad, in May the Federal Reserve reestablished swap lines with the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, and the Swiss National Bank. The Federal Reserve continued to develop its tools for draining reserves from the banking system to support the withdrawal of policy accommodation when such action becomes appropriate. The Committee is monitoring the economic outlook and financial developments, and it will employ its policy tools as necessary to promote economic recovery and price stability.

The economic projections prepared in conjunction with the June FOMC meeting are presented in Part 4 of this report. In general, FOMC participants anticipated that the economic recovery would proceed at a moderate pace. The expansion was expected to be restrained in part by household and business uncertainty, persistent weakness in real estate markets, only gradual improvement in labor market conditions, waning fiscal stimulus, and slow easing of credit conditions in the banking sector. The projected increase in real GDP was only a little faster than the economy's longer-run sustainable growth rate, and thus the unemployment rate was anticipated to fall only slowly over the next few years. Inflation was expected to remain subdued over this period. The participants' projections for economic activity and inflation were both somewhat lower than those prepared in conjunction with the April FOMC meeting, mainly because of the incoming economic data and the anticipated effects of developments abroad on the U.S. economy.

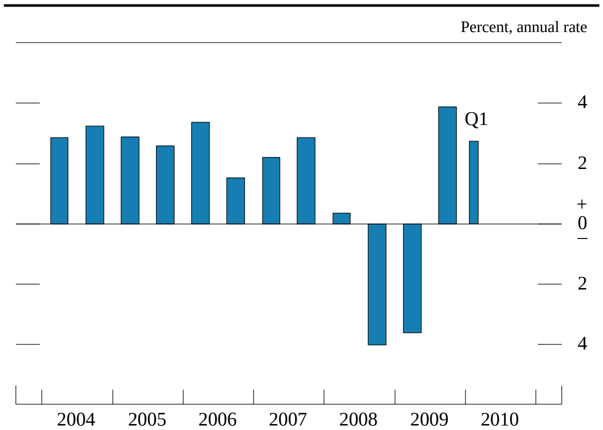
Participants generally judged that the degree of uncertainty surrounding the outlook for both economic activity and inflation was greater than historical norms. About one-half of the participants viewed the risks to the growth outlook as tilted to the downside, whereas in April, a large majority had seen the risks to growth as balanced; most continued to see balanced risks surrounding their inflation projections. Participants also reported their assessments of the rates to which macroeconomic variables would be expected to converge over the longer run under appropriate monetary policy and in the absence of further shocks to the economy. The central tendencies of these longer-run projections were 2.5 to 2.8 percent for real GDP growth, 5.0 to 5.3 percent for the unemployment rate, and 1.7 to 2.0 percent for the inflation rate.

Part 2
Recent Economic and Financial Developments

Real gross domestic product (GDP) increased at an annual rate of 2¾ percent in the first quarter of 2010 after rising about 4 percent on average in the second half of 2009, and it apparently posted another moderate gain in the second quarter (figure 1).[1] Some of the impetus to the continued recovery in economic activity in the first half of the year came from inventory investment as businesses started to rebuild stocks after the massive liquidation in the latter part of 2008 and in 2009. In addition, final sales continued to firm as consumer spending moved up, businesses raised their outlays for equipment and software, and demand for U.S. exports strengthened. In contrast, the underlying pace of activity in the housing sector has improved only marginally since hitting bottom in 2009. In the labor market, employment rose gradually over the first half of 2010 and average weekly hours worked increased, but the unemployment rate fell just slightly. Headline consumer price inflation has been low this year, as energy prices have dropped and core inflation has slowed (figure 2).

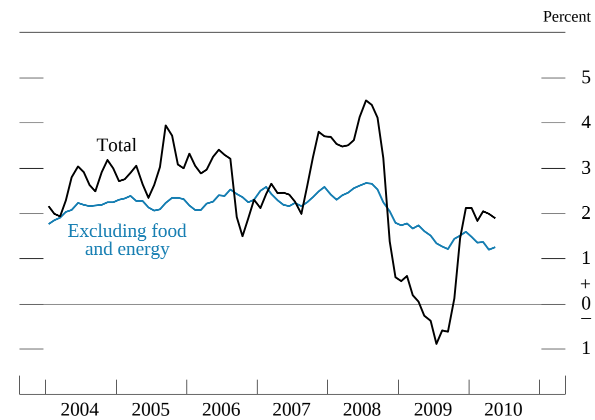
1. The oil spill in the Gulf of Mexico is having serious consequences for the environment and for many individuals and firms in the affected localities. However, the disaster does not appear to have registered sizable effects on the national economy to date.

1. Change in real gross domestic product, 2004–10



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, 2004–10



NOTE: The data are monthly and extend through May 2010; changes are from one year earlier.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

The gradual healing of the financial system that began in the spring of 2009 continued through the early spring of 2010. In the first quarter, financial market conditions generally became more supportive of economic activity, with yields and spreads on corporate bonds declining, broad equity price indexes rising, and measures of stress in many short-term funding markets falling to near their pre-crisis levels. In late April and early May, however, concerns about the effects of fiscal pressures in a number of European countries led to increases in credit spreads on many U.S. corporate bonds, declines in broad equity price indexes, and a renewal of strains in some short-term funding markets. Even so, over the first half of the year, mortgage rates and yields on U.S. corporate securities remained at low levels.

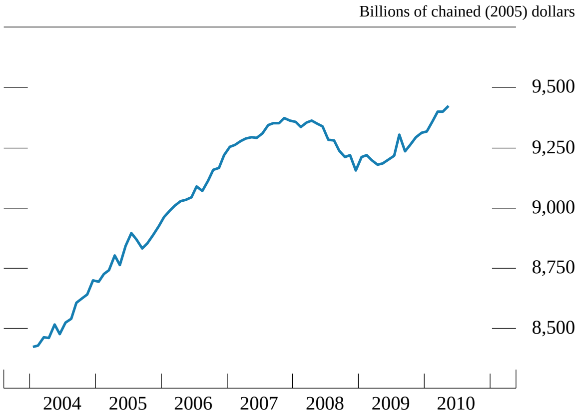
Domestic Developments

The Household Sector

Consumer Spending and Household Finance

Personal consumption expenditures (PCE) appear to have posted a moderate advance in the first half of 2010 after turning up in the second half of 2009 (figure 3).

3. Real personal consumption expenditures, 2004–10

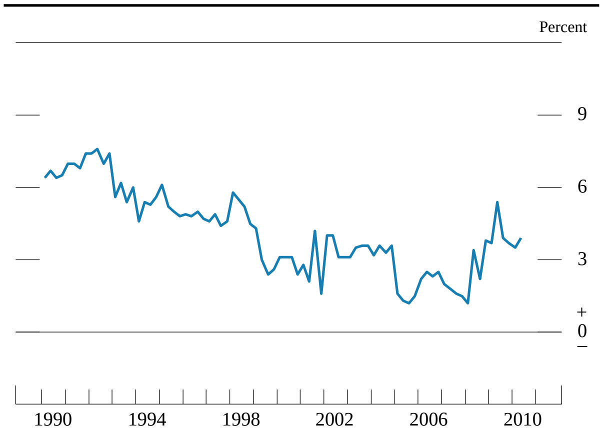


NOTE: The data are monthly and extend through May 2010.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

The improvement in employment and hours worked, and the associated pickup in real household incomes, provided important impetus to spending. The rise in household net worth in 2009 and the first quarter of 2010 also likely helped buoy spending, although the drop in stock prices during the spring unwound some of the earlier increase in wealth and—all else being equal—may restrain the rise in real PCE in the second half of the year. The personal saving rate has fluctuated in a fairly narrow range since the middle of 2009, and it stood at 4 percent in May (figure 4).

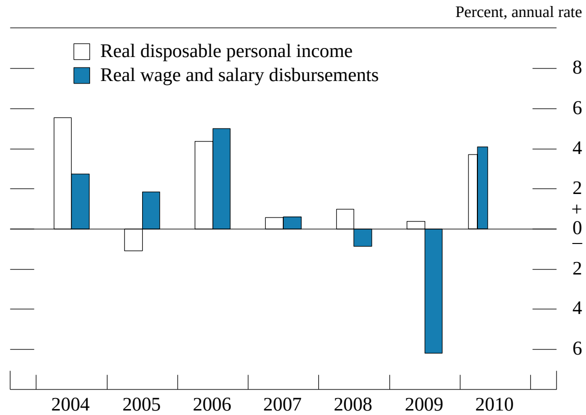
The gains in consumer spending during the first half of 2010 were widespread. Sales of new light motor vehicles (cars, sport utility vehicles, and pickup trucks) rose from an annual rate of 10¾ million units in the fourth quarter of 2009 to 11¼ million units in the second quarter, supported in part by favorable financing

4. Personal saving rate, 1990–2010



NOTE: The data are quarterly and extend through 2010:Q2; the reading for 2010:Q2 is the average for April and May.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

5. Change in real disposable personal income and in real wage and salary disbursements, 2004–10



NOTE: Through 2009, change is from December to December; for 2010, change is from December to May.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

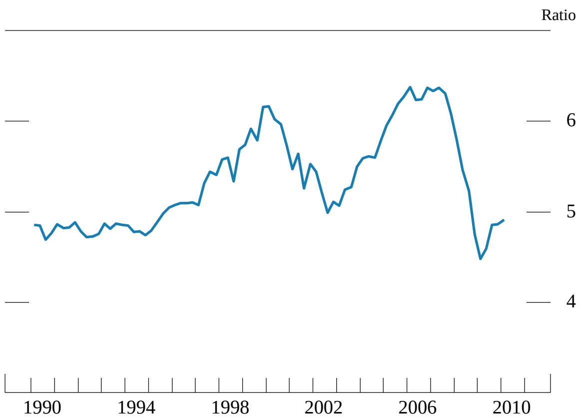
conditions for auto buyers. Spending for other goods started the year on a strong note—perhaps boosted by pent-up demand for purchases that had been deferred during the recession—though it appears to have cooled somewhat during the spring. Real outlays for services increased modestly after having only edged up in 2009.

Aggregate real disposable personal income (DPI)—personal income less personal current taxes, adjusted to remove price changes—rose at an annual rate of more than 3½ percent over the first five months of the year after barely increasing in 2009 (figure 5). Real wage and salary income, which had fallen appreciably in 2009, has regained some lost ground this year, as employment and hours of work have turned up and as real hourly wages have been bolstered by the very low rate of PCE price inflation. One measure of real wages—average hourly earnings of all employees, adjusted for the rise in PCE prices—increased at an annual rate of roughly 1 percent over the first five months of 2010 after having been about flat over the 12 months of 2009.

With equity values up and house prices holding steady, the ratio of household net worth to DPI edged higher in the first quarter of 2010 after increasing appreciably over the last three quarters of 2009. Nonetheless, the wealth-to-income ratio at that time was well below the highs of 2006 and 2007 (figure 6). Moreover, equity prices have fallen substantially since the end of the first quarter, a development that has not only depressed net worth but has also adversely affected consumer sentiment in recent months (figure 7).

Households continued to reduce their debt in the first half of 2010. Total household debt contracted at an annual rate of about 2½ percent in the first quarter

6. Wealth-to-income ratio, 1990–2010



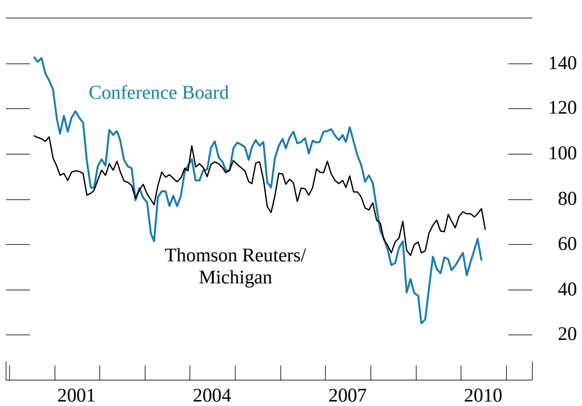
NOTE: The data are quarterly and extend through 2010:Q1. The wealth-to-income ratio is the ratio of household net worth to disposable personal income.

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

of 2010, with both mortgage debt and consumer credit posting declines. The fall in consumer credit was less rapid than it had been in the second half of 2009, a development that is consistent with banks' increased willingness to extend consumer installment loans that has been reported in recent results of the Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS).[2] However, SLOOS respondents also continued to report weak demand for such loans. Reflecting

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

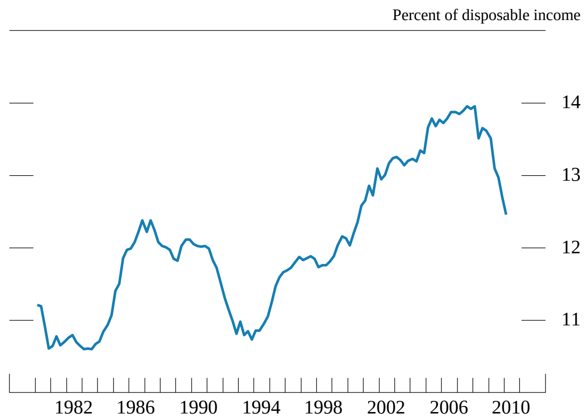
7. Consumer sentiment indexes, 2000–10



NOTE: The Conference Board data are monthly and extend through June 2010; 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 2010; the series is indexed to equal 100 in 1966.

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

8. Household debt service, 1980–2010



NOTE: The data are quarterly and extend through 2010: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.

the contraction in household debt, debt service payments—the required principal and interest on existing mortgages and consumer debt—fell as a fraction of disposable income (figure 8).

Changes in interest rates on consumer loans were mixed during the first half of 2010. Interest rates on new auto loans edged down on balance, and spreads on these loans relative to Treasury securities of comparable maturity remained near their average levels over the past decade. Interest rates on credit card loans rose through the first half of 2010; part of the increase early in the year may be attributable to adjustments made by banks prior to the imposition of new rules in February under the Credit Card Accountability Responsibility and Disclosure (Credit CARD) Act.[3]

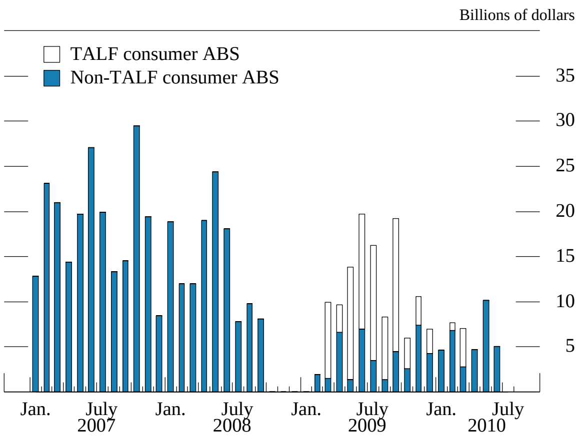
Although delinquency rates on auto loans at captive finance companies and on credit card loans at commercial banks edged down in the first quarter of 2010, they remained at elevated levels. Charge-off rates for credit card loans at commercial banks were also high.

The Federal Reserve's Term Asset-Backed Securities Loan Facility (TALF) continued to support the issuance of consumer asset-backed securities (ABS) until its closure for such securities on March 31 (figure 9).[4] Subsequently, issuance of consumer ABS was solid during the second quarter. Yields on such securities fell on balance during the first quarter, and spreads on high-quality credit card and auto loan ABS relative to

3. The Credit CARD Act includes some provisions that place restrictions on issuers' ability to impose certain fees and to engage in risk-based pricing.

4. The TALF extended loans to finance investment in ABS. The TALF remained open until June 30 for loans backed by newly issued commercial mortgage-backed securities.

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



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

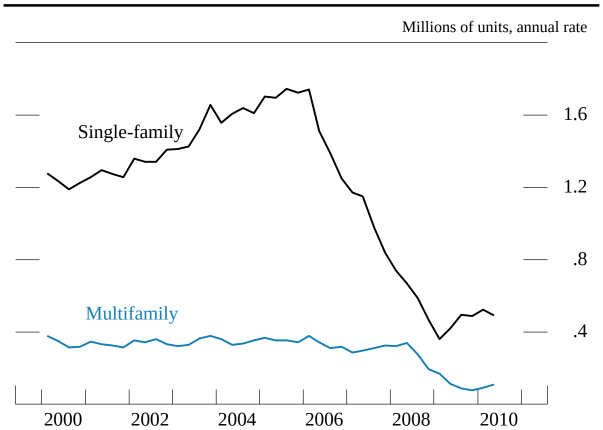
comparable-maturity Treasury securities declined to levels last seen in 2007.

Residential Investment and Housing Finance

Home sales and construction were boosted in the spring by the homebuyer tax credit. But looking through this temporary improvement, underlying housing activity appears to have remained weak this year despite a historically low level of mortgage interest rates. In an environment of soft demand, a large inventory of foreclosed or distressed properties on the market, and limits on the availability of financing for builders and some potential buyers, homebuilding has stayed at a slow pace. In the single-family sector, new units were started at an average annual rate of about 510,000 units between January and June—just 150,000 units above the quarterly low reached in the first quarter of 2009 (figure 10). Activity in the multifamily sector has continued to be held down by elevated vacancy rates and tight credit conditions; starts averaged just 100,000 units at an annual rate during the first half of 2010, essentially the same as in the second half of 2009 and well below the norm of 350,000 units per year that had prevailed over the decade prior to the financial crisis.

Home sales surged in the spring, but these increases likely were driven by purchases that were pulled forward to qualify for the homebuyer tax credit.[5] Sales of existing single-family houses jumped to an annual rate of 5 million units on average in April and May, ½ million units above their first-quarter pace. However, new home sales agreements—which also appear to have gotten a lift in April from the looming expiration of the

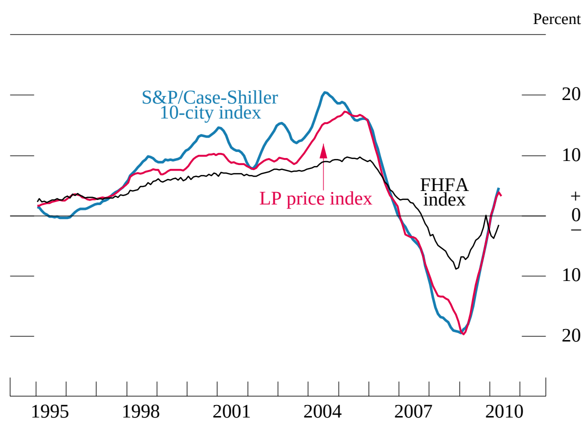
10. Private housing starts, 2000–10



Note: The data are quarterly and extend through 2010:Q2.
Source: Department of Commerce, Bureau of the Census.

5. In order to receive the homebuyer tax credit, a purchaser had to sign a sales agreement by the end of April. As the law was written, the purchaser had to close on the property by June 30, but the closing deadline was recently changed to September 30. Sales of existing homes are measured at closing, while sales of new homes are measured at the time the contract is signed.

11. Change in prices of existing single-family houses, 1995–2010



Note: The data are monthly and extend into 2010:Q2; changes are from one year earlier. The LP price index includes purchase transactions only. The FHFA index (formerly calculated by the Office of Federal Housing Enterprise Oversight) also includes purchase transactions only. The S&P/Case-Shiller index reflects all arm's-length sales transactions in the metropolitan areas of Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco, and Washington, D.C.
Source: For LP, LoanPerformance, a division of First American CoreLogic; for FHFA, Federal Housing Finance Agency; for S&P/Case-Shiller, Standard & Poor's.

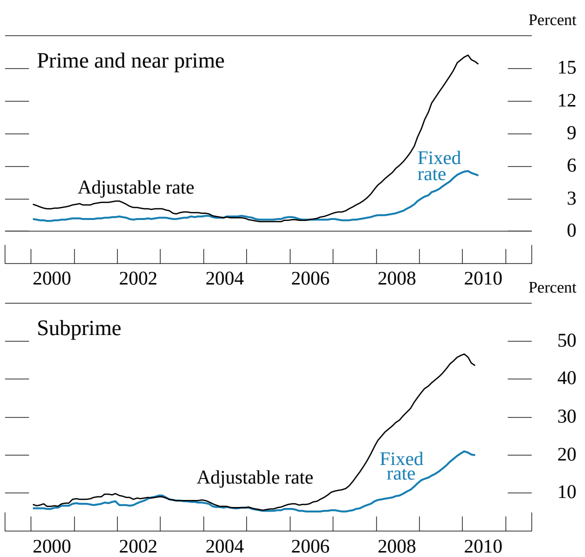
tax credit—plummeted in May, and other indicators of housing demand generally remain lackluster.

Meanwhile, house prices, as measured by a number of national indexes, appear to be reaching bottom (figure 11). For example, the LoanPerformance repeat-sales price index, which had dropped 30 percent from its peak in 2006 to its trough in 2009, has essentially moved sideways this year. This apparent end to the steep drop in house prices should begin to draw into the market potential buyers who had been reluctant to purchase homes when prices were perceived to be at risk of significant further declines.

Delinquency rates on most categories of mortgages showed tentative signs of leveling off over the first several months of 2010 but remain well above levels posted a year earlier (figure 12). As of May, serious delinquency rates on prime and near-prime loans had edged down to about 15 percent for variable-rate loans and to about 5 percent for fixed-rate loans.[6] For subprime loans, as of April (the latest data available), delinquency rates moved down to about 40 percent for variable-rate loans and slightly less than 20 percent for fixed-rate loans. About 650,000 homes entered the foreclosure process in the first quarter of 2010, only slightly below the elevated pace seen in 2009.

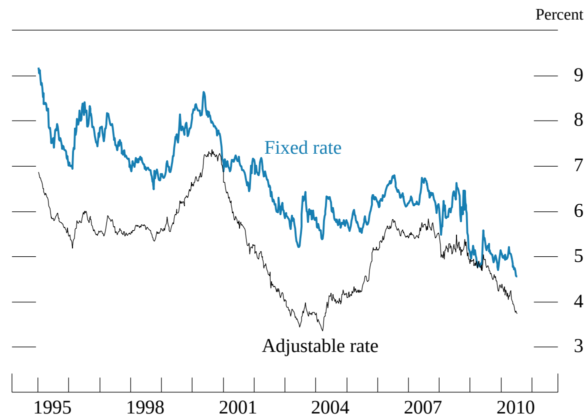
6. A mortgage is defined as seriously delinquent if the borrower is 90 days or more behind in payments or the property is in foreclosure.

12. Mortgage delinquency rates, 2000–10



Note: The data are monthly and extend through April 2010 for subprime and May 2010 for prime and near prime. Delinquency rate is the percent of loans 90 days or more past due or in foreclosure.
Source: For subprime, LoanPerformance, a division of First American CoreLogic; for prime and near prime, Lender Processing Services, Inc.

13. Mortgage interest rates, 1995–2010



Note: The data, which are weekly and extend through July 14, 2010, are contract rates on 30-year mortgages.
Source: Federal Home Loan Mortgage Corporation.

On balance, interest rates on fixed-rate mortgages decreased over the first half of 2010, a move that partly reflected the decline in Treasury yields over that period (figure 13). Some financial market participants had reportedly expressed concerns that rates would rise following the March 31 end of large-scale purchases of agency mortgage-backed securities (MBS) by the Federal Reserve. However, mortgage rates changed little around that date, and spreads have remained relatively narrow.

Despite the further fall in mortgage rates, the availability of mortgage financing continued to be constrained. The April 2010 SLOOS indicated that while banks had generally ceased tightening lending standards on all types of mortgages, they had not yet begun to ease those standards from the very stringent levels that had been imposed over the past few years. Perhaps reflecting the stringency of lending standards and low levels of home equity for many homeowners, over the first quarter of 2010 indicators of refinancing activity showed only a modest pickup from the subdued levels posted in the second half of 2009. Refinancing appeared to pick up late in the second quarter. Overall, residential mortgage debt contracted at a somewhat faster pace in the first half of 2010 than it had in the second half of the previous year.

Net issuance of MBS guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae fell during the first half of 2010 after having expanded briskly in the second half of 2009; the fall was largely attributable to weak demand for mortgages and to sizable prepayments on outstanding MBS stemming from repurchases by Fannie Mae and Freddie Mac of large numbers of delinquent mortgages out of the pools of mortgages backing agency MBS. The securitization market for mortgage loans not guaranteed by a housing-related government-sponsored enterprise (GSE) or the Federal Housing Administration remained essentially closed.

The Business Sector

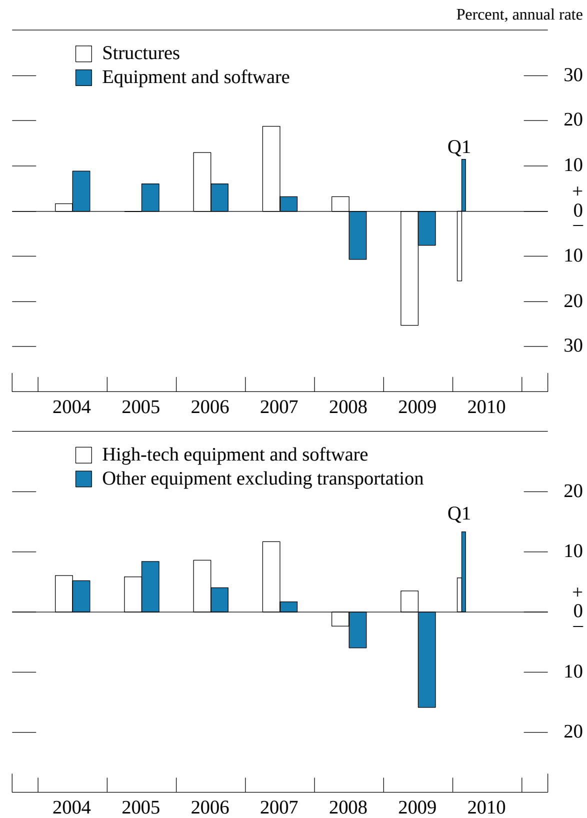
Fixed Investment

Real business fixed investment turned up in the fourth quarter of 2009 after more than a year of steep declines, and it appears to have risen further in the first half of 2010. The pickup occurred entirely in spending for equipment and software (E&S), which rebounded in response to the improvement in sales, production, and profits. Moreover, businesses have ample internal funds at their disposal. And although bank lending remains constrained—especially for small businesses—firms with access to capital markets have generally been able to finance E&S projects with the proceeds of bond issuance at favorable terms.

Real outlays for E&S rose at an annual rate of 11½ percent in the first quarter after an even larger increase in the fourth quarter (figure 14). As it had in the fourth quarter, business spending on motor vehicles rose briskly, and outlays on information technology (IT) capital—computers, software, and communications equipment—continued to be spurred by the need to replace older, less-efficient equipment and by the expansion of the infrastructure for wireless communications networks. In addition, investment in equipment other than transportation and IT jumped in the first quarter after falling more than 15 percent in 2009. More recently, orders and shipments for a wide range of equipment rose appreciably this spring, pointing to another sizable increase in real E&S outlays in the second quarter.

Investment in nonresidential structures continued to decline in the first half of 2010 against a backdrop of high vacancy rates, low property prices, and difficult financing conditions. Real outlays on structures outside of the drilling and mining sector fell at an annual rate of 27½ percent in the first quarter after falling 18 percent in 2009, and the incoming data point to continued weakness in the second quarter. Construction of manufacturing facilities appears to have firmed somewhat in recent months and outlays in the power category—though volatile from quarter to quarter—have retained considerable vigor, but spending on office and commercial structures remained on a steep downtrend through May. Meanwhile, real spending on drilling and mining

14. Change in real business fixed investment, 2004–10



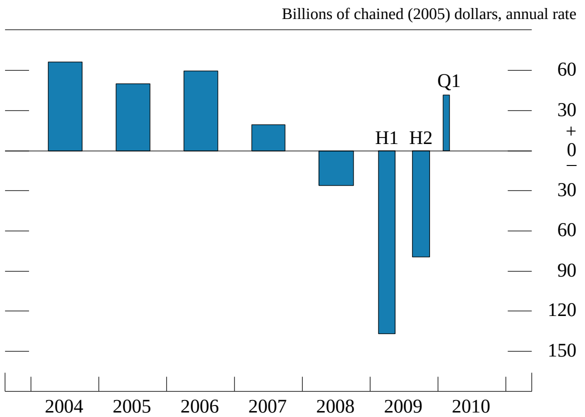
NOTE: High-tech equipment consists of computers and peripheral equipment and communications equipment.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

structures has posted solid increases in recent quarters in response to the rebound in oil and natural gas prices in the second half of last year; nonetheless, this pickup in activity follows a massive decline in the first half of 2009, and spending in this sector is still well below late-2008 levels.

Inventory Investment

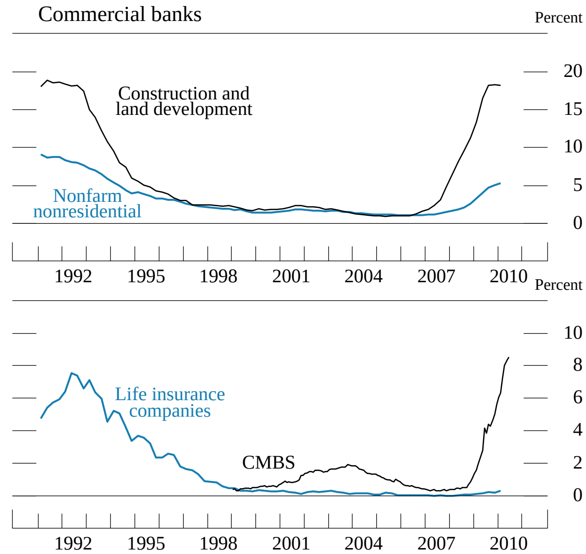
The pace of inventory liquidation slowed dramatically in late 2009 as firms acted to bring production into closer alignment with sales, and businesses began restocking in the first quarter of 2010 (figure 15). That swing in inventory investment added nearly 2 percentage points to the rise in real GDP in the first quarter. Nonetheless, firms appear to be keeping a tight rein on stocks. For example, in the motor vehicle sector, manufacturers held second-quarter production of light vehicles to a pace that pushed days' supply below historical norms—even after adjusting for the reduction

15. Change in real business inventories, 2004–10



SOURCE: Department of Commerce, Bureau of Economic Analysis.

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



NOTE: The data for commercial banks and life insurance companies are quarterly and extend through 2010:Q1. The data for commercial mortgage-backed securities (CMBS) are monthly and extend through June 2010. The delinquency rates for commercial banks and CMBS are the percent of loans 30 days or more past due or not accruing interest. The delinquency rate for life insurance companies is the percent of loans 60 days or more past due or not accruing interest.
SOURCE: For commercial banks, Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report); for life insurance companies, American Council of Life Insurers; for CMBS, Citigroup.

over the past couple of years in the number of models, trim lines, and dealerships. Outside of motor vehicles, real inventories rose modestly in the first quarter, and the limited available information suggests that stock-building remained at about this pace in the spring. The inventory-to-sales ratios for most industries covered by the Census Bureau's book-value data have moved back into a more comfortable range after rising sharply in 2009.

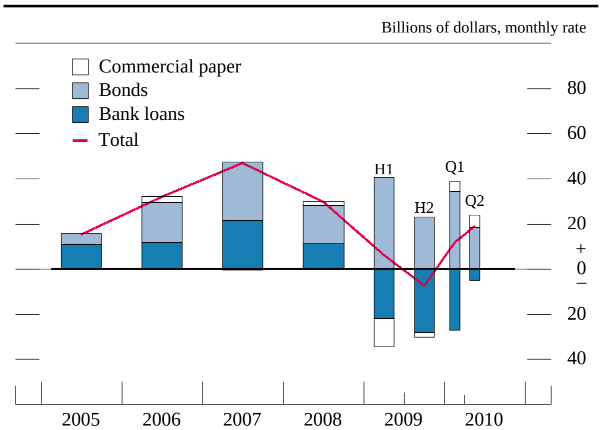
Corporate Profits and Business Finance

Operating earnings per share for S&P 500 firms continued to bounce back in the first quarter of 2010. In percentage terms, the recent advances were stronger among financial firms, as their profits rebounded from depressed levels, though profits at nonfinancial firms also posted solid increases. Analysts' forecasts point to an expected moderation in profit gains in the second quarter.

The credit quality of nonfinancial corporations has shown improvement this year. Credit rating upgrades outpaced downgrades through May, and very few corporate bond defaults have occurred this year. Although delinquency rates for commercial and industrial (C&I) loans edged down to about 4 percent in the first quarter of 2010, they remained near the higher end of their range over the past 20 years. Delinquency rates for commercial real estate (CRE) loans held steady as rates on construction and land development loans remained near 20 percent (figure 16).

Reflecting an improved economic outlook and a somewhat more hospitable financing environment, particularly for larger firms, borrowing by nonfinancial businesses expanded over the first two quarters of 2010 after having fallen during the second half of 2009 (figure 17). Net issuance of corporate bonds increased through April as businesses took advantage of relatively low interest rates to issue longer-term debt, and net issuance of commercial paper turned positive. However,

17. Selected components of net financing for nonfinancial businesses, 2005–10



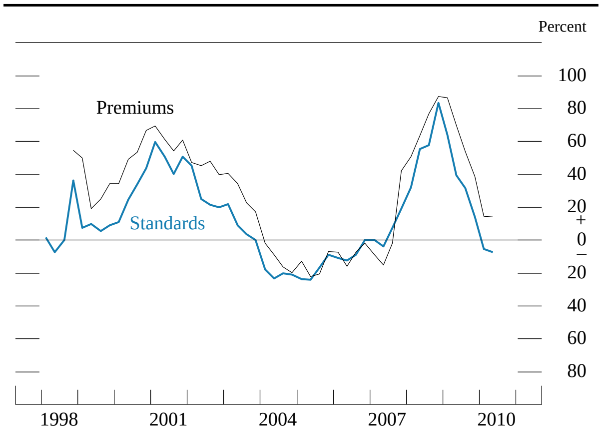
NOTE: The data for the components except bonds are seasonally adjusted.
SOURCE: Federal Reserve Board, flow of funds data.

bond issuance fell in May as a result of the market volatility and pullback from risk that accompanied European financial developments. C&I loans declined through May before flattening out in June, while CRE lending contracted steeply throughout the first half of the year.

The decline in commercial bank lending to businesses is partly attributable to weak demand for such loans, as suggested by answers to the April 2010 SLOOS. In addition, respondents to the April survey reported that banks increased premiums charged on riskier C&I loans over the previous three months; and although a small net fraction of banks reported easing standards on those loans, the severe bout of tightening reported over the past several years has yet to be materially unwound (figure 18). Moreover, a moderate net fraction of banks tightened standards on CRE loans over the first quarter of 2010.

Small businesses face relatively tight credit conditions given their lack of direct access to capital markets. Results from the May 2010 Survey of Terms of Business Lending indicated that the spread between the average interest rate on loans with commitment sizes of less than $1 million—loans that were likely made to smaller businesses—and swap rates of comparable maturity edged down in the second quarter but remained quite elevated. In surveys conducted by the National Federation of Independent Business, the net fraction of small businesses reporting that credit had become more difficult to obtain over the preceding three months remained at historically high levels during the first half of 2010 (figure 19). However, the fraction of businesses that cited credit availability as the most important problem that they faced remained small.

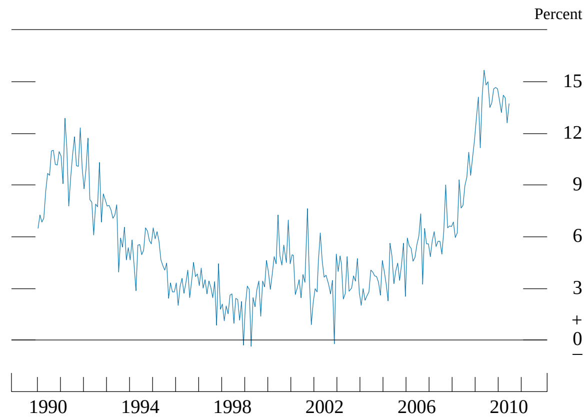
18. Net percentage of domestic banks tightening standards and increasing premiums charged on riskier loans to large and medium-sized business borrowers, 1998–2010



NOTE: The data are drawn from a survey generally conducted four times per year; the last observation is from the April 2010 survey, which covers 2010:Q1. Net percentage is the percentage of banks reporting a tightening of standards or an increase in premiums less the percentage reporting an easing or a decrease. The definition for firm size suggested for, and generally used by, survey respondents is that large and medium-sized firms have annual sales of $50 million or more.

SOURCE: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

19. Net percentage of small businesses that reported more difficulty in obtaining credit, 1990–2010



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

SOURCE: National Federation of Independent Business.

New issuance in the commercial mortgage-backed securities (CMBS) market, which had resumed in November 2009 with a securitization supported by the Federal Reserve's TALF program, continued at a very low level in the first half of 2010. The expiration of the legacy CMBS portion of the TALF program on March 31 had little apparent effect on issuance, and spreads on AAA-rated CMBS relative to comparable-maturity Treasury securities generally fell over the first half of the year, though they remained elevated in comparison with their pre-crisis levels.

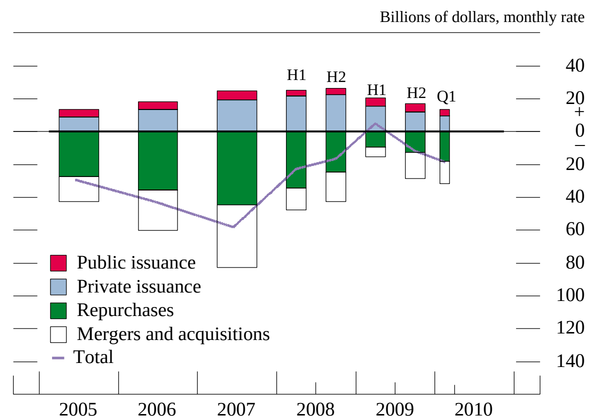
In the equity market, combined issuance from seasoned and initial offerings by nonfinancial firms slowed a bit in the first quarter of 2010 (figure 20). Meanwhile, equity retirements due to cash-financed merger and acquisition deals and share repurchases increased somewhat, leaving net equity issuance modestly negative.

The Government Sector

Federal Government

The deficit in the federal unified budget appears to be stabilizing—albeit at a very high level—after its sharp

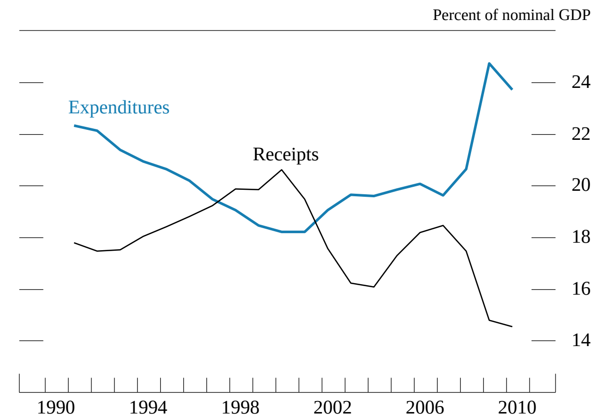
20. Components of net equity issuance, 2005–10



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. The data for 2010:Q1 are estimated.

SOURCE: Thomson Financial, Investment Benchmark Report; Money Tree Report by PricewaterhouseCoopers, National Venture Capital Association, and Venture Economics.

21. Federal receipts and expenditures, 1990–2010



NOTE: Through 2009, receipts and expenditures are for fiscal years (October through September); gross domestic product (GDP) is for the four quarters ending in Q3. For 2010, receipts and expenditures are for the 12 months ending in June, and GDP is the average of 2009:Q4 and 2010:Q1. Receipts and expenditures are on a unified-budget basis.

SOURCE: Office of Management and Budget.

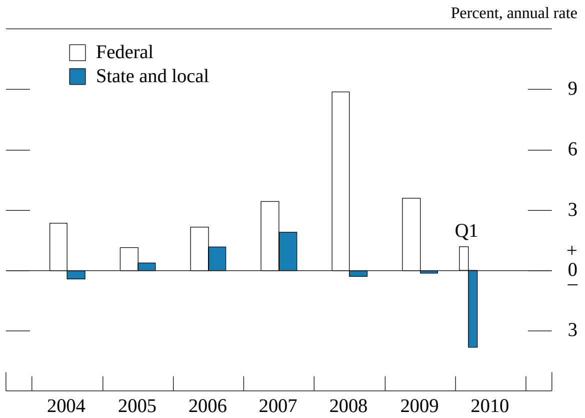
run-up in fiscal year 2009. Indeed, over the first nine months of fiscal 2010, the deficit was a little smaller than that recorded a year earlier, and the ongoing recovery in economic activity should help shore up revenues over the remainder of the fiscal year. Nonetheless, the deficit is still on track to exceed 9 percent of nominal GDP for fiscal 2010 as a whole, only a shade below the 10 percent figure for 2009 and substantially above the average value of 2 percent of GDP for fiscal years 2005 to 2007, prior to the onset of the recession and financial crisis. The budget costs of financial stabilization programs, which added significantly to the deficit in fiscal 2009, have helped reduce the deficit this year as the sum of (1) repayments and downward revisions of expected losses in the Troubled Asset Relief Program (TARP) and (2) banks' required prepayments to the Federal Deposit Insurance Corporation of three years of deposit insurance premiums has exceeded the additional payments by the Treasury to the housing-related GSEs. However, the deficit has continued to be boosted by the American Recovery and Reinvestment Act (ARRA) and other policy actions and by the still-low level of economic activity, which is damping revenues and pushing up cyclically sensitive outlays.

After falling 16½ percent in fiscal 2009, federal receipts edged up ½ percent in the first nine months of fiscal 2010 compared with the same period in fiscal 2009; they currently stand around 14½ percent of GDP—the lowest percentage in 60 years (figure 21). Taken together, individual income and payroll taxes were 4½ percent lower than a year earlier, in part because of the weakness in wage and salary income last fall and the low level of net final payments on 2009 tax liabilities this spring; in addition, the revenue provisions in ARRA had a larger negative effect on individual collections during the first nine months of fiscal 2010 than they did during the comparable period of fiscal 2009. In contrast, corporate receipts turned back up after a dramatic drop in 2008 and 2009.

Outlays through June were nearly 3 percent lower than those during the first nine months of fiscal 2009, but the decrease was more than accounted for by a marked downswing in total net outlays for the TARP, the GSE conservatorship, and federal deposit insurance. Excluding these financial transactions, outlays rose 10 percent compared with a year earlier, mainly because of the effects of the weak labor market on income-support programs (such as unemployment insurance and food stamps) and because of the spending associated with ARRA and other stimulus-related policies. In addition, net interest payments have been pushed up by the higher levels of outstanding debt.

As measured in the national income and product accounts (NIPA), real federal expenditures on consumption and gross investment—the part of federal spending that is a direct component of GDP—rose at an annual rate of only 1 percent in the first quarter (figure 22). Defense spending—which tends to be erratic from quarter to quarter—posted just a small rise, and nondefense purchases only inched up after a large stimulus-related increase in the second half of 2009. Real federal purchases likely increased somewhat faster in the second quarter, boosted by the surge in hiring for the decennial census.

22. Change in real government expenditures on consumption and investment, 2004–10

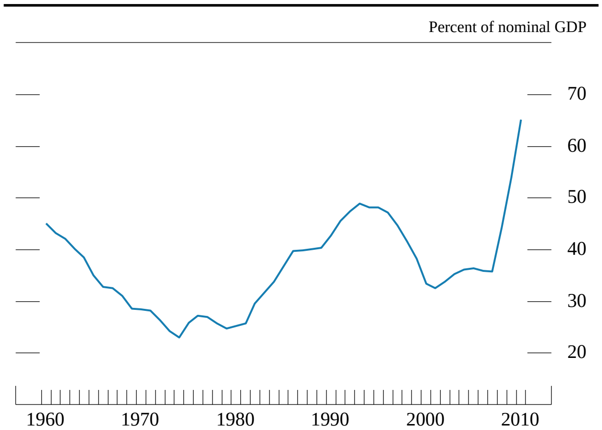


SOURCE: Department of Commerce, Bureau of Economic Analysis.

Federal Borrowing

Federal debt held by the public is projected to reach more than 65 percent of nominal GDP by the end of this year, the highest ratio seen in more than 50 years (figure 23). Despite the increase in financing needs, Treasury auctions have been mostly well received so far this year, and bid-to-cover ratios at those auctions were generally strong. Demand for Treasury securities was likely boosted by a desire for relatively safe and liquid assets in light of concerns about the consequences of fiscal strains in a number of European countries. Indicators of foreign demand for U.S. Treasury debt remained solid.

23. Federal government debt held by the public, 1960–2010



NOTE: The data for debt are as of year-end; the observation for 2010 is an estimate. The corresponding values for gross domestic product (GDP) are for Q4 at an annual rate. Excludes securities held as investments of federal government accounts.
SOURCE: Federal Reserve Board, flow of funds data.

State and Local Government

State and local governments, facing difficult situations, have continued to reduce expenditures on consumption and gross investment. Over the first six months of 2010, these governments cut roughly 100,000 jobs after a similar reduction in the second half of 2009 and kept a tight rein on operating expenditures to satisfy balanced budget requirements. Real construction expenditures dropped in the fourth quarter of 2009 and remained low in the first half of 2010 despite the availability of federal stimulus funds and supportive conditions in municipal bond markets. Capital expenditures are not typically subject to balanced budget requirements; however, debt service payments on the bonds used to finance capital projects are generally made out of operating budgets (and thus must compete with Medicaid and other high-priority programs for scarce funding), which may be deterring governments from undertaking new infrastructure projects.

As is the case at the federal level, the hemorrhaging of revenues that took a heavy toll on state and local budgets in 2008 and 2009 seems to be easing, and governments will continue to receive significant amounts of federal stimulus aid through the end of the year. Still, total state tax collections are well below their pre-recession levels, and available balances in reserve funds are low. At the local level, property taxes held up well through the first quarter, likely in part because lower real estate assessments have been offset by hikes in statutory tax rates in some areas; however, further increases in tax rates may encounter resistance, and many local governments are facing steep cutbacks in state aid. Moreover, many state and local governments will need to set aside money in coming years to rebuild their employee pension funds after the financial losses experienced over the past couple of years and to fund their ongoing obligations to provide health care to their retired employees.

State and Local Government Borrowing

Despite concerns over the fiscal positions and the financial health of state and local governments, the municipal bond market remained receptive to issuers over the first half of the year. Issuance of long-term municipal bonds was solid and continued to be supported by the Build America Bond program, which was authorized under ARRA.[7] Short-term municipal bond issuance was

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

moderate but generally consistent with typical seasonal patterns.

Interest rates on long-term municipal bonds on balance fell a bit less than those on comparable-maturity Treasury securities, leaving the ratio of their yields slightly elevated by historical standards. Downgrades of state and local government debt by credit agencies continued to exceed upgrades.

The External Sector

Following a substantial rebound in the second half of 2009, both real exports and imports continued to increase at a robust pace in the first quarter of this year (figure 24). While the cyclical recovery in real exports of goods and services remained strong, growth slowed from its 20 percent annual rate in the second half of last year to an 11 percent rate in the first quarter of 2010. Exports in almost all major categories expanded, with sales of industrial supplies, high-tech equipment, and services registering large increases. Exports of aircraft were the exception, as they slumped after a sizable increase in the fourth quarter of last year. Export demand from Mexico, Japan, Canada, and emerging Asia excluding China was especially vigorous, while exports to the European Union and China were flat. Data for April and May suggest that exports continued to rise at a solid pace in the second quarter.

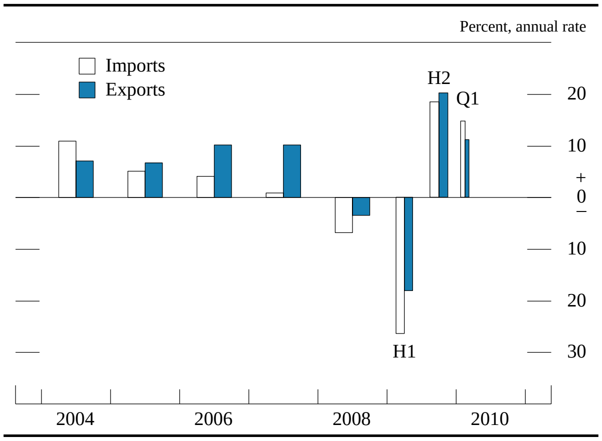
Real imports of goods and services rose at an annual rate of 15 percent in the first quarter, about the same pace as in the fourth quarter of last year. All major categories of imports rose, especially industrial supplies (including petroleum), capital goods, and consumer goods. Data for April and May suggest that imports continued to climb robustly in the second quarter, with automotive products and computers registering notable increases.

In the first quarter of 2010, the U.S. current account deficit reached an annual rate of $436 billion, approximately 3 percent of GDP (figure 25). The current account deficit has widened a little over the past few quarters, as imports have outpaced exports.

The spot price of a barrel of West Texas Intermediate crude oil started the year at about $80 and had risen to $86 by early May, continuing the rebound from last year's recession-induced lows as the global economic recovery progressed (figure 26). The price has since moved back down to about $77 as a result of increased concerns about the sustainability of the global recovery. The prices of longer-term futures contracts for crude oil (that is, those expiring in December 2018) also fell, from $100 per barrel in early May to $92 per barrel in mid-July. The upward-sloping futures curve is consistent with the view that, despite mounting worries about the near-term growth outlook, oil prices will rise again as global demand strengthens over the medium term.

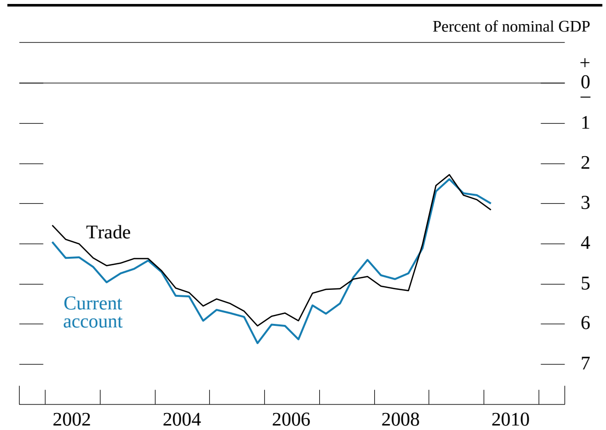
Nonfuel commodity prices have been mixed in 2010. Food prices have been roughly flat so far this year. Prices for metals and agricultural raw materials have been volatile; prices for these commodities rose into early April, as the global recovery continued, but since then have fallen sharply, reflecting the stronger value of the dollar and growing uncertainty about the outlook for the global economy. Market commentary also suggests that prices for metals have fallen because of concerns that policy tightening in China may slow its demand for those commodities.

24. Change in real imports and exports of goods and services, 2004–10



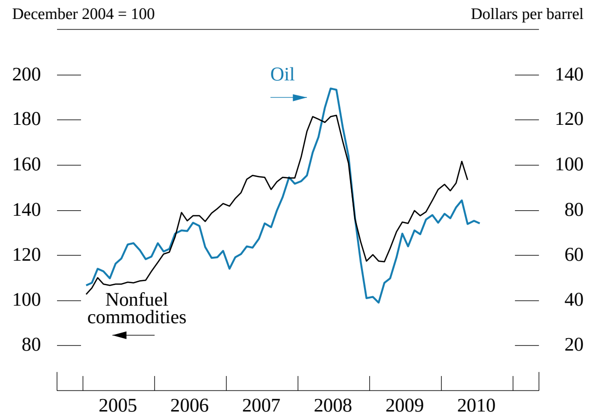
Source: Department of Commerce, Bureau of Economic Analysis.

25. U.S. trade and current account balances, 2002–10



Note: The data are quarterly and extend through 2010:Q1.
Source: Department of Commerce, Bureau of Economic Analysis.

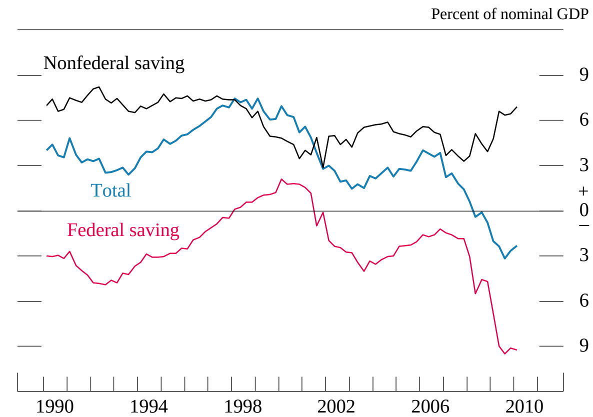
26. Prices of oil and nonfuel commodities, 2005–10



NOTE: The data are monthly. The oil price is the spot price of West Texas Intermediate crude oil, and the last observation is the average for July 1–14, 2010. The price of nonfuel commodities is an index of 45 primary-commodity prices and extends through May 2010.

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

27. Net saving, 1990–2010



NOTE: The data are quarterly and extend through 2010: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.

Prices of imported goods rose briskly in early 2010, boosted by the depreciation of the dollar in foreign exchange markets and the rise in commodity prices in late 2009. In the second quarter of this year, as commodity prices declined and the dollar appreciated, import price inflation slowed. Prices for imports of finished goods have, on average, been little changed in 2010.

National Saving

Total net national saving—that is, the saving of households, businesses, and governments excluding depreciation charges—remains very low by historical standards. After having reached 3¾ percent of nominal GDP in 2006, net national saving dropped steadily over the subsequent three years; since the start of 2009, it has averaged negative 2½ percent of nominal GDP (figure 27). The widening of the federal budget deficit over the course of the recession has more than accounted for the downswing in net saving since 2006, and the large federal deficit will likely cause national saving to remain low in the near term. Because the demand for funds for capital investment is currently relatively meager, the low rate of national saving is not being translated into higher real interest rates or increased foreign borrowing. However, if not boosted over the longer term, persistent low levels of national saving will likely be associated with upward pressure on interest rates, low rates of capital formation, and heavy borrowing from abroad, which would limit the rise in the standard of living of U.S. residents over time and hamper the ability of the nation to meet the retirement needs of an aging population.

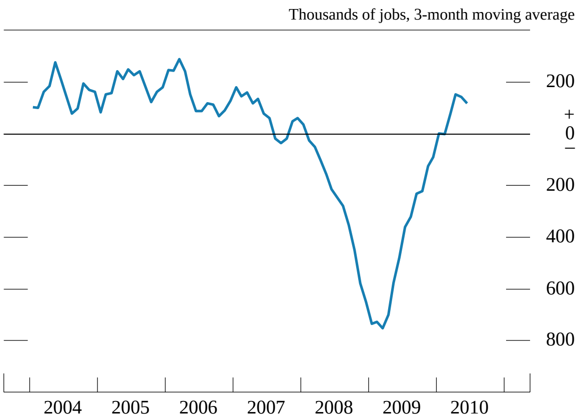
The Labor Market

Employment and Unemployment

The labor market bottomed out around the turn of the year and is now adding jobs across a range of industries, albeit at a modest pace. After falling steeply through most of 2009, nonfarm private payroll employment rose 100,000 per month, on average, over the first half of the year (figure 28).[8] Firms have also raised their labor input by increasing hours per worker. Indeed, the average workweek of employees, which had dropped sharply over the course of the recession, ticked up toward the end of 2009 and rose considerably over the first half of 2010; by June, it had recouped nearly one-half of its earlier decrease. The job gains to date have only been sufficient to about match the rise in the number of jobseekers, and the unemployment rate in the second quarter, at 9¾ percent on average, was only slightly below the recession high of 10 percent reached in the fourth quarter of last year (figures 29 and 30).

8. Total employment—private plus government—has exhibited unusually sharp swings of late, mainly because of the hiring of temporary workers for the decennial census. Census hiring started in earnest in March and peaked at about 400,000 in May. In June, the winding down of the census subtracted 225,000 workers from government payrolls. Apart from the census, government employment fell slightly on net over the first half of the year because of cutbacks at state and local governments.

28. Net change in private payroll employment, 2004–10

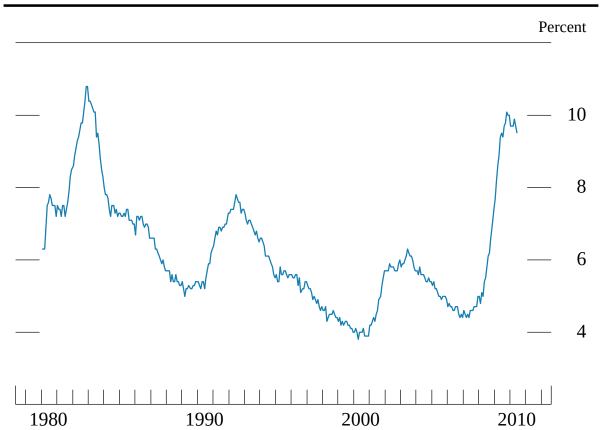


NOTE: The data are monthly and extend through June 2010.
SOURCE: Department of Labor, Bureau of Labor Statistics.

Other indicators are also consistent with a gradual improvement in labor market conditions this year. Measures of hiring and job openings have moved up from the low levels of 2009, as have readings from private surveys of hiring plans. In addition, layoffs have come down, although the relatively flat profile of initial claims for unemployment insurance in recent months suggests that the pace of improvement may have slowed lately.

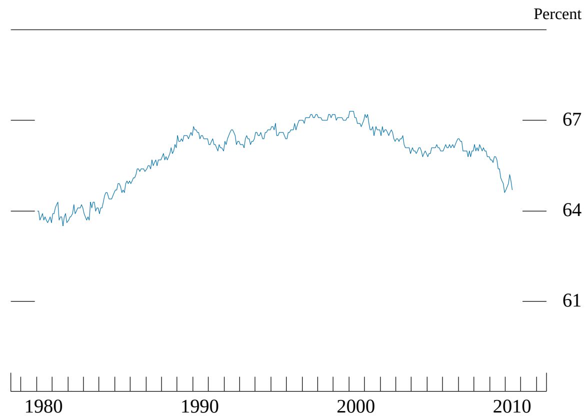
The economy remains far from full employment. The job gains this year have reversed only a small portion of the nearly 8½ million jobs lost during 2008 and 2009, and the unemployment rate is still at its highest level since the early 1980s. Moreover, long-term unemployment has continued to worsen—in June, 6.8 million persons, 600,000 more than at the end of

29. Civilian unemployment rate, 1980–2010



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

30. Labor force participation rate, 1980–2010



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

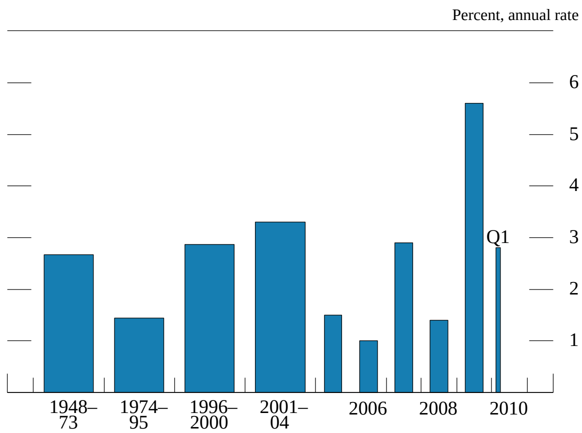
2009 and nearly one-half of the total unemployed, had been out of work for six months or more. Also, the number of workers who are working part time for economic reasons—another indicator of the underutilization of labor—has fallen only slightly this year and stands at nearly twice its pre-recession level.

Productivity and Labor Compensation

Labor productivity has continued to rise briskly, although not as rapidly as in 2009. According to the latest published data, output per hour in the nonfarm business sector rose at an annual rate of 2¾ percent in the first quarter after a 5½ percent advance in 2009 (figure 31). The continuing strong productivity gains reflect ongoing efforts by firms to improve the efficiency of their operations and their reluctance to increase their labor input in an uncertain economic environment.

Increases in hourly compensation continue to be restrained by the wide margin of slack in 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 2 percent or less since the start of 2009 after several years of increases in the neighborhood of 3 percent (figure 32). Compensation per hour in the nonfarm business sector—a measure derived from the labor compensation data in the NIPA—has also slowed noticeably over the past couple of years; though erratic from quarter to quarter, this measure rose just 1½ percent over the year ending in the first quarter of 2010. Similarly, average hourly earnings—the timeliest measure of wage developments—rose 1¾ percent

31. Change in output per hour, 1948–2010

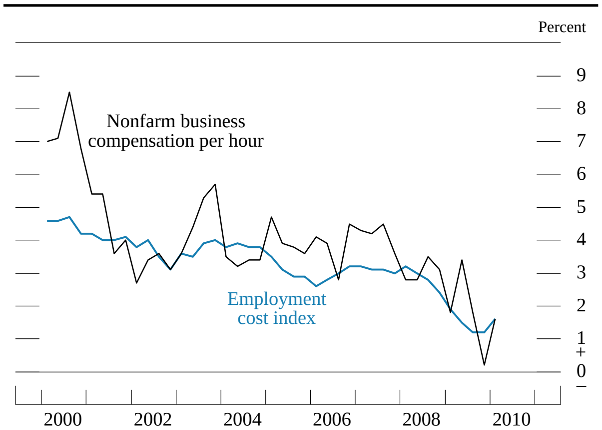


NOTE: Nonfarm business sector. Change for each multiyear period is measured to the fourth quarter of the final year of the period from the fourth quarter of the year immediately preceding the period.
SOURCE: Department of Labor, Bureau of Labor Statistics.

in nominal terms over the 12 months ending in June; as suggested earlier, this measure appears to have posted a modest increase in real terms over this period as a consequence of the low rate of consumer price inflation of late.

Reflecting the small rise in hourly compensation and the sizable advance in labor productivity, unit labor costs in the nonfarm business sector declined 4¼ percent over the year ending in the first quarter of 2010. Over the preceding year, unit labor costs had been flat.

32. Measures of change in hourly compensation, 2000–10



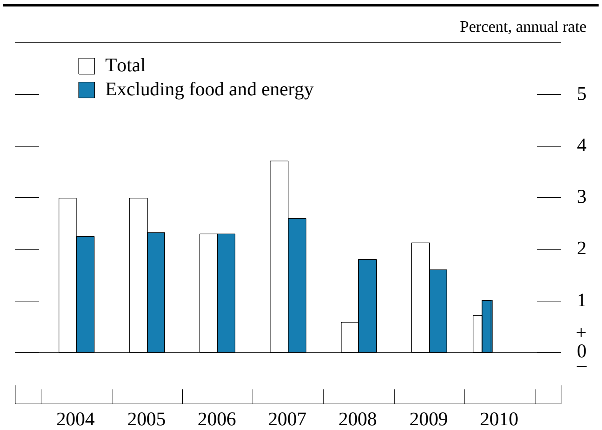
NOTE: The data are quarterly and extend through 2010:Q1. For nonfarm business compensation, change is over four quarters; for the employment cost index (ECI), change is over the 12 months ending in the last month of each quarter. The nonfarm business sector excludes farms, government, nonprofit institutions, 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.

Prices

Inflation diminished further in the first half of 2010. After rising 2 percent over the 12 months of 2009, the overall PCE chain-type price index increased at an annual rate of just ¾ percent between December 2009 and May 2010 as energy prices fell (figure 33). The core PCE price index—which excludes the prices of energy items as well as those of food and beverages—rose at an annual rate of 1 percent over the first 5 months of the year, compared with a rate of 1½ percent over the 12 months of 2009. This moderation was also evident in the appreciable slowing of inflation measures such as trimmed means and medians, which exclude the most extreme price movements in each period. Longer-run inflation expectations have been stable this year, with most survey-based measures remaining within the narrow ranges that have prevailed for the past few years.

Consumer energy prices continued to increase in January after a steep rise in the second half of 2009, but they turned down in February and fell further through midyear. Gasoline prices registered sizable decreases—especially in May and June—reflecting the ample inventories and drop in the price of crude oil in May. Although spot prices for natural gas were pushed up during the winter by unusually cold weather in some major consuming regions, they too fell on net over the spring and early summer as inventories remained high. Retail prices for electricity have fluctuated this year in response to movements in the cost of fossil fuel inputs, but on net they have changed little since the end of 2009.

33. Change in the chain-type price index for personal consumption expenditures, 2004–10



NOTE: Through 2009, change is from December to December; for 2010, change is from December to May.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Consumer food prices rose at an annual rate of 1¾ percent between December 2009 and May 2010, boosted by higher prices for meats and for fruits and vegetables. Farm prices drifted down through the end of June as reports on crop production pointed to an abundant harvest, though they have moved up a bit in recent weeks.

The slowdown in core PCE inflation has been centered in prices of core goods, which declined at an annual rate of 1½ percent, on net, over the first five months of 2010 after rising 1½ percent in 2009. The deceleration in core goods prices was widespread and occurred despite sizable increases in prices for some industrial commodities and materials. Meanwhile, prices of services other than energy posted only a small increase over this period, as the softness in the housing market continued to put downward pressure on housing costs and as prices of other services were restrained by the wide margin of economic slack.

Survey measures of inflation expectations have been relatively stable this year. In the preliminary Thomson Reuters/University of Michigan Surveys of Consumers for July, median year-ahead inflation expectations stood at 2.9 percent. Median 5- to 10-year inflation expectations were also at 2.9 percent in early July—a reading that is in line with the average value for 2009 and the first half of 2010. In the Survey of Professional Forecasters, conducted by the Federal Reserve Bank of Philadelphia, expectations for the increase in the consumer price index over the next 10 years remained around 2½ percent in the second quarter, a level that has been essentially unchanged for many years.

Financial Developments

The recovery of the financial system that began in the spring of 2009 generally continued through the early spring of 2010, but in recent months concerns about spillovers from the fiscal pressures in a number of European countries and the durability of the global recovery have led to the reemergence of strains in some markets.

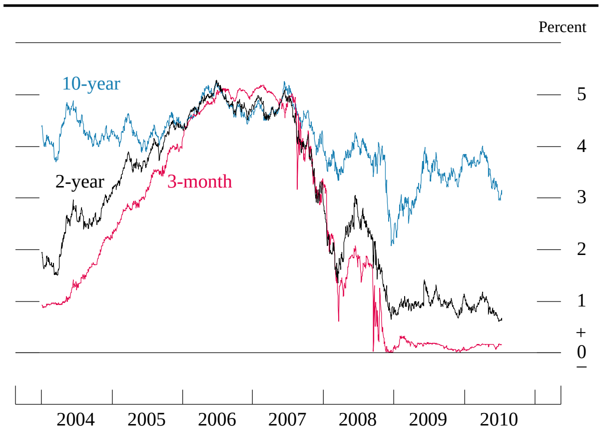
Monetary Policy Expectations and Treasury Rates

On balance over the first half of 2010, market participants pushed back their expected timing of the first increase in the target federal funds rate from its current range of 0 to ¼ percent, and they scaled back their expectations of the pace with which monetary policy accommodation would be removed. Quotes on money market futures contracts imply that, as of mid-July 2010, investors' expected trajectory for the federal funds rate rises above the current target range in the first quarter of 2011, two quarters later than the quotes implied at the start of 2010. Investors also expect, on average, that the effective federal funds rate will be around 1 percent by the middle of 2012, about 1¼ percentage points lower than anticipated at the beginning of this year. The expected path for monetary policy appeared to move lower in response to the mounting fiscal strains in Europe and weaker-than-expected U.S. economic data releases. The drop probably also reflected Federal Reserve communications, including the repetition in the statement released after each meeting of the Federal Open Market Committee that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for an extended period.

Yields on longer-term nominal Treasury securities fell noticeably, on net, over the first half of the year, while two-year yields fell somewhat less (figure 34). Yields were generally little changed during the first quarter but dropped in the second quarter along with the decline in the expected path for monetary policy. Increased demand for Treasury securities by investors looking for a haven from volatility in other markets has likely contributed to the decline in yields. On balance, over the first half of the year, yields on 2-year Treasury notes decreased about ½ percentage point to about ¾ percent, and yields on 10-year notes fell about ¾ percentage point to about 3 percent.

Yields on Treasury inflation-protected securities, or TIPS, declined substantially less than those on their

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



Note: The data are daily and extend through July 14, 2010.
Source: Department of the Treasury.

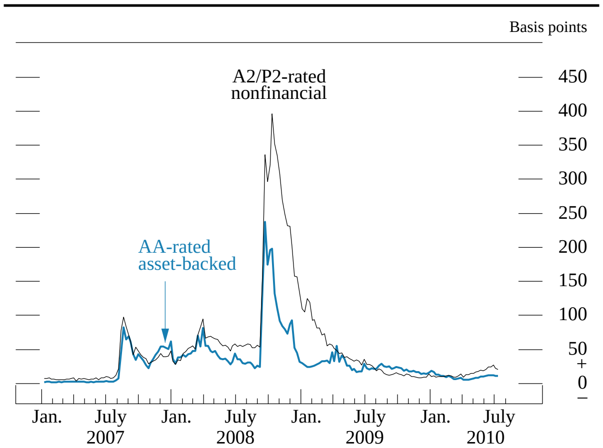
nominal counterparts over the first half of the year, resulting in lower medium- and long-term inflation compensation. The decline in inflation compensation may have partly reflected a drop in inflation expectations given the subdued rates of growth in major price indexes over the period and indications that economic slack would remain substantial for some time. However, inferences about investors' inflation expectations based on TIPS have been complicated over recent years by special factors such as the safe-haven demands for nominal Treasury securities and changes over time in the relative liquidity of TIPS and nominal Treasury securities.

Other Interest Rates and Equity Markets

In the commercial paper market, over the first half of 2010, yields on lower-quality A2/P2-rated paper and on AA-rated asset-backed commercial paper rose a bit from low levels, pushing up spreads over higher-quality AA-rated nonfinancial commercial paper (figure 35). Even so, spreads on both types of assets remain near the low end of the range observed since the fall of 2007.

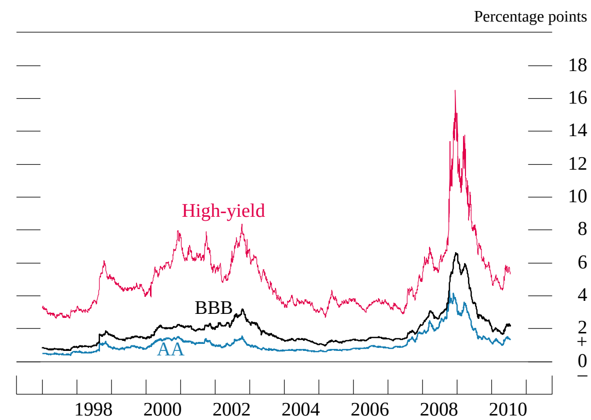
Yields on corporate bonds rated AA and BBB fell by less than those on comparable-maturity Treasury securities over the first half of the year, resulting in a noticeable increase in risk spreads (figure 36). Yields on speculative-grade corporate bonds fell during much of the first quarter but rose sharply during the second, leaving yields higher on net over the period and spreads somewhat more elevated. The widening of spreads

35. Commercial paper spreads, 2007–10



Note: The data are weekly and extend through July 14, 2010. Commercial paper yield spreads are for an overnight maturity and are expressed relative to the AA nonfinancial rate.
Source: Depository Trust and Clearing Corporation.

36. Spreads of corporate bond yields over comparable off-the-run Treasury yields, by securities rating, 1997–2010

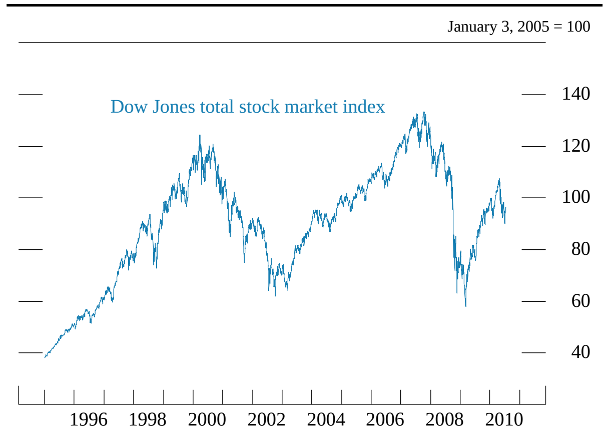


Note: The data are daily and extend through July 14, 2010. The spreads shown are the yields on 10-year bonds less the 10-year Treasury yield.
Source: Derived from smoothed corporate yield curves using Merrill Lynch bond data.

appears to reflect a decrease in demand for risky assets stemming from concerns about developments in Europe and the outlook for the global economy.

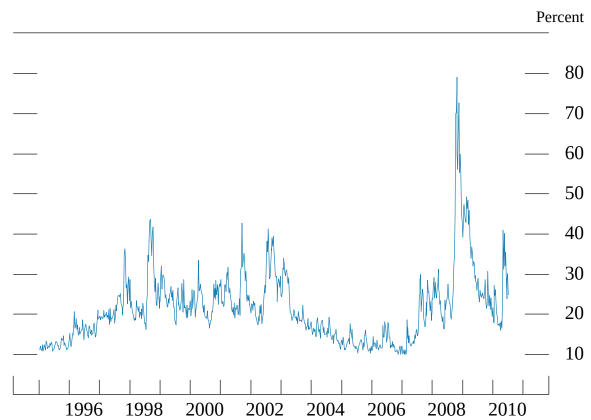
Similarly, broad equity price indexes, which rose in the first quarter, owing both to relatively strong earnings reports and to some better-than-expected economic data releases, fell back in the second quarter (figure 37). The second-quarter decline was broad based, encompassing most major equity market categories, and was consistent with movements in the prices of a wide variety of other asset classes. Implied volatility of the S&P 500, as calculated from option prices, spiked

37. Stock price index, 1995–2010



Note: The data are daily and extend through July 14, 2010.
Source: Dow Jones Indexes.

38. Implied S&P 500 volatility, 1995–2010

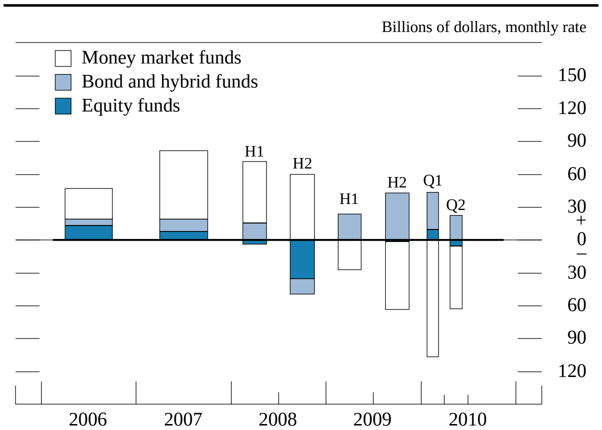


NOTE: The data are weekly and extend through the week ending July 16, 2010. The final observation is an estimate based on data through July 14, 2010. The series shown—the VIX—is the implied 30-day volatility of the S&P 500 stock price index as calculated from a weighted average of options prices.
SOURCE: Chicago Board Options Exchange.

upward in May before receding somewhat, then ended the first half of the year at a still-elevated level (figure 38).

Against a backdrop of declining equity prices and increases in equity market volatility, equity mutual funds experienced outflows in the second quarter; they had posted modest inflows in the first quarter after having been nearly flat for much of 2009 (figure 39). Most categories of bond funds and hybrid funds (which invest in a mix of bonds and equities) continued to show sizable inflows in the first half of 2010, although high-yield bond funds registered outflows as spreads widened in the second quarter. Money market mutual funds recorded large outflows, likely reflecting the very

39. Net flows into mutual funds, 2006–10



NOTE: The data exclude reinvested dividends and are not seasonally adjusted. The data for 2010:Q2 are estimated.
SOURCE: Investment Company Institute.

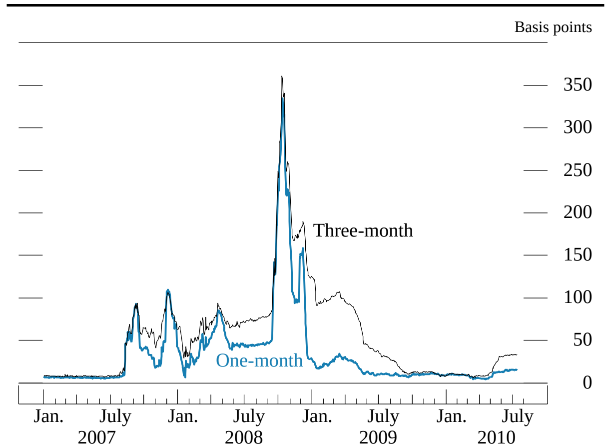
low yields on those assets relative to other short-term investments.

Financial Market Functioning

Financial market functioning continued to improve, on balance, during the first half of 2010. However, strains emerged in some markets. For example, the spread between the London interbank offered rate (Libor) and the rate on comparable-maturity overnight index swaps (OIS)—a measure of stress in short-term bank funding markets—widened over the first half of the year (figure 40). The increases in Libor-OIS spreads were more pronounced at longer maturities. In securities financing markets, bid-asked spreads and haircuts applied to collateral fell slightly.

In order to expand the availability of information on developments with respect to credit and leverage outside the traditional banking sector, the Federal Reserve initiated a Senior Credit Officer Opinion Survey on Dealer Financing Terms (SCOOS). The SCOOS surveys senior credit officers at about 20 U.S. and foreign dealers that, in the aggregate, provide the vast majority of the financing of dollar-denominated securities to nondealers and are the most active intermediaries in over-the-counter (OTC) derivative instruments. The survey will be conducted on a quarterly basis. In the first survey, conducted in late May and early June, dealers generally reported that the terms at which

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



NOTE: The data are daily and extend through July 14, 2010. An overnight index swap (OIS) is an interest rate swap with the floating rate tied to an index of daily overnight rates, such as the effective federal funds rate. At maturity, two parties exchange, on the basis of the agreed notional amount, the difference between interest accrued at the fixed rate and interest accrued by averaging the floating, or index, rate. Libor is the London interbank offered rate.
SOURCE: For Libor, British Bankers' Association; for the OIS rate, Prebon.

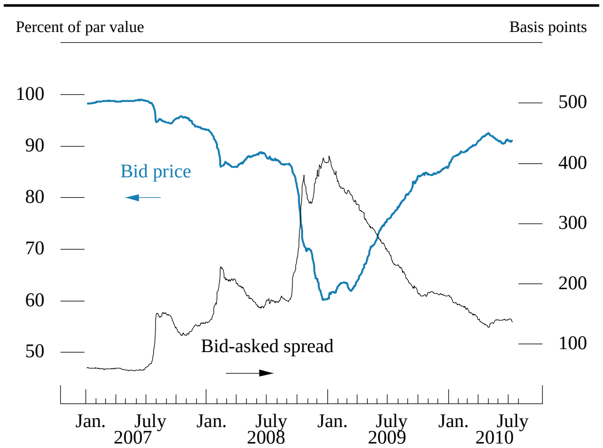
they provided credit were tight relative to those at the end of 2006.[9] However, they noted some loosening of terms for both securities financing and OTC derivative transactions, on net, over the previous three months for certain classes of clients—including hedge funds, institutional investors, and nonfinancial corporations—and intensified pressures by those clients to negotiate more-favorable terms. At the same time, they reported a pickup in demand for financing across several collateral types over the past three months.

The SCOOS results are consistent with market commentary suggesting that financial system leverage had begun to pick up in early 2010. However, leverage reportedly fell back in May against the backdrop of heightened market volatility. Hedge funds, which had earned solid returns on average during the first few months of the year, posted a sharp decline in May.

Conditions in the leveraged loan market continued to improve on balance over the first half of 2010. Gross issuance of such loans picked up slightly during that period from very low levels in 2009, as loan pools issuing collateralized loan obligations (CLOs) moved to reinvest the cash received from companies that had paid down older loans with the proceeds of bond issues. New CLO issuance, which had nearly ceased in the second half of 2009, also began to pick up in the second quarter of 2010. The recovery in investor demand for syndicated loans was evident in the secondary market as well, where average bid-asked spreads declined, on net, over the first half of 2010, and bid prices moved closer to par (figure 41).

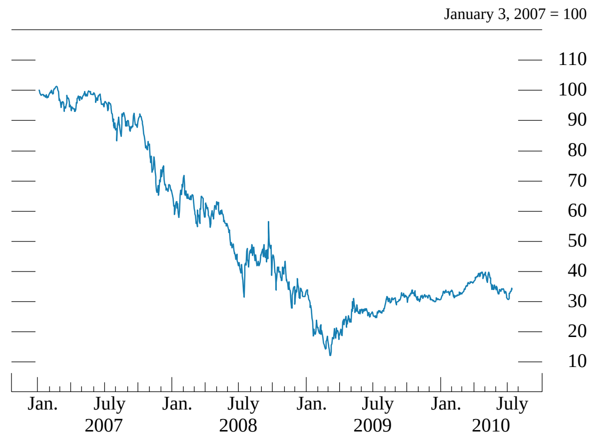
9. The SCOOS is available on the Federal Reserve Board's website at www.federalreserve.gov/econresdata/releases/scoos.htm.

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



NOTE: The data are daily and extend through July 14, 2010.
SOURCE: LSTA/Thomson Reuters Mark-to-Market Pricing.

42. Equity price index for banks, 2007–10



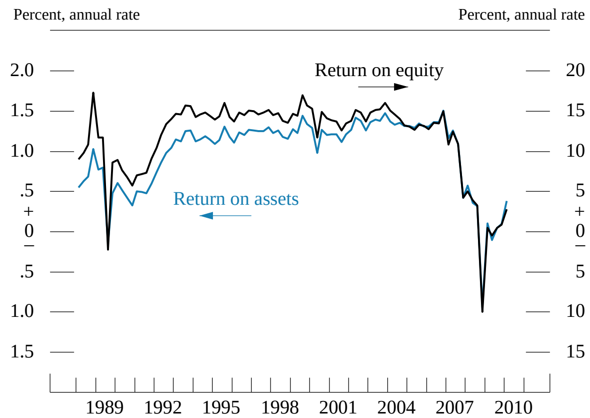
NOTE: The data are daily and extend through July 14, 2010.
SOURCE: Standard & Poor's.

Financial Institutions

Investor sentiment regarding the outlook for commercial banks, which had generally improved during the first quarter, became more pessimistic during the second quarter. Equity prices of commercial banks generally outperformed the broader market over the first quarter, before declining about in line with equity market indexes during the second (figure 42). Bank equity prices were likely boosted slightly by modest improvements in returns on equity and assets in the first quarter, although both profitability measures remained near the bottom end of their ranges of the past 20 years (figure 43). After adjusting for the effects of changes in the accounting treatment of securitized assets, net interest margins rose noticeably in the first quarter, while provisions for loan losses declined, consistent with responses to the January SLOOS that pointed to an improvement in banks' outlook on credit quality.[10] Smaller commercial banks collectively registered their first profitable quarter in more than a year in the first quarter.

10. The Financial Accounting Standards Board's Statements of Financial Accounting Standards Nos. 166 and 167 (FAS 166 and 167) modified the basis for determining whether a firm must consolidate securitized assets (as well as the associated liabilities and equity) onto its balance sheet. Most banking institutions were required to implement the standards in the first quarter of 2010. Banks are estimated to have brought $435 billion of loans back onto their books, of which about three-fourths were credit card loans, and increased their allowance for loan and lease losses by about $36 billion. For additional detail on the effects of FAS 166 and 167 on banks' balance sheets, see the "Notes on the Data" portion of Board of Governors of the Federal Reserve System, Statistical Release H.8, "Assets and Liabilities of Commercial Banks in the United States," www.federalreserve.gov/releases/h8/h8notes.htm.

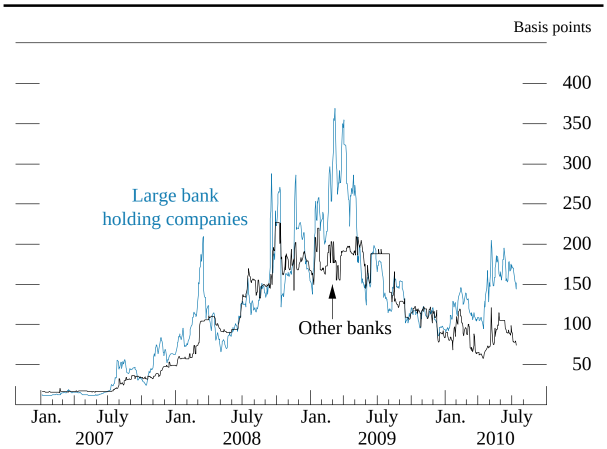
43. Commercial bank profitability, 1988–2010



NOTE: The data are quarterly and extend through 2010:Q1.
SOURCE: Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).

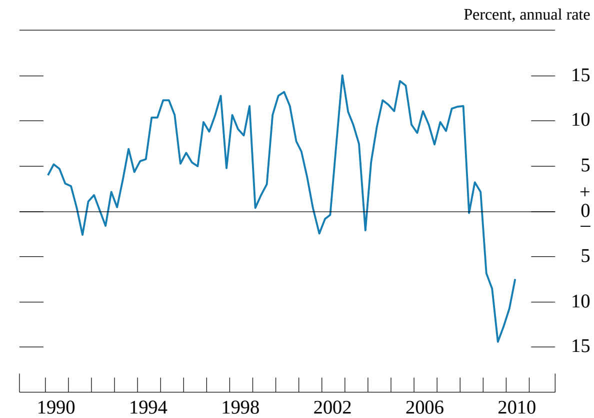
Credit default swap (CDS) spreads for banking institutions—which primarily reflect investors' assessments of and willingness to bear the risk that those institutions will default on their debt obligations—increased on net over the first half of the year, particularly for larger banking organizations (figure 44). The widening in CDS spreads reportedly reflected uncertainty about the outcome of legislation to reform the financial system as well as concerns about developments in Europe and their implications for the robustness of the U.S. and global economic recovery. The overall delinquency rate on loans held by commercial banks increased somewhat in the first quarter of 2010, as continued deterioration in the credit quality of residential mortgages offset

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



NOTE: The data are daily and extend through July 14, 2010. Median spreads for six bank holding companies and nine other banks.
SOURCE: Markit.

45. Change in total bank loans, 1990–2010



NOTE: The data, which are seasonally adjusted, are quarterly and extend through 2010:Q2. 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."

decreases in delinquency rates on most other categories of loans.

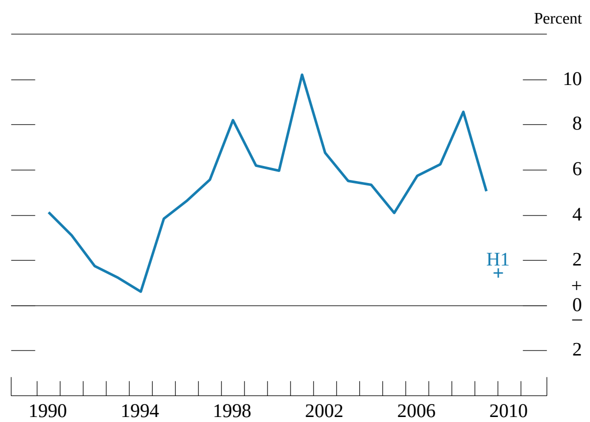
With loan demand reportedly continuing to be weak and credit conditions remaining tight, total loans on banks' books contracted during the first half of the year, though less rapidly than they had during the second half of 2009 (figure 45). After adjusting for the effects of changes in the accounting treatment of securitizations, all major categories of loans posted sizable declines. Securities holdings rose, on balance, reflecting substantial accumulation of Treasury securities. Cash assets also posted noticeable increases. However, total and risk-weighted assets shrank even as banks continued to raise capital, resulting in increases in regulatory capital ratios to historical highs.

Monetary Aggregates and the Federal Reserve's Balance Sheet

The M2 monetary aggregate rose only modestly in the first half of 2010 (figure 46).[11] Liquid deposits expanded

11. 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

46. M2 growth rate, 1990–2010



NOTE: The data extend through 2010:Q1 and are estimated for 2010:Q2. Through 2009, the data are annual on a fourth-quarter over fourth-quarter basis; the final observation refers to 2010:Q2 relative to 2009:Q4 at an annual rate. For definition of M2, see text note 11.

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

moderately, likely reflecting heightened household demand for safe and liquid assets. That increase was only partially offset by continued large outflows from small time deposits and retail money market mutual funds that likely reflected the very low rates of return offered on those products compared with other assets. The currency component of the money stock expanded moderately in the first half of the year. The monetary base—roughly equal to the sum of currency in circulation and the reserve balances of depository institutions held at the Federal Reserve—increased at a 3½ percent annual rate in the first half of 2010, well below the 30 percent rate posted in the second half of 2009. The slower growth rate was largely attributable to the more gradual expansion in reserve balances as the Federal Reserve's program of large-scale asset purchases came to an end.

The size of the Federal Reserve's balance sheet remained at a historically high level in mid-2010 (table 1). Total Federal Reserve assets on July 7, 2010, stood at about $2.3 trillion, about $100 billion more than at the end of 2009. The increase is largely attributable to the completion on March 31 of the Federal Reserve's program to purchase agency debt and agency mortgage-backed securities. Securities holdings, the vast majority of Federal Reserve assets, increased from about $1.8 trillion to about $2.1 trillion over the first half of the year.

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.

1. Selected components of the Federal Reserve balance sheet, 2009–10

Millions of dollars

Balance sheet item	Dec. 30, 2009	July 7, 2010
Total assets	**2,237,258**	**2,335,457**
Selected assets		
Credit extended to depository institutions and dealers		
Primary credit	19,111	17
Term auction credit	75,918	...
Central bank liquidity swaps	10,272	1,245
Primary Dealer Credit Facility and other broker-dealer credit	0	...
Credit extended to other market participants		
Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility.	0	...
Net portfolio holdings of Commercial Paper Funding Facility LLC	14,072	1
Term Asset-Backed Securities Loan Facility	47,532	42,278
Support of critical institutions		
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC[1]	65,024	66,996
Credit extended to American International Group, Inc.	22,033	24,560
Preferred interests in AIA Aurora LLC and ALICO Holdings LLC	25,000	25,733
Securities held outright		
U.S. Treasury securities	776,587	776,997
Agency debt securities	159,879	164,762
Agency mortgage-backed securities (MBS)[2]	908,257	1,118,290
MEMO		
Term Securities Lending Facility[3]	0	...
Total liabilities	**2,185,139**	**2,278,523**
Selected liabilities		
Federal Reserve notes in circulation	889,678	907,698
Reverse repurchase agreements	70,450	62,904
Deposits held by depository institutions	1,025,271	1,061,239
Of which: Term deposits	...	2,122
U.S. Treasury, general account	149,819	16,475
U.S. Treasury, supplemental financing account	5,001	199,963
Total capital	**52,119**	**56,934**

NOTE: LLC is a limited liability company.

1. The Federal Reserve has extended credit to several LLCs in conjunction with efforts to support critical institutions. Maiden Lane LLC was formed to acquire certain assets of The Bear Stearns Companies, Inc. Maiden Lane II LLC was formed to purchase residential mortgage-backed securities from the U.S. securities lending reinvestment portfolio of subsidiaries of American International Group, Inc. (AIG). Maiden Lane III LLC was formed to purchase multi-sector collateralized debt obligations on which the Financial Products group of AIG has written credit default swap contracts.

2. Includes only MBS purchases that have already settled.

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

... Not applicable.

SOURCE: Federal Reserve Board.

On February 1, 2010, in light of improved functioning in financial markets, the Federal Reserve closed the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, the Commercial Paper Funding Facility, the Primary Dealer Credit Facility, and the Term Securities Lending Facility. On March 8, the Federal Reserve conducted the final auction under the Term Auction Facility. With the closure of these facilities, the amount of credit extended by these programs fell to zero from roughly $100 billion at year-end. In addition, the terms on the primary credit facility were adjusted to increase the cost of funds to ¾ percent and to reduce the typical maturity of these loans to one day.[12] In response, primary credit declined from about $19 billion to about $17 million over the first half of the year. On June 30, the Federal Reserve closed the Term Asset-Backed Securities Loan Facility (TALF). About $42 billion in TALF loans, which have maturities of three or five years, remain on the Federal Reserve's balance sheet.

These broad-based programs, which were introduced during the crisis to provide liquidity to financial institutions and markets, contributed to the stabilization of financial markets and helped support the flow of credit to the economy—at no loss to the taxpayer. All of the loans extended through these programs that have come due have been repaid in full, with interest.

The credit provided to American International Group, Inc. (AIG), increased slightly, on net, over the first half of the year, in part because additional borrowing through this facility was used to pay down outstanding commercial paper that had been issued to the Commercial Paper Funding Facility LLC (limited liability company). The net portfolio holdings of Maiden Lane LLC—which was created in conjunction with efforts to avoid a disorderly failure of The Bear Stearns Companies, Inc.—increased as the recovery in financial markets boosted the fair value of the assets held in that LLC. Consistent with the terms of the transaction, the distribution of the proceeds realized on the asset portfolio held by Maiden Lane LLC will occur on a monthly basis going forward unless otherwise directed by the Federal Reserve. The monthly distributions will cover the expenses and repay the obligations of the LLC, including the principal and interest on the loan from the Federal Reserve Bank of New York, according to the priority established in the terms of the transaction. The portfolio holdings of Maiden Lane II LLC and Maiden Lane III LLC—which were created in conjunction with efforts to avoid the disorderly failure of AIG—decreased as prepayments and redemptions of some of the securities held in those portfolios were used to pay down the loans extended by the Federal Reserve Bank of New York. The Federal Reserve does not expect to incur a net loss on any of the secured loans provided during the crisis to help prevent the disorderly failure of systemically significant financial institutions.

12. The primary credit rate had been ½ percent, and the maximum maturity of primary credit loans had been 90 days.

On the liabilities side of the Federal Reserve's balance sheet, reserve balances averaged just over $1 trillion over the first six months of 2010. The Federal Reserve made preparations to conduct small-scale reverse repurchase operations to ensure its ability to use agency MBS collateral for such transactions, and the first small-value auctions in the Term Deposit Facility program were conducted in June and July. Reverse repurchase operations and the Term Deposit Facility are among the tools that the Federal Reserve will have at its disposal to drain reserves from the banking system at the appropriate time. The Treasury's supplementary financing account, which had fallen to about $5 billion when the statutory debt ceiling was approached last year, returned to its previous level of about $200 billion after the statutory debt ceiling was raised in early 2010.

On April 21, the Federal Reserve System released the 2009 annual comparative financial statements for the combined Federal Reserve Banks, the 12 individual Federal Reserve Banks, the LLCs that were created as part of the Federal Reserve's response to strains in financial markets, and the Board of Governors. The statements showed that the Reserve Banks' comprehensive income was just over $53 billion for the year ending December 31, 2009, an increase of nearly $18 billion from 2008. The increase in earnings was primarily attributable to the increase in the Federal Reserve's holdings of agency debt and agency MBS. The consolidated LLCs also contributed to the increase in the Reserve Banks' comprehensive income. The Reserve Banks transferred more than $47 billion of their $53 billion in comprehensive income to the U.S. Treasury in 2009, an increase of more than $15 billion—or about 50 percent—from the amount transferred in 2008.

International Developments

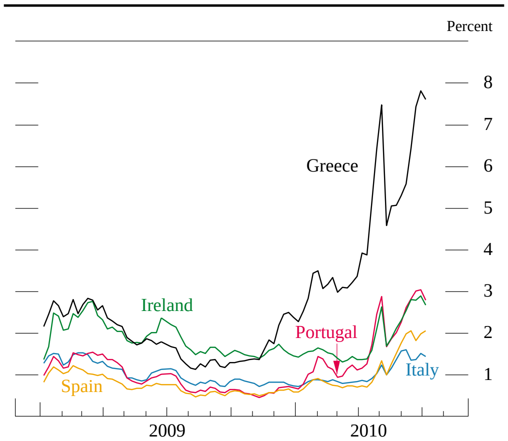
International Financial Markets

In recent months, global financial markets have been roiled by the Greek fiscal crisis and the resultant concerns about the European outlook more broadly (see box on European fiscal stress). Fears about the exposure of euro-area financial institutions to Greece and other vulnerable euro-area countries also resulted in pressure in dollar funding markets (see box on dollar funding pressures). Risk-related flows into safe investments lifted the value of the dollar and lowered yields on the sovereign bonds of most major advanced economies, including the United States. On net for the first half of

European Fiscal Stress and Policy Responses

The fiscal crisis in Greece and its ramifications for Europe have been a source of anxiety in global financial markets in recent months. Concerns about Greece began mounting around the turn of the year after announcements revealed the government's deficit to be considerably larger than initially estimated. Despite the announcement by the Greek government of plans to implement significant fiscal consolidation, the spread of yields on Greek sovereign bonds over those of German bonds soared during the spring, as market confidence in the ability of Greece to meet its fiscal obligations diminished (figure A). At the same time, concerns also spread to other euro-area countries with high debt and deficit ratios, including Portugal, Spain, and Ireland. On May 2, with the Greek government and banking sectors having difficulty obtaining market finance, the European Union and International Monetary Fund (IMF) announced a joint €110 billion financial support package for Greece. Disbursement of the support, in the form of loans to be distributed over three years, is contingent on aggressive fiscal consolidation, which would bring the country's budget deficit from almost 14 percent of gross domestic product in 2009 to below 3 percent by 2014.

A. Ten-year government debt spreads for peripheral European economies, 2009–10



Note: The data are weekly. The last observation for each series is July 9, 2010. The spreads shown are the yields on 10-year bonds less the 10-year German bond yield.
Source: Bloomberg.

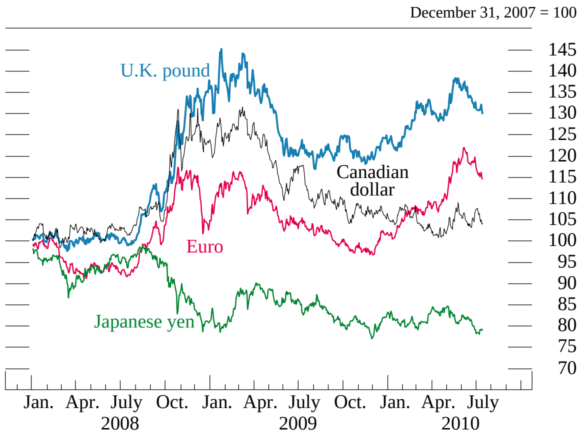
The announcement of the May 2 package assuaged investor concerns only briefly. Spreads on Greek sovereign debt and that of other vulnerable euro-area economies moved up sharply in the week after the announcement, and dollar funding strains for many euro-area institutions intensified.

In response, European leaders announced much broader stabilization measures on May 10. One set of initiatives addressed sovereign risk, providing up to €500 billion in funds—€60 billion through a European Financial Stabilization Mechanism and €440 billion from a special purpose vehicle, the European Financial Stabilization Facility, which is authorized to raise funds in capital markets backed by guarantees from euro-area member states. These funds may also be augmented with bilateral loans from the IMF. The European Central Bank (ECB) simultaneously announced that it was prepared to purchase government and private debt securities to ensure the depth and liquidity of euro-area debt markets that were considered dysfunctional. In addition, the ECB expanded its liquidity provision facilities. Finally, to forestall an emerging shortage of dollar liquidity, the Federal Reserve reopened temporary U.S. dollar liquidity swap lines with the ECB and four other major central banks.

The announcement of these measures and the subsequent purchases of sovereign debt by the ECB led to an improvement in market sentiment and a considerable drop in spreads, but spreads have since moved up. This renewed increase is due, at least in part, to market concerns about the growth implications of the significant and synchronized fiscal consolidation efforts being implemented across the euro area.

Considerable uncertainties also remain about the exposure of financial institutions to vulnerable countries and about the financial position of these institutions more generally. European governments are currently working to address these uncertainties through a coordinated set of bank stress tests.

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

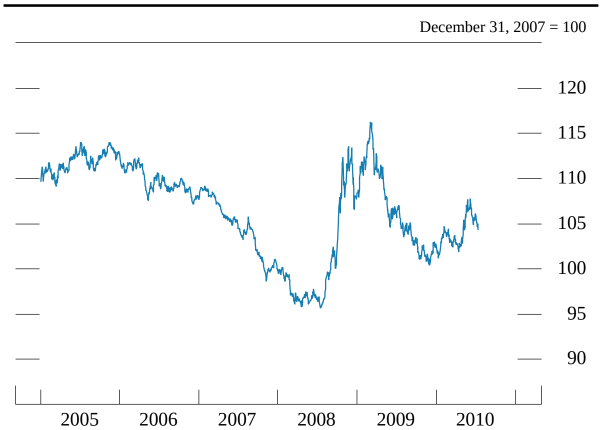


NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for each series is July 14, 2010.
SOURCE: Federal Reserve Board, Statistical Release H.10, "Foreign Exchange Rates."

the year, the dollar has appreciated, and foreign stock markets and the yields on benchmark sovereign bonds have moved down.

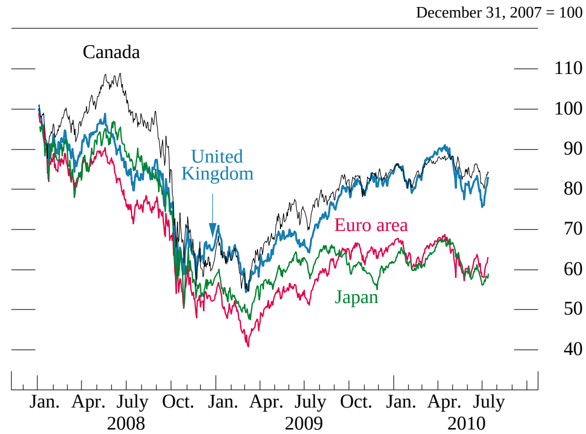
In the first quarter of this year, a sense that the U.S. recovery was proceeding more rapidly than the recovery in Europe led the dollar to appreciate against the euro and sterling (figure 47), while strong growth in emerging Asia led the dollar to depreciate against many emerging market currencies. These divergent

48. U.S. dollar nominal exchange rate, broad index, 2005–10



NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for the series is July 14, 2010. The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of the most important U.S. trading partners. The index weights, which change over time, are derived from U.S. export shares and from U.S. and foreign import shares.
SOURCE: Federal Reserve Board, Statistical Release H.10, "Foreign Exchange Rates."

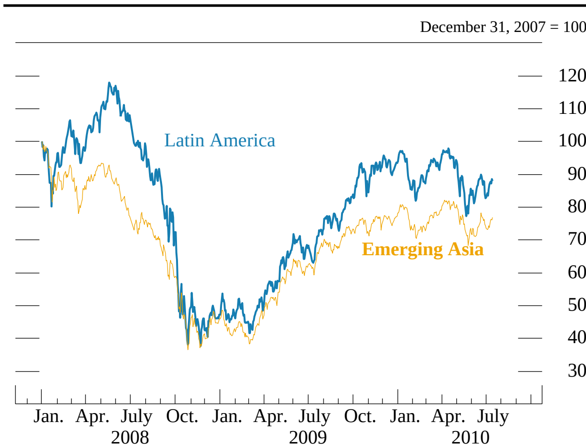
49. Equity indexes in selected advanced foreign economies, 2008–10



NOTE: The data are daily. The last observation for each series is July 14, 2010. Because the Tokyo Stock Exchange was closed on December 31, 2007, the Japan index is scaled so that the December 28, 2007, closing value equals 100. For euro area, Dow Jones Euro STOXX Index; for Canada, Toronto Stock Exchange 300 Composite Index; for Japan, Tokyo Stock Exchange (TOPIX); and for the United Kingdom, London Stock Exchange (FTSE 350).
SOURCE: Bloomberg.

movements left the Federal Reserve's broadest measure of the nominal trade-weighted foreign exchange value of the dollar little changed by the end of the first quarter (figure 48). Foreign equity indexes generally rose modestly during the first quarter, as the effect of improving growth prospects in some regions was only partly offset by concerns about Greece (figures 49 and 50). Those concerns led yields on the sovereign bonds of Germany

50. Aggregate equity indexes for emerging market economies, 2008–10



NOTE: The data are daily. The last observation for each series is July 14, 2010. 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: Morgan Stanley Capital International (MSCI) index.

Dollar Funding Pressures and the Reinstitution of Central Bank Swap Lines

In March, dollar funding pressures began to reemerge in the euro area as uncertainties about the condition of some euro-area financial institutions were amplified by concerns about their possible exposures to Greece and other peripheral euro-area economies. The London interbank offered rate, or Libor, for U.S. dollars increased sharply in late April.

In response to the intensification of these dollar funding strains, the Federal Open Market Committee reestablished dollar liquidity swap lines on May 9 and 10 with the European Central Bank (ECB), the Bank of England, the Bank of Canada, the Bank of Japan, and the Swiss National Bank. So far, drawings on the lines have been limited, with only the ECB and the Bank of Japan attracting any bidders in their dollar tender operations.

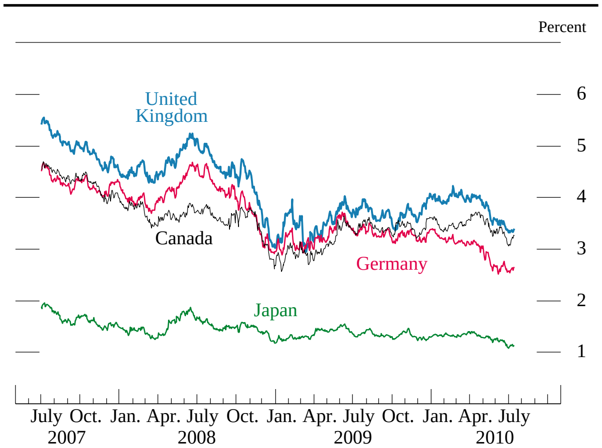
Draws on these lines have been limited because the central banks are offering dollar liquidity in their markets at rates equal to the overnight index swap rate plus 100 basis points—rates that have exceeded the cost of dollar funding available to most institutions from alternative sources. However, these facilities were designed to provide a backstop, and as such, even with limited credit extensions, they are supporting the functioning of dollar funding markets and helping to curtail uncertainties in those markets.

and France to drift down, as investors shifted into those assets (figure 51).

By late April, the problems in Greece were exacerbating concerns about fiscal sustainability in Europe and growth in the region more broadly. The increase in perceived risk caused the dollar to appreciate noticeably from mid-April to the end of May and led to sharp declines in foreign stock markets. The yields on the sovereign bonds of France and Germany fell further, and yields on the sovereign bonds of other advanced economies began falling as well, driven by flight-to-safety flows and expectations that policy tightening would occur later than had previously been expected.

Steps taken by European countries in early May to provide assistance to Greece and other countries with fiscal vulnerabilities supported some improvement in market sentiment; equity prices temporarily halted their decline by early June and the dollar depreciated somewhat, likely reflecting a modest reversal of flight-to-safety flows. Over the past month, however, worries about global growth prospects have intensified, and yields on advanced economy sovereign bonds have drifted down further.

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

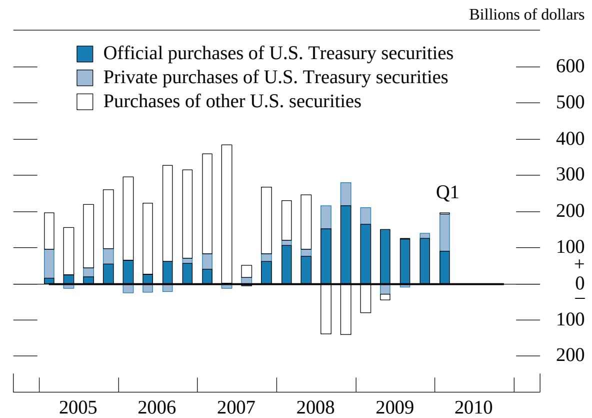


Note: The data, which are for 10-year bonds, are daily. The last observation for each series is July 14, 2010.
Source: Bloomberg.

The Financial Account

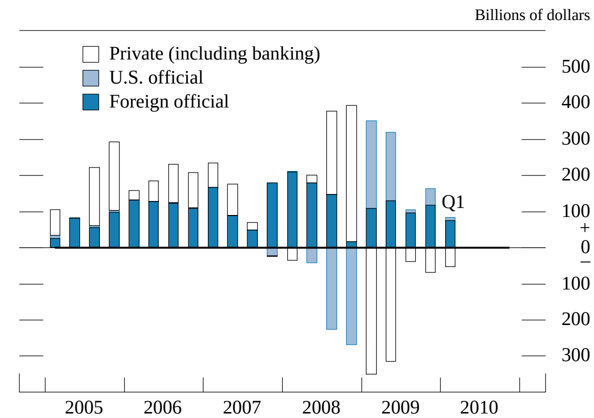
Financial flows in the first quarter of this year reflected a growing imprint of the strains in Europe. Data for the first quarter and indicators for the second quarter point to unusually large purchases of U.S. Treasury securities by private foreigners so far this year, likely indicating a flight to quality as fiscal problems in Europe mounted (figure 52). Foreign demand for other U.S. securities remained mixed. Net purchases of U.S. agency debt stayed weak, while net purchases of U.S. equities, which were strong in the first quarter, appear to have weakened in the second quarter. Foreign private investors continued to sell U.S. corporate debt securities, on net, but at a slower pace in the second quarter. Conversely, U.S. residents continued to purchase sizable amounts of foreign bonds and equities, including both emerging market and European securities (figure 53).

52. Net foreign purchases of U.S. securities, 2005–10



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

54. U.S. net financial inflows, 2005–10

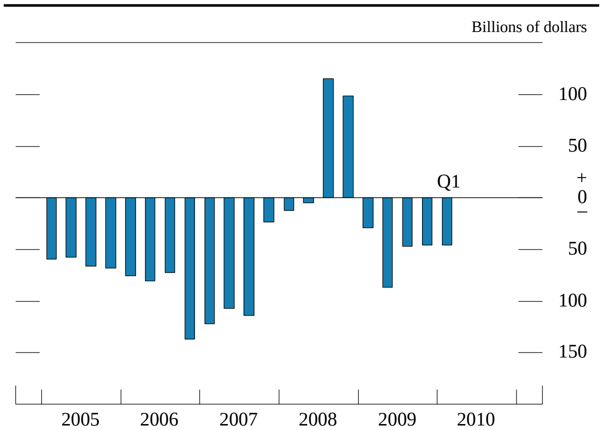


Note: U.S. official flows include the foreign currency acquired when foreign central banks draw on their swap lines with the Federal Reserve.
Source: Department of Commerce, Bureau of Economic Analysis.

Banks located in the United States sharply increased net lending abroad, generating net private capital outflows (figure 54). These outflows were spurred in part by the reemergence of dollar funding pressures in European interbank markets; such pressures had been acute at the height of the global financial crisis in late 2008 but had subsided by the middle of last year.

Inflows from foreign official institutions remained strong through the first quarter. Most of these inflows were from countries seeking to counteract upward pressure on their currencies by purchasing U.S. dollars on foreign currency markets. These countries then used the proceeds to acquire U.S. assets, primarily Treasury securities. Available data for the second quarter indicate that foreign official purchases of U.S. Treasury securities slowed in line with the strengthening of the dollar.

53. Net U.S. purchases of foreign securities, 2005–10



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

Advanced Foreign Economies

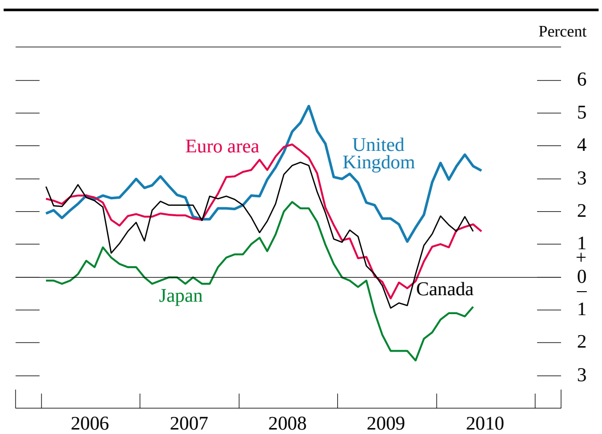
Notwithstanding the ongoing strains on the European economy, the data on economic activity abroad that we have received to date do not show significant effects of these strains and suggest that a moderate recovery is under way. In the first quarter, the recovery from last year's recession gathered momentum in the advanced foreign economies, driven by a rebound in world trade and continuing improvement in business sentiment. Growth was particularly robust in Japan, which benefited from rising exports to emerging Asia, and in Canada, where private domestic demand remained strong. Economic growth was less vigorous in the euro area, where consumption and investment spending declined again, and in the United Kingdom, where consumption was held back by the hike in the value-added tax in January.

Monthly indicators of economic activity across the advanced foreign economies suggest widespread growth in the second quarter. Industrial production has continued to rebound, business confidence has improved further, and purchasing managers indexes remain at levels consistent with solid expansion. However, indicators of household spending showed considerable variation across countries, with retail sales expanding rapidly in Canada but declining in the euro area. Such variation in part reflected differences in labor market developments. Canadian employment has rebounded this year, while euro-area employment has stagnated. As described earlier, increasing concerns about sovereign debt and banking systems in some euro-area countries have affected a wide array of financial markets. However, while these stresses are materially restraining economic activity in Greece and several other European countries, they have not yet had a broader effect on economic indicators in the other major advanced foreign economies.

Twelve-month consumer price inflation picked up a bit in the advanced foreign economies early this year, largely owing to increases in the prices of energy and other commodities, but inflation remained below target in the euro area and Canada and continued to be negative in Japan (figure 55). Core consumer price inflation, excluding food and energy, remained subdued in these economies, as considerable economic slack persisted. In contrast, headline inflation in the United Kingdom rose above 3 percent this year, driven by exchange rate depreciation and the increase in the value-added tax.

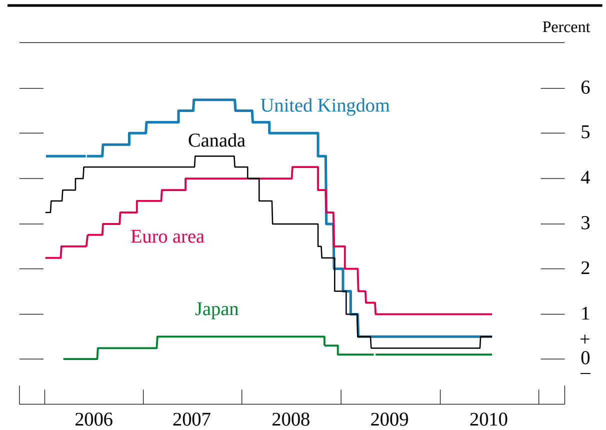
After cutting policy rates to very low levels in 2009, most major foreign central banks have kept rates unchanged so far this year (figure 56). The Bank of Canada, however, tightened monetary policy in June, raising its target for the overnight rate 25 basis points to ½ percent, amid signs of strong growth and diminishing excess capacity in the Canadian economy. The European Central Bank kept its main refinancing rate at 1 percent and, in the second quarter, took additional measures to provide liquidity: extending the period over which it promised to provide fixed-rate refinancing with full allotment, adjusting its collateral requirements on repurchase agreements to ensure that Greek government debt would remain eligible, and buying the debt of some euro-area countries in the secondary market. The Bank of Japan kept its targeted rate near zero and added a new lending facility aimed at encouraging private-bank lending to businesses.

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



NOTE: The data are monthly, and the percent change is from one year earlier. The data extend through June 2010 for the euro area and United Kingdom, and through May 2010 for Canada and Japan.
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.

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



NOTE: The data are daily and extend through July 14, 2010. 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.

Emerging Market Economies

The emerging market economies, which have led the recovery from the global financial crisis, have continued to grow strongly thus far this year.

In emerging Asia, aggregate real GDP growth picked up to an impressive double-digit pace in the first quarter. Indicators suggest that growth likely slowed to a more sustainable but still-rapid pace in the second quarter. In China, domestic demand has been strong, with retail sales registering significant gains. The accompanying rapid growth of imports has provided a boost to other economies in the region and to commodity exporters around the world. However, Chinese real GDP decelerated in the second quarter, reflecting a slowdown in fixed investment and tighter credit conditions. Rising property prices and concerns about the volume and quality of lending led authorities to clamp down on bank lending through a variety of prudential measures. Authorities also began to tighten monetary policy and have raised required reserve ratios for banks a cumulative 150 basis points since January. In late June, Chinese authorities announced that they would take steps to increase the flexibility of the renminbi. The renminbi has subsequently appreciated about 1 percent against the dollar.

In Latin America, real GDP growth dipped in the first quarter, with output declines in Mexico, Chile, and Venezuela offsetting rapid growth in Brazil. The fall in output in Mexico reflected both a sharp decline in Mexico's agricultural sector and deceleration in the manufacturing sector, but other indicators, including very strong exports, were more upbeat. Brazilian economic activity continued to show strength in the first quarter, with real GDP expanding at a double-digit rate, boosted by fiscal stimulus and strong demand for the country's commodity exports. Brazil's central bank has recently tightened monetary policy, raising the policy rate a cumulative 150 basis points since late April.

Inflation in emerging market economies rose at the end of 2009 and into 2010, reflecting increases in food and energy prices and, particularly in the case of Mexico, special factors such as tax increases. Consumer price readings from recent months suggest that these price pressures are waning.

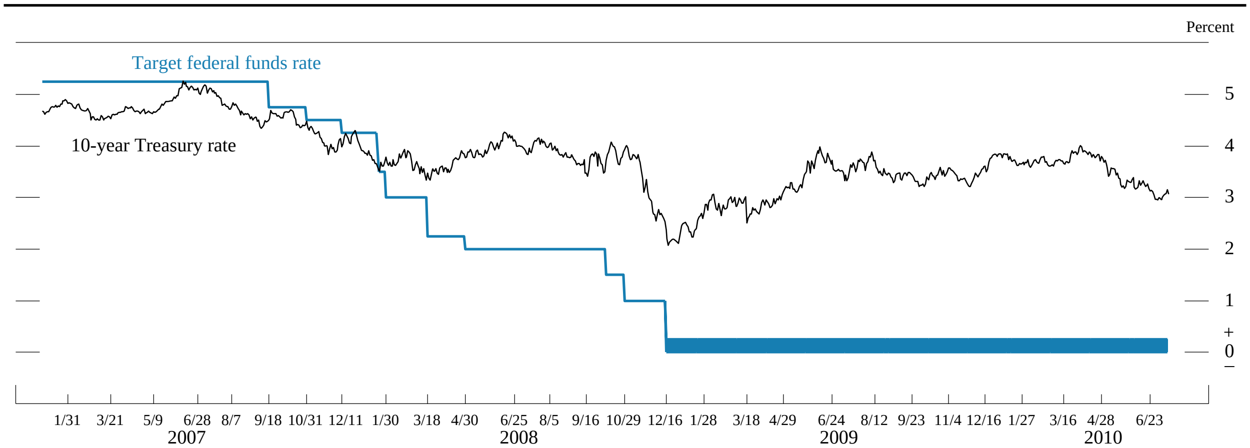
Part 3
Monetary Policy: Recent Developments and Outlook

Monetary Policy over the First Half of 2010

The Federal Open Market Committee (FOMC) maintained a target range for the federal funds rate of 0 to ¼ percent throughout the first half of 2010 in order to continue to promote economic recovery and price stability (figure 57). In the statement accompanying each regularly scheduled FOMC meeting, the Committee noted that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, were likely to warrant exceptionally low levels of the federal funds rate for an extended period. At the end of March, the Federal Reserve concluded its purchases of agency mortgage-backed securities (MBS) and agency debt under its large-scale asset purchase programs, which were undertaken to provide support to mortgage lending and housing markets and to improve overall conditions in private credit markets. Also, in light of improved functioning of financial markets, by the end of June the Federal Reserve had closed all of the special liquidity facilities that it had created to support markets during the crisis. However, in response to the reemergence of strains in U.S. dollar short-term funding markets in Europe, the Federal Reserve and five foreign central banks announced in May the reestablishment of temporary U.S. dollar liquidity swap facilities.

At its January 26–27 meeting, the Committee agreed that the incoming information, though mixed, indicated that overall economic activity had strengthened in recent months, about in line with expectations. Consumer spending was well maintained in the fourth quarter, and business expenditures on equipment and software appeared to expand substantially. However, the improvement in the housing market had slowed, and spending on nonresidential structures continued to fall. Available data suggested that the pace of inventory liquidation had diminished considerably in the fourth quarter, providing a sizable boost to economic activity, and especially to industrial production. In the labor market, layoffs subsided noticeably in the final months of 2009, but the unemployment rate remained elevated and hiring stayed quite limited. The weakness in labor markets continued to be an important concern for the Committee; moreover, the prospects for job growth remained a significant source of uncertainty in the economic outlook, particularly for consumer spending. Financial market conditions were supportive of economic growth. Nonetheless, net debt financing by nonfinancial businesses was near zero in the fourth

57. Selected interest rates, 2007–10



Note: The data are daily and extend through July 14, 2010. The 10-year Treasury rate is the constant-maturity yield based on the most actively traded securities. The dates on the horizontal axis are those of regularly scheduled Federal Open Market Committee meetings.
Source: Department of the Treasury and the Federal Reserve.

quarter after being negative in the third, consistent with sluggish demand for credit and tight lending standards and terms at banks. Increases in energy prices pushed up headline consumer price inflation, but core consumer price inflation remained subdued.

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

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

The data reviewed at the March 16 FOMC meeting suggested that economic activity expanded at a moderate pace in early 2010. Business investment in equipment and software seemed to have picked up, and consumer spending increased further in January. Private employment would likely have turned up in February but for the snowstorms that affected the East Coast. Meeting participants agreed that available indicators suggested that the labor market appeared to be stabilizing. Output in the manufacturing sector continued to trend higher as firms increased production to meet strengthening final demand and to slow the pace of inventory liquidation. On the downside, housing activity remained flat and nonresidential construction weakened further. Meanwhile, a sizable increase in energy prices had pushed up headline consumer price inflation in recent months; in contrast, core consumer price inflation was quite low. Participants agreed that financial market conditions remained supportive of economic growth. Spreads in short-term funding markets were near pre-crisis levels, and risk spreads on corporate bonds and measures of implied volatility in equity markets were broadly consistent with historical norms given the outlook for the economy. Participants were also reassured by the absence of any signs of renewed strains in financial market functioning as a consequence of the Federal Reserve's winding down of its special liquidity facilities. However, bank lending was still contracting, and interest rates on many bank loans had risen further in recent months.

Against this backdrop, Committee members agreed that it would be appropriate to maintain the target range of 0 to ¼ percent for the federal funds rate and to complete the Committee's previously announced purchases of $1.25 trillion of agency MBS and about $175 billion of agency debt by the end of March. Nearly all members judged that it was appropriate to reiterate in the Committee's statement the expectation that economic conditions—including low levels of resource utilization, subdued inflation trends, and stable inflation expectations—were likely to warrant exceptionally low levels of the federal funds rate for an extended period. In light of the improved functioning of financial markets, Committee members agreed that it would be appropriate for the statement to indicate that the previously announced schedule for closing the Term Asset-Backed Securities Loan Facility (TALF) was being maintained. On March 31, the TALF closed for loans backed by collateral other than newly issued commercial MBS.

The information reviewed at the April 27–28 FOMC meeting suggested that, on balance, the economic recovery was proceeding at a moderate pace and that the deterioration in the labor market was likely coming to an end. Consumer spending continued to post solid gains in the first three months of the year, and business investment in equipment and software appeared to have increased significantly further in the first quarter. In addition, growth of manufacturing output remained brisk, and gains became more broadly based across industries. However, residential construction, while having edged up, was still depressed, construction of nonresidential buildings remained on a steep downward trajectory, and state and local governments continued to retrench. Consumer price inflation remained low. Meeting participants expected that business investment would be supported by improved conditions in financial markets. Large firms with access to capital markets appeared to be having little difficulty in obtaining credit, and in many cases they also had ample retained earnings with which to fund their operations and investment. However, many participants noted that, while financial market conditions had generally improved, bank lending was still contracting and that smaller firms in particular continued to face substantial difficulty in obtaining bank loans. Members saw an escalation of financial strains in Europe as a risk to the outlook, although the attendant effects on global market conditions were only beginning to be felt.

Members agreed that no adjustments to the federal funds rate target range were warranted at the meeting. On balance, the economic outlook had changed little since the March meeting. Even though the recovery appeared to be continuing and was expected to strengthen gradually over time, most members projected that economic slack would continue to be elevated for some time, with inflation remaining below rates that would be consistent in the longer run with the Federal Reserve's dual objectives of maximum employment and price stability. In addition, nearly all members judged that it was appropriate to reiterate the expectation that economic conditions were likely to warrant exceptionally low levels of the federal funds rate for an extended period. In light of the improved functioning of financial markets, Committee members again agreed that it would be appropriate for the statement to indicate that the previously announced schedule for closing the TALF was being maintained.

On May 9, 2010, the Committee met by conference call to discuss developments in global financial markets and possible policy responses. Over the previous several months, financial market concerns about the ability of Greece and some other euro-area countries to contain their sizable budget deficits and finance their debt had increased. Conditions in short-term funding markets in Europe had deteriorated, and global financial markets more generally had been volatile and less supportive of economic growth.

In connection with the possible implementation by the European authorities of a number of measures to promote fiscal sustainability and support financial market functioning, some major central banks had requested that dollar liquidity swap lines with the Federal Reserve be reestablished. The Committee agreed that such arrangements could be helpful in limiting the strains in dollar funding markets and the adverse implications of recent developments for the U.S. economy. In order to promote the transparency of these arrangements, participants also agreed that it would be appropriate for the Federal Reserve to publish the swap contracts and to release on a weekly basis the amounts of draws under the swap lines by central bank counterparty. It was recognized that the Committee would need to consider the implications of swap lines for bank reserves and overall management of the Federal Reserve's balance sheet. Participants noted the importance of appropriate consultation with U.S. government officials and emphasized that a reestablishment of the lines should be contingent on strong and effective actions by authorities in Europe to address fiscal sustainability and support financial markets.

At the conclusion of its discussion, the Committee voted unanimously to authorize the Chairman to agree to reestablish swap lines with the European Central Bank (ECB), the Bank of England, the Swiss National Bank, the Bank of Japan, and the Bank of Canada. The arrangements with the Bank of England, the ECB, the Swiss National Bank, and the Bank of Japan would provide those central banks with the capacity to conduct tenders of U.S. dollars in their local markets at fixed rates for full allotment, similar to arrangements that had been in place previously. The arrangement with the Bank of Canada would support draws of up to $30 billion, as was the case previously. The swap arrangements were authorized through January 2011.

The information reviewed at the June 22–23 FOMC meeting suggested that the economic recovery was proceeding at a moderate pace in the second quarter. Businesses continued to increase employment and lengthen workweeks in April and May, but the unemployment rate remained elevated. Industrial production registered strong and widespread gains, and business investment in equipment and software rose rapidly. Consumer spending appeared to have moved up further in April and May. However, housing starts dropped in May, and nonresidential construction remained depressed. Falling energy prices held down headline consumer prices in April and May, while core consumer prices edged up.

Financial markets had become somewhat less supportive of economic growth since the April meeting, with developments in Europe a leading cause of greater global financial market tensions. Risk spreads for many corporate borrowers had widened noticeably, equity prices had fallen appreciably, and the dollar had risen in value against a broad basket of other currencies. Participants saw these changes as likely to weigh to some degree on household and business spending over coming quarters.

The Committee agreed to make no change in its target range for the federal funds rate at the meeting. Although the economic outlook had softened somewhat, and a number of meeting participants saw the risks to the outlook as having shifted to the downside, all saw the economic expansion as likely to be strong enough to continue raising resource utilization, albeit more slowly than they had previously anticipated. In addition, they saw inflation as likely to stabilize near recent low readings in coming quarters and then gradually rise toward more desirable levels. Nearly all members again judged that it was appropriate to indicate in the statement released following the meeting that economic conditions were likely to warrant exceptionally low levels of the federal funds rate for an extended period. Participants noted that in addition to continuing to develop and test instruments to exit from the period of unusually accommodative monetary policy, the Committee would need to consider whether further policy stimulus might become appropriate if the economic outlook were to worsen appreciably.

Tools for the Withdrawal of Monetary Policy Accommodation

Although the FOMC continues to anticipate that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for an extended period, ultimately the Federal Reserve will need to begin to tighten monetary conditions to prevent the development of inflation pressures as the economy recovers. That tightening will be accomplished partly through changes that will affect the composition and size of the Federal Reserve's balance sheet.

The Federal Reserve has developed a number of tools that will facilitate the removal of policy accommodation and reduce the quantity of reserves held by the banking system at the appropriate time. These tools encompass (1) raising the interest rate paid on excess reserve balances (the IOER rate), (2) executing term reverse repurchase agreements (RRPs) with the primary dealers and other counterparties, (3) issuing term deposits to depository institutions through the Term Deposit Facility (TDF), (4) redeeming maturing and prepaid securities held by the Federal Reserve without reinvesting the proceeds, and (5) selling securities held by the Federal Reserve. All but the first of these tools would shrink the supply of reserve balances; the last two would also reduce the size of the Federal Reserve's balance sheet.

Interest on Excess Reserves Rate

In their discussion of the IOER rate at the January meeting, all participants agreed that raising that rate and the target for the federal funds rate would be a key element of a move to less-accommodative monetary policy. Most participants thought that it likely would be appropriate to reduce the supply of reserve balances, to some extent, before raising the IOER rate and the target for the federal funds rate, in part because reducing the supply of reserve balances would tighten the link between short-term market rates and the IOER rate. However, several participants noted that draining operations might be seen as a precursor to tightening and should be undertaken only when the Committee judged that an increase in its target for the federal funds rate would soon be appropriate. For the same reason, a few believed that it would be better to drain reserves concurrently with the eventual increase in the IOER and target rates.

With respect to longer-run approaches to implementing monetary policy, most policymakers saw benefits in continuing to use the federal funds rate as the operating target for implementing monetary policy, so long as other money market rates remained closely linked to the federal funds rate. Many thought that an approach in which the primary credit rate was set above the Committee's target for the federal funds rate and the IOER rate was set below that target—a corridor system—would be beneficial. Participants recognized, however, that the supply of reserve balances would need to be reduced considerably to lift the federal funds rate above the IOER rate. Participants noted that their judgments were tentative, that they would continue to discuss the ultimate operating regime, and that they might well gain useful information about longer-run approaches during the eventual withdrawal of policy accommodation.

Reverse Repurchase Agreements

At the January meeting, staff reported on successful tests of the Federal Reserve's ability to conduct term RRPs with primary dealers by arranging several small-scale transactions using Treasury securities and agency debt as collateral; staff anticipated that the Federal Reserve would be able to execute term RRPs against MBS later in the year and would have the capability to conduct RRPs with an expanded set of counterparties shortly thereafter. The staff updated the Committee on the status of work on RRPs at subsequent meetings.

Term Deposit Facility

In late December 2009, the *Federal Register* published a notice requesting the public's input on a proposal for a TDF. At the January FOMC meeting, Federal Reserve staff indicated that they would analyze comments from the public in the coming weeks and then prepare a final proposal for the Board's consideration. On April 30, the Federal Reserve Board announced that it had approved amendments to Regulation D (Reserve Requirements of Depository Institutions) authorizing the Reserve Banks to offer term deposits to institutions that are eligible to receive earnings on their balances at Reserve Banks. On May 10, the Federal Reserve Board authorized up to five small-value offerings of term deposits under the TDF, which were designed to ensure the effectiveness of TDF operations and to provide eligible institutions with an opportunity to gain familiarity with the procedures. The first of these offerings, for $1 billion in 14-day term deposits, was conducted on June 14. The auction had a stop-out rate of 27 basis points and a bid-to-cover ratio of slightly more than 6. The second offering, for $2 billion in 28-day deposits, was conducted on June 28. That auction had a stop-out rate of about 27 basis points and a bid-to-cover ratio of about 5½. The third, for $2 billion in 84-day term deposits, was conducted on July 12. That auction had a stop-out rate of 31 basis points and a bid-to-cover ratio of about 3¾.

Asset Redemptions and Sales

Over the course of the FOMC meetings conducted in the first half of 2010, participants discussed the eventual size and composition of the Federal Reserve's balance sheet and longer-run strategies for asset redemptions and sales. Participants agreed that any longer-run strategy for asset sales and redemptions should be consistent with the achievement of the Committee's objectives of maximum employment and price stability. Policymakers were also unanimous in the view that it will be appropriate to shrink the supply of reserve balances and the size of the Federal Reserve's balance sheet substantially over time. Moreover, they agreed that it will eventually be appropriate for the System Open Market Account to return its domestic holdings to only securities issued by the U.S. Treasury, as was the case before the financial crisis. Meeting participants also agreed that sales of agency debt and agency MBS should be implemented in accordance with a framework communicated well in advance and be conducted at a gradual pace that potentially could be adjusted in response to developments in economic and financial conditions.

Most participants favored deferring asset sales for some time, and a majority preferred beginning asset sales after the first increase in the FOMC's target for short-term interest rates. Such an approach would postpone any asset sales until the economic recovery was well established and would maintain short-term interest rates as the Committee's key monetary policy tool. Participants agreed that the current policy of redeeming and not replacing agency debt and agency MBS as those securities mature or are prepaid helped make progress toward the Committee's goals regarding the size and composition of the Federal Reserve's balance sheet. Many policymakers saw benefits to eventually adopting an approach of reinvesting maturing Treasury securities in bills and shorter-term coupon issues to shift the maturity composition of the Federal Reserve's portfolio toward the structure that had prevailed prior to the financial crisis. Several meeting participants thought the Federal Reserve should eventually hold a portfolio composed largely of shorter-term Treasury securities.

Participants expressed a range of views about the appropriate timing and pace of asset sales and redemptions, and Committee members did not reach final decisions about those issues over the course of the meetings in the first half of 2010. Participants agreed that it would be important to maintain flexibility regarding these issues given the uncertainties associated with the unprecedented size and composition of the Federal Reserve's balance sheet and its effects on financial conditions. For the time being, meeting participants agreed that the Federal Reserve should continue the interim approach of allowing all maturing agency debt and all prepayments of agency MBS to be redeemed without replacement while rolling over all maturing Treasury securities. At the June meeting, participants recognized that in light of the increased downside risks to an already gradual recovery from a deep recession, the Committee also needed to review its options for providing additional monetary stimulus should doing so become necessary. Participants will continue to consider the Committee's portfolio management strategy at future meetings.

Part 4
Summary of Economic Projections

The following material appeared as an addendum to the minutes of the June 22–23, 2010, meeting of the Federal Open Market Committee.

In conjunction with the June 22–23, 2010, FOMC meeting, the members of the Board of Governors and the presidents of the Federal Reserve Banks, all of whom participate in deliberations of the FOMC, submitted projections for output growth, unemployment, and inflation for the years 2010 to 2012 and over the longer run. The projections were based on information available through the end of the meeting and on each participant's assumptions about factors likely to affect economic outcomes, including his or her assessment of appropriate monetary policy. "Appropriate monetary policy" is defined as the future path of policy that the participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her interpretation of the Federal Reserve's dual objectives of maximum employment and stable prices. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge over time under appropriate monetary policy and in the absence of further shocks.

FOMC participants' forecasts for economic activity and inflation suggested that they expected the recovery to continue and inflation to remain subdued, but with, on balance, slightly weaker real activity and a bit lower inflation than in the projections they made in conjunction with the April 2010 FOMC meeting. As depicted in figure 1, the economic recovery was anticipated to be gradual, with real gross domestic product (GDP) expanding at a pace only moderately above the participants' assessment of its longer-run sustainable growth rate and the unemployment rate slowly trending lower over the next few years. Most participants also anticipated that inflation would remain relatively low over the forecast period. As indicated in table 1, participants generally made modest downward revisions to their projections for real GDP growth for the years 2010 to 2012, as well as modest upward revisions to their projections for the unemployment rate for the same period. Participants also revised down a little their projections for inflation over the forecast period. Several participants noted that these revisions were largely the result of the incoming economic data and the anticipated effects of developments abroad on U.S. financial markets and the economy. Overall, participants continued to expect the pace of the economic recovery to be held back by a number of factors, including household and business uncertainty, persistent weakness in real estate markets, only gradual improvement in labor market

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

Percent

Variable	Central tendency[1]				Range[2]			
	2010	2011	2012	Longer run	2010	2011	2012	Longer run
Change in real GDP	3.0 to 3.5	3.5 to 4.2	3.5 to 4.5	2.5 to 2.8	2.9 to 3.8	2.9 to 4.5	2.8 to 5.0	2.4 to 3.0
April projection	3.2 to 3.7	3.4 to 4.5	3.5 to 4.5	2.5 to 2.8	2.7 to 4.0	3.0 to 4.6	2.8 to 5.0	2.4 to 3.0
Unemployment rate	9.2 to 9.5	8.3 to 8.7	7.1 to 7.5	5.0 to 5.3	9.0 to 9.9	7.6 to 8.9	6.8 to 7.9	5.0 to 6.3
April projection	9.1 to 9.5	8.1 to 8.5	6.6 to 7.5	5.0 to 5.3	8.6 to 9.7	7.2 to 8.7	6.4 to 7.7	5.0 to 6.3
PCE inflation	1.0 to 1.1	1.1 to 1.6	1.0 to 1.7	1.7 to 2.0	0.9 to 1.8	0.8 to 2.4	0.5 to 2.2	1.5 to 2.0
April projection	1.2 to 1.5	1.1 to 1.9	1.2 to 2.0	1.7 to 2.0	1.1 to 2.0	0.9 to 2.4	0.7 to 2.2	1.5 to 2.0
Core PCE inflation[3]	0.8 to 1.0	0.9 to 1.3	1.0 to 1.5		0.7 to 1.5	0.6 to 2.4	0.4 to 2.2	
April projection	0.9 to 1.2	1.0 to 1.5	1.2 to 1.6		0.7 to 1.6	0.6 to 2.4	0.6 to 2.2	

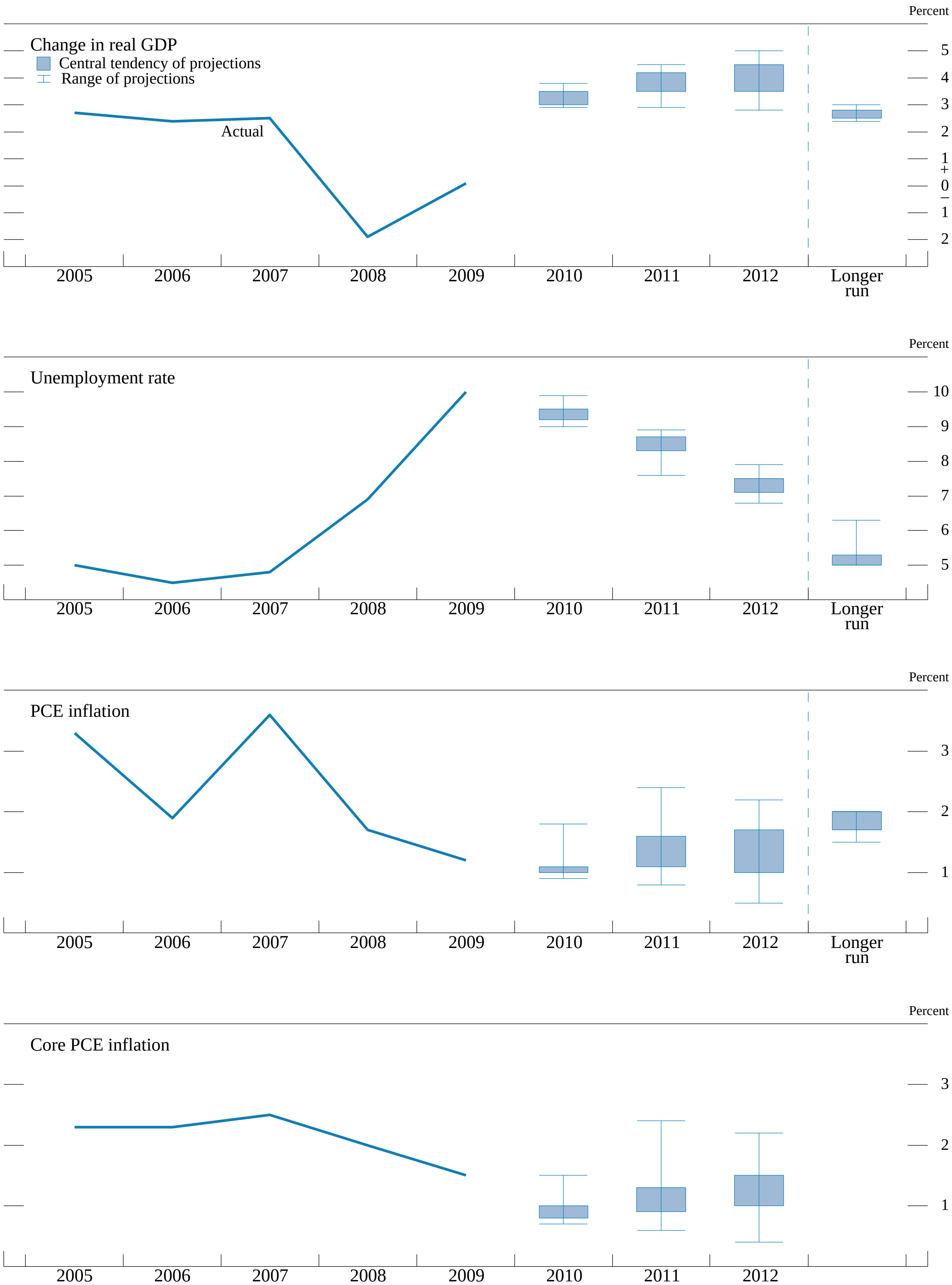
NOTE: Projections of change in real gross domestic product (GDP) and in inflation are from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The April projections were made in conjunction with the meeting of the Federal Open Market Committee on April 27–28, 2010.

1. The central tendency excludes the three highest and three lowest projections for each variable in each year.

2. The range for a variable in a given year consists of all participants' projections, from lowest to highest, for that variable in that year.

3. Longer-run projections for core PCE inflation are not collected.

Figure 1. Central tendencies and ranges of economic projections, 2010–12 and over the longer run



NOTE: Definitions of variables are in the notes to table 1. The data for the actual values of the variables are annual.

conditions, waning fiscal stimulus, and slow easing of credit conditions in the banking sector. Participants generally anticipated that, in light of the severity of the economic downturn, it would take some time for the economy to converge fully to its longer-run path as characterized by sustainable rates of output growth, unemployment, and inflation consistent with participants' interpretation of the Federal Reserve's dual objectives; most expected the convergence process to take no more than five to six years. About one-half of the participants now judged the risks to the growth outlook to be tilted to the downside, while most continued to see balanced risks surrounding their inflation projections. Participants generally continued to judge the uncertainty surrounding their projections for both economic activity and inflation to be unusually high relative to historical norms.

The Outlook

Participants' projections for real GDP growth in 2010 had a central tendency of 3.0 to 3.5 percent, slightly lower than in April. Participants noted that the economic recovery was proceeding. Consumer spending was increasing, supported by rising disposable income as labor markets gradually improved. Business outlays on equipment and software were also rising, driven by replacement spending, the low cost of capital, and increased production. Participants pointed to a number of factors that would provide ongoing support to economic activity, including accommodative monetary policy and still generally supportive conditions in financial markets. Fiscal policy was also seen as currently contributing to economic growth, although participants expected that the effects of fiscal stimulus would diminish going forward and also anticipated that budgetary pressures would continue to weigh on spending at the state and local levels. Participants noted that financial conditions had tightened somewhat because of developments abroad. The effects of a stronger dollar, a lower stock market, and wider corporate credit spreads were expected to be offset only partially by lower oil and commodity prices and a decline in Treasury yields. Many participants anticipated that the economic expansion would be held back by firms' caution in hiring and spending in light of the considerable uncertainty regarding the economic outlook, by households' focus on repairing balance sheets weakened by equity and house price declines, and by tight credit conditions for small businesses and households.

Looking further ahead, the central tendencies of participants' projections for real GDP growth were 3.5 to 4.2 percent in 2011 and 3.5 to 4.5 percent in 2012. Participants generally expected a rebound in spending on housing, consumer durables, and business capital equipment as household income and balance sheets strengthen, credit becomes more widely available, and the recovery is seen by households and firms as more firmly established. Nevertheless, participants cited several factors that could restrain the pace of expansion over the next two years, including a rising household saving rate as households seek to make further progress in repairing balance sheets, persistent uncertainty on the part of households and businesses about the strength of the recovery, spillovers from fiscal strains abroad to U.S. financial markets and the U.S. economy, and continued weakness in residential construction. Moreover, despite improvements in the condition of banking institutions, strains in the commercial real estate sector were seen as posing risks to the balance sheets of such institutions for some time. Terms and standards on bank loans continued to be restrictive, and participants anticipated only a gradual loosening of credit conditions for many households and smaller firms. In the absence of further shocks, participants generally expected that real GDP growth would eventually settle down at an annual rate of 2.5 to 2.8 percent, a pace that appeared to be sustainable in view of expected long-run trends in the labor force and labor productivity.

Participants anticipated that labor market conditions would improve slowly over the next several years. The central tendency of their projections for the average unemployment rate in the fourth quarter of 2010 was 9.2 to 9.5 percent. Consistent with their expectations of a gradual economic recovery, participants generally anticipated that the unemployment rate would decline to 7.1 to 7.5 percent by the end of 2012, remaining well above their assessments of its longer-run sustainable rate. Although a few participants were concerned about a possible decrease in the sustainable level of employment resulting from ongoing structural adjustments in product and labor markets, participants' longer-term unemployment projections had a central tendency of 5.0 to 5.3 percent, the same as in April.

Participants noted that prices of energy and other commodities declined somewhat in recent months, and underlying inflation trended lower. They generally expected inflation to remain subdued over the next several years. Indeed, most of the participants marked down a bit their projections for inflation over the forecast period. The central tendency of their projections for personal consumption expenditures (PCE) inflation was 1.0 to 1.1 percent for 2010, 1.1 to 1.6 percent for 2011, and 1.0 to 1.7 percent for 2012, generally about

¼ percentage point lower than in April. The central tendencies of participants' projections for core PCE inflation followed a broadly similar path, although headline PCE inflation was expected to run slightly above core PCE inflation over the forecast period, reflecting somewhat more rapid increases in food and energy prices. Most participants anticipated that, with appropriate monetary policy, inflation would rise gradually toward the inflation rate that they individually consider most consistent with the Federal Reserve's dual mandate for maximum employment and stable prices. The central tendency of participants' projections of the longer-run, mandate-consistent inflation rate was 1.7 to 2.0 percent, unchanged from April. A majority of participants anticipated that inflation in 2011 and 2012 would continue to be below their assessments of the mandate-consistent inflation rate.

Table 2. Average historical projection error ranges

Percentage points

Variable	2010	2011	2012
Change in real GDP[1]	±1.0	±1.6	±1.8
Unemployment rate[1]	±0.4	±1.2	±1.5
Total consumer prices[2]	±0.9	±1.0	±1.1

Note: Error ranges shown are measured as plus or minus the root mean squared error of projections for 1990 through 2009 that were released in the summer by various private and government forecasters. As described in the box titled "Forecast Uncertainty," under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, and consumer prices will be in ranges implied by the average size of projection errors made in the past. Further information is in David Reifschneider and Peter Tulip (2007), "Gauging the Uncertainty of the Economic Outlook from Historical Forecasting Errors," Finance and Economics Discussion Series 2007-60 (Washington: Board of Governors of the Federal Reserve System, November).

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

2. Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projection is percent change, fourth quarter of the previous year to the fourth quarter of the year indicated.

Uncertainty and Risks

Most participants judged that their projections of future economic activity and unemployment continued to be subject to greater-than-average uncertainty, while a few viewed the uncertainty surrounding their outlook for growth and unemployment as in line with typical levels.[13] About one-half of the participants saw the risks to their growth outlook as tilted to the downside; in contrast, in April a large majority of participants saw the risks to growth as balanced. In the current survey, a substantial number of participants also viewed the risks to unemployment as tilted to the upside. The remaining participants saw the risks to the projections for economic growth and unemployment as roughly balanced. Participants pointed to developments abroad and their possible ramifications for U.S. financial markets and the U.S. economy as suggesting somewhat greater uncertainty about the path of economic growth. In addition, some participants cited the unusual rise in the unemployment rate last year, which was associated with rapid growth in labor productivity, as contributing to increased uncertainty regarding the outlook for employment and economic activity. Participants who judged that the risks to their growth outlook were tilted to the downside pointed to recent developments abroad and the risk of further contagion, together with the potential for an increase in risk aversion among investors, as important factors contributing to their assessment. Participants noted that problems in the commercial real estate market and the effects of financial regulatory reform could lead to greater constraints on credit availability, thereby restraining growth of output and employment. However, some participants viewed the downside risks to the growth outlook as roughly balanced by upside risks; they saw the possibility that monetary policy might remain accommodative for too long as one reason that growth could prove stronger than expected.

As in April, most participants continued to see the uncertainty surrounding their inflation projections as above average. Still, a few judged that uncertainty in the outlook for inflation was about in line with or lower than typical levels. Most participants judged the risks to the inflation outlook as roughly balanced. As factors accounting for elevated uncertainty regarding the outlook for inflation, participants pointed to the extraordinary degree of monetary policy accommodation, the uncertain timing of the exit from accommodation, and the unusually large gap between expected inflation, as measured by surveys of households and businesses, and current inflation. Participants noted that, despite the downward trend in underlying inflation in recent months, inflation expectations continued to be well anchored. Nonetheless, the possibility that inflation expectations might start to decline in response to persistently low levels of actual inflation and the potential effects of continued weakness of the economy on price trends were seen by a few participants as posing some downside risks to the inflation outlook.

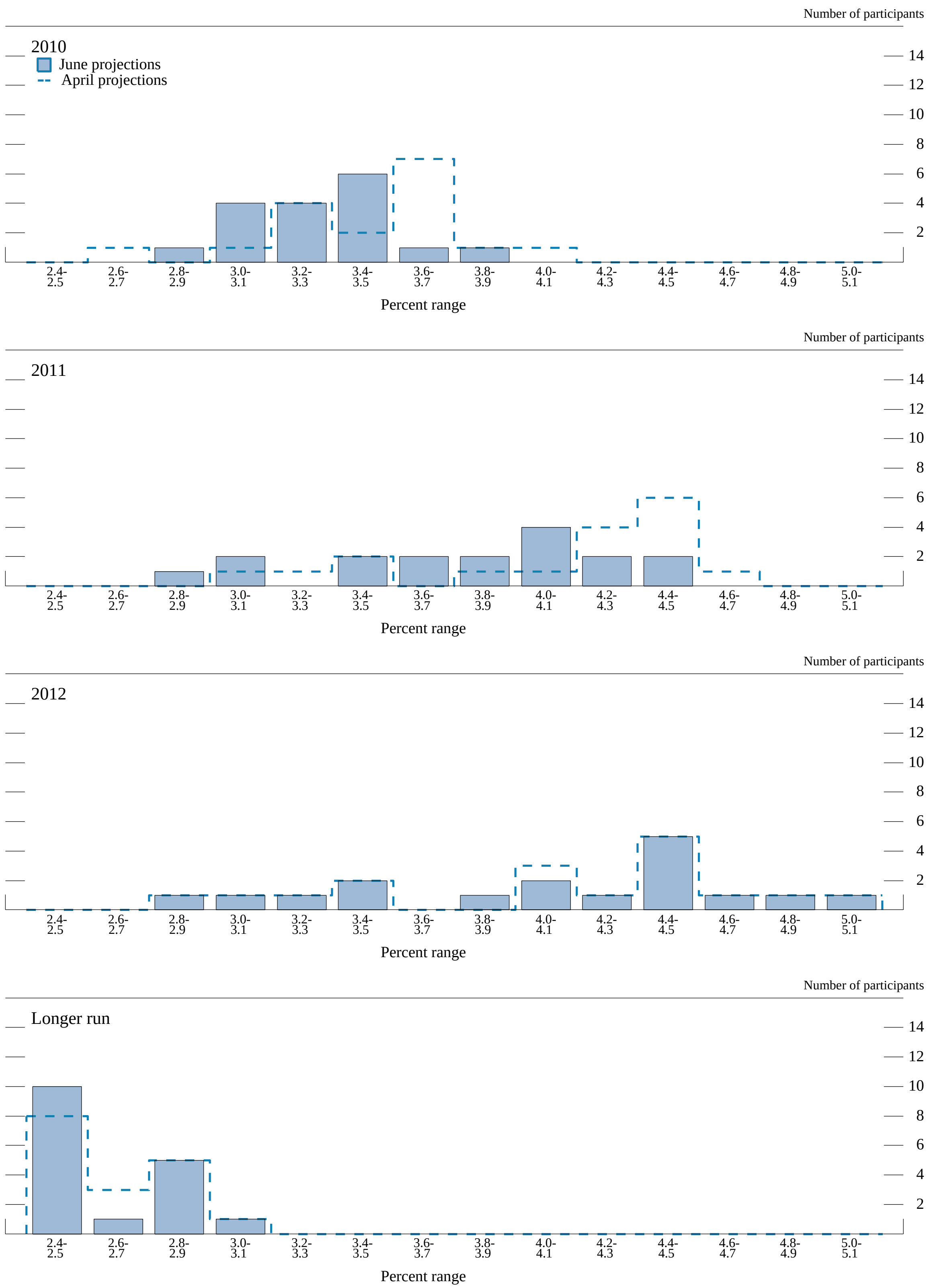
13. Table 2 provides estimates of forecast uncertainty for the change in real GDP, the unemployment rate, and total consumer price inflation over the period from 1990 to 2009. At the end of this summary, the box "Forecast Uncertainty" discusses the sources and interpretation of uncertainty in economic forecasts and explains the approach used to assess the uncertainty and risk attending participants' projections.

Diversity of Views

Figures 2.A and 2.B provide further details on the diversity of participants' views regarding the likely outcomes for real GDP growth and the unemployment rate. The distribution of participants' projections for real GDP growth this year was slightly narrower than the distribution in April, but the distributions for real GDP growth in 2011 and 2012 were about unchanged. As in earlier projections, the dispersion in forecasts for output growth appeared to reflect the diversity of their assessments regarding the current degree of underlying momentum in economic activity, the evolution of consumer and business sentiment, the degree of support to economic growth provided by financial markets, the effects of monetary policy accommodation, and other factors. Regarding participants' projections for the unemployment rate, the distributions shifted somewhat higher for the years 2010 to 2012. The distributions of their estimates of the longer-run sustainable rates of output growth and unemployment were little changed from April.

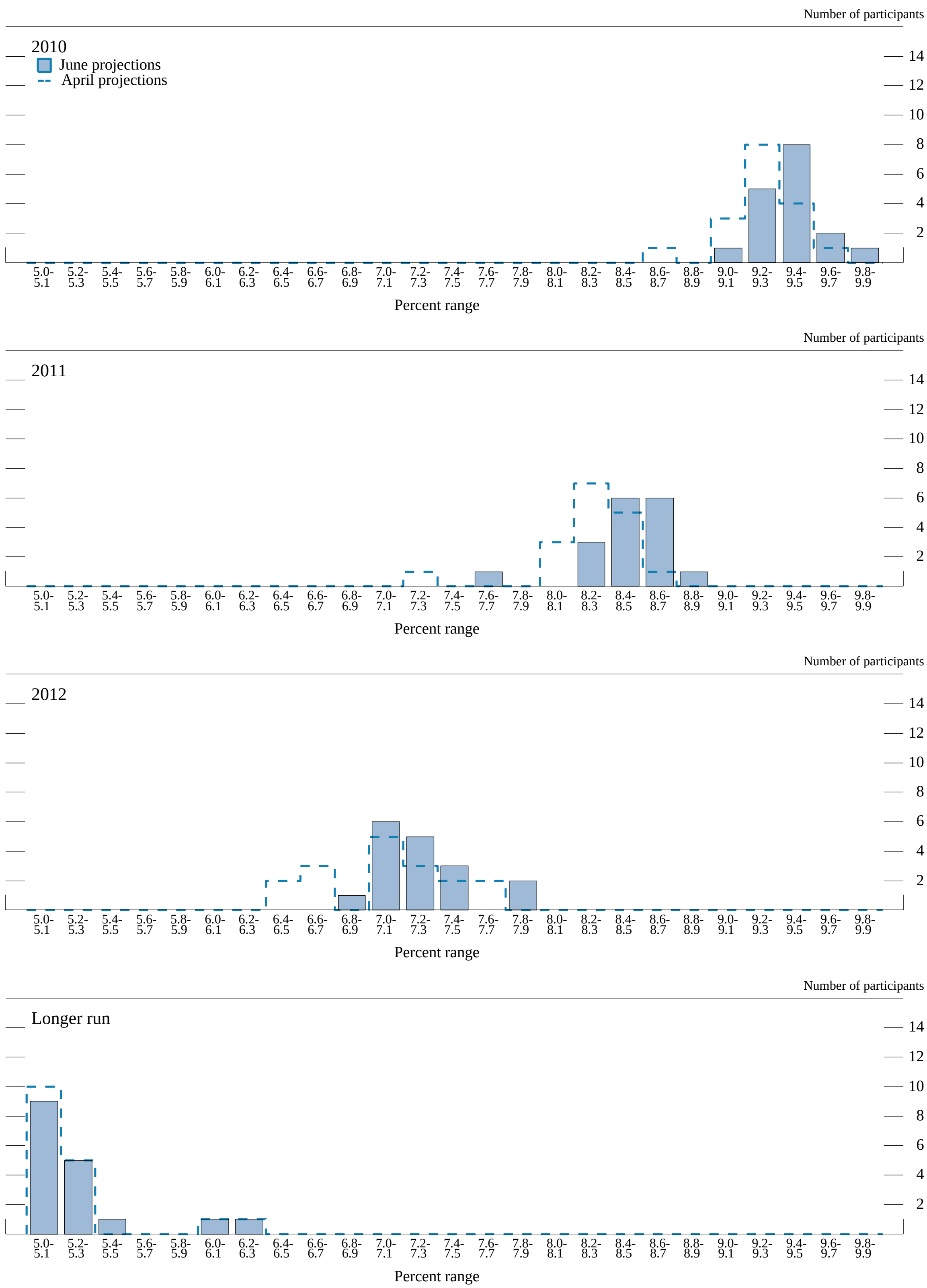
Corresponding information about the diversity of participants' views regarding the inflation outlook is provided in figures 2.C and 2.D. The distributions of projections for overall and core PCE inflation for 2010 shifted lower relative to the distributions in April, and the distributions were noticeably more tightly concentrated. The distributions of overall and core inflation for 2011 and 2012, however, were generally little changed and remained fairly wide. The dispersion in participants' projections over the next few years was mainly due to differences in their judgments regarding the determinants of inflation, including their estimates of prevailing resource slack and their assessments of the extent to which such slack affects actual and expected inflation. In contrast, the relatively tight distribution of participants' projections for longer-run inflation illustrates their substantial agreement about the measured rate of inflation that is most consistent with the Federal Reserve's dual objectives of maximum employment and stable prices.

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



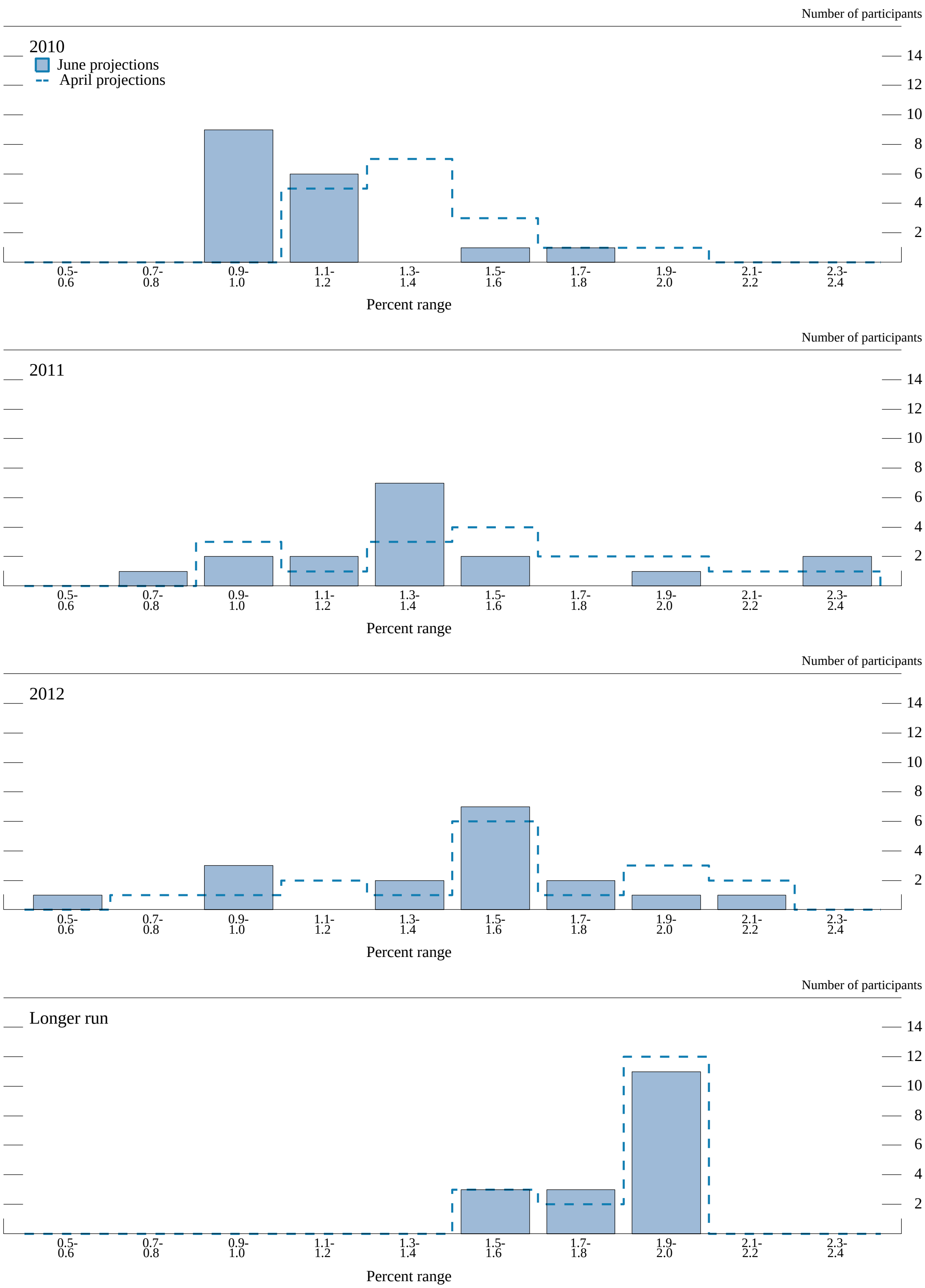
Note: Definitions of variables are in the general note to table 1.

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



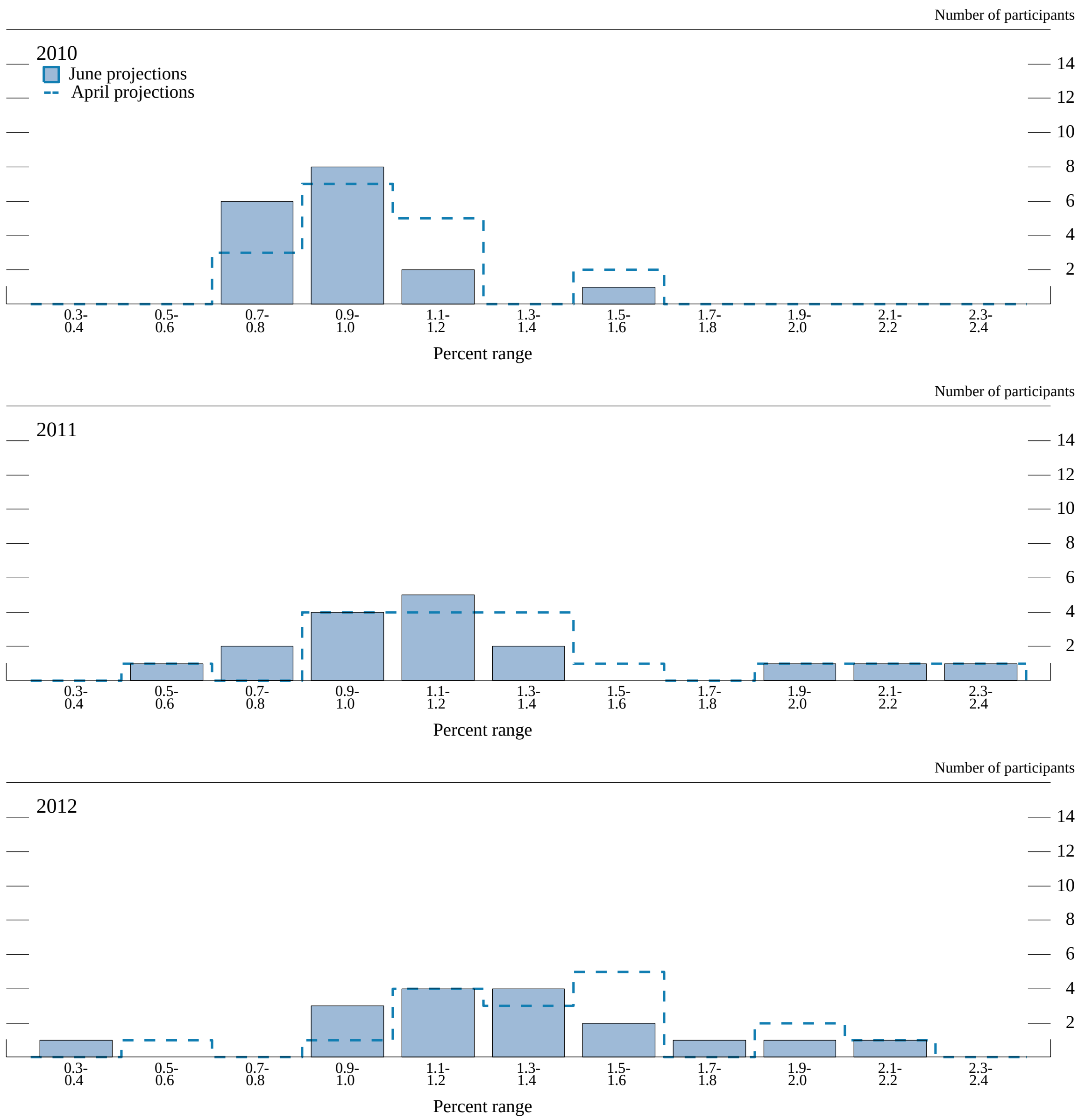
NOTE: Definitions of variables are in the general note to table 1.

Figure 2.C. Distribution of participants' projections for PCE inflation, 2010–12 and over the longer run



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

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



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

Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world. And the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 summarizes the average historical accuracy of a range of forecasts, including those reported in past *Monetary Policy Reports* and those prepared by Federal Reserve Board staff in advance of meetings of the Federal Open Market Committee. The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand within a range of 2.0 to 4.0 percent in the current year, 1.4 to 4.6 percent in the second year, and 1.2 to 4.8 percent in the third year. The corresponding 70 percent confidence intervals for overall inflation would be 1.1 to 2.9 percent in the current year, 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.

Abbreviations

ABS	asset-backed securities
AIG	American International Group, Inc.
ARRA	American Recovery and Reinvestment Act
CDS	credit default swap
C&I	commercial and industrial
CLO	collateralized loan obligation
CMBS	commercial mortgage-backed securities
CRE	commercial real estate
Credit CARD Act	Credit Card Accountability Responsibility and Disclosure Act
DPI	disposable personal income
ECB	European Central Bank
E&S	equipment and software
FAS	Financial Accounting Standards
FOMC	Federal Open Market Committee; also, the Committee
GDP	gross domestic product
GSE	government-sponsored enterprise
IMF	International Monetary Fund
IOER	interest on excess reserves
IRA	individual retirement account
IT	information technology
Libor	London interbank offered rate
LLC	limited liability company
MBS	mortgage-backed securities
NIPA	national income and product accounts
NOW	negotiable order of withdrawal
OIS	overnight index swap
OTC	over the counter
PCE	personal consumption expenditures
RRP	reverse repurchase agreement
SCOOS	Senior Credit Officer Opinion Survey on Dealer Financing Terms
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
TAF	Term Auction Facility
TALF	Term Asset-Backed Securities Loan Facility
TARP	Troubled Asset Relief Program
TDF	Term Deposit Facility
TIPS	Treasury inflation-protected securities