Minutes of the Federal Open Market Committee
June 22-23, 2010

A joint meeting of the Federal Open Market Committee and the Board of Governors of the Federal Reserve System was held in the offices of the Board of Governors in Washington, D.C., on Tuesday, June 22, 2010, at 2:00 p.m. and continued on Wednesday, June 23, 2010, at 9:00 a.m.

PRESENT:

Ben Bernanke, Chairman
William C. Dudley, Vice Chairman
James Bullard
Elizabeth Duke
Thomas M. Hoenig
Donald L. Kohn
Sandra Pianalto
Eric Rosengren
Daniel K. Tarullo
Kevin Warsh

Charles L. Evans, Richard W. Fisher, Narayana Kocherlakota, and Charles I. Plosser, Alternate Members of the Federal Open Market Committee

Jeffrey M. Lacker, Dennis P. Lockhart, and Janet L. Yellen, Presidents of the Federal Reserve Banks of Richmond, Atlanta, and San Francisco, respectively

Brian F. Madigan, Secretary and Economist
Matthew M. Luecke, Assistant Secretary
David W. Skidmore, Assistant Secretary
Michelle A. Smith, Assistant Secretary
Thomas Baxter, Deputy General Counsel
Richard M. Ashton, Assistant General Counsel
Nathan Sheets, Economist
David J. Stockton, Economist

Thomas A. Connors, William B. English, Jeff Fuhrer, Steven B. Kamin, Simon Potter, Lawrence Slifman, Christopher J. Waller, and David W. Wilcox, Associate Economists

Brian Sack, Manager, System Open Market Account

Jennifer J. Johnson, Secretary of the Board, Office of the Secretary, Board of Governors

Patrick M. Parkinson, Director, Division of Bank Supervision and Regulation, Board of Governors

Robert deV. Frierson,[1] Deputy Secretary, Office of the Secretary, Board of Governors

Charles S. Struckmeyer, Deputy Staff Director, Office of the Staff Director for Management, Board of Governors

James A. Clouse, Deputy Director, Division of Monetary Affairs, Board of Governors

Linda Robertson,[2] Assistant to the Board, Office of Board Members, Board of Governors

Nellie Liang, David Reifschneider, and William Wascher, Senior Associate Directors, Division of Research and Statistics, Board of Governors; William Nelson, Senior Associate Director, Division of Monetary Affairs, Board of Governors

Seth B. Carpenter, Associate Director, Division of Monetary Affairs, Board of Governors

Christopher J. Erceg, Deputy Associate Director, Division of International Finance, Board of Governors; Michael G. Palumbo and Joyce K. Zickler, Deputy Associate Directors, Division of Research and Statistics, Board of Governors

Brian J. Gross, Special Assistant to the Board, Office of Board Members, Board of Governors

Fabio M. Natalucci, Assistant Director, Division of Monetary Affairs, Board of Governors

David H. Small, Project Manager, Division of Monetary Affairs, Board of Governors

Beth Anne Wilson, Section Chief, Division of International Finance, Board of Governors

[1] Attended Tuesday's session only.
[2] Attended Wednesday's session only.

John C. Driscoll and Jennifer E. Roush, Senior Economists, Division of Monetary Affairs, Board of Governors; Andrea L. Kusko, Senior Economist, Division of Research and Statistics, Board of Governors; John W. Schindler, Senior Economist, Division of International Finance, Board of Governors

Penelope A. Beattie, Assistant to the Secretary, Office of the Secretary, Board of Governors

Valerie Hinojosa and Randall A. Williams, Records Management Analysts, Division of Monetary Affairs, Board of Governors

Patrick K. Barron and John F. Moore, First Vice Presidents, Federal Reserve Banks of Atlanta and San Francisco, respectively

Loretta J. Mester, Harvey Rosenblum, and John C. Williams, Executive Vice Presidents, Federal Reserve Banks of Philadelphia, Dallas, and San Francisco, respectively

David Altig, Richard P. Dzina, Arthur Rolnick, and Mark E. Schweitzer, Senior Vice Presidents, Federal Reserve Banks of Atlanta, New York, Minneapolis, and Cleveland, respectively

Daniel Aaronson, Todd E. Clark, and Andreas L. Hornstein, Vice Presidents, Federal Reserve Banks of Chicago, Kansas City, and Richmond, respectively

Joshua L. Frost, Assistant Vice President, Federal Reserve Bank of New York

Developments in Financial Markets and the Federal Reserve's Balance Sheet

The Manager of the System Open Market Account (SOMA) reported on developments in domestic and foreign financial markets during the period since the Committee met on April 27–28, 2010. He also briefed the Committee on the System's progress in developing tools for managing the supply of reserves, including reverse repurchase agreements and the Term Deposit Facility. In preparation for possible future reserve draining operations, in June the Federal Reserve conducted the first of several small-value auctions to test the Term Deposit Facility. In addition, the Manager reported on System open market operations during the intermeeting period. By unanimous vote, the Committee ratified those transactions. There were no open market operations in foreign currencies for the System's account over the intermeeting period.

In his presentation to the Committee, the Manager noted that "fails to deliver" in the mortgage-backed securities (MBS) market had reached very high levels in recent months. Under these conditions, dealers had experienced difficulty in arranging delivery of a small amount—including about $9 billion of securities with 5.5 percent coupons issued by Fannie Mae—of the $1.25 trillion of MBS that the Desk at the Federal Reserve Bank of New York had purchased between January 2009 and March 2010. The Desk had postponed settlement of some of these transactions through the use of dollar rolls. The Manager discussed alternative methods of settling the outstanding transactions and recommended that the Committee authorize the Desk to engage in coupon swap transactions to facilitate the settlement of these purchases. The Manager noted that a coupon swap is a common transaction in the market for MBS in which the two counterparties exchange securities at market prices. By engaging in a coupon swap, the Federal Reserve would effectively sell the scarce securities that it had not yet received and purchase instead securities that are more readily available in the market. After discussing various approaches, meeting participants agreed that coupon swaps were an appropriate method to achieve settlement of outstanding transactions.

As background for the Committee's continuing consideration of its portfolio management policies, the Manager gave a presentation on alternative strategies for reinvesting the proceeds from maturing Treasury securities. Under current practice, the Desk reinvests the proceeds of maturing Treasury coupon securities in new Treasury securities that are issued on the date the older securities mature, allocating the investments across the new securities in proportion to the issuance amounts. The Manager presented two alternatives to the status quo. First, the Committee could consider halting all reinvestment of the proceeds of maturing securities. Such a strategy would shrink the size of the Federal Reserve's balance sheet and reduce the quantity of reserve balances in the banking system gradually over time. Second, the Committee could reinvest the proceeds of maturing securities only in new issues of Treasury securities with relatively short maturities—bills only, or bills as well as coupon issues with terms of three years or less. This strategy would maintain the size of the Federal Reserve's balance sheet but would reduce somewhat the average maturity of the portfolio and increase its liquidity. One participant favored halting all reinvestment, and many saw benefits to eventually adopting an approach of reinvesting in bills and shorter-term coupon issues to shift the maturity composition of the portfolio toward the structure that had prevailed prior to the financial crisis. However, the Committee made no change to its reinvestment policy at this meeting.

Continuing a discussion from previous meetings, participants again addressed issues regarding asset sales. Participants continued to agree that gradual sales of MBS should be undertaken, at some point, to speed the return to a Treasury-securities-only portfolio. A few participants supported beginning such sales fairly soon; they noted that, given the evident demand in the market for safe, longer-term assets, modest sales of MBS might not put much, if any, upward pressure on long-term interest rates or be disruptive to the functioning of financial markets. However, many participants still saw asset sales as potentially tightening financial conditions to some extent. Most participants continued to judge it appropriate to defer asset sales for some time; several noted the modest weakening in the economic outlook since the Committee's last meeting as an additional reason to do so. A majority of participants continued to anticipate that asset sales would start after the Committee had begun to firm policy by increasing short-term interest rates; such an approach would postpone asset sales until the economic recovery was well established and maintain short-term interest rates as the Committee's key monetary policy tool. A few participants suggested selling MBS and using the proceeds to purchase Treasury securities of comparable duration, arguing that doing so would hasten the move toward a Treasury-securities-only portfolio without tightening financial conditions. Participants agreed that it would be important to maintain flexibility regarding the appropriate timing and pace of asset sales, given the uncertainties associated with the unprecedented size and composition of the Federal Reserve's balance sheet and its effects on financial conditions. Overall, participants emphasized that any decision to engage in asset sales would need to be communicated well in advance of the initiation of such transactions, and that sales should be conducted at a gradual pace and potentially be adjusted in response to developments in economic and financial conditions.

Staff Review of the Economic Situation

The information reviewed at the June 22–23 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.

Labor demand continued to firm in recent months. While the change in total nonfarm payroll employment in May was boosted significantly by the hiring of temporary workers for the decennial census, private employment posted only a small increase. This increase, however, followed sizable gains in March and April, and the average workweek of all private-sector employees increased over the March-to-May period. As a result, aggregate hours worked by employees on private nonfarm payrolls rose substantially through May. The unemployment rate moved up in April but dropped back in May to 9.7 percent, its first-quarter average. The labor force participation rate was, on average, higher in recent months than in the first quarter, as rising employment was accompanied by an increasing number of jobseekers. Although the number of workers who were employed part time for economic reasons leveled off in recent months, the proportion of unemployed workers who were jobless for more than 26 weeks continued to move up. Initial claims for unemployment insurance were little changed over the intermeeting period, remaining at a still-elevated level.

Industrial production rose at a robust rate in April and May, with production increases broadly based across industries. Firming domestic demand, rising exports, and business inventory restocking appeared to have provided upward impetus to factory production. In April and May, production in high-technology industries again rose strongly, with substantial gains in the output of semiconductors and further solid increases in the production of computers and communications equipment. The production of other types of business equipment continued to rebound, and the output of construction supplies advanced further. Production of light motor vehicles turned up in May; nonetheless, dealers' inventories remained lean. Capacity utilization in manufacturing rose in May to a rate noticeably above the low reached in mid-2009, but it was still substantially below its longer-run average.

The rise in consumer spending slowed in recent months after a brisk increase in the first quarter. Although sales of light motor vehicles continued to trend higher, nominal sales of non-auto consumer goods and food services were little changed in April and May. The moderation in spending appeared, on balance, to be aligning the pace of consumption with recent trends in income, wealth, and consumer sentiment. Real disposable personal income moved up at a solid rate in March and April, reflecting increases in employment and hours worked as well as slightly higher real wages, but home values declined in recent months and equity prices moved down since the April meeting. Measures of consumer sentiment improved in May and early June but were still at relatively low levels.

The anticipated expiration of the homebuyer tax credit appeared to have pulled home sales forward, boosting their level in recent months. Sales of existing single-family homes rose strongly in April, and, although they moved down in May, these sales were still above their level earlier in the year. Purchases of new single-family homes also jumped in April, but then fell steeply in May. On net, the upswing in the volume of real estate transactions in recent months was likely to boost the brokers' commissions component of residential investment in the second quarter. However, starts of new single-family homes, which had trended higher in the first four months of the year, declined sharply in May. In addition, the number of permits for new homes, which tends to lead starts, fell for a second month in May. House prices declined somewhat in recent months, reversing some of the modest increases that occurred in the spring and summer of 2009. After changing little on net during the preceding year, interest rates for 30-year fixed-rate conforming mortgages moved lower in May and June.

Real spending on equipment and software increased further early in the second quarter. Business outlays for computing equipment and software continued to rise at a brisk pace through April, and shipments of aircraft to domestic carriers rebounded. Orders and shipments of nondefense capital goods excluding transportation and high-tech equipment stayed on a noticeable uptrend, on net, in March and April, with the increases broadly based by type of equipment. The recovery in equipment and software spending was consistent with the relatively strong gains in production in recent months, improved financial conditions over the first part of the year, and the positive readings from surveys on business conditions and earnings reports for producers of capital goods. Business outlays for nonresidential construction appeared to be contracting further, on balance, in March and April, although the rate of decline seemed to be moderating. Outlays for new power plants and for manufacturing facilities firmed, and investment in drilling and mining structures continued to rise strongly. However, spending on office and commercial structures was still falling steeply through April, with the weakness likely related to high vacancy rates, falling property prices, and the light volume of sales.

Businesses appeared to have begun to restock their inventories. Real nonfarm inventory investment turned positive in the first quarter, and data for April pointed to further modest accumulation. Ratios of inventories to sales for most industries looked to be within comfortable ranges.

Consumer price inflation remained low in April and May. The core consumer price index rose only slightly over the period, and the year-over-year change in the index was lower than earlier this year. Core goods prices continued to decline, on net, and prices of nonenergy services remained soft. The headline consumer price index edged down in both months, as the drop in the price of crude oil since April led consumer energy prices to retrace a portion of the run-up that occurred during the nine months ending in January. At earlier stages of processing, producer prices of core intermediate materials rose moderately in May after five months of large increases. Inflation compensation based on Treasury inflation-protected securities decreased recently in response to low readings on inflation and falling oil prices. Survey measures of both short- and long-term inflation expectations remained relatively stable.

Unit labor costs continued to be restrained by weakness in hourly compensation and further gains in productivity. Revised estimates of labor compensation indicated that hourly compensation in the nonfarm business sector was about flat, on net, during the fourth quarter of 2009 and the first quarter of 2010. The employment cost index showed a moderate rise over the period, boosted by a sizable increase in benefit costs in the first quarter. The year-over-year increase in average hourly earnings of all employees was also moderate through May. Output per hour in the nonfarm business sector, which rose rapidly in 2009, posted a more moderate but still-solid gain in the first quarter of 2010.

The U.S. international trade deficit widened slightly in April, as nominal exports fell a bit more than nominal imports. The April declines in both exports and imports followed robust increases in March. The April fall in exports reflected declines in exports of consumer goods, primarily due to a drop in pharmaceuticals, and in agricultural goods. Exports of industrial supplies moved up while exports of capital goods were flat after increasing strongly in March. Imports in April were pulled down by lower imports of consumer goods, which more than offset sharply higher imports of capital goods, particularly computing equipment. Imports of automotive products and non-oil industrial supplies declined slightly, and imports of petroleum products were flat following a large increase in March.

Incoming data suggested that economic activity abroad continued to expand at a strong pace in the first half of the year. Among the advanced foreign economies, growth of real gross domestic product (GDP) in the first quarter was particularly strong in Canada and Japan, and recent indicators for those countries pointed to continued solid increases in the second quarter. In contrast, the rise in economic activity in the euro area was subdued, as favorable readings for the manufacturing sector were counterbalanced by weakness in domestic demand. Since the time of the April meeting of the Federal Open Market Committee (FOMC), concerns about the fiscal situation of several euro-area countries intensified sharply. In response, European authorities announced a number of policy measures, including acceleration of fiscal consolidation plans in some countries, finalization of an International Monetary Fund (IMF) and European Union (EU) assistance package for Greece, and the introduction of a broader €500 billion financial assistance program that could be complemented by bilateral IMF lending. The European Central Bank (ECB) also announced further measures to improve liquidity conditions in impaired markets, including a program to purchase sovereign and private debt.

Economic activity in emerging market economies continued to expand briskly in the first half of this year. Growth of economic activity was particularly robust in emerging Asia, driven in part by strong increases in industrial production and exports associated with solid gains in final demand as well as the turn in the inventory cycle. The rise of real GDP in Latin America appeared to have stalled in the first quarter, but this development reflected a contraction in Mexico that more-favorable monthly indicators suggested should prove temporary. In contrast, the increase in Brazilian real GDP was very strong. Consumer price inflation in the foreign economies in aggregate was buoyed by higher food and energy prices in the first quarter, while core inflation generally remained subdued. More recent information suggested some moderation in foreign inflation in the second quarter.

Staff Review of the Financial Situation

The FOMC's decision at its April meeting to maintain the 0 to ¼ percent target range for the federal funds rate and the wording of the accompanying statement were largely in line with expectations and prompted little market reaction. Economic data releases were mixed, on balance, over the intermeeting period, but market participants were especially attentive to incoming information on the labor market—most notably, the private payroll figures in the employment report for May, which were considerably weaker than investors expected. Those data, combined with heightened concerns about the global economic outlook stemming in part from Europe's sovereign debt problems, contributed to a downward revision in the expected path of policy implied by money market futures rates.

In the market for Treasury coupon securities, 2- and 10-year nominal yields fell considerably over the intermeeting period. Market participants pointed to flight-to-quality flows and greater concern about the economic outlook as factors boosting the demand for Treasury securities. The drop in Treasury yields was accompanied by a small widening of swap spreads.

Conditions in short-term funding markets deteriorated somewhat, particularly for European financial institutions. Spreads of the term London interbank offered rate, or Libor, over rates on overnight index swaps widened noticeably, with the availability of funding at maturities longer than one week reportedly quite limited. Market participants also reduced holdings of commercial paper sponsored by entities thought to have exposures to peripheral European financial institutions and governments. Even so, spreads of high-grade unsecured financial commercial paper to nonfinancial commercial paper widened only modestly over the intermeeting period. In secured funding markets, spreads on asset-backed commercial paper also widened modestly, while rates on repurchase agreements involving Treasury and agency collateral changed little. In the inaugural Senior Credit Officer Opinion Survey on Dealer Financing Terms, which was conducted by the

Federal Reserve between May 24 and June 4, dealers generally reported that the terms on which they provided credit remained tight relative to those at the end of 2006. However, they noted some loosening of terms for both securities financing and over-the-counter derivatives transactions, on net, over the previous three months for certain classes of clients—including hedge funds, institutional investors, and nonfinancial corporations—and intensified efforts 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.

Broad U.S. stock price indexes fell over the intermeeting period, in part reflecting deepening concerns about the European fiscal situation and its potential for adverse spillovers to global economic growth. Option-implied volatility on the S&P 500 index spiked in mid-May, to more than double its value at the time of the April FOMC meeting, but largely reversed its run-up by the time of the June meeting. The spread between the staff's estimate of the expected real return on equities over the next 10 years and an estimate of the expected real return on a 10-year Treasury note—a measure of the equity risk premium—increased from its already elevated level.

Investors' attitudes toward financial institutions deteriorated somewhat, as the equity of financial firms underperformed the broader market amid uncertainty about the implications of developments in Europe and the potential effects of financial regulatory reform. Yields on investment- and speculative-grade corporate bonds moved higher over the intermeeting period, and high-yield bond mutual funds recorded substantial net outflows. Spreads on corporate bonds widened, although they remained within the range prevailing since last summer. Secondary-market bid prices on syndicated leveraged loans fell, while bid-asked spreads in that market widened.

Net debt financing by nonfinancial corporations increased in April and May relative to its pace in the first quarter. Gross bond issuance by investment-grade nonfinancial corporations in the United States remained solid, on average, over those two months; nonfinancial commercial paper outstanding increased as well. High-yield corporate bond issuance in the United States briefly paused in May, reflecting the market's pullback from risky assets, although speculative-grade U.S. firms continued to issue bonds abroad and a few placed issues domestically in the first half of June. Gross equity issuance fell a bit, on net, in April and May, likely due in part to recent declines in equity prices and elevated market volatility. Measures of the credit quality of nonfinancial firms generally continued to improve, and first-quarter profits for firms in the S&P 500 jumped substantially, primarily reflecting an upturn in financial sector profits from quite depressed levels. The outlook in commercial real estate markets stayed weak; prices of commercial properties fell a bit further in the first quarter, and the volume of commercial property sales remained light. The delinquency rate for securitized commercial mortgages continued to climb in May, and indexes of prices of credit default swaps on commercial mortgages declined, on net, over the intermeeting period.

Consumer credit contracted again in recent months, as revolving credit continued on a steep downtrend. Issuance of consumer credit asset-backed securities (ABS) increased in May, although the pace was still well below that observed before the onset of the financial crisis. Credit card ABS issuance remained subdued, partly reflecting regulatory changes that made financing credit card receivables via securitization less desirable. In primary markets, spreads of credit card interest rates over those on Treasury securities remained extremely high in April, while interest rate spreads on auto loans stayed near their average level of the past decade. Consumer credit quality improved further, with delinquency rates on credit cards and auto loans moving down a bit in April.

Bank credit declined, on average, in April and May at about the same pace as in the first quarter. Commercial and industrial loans, after dropping rapidly in April, decreased at a slower pace in May. While commercial real estate and home equity loans fell at a slightly faster rate than in recent quarters, the contraction in closed-end residential loans abated, partly because of a reduced pace of sales to Fannie Mae and Freddie Mac. Consumer loans declined again, on average, in April and May. The amount of Treasury and agency securities held by large domestic banks and foreign-related institutions declined in May, contributing to a sizable drop in banks' securities holdings.

On a seasonally adjusted basis, M2 contracted in April but surged in May, with much of the month-to-month variation apparently associated with the effects of federal tax payments and refunds. Averaging across the two months, M2 expanded moderately after having been about unchanged in the first quarter; liquid deposits accounted for most of the net change.

The threat to global economic growth and financial stability posed by the fiscal situation in some European nations sparked widespread flight-to-quality flows over most of the intermeeting period. This retreat led to a broad appreciation of the dollar as well as declines in equity prices abroad and in yields on benchmark sovereign bonds. However, investor sentiment improved near the end of the period, leading to a partial reversal in some of these movements, despite Moody's downgrade of Greece to below-investment-grade status in mid-June. On net, the dollar ended the intermeeting period up, most headline equity indexes fell, and benchmark government bond yields declined. Strains in euro-area bank funding markets reemerged during the period. In response, the ECB announced some changes to its liquidity operations that would provide greater market access to term funding in euros.[3] Difficulties also appeared in corporate debt markets as both nonfinancial and financial corporate debt issuance dropped substantially in May. In addition, pressures in dollar funding markets reappeared for foreign financial institutions, especially those thought to have significant exposure to Greece and other peripheral euro-area countries. To help contain these pressures and to prevent their spread to other institutions and regions, the Federal Reserve reestablished dollar liquidity swap arrangements with the ECB, the Bank of England, the Bank of Japan, the Bank of Canada, and the Swiss National Bank.

Yields on the sovereign obligations of peripheral European countries declined noticeably following a May 10 announcement of a framework established by the EU for providing financial aid to euro-area governments and of the ECB's intention to purchase euro-area sovereign debt. However, yields remained high even after these announcements and moved up subsequently, notwithstanding the ECB's purchases of government debt. Amid a weakening outlook for economic growth in Europe, central banks in several emerging European economies began to decrease policy rates. By contrast, brighter economic prospects in Canada and China prompted the Bank of Canada to raise its target for the overnight rate to 50 basis points at its June meeting and Chinese authorities to raise banks' reserve requirement further in May. In addition, the People's Bank of China announced late in the period that it would allow the renminbi to move more flexibly, and the currency appreciated slightly immediately following the announcement.

Staff Economic Outlook

In the economic forecast prepared for the June FOMC meeting, the staff continued to anticipate a moderate recovery in economic activity through 2011, supported by accommodative monetary policy, an attenuation of financial stress, and strengthening consumer and business confidence. While the recent data on production and spending were broadly in line with the staff's expectations, the pace of the expansion over the next year and a half was expected to be somewhat slower than previously predicted. The intensifying concerns among investors about the implications of the fiscal difficulties faced by some European countries contributed to an increase in the foreign exchange value of the dollar and a drop in equity prices, which seemed likely to damp somewhat the expansion of domestic demand. The implications of these less-favorable factors for U.S. economic activity appeared likely to be only partly offset by lower interest rates on Treasury securities, other highly rated securities, and mortgages, as well as by a lower price for crude oil. The staff still expected that the pace of economic activity through 2011 would be sufficient to reduce the existing margins of economic slack, although the anticipated decline in the unemployment rate was somewhat slower than in the previous projection.

The staff's forecasts for headline and core inflation were also reduced slightly. The changes were a response to the lower prices of oil and other commodities, the appreciation of the dollar, and the greater amount of economic slack in the forecast. Despite these developments, inflation expectations had remained stable, likely limiting movements in inflation. On balance, core inflation was expected to continue at a subdued rate over the projection period. As in earlier forecasts, headline inflation was projected to move into line with the core rate by 2011.

Participants' Views of Current Conditions and the Economic Outlook

In conjunction with this FOMC meeting, all meeting participants—the five members of the Board of Governors and the presidents of the 12 Federal Reserve Banks—provided projections of economic growth, the unemployment rate, and consumer price inflation for each year from 2010 through 2012 and over a longer horizon. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge over time under appro-

[3] The ECB reinstituted a six-month lending operation and switched its three-month lending operations from fixed-quantity auctions to full-allotment offerings at a fixed rate of 1 percent.

priate monetary policy and in the absence of further shocks. Participants' forecasts through 2012 and over the longer run are described in the Summary of Economic Projections, which is attached as an addendum to these minutes.

In their discussion of the economic situation and outlook, meeting participants generally saw the incoming data and information received from business contacts as consistent with a continued, moderate recovery in economic activity. Participants noted that the labor market was improving gradually, household spending was increasing, and business spending on equipment and software had risen significantly. With private final demand having strengthened, inventory adjustments and fiscal stimulus were no longer the main factors supporting economic expansion. In light of stable inflation expectations and incoming data indicating low rates of inflation, policymakers continued to anticipate that both overall and core inflation would remain subdued through 2012. However, financial markets were generally seen as recently having become less supportive of economic growth, largely reflecting international spillovers from European fiscal strains. In part as a result of the change in financial conditions, most participants revised down slightly their outlook for economic growth, and about one-half of the participants judged the balance of risks to growth as having moved to the downside. Most participants continued to see the risks to inflation as balanced. A number of participants expressed the view that, over the next several years, both employment and inflation would likely be below levels they consider to be consistent with their dual mandate, but they anticipated that, with appropriate monetary policy, both would rise over time to levels consistent with the Federal Reserve's objectives.

Financial markets had become somewhat less supportive of economic growth since the April meeting, with the developments in Europe cited as 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. Participants also noted ongoing difficulties in financing commercial real estate. Nonetheless, reports suggested that more-creditworthy business borrowers were still able to obtain funding in the open markets on fairly attractive terms, and a couple of participants noted that credit from the banking sector, which had been contracting for some time, was showing some tentative signs of stabilizing. Moreover, several participants observed that the decline in yields on Treasury securities resulting from the global flight to quality was positive for the domestic economy; in particular, the associated decline in mortgage rates was seen as potentially helpful in supporting the housing sector.

Supporting the view of a continued recovery, incoming data and anecdotal reports pointed to strength in a number of business sectors, particularly manufacturing and transportation. Policymakers noted that firms' investment in equipment and software had advanced rapidly of late, and they anticipated that such spending would continue to rise, though perhaps at a somewhat slower pace. Business contacts suggested that investment spending had been supported by the replacement and upgrading of existing capital, making up for some spending that had been postponed in the downturn, and this component of investment demand was seen as unlikely to remain robust. In addition, inventory accumulation, which had been a significant contributor to recent gains in production, appeared likely to provide less impetus to growth in coming quarters. Participants also noted that several uncertainties, including those related to legislative changes and to developments in global financial markets, were generating a heightened level of caution that could lead some firms to delay hiring and planned investment outlays.

Participants commented that household spending continued to advance, with notable increases in auto sales and expenditures on other durable goods. Going forward, consumption spending was expected to continue to post moderate gains, with the effects of income growth and improved confidence as the economy recovers more than offsetting the effects of lower stock prices and housing wealth. However, continued labor market weakness could weigh on consumer sentiment, and households were still repairing their balance sheets; both factors could restrain consumer spending going forward. Although readings from the housing sector had been strong through mid-spring, participants noted that the strength likely reflected the effects of the temporary tax credits for homebuyers. Indeed, data for the most recent month suggested that, with the expiration of those provisions, home sales and starts had stepped down noticeably and could remain weak in the near term; with lower demand and a continuing supply of foreclosed houses coming to market, participants judged that house prices were likely to remain flat or decline somewhat further in the near term.

Meeting participants interpreted the data on the labor market as consistent with their outlook for gradual recovery. Employers were adding hours to the workweek and hiring temporary workers, suggesting a pickup in labor demand; however, the most recent data on employment had been disappointing, and new claims for unemployment insurance remained elevated. Reportedly, employers were still cautious about adding to payrolls, given uncertainties about the outlook for the economy and government policies. Participants expected the pace of hiring to remain low for some time. Indeed, the unemployment rate was generally expected to remain noticeably above its long-run sustainable level for several years, and participants expressed concern about the extended duration of unemployment spells for a large number of workers. Participants also noted a risk that continued rapid growth in productivity, though clearly beneficial in the longer term, could in the near term act to moderate growth in the demand for labor and thus slow the pace at which the unemployment rate normalizes.

A broad set of indicators suggested that underlying inflation remained subdued and was, on net, trending lower. The latest readings on core inflation—which excludes the relatively volatile prices of food and energy—had slowed, and other measures of the underlying trajectory of inflation, such as median and trimmed-mean measures, also had moved down this year. Crude oil prices declined somewhat over the intermeeting period, a factor that was likely to damp headline inflation at the consumer level in coming months. Other commodity prices were moderating, and nominal wages appeared to be rising only slowly. Some participants indicated that they viewed the substantial slack in labor and resource markets as likely to reduce inflation. The financial strains in Europe had led to an increase in the foreign exchange value of the dollar, and the resulting downward pressure on import prices also was expected to weigh on consumer prices for a time. However, inflation expectations were seen by most participants as well anchored, which would tend to curb any tendency for actual inflation to decline. On balance, meeting participants revised down modestly their outlook for inflation over the next couple of years; they generally expected inflation to be quite low in the near term and to trend slightly higher over time.

Some participants judged the risks to the outlook for inflation as tilted to the downside, particularly in the near term, in light of the large amount of resource slack already prevailing in the economy, the significant downside risks to the outlook for real activity, and the possibility that inflation expectations could begin to decline in response to low actual inflation. A few participants cited some risk of deflation. Other participants, however, thought that inflation was unlikely to fall appreciably further given the stability of inflation expectations in recent years and very accommodative monetary policy. Over the medium term, participants saw both upside and downside risks to inflation. Several participants noted that a continuation of lower-than-expected inflation and high unemployment could eventually lead to a downward movement in inflation expectations that would reinforce disinflationary pressures. By contrast, a few participants noted the possibility that a potentially unsustainable fiscal position and the size of the Federal Reserve's balance sheet could boost inflation expectations and actual inflation over time.

Committee Policy Action

In their discussion of monetary policy for the period ahead, members agreed that it would be appropriate to maintain the target range of 0 to ¼ percent for the federal funds rate. The economic outlook had softened somewhat and a number of members saw the risks to the outlook as having shifted to the downside. Nonetheless, 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. In sum, the changes to the outlook were viewed as relatively modest and as not warranting policy accommodation beyond that already in place. However, members 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 outlook were to worsen appreciably. Given the slightly softer cast of recent data and the shift to less accommodative financial conditions, members agreed that some changes to the statement's characterization of the economic and financial situation were necessary. Nearly all members judged that it was appropriate to reiterate 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. One member, however, believed that continuing to communicate an expectation in the Committee's statement that the federal funds rate would remain at an exceptionally low level for an extended period would create conditions that could lead to macroeconomic and financial imbalances.

At the conclusion of the discussion, the Committee voted to authorize and direct the Federal Reserve Bank of New York, until it was instructed otherwise, to execute transactions in the System Account in accordance with the following domestic policy directive:

> "The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability."

The vote encompassed approval of the statement below to be released at 2:15 p.m.:

> "Information received since the Federal Open Market Committee met in April suggests that the economic recovery is proceeding and that the labor market is improving gradually. Household spending is increasing but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software has risen significantly; however, investment in nonresidential structures continues to be weak and employers remain reluctant to add to payrolls. Housing starts remain at a depressed level. Financial conditions have become less supportive of economic growth on balance, largely reflecting developments abroad. Bank lending has continued to contract in recent months. Nonetheless, the Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability, although the pace of economic recovery is likely to be moderate for a time.
>
> Prices of energy and other commodities have declined somewhat in recent months, and underlying inflation has trended lower. With substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.
>
> The Committee will maintain the target range for the federal funds rate at 0 to ¼ percent and continues to anticipate that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels of the federal funds rate for an extended period.
>
> The Committee will continue to monitor the economic outlook and financial developments and will employ its policy tools as necessary to promote economic recovery and price stability."

Voting for this action: Ben Bernanke, William C. Dudley, James Bullard, Elizabeth Duke, Donald L. Kohn, Sandra Pianalto, Eric Rosengren, Daniel K. Tarullo, and Kevin Warsh.

Voting against this action: Thomas M. Hoenig.

Mr. Hoenig dissented because he believed that, as the economy completed its first year of modest recovery, it was no longer advisable to indicate that economic and financial conditions were likely to warrant "exceptionally low levels of the federal funds rate for an extended period." Although risks to the forecast remained, Mr. Hoenig was concerned that communicating such an expectation would limit the Committee's flexibility to begin raising rates modestly in a timely fashion and could result in a buildup of future financial imbalances and increase the risks to longer-run macroeconomic and financial stability.

By unanimous vote, the Committee selected William B. English to serve as Secretary and Economist, and James A. Clouse to serve as Associate Economist, effective July 23, 2010, until the selection of their successors at the first regularly scheduled meeting of the Committee in 2011.

It was agreed that the next meeting of the Committee would be held on Tuesday, August 10, 2010. The meeting adjourned at 12:10 p.m. on June 23, 2010.

Conference Call

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, 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. By early May, financial strains had intensified, reflecting investors' uncertainty about whether fiscally stronger euro-area governments would provide financial support to the weakest members, the extent of the drag on euro-area economies that could result from efforts at fiscal consolidation, and the degree of exposure of major European banks and financial institutions to vulnerable countries. Conditions in short-term funding markets in Europe had also deteriorated, and global financial markets more generally had been volatile and less supportive of economic growth.

The Chairman indicated that European authorities were considering a number of measures to promote fiscal sustainability and to provide increased liquidity and support to money markets and markets for European sovereign debt. In connection with the possible implementation of these measures, some major central banks had requested that dollar liquidity swap lines with the Federal Reserve be reestablished. These swap lines would enhance the ability of these central banks to provide support for dollar funding markets in their jurisdictions. The terms and conditions of the swap lines would generally be similar to those in place prior to their expiration earlier in the year.

The Committee discussed considerations surrounding the possible reestablishment of dollar liquidity swap lines. Participants 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. Participants observed that, in current circumstances, the dollar swap lines should be made available to a smaller number of major foreign central banks than previously. In order to promote the transparency of these arrangements, participants 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 the discussion, the Committee voted unanimously to approve the following resolution:

> "The Committee authorizes the Chairman to agree to establish swap lines with the European Central Bank, the Bank of England, the Swiss National Bank, the Bank of Japan, and the Bank of Canada, as discussed by the Committee today."

> Secretary's note: Later on May 9, 2010, the Federal Reserve, in coordination with the Bank of Canada, the Bank of England, the European Central Bank (ECB), and the Swiss National Bank, announced that U.S. dollar liquidity swap facilities had been reestablished with those central banks. The arrangements with the Bank of England, the ECB, and the Swiss National Bank provide these 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 drawings of up to $30 billion, as was the case previously. On May 10, the Federal Reserve and the Bank of Japan (BOJ) announced that a temporary U.S. dollar liquidity swap arrangement had been established that would provide the BOJ with the capacity to conduct tenders of U.S. dollars at fixed rates for full allotment.

Notation Vote

By notation vote completed on May 17, 2010, the Committee unanimously approved the minutes of the FOMC meeting held on April 27–28, 2010.

Brian F. Madigan
Secretary

Summary of Economic Projections

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 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

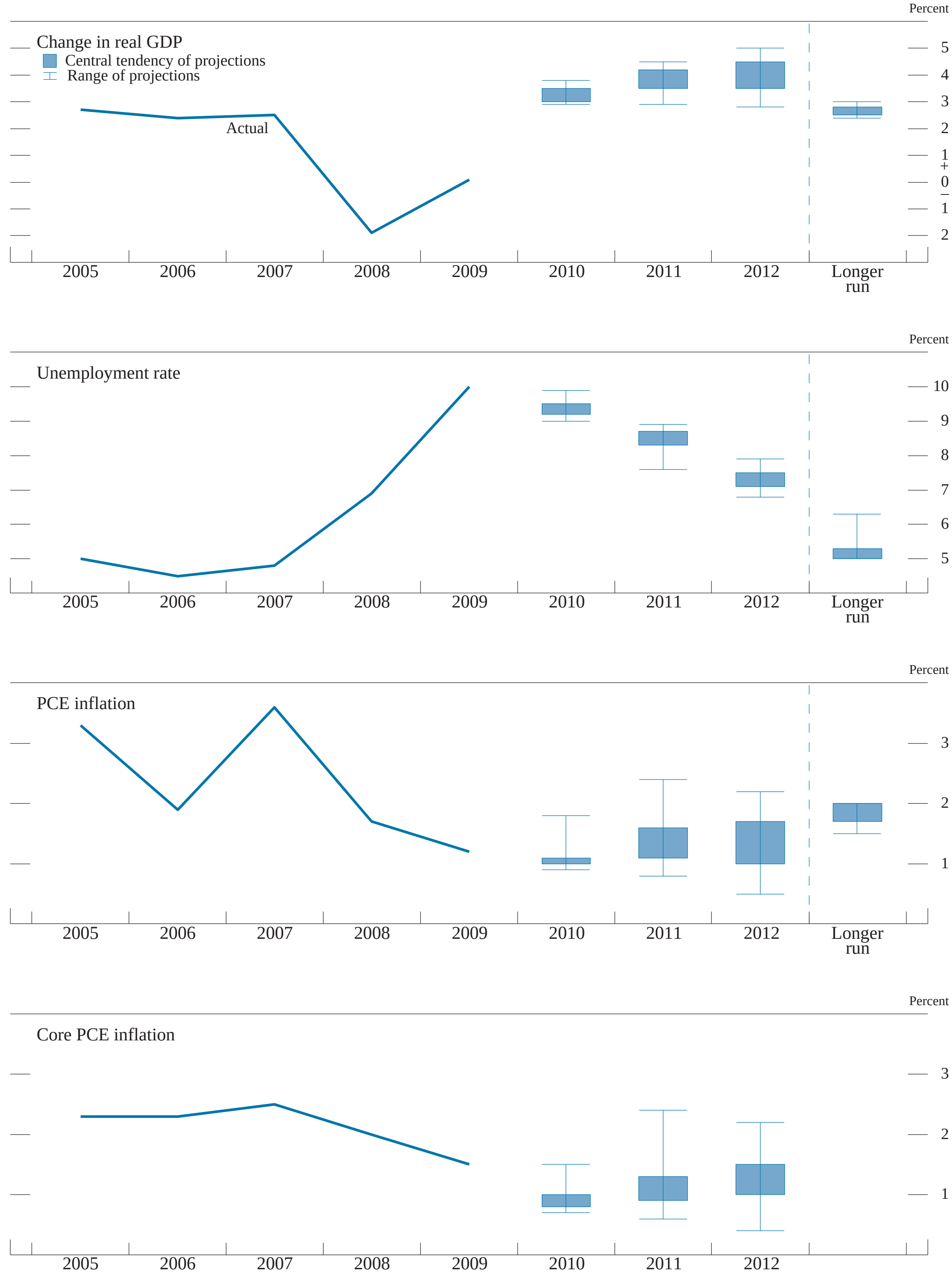
Table 1. Economic projections of Federal Reserve Governors and Reserve Bank presidents, June 2010
Percent

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.

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.

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.[1] 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.

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 "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.

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.

Diversity of Views

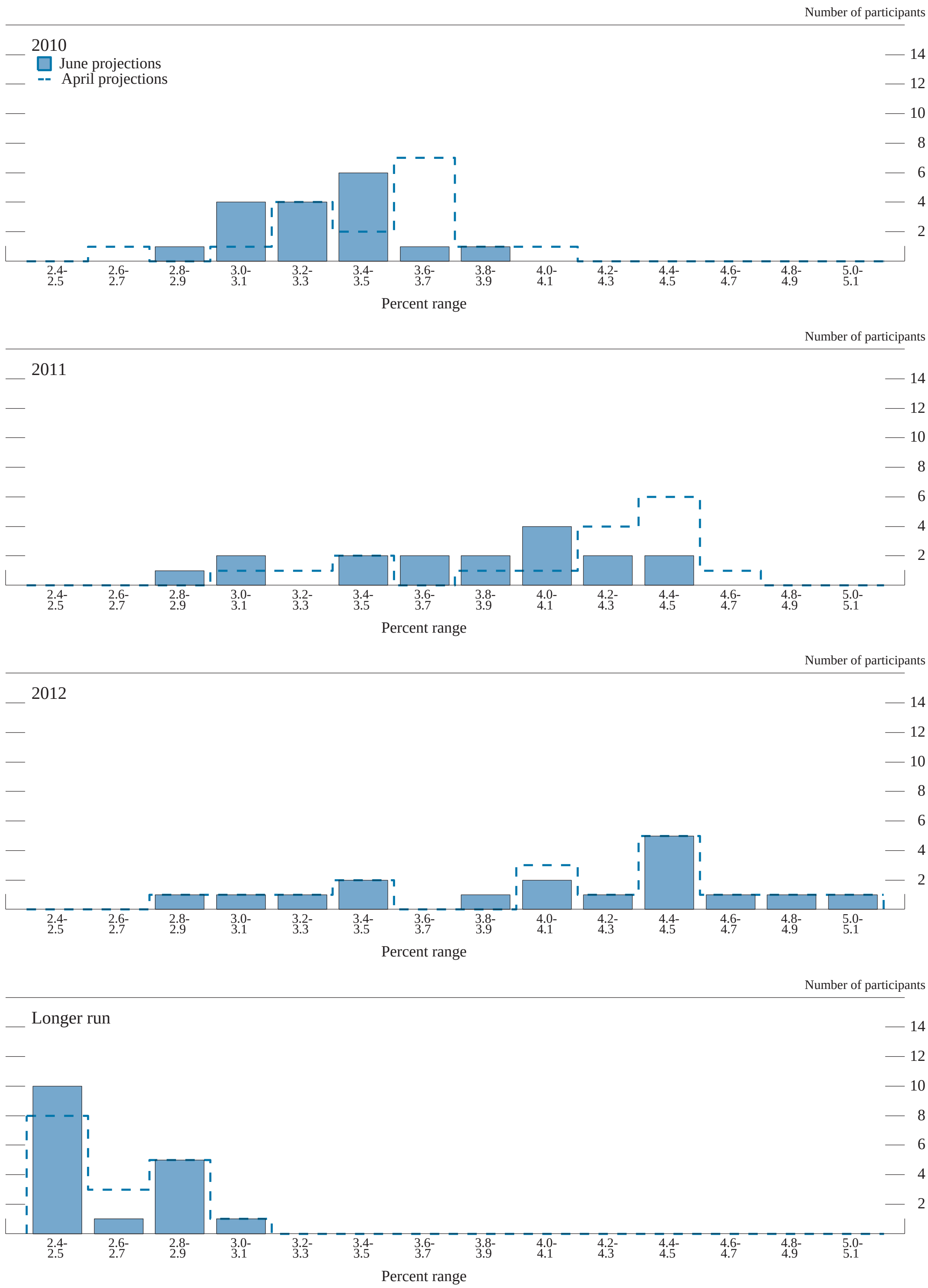
Figures 2.A and 2.B provide further details on the diversity of participants' views regarding the likely outcomes for real GDP growth and the unemployment rate. The distribution of participants' projections for real GDP growth this year was slightly narrower than the distribution in April, but the distributions for real GDP growth in 2011 and 2012 were about unchanged. As in earlier projections, the dispersion in forecasts for

[1] 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.

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.

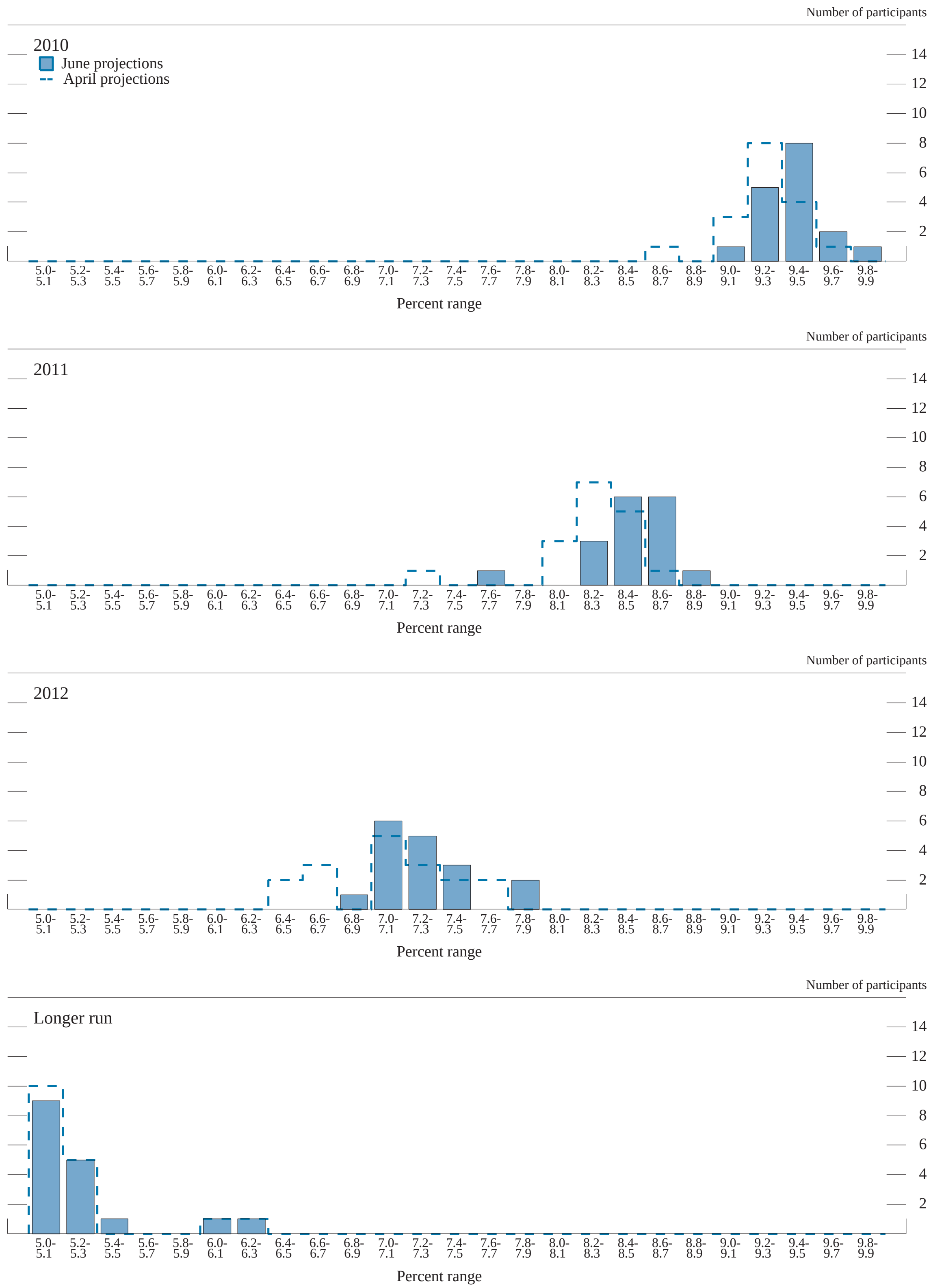
Corresponding information about the diversity of participants' views regarding the inflation outlook is provided in figures 2.C and 2.D. The distributions of projections for overall and core PCE inflation for 2010 shifted lower relative to the distributions in April, and the distributions were noticeably 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



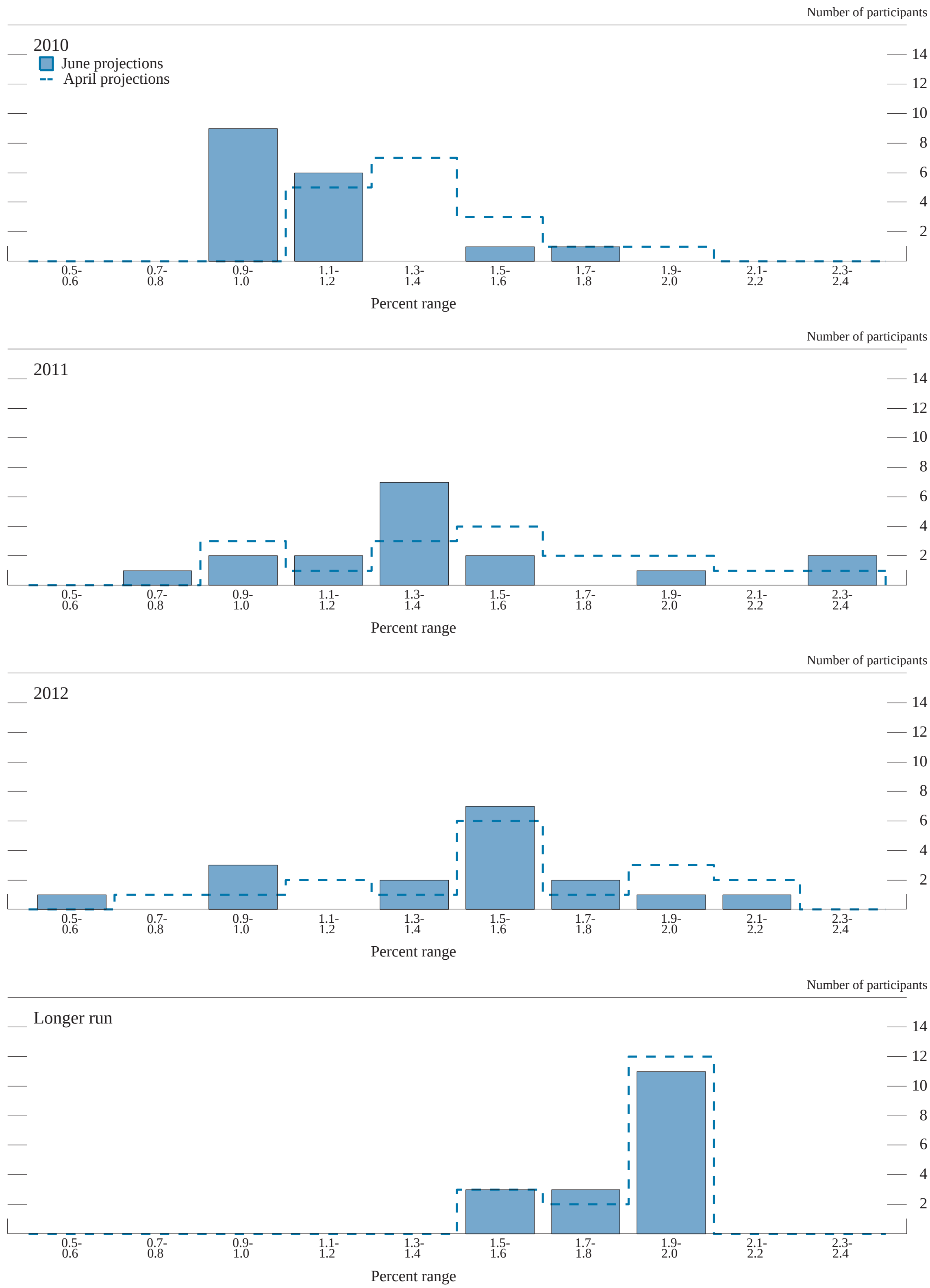
NOTE: Definitions of variables are in the general note to table 1.

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



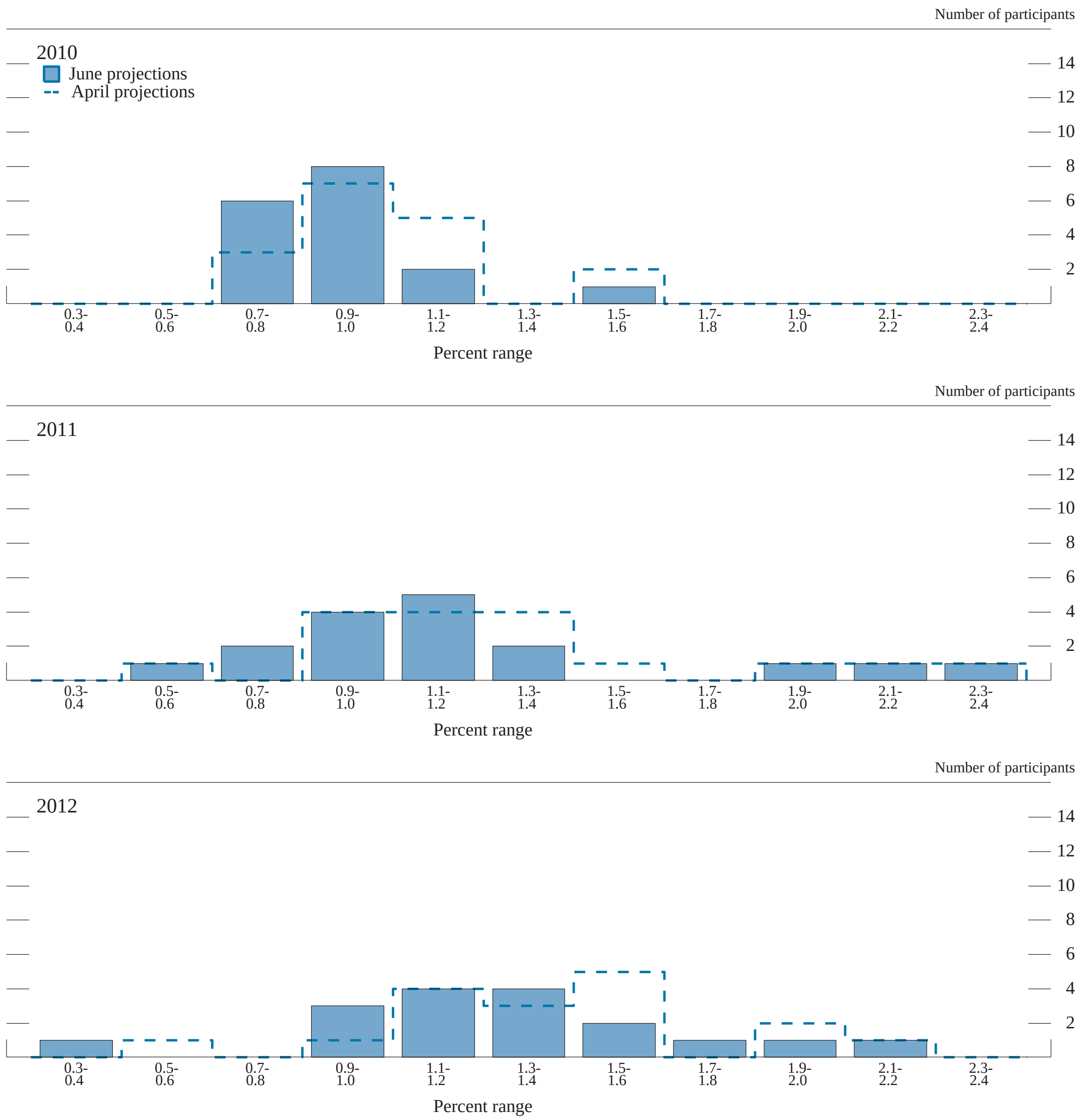
NOTE: Definitions of variables are in the general note to table 1.

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.