

Minutes of the Federal Open Market Committee November 1–2, 2011

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, November 1, 2011, at 10:30 a.m. and continued on Wednesday, November 2, 2011, at 8:30 a.m.

PRESENT:

Ben Bernanke, Chairman
William C. Dudley, Vice Chairman
Elizabeth Duke
Charles L. Evans
Richard W. Fisher
Narayana Kocherlakota
Charles I. Plosser
Sarah Bloom Raskin
Daniel K. Tarullo
Janet L. Yellen

Christine Cumming, Jeffrey M. Lacker, Dennis P. Lockhart, Sandra Pianalto, and John C. Williams, Alternate Members of the Federal Open Market Committee

James Bullard, Esther L. George, and Eric Rosengren, Presidents of the Federal Reserve Banks of St. Louis, Kansas City, and Boston, respectively

William B. English, Secretary and Economist
Deborah J. Danker, Deputy Secretary
Matthew M. Luecke, Assistant Secretary
David W. Skidmore, Assistant Secretary
Michelle A. Smith, Assistant Secretary
Scott G. Alvarez, General Counsel
David W. Wilcox, Economist

James A. Clouse, Thomas A. Connors, Steven B. Kamin, Loretta J. Mester, Simon Potter, David Reifschneider, Harvey Rosenblum, Lawrence Slifman, Daniel G. Sullivan, and Kei-Mu Yi, 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 Banking Supervision and Regulation, Board of Governors

Nellie Liang, Director, Office of Financial Stability Policy and Research, Board of Governors

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

William Nelson, Deputy Director, Division of Monetary Affairs, Board of Governors

Andrew T. Levin, Special Adviser to the Board, Office of Board Members, Board of Governors

Linda Robertson, Assistant to the Board, Office of Board Members, Board of Governors

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

Michael P. Leahy, Senior Associate Director, Division of International Finance, Board of Governors; William Wascher, Senior Associate Director, Division of Research and Statistics, Board of Governors

Ellen E. Meade, Senior Adviser, Division of Monetary Affairs, Board of Governors

Daniel M. Covitz and Michael T. Kiley,¹ Associate Directors, Division of Research and Statistics, Board of Governors

Christopher J. Erceg,¹ Deputy Associate Director, Division of International Finance, Board of Governors; Fabio M. Natalucci, Deputy Associate Director, Division of Monetary Affairs, Board of Governors

Brian J. Gross,¹ Special Assistant to the Board, Office of Board Members, Board of Governors

¹ Attended the portion of the meeting relating to monetary policy strategies and communication.

David Lopez-Salido,¹ Assistant Director, Division of Monetary Affairs, Board of Governors

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

Mark A. Carlson, Senior Economist, Division of Monetary Affairs, Board of Governors

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

Sarah G. Green, First Vice President, Federal Reserve Bank of Richmond

Glenn D. Rudebusch, Executive Vice President, Federal Reserve Bank of San Francisco

David Altig, Geoffrey Tootell, and Christopher J. Waller, Senior Vice Presidents, Federal Reserve Banks of Atlanta, Boston, and St. Louis, respectively

Todd E. Clark, Edward S. Knotek II, and Nathaniel Wuerffel, Vice Presidents, Federal Reserve Banks of Cleveland, Kansas City, and New York, respectively

Deborah L. Leonard, Assistant Vice President, Federal Reserve Bank of New York

Robert L. Hetzel, Senior Economist, Federal Reserve Bank of Richmond

¹ Attended the portion of the meeting relating to monetary policy strategies and communication.

By unanimous vote, the Committee selected David W. Wilcox to serve as Economist, and Lawrence Slifman to serve as Associate Economist, effective November 1, 2011, until the selection of their successors at the first regularly scheduled meeting of the Committee in 2012.

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 markets during the period since the Federal Open Market Committee (FOMC) met on September 20–21, 2011. He also discussed the developments in connection with the bankruptcy filing of MF Global

Holdings Ltd. and its finance subsidiary, MF Global Finance USA Inc., and with the termination of MF Global Inc. as a primary dealer. The Manager reported on System open market operations, including the ongoing reinvestment into agency-guaranteed mortgage-backed securities (MBS) of principal payments received on SOMA holdings of agency debt and agency-guaranteed MBS as well as the operations related to the maturity extension program authorized at the September 20–21 FOMC meeting. By unanimous vote, the Committee ratified the Desk's domestic transactions over the intermeeting period. There were no intervention operations in foreign currencies for the System's account over the intermeeting period.

Monetary Policy Strategies and Communication

The staff gave a presentation on alternative monetary policy strategies, and meeting participants discussed those alternatives as well as potential approaches for enhancing the clarity of their public communications. No decision was made at this meeting to change the Committee's policy strategy or communications. It was noted that many central banks around the world pursue an explicit inflation objective, maintain flexibility to stabilize economic activity, and seek to communicate their forecasts and policy plans as clearly as possible. Many participants pointed to the merits of specifying an explicit longer-run inflation goal, but it was noted that such a step could be misperceived as placing greater weight on price stability than on maximum employment; consequently, some suggested that a numerical inflation goal would need to be set forth within a context that clearly underscored the Committee's commitment to fostering both parts of its dual mandate. More broadly, a majority of participants agreed that it could be beneficial to formulate and publish a statement that would elucidate the Committee's policy approach, and participants generally expressed interest in providing additional information to the public about the likely future path of the target federal funds rate. The Chairman asked the subcommittee on communications to give consideration to a possible statement of the Committee's longer-run goals and policy strategy, and he also encouraged the subcommittee to explore potential approaches for incorporating information about participants' assessments of appropriate monetary policy into the Summary of Economic Projections.

Committee participants shared their views regarding the potential merits and pitfalls of making conditional commitments regarding the future course of monetary policy. As noted in the staff briefing, economic theory and model simulations suggested that a policy strategy

involving such commitments could foster better macroeconomic outcomes than a discretionary approach of reoptimizing policy at every meeting, so long as the public understood the central bank's strategy and believed that policymakers would follow through on those commitments. Some participants noted that conditional commitments might be particularly helpful in providing additional accommodation and mitigating downside risks when the policy rate is close to its effective lower bound, because a central bank can commit to a shallower interest rate trajectory than investors would expect if policymakers followed a purely discretionary approach. However, many pointed out that the implementation of such a strategy could pose substantial communication challenges and that the benefits would be diminished if the strategy was not fully credible. Indeed, one participant suggested that additional purchases of longer-term securities would be a clearer and more effective way to provide additional monetary accommodation when the federal funds rate was near its lower bound.

Given the potential pitfalls of pursuing commitment strategies extending far out into the future, many participants thought that the Committee should consider policies intended to accrue some of the gains from conditional commitments and to perform well in a wide range of alternative scenarios. In this vein, a number of participants expressed support for the possibility of clarifying the conditionality of the Committee's forward guidance about the trajectory of the federal funds rate through setting numerical thresholds for unemployment and inflation that would warrant exceptionally low levels for the policy rate. However, several participants noted that such thresholds could be confusing in the absence of a clear expression of the Committee's longer-term goals. Moreover, others suggested that such an approach could be problematic in light of significant uncertainties about the longer-run normal rate of unemployment. One participant pointed to those uncertainties as instead supporting the use of thresholds as a way of managing potential inflation risks associated with additional accommodation.

The Committee also considered policy strategies that would involve the use of an intermediate target such as nominal gross domestic product (GDP) or the price level. The staff presented model simulations that suggested that nominal GDP targeting could, in principle, be helpful in promoting a stronger economic recovery in a context of longer-run price stability. Other simulations suggested that the single-minded pursuit of a price-level target would not be very effective in foster-

ing maximum sustainable employment; it was noted, however, that price-level targeting where the central bank maintained flexibility to stabilize economic activity over the short term could generate economic outcomes that would be more consistent with the dual mandate. More broadly, a number of participants expressed concern that switching to a new policy framework could heighten uncertainty about future monetary policy, risk unmooring longer-term inflation expectations, or fail to address risks to financial stability. Several participants observed that the efficacy of nominal GDP targeting depended crucially on some strong assumptions, including the premise that the Committee could make a credible commitment to maintaining such a strategy over a long time horizon and that policymakers would continue adhering to that strategy even in the face of a significant increase in inflation. In addition, some participants noted that such an approach would involve substantial operational hurdles, including the difficulty of specifying an appropriate target level. In light of the significant challenges associated with the adoption of such frameworks, participants agreed that it would not be advisable to make such a change under present circumstances.

Staff Review of the Economic Situation

The information reviewed at the November 1–2 meeting indicated that the pace of economic activity strengthened somewhat in the third quarter, reflecting in part a reversal of the temporary factors that weighed on economic growth in the first half of the year. However, labor market conditions continued to be weak. Overall consumer price inflation was more moderate than earlier in the year, as prices of energy and some commodities declined from their recent peaks. Inflation for other goods and services also appeared to have moderated, and measures of longer-run inflation expectations remained stable.

Private nonfarm employment rose modestly in September, boosted in part by the return of communications workers who were on strike in August. Nonetheless, the pace of private-sector job gains in the third quarter as a whole was less than it was in the first half of the year. Meanwhile, employment in the state and local government sector continued to trend lower. The unemployment rate held at 9.1 percent in September, and both long-duration unemployment and the share of workers employed part time for economic reasons were still high. Initial claims for unemployment insurance have edged down since the middle of September but have remained at a level consistent with only mod-

est employment growth, and most indicators of businesses' hiring plans have showed no improvement.

Industrial production rose modestly in September, and the manufacturing capacity utilization rate edged up. Output in the motor vehicle-related sectors continued to step up following the disruptions associated with the earthquake in Japan earlier in the year, but the pace of factory production outside of those sectors was sluggish. Motor vehicle assemblies were scheduled to rise further in the fourth quarter, but broader indicators of near-term manufacturing activity, such as the diffusion indexes of new orders from the national and regional manufacturing surveys, remained at levels consistent with only modest increases in production in the coming months.

Real personal consumption expenditures (PCE) rose briskly in September but posted a more moderate gain for the third quarter as a whole. Motor vehicle purchases increased significantly in September to a level well above that in the spring (when availability of some models was limited by supply chain disruptions), and sales of new light motor vehicles stepped up further in October. However, real disposable income declined in the third quarter, as increases in consumer prices more than offset small gains in nominal income. Moreover, consumer sentiment continued to be downbeat in October.

Housing market activity remained very weak, held down by the large overhang of foreclosed and distressed properties along with limited demand in an environment of uncertainty about future home prices and tight underwriting standards for mortgage loans. Although starts and permits for new single-family homes edged up in September, they stayed near the depressed levels seen since the middle of last year. Sales of new and existing homes continued to be soft in recent months, and home prices trended lower.

Real business purchases of equipment and software expanded appreciably in the third quarter. Moreover, new orders for nondefense capital goods continued to run ahead of shipments in August and September; the buildup of unfilled orders pointed toward further increases in spending for business equipment in subsequent months. Nevertheless, survey measures of business conditions and sentiment in October suggested that firms remained cautious. Real business expenditures for nonresidential construction also rose appreciably in the third quarter, but spending was still at a relatively low level and continued to be held back by elevated vacancy rates and tight credit conditions for con-

struction loans. In the third quarter, businesses increased their inventories at a much slower pace than in the second quarter, and inventory-to-sales ratios in most industries appeared to be in a comfortable range.

Real federal purchases increased in the third quarter, as defense expenditures continued to rise from unusually low levels early in the year, more than offsetting a decrease in nondefense spending. At the state and local level, real purchases declined in the third quarter at a noticeably slower rate than in the first half of the year as the pace of reductions in payrolls eased and construction spending rose slightly.

The U.S. international trade deficit was virtually the same in August as it was in July, as both exports and imports moved down only by small amounts. The decrease in exports reflected lower sales of automotive products and capital goods, which more than offset increases in exports of industrial supplies and consumer goods. The dip in imports was the result of lower purchases of capital goods, automotive products, and consumer goods, which outweighed an increase in petroleum imports. The advance release of the third-quarter data for the national income and product accounts showed real exports of goods and services expanding faster than real imports. As a result, net exports were estimated to have made a small positive contribution to real GDP growth in the third quarter, a contribution of about the same size as in the second quarter.

Overall U.S. consumer price inflation, as measured by the PCE price index, was more moderate in the third quarter than in the first half of the year. Consumer prices for food and energy increased last quarter at a slower pace than earlier in the year, and consumer prices excluding food and energy rose a bit less than in the preceding quarter. Near-term inflation expectations from the Thomson Reuters/University of Michigan Surveys of Consumers in October continued to be well below the elevated level seen in the spring, and longer-term inflation expectations in the survey remained stable.

Measures of labor compensation showed that wage increases continued to be subdued. The employment cost index increased at a modest rate over the year ending in the third quarter, and compensation per hour in the nonfarm business sector appeared to have decelerated somewhat last quarter. Similarly, the 12-month change in average hourly earnings for all employees remained subdued in September.

Foreign economic activity appeared to have largely recovered from the effects of the Japanese disaster in March, as production in Japan rebounded and supply disruptions waned. However, recent data pointed to considerable weakness in the euro-area economy. Elsewhere, indicators were somewhat more upbeat, with employment in Canada continuing to rise through September, while GDP growth in China over the year ending in the third quarter was a little less than in the first half of the year but still quite robust. Foreign inflation remained contained, although the reversal of earlier increases in energy prices appeared to be passing through to consumer price inflation relatively slowly in some countries.

Staff Review of the Financial Situation

Financial markets were quite volatile over the period since the September FOMC meeting. Investor sentiment was strongly influenced by prospects for Europe, as market participants remained highly attuned to developments regarding possible steps to contain the fiscal and banking problems there. Economic data releases that were, on balance, somewhat better than market participants expected provided some support to financial markets.

Longer-term Treasury yields declined appreciably following the release of the September FOMC statement. Investors reportedly viewed the Committee's assessment of the economic outlook as more downbeat than anticipated. In addition, the announcement that the Federal Reserve would lengthen the average maturity of its portfolio by purchasing longer-term Treasury securities and selling an equivalent amount of shorter-term Treasury securities reportedly contributed to the decline in longer-term yields on the day. Yields on current-coupon agency MBS also moved lower on the announcement that the Federal Reserve would begin to reinvest principal payments on agency securities in agency MBS. Over the following weeks, movements in yields were driven by shifts in investors' assessments of the ongoing efforts to address the European fiscal and banking situation and by somewhat stronger-than-expected U.S. economic data. On balance since the September FOMC meeting, Treasury yields on shorter-dated securities and the expected path of the federal funds rate implied by money market futures quotes were not much changed. Yields on Treasury securities with maturities beyond 10 years moved down. Measures of near-term inflation compensation derived from nominal and inflation-protected Treasury securities rose slightly over the intermeeting period, while similar

measures of longer-term inflation compensation were about unchanged.

Credit default swap (CDS) spreads and equity prices of large U.S. banking organizations were again volatile over the period. Investor sentiment toward these financial institutions was strongly influenced by changes in investors' assessments of the risks associated with the European fiscal and banking problems and the exposure of various financial institutions to Europe. Third-quarter U.S. bank earnings reports generally met investors' expectations. On net, equity prices for U.S. banking firms were not much changed over the period since the last FOMC meeting, while their CDS spreads were a bit higher. European bank CDS spreads remained elevated, and these institutions continued to face somewhat strained conditions in short-term bank funding markets.

Although equity markets were volatile, broad U.S. equity price indexes ended the intermeeting period little changed. Earnings reports for nonfinancial firms generally came in somewhat better than investors expected and about in line with second-quarter levels. Gross public equity issuance by nonfinancial firms continued to be very weak in September and October, with a large number of firms shelving planned initial public offerings amid the volatility in equity markets.

Yields on investment- and speculative-grade corporate bonds edged lower, on net, over the period, leaving their spreads to Treasury securities slightly narrower. Credit flows for nonfinancial firms were mixed in September and October. The pace of bond financing by investment-grade nonfinancial corporations slowed some in October from its robust September pace, while bond issuance by speculative-grade firms was limited. Nonfinancial commercial paper outstanding posted solid growth in October. In the leveraged loan market, issuance financed by institutional investors slowed significantly in the third quarter.

Financing conditions for commercial real estate (CRE) markets appeared to have deteriorated in some respects. Issuance of commercial mortgage-backed securities (CMBS) slowed further in the third quarter amid widening CMBS spreads, and only a small number of deals were in the pipeline for the rest of the year. Prices of most types of commercial properties remained depressed, and aggregate vacancy and delinquency rates for commercial properties were close to their recent highs.

Interest rates on residential mortgages changed little, on net, over the intermeeting period but remained at historically low levels. The recent low rates appeared to have only a modest effect on the pace of mortgage refinancing, as tight underwriting standards and low home equity continued to limit the access of many households to the mortgage market. However, in October, the Federal Housing Finance Agency announced changes to the Home Affordable Refinance Program to expand eligibility and take-up among borrowers with mortgages backed by Fannie Mae and Freddie Mac. Indicators of home prices remained weak, reflecting a large inventory of unsold properties and modest demand for homes. The pace at which performing prime mortgages became newly delinquent rose over the summer but remained below last year's levels.

Consumer credit decreased in August. Growth in non-revolving credit, which had been volatile due to a shift in the timing of student loan originations, stepped down from the pace seen earlier in the year but remained solid in recent months. Issuance of consumer credit asset-backed securities continued at a moderate pace through mid-October. Delinquency rates for several categories of consumer loans remained low, a reflection in part of tighter underwriting standards that shifted the composition of borrowers toward those with stronger credit histories.

Core commercial bank loans expanded slightly in the third quarter. Commercial and industrial (C&I) loans accelerated following the already strong increases seen over the first half of the year. That growth was concentrated among large domestic banks and non-European foreign institutions. Consumer loans on banks' books advanced modestly in the third quarter, ending a two-year string of quarterly declines. Closed-end residential mortgage loans held by banks also increased amid the modest pickup in refinancing activity, while CRE loans contracted. The October Senior Loan Officer Opinion Survey on Bank Lending Practices showed less net easing of lending standards by domestic banks than in the past few surveys. In particular, domestic banks reported little change in their standards on C&I loans over the third quarter, on net, compared with more widespread reports of easing in the previous several quarters. Demand for loans reportedly was little changed, on balance, over the third quarter.

M2 grew at a modest pace in September and October, well below the rapid rate seen in July and August. Some of the factors that contributed to M2 growth over the summer, such as concerns about European

financial developments and equity market volatility, persisted and supported elevated levels of M2 deposits but did not trigger additional sizable inflows. The monetary base also grew moderately as its major components—reserve balances and currency—increased over the period.

Foreign financial markets remained volatile over the intermeeting period, and funding pressures for many European financial institutions continued. After falling sharply in August and early September, foreign equity prices rose, with stocks in the euro area outperforming those in most other economies. For most of the period, market participants seemed heartened by European leaders' efforts to address the fiscal and financial challenges present in the euro area, although the news late in the period on a possible Greek referendum sent stock prices down sharply. Benchmark sovereign yields increased over the period, but spreads of yields on 10-year sovereign bonds of the most vulnerable euro-area countries over yields on German bunds were little changed on net. Some reversal of safe-haven flows in October reportedly led the dollar to give back most of the gains it registered in late September, leaving the broad nominal foreign exchange value of the dollar little changed, on balance, relative to its level at the time of the September FOMC meeting. At the end of October, Japanese officials intervened in foreign exchange markets through sales of yen.

The first round of the three-month U.S. dollar auctions that major foreign central banks announced on September 15 was held in October; demand was quite limited, and only the European Central Bank (ECB) drew on its swap line with the Federal Reserve. Korea and Japan announced that they would increase the size and scope of their bilateral currency swap arrangements, expanding the size of their existing won-yen swap arrangement and establishing a \$30 billion facility in which dollars could be swapped for either won or yen.

A number of central banks announced additional measures to stimulate economic activity. The Bank of England and Bank of Japan each announced expansions of their respective asset purchase programs, and the ECB announced that it would conduct two refinancing operations with maturities of slightly more than a year and launched a new covered bond purchase program. The central banks of Brazil, Indonesia, and Israel lowered their policy rates, citing a potential slowdown in global growth.

Staff Economic Outlook

With the recent data on spending, particularly for consumer expenditures and business outlays for capital goods and nonresidential construction, stronger than the staff anticipated at the time of the September FOMC meeting, the staff's near-term projection for the rate of increase in real GDP was revised up. However, other important near-term indicators of economic activity remained downbeat: Measures of consumer sentiment were still very low, business surveys pointed to continued caution by firms, conditions in the labor market remained weak, and gains in manufacturing production outside of the motor vehicle–related sectors were sluggish. Moreover, many of the factors that have been restraining the recovery, such as the large overhang of vacant houses, tight credit conditions, and elevated risk premiums, remained in place. Consequently, the staff's outlook for economic activity over the medium term was similar to the projection prepared for the September FOMC meeting. The staff continued to project that real GDP would accelerate gradually in 2012 and 2013, supported by accommodative monetary policy, further improvements in credit conditions, and a pickup in consumer and business sentiment from their current low levels. Over the forecast period, the increase in real GDP was projected to be sufficient to reduce the slack in product and labor markets only slowly, and the unemployment rate was expected to remain elevated at the end of 2013.

The staff's forecast for inflation was essentially unchanged from the projection prepared for the September FOMC meeting. The upward pressure on consumer prices from the rise in commodity and import prices early in the year was anticipated to ease further in the current quarter. With longer-run inflation expectations stable and significant slack anticipated to persist in labor and product markets, the staff continued to expect prices to rise at a subdued pace in 2012 and 2013.

Participants' Views on Current Conditions and the Economic Outlook

In conjunction with this FOMC meeting, all participants—the five members of the Board of Governors and the presidents of the 12 Federal Reserve Banks—provided projections of output growth, the unemployment rate, and inflation for each year from 2011 through 2014 and over the longer run. 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 to the economy. Although participants had revised downward their pro-

jections for growth since their previous forecasts in June, they continued to anticipate that economic growth would pick up and the unemployment rate would decline gradually through 2014. They also continued to project that inflation would settle at or below levels consistent with the Committee's dual mandate. Participants' forecasts are described in more detail 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 regarded the information received during the intermeeting period as indicating that economic growth had strengthened somewhat in the third quarter, reflecting in part a reversal of temporary factors that had weighed on the economic recovery in the first half of the year. Participants noted that global supply chain disruptions associated with the natural disaster in Japan had diminished, and that the prices of energy and some commodities had come down from their recent peaks, easing strains on household budgets and likely contributing to a somewhat stronger pace of consumer spending in recent months. More broadly, final demand from consumers and businesses was stronger than had been expected at the time of the September FOMC meeting. Nonetheless, most participants anticipated that the pace of economic growth would remain moderate over coming quarters. While they believed that the economic recovery would continue to be supported by accommodative monetary policy, ongoing improvements in households' and businesses' financial positions, and pent-up demand for goods and services, a number of factors were seen as likely to continue to restrain the pace of economic growth. Those included persistent weakness in the labor and housing markets, still-tight credit conditions for many households and small businesses, low consumer and business confidence, fiscal consolidation at all levels of government, and elevated volatility in financial markets. Moreover, the recovery was still subject to significant downside risks, including strains in global financial markets. With longer-term inflation expectations remaining stable, the effects of earlier increases in the prices of energy and other commodities continuing to wane, and low levels of resource utilization restraining increases in prices and wages, most participants anticipated that inflation would settle, over coming quarters, at or below levels they judged to be most consistent with their dual mandate.

In the household sector, incoming data on retail sales were somewhat stronger than expected, and participants reported scattered optimism among their con-

tacts regarding the prospects for holiday spending. Some participants thought that the effects of balance sheet deleveraging might be running their course or that such effects could be less powerful than had been thought. Others noted that the recent pickup in consumer spending outpaced growth in after-tax incomes and was accompanied by a decline in the saving rate, raising doubts about its sustainability unless income growth picked up. In addition, households appeared to remain pessimistic about the prospects for their future income, the job market was still weak, consumer confidence was historically very low, and credit conditions for many households were still tight. The housing sector continued to be depressed, and some meeting participants indicated that the elevated supply of available homes and the overhang of foreclosures, together with limited access to mortgage credit, were continuing to put downward pressure on house prices and housing construction. A few participants noted that recent government initiatives aimed at helping high-loan-to-value borrowers refinance could be useful steps toward stabilizing the housing market.

Business contacts in many parts of the country were reported to be cautious and uncertain about the economic and political outlook and so remained reluctant to hire or expand capacity. However, production in the manufacturing, agriculture, and energy sectors continued to increase, and the auto sector was rebounding from earlier supply chain disruptions. In addition, businesses in a number of regions reported ongoing capital investment to increase productivity. Input cost pressures were said to have abated somewhat, while labor costs remained subdued. Overall, credit costs were low, and profits and balance sheets at nonfinancial corporations were healthy, with many firms continuing to hold very high levels of cash.

Despite some signs of improvement of late, the available indicators pointed to continued weakness in overall labor market conditions, and the unemployment rate remained elevated. Some participants suggested that the persistently high level of unemployment reflected the impact of structural factors, including mismatches between the skills of the unemployed and the skills demanded in sectors in which jobs were currently available. Consistent with this view, some business contacts reportedly were concerned about the low quality of many job applicants, while other contacts noted that workers with some specialized skills continued to be in short supply. However, other participants indicated that such concerns were not new and that much of the current elevated level of unemployment reflected cyc-

lical factors, with one pointing to the lack of wage pressures as evidence. As a result, they expected that unemployment would fall back as the economy recovered. Some participants again warned that the exceptionally high level of long-term unemployment could ultimately lead to permanent negative effects on the skills and employment prospects of the unemployed.

Meeting participants observed that financial markets continued to be particularly volatile during the intermeeting period as investors responded to incoming economic data and to news regarding fiscal and financial developments in Europe. Liquidity in many markets worsened, in part because financial institutions more reliant on short-term funding markets reportedly pulled back from risk-taking and became somewhat less willing to make markets. Participants noted the announcement by European policymakers of a new package of measures to address Greece's fiscal situation as well as the vulnerabilities of European banks and sovereigns. However, participants indicated that many details of the new plan had not yet been worked out and that a number of important issues remained unresolved. Participants took note of the possible adverse effects on U.S. financial markets and the broader U.S. economy if European sovereign debt and banking problems intensified. Participants observed, however, that the capital and liquidity positions of U.S. banks had strengthened in recent quarters and that the credit quality of loans to businesses and households had improved further. Contacts in the banking sector reported that U.S. banks continued to be willing to extend loans to creditworthy borrowers, but loan demand remained weak and competition for such borrowers was putting pressure on net interest margins. It was noted that very low interest rates were negatively affecting pension funds and the profitability of the life insurance industry. Participants also discussed the events surrounding the bankruptcy filing of MF Global Holdings Ltd. and saw the financial stability implications of this development as limited to date.

Participants generally agreed that measures of total inflation appeared to have moderated since earlier in the year as prices of energy and some commodities declined from their peaks. Measures of core inflation also seemed to have declined in recent months, and longer-term inflation expectations remained well anchored. Nonetheless, some participants noted that core inflation had not come down as quickly or by as much as they had expected in light of the reduction in commodity prices, perhaps suggesting that the level of potential output was lower than had been thought. However,

other participants pointed to the subdued pace of gains in labor costs as a factor damping inflation, and reports from contacts suggested that upward pressure on wages remained limited.

Regarding their overall outlook for economic activity, participants generally agreed that, even with the positive news received over the intermeeting period, the most probable outcome was a moderate pace of economic growth over the medium run with only a gradual decline in the unemployment rate. While some factors were seen as likely to support growth going forward—such as pent-up demand, improvements in household and business balance sheets, and accommodative monetary policy—participants observed that the pace of economic recovery would likely continue to be held down for some time by persistent headwinds. In particular, they pointed to very low levels of consumer and business confidence, further efforts by households to deleverage, cutbacks at all levels of government, elevated financial market volatility, still-tight credit conditions for some households and small businesses, and the ongoing weakness in the labor and housing markets. While recent incoming data suggested reduced odds that the economy would slide back into recession, participants still saw significant downside risks to the outlook for economic growth. Risks included potential spillovers to U.S. financial markets and institutions, and so to the broader U.S. economy, if the European debt and banking crisis were to worsen significantly. In addition, participants noted the risk of a larger-than-expected fiscal tightening and the possibility that structural problems in the housing market had attenuated the transmission of monetary policy actions to the real economy. It was also noted that the extended period of highly accommodative monetary policy could eventually lead to a buildup of financial imbalances. A few participants, however, mentioned the possibility that economic growth could be more rapid than currently expected, particularly if gains in output and employment led to a virtuous cycle of improvements in household balance sheets, increased confidence, and easier credit conditions.

With respect to the outlook for inflation, participants generally anticipated that inflation would recede further over coming quarters and would settle over the medium run at levels at or below those judged to be most consistent with the Committee's dual mandate. They pointed to the further dissipation of the effects of earlier increases in the prices of energy and some commodities, the significant slack in resource utilization, the continued subdued growth in labor compensation, and

well-anchored inflation expectations as factors likely to contribute to the moderation in inflation over time. A number of participants saw the risks to the outlook for inflation as roughly balanced. A few participants felt that the continuation of the current stance of monetary policy, coupled with the possibility of a rebound in energy and commodity prices, posed some upside risks to inflation. Other participants instead saw inflation risks as tilted to the downside, in light of their expectations for persistent resource slack. It was noted that U.S. inflation had been influenced relatively more by commodity price fluctuations in recent years; because commodity prices reflect global economic conditions, U.S. inflation might be less affected by domestic factors and more linked to the global outlook than in the past.

Committee Policy Action

Members noted that information received over the intermeeting period pointed to somewhat stronger economic growth in the third quarter, partly reflecting a reversal of temporary factors that had depressed economic growth in the first half of the year. However, overall labor market conditions remained weak. Members generally anticipated that unemployment would decline only gradually from levels significantly above those that the Committee would expect to prevail in the longer run, with inflation likely to settle at levels at or below those consistent with the Committee's dual mandate. Accordingly, in the discussion of monetary policy for the period ahead, all Committee members agreed to continue the program of extending the average maturity of the Federal Reserve's holdings of securities as announced in September. The Committee decided to maintain its existing policy of reinvesting principal payments from its holdings of agency debt and agency MBS in agency MBS and of rolling over maturing Treasury securities at auction. In addition, the Committee agreed to keep the target range for the federal funds rate at 0 to $\frac{1}{4}$ percent and to reiterate its expectation that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2013. A few members expressed interest in using language specifying a period of time during which the federal funds rate was expected to remain exceptionally low, rather than a calendar date, arguing that such language might be better to indicate a constant stance of monetary policy over time. However, members generally preferred to retain the existing forward guidance, at least for now. A few members indicated that they believed the economic outlook

might warrant additional policy accommodation. However, it was noted that any such accommodation would likely be more effective if it were provided in the context of a future communications initiative, and most of these members agreed that they could support retention of the current policy stance at this meeting. One member dissented from the policy decision on the grounds that additional monetary policy accommodation was warranted at this time. With the Committee in the process of reviewing its monetary policy strategies and communication, and no additional accommodation being provided at this meeting, a few members indicated that they could support the Committee's decision even though they had not favored recent policy actions. The Committee reiterated that it will regularly review the size and composition of its securities holdings and that it is prepared to adjust those holdings as appropriate to promote a stronger economic recovery in the context of price stability. With respect to the statement to be released following the meeting, members agreed that only relatively small changes were needed to reflect the modest improvement in the economic outlook and to note that the Committee would continue to implement its policy steps from recent meetings.

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 $\frac{1}{4}$ percent. The Committee directs the Desk to continue the maturity extension program it began in September to purchase, by the end of June 2012, Treasury securities with remaining maturities of approximately 6 years to 30 years with a total face value of \$400 billion, and to sell Treasury securities with remaining maturities of 3 years or less with a total face value of \$400 billion. The Committee also directs the Desk to maintain its existing policies of rolling over maturing Treasury securities into new issues and of reinvesting principal payments on all agency debt and agency mortgage-backed securities in the System Open Market Account in agency mortgage-backed

securities in order to maintain the total face value of domestic securities at approximately \$2.6 trillion. The Committee directs the Desk to engage in dollar roll 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 12:30 p.m.:

"Information received since the Federal Open Market Committee met in September indicates that economic growth strengthened somewhat in the third quarter, reflecting in part a reversal of the temporary factors that had weighed on growth earlier in the year. Nonetheless, recent indicators point to continuing weakness in overall labor market conditions, and the unemployment rate remains elevated. Household spending has increased at a somewhat faster pace in recent months. Business investment in equipment and software has continued to expand, but investment in nonresidential structures is still weak, and the housing sector remains depressed. Inflation appears to have moderated since earlier in the year as prices of energy and some commodities have declined from their peaks. Longer-term inflation expectations have remained stable.

Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee continues to expect a moderate pace of economic growth over coming quarters and consequently anticipates that the unemployment rate will decline only gradually toward levels that the Committee judges to be consistent with its dual mandate. Moreover, there are significant downside risks to the economic outlook, including strains in global financial markets. The Committee also anticipates that inflation will settle, over coming quarters, at levels at or below those consistent with the Committee's dual mandate as

the effects of past energy and other commodity price increases dissipate further. However, the Committee will continue to pay close attention to the evolution of inflation and inflation expectations.

To support a stronger economic recovery and to help ensure that inflation, over time, is at levels consistent with the dual mandate, the Committee decided today to continue its program to extend the average maturity of its holdings of securities as announced in September. The Committee is maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as appropriate.

The Committee also decided to keep the target range for the federal funds rate at 0 to $\frac{1}{4}$ percent and currently anticipates that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2013.

The Committee will continue to assess the economic outlook in light of incoming information and is prepared to employ its tools to promote a stronger economic recovery in a context of price stability.”

Voting for this action: Ben Bernanke, William C. Dudley, Elizabeth Duke, Richard W. Fisher, Narayana

Kocherlakota, Charles I. Plosser, Sarah Bloom Raskin, Daniel K. Tarullo, and Janet L. Yellen.

Voting against this action: Charles L. Evans.

Mr. Evans dissented because he saw the high unemployment rate and the outlook for only weak economic growth as calling for additional policy accommodation at this meeting. Moreover, the longer the current situation of low resource utilization lasted, the more the economy’s longer-term growth potential could be impaired. Furthermore, given current policy, his outlook was for inflation to come in below levels consistent with the Committee’s dual mandate, bolstering the case for additional monetary easing at this time. He also believed policies with more-explicit forward guidance about the economic conditions under which exceptionally low levels of the funds rate could be maintained would improve the prospects for growth and employment and, while possibly admitting somewhat higher inflation for a time, would still safeguard price stability.

It was agreed that the next meeting of the Committee would be held on Tuesday, December 13, 2011. The meeting adjourned at 10:30 a.m. on November 2, 2011.

Notation Vote

By notation vote completed on October 11, 2011, the Committee unanimously approved the minutes of the FOMC meeting held on September 20–21, 2011.

William B. English
Secretary

Summary of Economic Projections

In conjunction with the November 1–2, 2011, Federal Open Market Committee (FOMC) meeting, the members of the Board of Governors and the presidents of the Federal Reserve Banks, all of whom participate in the deliberations of the FOMC, submitted projections for growth of real output, the unemployment rate, and inflation for the years 2011 to 2014 and over the longer run. The projections were based on information available at the time 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 each 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.

As depicted in figure 1, FOMC participants expected the economic recovery to continue at a moderate pace, with the growth of real gross domestic product (GDP) slowing this year compared with its pace in 2010 but then picking up gradually through 2014. With expectations that the pace of economic growth will modestly exceed participants' estimates of the longer-run sustainable rate of increase in real GDP, the unemploy-

ment rate is projected to decline only gradually over this projection period. As a result, participants anticipated that, at the end of 2014, the unemployment rate would remain well above their estimates of the unemployment rate that they see as consistent, over the longer run, with the Committee's dual mandate of maximum employment and price stability. Most participants anticipated that the factors underlying the noticeable rise in overall inflation in 2011 would be largely transitory and that inflation would move lower in 2012; thereafter, inflation was expected to remain at levels roughly consistent with or below rates that they see as consistent with the Committee's dual mandate. Participants generally viewed the rate of core inflation as likely to remain at or somewhat below its 2011 level throughout the projection period.

On balance, as indicated in table 1, participants anticipated somewhat slower economic growth and somewhat higher unemployment relative to their projections in June; they raised their projections for inflation in 2011 but left their projections for inflation from 2012 onward about unchanged since the June meeting. All of the participants made substantial downward revisions to their projections for GDP growth in 2011, and most marked down their projections for economic growth in 2012 and 2013; however, participants did not materially alter their expectations for the normal rate of economic growth that would prevail in the longer run. Although participants continue to expect a gradual de-

Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, November 2011
Percent

Variable	Central tendency ¹					Range ²				
	2011	2012	2013	2014	Longer run	2011	2012	2013	2014	Longer run
Change in real GDP . . .	1.6 to 1.7	2.5 to 2.9	3.0 to 3.5	3.0 to 3.9	2.4 to 2.7	1.6 to 1.8	2.3 to 3.5	2.7 to 4.0	2.7 to 4.5	2.2 to 3.0
June projection. . .	2.7 to 2.9	3.3 to 3.7	3.5 to 4.2	n.a.	2.5 to 2.8	2.5 to 3.0	2.2 to 4.0	3.0 to 4.5	n.a.	2.4 to 3.0
Unemployment rate. . .	9.0 to 9.1	8.5 to 8.7	7.8 to 8.2	6.8 to 7.7	5.2 to 6.0	8.9 to 9.1	8.1 to 8.9	7.5 to 8.4	6.5 to 8.0	5.0 to 6.0
June projection. . .	8.6 to 8.9	7.8 to 8.2	7.0 to 7.5	n.a.	5.2 to 5.6	8.4 to 9.1	7.5 to 8.7	6.5 to 8.3	n.a.	5.0 to 6.0
PCE inflation.	2.7 to 2.9	1.4 to 2.0	1.5 to 2.0	1.5 to 2.0	1.7 to 2.0	2.5 to 3.3	1.4 to 2.8	1.4 to 2.5	1.5 to 2.4	1.5 to 2.0
June projection. . .	2.3 to 2.5	1.5 to 2.0	1.5 to 2.0	n.a.	1.7 to 2.0	2.1 to 3.5	1.2 to 2.8	1.3 to 2.5	n.a.	1.5 to 2.0
Core PCE inflation ³ . .	1.8 to 1.9	1.5 to 2.0	1.4 to 1.9	1.5 to 2.0		1.7 to 2.0	1.3 to 2.1	1.4 to 2.1	1.4 to 2.2	
June projection. . .	1.5 to 1.8	1.4 to 2.0	1.4 to 2.0	n.a.		1.5 to 2.3	1.2 to 2.5	1.3 to 2.5	n.a.	

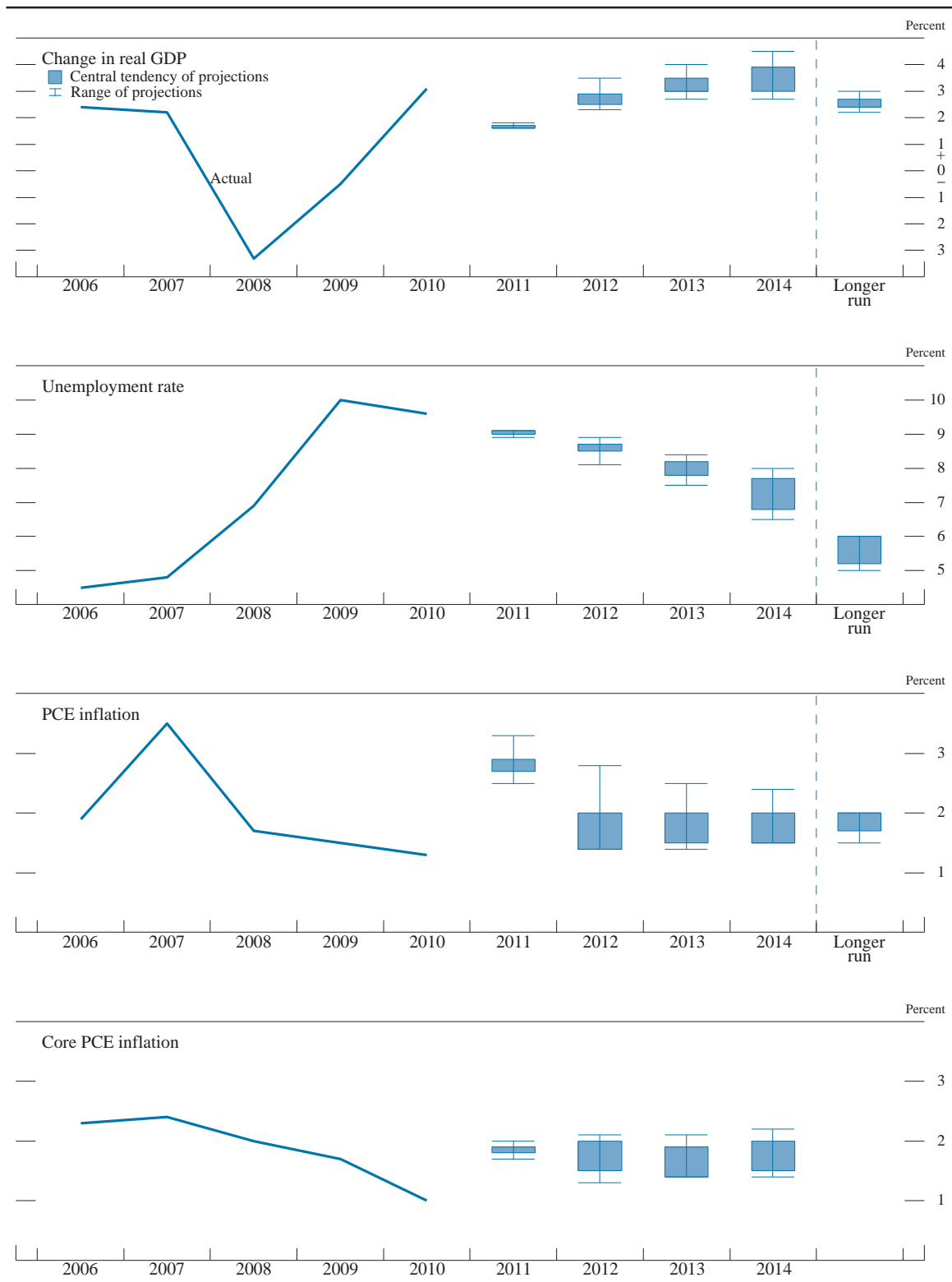
NOTE: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The June projections were made in conjunction with the meeting of the Federal Open Market Committee on June 21–22, 2011.

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

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

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

Figure 1. Central tendencies and ranges of economic projections, 2011–14 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.

cline in the unemployment rate over time, most participants revised up their projections for the path of the unemployment rate over the forecast period, and some participants also raised their projections of the longer-run rate of unemployment compared with June. Participants' projections for overall and core inflation this year were slightly higher than in June, but their projections for 2012, 2013, and over the longer run were broadly similar to those made in June.

As indicated in figure 2, a sizable majority of participants continued to attach an unusually high level of uncertainty to their projections for economic growth, the unemployment rate, and inflation relative to historical norms. Most participants viewed the risks to output growth as being weighted to the downside and the risks to the unemployment rate as being weighted to the upside. Most participants saw the risks to overall and core inflation as broadly balanced.

The Outlook

Participants marked their forecasts down significantly for real GDP growth in 2011, with the central tendency of their projections forming a narrow band from 1.6 to 1.7 percent, down from 2.7 to 2.9 percent in June. Participants stated that the downward revision reflected the body of economic data received since June, particularly the comprehensive annual revisions and the estimate of second-quarter GDP published by the Bureau of Economic Analysis, which showed that the expansion in real GDP in the first half of the year had been considerably slower than the participants had expected at the time of their June projections. More-recent data indicated that output growth strengthened during the third quarter, reflecting in part a reversal of the temporary factors that had weighed on real activity earlier in the year, including the damping effect of higher food and energy prices on consumer purchasing power and spending as well as supply chain disruptions associated with the disaster in Japan. However, several participants indicated that some of the factors contributing to the slowdown in GDP growth earlier in the year, including reduced spending by state and local governments, were likely to be more persistent. Participants also noted that heightened uncertainty regarding economic and financial developments, as well as low confidence among businesses and consumers, continued to restrain economic activity.

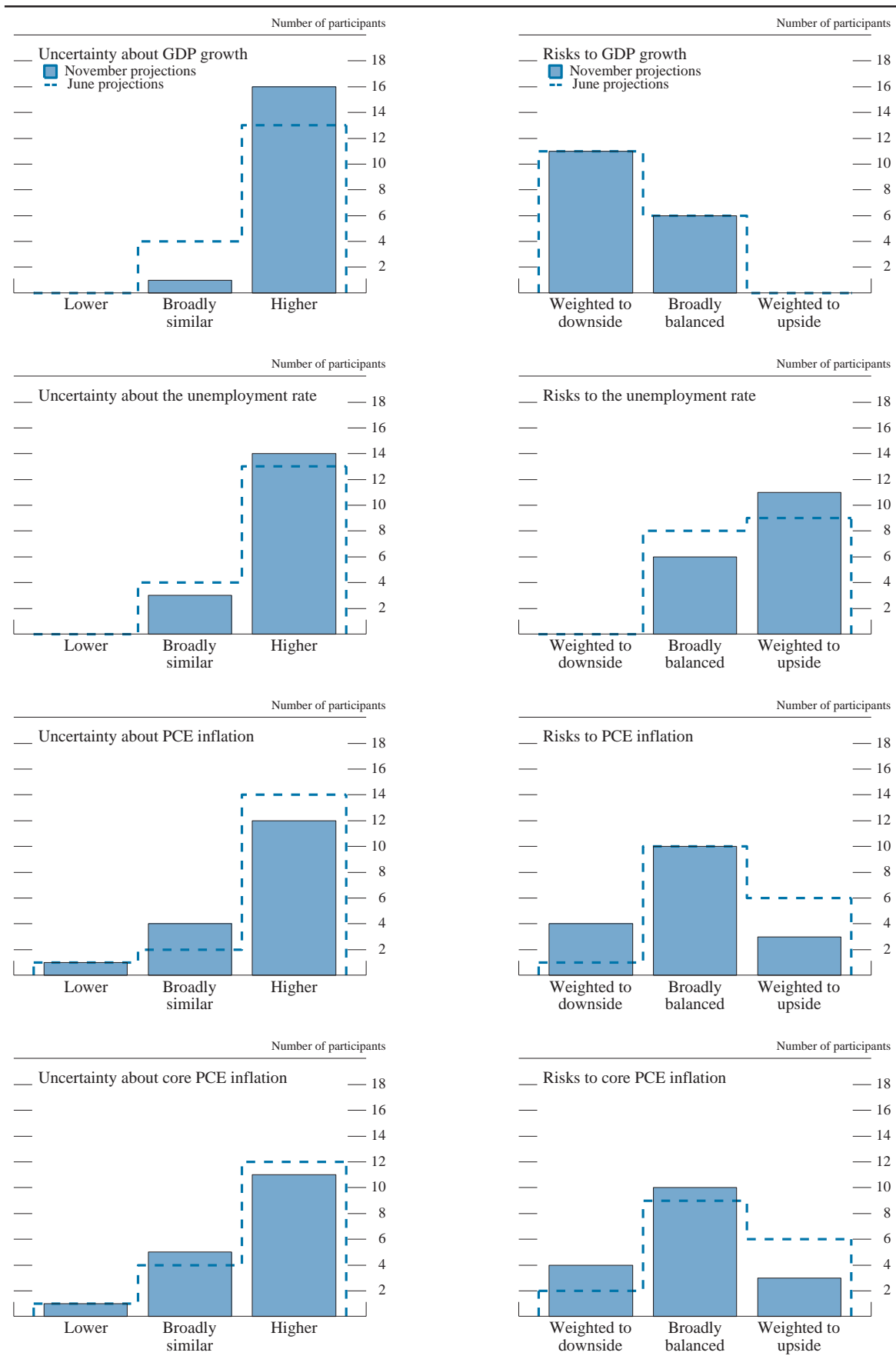
Looking further ahead, participants continued to expect a moderate pickup in the pace of the economic recovery over the next couple of years, albeit to growth rates somewhat below those previously projected. The cen-

tral tendency of participants' projections for output growth in 2012 was 2.5 to 2.9 percent, followed by central tendencies of 3.0 to 3.5 percent in 2013 and 3.0 to 3.9 percent in 2014. Participants anticipated that the economic expansion would be supported by continued monetary policy accommodation, reduced commodity cost pressures, strengthening household balance sheets, and improving financial conditions. However, in downgrading the trajectory of their projections compared with those in June, participants cited a number of forces that were likely to restrain the pace of output growth over the next few years, including tighter fiscal policy at all levels of government, ongoing drag from the troubled housing sector, volatility in financial markets, and possibly reduced external demand. Many also pointed to the additional headwinds of still-tight credit conditions for some households and smaller businesses, weak consumer and business sentiment, persistently high unemployment, and slow income growth. In addition, some participants noted that although energy and commodity prices had fallen back, they remain at elevated levels that might weigh on spending for a time. The central tendency of participants' projections for the longer-run rate of real GDP growth, in the absence of further shocks, was 2.4 to 2.7 percent, a bit slower than projected in June.

In response to the ongoing weakness in labor market conditions and the downward revisions to their assessments of the economic outlook, participants marked up their forecasts for the unemployment rate over the forecast period. For the fourth quarter of this year, the central tendency of participants' projections rose to 9.0 to 9.1 percent from 8.6 to 8.9 percent reported in June. Similar upward revisions were made for 2012 and 2013, with the central tendencies of the unemployment rate projections for those years now at 8.5 to 8.7 percent and 7.8 to 8.2 percent, respectively. The central tendency of their unemployment rate projections for the end of 2014 was 6.8 to 7.7 percent, indicating expectations for an ongoing, gradual improvement in the employment situation, but one that continued to leave the unemployment rate well above the 5.2 to 6.0 percent central tendency of participants' estimates of the unemployment rate that would prevail over the longer run in the absence of further shocks. The upper bound of the central tendency of participants' longer-run projections was higher than in June, although the range of participants' estimates was unchanged.

Participants noted that measures of consumer price inflation had increased this year relative to both their

Figure 2. Uncertainty and risks in economic projections



NOTE: For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty." Definitions of variables are in the general note to table 1.

levels in 2010 and the projections made in June, reflecting in part higher prices of oil and other commodities that had larger effects than previously expected. The central tendency of their estimates for total personal consumption expenditures (PCE) inflation in 2011 rose to 2.7 to 2.9 percent compared with 2.3 to 2.5 percent in June. Most participants anticipated that the influence of higher commodity prices and supply chain disruptions from Japan would be temporary and that inflation pressures in the next several years would be subdued as commodity prices stabilized, inflation expectations remained well anchored, and large margins of slack in labor markets kept labor costs in check. As a result, the central tendency of participants' projections of total PCE inflation was about 1.5 to 2.0 percent in 2012, 2013, and 2014, similar to their forecasts in June and at or slightly below the 1.7 to 2.0 percent central tendency of their estimates of the longer-run, mandate-consistent rate of inflation. The central tendency of participants' projections of core PCE inflation in 2011 shifted up to 1.8 to 1.9 percent, compared with 1.5 to 1.8 percent in June, as some of this year's run-up in commodity prices passed through to core prices. However, the central tendencies of the projections of core inflation for the next three years were approximately 1.5 to 2.0 percent, essentially unchanged from their June levels and roughly similar to participants' projections for headline inflation.

Uncertainty and Risks

In their assessments of the uncertainty and risks associated with their projections, a substantial majority of participants continued to judge that the levels of uncertainty associated with their projections for economic growth, the unemployment rate, and inflation were greater than the average levels that had prevailed over the past 20 years.¹ They pointed to a number of factors that raised their assessments of uncertainty regarding output growth and unemployment, including concerns about the ongoing developments in Europe, the severity of the recent recession, and the pace at which the numerous financial and economic headwinds buffeting the economy will recede. However, slightly fewer participants reported a higher-than-average degree of un-

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 1991 to 2010. At the end of this summary, the box "Forecast Uncertainty" discusses the sources and interpretation of uncertainty in the economic forecasts and explains the approach used to assess the uncertainty and risks attending the participants' projections.

Table 2. Average historical projection error ranges
Percentage points

Variable	2011	2012	2013	2014
Change in real GDP ¹	±0.6	±1.4	±1.7	±1.8
Unemployment rate ¹	±0.2	±0.9	±1.5	±1.8
Total consumer prices ²	±0.5	±0.9	±1.0	±1.0

NOTE: Error ranges shown are measured as plus or minus the root mean squared error of projections for 1991 through 2010 that were released in the fall 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.

certainty around their inflation projections than in June. Participants noted that uncertainties about the pace of economic recovery and the effects of the Federal Reserve's extraordinary monetary policy accommodation, as well as the timing of exit from it, were significant sources of uncertainty in the outlook for inflation. However, a number of participants highlighted that inflation currently remains anchored by stable longer-term inflation expectations.

Although several participants noted that the risks of a near-term recession had likely diminished, most participants continued to judge that the balance of risks to economic growth was weighted to the downside (that is, they judged that economic growth was more likely to be below their projection of its most likely outcome than above it). The remaining participants saw the risks as balanced. The most frequently cited downside risks to growth included possible financial market and economic spillovers from an intensification of the financial strains in Europe, vulnerabilities related to weak consumer and business confidence, the possible effects on spending of uncertainties about regulatory policy, and the potential consequences of larger-than-expected near-term fiscal consolidation. The risks surrounding participants' forecasts of the unemployment rate shifted higher, with a larger number of participants relative to June viewing the risks to their projections as weighted to the upside, and the remaining participants seeing the risks as broadly balanced.

A majority of the participants continued to judge the risks to their projections of overall and core inflation to

be broadly balanced. Compared with their assessments in June, a smaller number of participants viewed the risks to inflation as being weighted to the upside, and more participants indicated that the risks were weighted to the downside; the changes left the number of participants who saw a skew in either direction more evenly distributed. Some participants saw a risk that elevated resource slack could put more downward pressure on inflation than expected. Nevertheless, some participants noted the risk that commodity prices could experience renewed volatility or have a longer-lasting influence than expected. A few participants pointed to the possibility that the current highly accommodative stance of monetary policy, if it were maintained for longer than is appropriate, could lead to higher inflation expectations and actual inflation; some also thought that fiscal imbalances could have a similar effect.

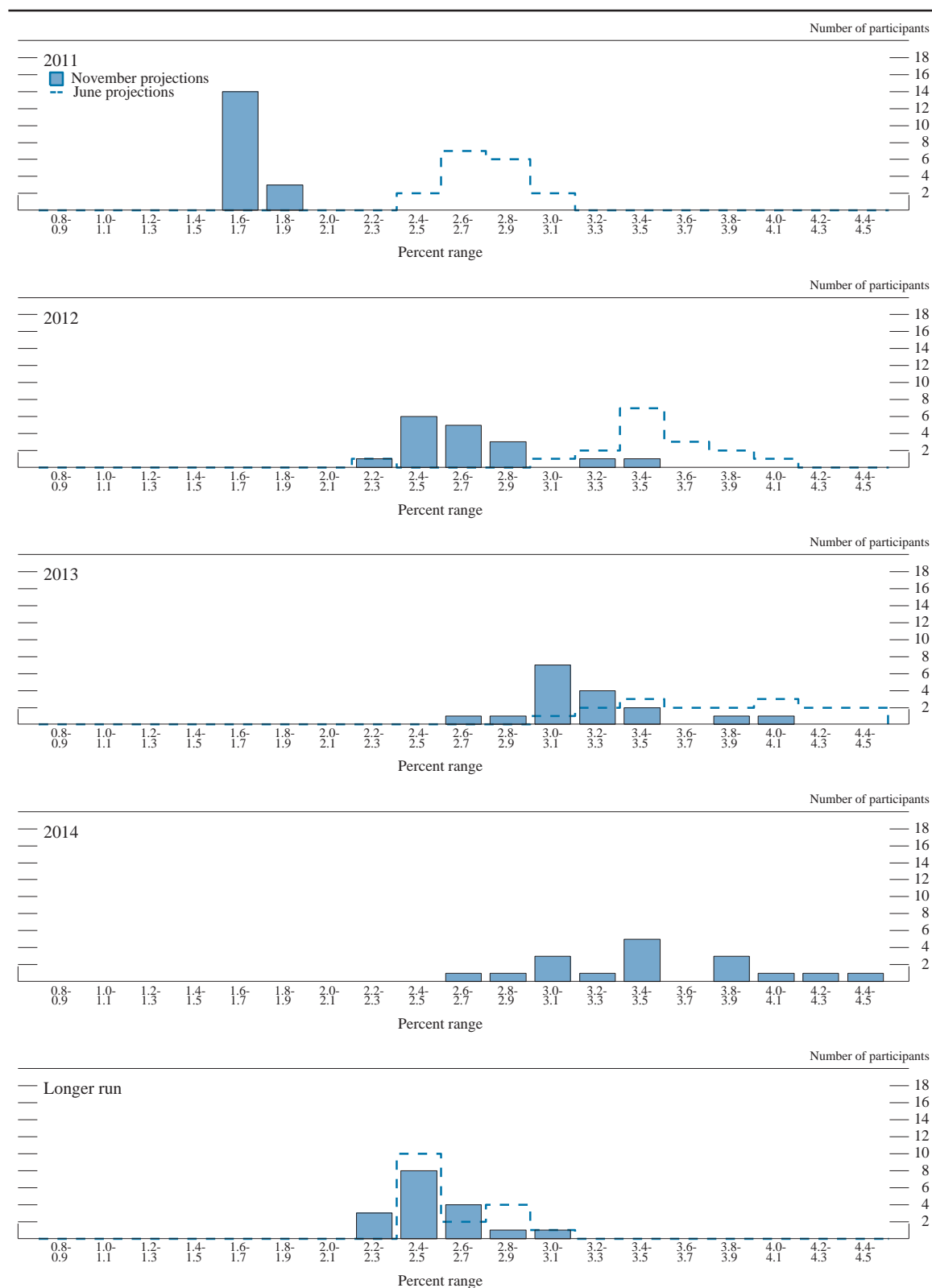
Diversity of Views

Figures 3.A and 3.B provide further details on the diversity of participants' views regarding the likely outcomes for real GDP growth and the unemployment rate over the next few years and over the longer run. The dispersion in these projections continued to reflect differences in participants' assessments of many factors, including the underlying momentum in economic activity, appropriate future monetary policy and its effects on economic activity, the effects of the European situation, and the future path of U.S. fiscal policy. With much of the data for 2011 now in hand, the dispersion of participants' projections of output growth and the unemployment rate this year narrowed substantially relative to June. The range of participants' projections for these variables in 2012 and 2013 also narrowed somewhat; however, the range of projections for real GDP growth in each of those years shifted to the lower end of the range of their June projections, and the range of projections for the unemployment rate shifted to the higher end of the June distribution. The dispersion associated with participants' longer-run projections of output growth and the unemployment rate changed very little, although the dispersion of their

projections in 2014 exceeded the dispersion of their longer-run ranges, suggesting greater agreement among policymakers about the economy's longer-run performance than the path of convergence toward it. A sizable majority of the participants judged that, in the absence of any additional shocks, the economy would converge fully to its longer-run rates of GDP growth, unemployment, and inflation within about five or six years; a few participants indicated that convergence might take a longer period of time, and one participant believed convergence could occur more rapidly.

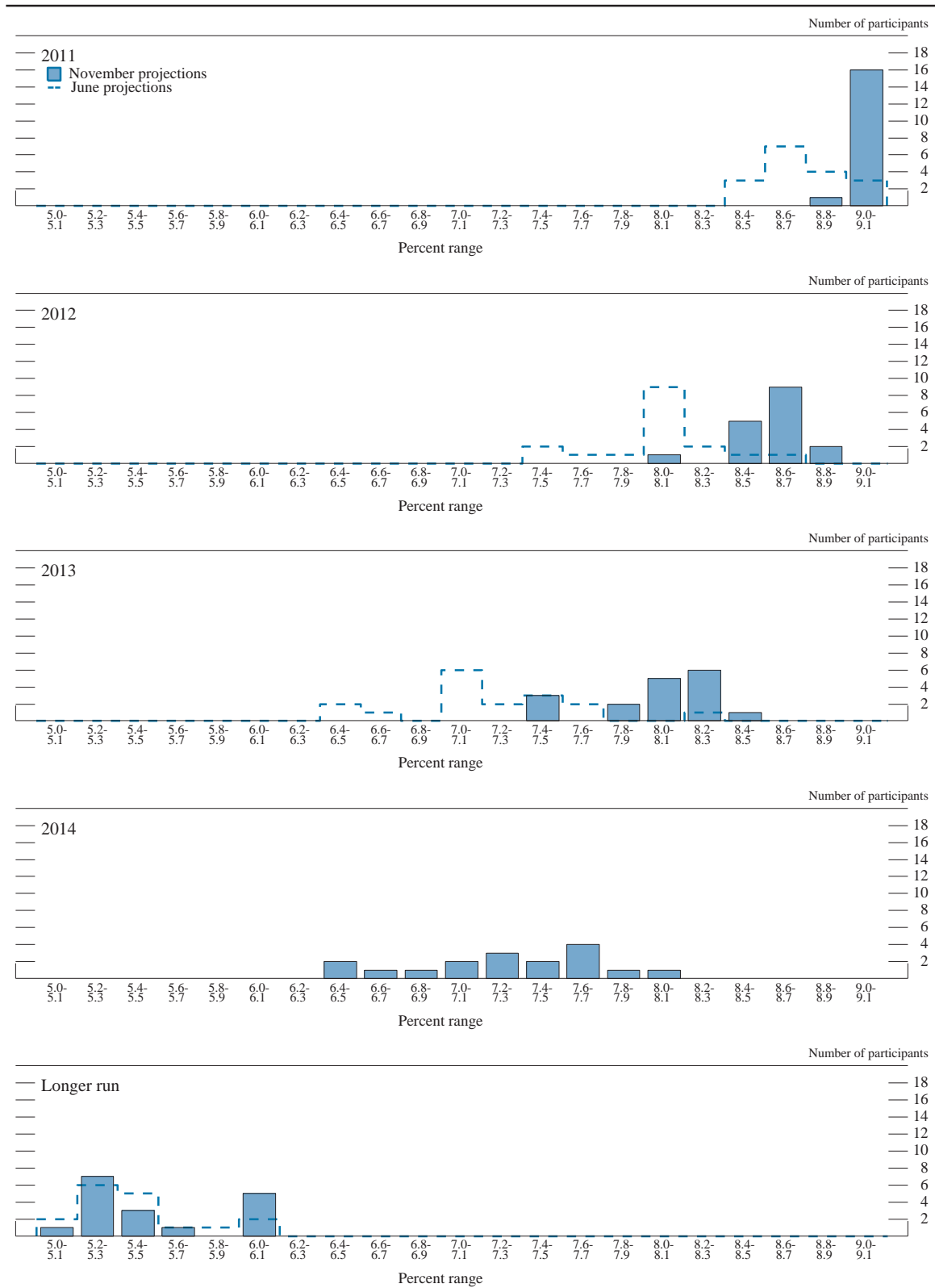
Figures 3.C and 3.D provide corresponding information about the diversity of participants' outlooks for inflation. The center of mass of the distributions of participants' projections for overall and core PCE inflation in 2011 shifted to the right relative to the ranges of these projections provided in June. The dispersion of projections for total PCE inflation in 2012 and 2013 changed little, although the top end of the range of participants' projections was somewhat higher than that of their projections for core inflation, suggesting that a few participants are concerned that elevated price increases for food and energy will persist for a time. The dispersion of projections for core inflation narrowed somewhat, driven predominantly by a decline in the upper end of the ranges. The ranges of inflation projections for 2014 were similar to those for 2012 and 2013. In general, the dispersion of participants' inflation forecasts for the next few years represented differences in judgments regarding the fundamental determinants of inflation, including the degree of resource slack and the extent to which resource slack influences inflation outcomes and expectations, as well as estimates of how the stance of monetary policy may influence inflation expectations. By contrast, the unchanged and relatively concentrated distribution of participants' projections for overall inflation over the longer run continued to reflect broad similarity in participants' assessments of the approximate level of inflation that is consistent with the Federal Reserve's dual objectives of maximum employment and price stability.

Figure 3.A. Distribution of participants' projections for the change in real GDP, 2011–14 and over the longer run



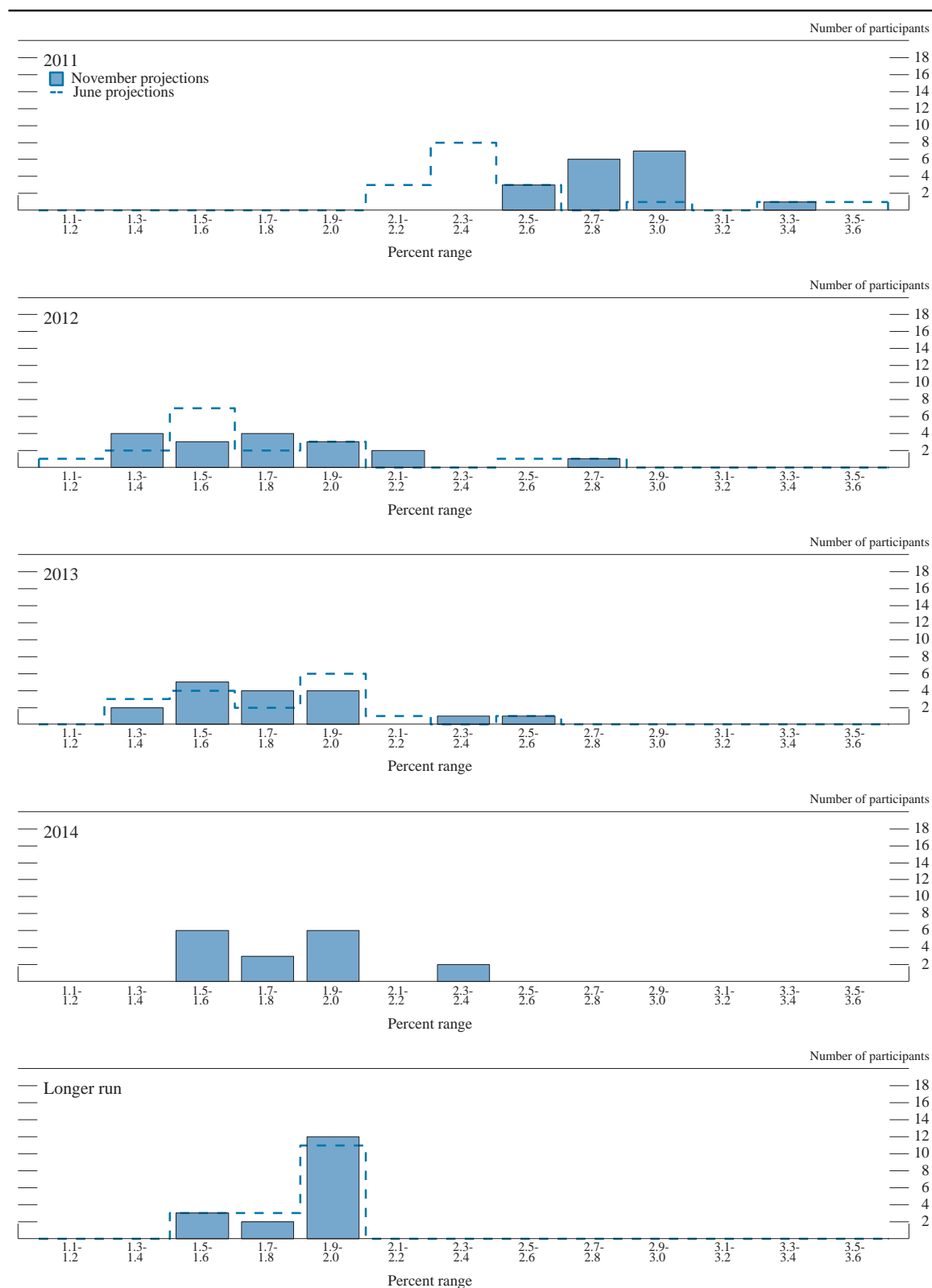
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.B. Distribution of participants' projections for the unemployment rate, 2011–14 and over the longer run



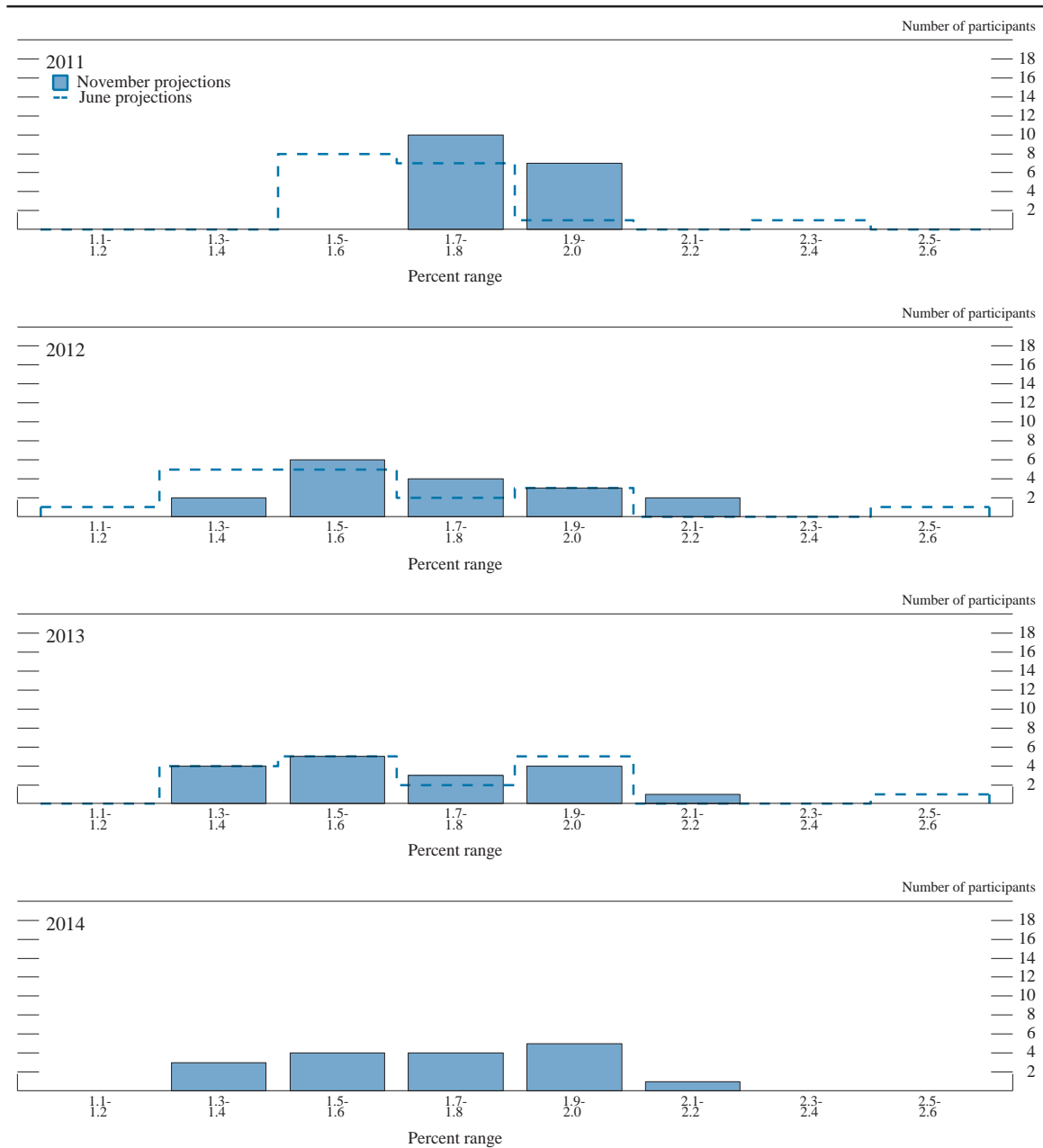
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.C. Distribution of participants' projections for PCE inflation, 2011–14 and over the longer run



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

Figure 3.D. Distribution of participants' projections for core PCE inflation, 2011–14



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 the Federal Reserve Board's staff in advance of meetings of the Federal Open Market Committee. The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks

around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand within a range of 2.4 to 3.6 percent in the current year, 1.6 to 4.4 percent in the second year, 1.3 to 4.7 percent in the third year, and 1.2 to 4.8 percent in the fourth year. The corresponding 70 percent confidence intervals for overall inflation would be 1.5 to 2.5 percent in the current year, 1.1 to 2.9 percent in the second year, and 1.0 to 3.0 percent in the third and fourth years.

Because current conditions may differ from those that prevailed, on average, over history, participants provide judgments as to whether the uncertainty attached to their projections of each variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty in the past, as shown in table 2. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, are weighted to the downside, or are broadly balanced. That is, participants judge whether each variable is more likely to be above or below their projections of the most likely outcome. These judgments about the uncertainty and the risks attending each participant's projections are distinct from the diversity of participants' views about the most likely outcomes. Forecast uncertainty is concerned with the risks associated with a particular projection rather than with divergences across a number of different projections.