FRBNY BLACKBOOK UPDATE

RESEARCH AND STATISTICS GROUP

FOMC Background Material

January 2014

CONFIDENTIAL (FR) Class II FOMC

FRBNY BLACKBOOK UPDATE

January 2014

CONTENTS

EXHIBITS

1. Policy Recommendation and Rationale

Summary:

The outlook for the labor market and real activity has improved, and we thus recommend that the FOMC continues to reduce gradually the pace of asset purchases, consistent with the communications following the December FOMC meeting. We also recommend that the Committee continues to affirm its state-contingent forward guidance regarding the federal funds rate and to emphasize that an appropriate policy stance will entail the removal of policy accommodation only at a gradual pace. In light of the faster than anticipated decline in the unemployment rate, however, the Committee should revisit its guidelines on how interest rate policy will be conducted once the unemployment threshold is reached. To this end we recommend shifting the emphasis from numerical thresholds to an assessment of overall economic conditions based on both legs of the Fed's mandate. Furthermore, we recommend that the Committee revisits the June 2011 principles regarding policy renormalization.

Background:

Data releases in the intermeeting period generally support the view that economic fundamentals are continuing to improve. Despite the disappointing December labor market report, payroll growth has averaged around 180,000 per month in 2013Q4 and the unemployment rate has fallen below 7%. Indicators for the manufacturing sector suggest somewhat stronger growth in the sector, and personal consumption and net exports appeared to strengthen considerably in 2013Q4. The housing sector remained sluggish, due to the effect of higher mortgage rates, but business investment appeared to gain some momentum. Moreover, recent data indicate further abatement of the headwinds from the euro area, suggesting that the global economic outlook is now a neutral factor for the U.S. outlook. Relative to December, our outlook now sees stronger real growth for 2014, supported by robust consumer demand and a rebound in productivity growth. Inflation, however, continues to be subdued, with the core PCE deflator rising by only 1.1% in November on a 12-month basis, and projected to remain below the FOMC's 2% longer-run

objective for some time. We assess the risks around the outlook to be roughly balanced and the uncertainty to have fallen modestly over the period.

Staff policy recommendation:

1) **As long as economic conditions evolve broadly in line with the forecast, the pace of asset purchases should be reduced gradually along the lines described in the December FOMC statement and the Chairman's press conference. Over upcoming meetings, the Committee should provide guidance regarding the overall evolution of the balance sheet after the conclusion of the LSAP program.**

Rationale: The broad based improvement in the outlook for the labor market is consistent with settling on a course of moderate reductions in the pace of purchases, as initiated this month. Tapering at about $10 billion per meeting (equally distributed between Treasuries and agency MBS) appears factored in markets' expectations, so it is unlikely to be associated with an abrupt tightening of financial conditions. In addition, based on the FOMC statement, expectations about the end of the purchase program will influence the anticipated timing of the policy rate lift-off: if the end of the program is pushed back or pulled forward, so will the expected time of lift-off. Because of the more significant signaling effect in this environment, even though decisions about the pace of purchases should remain data dependent, the bar—in terms of shock magnitudes or forecast errors—for deviating from the current expected path for purchases should be high. Recalibrations of the monetary stance in response to contingencies should rather rely on policy rate guidance. More importantly, the Committee should provide state-contingent guidance on the evolution of the balance sheet *after* the purchase program comes to an end. Assuming that the appropriate facilities and tools will be in place to allow the control of the short term rates even with large reserves, expectations of a very gradual renormalization of the balance sheet could enhance forward guidance on short-term rates and help set the overall monetary stance appropriately. In this respect, it would be desirable to ratify formally the amendments so far made to the June 2011 'exit principles,' perhaps issuing a set of new, comprehensive 'normalization guidelines'. A starting point for the Committee in this

dimension should be integrating and streamlining paragraphs 3-4 of the current FOMC statement. Any agreement on new guidelines will not require a decision on the long-term operational framework; we will learn more about that during the period of operating with a large balance sheet.

2) **Keeping into account the recent dynamics of the unemployment rate, the Committee should be prepared to provide guidance on the principles underlying interest rate policy after the threshold is crossed, an event that may occur earlier than previously anticipated.**

Rationale: The Committee currently anticipates that maintaining the federal funds rate in the 0-25 bps range will be appropriate for a considerable time after the asset purchase ends and "well past" the threshold crossing, "especially if projected inflation continues to run below the Committee's 2 percent longer-run goal." Based on recent releases, the unemployment threshold will likely be crossed much earlier than it was anticipated in September 2012 and probably while the asset purchase program is still active. This situation deprives the current threshold of much of its significance, even though labor market conditions generally remain subdued and inflation runs persistently below the Committee's long-run objective. We recommend that the Committee provides more explicit guidance on the reaction function that will inform interest rate policy, both regarding the lift-off time as well as the subsequent setting of the policy rate. Even though the experience with the current language has been positive overall, it has revealed the inadequacy of numerical thresholds to communicate the appropriate stance in many circumstances. We recommend replacing this approach with qualitative language more closely related to the statement on longer-run goals and monetary policy strategy. Any such revision should maintain focused on the overall evolution of labor market conditions in order to guard against a rebound in the unemployment rate. The Committee should also be mindful of potential financial imbalances that continued accommodation may create and thus closely monitor developments in financial markets.

Based on our recommendation, we provide in a separate box some suggestions for revising paragraph 5 of the current statement when appropriate.

3) **The Committee should authorize a wider extension of the overnight reverse repo (RRP) exercises to assess the role of a full-allotment overnight RRP facility for policy implementation with a large balance sheet.**

Rationale: An overnight full allotment RRP facility potentially could reduce some of the perceived costs associated with a large Fed balance sheet, alleviating concerns that the normalization process will be impaired by a large outstanding amount of reserves. Nevertheless, there are still a number of issues that need to be studied about the facility's design and its effects on money markets. Consequently, the Committee should extend the authorization of overnight RRP exercises for a significant period of time such that it allows for a wider set of tests of a potential facility.

Suggested revisions to paragraph 5 language

We suggest two possible revisions of paragraph 5 of the current statement, which balance tactical considerations with renewed emphasis on longer-term strategic elements; the second departs to a greater extent from the current language:

a. The Committee today reaffirmed its view that a highly accommodative stance of monetary policy will remain appropriate to support continued progress toward maximum employment and price stability. In determining how long to maintain a highly accommodative stance of monetary policy, the Committee will continue to monitor deviations of employment from the Committee's assessment of its maximum level, deviations of projected inflation between one and two years ahead from its longer-run goal, and longer-term inflation expectations. The Committee will also consider other information, including additional measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial developments. Specifically, the Committee currently anticipates, based on its assessment of these factors, that it likely will be appropriate to maintain the current target range for the federal funds rate for a considerable time after the asset purchase program ends and the economic recovery strengthens, especially if projected inflation continues to run below the Committee's 2 percent longer-run goal. When the Committee decides to begin to remove policy accommodation, it will take a balanced approach, taking into account the magnitude of the deviations and the potentially different time horizons over which employment and inflation are projected to return to its longer-run goals of maximum employment and inflation of 2 percent.

b. Because inflation has been running below the Committee's longer-run goal for some time and many indicators point to significant remaining weakness in the labor market, the Committee expects that the current exceptionally low target range for the federal funds rate of 0 to ¼ percent will be appropriate until a wider range of indicators point to significant progress toward maximum employment, as long as inflation is not projected to move persistently above its longer-run goal, and longer-term inflation expectations continue to be well anchored. The indicators that the Committee will follow to assess the appropriate policy stance include a broader set of measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial developments. When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its goals of maximum employment and inflation of 2 percent over the longer term.

2. Outlook and Risks Update

2.1 Central Forecast

Intermeeting Developments

Over the intermeeting period, indicators of US economic activity have tended to surprise to the upside, boosting our estimate of growth of real GDP over the fourth quarter to 3 ½% (annual rate) from 1.8% in the December Blackbook. Relative to our expectations a month ago, the fourth quarter growth contributions of consumption, net exports, and inventory investment are all substantially higher. In contrast, the growth contributions from residential investment and the state and local government sector are somewhat weaker.

Based on available information, real PCE likely rose at a 4% to 4 ½% annual rate in the fourth quarter, potentially the fastest quarterly growth rate since the first quarter of 2006. Growth of real PCE over the preceding four quarters averaged just 1.9%. As has been the case for some time, growth of real consumer spending was led by durable goods. Sales of light-weight vehicles edged slightly lower in the fourth quarter, to 15.58 million units (annual rate) from 15.66 million in the third quarter. However, real purchases of furniture, appliances, and home electronics remained robust. An interesting feature of the strengthening of growth of real PCE in the fourth quarter is that the corresponding increase in the rate of growth of nominal PCE was considerably more modest. This reflects the fact that there were large gains in consumer spending in categories in which prices were flat or falling. For example, in nominal terms, growth of spending on nondurable goods, which includes food for consumption at home, apparel, and gasoline, slowed to around 3 ½% (annual rate) in the fourth quarter from 7 ½% in the third quarter. In contrast, growth of real spending on nondurable goods rose from around 3% in the third quarter to nearly 6% in the fourth quarter. In addition to declining prices for gasoline, this phenomenon was due to essentially no change in prices of apparel and food and beverages for home consumption. Growth of spending on real services also strengthened in the fourth quarter after having been quite sluggish for several quarters. This was due in part to the fact that

temperatures were somewhat below the average of the preceding five years, boosting household spending on utilities.

But in a more fundamental sense, the strengthening of consumer spending appears to be due in large measure to the substantial improvement in the household balance sheet that has occurred over the past year. Household net worth, expressed as a percent of disposable personal income, has soared over the past two years and as of the end of 2013 should be rivaling the peak values of late 2006 and early 2007. From its recent low point in 2009Q1, household net worth over disposable income has increased 23%, led by a 44% increase in the value of financial assets and an 18% increase in the value of owned homes. Total liabilities declined modestly over the period. The personal saving rate, estimated at 4.3% for the fourth quarter, is above the level consistent with the historical relationship between household net worth and personal saving, suggesting some upside risk to consumer spending in early 2104. In addition to increases in wealth, the process of deleveraging by the household sector appears to be over. Based on the Flow of Funds Accounts, the sum of home mortgages and consumer credit rose 0.9% from 2012Q3 to 2013Q3, the first year-over-year increase since the third quarter of 2008.

Growth of manufacturing output also surprised to the upside in the fourth quarter. Manufacturing output rose at a 6 ¼% annual rate in Q4, the fastest in nearly two years. Output of durable goods rose at an 8.9% annual rate, led by motor vehicles and parts (19.2% AR) and IT equipment (11.1% AR). Excluding motor vehicles and IT, production rose a more moderate 4.9% AR, but even that is a notable pickup from the depressed pace of the second and third quarters. In addition to consumer spending, these larger gains in output showed through in stronger-than-expected gains in exports and inventory investment. We estimate that real exports increased at an annual rate of nearly 10% in the fourth quarter, the fastest in three years, reflecting the firming of growth among our major trading partners over the second half of 2013 as well as a trend of increased exports of petroleum products. On balance, the fourth quarter growth contribution from net exports is likely to be around 0.8 percentage points, one half percentage point more than we were expecting in the last Blackbook. Similarly, while somewhat less than in the third quarter,

fourth quarter growth of inventories was likely much stronger than expected. Inventories of motor vehicles and parts appear to have risen sharply, with anecdotal reports of some tensions developing between manufacturers and their networks of dealers. Elsewhere, there were large increases in inventories in the wholesale trade sector, apparently due in large part to the rebuilding of stocks of agricultural products following last year's drought.

Recent data on housing market activity has been mixed. According to the National Association of Realtors, sales of existing homes declined substantially in October and November. These declines are expected to result in a substantial fall off of brokers' commissions and other transactions costs in the fourth quarter, possibly resulting in the first quarterly decline of real residential investment since 2010Q3. In contrast, both single-family and multi-family housing starts increased in the fourth quarter, bringing total starts to the highest level since 2008Q2. Signals are mixed regarding the issue of whether or not single-family starts will remain near the December level in coming months. Single-family permits fell 4.8% in December to 610,000 units. The Mortgage Bankers Associations purchase mortgage applications index has weakened a bit further in recent weeks. Finally, the National Association of Home Builders' Housing Market Index, which rose sharply in the first half of 2013, has been essentially flat over the six months through January 2014. Despite the slowing in sales, the 12-month change of the CoreLogic national home price index was 11.8% in November, about the same as the 11.9% increase of October. The main reason for this surprisingly sharp increase in home prices appears to be relatively low inventories of homes for sale.

While the gain in nonfarm payroll employment in December of just 74,000 was a disappointment, for the fourth quarter as a whole hours worked by private employees rose at a 1.9% annual rate versus 1% in the third quarter. The unemployment rate fell to 6.7% in December from 7.2% in September. But over that same period the labor force participation rate also fell by 0.5 percentage points. The employment-to-population ratio remained unchanged at 58.6, about where it has been since mid-2009.

As mentioned above, inflation was relatively low in the fourth quarter. The total CPI rose

at just a 0.9% annual rate, with the four-quarter change down to 1.2%. Energy prices fell 4.7% (AR) in Q4, with the fourth quarter average level of the energy index about equal to what it was in 2011Q2. Prices of food for home consumption rose very modestly in the fourth quarter and were up just 0.6% on a four-quarter change basis. Prices of non-food, non-energy goods fell at a 1.1% annual rate in the fourth quarter and were essentially unchanged over the year. In contrast, prices of non-energy services rose at a 2.5% annual rate, up from 2 ¼% in the third quarter, and were up 2.4 year-over-year, about the same inflation rate as since the first half of 2012.

The Outlook

While growth of real GDP in the final half of 2013 turned out to be stronger than expected, the behavior of the economy has been consistent with the broad outlines of our forecast. Consumer spending is firming due to stronger gains in real income, increases in wealth, and the end of the deleveraging process. The manufacturing sector is beginning to rebound and export growth remains strong. Finally, fiscal restraint by both the federal and the state and local levels of government has lessened, with the state and local sector actually beginning to expand at a moderate pace.

That being said, we have nudged up our forecast for growth in 2014 and 2015 somewhat in response to the string of upside surprises in recent reports on economic conditions. In 2014 we expect growth of real GDP of 3% (Q4/Q4), up from 2 ¾%, while for 2015 we project growth of 3 ½%, up from 3 ¼%. This upgrading of the forecast reflects the view that increases in wealth and in labor market conditions provide the basis for somewhat stronger growth of real consumer spending. In addition, the improvement in manufacturing output should set the stage for somewhat stronger growth of business investment spending.

All else equal, the stronger growth of output should translate into stronger growth of employment and a somewhat lower path of the unemployment rate. However, given that productivity growth has been running below our assessment of trend over the year ending in 2013Q3, we have boosted modestly the path of productivity growth over the forecast

horizon. This lessens somewhat the monthly gains in payroll employment, but those gains should average about 250,000 per month in 2014 and over 300,000 a month in 2015. Accordingly, the path of the unemployment rate in this forecast round is somewhat lower, reaching 6 ½% by mid-2014 and 5 ½% by mid-2015. However, there is considerable uncertainty associated with these projections due to the continued, unexpectedly large declines of the labor force participation rate. If that rate does not begin to rebound as the labor market improves, as we have been expecting for some time, the path of the unemployment rate over the forecast horizon would be substantially lower.

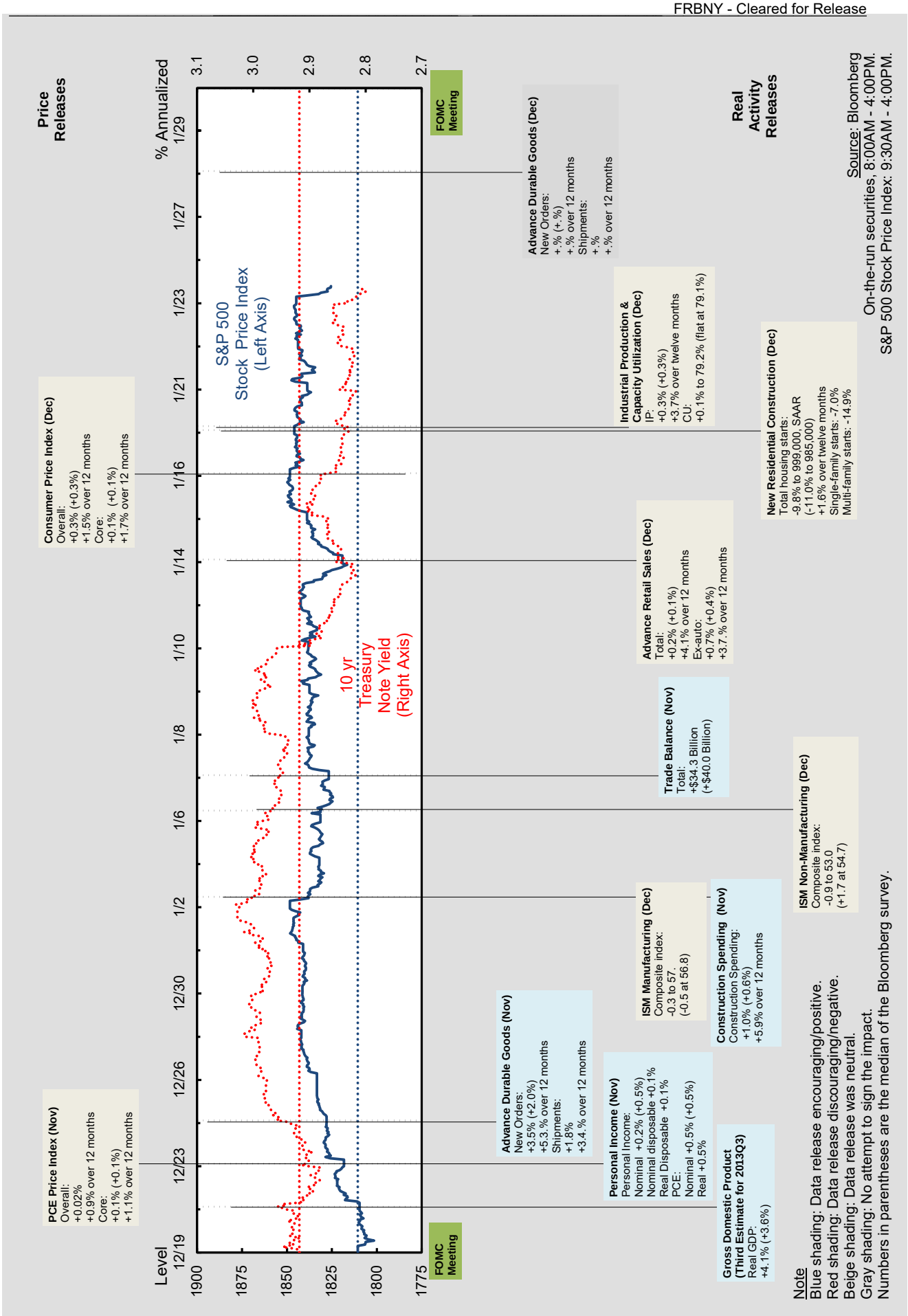
We expect inflation to rise gradually over the next couple of years, and to be near the FOMC objective by the end of 2015, at which time we expect inflation to stabilize. This forecast is based on the projected gradual increase in the levels of resource utilization, which would ease downward pressure on firms' marginal costs and prices, a firming in global demand, and the upward pull exercised by stable inflation expectations on actual inflation. Underpinning the latter assumption is the broad stability of long-term inflation expectations across different financial and survey measures, combined with ongoing moderate growth of wages and unit labor costs, all observations consistent with anchored inflation expectations. Around this central forecast, risks are roughly balanced.

2.2 Alternative Scenarios and Risks

Our assessment of risks to the outlook has changed modestly since the December Blackbook. We see now both risks to inflation and real growth as roughly balanced at medium-term horizons [Exhibit C-3]. The small changes in the overall risk profile reflect an increase in the likelihood of the *Productivity Boom* scenario (there is now a 14% probability of ever entering that scenario), and a modest decline in the *Fiscal Consolidation* and *Global Credit Crunch* scenarios [Exhibit C-1]. *Faster Growth* remains the more likely scenario, with around 33% probability. These adjustments stem mainly from positive real data releases and continued low inflation.

Exhibit C-3 also displays the baseline forecasts from the FRBNY-DSGE model (orange line), which are little changed from those reported in the December Blackbook. The DSGE forecasts for core PCE inflation is well below the mean and modal forecasts, hovering

Key Data Releases



around 1 percent until late 2014 and after that moving very slowly towards the longer term Fed's objective. The DSGE forecasts for GDP is essentially in line with the staff forecast until late 2014 but is quite a bit below it for the medium horizon, slowly converging to it towards the end of 2016. The staff forecast distribution for core PCE inflation shifted slightly up at longer horizons, while there is somewhat reduced uncertainty in the near term in the forecast distribution for GDP growth.

Forecast Comparison with the Tealbook

- *Tealbook policy assumption*: The Tealbook increased the assumed number of quarters—from 1 to 3—that the funds rate would remain unchanged following the crossing of the 6 ½% unemployment threshold. However, given the change in their projected path of the unemployment rate, the date of liftoff is unchanged. The slope of the fed funds rate path following the lift off was increased.
- The Board and the FRBNY staff forecasts for real growth are moving closer, with the Tealbook forecast revised slightly downward and ours slightly upward. The Tealbook forecasts for GDP growth in 2014 and 2015 are 3.1% and 3.4%, respectively [Exhibit B-6], versus 3.0% and 3.5% in the Blackbook. However, the forecasts differ somewhat in the strength of individual expenditure components:
    - The Board staff continues to anticipate a stronger rebound in consumption expenditures, with growth of real PCE rising to 3.5% (Q4/Q4) in 2014 and 3.9% in 2015. In our forecast we have boosted growth of real PCE somewhat, to 3.1% and 3.3%, respectively. The difference in the projected rebound of consumer spending is due largely to differing assessments of future strength of wealth effects. In the Blackbook, the personal savings rate is essentially flat around 4 ¼% over the forecast horizon, while in the Tealbook the saving rate declines to 3.9% in 2014 and then to 3.5% in 2015.

- The Blackbook projects a stronger growth contribution from business fixed investment (BFI), of 1 percentage point both in 2014 and 2015. By comparison, the BFI growth contribution in the Tealbook is 0.6 percentage points in 2014 and 0.7 percentage points in 2015.

- In addition, the Blackbook projects a stronger positive growth contribution from the state and local government sector, as well as a lower inventory drag, especially in 2015. But these are partially offset by a larger negative growth contribution of net exports in the Blackbook versus the Tealbook (-0.3 versus -0.1 percentage points) in 2015. The weaker projection for net exports reflects stronger imports in the Blackbook versus the Tealbook, due to both stronger domestic demand and higher income elasticity of demand for imports.

- The Board staff continues to project a somewhat stronger rebound in housing starts than the Blackbook both in 2014 and 2015, but the differences are smaller than in the December projections. Housing starts are now projected to be 1.15 million in 2014Q4 and 1.39 million in 2015Q4 in the Blackbook, while the Tealbook forecasts are 1.2 and 1.5 million.

- Both the Tealbook and the Blackbook forecasts for core PCE inflation are at 1.5% for 2014. For 2015, the Blackbook continues to project 1.9%, while the Board increased the inflation forecast from 1.6% to 1.7% – perhaps reflecting a meaningful downward revision of the path of the output gap.

- The Board staff has lowered their projected path of the unemployment rate once again, such that it is now nearly identical to that of the Blackbook. The unemployment rate reaches 6 ¼% by 2014Q4 and 5 ½% by 2015Q4. Payroll growth is projected to be somewhat higher in the Blackbook, possibly due to the higher path of average weekly hours projected by the Tealbook.

Special Topic: The Recent Deceleration in Inflation and the Role of Productivity

Henry Linder, Richard Peach, Robert Rich

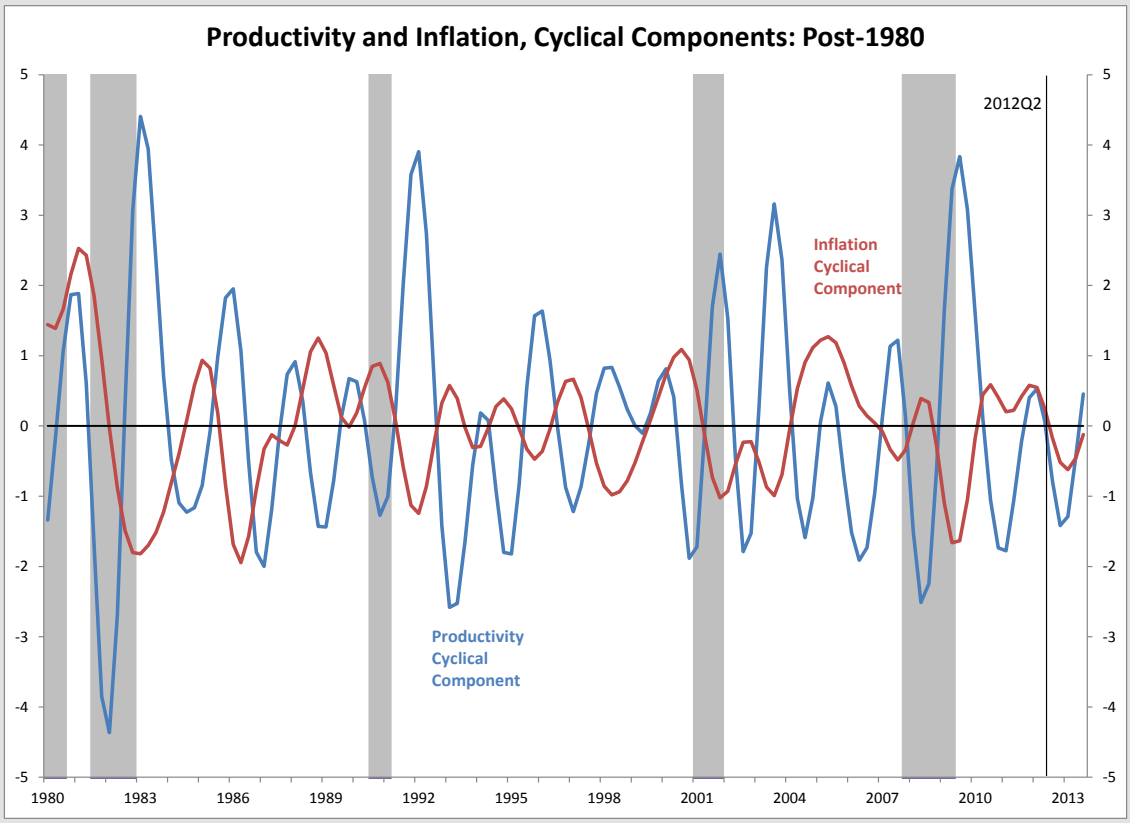
The slowing in inflation over the past two years has raised concerns that the recovery is weaker and slack is greater than suggested by standard measures. However, changes in supply conditions resulting from higher productivity growth can generate similar behavior of inflation. Moreover, while productivity growth typically rises at the beginning of a recovery, the unusual dynamics associated with the Great Recession may have delayed this effect so that its disinflationary impact has only recently started to emerge. Based on our investigation, however, we do not find support for this viewpoint.

In our analysis, we examine the business cycle behavior of inflation and productivity growth over the post-war period and during the current expansion to determine if there is evidence of an upswing in productivity growth that may underlie the recent deceleration in inflation. The data are from the nonfarm business sector for the period 1948:Q1-2013:Q3, with inflation measured as the (annualized) quarterly growth rate in the implicit price deflator for output (from the nonfarm business sector). Productivity growth is measured as the (annualized) quarterly growth rate in average labor productivity. We wish to concentrate on the business cycle dynamics, so we apply a (bandpass) filtering technique to eliminate the trends and high frequency components of the series.

Based on the historical data, there is a modest inverse relationship between the cyclical components of inflation and productivity growth – the correlation coefficient is -0.39. The following figure displays the cyclical components of inflation and productivity during the post-1980 period.

As shown, the cyclical component of inflation usually falls during a recession, while the cyclical component of productivity growth generally declines during the early stage of a recession and then eventually rises during the latter parts of a recession and the beginning of the expansion. Both series also show fluctuations during the course of an expansion. Concentrating on the recent cycle, productivity growth displayed a cyclical rebound similar to that observed during previous

recessions. With regard to the cyclical downturn in inflation starting in 2012:Q2, there is a positive co-movement between the series, rather than a negative co-movement. Moreover, the data do not indicate that cyclical movements in productivity precede those for inflation – the correlation between the inflation series and lagged values of the productivity series is quite low at horizons extending back through eight quarters. Taken together, our findings do not show much evidence that the recent slowdown in inflation is associated with a pickup in productivity growth. Further, a separate analysis indicates that the recent slowdown in inflation cannot be attributed to a sharp decline in unit labor cost growth. One qualification to these conclusions, however, is that there is some imprecision associated with values at the end of the sample because they are based on forecasts of the original (unfiltered) data series.

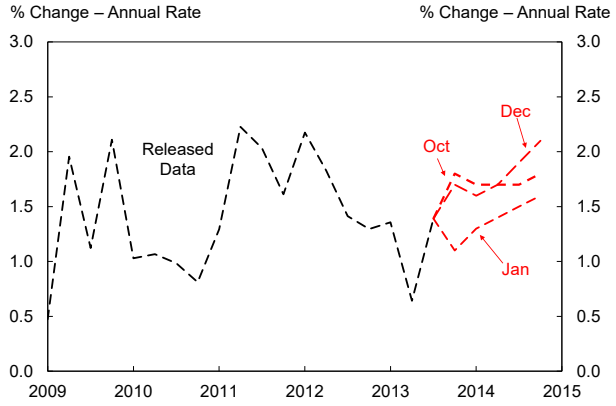


B. FRBNY Forecast Details

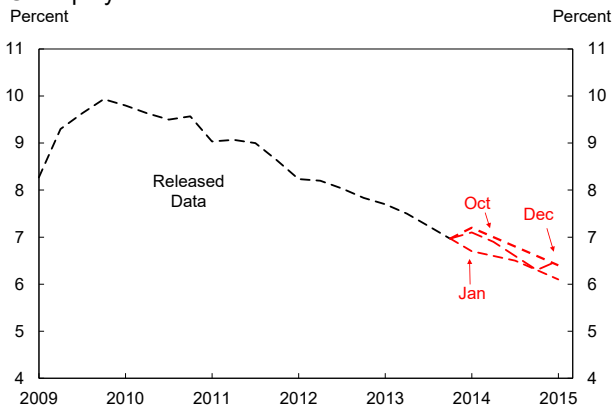
Exhibit B-2: Evolution of Projected Quarterly Paths

Key Indicators

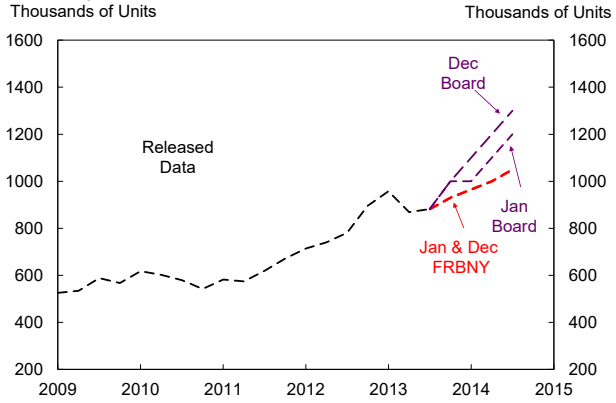
Core PCE Inflation



Unemployment Rate

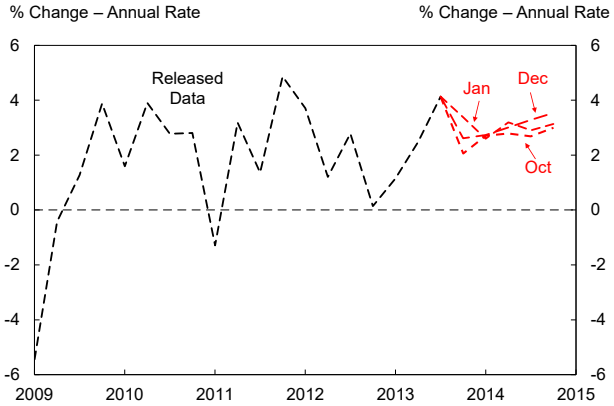


Housing Starts

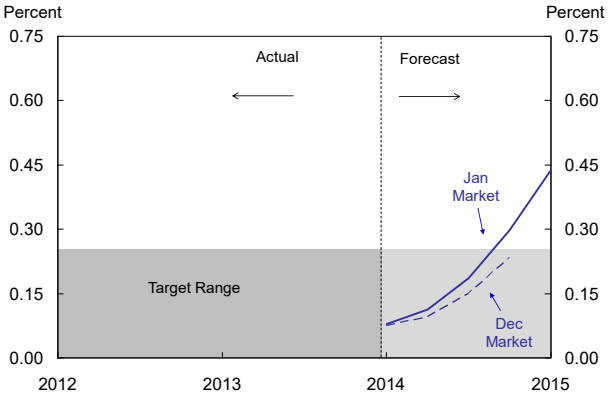


Forecast Assumptions

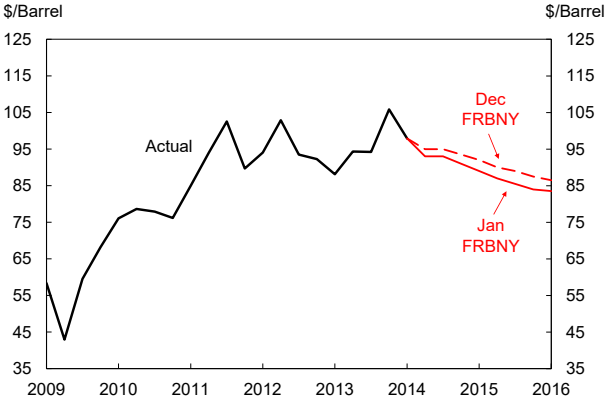
Real GDP Growth



Federal Funds Rate



Crude Oil



Source: FRBNY (MMS and IR Functions) and Federal Reserve Board

B. FRBNY Forecast Details

Exhibit B-3: Near-Term Projections

	Quarterly Growth Rates (AR)			Quarterly Growth Contributions (AR)		
	2013Q4	2014Q1	2014Q2	2013Q4	2014Q1	2014Q2
OUTPUT						
Real GDP	3.4	2.6	3.2	3.4	2.6	3.2
	(1.8)	(2.2)	(2.8)	(1.8)	(2.2)	(2.8)
Final Sales to Domestic Purchasers	2.9	2.9	3.5	3.0	3.0	3.5
	(2.4)	(2.4)	(2.9)	(2.4)	(2.4)	(3.0)
Consumption	4.1	3.0	3.0	2.8	2.0	2.0
	(3.5)	(2.8)	(2.9)	(2.4)	(1.9)	(2.0)
BFI: Equipment	6.0	8.0	10.0	0.3	0.4	0.5
	(3.0)	(4.0)	(6.0)	(0.2)	(0.2)	(0.3)
BFI: Nonresidential Structures	10.0	11.0	11.0	0.3	0.3	0.3
	(3.0)	(6.0)	(8.0)	(0.1)	(0.2)	(0.2)
BFI: Intellectual Property Products	4.0	4.0	4.0	0.2	0.2	0.2
	(3.0)	(4.0)	(4.0)	(0.1)	(0.2)	(0.2)
Residential Investment	-5.5	8.6	19.7	-0.2	0.3	0.6
	(3.0)	(5.0)	(13.0)	(0.1)	(0.2)	(0.4)
Government: Federal	-5.0	-4.0	-3.5	-0.4	-0.3	-0.3
	(-7.4)	(-4.0)	(-3.6)	(-0.6)	(-0.3)	(-0.3)
Government: State and Local	0.2	0.8	1.3	0.0	0.1	0.1
	(1.0)	(1.2)	(1.3)	(0.1)	(0.1)	(0.1)
Inventory Investment	--	--	--	-0.4	-0.6	-0.3
	--	--	--	(-0.8)	(-0.6)	(-0.2)
Net Exports	--	--	--	0.7	0.2	-0.1
	--	--	--	(0.2)	(0.3)	(0.1)
INFLATION						
Total PCE Deflator	0.7	1.3	1.5			
	(0.6)	(1.3)	(1.6)			
Core PCE Deflator	1.1	1.3	1.4			
	(1.1)	(1.3)	(1.4)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	2.3	1.3	1.5			
	(0.4)	(1.0)	(1.3)			
Compensation per Hour	2.2	2.3	2.3			
	(1.8)	(2.0)	(1.9)			
Unit Labor Costs	-0.1	1.0	0.8			
	(1.4)	(1.0)	(0.7)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

B. FRBNY Forecast Details

Exhibit B-4: Medium-Term Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2012	2013	2014	2012	2013	2014
OUTPUT						
Real GDP	2.0	2.8	3.0	2.0	2.8	3.0
	(2.0)	(2.2)	(2.7)	(2.0)	(2.2)	(2.7)
Final Sales to Domestic Purchasers	2.1	1.9	3.2	2.2	2.0	3.2
	(2.1)	(1.7)	(2.8)	(2.2)	(1.7)	(2.8)
Consumption	2.0	2.5	3.1	1.4	1.7	2.1
	(2.0)	(2.2)	(2.9)	(1.4)	(1.5)	(2.0)
BFI: Equipment	4.5	2.7	9.5	0.2	0.2	0.5
	(4.5)	(1.9)	(7.0)	(0.2)	(0.1)	(0.4)
BFI: Nonresidential Structures	9.2	2.2	11.2	0.2	0.1	0.3
	(9.2)	(0.6)	(7.5)	(0.2)	(0.0)	(0.2)
BFI: Intellectual Property Products	2.9	3.0	4.0	0.1	0.1	0.2
	(2.9)	(1.7)	(4.0)	(0.1)	(0.1)	(0.2)
Residential Investment	15.5	7.6	8.3	0.4	0.2	0.3
	(15.5)	(10.6)	(6.2)	(0.4)	(0.3)	(0.2)
Government: Federal	-2.3	-4.2	-3.6	-0.2	-0.3	-0.3
	(-2.3)	(-4.7)	(-3.5)	(-0.2)	(-0.4)	(-0.3)
Government: State and Local	-0.3	0.2	1.3	0.0	0.0	0.1
	(-0.3)	(0.4)	(1.4)	(-0.0)	(0.1)	(0.2)
Inventory Investment	--	--	--	-0.5	0.7	-0.2
	--	--	--	(-0.5)	(0.6)	(-0.1)
Net Exports	--	--	--	0.3	0.1	-0.1
	--	--	--	(0.3)	(-0.0)	(-0.0)
INCOME						
Personal Income	5.8	2.3	4.3			
	(5.8)	(1.9)	(4.1)			
Real Disposable Personal Income	3.6	0.5	2.7			
	(3.6)	(0.2)	(2.4)			
Personal Saving Rate	6.6	4.8	4.5			
	(6.6)	(4.7)	(4.4)			
Corporate Profits Before Taxes	2.7	4.8	-1.5			
	(2.7)	(4.7)	(-1.6)			

Note: Numbers in parentheses are from the previous Blackbook.

B. FRBNY Forecast Details

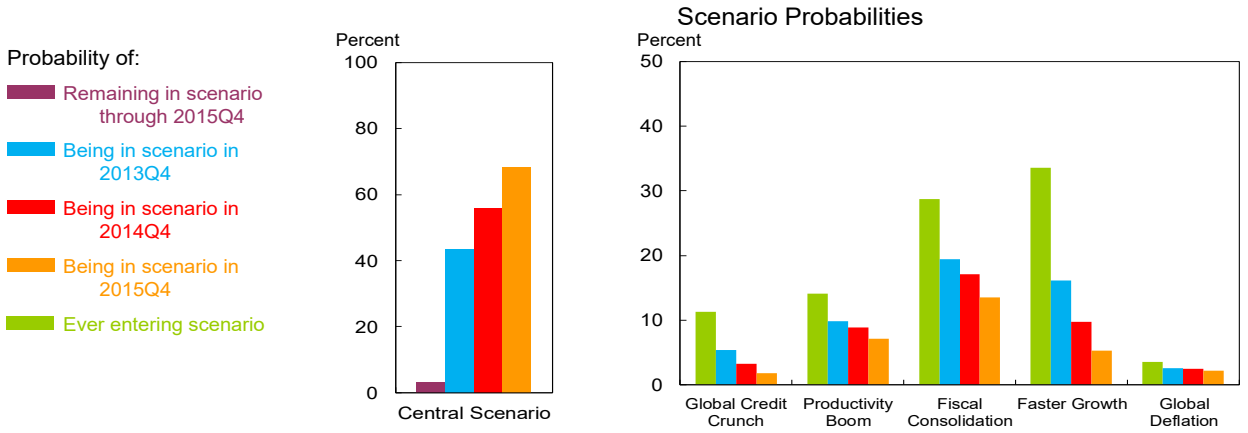
Exhibit B-5: Medium-Term Projections, Continued

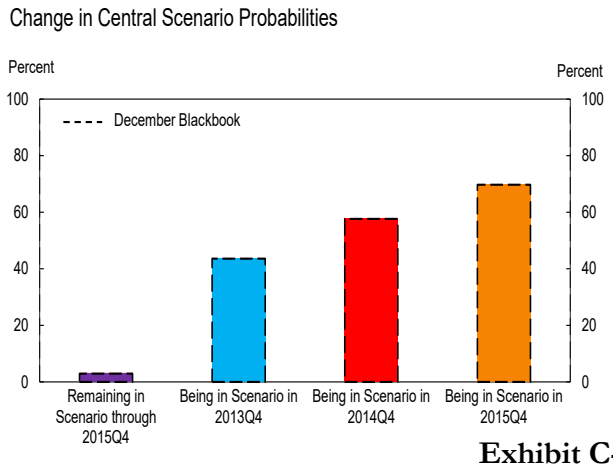
	Q4/Q4 Growth Rates		
	2012	2013	2014
INFLATION			
Total PCE Deflator	1.7	0.9	1.5
	(1.7)	(0.9)	(1.6)
Core PCE Deflator	1.7	1.1	1.4
	(1.7)	(1.1)	(1.4)
Total CPI Inflation	1.9	1.2	1.8
	(1.9)	(1.2)	(2.0)
Core CPI Inflation	1.9	1.7	1.8
	(1.9)	(1.7)	(1.9)
GDP Deflator	1.8	1.4	1.7
	(1.8)	(1.4)	(1.7)
PRODUCTIVITY AND LABOR COSTS*			
Output	2.8	3.0	3.6
	(2.8)	(2.5)	(3.2)
Hours	1.9	1.6	2.1
	(1.9)	(1.6)	(2.0)
Output per Hour	0.9	1.3	1.4
	(0.9)	(0.8)	(1.2)
Compensation per Hour	5.3	0.5	2.3
	(5.3)	(0.0)	(1.9)
Unit Labor Costs	4.4	-0.8	0.9
	(4.4)	(-0.8)	(0.7)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	7.8	7.0	6.3
	(7.8)	(7.1)	(6.5)
Participation Rate (Avg. Q4 Level)	63.6	62.9	63.1
	(63.7)	(63.0)	(63.2)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	183	182	221
	(183)	(184)	(216)

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

C. FRBNY Forecast Distributions

Exhibit C-1: Risks





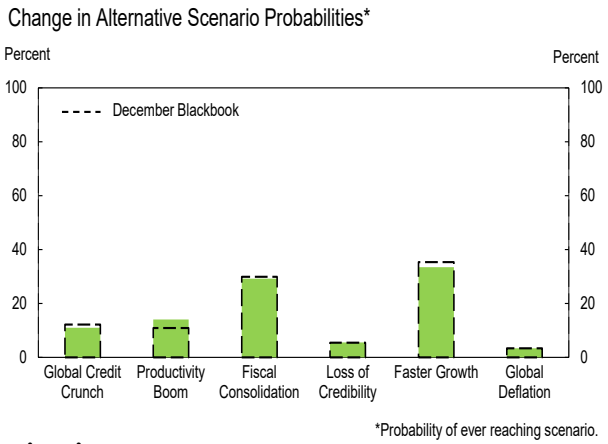
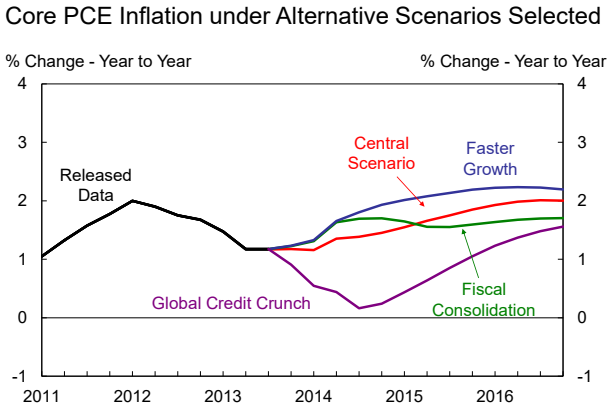
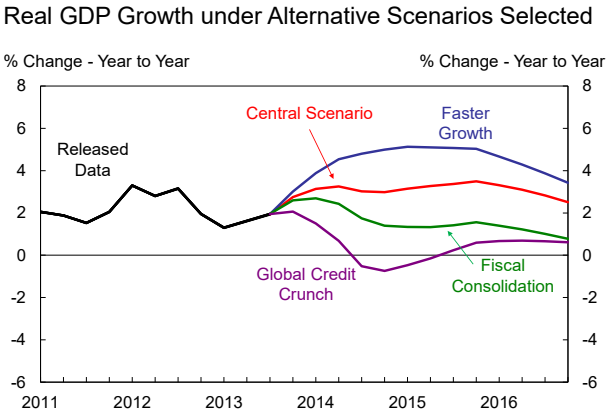


Exhibit C-2: Projections under Alternative Scenarios



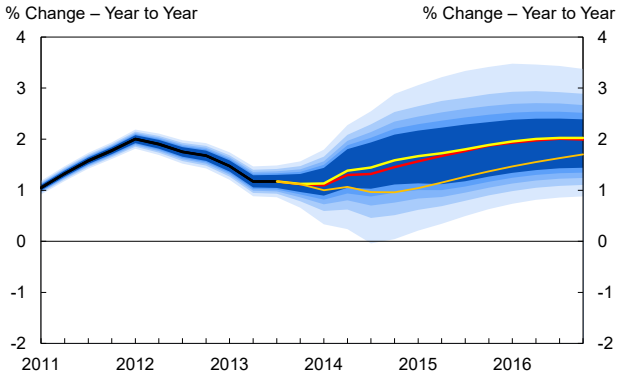


Source: MMS Function (FRBNY)

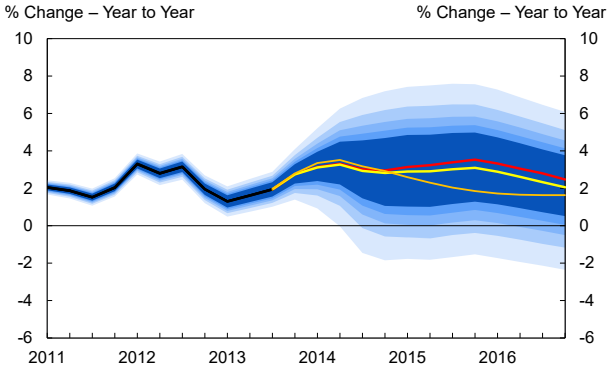
C. FRBNY Forecast Distributions

Exhibit C-3: Inflation and Output Forecast Distributions

Core PCE Inflation Forecast Distribution

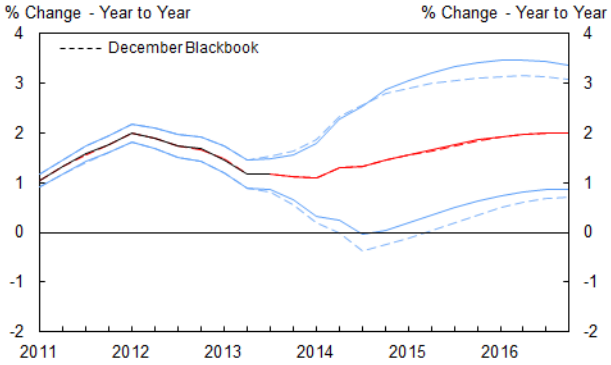


Real GDP Growth Forecast Distribution

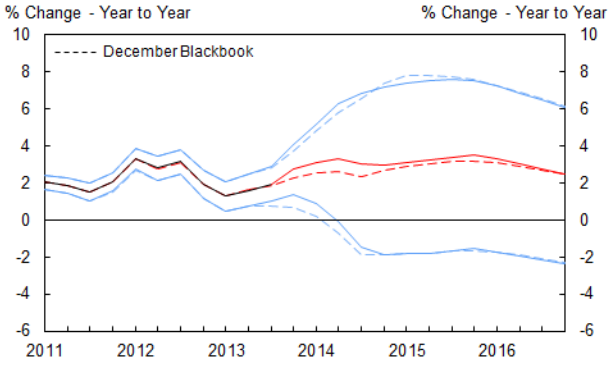


The yellow line is the expected value of the forecast distribution, the red line is the FRBNY central projection, the orange line is the DSGE forecast, and the black line is released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter change will be within the respective range.

Change in Core PCE Inflation Forecast Distribution

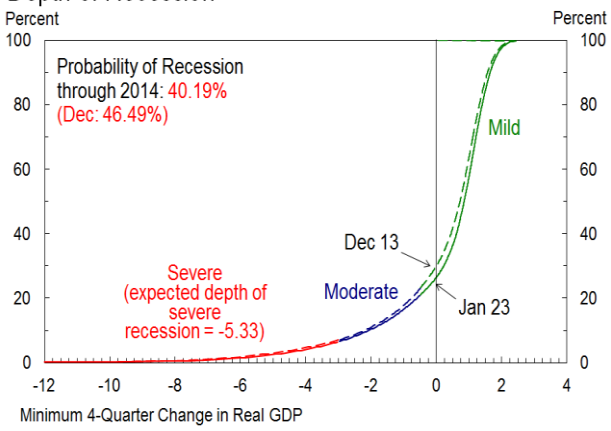


Change in Real GDP Growth Forecast Distribution

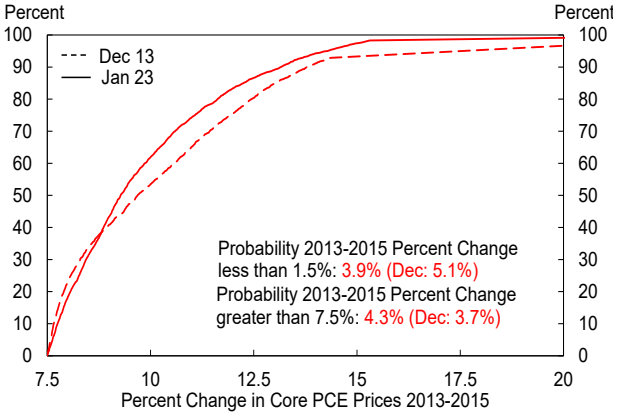


The blue lines are the 90% chance the four-quarter change will be within the lines, the red line is the central scenario projection, and the black line is released data. Dashed lines represent forecasts from the previous Blackbook.

Depth of Recession



High Inflation Probability and Distribution



Source: MMS Function (FRBNY)

FRBNY BLACKBOOK

RESEARCH AND STATISTICS GROUP

FOMC Background Material

March 2014

CONFIDENTIAL (FR) Class II FOMC

FRBNY BLACKBOOK

March 2014

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EXHIBITS

APPENDICES

1. Policy Recommendation and Rationale

Summary:

Intermeeting developments suggest that the economic outlook has not changed substantially beyond the current quarter: as discussed in the next section, the softness in current quarter real GDP and hours growth appears to reflect largely transitory factors. We thus recommend staying the course. The Committee should continue to emphasize that policy accommodation will be maintained as the economic recovery consolidates, and that increases in the policy rate, once they begin, are likely to be gradual. However, with the unemployment rate near the specified threshold, it seems appropriate for the Committee to consider revisions to its guidance, shifting the emphasis from numerical thresholds to an assessment of overall economic conditions and their consistency with the Fed's dual mandate. Such revisions should provide guidance both for pre-liftoff and post-liftoff interest rate policy. We also recommend that the FOMC continues to reduce gradually the pace of asset purchases, consistent with previous FOMC announcements. Furthermore, the Committee should start assessing options to provide further guidance about the path of the balance sheet after the end of the asset purchase program.

Staff policy recommendation:

1) **The Committee should provide guidance on the principles underlying decisions about the timing of the liftoff and the interest rate policy after the liftoff.**

The Committee's promise of future accommodation when it is constrained by the ZLB has been an essential element in supporting a faster recovery. Guidance should continue to emphasize that the appropriate degree of accommodation will be maintained as the economic recovery strengthens and increases in the policy rate, once they begin, are likely to be gradual. In particular, the Committee should communicate that the policy rate will likely remain below most estimates of the longer-run "neutral" rate even after inflation and output gaps are largely closed. To avoid the impression that the longer-run

inflation objective is a ceiling, the Committee should convey that it is comfortable with temporary deviations on both sides of its longer-run goal as long as inflation is projected to average 2 percent over the medium term. Moreover, we recommend using qualitative rather than quantitative state-contingent language to communicate the stance of policy. Specifically, policy should be based on a broad judgment of the realized and projected progress of the economy toward the FOMC's objectives rather than on a single indicator such as the unemployment rate. Committee communications should also underline that such revisions represent a logical progression of the threshold-based policy and a continuation of the previous policy stance. Finally, the Committee should state that it will continue to monitor financial market conditions, stressing that it is mindful of financial imbalances that continued accommodation may create and the potential risks such imbalances could pose in achieving the Committee's objectives.

2) **As long as economic conditions continue to evolve broadly in line with the forecast, the pace of asset purchases should be reduced at a rate similar to that announced at the last two FOMC meetings. At upcoming meetings, the Committee should provide updated guidance regarding the management of the balance sheet after the conclusion of the LSAP program.**

We recommend that the Committee continues the moderate reductions in the pace of purchases, tapering at about $10 billion per meeting (equally distributed between Treasuries and agency MBS). Because expectations about the end of the purchase program can influence the anticipated timing of the policy rate liftoff, decisions about the pace of purchases have a significant signaling effect; therefore, the bar for deviating from the current expected path for purchases should be high. Any significant recalibrations of the monetary stance to changes in the outlook or risks should rather rely primarily on policy rate guidance. Moreover, the Committee should provide further guidance about the management of the balance sheet *after* the purchase program comes to an end. Some clarification about the post-taper balance sheet policy should not be delayed, as guidance about a very gradual renormalization of the balance sheet would enhance forward guidance on short-term rates, thus helping to set the overall monetary stance

appropriately. In this respect, it would be desirable to start from the increasingly outdated June 2011 'exit principles' and communicate a comprehensive revision to those 'normalization guidelines.'

2. Central Forecast & Risks Assessment

Intermeeting Developments

Since the January FOMC meeting, economic indicators have tended to be weaker than expected, dampening our estimate of growth of real GDP in 2014Q1. After peaking at a relatively high level in mid-January, the Citigroup Economic Surprise Index has fallen sharply over the past two months and as of March 10 was -31.6. Some slowing of economic activity relative to that of the second half of 2013 was anticipated. Inventory investment made a positive growth contribution in all four quarters of 2013, with inventory levels getting somewhat elevated relative to sales, particularly for motor vehicles. As a result, a slowing of the pace of inventory accumulation in the first quarter seems very likely. In addition, even after revision, net exports provided a full percentage point growth contribution in the fourth quarter, which is widely regarded as an outlier inconsistent with underlying trends in exports and imports. Nonetheless, our current projection of Q1 growth of real GDP, at 1½% (annual rate), is a percentage point below that expected in late January. We attribute much of this marking down of the Q1 growth rate to the severe winter weather of January and February. A return to more normal weather patterns in the second quarter would tend to boost the Q2 growth rate somewhat above our January forecast, leaving projected growth for all of 2014 essentially unchanged.

According to the second estimate, growth of real GDP in 2013Q4 was revised down from 3.2% (annual rate) to 2.4%, in line with expectations. The growth contributions from net exports and inventory investment were both revised down by 0.3 percentage points. Growth of real PCE was revised down from 3.3% to 2.6% while the personal saving rate was revised up from 4.3% to 4.5%. The revised real PCE growth rate is still above the

roughly 2% trend of the preceding four quarters, but it does dampen somewhat our assessment of the strength of consumer spending going into 2014. Exactly offsetting the downward revision of real PCE, however, was an upward revision of growth of real businesses fixed investment. Despite the downward revision of the growth of real GDP, real final sales increased at a 2.3% annual rate in the quarter, notably above the 1.8% annual rate trend of the period from mid-2009 through mid-2013.

While the data for January and February have generally surprised to the downside, the January data on growth of real PCE was actually somewhat stronger than expected. After falling 0.1% in December, real PCE rose 0.3% in January. Household spending on electricity and natural gas rose at a 260% annual rate in January, reflecting the unusually cold weather. In addition, household spending on healthcare rose at a 22% annual rate, reflecting the expansion of the Medicaid program as part of the Affordable Care Act. Excluding these two categories, real PCE fell 0.2% in January after being essentially unchanged in December. Real spending on goods fell 0.6% in January following a 0.2% decline in December. Real spending on both durable and nondurable goods declined, with a pronounced fall in real spending on apparel. Sales of lightweight motor vehicles rose only modestly in February, to 15.3 million units (annual rate) from 15.2 million in January. Such sales averaged 15.7 million over the second half of 2013.

We view this recent weakness as transitory, reflecting the difficulty of seasonally-adjusting consumer spending around the holiday period and the severe weather. The underlying fundamentals of consumer spending still appear to be supportive of a stronger pace of growth. Household net worth rose sharply again in the fourth quarter. Year-over-year growth of household liabilities moved into positive territory in 2013Q4 for the first time since mid-2008. In addition, consumer confidence, particularly assessments of current conditions, strengthened in January and February.

As has been the case for some time now, recent data on housing market activity has been mixed. Sales of new single-family homes rose nearly 10% in January to the highest level since mid-2008. With distressed sales included, the seasonally-adjusted CoreLogic

national home price index rose 1.9% in January, one of the largest monthly increases in the history of the series. The 12-month change of the not-seasonally-adjusted index was 12.0% in January, the largest since February of 2006. However, total housing starts fell a steep 16% in January to 880,000 units (seasonally adjusted annual rate) from an upwardly revised 1,048,000 units in December. Single-family housing starts fell 15.9% to 573,000 units from 681,000 units in December. In contrast, single-family permits fell a modest 1.3% to 602,000 from 610,000 in December. Multi-family starts fell 16.3% in January to 307,000 units from 367,000 in December. Multi-family permits fell 12.1% to 335,000 units from 381,000 in December. Lastly, the National Association of Home Builders' Housing Market Index for February fell a sharp 10 points to 46. It had ranged from 54 to 58 from July of 2013 through this January. Assessments of current sales fell from 62 to 51, assessments of sales six months in the future fell from 60 to 54, and assessments of prospective buyer traffic at builders' subdivisions fell from 40 to 31. In addition, the index was down in all four major Census regions, with the largest decline in the West. As with consumption, we interpret much of the January softness in housing starts as due to inherent volatility and weather. Housing permits have been reasonably well maintained, and the rise in sales of new homes in January is consistent with some of the recent reports by large, publicly-traded home builders.

Our adding up of the January data on business investment spending suggests some slowing in Q1 relative to Q4, but it appears to be holding up reasonably well. Shipments of nondefense capital goods fell in January, but are up over the past three months. In addition, imports of capital goods rose in January while exports fell, so some of the recent softness in shipments is already counted in our projection of a pronounced slowing of growth of exports in the first quarter. New orders for nondefense capital goods have strengthened in recent months, and a three month moving average of new orders is now running about 10% above shipments. Despite the weather, private nonresidential construction increased in January. The Architectural Billings Index, while still relatively low, rose above 50 in January. In contrast, public sector construction put-in-place fell sharply in January.

Consistent with the expectation of a slower pace of inventory investment in the first quarter, manufacturing output fell a steep 0.8% in January. The decline was wide spread but most pronounced in the motor vehicle sector, where assemblies declined by 5.6%. Manufacturing data for February looks to be a bit stronger. The manufacturing ISM index rose 1.9 points to 53.2 in February, after falling more than 5 points in January. Aggregate hours worked in the manufacturing sector were unchanged in February following a 0.5% decline in January. We have only preliminary data on inventories for January, so there is substantial uncertainty about the magnitude of the inventory growth contribution in the first quarter.

Nonfarm payroll employment grew by 175,000 in February, while the January increase was revised up from 113,000 to 129,000. This was one of a relatively few upside surprises over the intermeeting period. At the same time, however, total hours worked fell 0.2% from January to February. The January-February average of aggregate hours worked is about 0.7% (annual rate) below the fourth quarter average. Hours would need to increase 0.6% in March in order for the first quarter average just to equal that of the fourth quarter. The largest declines in hours worked in February were in categories susceptible to a weather effect: hours worked in construction, transportation and trade, education and health services, and leisure and hospitality all declined by sizeable amounts. Nonetheless, we continued to see decent increases in employment in construction, education and health, and leisure and hospitality, suggesting that employers in those industries are looking through the transitory disruption and seeing favorable prospects. Average hourly earnings rose by 0.4% in February, quite a bit faster than the recent trend. However, this appears to be due to the fact that many workers are paid when they are unable to work due to weather. As result, aggregate hours worked declined more that the aggregate wage bill.

Overall, price inflation has remained quite stable over the past few months. Energy prices have moved higher, rising 1.6% in December and then 0.6% in January. Prices of electricity, natural gas, propane, and home heating oil rose further in February, likely offsetting a modest decline in seasonally-adjusted gasoline prices. For 2014Q1 we expect

energy prices to rise 7% (annual rate) after falling at a 1% annual rate in the fourth quarter. Prices of food and beverages for consumption at home were essentially unchanged over the fourth quarter, and are expected to rise only modestly in the first quarter. The core PCE deflator rise by just 0.09% in January, less than we expected, leading us to mark down our projected increase for the entire first quarter to 1.2% (annual rate) versus 1.3% in the fourth quarter. Twelve month changes in total and core PCE deflator inflation were 1.2% and 1.1%, respectively, as of January.

The Outlook

The flow of data over the past several weeks has been difficult to interpret and, as one might expect, has led to the development of two quite distinct camps. One view of the data is that the economy has lost a lot of the forward momentum that had been evident up through November. Since then, real PCE (excluding utilities and health care) has declined, a three-month moving average of monthly gains in nonfarm payroll employment has declined from 225,000 to 129,000, and the three-month change of manufacturing output has gone from 4.2% (annual rate) to -1.2%. The opposing view is that a slowing of growth was widely expected for reasons discussed earlier, on top of which we had unusually harsh winter weather in January and February that likely lowered the Q1 growth rate by as much as a full percentage point.

We are in the latter camp, continuing to believe that the underlying fundamentals of the US and global economies have improved to the point where it is reasonable to expect that a firming of growth is underway. Indeed, despite the reduction in our projection for 2014Q1 real GDP growth, we expect growth of final sales to domestic purchasers to be 2.5% (annual rate) in the quarter, modestly above the average of the second half of 2013. The improving underlying fundamentals are well known at this point. Both the asset and the liability side of consumer's balance sheets are effectively repaired, with household liabilities beginning to expand. The excess housing built up over the previous decade has been worked off, and home prices continue to rise rapidly due to a shortage of homes for sale. Fiscal consolidation at both the federal and the state and local levels is largely over,

with employment at the state and local level up 0.3% over the twelve months ending in February. In addition, credits standards continue to gradually ease, while overall financial conditions remain supportive. In addition, growth prospects among many of our major trading partners have improved.

Therefore, we continue to believe that the most likely scenario for the US economy is for real GDP to grow at around 3% (Q4/Q4) in 2014, and then rise to around 3½% in 2015. All else equal, the stronger growth of output should translate into stronger growth of employment, with the unemployment rate declining to just over 6% by the end of 2014, just below 5½% at the end of 2015, and then reach 5¼%, our estimate for the longer-run natural rate of unemployment, in early 2016. However, there is considerable uncertainty around this projected path of the unemployment rate due to uncertainty over the future path of the participation rate. The labor force participation rate averaged 63.0% in January and February, up from 62.9% in the fourth quarter. We expect it to begin trending upward in the near future, reaching 63.4% by 2015Q4.

We expect inflation to rise gradually over the next couple of years, and to be near the FOMC objective by the end of 2015, at which time we expect inflation to stabilize. This forecast is based on the projected gradual increase in the levels of resource utilization, which would ease downward pressure on firms' marginal costs and prices, a firming in global demand, and the upward pull on actual inflation from stable inflation expectations. Underpinning the latter assumption is the broad stability of long-term inflation expectations across different financial and survey measures, combined with ongoing moderate growth of wages and unit labor costs, all observations consistent with anchored inflation expectations.

Uncertainty and Risks Assessment

Our overall assessment of the risks around the central outlook has not changed substantially over the intermeeting period. Based on the difference between the modal central forecast and the expected value from our forecast distributions, the risks remained

roughly balanced for core PCE inflation and for real GDP growth through most of the forecast horizon [Exhibit C-1]. Nevertheless, we see the uncertainty around the forecast as having risen slightly from already elevated levels.

The small increase in uncertainty partly reflects two opposing interpretations of the recent data. On the one hand, some of the recent data have held up relatively well taking into account various estimates of the weather effects, which would imply that the economy may have greater underlying strength than our current assessment. On the other hand, it is possible that we and most forecasters are attributing too much of the weakness in the recent data to transitory factors (including the weather), and that the underlying strength of the economy is less than in our central assessment. In our framework, we capture these two opposing factors through a small increase in the probability of the upside *Faster Growth* scenario and a somewhat larger increase in the probability of the downside *Fiscal Consolidation* scenario [Exhibit C-2]. We also have raised slightly the probability on the *Global Credit Crunch* scenario to capture risks associated with recent market fluctuations associated with developments in the EMEs.

Comparing the recent data and our current central forecast with the forecast distribution from a year earlier, the current central forecast for inflation is now in the lower part of the year-ago inflation distribution, reflecting the low inflation data of the past year and its impact on our outlook [Exhibit C-4]. In contrast, the current real GDP growth forecast is within the center of the year-ago forecast distribution.

Because we have lowered our current quarter central forecast and maintained considerable uncertainty around it, the probability of negative growth in 2014Q1 is fairly substantial [Exhibit C-4]. For subsequent quarters through 2015Q1, this probability is relatively moderate in our assessment, although it is still above that from the Survey of Professional Forecasters (SPF), a long-running feature of the two outlooks.

3. Forecast Comparison

3.1 Comparison with Private Forecasters[1]

GDP Growth. The staff is less optimistic than private forecasts for Q1, but there is little disagreement on growth for the year as a whole. The drop in the FRBNY projection for 2014Q1 from 2.6% to 1.5% puts the forecast at the low end of private forecasts. The markdown is similar to that made by Macro Advisers, which lowered its forecast from 2.2% to 1.5%. The median of the SPF fell from 2.5% to 2.0%, while the Blue Chip forecast rose slightly to 1.9%. The FRBNY projection for 2014 (Q4/Q4) is unchanged at 3.0%, in line with the Macro Advisers' forecast. The Blue Chip (2.7%) and the median of the SPF (2.6%) have less growth.

Inflation. The FRBNY forecast for core PCE inflation in 2014Q1 fell from 1.3% to 1.2%. Macro Advisors expect a similar inflation rate, while the median of the SPF is 1.5%. The 2014 (Q4/Q4) FRBNY forecast was lowered from 1.4% to 1.3%, which is below the Macro Advisers' outlook (1.4%) and the Median SPF (1.7%).

The 2014Q1 FRBNY projection for core CPI is 1.6% (down from 1.7%), the same as the Macro Advisers' forecast and below the median SPF of 1.8%. The FRBNY forecast for 2014 (Q4/Q4) is unchanged at 1.8%, which is between the Macro Advisers' outlook (1.7%) and the median SPF (1.9%).

The total CPI inflation FRBNY forecast for 2014Q1 increased from 1.6% to 2.2%. This is higher than the projections by Macro Advisors (2.0%), Blue Chip (1.9%), and the median SPF (1.7%). The 2014 (Q4/Q4) FRBNY forecast was revised from 1.8% to 2.0%. The Blue Chip survey has the same forecast, while the median SPF is 1.8%.

[1] The details of the forecast comparison are in Exhibit B-8. Quarterly numbers are SAAR.

3.2 FRBNY-DSGE Model Forecast

The FRBNY model forecasts are obtained using data released through 2013Q4, augmented for 2014Q1 with the FRBNY staff forecasts for real GDP growth, core PCE inflation, and growth in total hours, and with values of the federal funds rate and the spread between Baa corporate bonds and 10-year Treasury yields based on 2014Q1 observations. The expected federal funds rate is constrained to equal market expectations, as measured by OIS rates, through 2015Q2. This constraint is implemented via anticipated policy shocks, whose standard deviations are estimated using FFR expectations since 2008Q4, when the zero bound became binding. The 2014Q1 staff projections and OIS rates are those that were available on March 4, 2014.

Relative to December, the GDP growth forecast for 2014 (Q4/Q4) remains unchanged at 2.0 percent, while the forecasts for 2015 and 2016 (Q4/Q4) are higher by two tenth of a percent, at 1.9 percent, compared to last December's forecast of 1.7 percent. In general, the model continues to project moderate growth in economic activity throughout the forecast horizon. For inflation, the mean core PCE inflation for 2014 is projected to be 1.0 percent, slightly higher than the 0.9 percent projected last December. For 2015 and 2016, however, inflation forecasts are lower, at 1.2 and 1.6 percent, respectively, compared to the December forecasts of 1.3 and 1.7 percent. Despite being on an upward trajectory, inflation is projected to remain below the FOMC long-run goal of 2 percent throughout the whole forecast horizon.

Uncertainty around real GDP growth and inflation forecasts has diminished slightly, due primarily to a reduction in downside risks. For GDP growth, the 68 percent bands cover the intervals -0.1 to 3.4 percent in 2014, -1.3 to 4.6 percent in 2015 and -1.2 to 5.0 in 2016. For inflation, the 68 percent probability bands range from 0.4 to 2.4 percent throughout 2016.

The FRBNY forecast is driven by three main factors. First, headwinds from the financial crisis, as captured by shocks to the marginal efficiency of investment (MEI), continue to depress real activity, and hence result in low real marginal costs, and low inflation, five years after the crisis. The economy experienced large credit spread shocks during the Great Recession and a sequence of adverse MEI shocks afterwards. Given that the MEI shocks have persistent effects on output growth and inflation, they continue to negatively affect the forecasts for these variables through the end of the forecast horizon. Second, while accommodative monetary policy, particularly forward-guidance, has played an important role in counteracting these headwinds, and has lifted output and inflation in past years, the impact of past forward guidance announcements on the *level* of output has now begun to wane. This implies a negative effect of policy on GDP *growth*, starting in 2014 and for the remainder of the forecasting horizon. Third, the model estimates that reductions in labor supply will also contribute to lower GDP growth. These three factors together explain why output growth is still below its long-run average at the end of 2016.

The FRBNY model projects the FFR to be roughly 2 percent by the end of 2016, about 2 percentage points below its steady state value. This forecast is mostly driven by the endogenous response of policy to the weak economy, rather than by policy shocks. In fact, about two thirds of the FFR deviation from steady state (close to 1.5 percentage points) is accounted for by the negative contribution of MEI shocks, while anticipated policy shocks add about 70 basis points of accommodation. In this respect, the DSGE forecast is quite consistent with the December Summary of Economic Projections (SEP), which shows a majority of FOMC participants expecting the FFR to be at or below 2% in 2016. Unlike in the SEP, however, the large and persistent undershooting of the longer-run level of the FFR in the model does not provide enough accommodation to achieve the Committee's objectives even by the end of 2016. Indeed, the model sees GDP growth about one percentage point below steady state, and inflation about a quarter of a percentage point below target at that horizon.

Forecast Comparison with the Tealbook [Exhibit B-6]

- *Tealbook policy assumption*: The FFR path and the assumption for the LSAP program are little changed from those in the January Tealbook. The federal funds rate is assumed to lift off in 2015Q2, two quarters after the end of the asset purchase program.

- The Board and the FRBNY staff forecasts for real growth in 2014 were both revised down slightly to 2.9%. But while the Blackbook kept its forecast for 2015 unchanged at 3.5%, the Tealbook forecast was revised down from 3.4% to 3.2%. The forecasts continue to differ somewhat in the strength of individual expenditure components:

    - As has been true for some time, the Board staff anticipates a stronger rebound in consumption expenditures, with growth of real PCE rising to 3.5% (Q4/Q4) in 2014 and 3.7% in 2015. In our forecast we have lowered growth of real PCE somewhat to 3.0% and 3.1%, respectively. Since projected equity values and home prices are the same in both forecasts, the difference in the strength of the rebound of consumer spending is likely due to two main sources—the strength of the wealth effect and the projected paths of labor compensation. While the Blackbook forecasts growth in compensation per hour to be 2.0% in 2014 and 2.2% in 2015, the Tealbook has it at 2.8% and 3.3%, respectively. Despite this higher compensation growth, resulting in faster growth of unit labor costs, the Tealbook projects higher corporate profits as a share of GNP.

    - The Blackbook continues to project a stronger growth contribution from business fixed investment (BFI), of 0.9 and 1.2 percentage points in 2014 and 2015, respectively. By comparison, the BFI growth contribution in the Tealbook is 0.5 percentage points in 2014 and 0.6

percentage points in 2015.

  - In addition, while the Blackbook projects a slightly positive growth contribution from the government sector and a neutral contribution from inventories in 2015, these are drags in the Tealbook forecast. On the other hand, there is a larger negative growth contribution of net exports in the Blackbook versus the Tealbook in 2015 (-0.3 versus -0.1 percentage points).

- The Board staff continues to project a somewhat stronger rebound in housing starts than the Blackbook in 2014, but the differences in 2015 have decreased significantly. Housing starts are now projected to be 1.09 million in 2014Q4 and 1.37 million in 2015Q4 in the Blackbook, and 1.2 and 1.4 million in the Tealbook, respectively.

- For 2014, the Blackbook has revised the forecast for core PCE inflation down slightly to 1.3% while the Board kept it unchanged at 1.5%. Both forecasts are 1.7% in 2015.

- After a small downward revision in the FRBNY forecast for the unemployment rate, both the Blackbook and the Tealbook have the unemployment rate at 6.2% in 2014Q4. In 2015Q4, the Blackbook and Tealbook forecasts are 5.4% and 5.6%, respectively – with payroll growth also projected to be higher in the Blackbook. As usual, the Blackbook envisions some increase of the labor force participation rate over the forecast horizon while the Tealbook assumes that it will remain flat.

4. Policy Paths Comparisons

Our current policy recommendation implies a target range for the federal funds rate of 0-0.25% until mid-2015 under the central scenario. The FFR path in 2014 is unchanged since the January Blackbook, with a marginally lower path for 2015 and beyond [Exhibit D-1]. The FFR path derived from overnight index swaps (OIS) is essentially unchanged from the January Blackbook, with the first rate hike in 2015Q2.

The Survey of Primary Dealers reveals little change in market sentiment about the timing of the first FFR increase, with the median expected date moving in slightly from 2015Q4. The unemployment rate is expected to be below 6 percent at the time of lift-off, with inflation 1 to 2 years ahead at 2 percent, and non-farm payrolls growing at a monthly rate of just under 200,000.

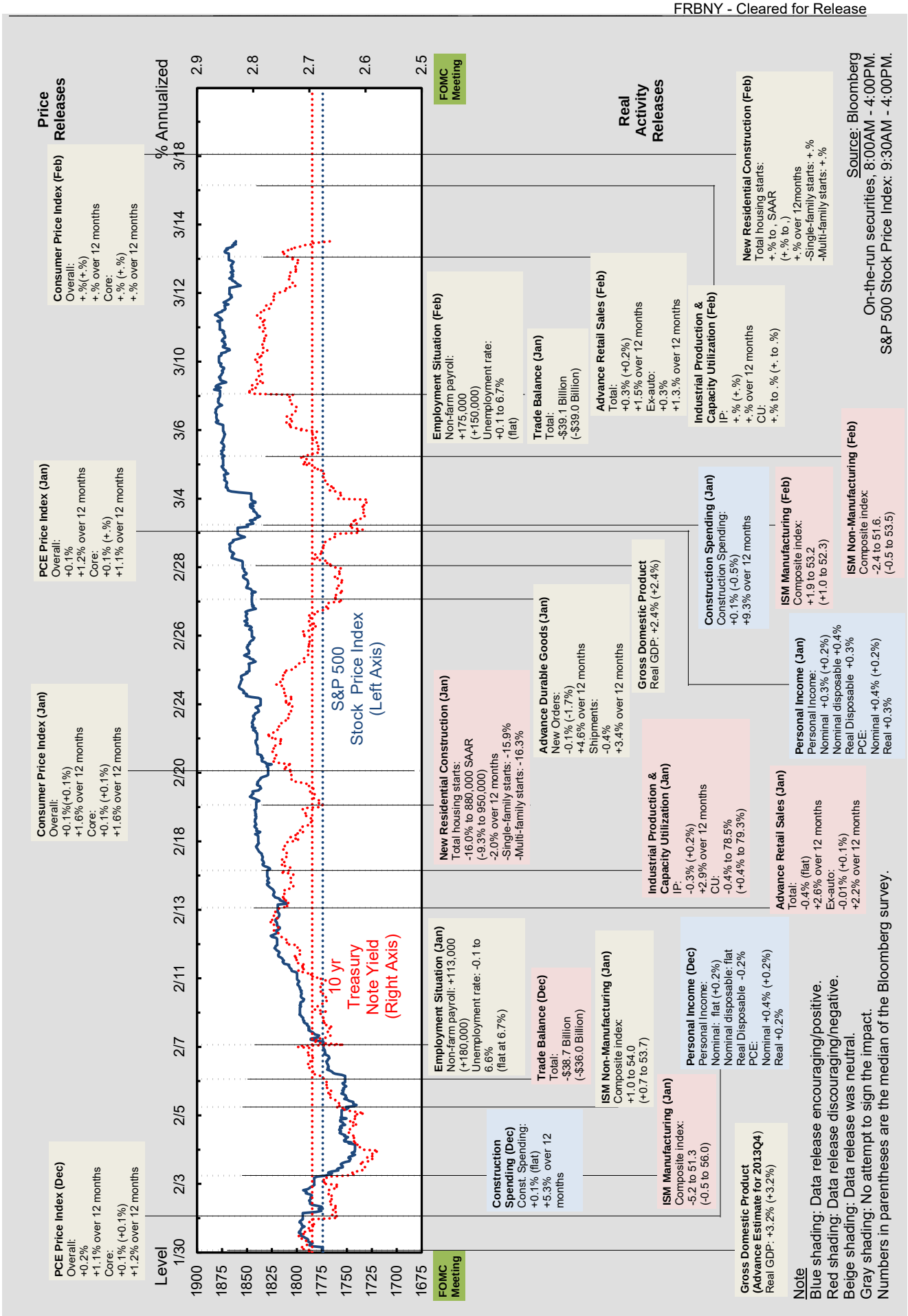
There is little uncertainty about the pace of asset purchases. The median SOMA path is unchanged since the January survey, with $10 billion in cuts at each upcoming FOMC meeting, ending with a final reduction in October 2014.

5. Significant Developments

5.1 Economic Developments

Foreign Data Releases. *Euro area*: Output was up 1.1 percent (saar) in Q4 2013, in line with expectations, after a 0.5 percent increase in Q3. The net export component was the main driver of Q4 growth, adding 1.5 percentage points to overall GDP growth. Fixed investment spending was relatively strong, while consumer spending remained weak and government consumption fell. The current account balance roughly doubled in 2013 to almost $300 billion, due to higher exports and lower imports. Survey data point to an ongoing recovery, with both the economic sentiment index and the composite PMI increasing in January and February. Core inflation rose to 1.0 percent in February, up from its historic low of 0.7 percent in December.

Key Data Releases



Japan: Growth was again modest in Q4, with output up 0.7 percent (saar). Consumption and fixed investment spending grew at respectable rates, but the net export component was a big drag on growth, due to a surge in imports and only a slight increase in exports. Manufacturing continued to rise through January, putting the index 10 percent above its year-ago level. The manufacturers' survey, however, points to a significant slowdown in February and March. Export volumes fell in January, with little growth over the year, while import volumes rose sharply. PMI data improved again in January, then staged a small retreat in February to a still high level. Wages remain stagnant. The pickup in inflation over the course of 2013 appears to have ended. The core index was up 0.6 percent over the year in January, a pace roughly unchanged from the previous two months. Total CPI inflation eased to 1.4 percent.

EM Asia: For China, growth in 2013 came in at 7.7 percent (Q4/Q4), near expectations. Data indicate that the moderation that began in late 2013 continued in 2014 as policymakers tighten credit conditions. NIE growth in 2013 came in at 3.8 percent, which was better than expected. Data point to an ongoing recovery in line with firming activity in the major developed countries.

Latin America: Brazil grew 2.0 percent in 2013, with a strong contribution from net exports at the end of the year. The forecast is for low or negative growth in Q1. Mexico grew 0.7 percent in 2013, with a subdued performance in Q4 reflecting a relapse of manufacturing weakness. Argentina's 2013 growth estimate has been reduced from 3.7 percent to 0.9 percent due to data revisions. (The prior estimate reflected official figures that were overstated.) The authorities allowed the peso to depreciate significantly in January amid reserve losses, while hiking short-term interest rates by 1300 basis points. The 2014 forecast is for an economic contraction, with tighter financial conditions, poor business and consumer sentiment, and weak investment spending outweighing the lift from a strong soybean harvest.

5.2 Financial Markets

Domestic Financial Markets. *Nominal Interest Rates:* On balance the Treasury yield curve was largely unchanged since the January FOMC meeting, but showed some volatility in the intermeeting period. The on-the-run 2-year Treasury yield fluctuated between levels of 30 to 38 basis points and currently stands at 36 basis points. The 10-year Treasury yield currently stands at 2.73 percent after having fallen to 2.6 percent in early March. The volatility likely reflected mixed economic news, uncertainty about emerging market economies, as well as political uncertainty surrounding the events in Ukraine. The New York Fed staff model attributes most of the recent yield dynamics to changes in term premia, implying that the expected path of short-term policy rates was largely unchanged since the January meeting. On balance, implied measures of interest rate volatility on Treasuries and swaps, as measured by the MOVE and SMOVE indexes, fell somewhat over the intermeeting period and remain at relatively low levels by historical standards. [Exhibit A-3: Treasury Yields]

Inflation Compensation: In line with their nominal counterparts, on balance inflation-adjusted Treasury yields are largely unchanged since the January FOMC meeting. Five-year real Treasury yields currently stand at –41 basis points which implies a 5-year inflation compensation of 2.01 percent. In contrast, inflation compensation further out, as measured by 5-year breakevens five years from now, declined somewhat to currently 2.42 percent, a level that is near its historical average value. [Exhibit A-4: Real Yields and Implied Inflation]

Expected Policy Path: The market implied path for the federal funds rate, as measured by quotes on overnight index swaps (OIS), steepened somewhat since the January FOMC meeting. Implied rates up to mid-2015 were largely unchanged, but the path moved up starting in early 2016. The lift-off date for the federal funds rate implied by the OIS curve is currently the second quarter of 2015. The path still crosses the one-percent level in the second quarter of 2016, as was the case at the time of the January meeting. Results from the December Blue Chip Financial Forecasts, which was conducted on February 24-25, are consistent with the market implied path as measured by the average survey

response which currently points to a federal funds rate lift-off in the second quarter of 2015. However, the distribution of forecasts is positively skewed at these horizons, and the median respondent still expects the federal funds rate to remain in the 0-25 basis point range through the second quarter of 2015. [Exhibit A-5: Policy Expectations]

Equity Market: After a brief setback in early February, the S&P500 index continued to rise over the intermeeting period, successively breaking a few all-time records. While tech-related stocks moved in lockstep with the broader market, financials continued to underperform. Mirroring the movements in the index, implied equity volatility briefly spiked to above 21 points in early February but then receded to a current level of just above 14, which puts it at the low-end of its historical range. [Exhibit A-6: Equity]

Credit Spreads: Corporate credit spreads, as measured by the Merrill Lynch indexes, continued to decline since the January FOMC meeting. Spreads of investment grade corporate bond yields to comparable maturity Treasuries declined 5 basis points to 1.23 percent, which brings them closer to pre-crisis levels of 1 percent or less. Spreads of high yield corporate bonds to comparable maturity Treasuries declined 29 basis points to 3.87 percent, which is just a few basis point shy of the post-crisis record low registered in early March. Primary and secondary mortgage market rates moved largely in lockstep with longer-dated Treasury yields over the intermeeting period. After dipping about 10 basis points in early February, yields on current coupon MBS moved back up and currently stand at 3.41 percent, while the primary mortgage rate is up 3 basis points to 4.34 percent. Accordingly, the spread between primary and secondary mortgage yields hovered around 1.00 percent, which is in line with levels seen since mid-2013. The increase in agency guarantee fees (g-fees) announced by the Federal Housing Finance Agency (FHFA) in December 2013 in order to incentivize a return of private capital in the mortgage securitization market has not yet been implemented. Once put in place, these costs are expected to result in a widening of the primary-secondary spread. [Exhibit A-7: Credit]

Foreign Financial Markets. *Euro Area*: Peripheral sovereign debt spreads narrowed over the intermeeting period, with ten-year Italian and Spanish spreads falling by 40 basis points. This was due to expectations that the ECB will keep rates low for longer, improved data, and increased foreign investor participation. Also, progress towards fiscal consolidation had an impact on peripheral spreads, with Portugal and Ireland making some steps towards improving their funding profiles. Portugal issued €3 billion of 10-year paper via syndication, with approximately 83 percent foreign participation, and conducted two buybacks to smooth its debt redemption profile after its scheduled exit from its aid program in May. Ireland announced it would resume regular bond auctions for the first time since September 2010 to prefund its 2015 cash needs. The euro appreciated against the dollar and euro area equities were higher, with peripheral and bank equity indices outperforming the broader index.

Japan: Government 10-yr bond yields were broadly unchanged over the intermeeting period, and volatility and liquidity measures remain stable. The Bank of Japan's purchase operations are cited by market participants as dictating the majority of market activity. Similarly, Japanese equities were broadly unchanged over the period. The yen depreciated somewhat against its major counterparts over the period, but was fairly stable against the dollar. In particular, changing expectations about the timing of additional monetary policy accommodation, due to policymaker communications over the period, seemed to have reduced support for a weaker yen and higher equity prices.

Emerging Europe: Asset prices in the region have weakened since the last FOMC meeting, as political turmoil in Ukraine fueled a marked underperformance in both Ukraine and Russia. The Russian ruble is down 4 percent over the period, although a 150 basis points rate hike in early March helped to stabilize the currency. In Ukraine, sovereign spreads rose by 215 basis points. Regional spillovers, however, appear limited, as early losses in neighboring markets have largely been retraced.

Emerging Asia: Emerging Asian currencies (ex-China) were, on average, 2 percent stronger against the U.S. dollar over the intermeeting period on the back of an abatement

of global risk aversion. Of these currencies, the Indonesian rupiah appreciated most prominently, as it gained about 7 percent against the dollar due to ongoing external rebalancing. Since the last FOMC meeting, the Chinese renminbi weakened 2 percent relative to the dollar. Equities in the region gained 3 percent over the period.

Latin America: The Brazilian real appreciated 3 percent relative to the U.S. dollar since the last FOMC meeting. The Chilean *peso* depreciated by 4 percent amid ongoing monetary easing and concerns of how a China slowdown will affect copper prices and export volumes. Sovereign spreads and local currency yields in the region broadly declined and equity markets weakened, with a 5 percent drop in Brazilian shares.

5.3 Global Economic Policy

Euro Area: The ECB did not change its key policy rates and announced no new non-standard measures at its February and March policy meetings; it reiterated its forward guidance, stressing that "we continue to expect the key ECB interest rates to remain at present or lower levels for an extended period of time." At the February meeting, the ECB's Governing Council noted that further accommodation would depend on two conditions: an unwarranted tightening of euro area liquidity conditions or a significant reduction in the ECB's medium-term outlook for inflation. The latest ECB staff forecast projects inflation to remain below 2 percent until the end of the forecast horizon, which was extended to 2016.

Japan: At its April 2013 policy meeting, the Bank of Japan announced easing measures that will drastically ramp up asset purchases and increase the duration of assets held on its balance sheet, with an aim to achieve its 2 percent inflation target by 2015. Subsequent meetings, the last one in February, have kept this policy stance unchanged. The monetary base is now the Bank's target and it was up 56 percent over the year in February (4 percentage points higher than in November). At its February meeting, the Bank made adjustments to two small programs that encourage bank lending, as both were set to expire in March 2014. No signs were given to suggest that a shift to a more aggressive asset-buying program is imminent at the March meeting.

Canada and the U.K.: The Bank of Canada left its policy rate unchanged at 1.0 percent in March. The Bank projects that the economy will not reach full capacity until the first half of 2016. At its February meeting, the Bank of England maintained its policy rate at 0.5 percent and its asset purchase program size at £375 billion. Because the labor market has improved more quickly than expected, the Bank is citing falling inflation and spare capacity as reasons to continue its low-rate policy beyond the 7.0 percent unemployment rate threshold.

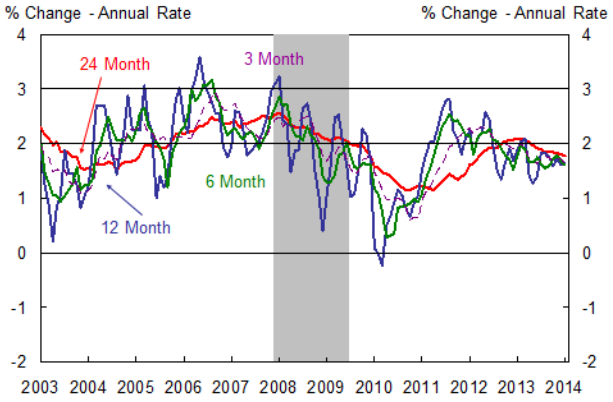
EM Asia: Monetary authorities in India hiked policy rates by 25 basis points in January, but signaled that they would put off any further tightening as inflation appears to moderate. Overall, central banks in the region are expected to remain on hold in the first half of the year. Chinese reserve purchases totaled an estimated $146 billion in Q4, toward the upper end of quarterly purchases in recent years, on sustained strong capital inflows.

Latin America: The central bank of Brazil increased its policy rate by 25 basis points at its February policy meeting. This is a slower pace of tightening than the sequence of 50 basis point hikes that occurred over the last few months, since the 2014 growth outlook has become more sluggish. This brings the cumulative rate hikes since April 2013 to 350 basis points. A final 25 basis point hike is expected in April. Furthermore, the Brazilian central bank continues to provide roughly $1 billion per week in liquidity to currency markets through its intervention program, even though the Brazilian currency has been strengthening recently. Mexico's central bank kept rates unchanged at 3.5 percent at its January meeting, and is expected to remain on hold through 2014. Finally, in Argentina monetary authorities allowed the peso to depreciate significantly in January amid reserve losses, while hiking short-term interest rates by 1300 basis points. The 2014 growth forecast is for a contraction of 1.1 percent, with tighter financial conditions, poor business and consumer sentiment, and weak investment spending. The latter is partly driven by higher costs of imported capital goods.

A. Significant Developments

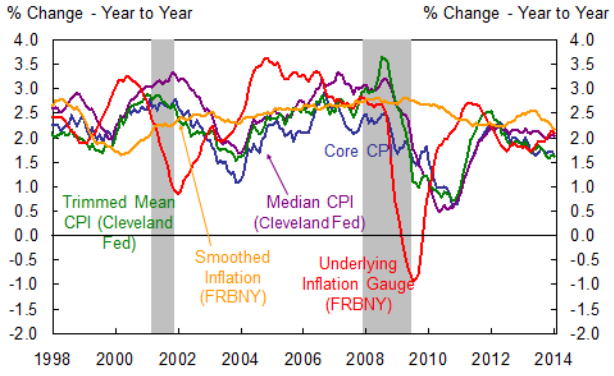
Exhibit A-1:
Measures of Trend Inflation

Core CPI Inflation over Various Horizons



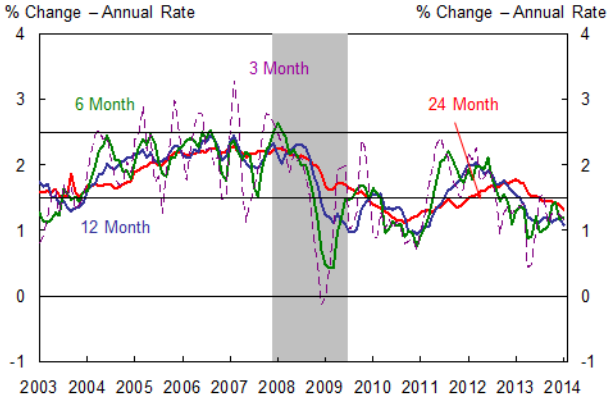
Source: Bureau of Labor Statistics

Alternative Measures of CPI Inflation



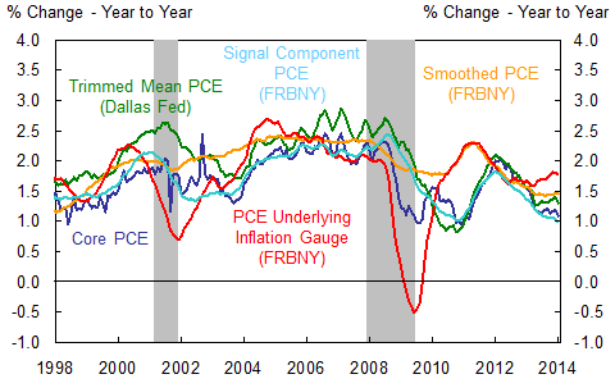
Source: Bureau of Labor Statistics, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Core PCE over Various Horizons



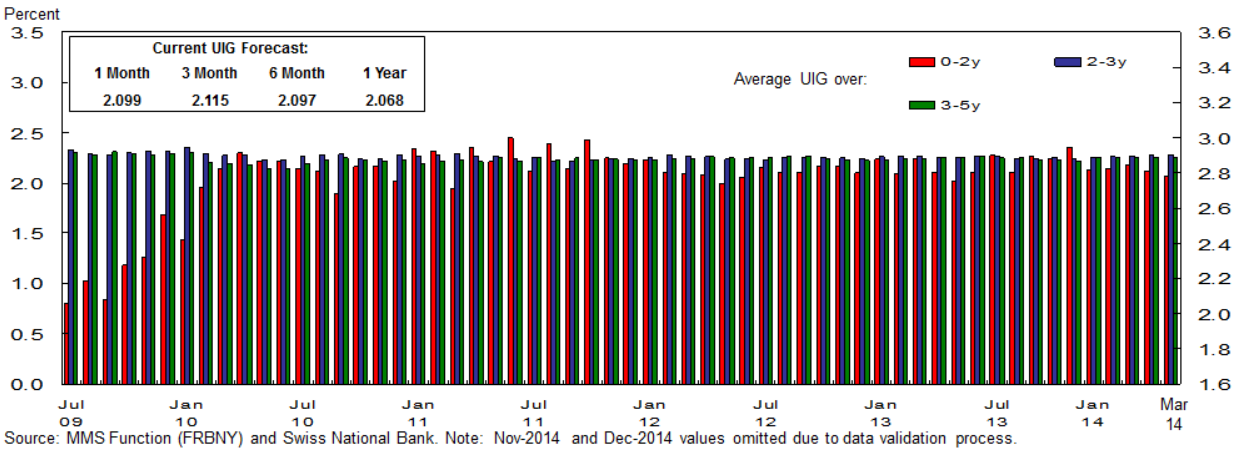
Source: Bureau of Economic Analysis

Alternative Measures of PCE Inflation



Source: Bureau of Economic Analysis, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Exhibit A-2:
Underlying Inflation Gauge (UIG)



Source: MMS Function (FRBNY) and Swiss National Bank. Note: Nov-2014 and Dec-2014 values omitted due to data validation process.

A. Significant Developments

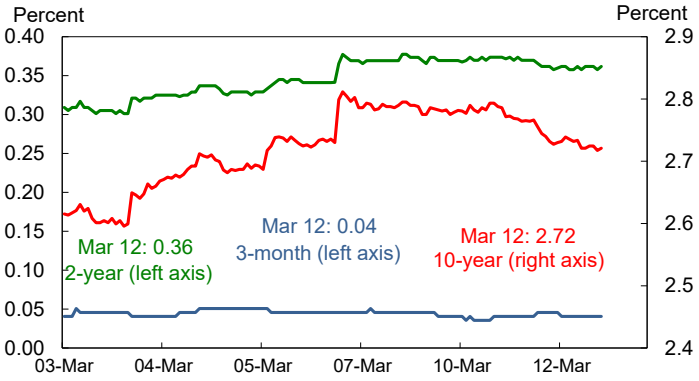
Exhibit A-3:
Treasury Yields

Short- and Long-Term Rates

Source: Bloomberg

Note: Yields of on-the-run securities.

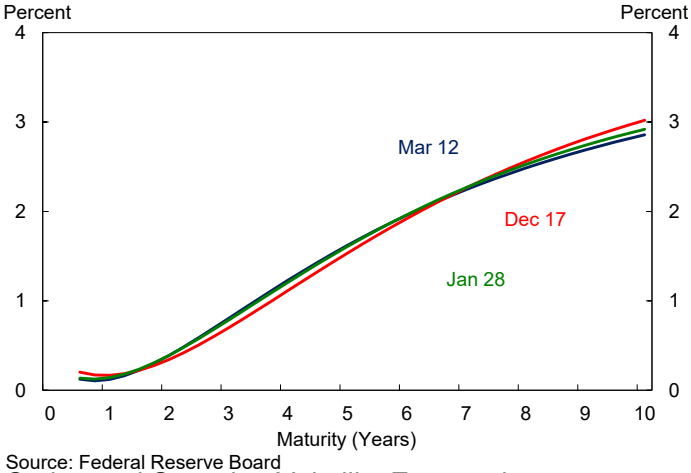
Short- and Long-Term Rates (Intraday)



Source: Bloomberg

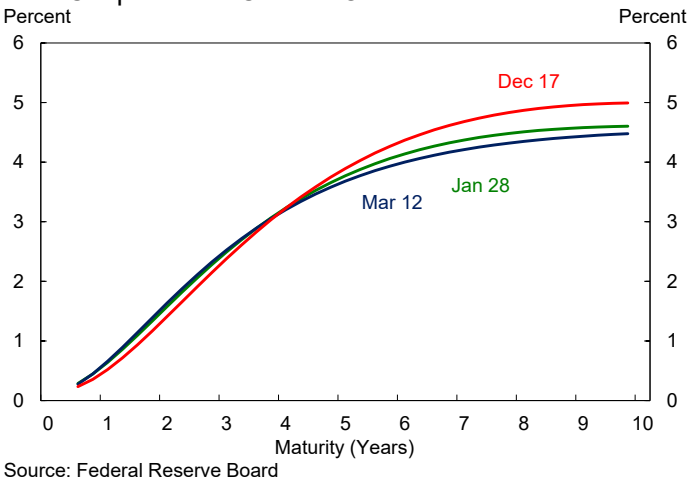
Note: On-the-run securities, 8:00 am to 4:00 pm.

Zero Coupon Yield Curves



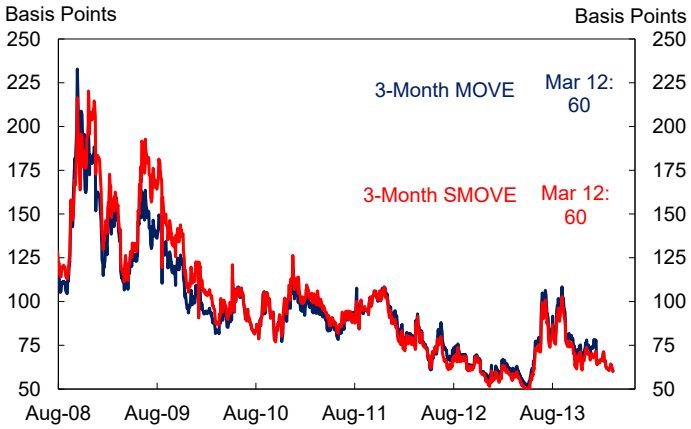
Source: Federal Reserve Board

Zero Coupon Yield Curves: One-Year Forward Rates



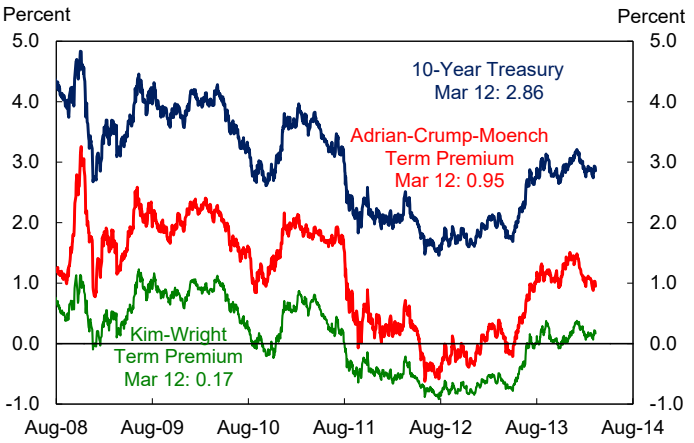
Source: Federal Reserve Board

Option and Swaption Volatility Expectations



Source: Federal Reserve Board, Barclays, and FRBNY staff

10-Year Treasury and Term Premia

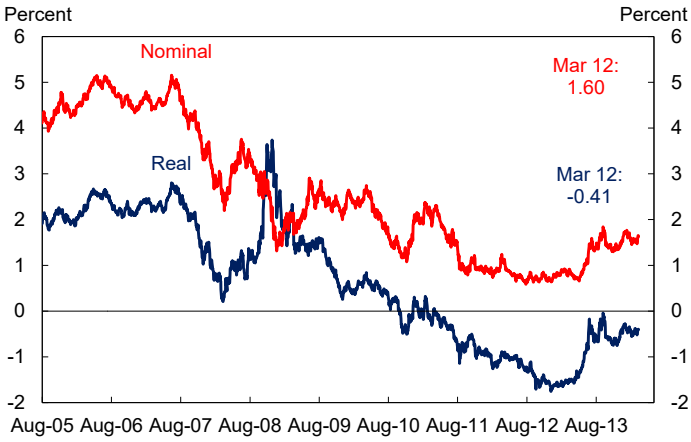


Source: FRBNY calculations, Federal Reserve Board

A. Significant Developments

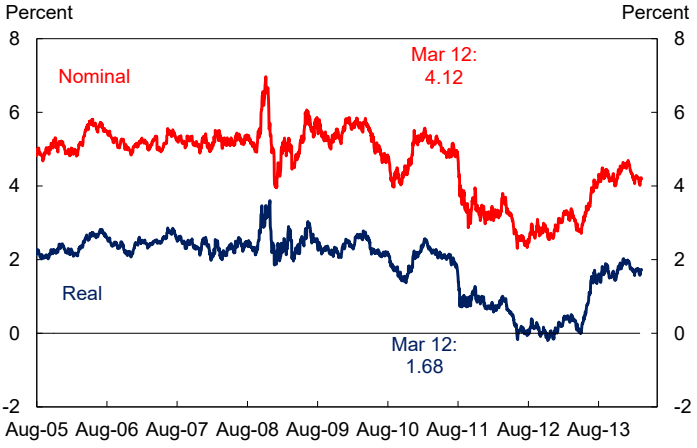
Exhibit A-4:
Real Yields and Implied Inflation

5 Year Spot Rate



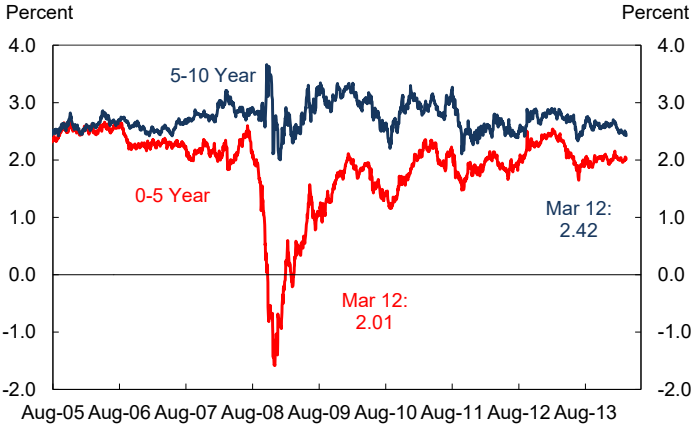
Source: Federal Reserve Board

5-10 Year Forward Rates



Source: Federal Reserve Board

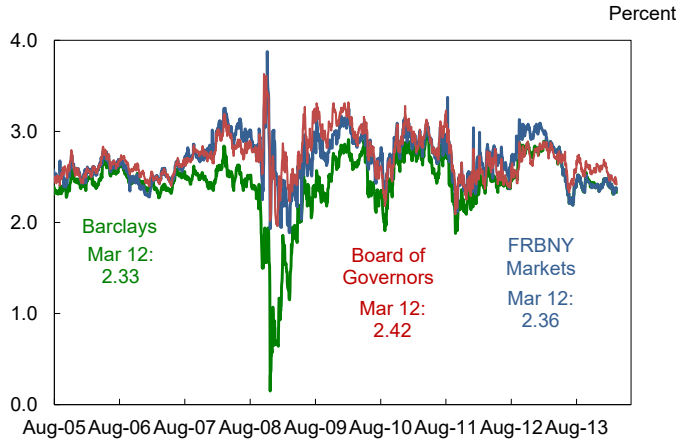
TIPS Implied Inflation Compensation: 0-5, 5-10 Year Horizons



Source: Federal Reserve Board

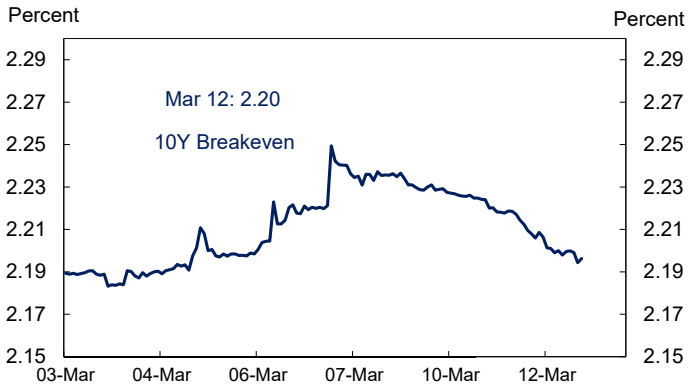
Note: Carry-adjusted.

Alternative Measures of 5-10 Year Implied Inflation Compensation



Source: Federal Reserve Board, Barclays, and FRBNY calculations

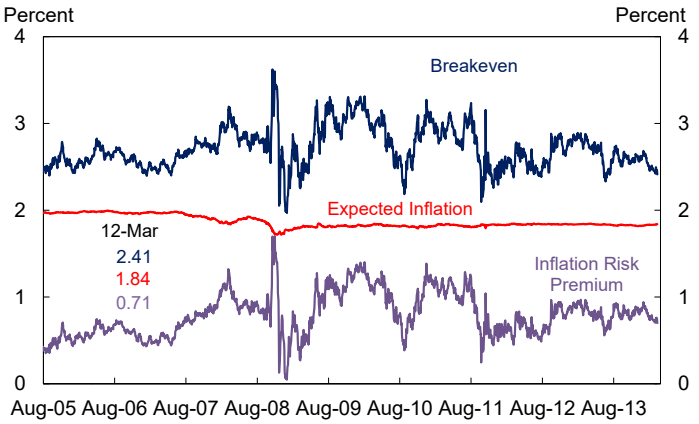
10-Year Breakeven Inflation Compensation (Intraday)



Source: Bloomberg

Note: On-the-run securities, 8:00 am to 4:00 pm.

5-10 Year Forward Decomposition (2005-present)

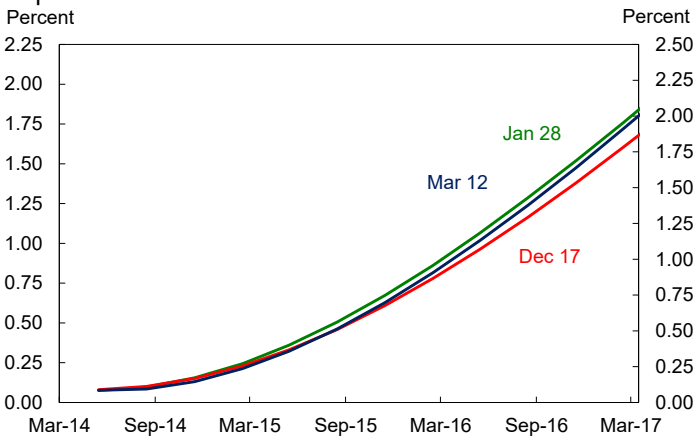


Source: FRBNY Calculations

A. Significant Developments

Exhibit A-5:
Policy Expectations

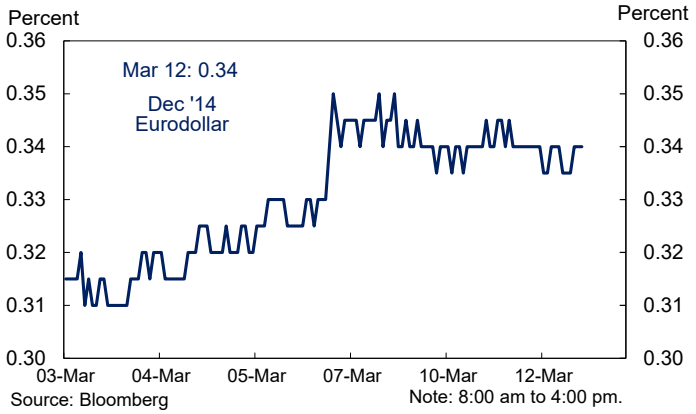
Expected Fed Funds Rate



Source: Federal Reserve Board

Note: Estimated using OIS quotes.

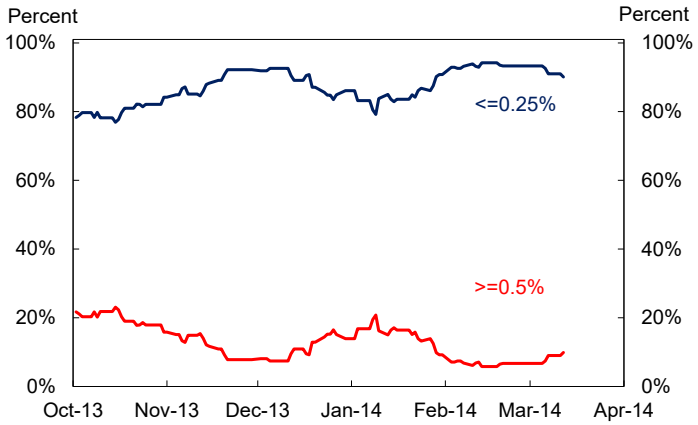
Implied Eurodollar Rates (Intraday)



Source: Bloomberg

Note: 8:00 am to 4:00 pm.

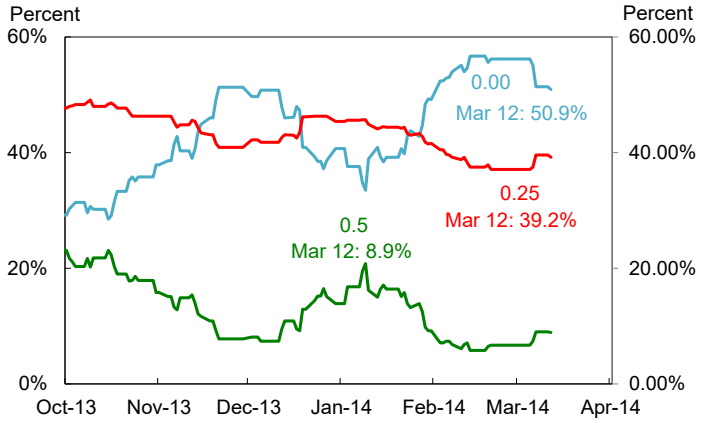
Fed Funds Probabilities December 2014



Source: Bloomberg

Note: Estimated from Fed Funds Futures

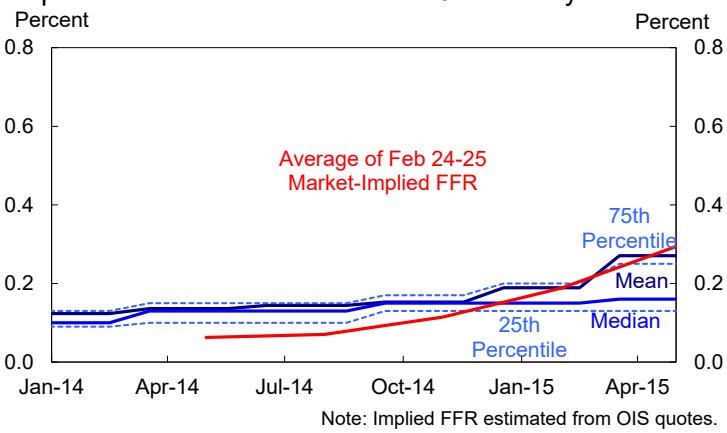
Fed Funds Probabilities December 2014



Source: Bloomberg

Note: Estimated from Fed Funds Futures

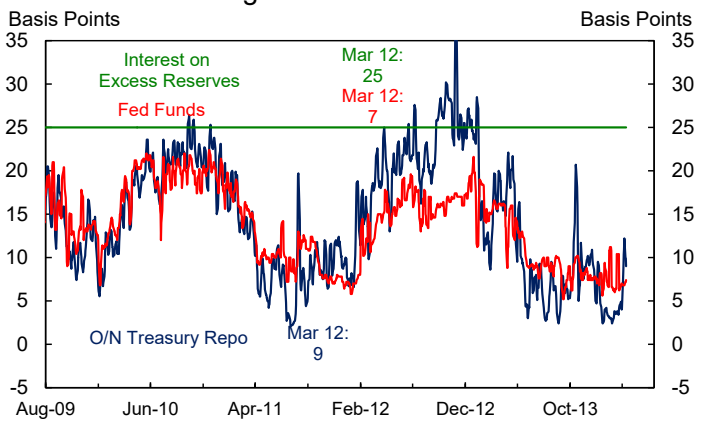
Expected Fed Funds from March 2014 Survey



Note: Implied FFR estimated from OIS quotes.

Source: The Blue Chip Financial Forecast conducted on February 24-25.

Short Term Funding Rates



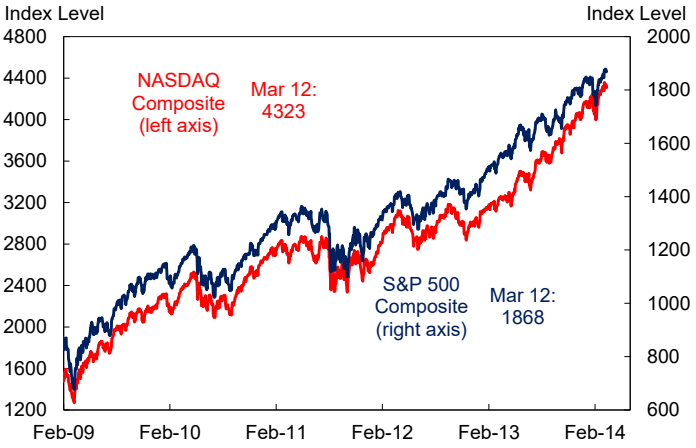
Source: Bloomberg, FRBNY calculations

Note: 1-week moving averages.

A. Significant Developments

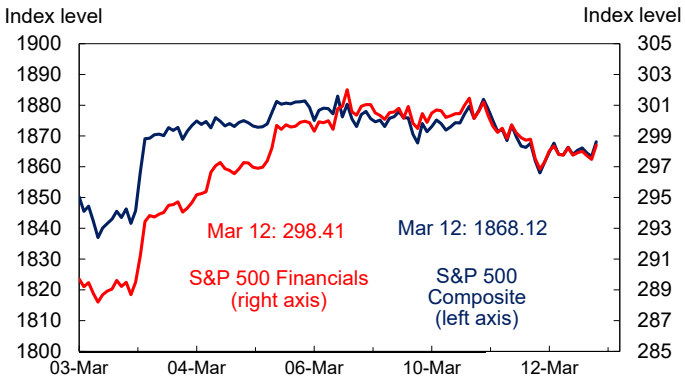
Exhibit A-6:
Equity

Equity Index Levels



Source: Bloomberg

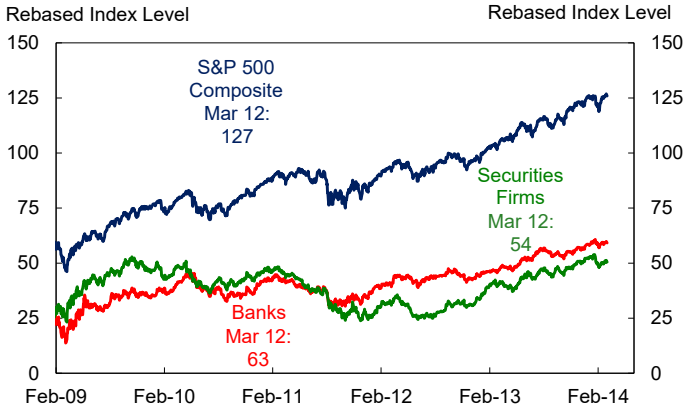
S&P 500 Indices (Intraday)



Source: Bloomberg

Note: 9:30 am to 4:00 pm.

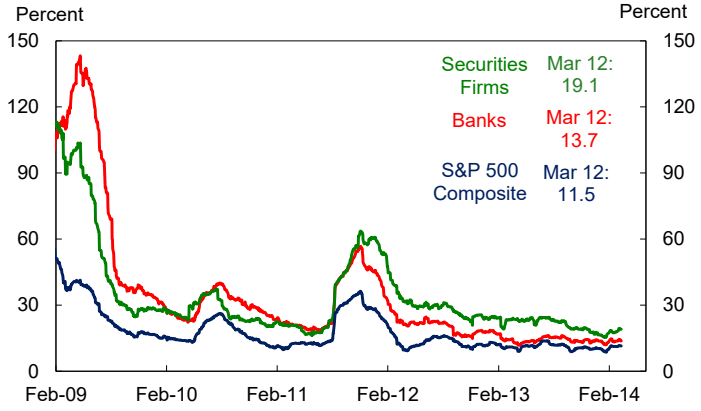
Equity Performance



Note: Rebased to equal 100 on August 1, 2007. Banks series is S&P 500 Banks index. Securities Firms series is S&P 500 Investment Banks and Brokerages index.

Source: Bloomberg

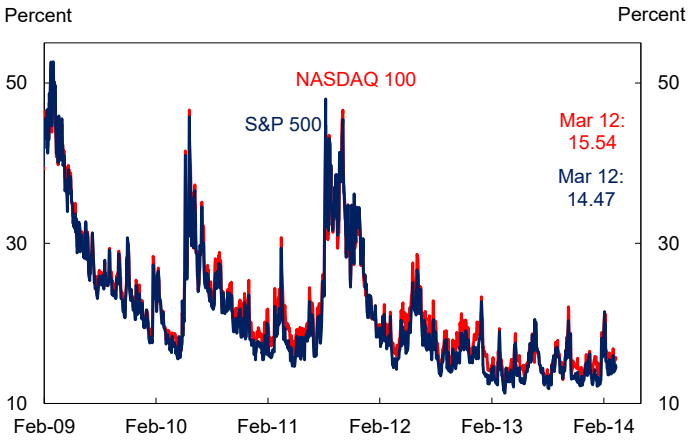
Historical Equity Volatility



Note: Annualized rolling 3-month standard deviation of daily returns. Banks series is S&P 500 Banks index. Securities Firms series is S&P 500 Investment Banks and Brokerages index.

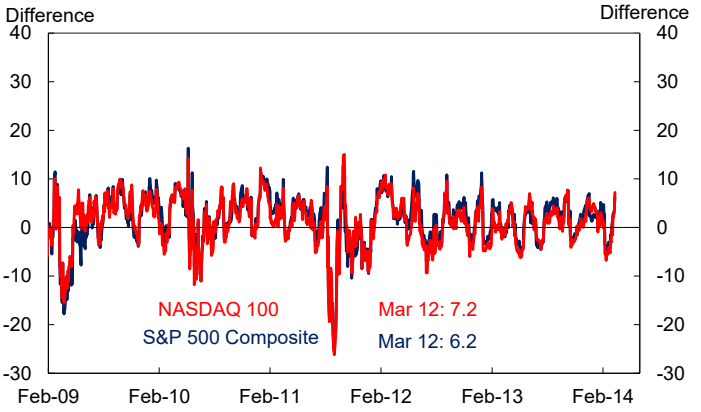
Source: Bloomberg

Equity Index Implied Volatility: 1-Month



Source: Bloomberg

Difference of Implied and Realized Volatility



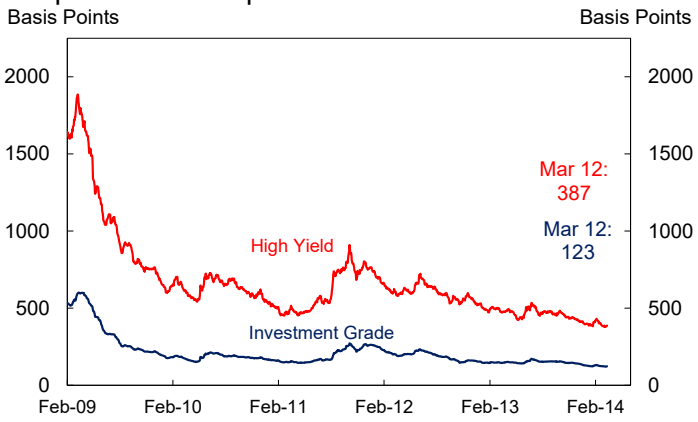
Source: Bloomberg

Note: Realized volatility is annualized 1-month rolling standard deviation of daily returns (360-day year) for S&P 500 and Nasdaq 100.

A. Significant Developments

Exhibit A-7:
Credit

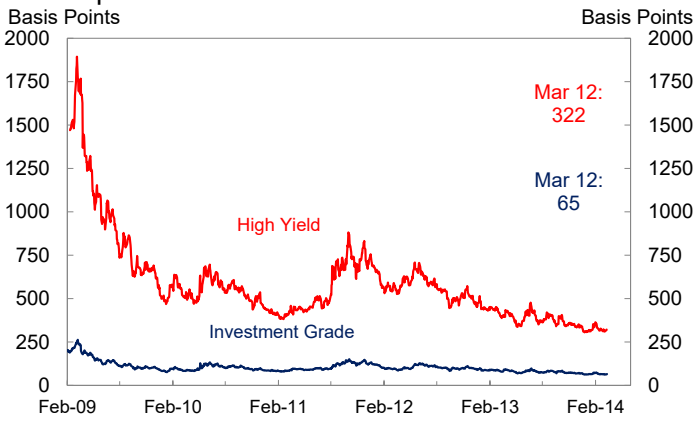
Corporate Credit Spreads



Source: Merrill Lynch

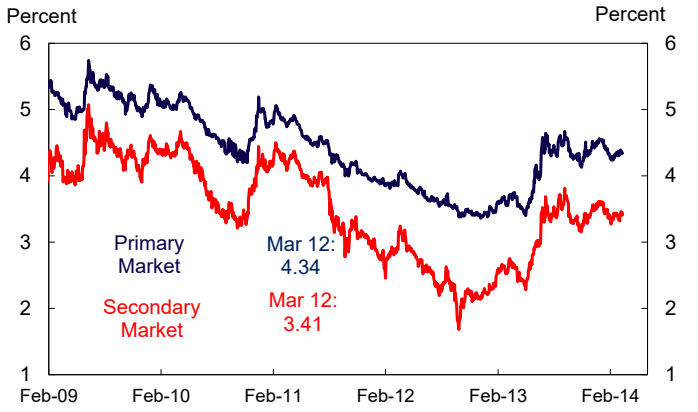
Note: Option-adjusted spreads.

CDS Spreads



Source: Bloomberg

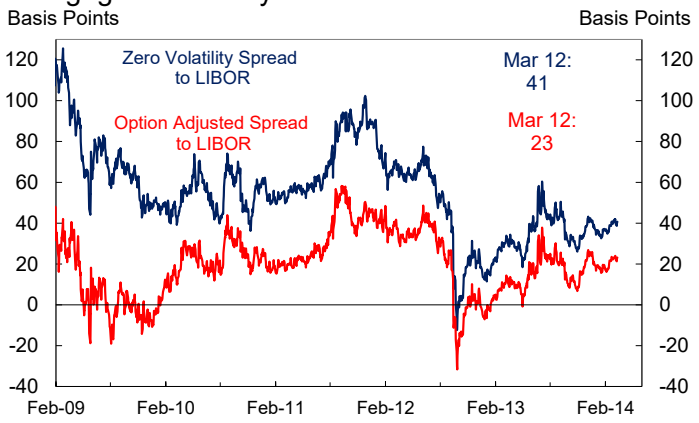
Mortgage Market Rates



Source: Bloomberg

Note: 30-year fixed mortgage rate and Fannie Mae current coupon yield.

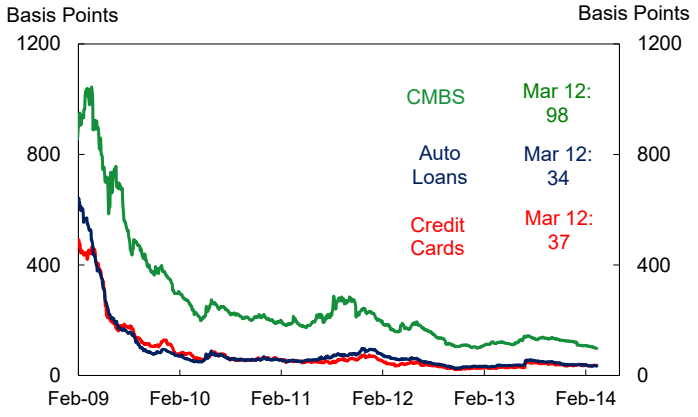
Mortgage Secondary Market



Source: J.P. Morgan

Note: 30 year current coupon Fannie Mae MBS.

AAA-Rated ABS/CMBS Spreads

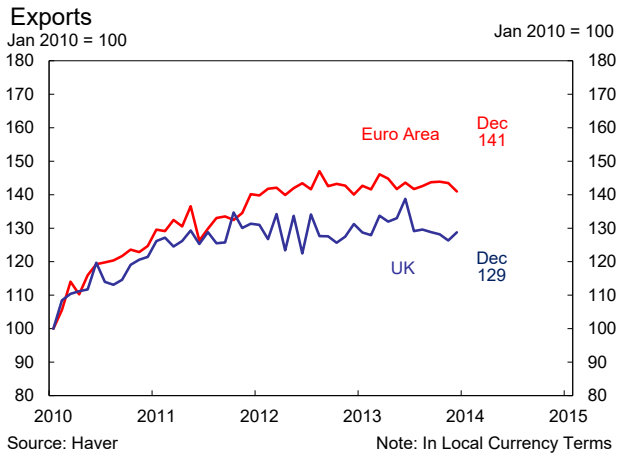


Source: Merrill Lynch

Note: Option-adjusted spreads.

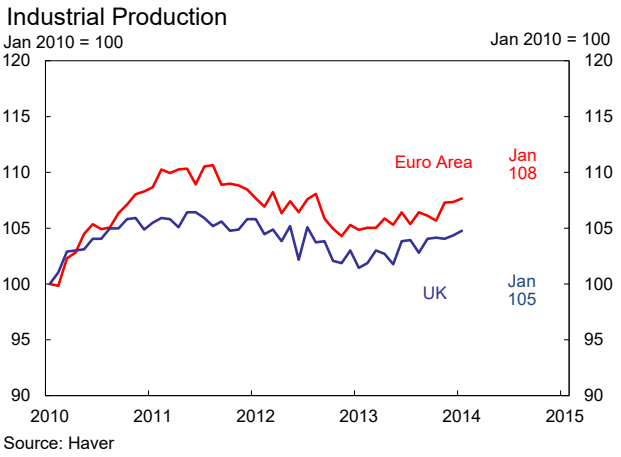
A. Significant Developments

Exhibit A-8: Exports and Industrial Production

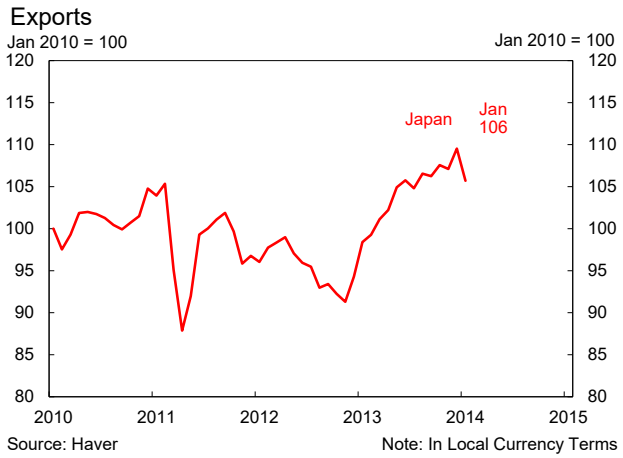


Source: Haver

Note: In Local Currency Terms

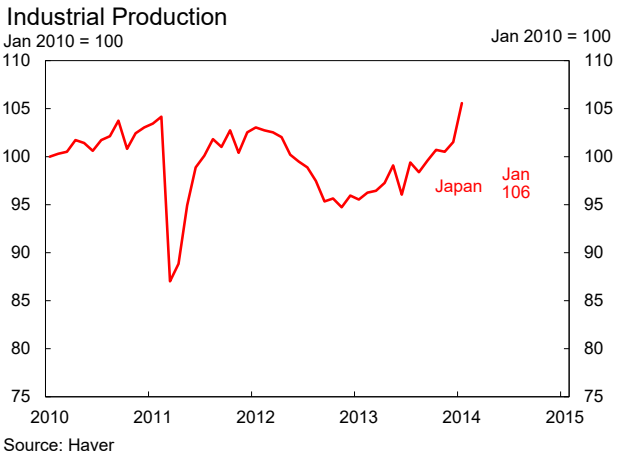


Source: Haver

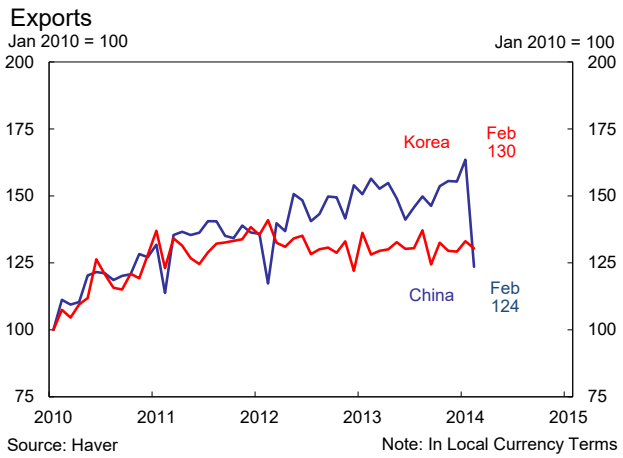


Source: Haver

Note: In Local Currency Terms

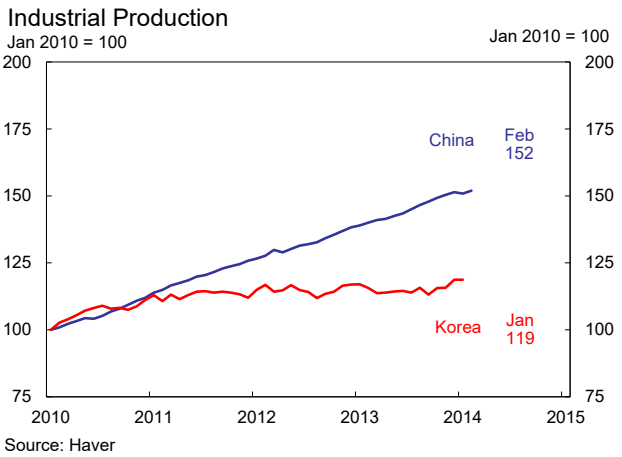


Source: Haver



Source: Haver

Note: In Local Currency Terms

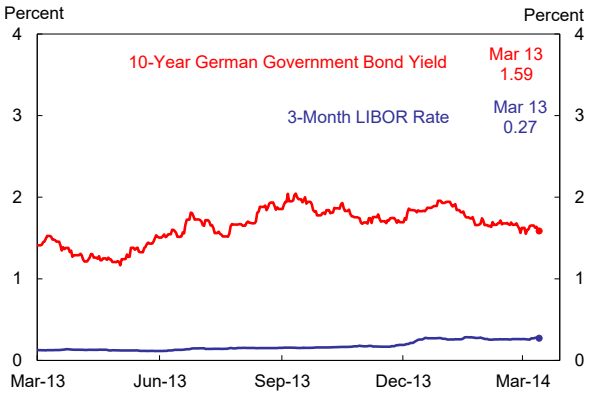


Source: Haver

A. Significant Developments

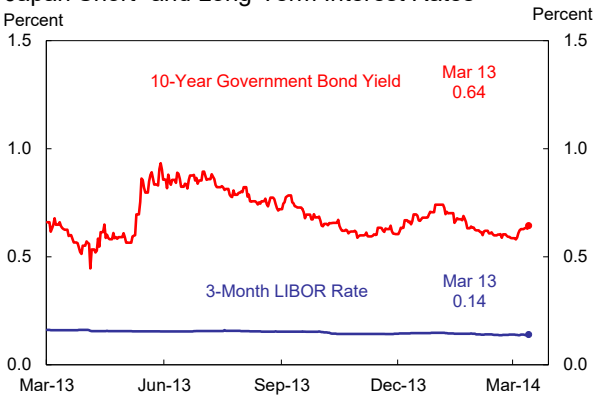
Exhibit A-9:
Global Interest Rates and Equity Markets

Euro Area Short- and Long-Term Interest Rates



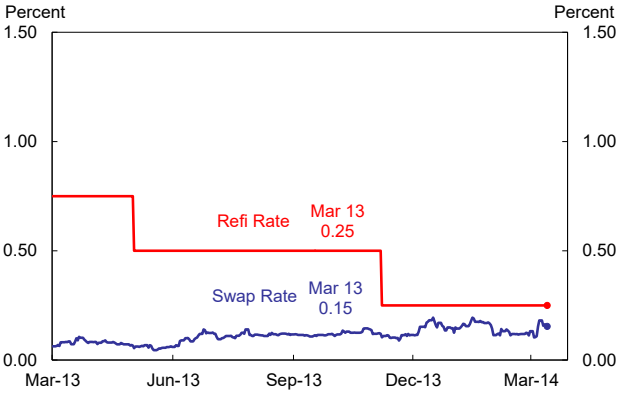
Source: Bloomberg

Japan Short- and Long-Term Interest Rates



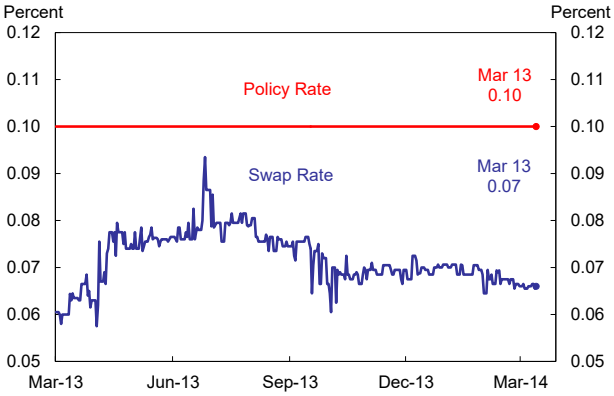
Source: Bloomberg

Euro Area: OIS Rate (Six Months)



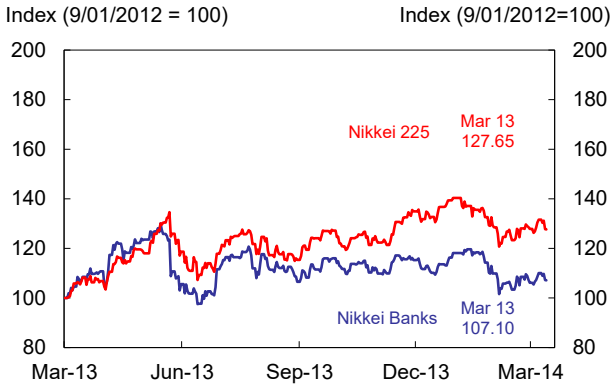
Source: Bloomberg

Japan: OIS Rate (Six Months)



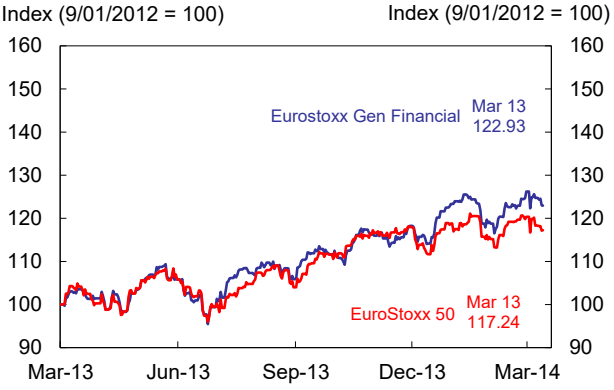
Source: Bloomberg

Japan Equity Price Indices



Source: Bloomberg

Euro Area Equity Price Indices

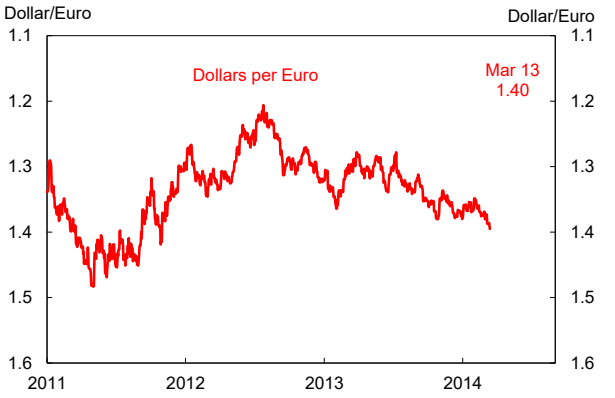


Source: Bloomberg

A. Significant Developments

Exhibit A-10:
Exchange Rates

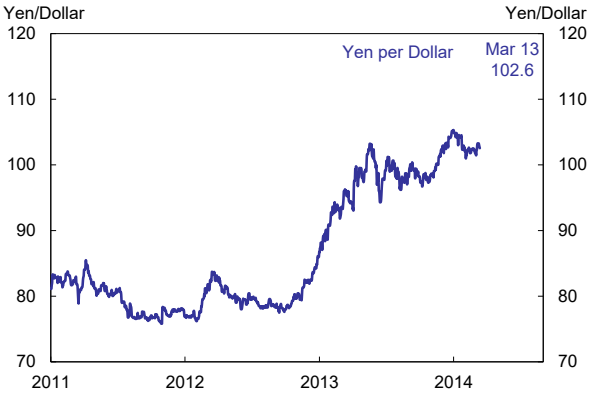
Dollar-Euro Exchange Rate



Source: Bloomberg

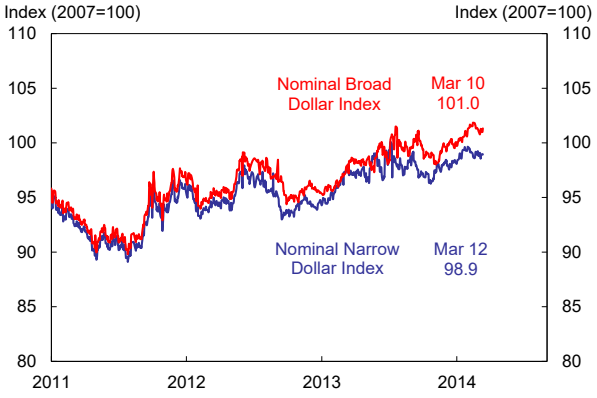
Note: Exchange rate scale is inverted.

Yen-Dollar Exchange Rate



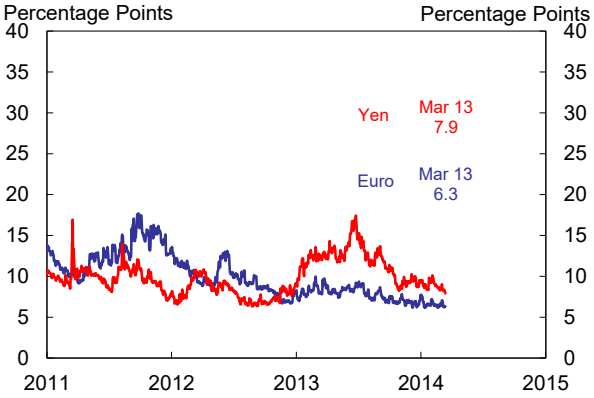
Source: Bloomberg

Nominal Effective Exchange Rates



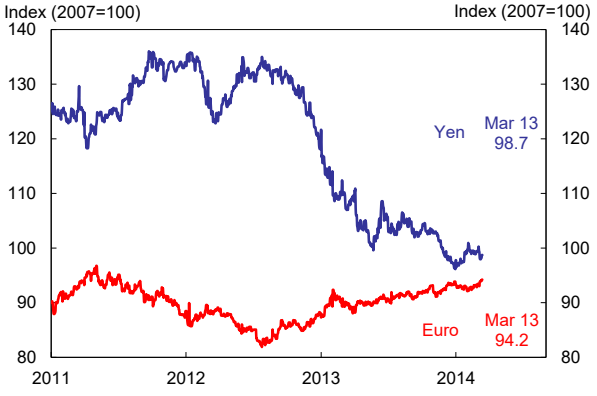
Source: Bloomberg, JPMorgan

Euro and Yen One-Month Implied FX Option Volatility



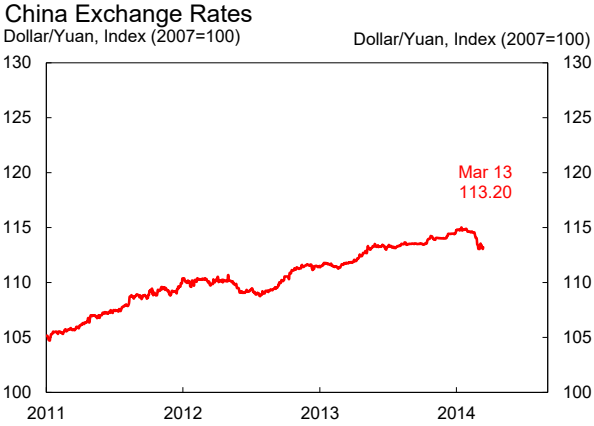
Source: Bloomberg

Euro Area and Japan Effective Exchange Rates



Source: Bloomberg and JPMorgan

China Exchange Rates



Source: Bloomberg

B. FRBNY Forecast Details

Exhibit B-1: Quarterly and Annual Projections of Key Variables

	Core PCE		Real GDP Growth		Unemployment Rate*		Fed Funds Rate**	
	Jan	March	Jan	March	Jan	March	Jan	March
2013								
Q1	*1.3*	*1.3*	*1.1*	*1.1*	*7.7*	*7.7*	*0-0.25*	*0-0.25*
Q2	*0.6*	*0.6*	*2.5*	*2.5*	*7.5*	*7.5*	*0-0.25*	*0-0.25*
Q3	*1.4*	*1.4*	*4.1*	*4.1*	*7.2*	*7.2*	*0-0.25*	*0-0.25*
Q4	*1.1*	*1.3*	*3.4*	*2.4*	*7.0*	*7.0*	*0-0.25*	*0-0.25*
2014								
Q1	1.3	1.2	2.6	1.5	6.7	6.6	0-0.25	0-0.25
Q2	1.4	1.3	3.2	3.6	6.6	6.4	0-0.25	0-0.25
Q3	1.5	1.4	2.9	3.1	6.5	6.2	0-0.25	0-0.25
Q4	1.6	1.5	3.1	3.4	6.3	6.1	0-0.25	0-0.25
2015								
Q1	1.7	1.6	3.2	3.3	6.1	5.9	0-0.25	0-0.25
Q2	1.8	1.7	3.5	3.4	5.8	5.7	0.25	0.25
Q3	1.9	1.8	3.6	3.6	5.6	5.6	0.5	0.5
Q4	2.0	1.9	3.6	3.5	5.4	5.3	1.0	1.0
Q4/Q4								
2012	*1.7*	*1.7*	*2.0*	*2.0*	*-0.8*	*-0.8*	*0.0*	*0.0*
2013	*1.1*	*1.2*	*2.8*	*2.5*	*-0.7*	*-0.7*	*0.0*	*0.0*
2014	1.4	1.3	3.0	2.9	-1.0	-1.1	0.0	0.0
2015	1.8	1.7	3.5	3.5	-0.9	-1.1	1.0	1.0

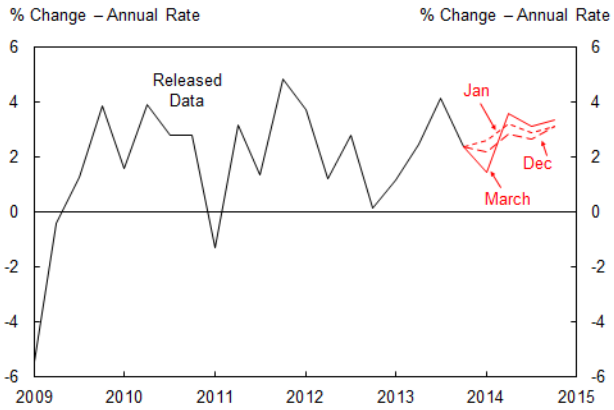
Columns reflect the forecast dates. Numbers in gray are from the previous Blackbook, and numbers in italics are released data.
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.
**Quarterly values are the end-of-quarter value. Yearly values are the difference between the end-of-year value in the previous year and the end-of-year value in the listed year.

B. FRBNY Forecast Details

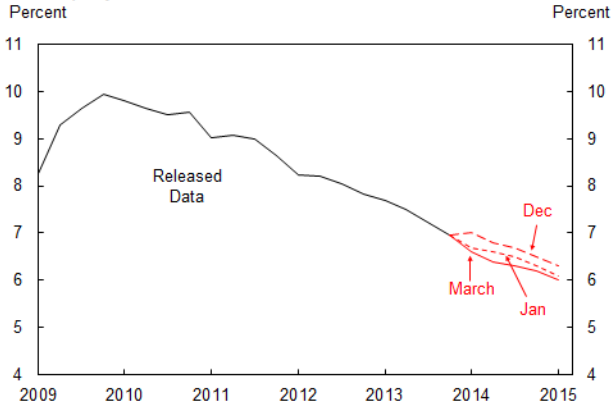
Exhibit B-2: Evolution of Projected Quarterly Paths

Key Indicators

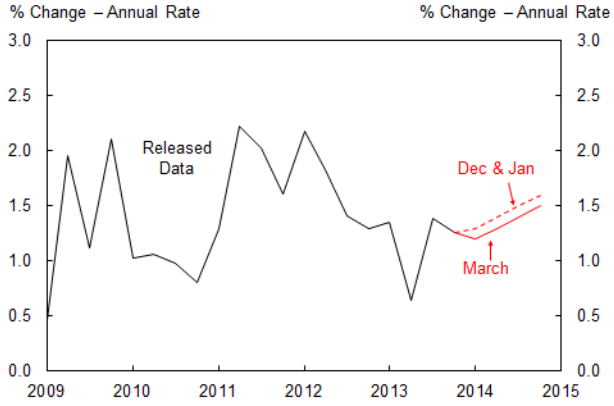
Real GDP Growth



Unemployment Rate

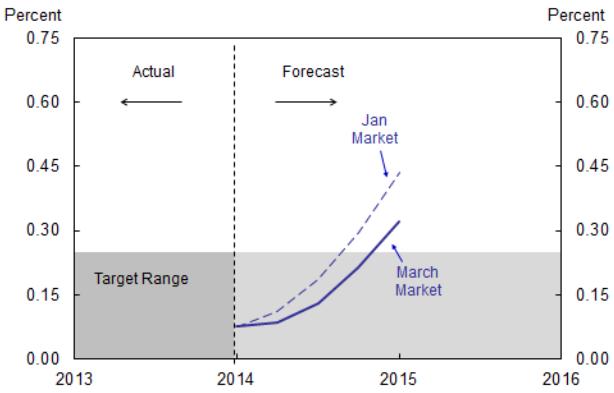


Core PCE Inflation

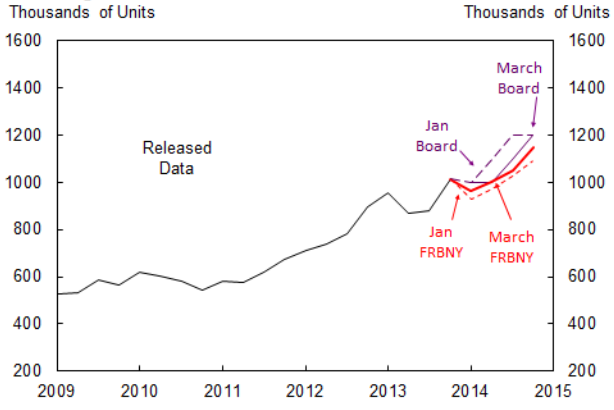


Forecast Assumptions

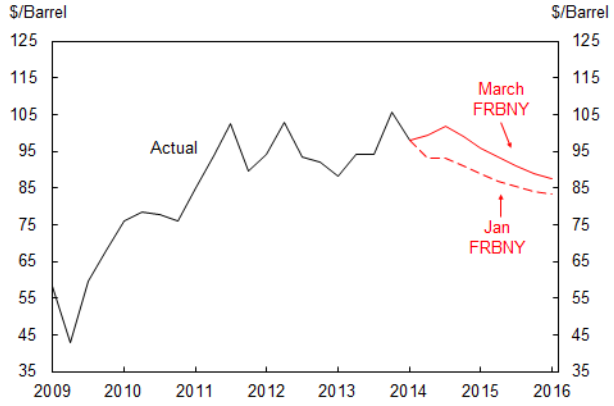
Federal Funds Rate



Housing Starts



Crude Oil



Source: FRBNY (MMS and IR Functions) and Federal Reserve Board

B. FRBNY Forecast Details

Exhibit B-3: Near-Term Projections

	Quarterly Growth Rates (AR)			Quarterly Growth Contributions (AR)		
	2013Q4	2014Q1	2014Q2	2013Q4	2014Q1	2014Q2
OUTPUT						
Real GDP	2.4	1.5	3.6	2.4	1.5	3.6
	(3.4)	(2.6)	(3.2)	(3.4)	(2.6)	(3.2)
Final Sales to Domestic Purchasers	1.2	2.4	3.6	1.3	2.4	3.6
	(2.9)	(2.9)	(3.5)	(3.0)	(3.0)	(3.5)
Consumption	2.5	2.5	3.1	1.7	1.7	2.1
	(4.1)	(3.0)	(3.0)	(2.8)	(2.0)	(2.0)
BFI: Equipment	10.5	5.0	10.0	0.6	0.3	0.5
	(6.0)	(8.0)	(10.0)	(0.3)	(0.4)	(0.5)
BFI: Nonresidential Structures	0.2	6.0	14.0	0.0	0.2	0.4
	(10.0)	(11.0)	(11.0)	(0.3)	(0.3)	(0.3)
BFI: Intellectual Property Products	8.0	4.0	4.0	0.3	0.2	0.2
	(4.0)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	-8.8	7.3	15.0	-0.3	0.2	0.5
	(-5.5)	(8.6)	(19.7)	(-0.2)	(0.3)	(0.6)
Government: Federal	-12.8	-1.0	-2.0	-1.0	-0.1	-0.1
	(-5.0)	(-4.0)	(-3.5)	(-0.4)	(-0.3)	(-0.3)
Government: State and Local	-0.5	0.3	1.3	-0.1	0.0	0.1
	(0.2)	(0.8)	(1.3)	(0.0)	(0.1)	(0.1)
Inventory Investment	--	--	--	0.1	-0.8	-0.3
	--	--	--	(-0.4)	(-0.6)	(-0.3)
Net Exports	--	--	--	1.0	-0.1	0.3
	--	--	--	(0.7)	(0.2)	(-0.1)
INFLATION						
Total PCE Deflator	1.0	1.5	1.5			
	(0.7)	(1.3)	(1.5)			
Core PCE Deflator	1.3	1.2	1.3			
	(1.1)	(1.3)	(1.4)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	1.8	1.8	2.0			
	(2.3)	(1.3)	(1.5)			
Compensation per Hour	1.7	1.9	2.0			
	(2.2)	(2.3)	(2.3)			
Unit Labor Costs	-0.1	0.1	0.0			
	(-0.1)	(1.0)	(0.8)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

B. FRBNY Forecast Details

Exhibit B-4: Medium-Term Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2013	2014	2015	2013	2014	2015
OUTPUT						
Real GDP	2.5	2.9	3.5	2.5	2.9	3.5
	(2.8)	(3.0)	(3.5)	(2.8)	(3.0)	(3.5)
Final Sales to Domestic Purchasers	1.5	3.2	3.7	1.6	3.3	3.7
	(1.9)	(3.2)	(3.7)	(2.0)	(3.2)	(3.8)
Consumption	2.1	3.0	3.1	1.5	2.0	2.1
	(2.5)	(3.1)	(3.3)	(1.8)	(2.1)	(2.3)
BFI: Equipment	3.8	8.7	12.0	0.2	0.5	0.7
	(2.7)	(9.5)	(12.0)	(0.2)	(0.5)	(0.7)
BFI: Nonresidential Structures	-0.2	10.5	10.0	0.0	0.3	0.3
	(2.2)	(11.2)	(12.0)	(-0.0)	(0.3)	(0.4)
BFI: Intellectual Property Products	4.0	4.0	4.0	0.2	0.2	0.2
	(3.0)	(4.0)	(4.0)	(0.1)	(0.2)	(0.2)
Residential Investment	6.6	10.5	11.5	0.2	0.3	0.4
	(7.6)	(8.3)	(7.0)	(0.2)	(0.3)	(0.4)
Government: Federal	-6.2	-1.8	-2.0	-0.5	-0.1	-0.1
	(-4.2)	(-3.6)	(-2.7)	(-0.3)	(-0.3)	(-0.2)
Government: State and Local	0.1	0.8	1.9	0.0	0.1	0.2
	(0.2)	(1.3)	(2.0)	(0.0)	(0.1)	(0.2)
Inventory Investment	--	--	--	0.8	-0.2	0.0
	--	--	--	(0.7)	(-0.2)	(0.0)
Net Exports	--	--	--	0.2	-0.1	-0.3
	--	--	--	(0.1)	(-0.1)	(-0.3)
INCOME						
Personal Income	1.6	3.9	4.3			
	(2.3)	(4.3)	(5.3)			
Real Disposable Personal Income	-0.2	2.3	2.5			
	(0.5)	(2.7)	(3.3)			
Personal Saving Rate	4.5	4.0	3.5			
	(4.8)	(4.5)	(4.7)			
Corporate Profits Before Taxes	4.2	1.7	0.4			
	(4.8)	(-1.5)	(-0.5)			

Note: Numbers in parentheses are from the previous Blackbook.

B. FRBNY Forecast Details

Exhibit B-5: Medium-Term Projections, Continued

	Q4/Q4 Growth Rates		
	2013	2014	2015
INFLATION			
Total PCE Deflator	1.0	1.5	1.8
	(0.9)	(1.5)	(1.8)
Core PCE Deflator	1.2	1.3	1.7
	(1.1)	(1.4)	(1.9)
Total CPI Inflation	1.2	2.0	2.2
	(1.2)	(1.8)	(2.2)
Core CPI Inflation	1.7	1.8	2.2
	(1.7)	(1.8)	(2.2)
GDP Deflator	1.4	1.9	2.0
	(1.4)	(1.7)	(1.9)
PRODUCTIVITY AND LABOR COSTS*			
Output	2.9	3.6	4.3
	(3.0)	(3.6)	(4.1)
Hours	1.7	2.0	2.8
	(1.6)	(2.1)	(2.6)
Output per Hour	1.3	1.7	1.5
	(1.3)	(1.4)	(1.5)
Compensation per Hour	0.3	2.0	2.2
	(0.5)	(2.3)	(2.6)
Unit Labor Costs	-0.9	0.3	0.7
	(-0.8)	(0.9)	(1.1)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	7.0	6.2	5.4
	(7.0)	(6.3)	(5.4)
Participation Rate (Avg. Q4 Level)	62.9	63.1	63.4
	(62.9)	(63.1)	(63.4)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	182	200	296
	(182)	(221)	(300)

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

B. FRBNY Forecast Details

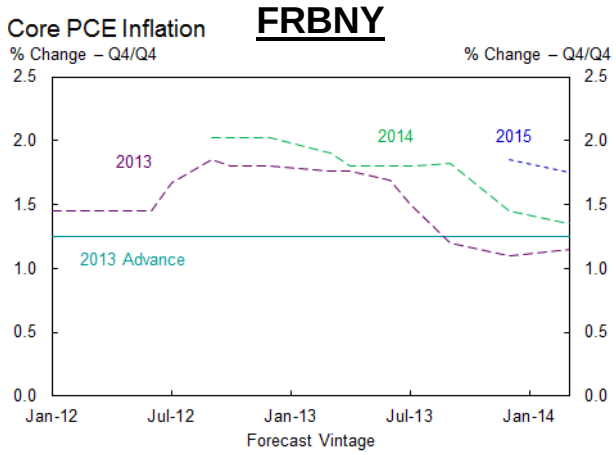
Exhibit B-6: FRBNY and Tealbook Forecast Comparison

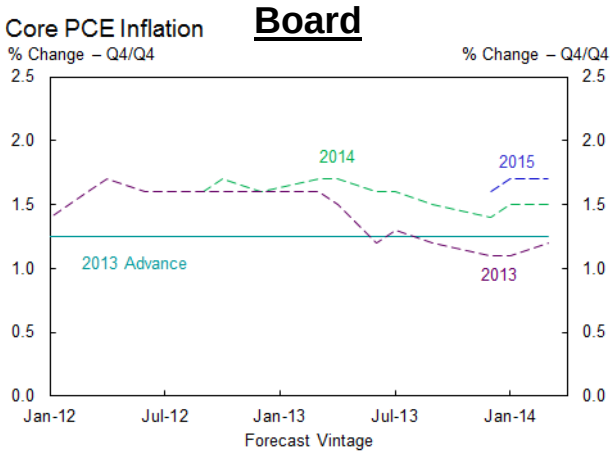
	FRBNY (Q4/Q4)			Board (Q4/Q4)		
	2013	2014	2015	2013	2014	2015
OUTPUT						
Real GDP	2.5	2.9	3.5	2.5	2.9	3.2
	(2.8)	(3.0)	(3.5)	(2.8)	(3.1)	(3.4)
GDP Growth Contributions						
Final Sales to Domestic Purchasers	1.6	3.3	3.7	1.5	3.1	3.5
	(2.0)	(3.2)	(3.8)	(1.8)	(3.3)	(3.8)
Consumption	1.5	2.0	2.1	1.5	2.4	2.5
	(1.7)	(2.1)	(2.3)	(1.7)	(2.4)	(2.7)
BFI	0.4	0.9	1.2	0.3	0.5	0.6
	(0.3)	(1.0)	(1.2)	(0.4)	(0.6)	(0.7)
Residential Investment	0.2	0.3	0.4	0.2	0.3	0.5
	(0.2)	(0.3)	(0.2)	(0.2)	(0.4)	(0.5)
Government	-0.5	0.0	0.1	-0.5	-0.1	-0.1
	(-0.3)	(-0.1)	(0.0)	(-0.5)	(-0.1)	(-0.1)
Inventory Investment	0.8	-0.2	0.0	0.8	-0.1	-0.2
	(0.7)	(-0.2)	(0.0)	(0.7)	(-0.1)	(-0.3)
Net Exports	0.2	-0.1	-0.3	0.2	-0.1	-0.1
	(0.1)	(-0.1)	(-0.3)	(0.3)	(-0.1)	(-0.1)
INFLATION						
Total PCE Deflator	1.0	1.5	1.8	1.0	1.5	1.5
	(0.9)	(1.5)	(1.8)	(0.9)	(1.4)	(1.6)
Core PCE Deflator	1.2	1.3	1.7	1.2	1.5	1.7
	(1.1)	(1.4)	(1.8)	(1.1)	(1.5)	(1.7)
INTREST RATE ASSUMPTION						
Fed Funds Rate (End-of-Year)	0-0.25	0-0.25	1.00	0-0.25	0-0.25	1.25
	0-0.25	0-0.25	1.00	0-0.25	0-0.25	1.00
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	1.3	1.7	1.5	1.2	1.4	1.4
	(1.3)	(1.4)	(1.5)	(1.7)	(1.2)	(1.6)
Compensation per Hour	0.3	2.0	2.2	0.3	2.8	3.3
	(0.5)	(2.3)	(2.6)	(0.4)	(2.7)	(3.3)
Unit Labor Costs	-0.9	0.3	0.7	-0.9	1.4	1.9
	(-0.8)	(0.9)	(1.1)	(-1.3)	(1.5)	(1.7)
LABOR MARKET						
Unemployment Rate (Avg. Q4 Level)	7.0	6.2	5.4	7.0	6.2	5.6
	(7.0)	(6.3)	(5.4)	(7.0)	(6.2)	(5.5)
Participation Rate (Avg. Q4 Level)	62.9	63.1	63.4	62.8	63.0	63.0
	(62.9)	(63.1)	(63.4)	(62.8)	(62.8)	(62.8)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	182	200	296	197	210	224
	(182)	(221)	(300)	(184)	(223)	(235)
SAVING						
Personal Saving Rate (Avg. Q4 Level)	4.5	4.0	3.5	4.5	4.0	3.6
	(4.8)	(4.5)	(4.7)	(4.2)	(3.9)	(3.5)
HOUSING						
Housing Starts (Avg. Q4 Level, Thous.)	1016	1090	1370	900	1200	1400
	(1016)	(1150)	(1390)	(900)	(1200)	(1500)

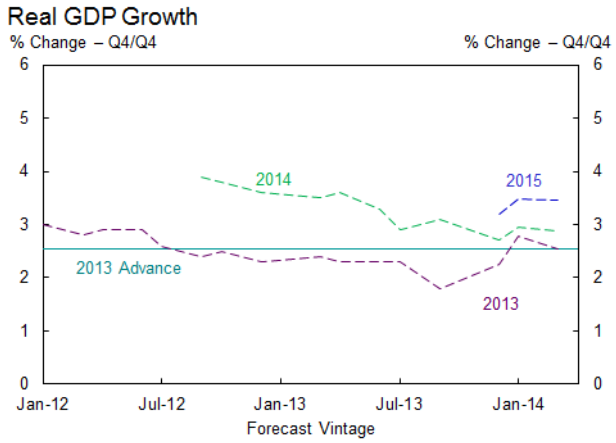
Note: Numbers in parentheses are from the previous Blackbook.

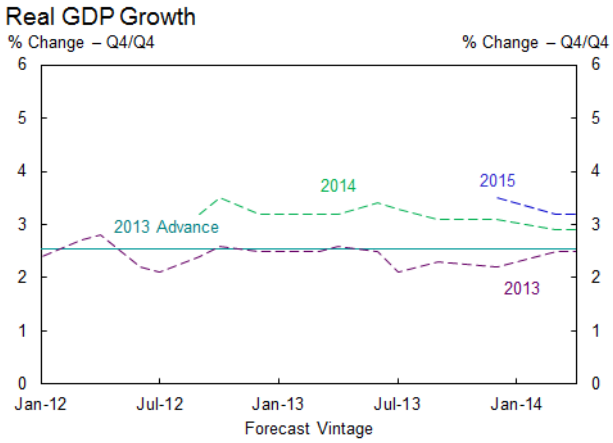
B. FRBNY Forecast Details

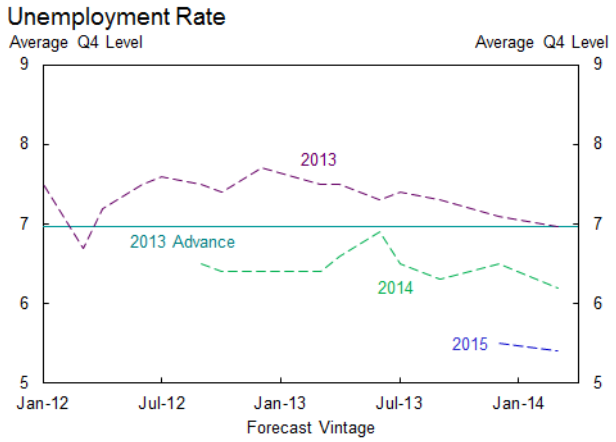
Exhibit B-7: Evolution of FRBNY and Board Forecasts since the beginning of 2011

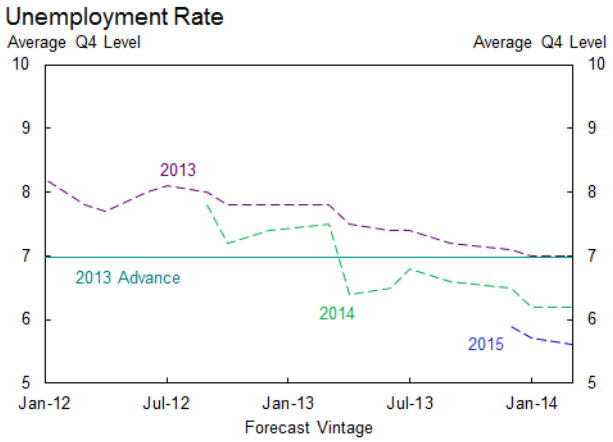












Note: Forecast vintage is the date the forecast was produced.

B. FRBNY Forecast Details

Exhibit B-8: Alternative GDP and Inflation Forecasts

Real GDP Growth

	Release Date	2013Q4	2014Q1	2013 Q4/Q4	2014 Q4/Q4
FRBNY	3/13/2014	2.4	1.5	2.5	2.9
		(3.4)	(2.6)	(2.8)	(3.0)
Blue Chip	3/10/2014	2.4	1.9	2.5	2.7
		(1.6)	(1.8)	(2.2)	(2.8)
Median SPF	2/14/2014	--	2.0	2.7	2.6
		(1.8)	(2.5)	(1.7)	(2.6)
Macro Advisers	3/10/2014	2.4	1.5	2.5	3.0
		(1.5)	(2.2)	(2.2)	(3.0)
FRBNY-DSGE	3/13/2014	--	1.5	--	1.9
		(1.8)	(2.0)	(2.2)	(1.9)

Core PCE Inflation

	Release Date	2013Q4	2014Q1	2013 Q4/Q4	2014 Q4/Q4
FRBNY	3/13/2014	1.3	1.2	1.2	1.3
		(1.1)	(1.3)	(1.1)	(1.4)
Median SPF	2/14/2014	1.5	1.5	1.2	1.7
		(1.5)	(1.7)	(1.2)	(1.6)
Macro Advisers	3/10/2014	1.3	1.2	1.2	1.4
		(1.2)	(1.5)	(1.2)	(1.7)
FRBNY-DSGE	3/13/2014	--	1.2	--	1.0
		(1.1)	(0.9)	(1.1)	(1.0)

CPI Inflation

	Release Date	2013Q4	2014Q1	2013 Q4/Q4	2014 Q4/Q4
FRBNY	3/13/2014	1.1	2.2	1.2	2.0
		(0.9)	(1.6)	(1.2)	(1.8)
Blue Chip	3/10/2014	1.1	1.9	1.2	2.0
		(1.1)	(1.9)	(1.3)	(2.0)
Median SPF	2/14/2014	1.8	1.7	1.4	1.8
		(1.8)	(1.8)	(1.4)	(2.0)
Macro Advisers	3/10/2014	1.1	2.0	1.2	1.9
		(0.7)	(2.1)	(1.2)	(1.7)

Core CPI Inflation

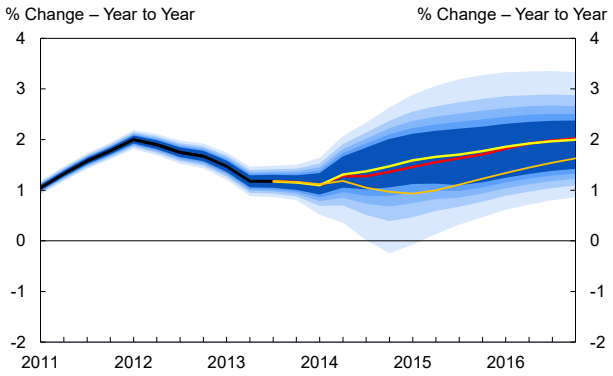
	Release Date	2013Q4	2014Q1	2013 Q4/Q4	2014 Q4/Q4
FRBNY	3/13/2014	1.6	1.6	1.7	1.8
		(1.6)	(1.7)	(1.7)	(1.8)
Median SPF	2/14/2014	1.9	1.8	1.8	1.9
		(1.9)	(1.9)	(1.8)	(2.0)
Macro Advisers	3/10/2014	1.6	1.6	1.7	1.7
		(1.6)	(1.9)	(1.7)	(1.9)

*Note: Numbers in gray are from the previous Blackbook

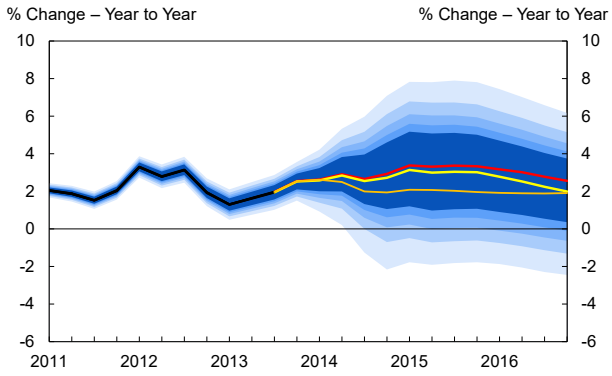
C. FRBNY Forecast Distributions

Exhibit C-1: Inflation and Output Forecast Distributions

Core PCE Inflation Forecast Distribution

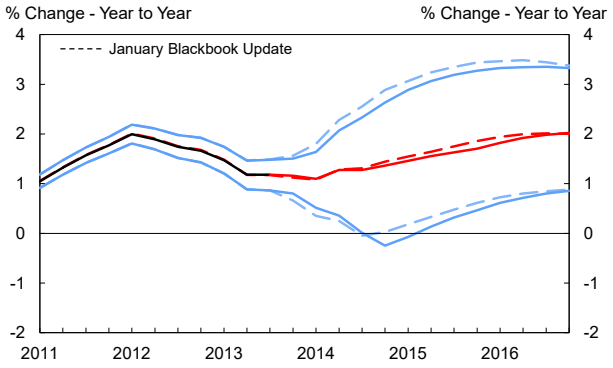


Real GDP Growth Forecast Distribution

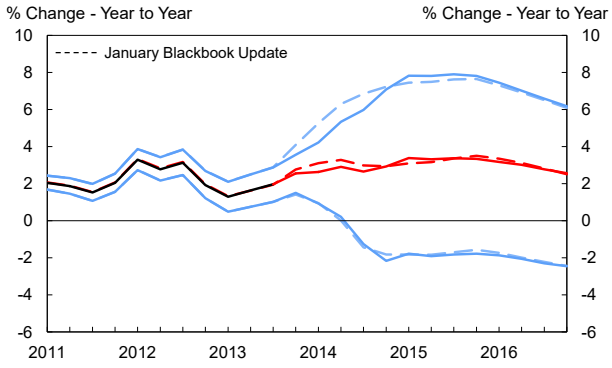


The yellow line is the expected value of the forecast distribution, the red line is the FRBNY central projection, the orange line is the DSGE forecast, and the black line is released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter change will be within the respective range.

Change in Core PCE Inflation Forecast Distribution



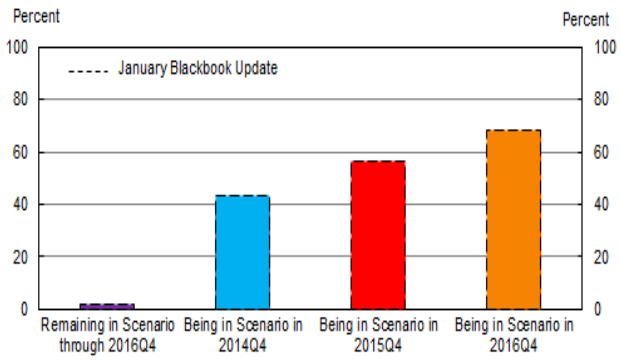
Change in Real GDP Growth Forecast Distribution



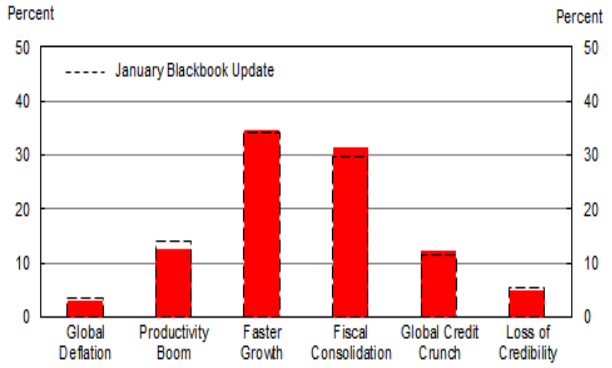
The blue lines are the 90% chance the four-quarter change will be within the lines, the red line is the central scenario projection, and the black line is released data. Dashed lines represent forecasts from the previous Blackbook.

Exhibit C-2: Scenarios Probabilities

Change in Central Scenario Probabilities



Change in Alternative Scenario Probabilities*



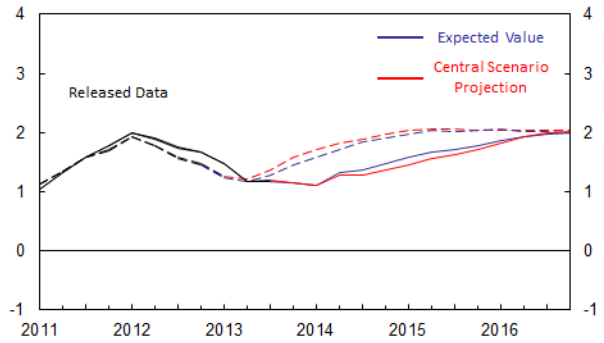
*Probability of ever reaching scenario.

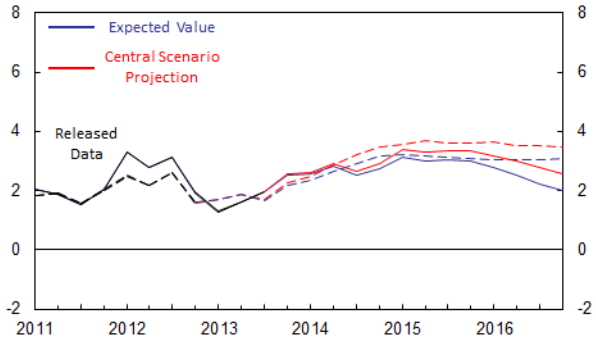
Source: MMS Function (FRBNY)

C. FRBNY Forecast Distributions

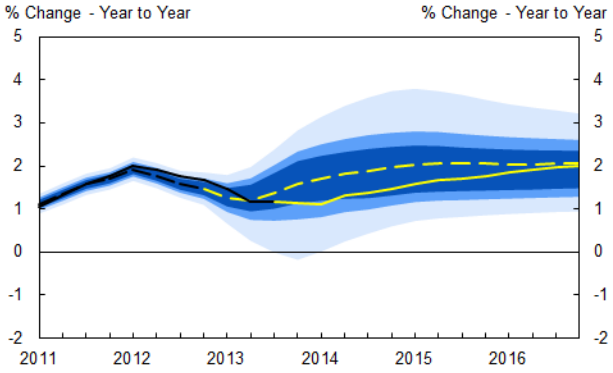
Exhibit C-3: Evolution and Performance of Inflation and Output Forecast Distributions

The solid lines represent the current central scenario projection and expected value, while the dashed lines represent those from the year-ago Blackbook.

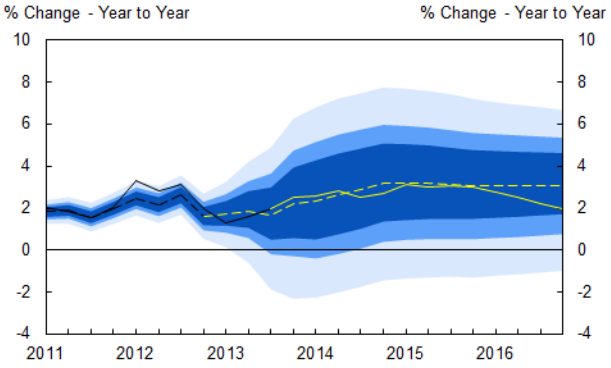




One-Year Comparison of Core PCE Inflation Forecast Distribution and Expected Value



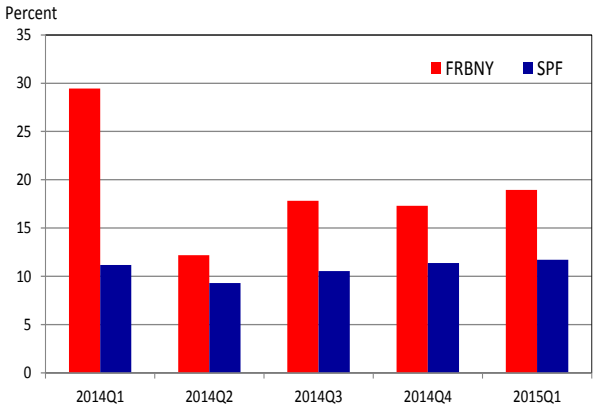
One-Year Comparison of Real GDP Growth Forecast Distribution and Expected Value



The solid yellow line is the **current** expected value of the forecast distribution, while the dashed yellow line is the expected value from the year-ago Blackbook. The shading represents the 50, 70 and 90 percent probability intervals from the year-ago forecast. The black lines are released data.

Exhibit C-4: Probability of a Negative Growth Quarter

Probability of a Negative-Growth Quarter



Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

Exhibit D-1: Baseline & OIS-Implied Nominal FFR

Comparison with Previous Blackbook Update

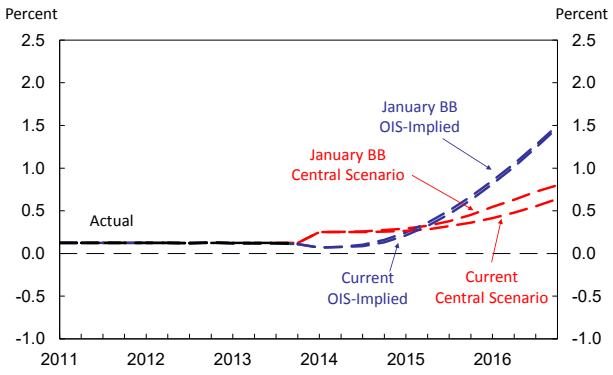
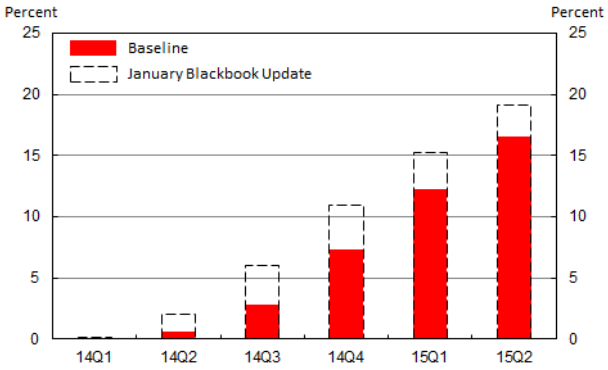
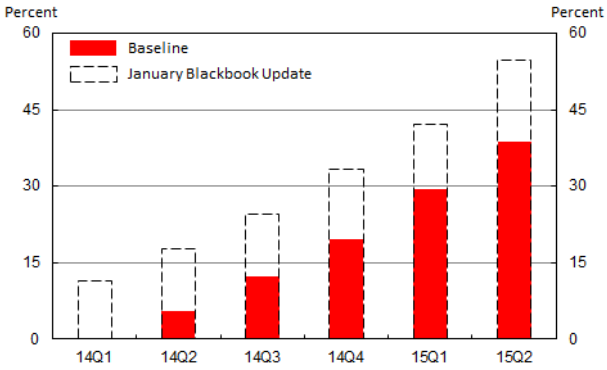


Exhibit D-2: FFR Probabilities Above 0.5%

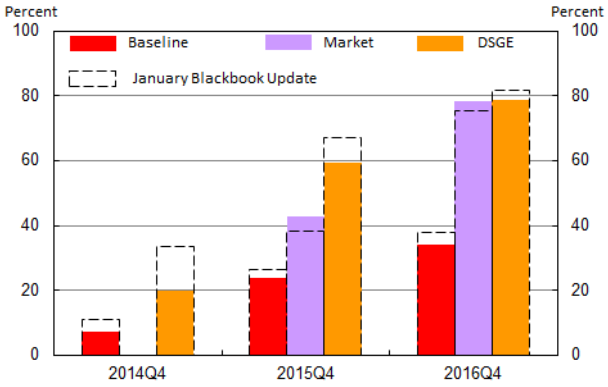
FRBNY Forecast Distributions Over Next 6 Quarters



FRBNY DSGE Model Over Next 6 Quarters



Comparison Over 2014, 2015 and 2016 Year End

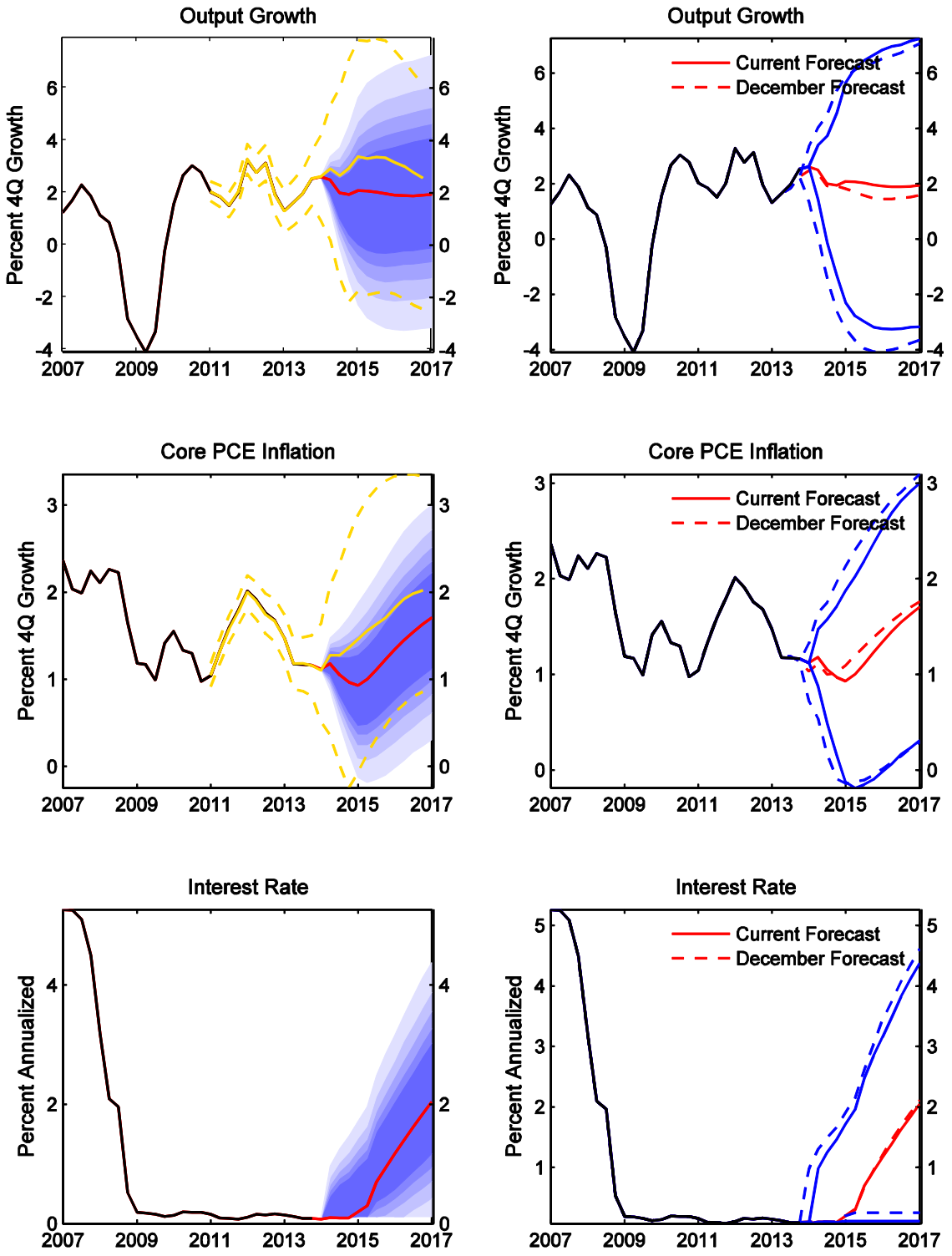


Note: Probability displayed is probability of FFR being above 0.5% in quarter noted and remaining above 0.5% in subsequent four quarters. DSGE results are shown for model including zero bound restriction. Market-implied FFR based on data from the Board.

Source: MMS Function (FRBNY)

E. FRBNY-DSGE Model

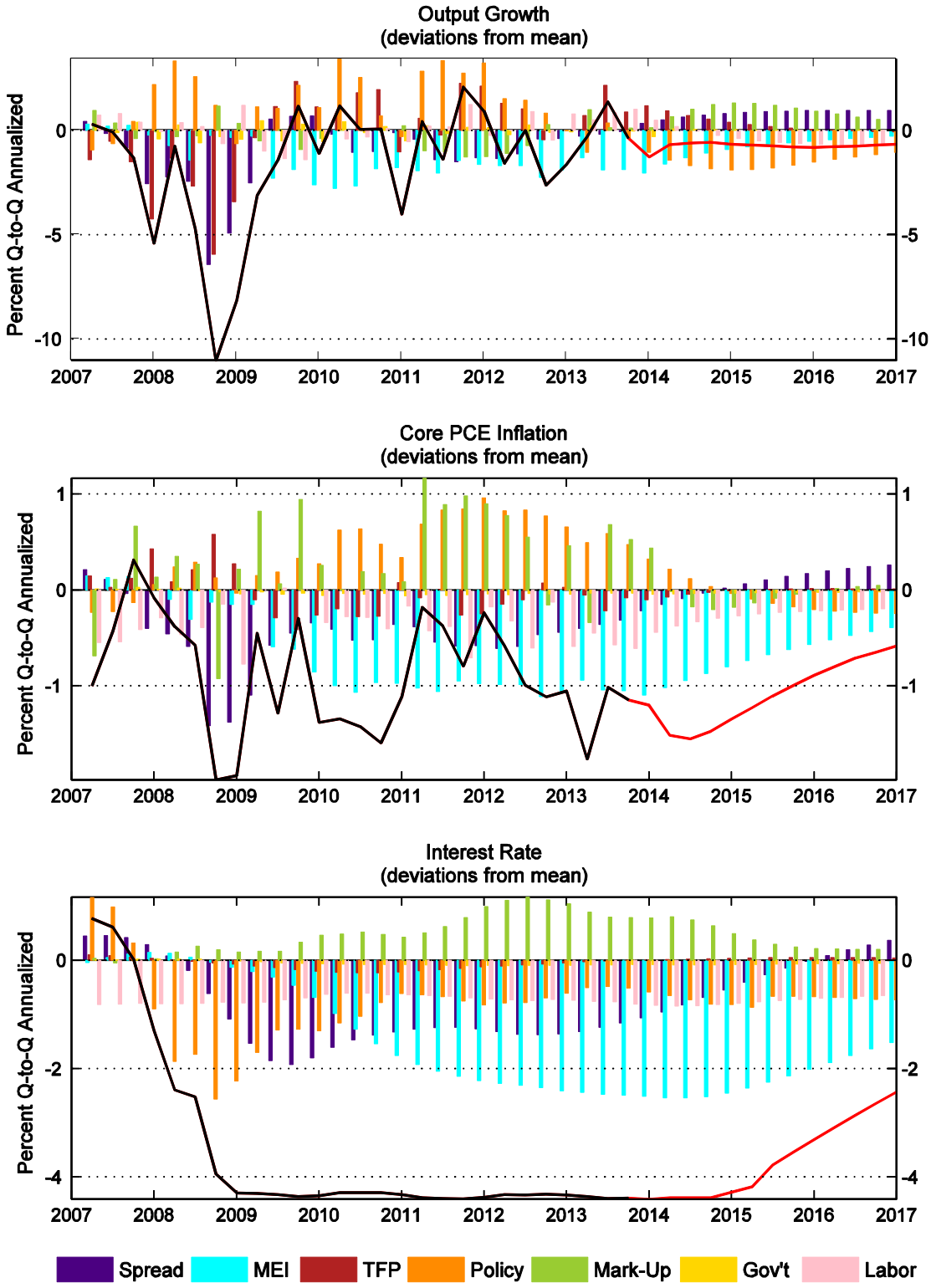
Exhibit E-1: FRBNY-DSGE Forecasts



Note: Black lines indicate data, red lines indicate mean forecasts, and shaded areas mark the parameter and shock uncertainty associated with our forecast as 50, 60, 70, 80, and 90 percent probability intervals. For comparison, we report the FRBNY Central Projection for output growth and inflation (solid yellow line) and the 90 percent bands for the FRBNY forecast distribution (dashed yellow lines). Blackbook forecast comparisons (right-hand side charts) display 90 percent bands.
Source: MMS Function (FRBNY)

E. FRBNY-DSGE Model

Exhibit E-2: FRBNY-DSGE Shock Decomposition



Note: The solid lines (black for realized data, red for mean forecast) show each variable in deviation from its steady state. The bars represent the shock contributions; specifically, the bars for each shock represent the counterfactual values for the observables (in deviations from the mean) obtained by setting all other shocks to zero.
Source: MMS Function (FRBNY)

Appendix 1: Alternative Scenario Descriptions

In this Appendix, we provide brief descriptions of the alternative scenarios used in this Blackbook. A description of the methodology underlying our risk assessment and forecast distributions is included in the Blackbook Documentation.

Our first alternative scenario considers the impact of above-trend productivity growth. Our current assumption of trend productivity growth is around 1.5% on a nonfarm business sector basis. Sustained productivity growth above this assumption would have important consequences for the economy. Typically, because below-trend productivity growth also has important consequences, we have included an alternative scenario that incorporates that assumption (*Productivity Slump)*. However, because the near-term consequences of that scenario and the *Fiscal Consolidation* scenario are similar, we have combined those two scenarios into a single revamped *Fiscal Consolidation* scenario, which allows us to add another scenario (*Faster Growth*). We also currently consider four additional scenarios. In one (*Faster Growth*), the "headwinds" subside more quickly than expected, leading to stronger aggregate demand effects from monetary and fiscal policy. In another (*Loss of Credibility*), the public and investors lose confidence in the current stances of monetary and fiscal policy. In the other two (*Global Credit Crunch* and *Global Deflation*), renewed stresses in global financial and economic conditions have an impact on U.S. economic conditions; the differences between the two mainly reflect differing assessments of how protracted the negative effects could be.

Alternative 1: *Productivity Boom*

Productivity growth has been subdued and below our current estimate of trend productivity growth. Our central forecast sees the recent slow growth as cyclical, and anticipates that productivity growth will return to near trend. However, it is possible that resource reallocation associated with the recession and its aftermath and recent technological developments have set the stage for a prolonged period of higher productivity growth, closer to that of the 1947-72 and the mid-1990s through the mid-2000s periods. As such, we could see persistent productivity growth above our assumed trend, implying a higher potential growth rate for output and thus expected real output

growth that is higher than our current estimate. (A higher potential growth rate may also imply that the output gap that opened during the 2007-2009 recession is larger than we currently estimate). Strong productivity growth would also limit labor cost pressures and thereby help to keep inflation subdued.

Alternative 2: *Fiscal Consolidation*

Persistent high U.S. fiscal deficits and the European sovereign debt crisis have raised issues about the possible economic consequences if concerns were to develop about the sustainability of the U.S. government's fiscal position. Furthermore, a political stalemate like that of August 2011 could exacerbate these concerns. The *Fiscal Consolidation* scenario envisions a situation in which concerns on the part of investors about the fiscal sustainability of the United States leads to an increase in long-term interest rates and term premia that contribute to keep output growth below that of the central forecast. As the U.S. government responds to those concerns by further reducing government spending and/or raising taxes, the consequent decline in aggregate demand would imply that growth of real activity continues to be weak. In this scenario inflation temporarily rises above the central forecast, in part due to a depreciation of the dollar and possible increases in inflation expectations[2]. [As stated earlier, the near-term implications of this scenario are similar to those of a supply shock or productivity slump, which is one reason we have folded in the weight of the old *Productivity Slump* scenario into this scenario.] However, after several quarters, with the government embarking on a credible fiscal consolidation, inflation declines below the central forecast as a consequence of the drop in aggregate demand and output growth.

Alternative 3: *Faster Growth*

The current expansion has been quite weak, especially given the severe drop in real activity during the recession. Factors behind the slow growth include the continued stress faced by financial markets and institutions as they slowly mend from the financial crisis and a slow process of repairing household balance sheets damaged in the financial crisis and recession. However, the relative strength in recent real PCE and payroll growth in the

[2] Some economic models imply that if the public and investors see the fiscal situation as unsustainable, they could raise inflation expectations because of the possibility that part of the long-term fiscal budget gap is closed through higher inflation.

face of fiscal headwinds raise the possibility that the process of mending may be near an end. The *Faster Growth* scenario envisions a situation where these factors that have inhibited growth subside more quickly than anticipated by policymakers. In particular, the diminution of these factors would lead to a stronger impact from accommodative monetary policy, leading to faster growth in aggregate demand. In that case, real GDP growth could be higher than anticipated, and inflation pressures could materialize more quickly.

Alternative 4: *Loss of Credibility*

In the wake of the monetary and fiscal stimulus used to combat the 2007-2009 recession, some commentary has focused on the possibility that these policies could lead to higher inflation expectations and eventually to higher inflation. The fairly elevated levels of some commodity prices are consistent with such commentary. Even though the FOMC has made its commitment to low rates in part contingent on medium-term inflation below 2½% and inflation expectations remaining well anchored, it is possible that market participants may begin to believe that the FOMC is not credibly committed to keeping inflation around the FOMC's longer-run goal, especially if the unemployment rate remains above the FOMC's 6½% threshold. In addition, concerns about the possible influence of continued high fiscal deficits on monetary policy could lead investors and the public to question FOMC credibility on inflation: FRBNY survey evidence suggests that, for at least some market participants, increases in government debt lead to higher inflation expectations, regardless of the reason for the increased debt. If the concerns about credibility were to become widespread, they would likely cause inflation and inflation expectations to rise above forecast.

Alternative 5: *Global Credit Crunch*

Although financial markets are generally notably healthier than they were during the financial crisis, continued impairments in some markets as well as general economic uncertainty may be keeping credit availability very tight. In addition, consumers suffered sizable wealth losses during the crisis, which may be adversely affecting their desire to take on risk. Most central banks are maintaining what would appear to be very accommodative policy stances. This combination of factors suggests that the neutral rate

is still lower than it was before the financial turmoil began (we estimate the longer-run neutral FFR to be around 3.50%). Even though the current FFR is well below our lower estimate of the neutral rate, tight credit conditions, continued stresses in global financial markets, and a still-significant chance of a further deterioration in global economic conditions create a risk that output growth will fall significantly below the level projected in the central forecast; this development would likely be accompanied by inflation below the level in the central forecast. Nevertheless, under this scenario we assume that financial markets will begin to function more normally and that, as they do, the economy will exit the *Global Credit Crunch* scenario and begin growing faster than its potential growth rate. The strong output growth experienced when the economy leaves the scenario should result in a closing of the output gap over time.

Alternative 6: *Global Deflation*

Recent price level indicators continue to point to low inflation in many regions of the world. With inflation at such levels, sluggish global growth, continuing concerns about the future of the euro zone, and continued financial market uncertainty suggest that there is some risk of global deflation going forward. This possibility is further exacerbated as many central banks around the world have their policy rates at or very near their lower bounds. The *Global Deflation* scenario reflects the possibility that the U.S. and the rest of the world may be mired in a liquidity trap for a prolonged period of time, resulting in both inflation and output growth far below the levels projected in the central forecast. Because of the difficulty of exiting such a situation, we see the *Global Deflation* scenario as quite persistent. Unlike the *Global Credit Crunch* scenario, the economy does not generally "bounce back" from *Global Deflation* to close the output gap. Instead, the U.S. is much more likely to experience a prolonged period of essentially no growth.

The implications for inflation and output of the various scenarios can be summarized as follows:

1. *Productivity Boom*: inflation below central forecast, output above central forecast.
2. *Fiscal Consolidation*: inflation initially above and then below central forecast, output below central forecast.
3. *Faster Growth*: inflation above central forecast, output above central forecast.

4. *Loss of Credibility*: inflation far above central forecast, output slightly below central forecast.
5. *Global Credit Crunch*: inflation below central forecast, output significantly below central forecast.
6. *Global Deflation*: inflation far below central forecast, output far below central forecast.

Appendix 2: Policy Rule Description

In this Appendix, we describe our *Baseline* policy rule. Additional background is included in the Blackbook Documentation.

In our *Baseline* policy rule specification, the policy rate responds to deviations of inflation from target and of output from potential, while incorporating some inertia. For each of the FFR paths, we determine these deviations using the inflation and output paths generated in Exhibit C.

Baseline Policy Rule Specification:

$$i_t = \rho i_{t-1} + (1-\rho)\left[i^* + \varphi_\pi\left(\pi_t - \pi^*\right) + \varphi_x x_t\right]$$

$\rho = 0.8$ (interest rate smoothing parameter)
$i^* = 3.50$ over the forecast horizon (neutral FFR)
$\pi^* = 2.00$ (PCE inflation longer - run objective)
$\varphi_\pi = 1.5$ (weight on inflation deviations)
$\varphi_x = 0.5$ (weight on output gap)
π_t : core PCE, 4 - quarter average
x_t : output gap, using 2.3% potential growth rate
i_{t-1} : interest rate in previous quarter

FOMC BACKGROUND MATERIAL

RESEARCH AND STATISTICS GROUP

FRBNY Blackbook

April 2014

CONFIDENTIAL (FR) Class II FOMC

FRBNY BLACKBOOK

April 2014

CONTENTS

APPENDIX

1. Policy Recommendation and Rationale

Our assessment of the economic outlook has not changed significantly since the last Blackbook. Although the data releases during the intermeeting period point to a weaker first quarter than we had previously expected, they also indicate that the weakness was transitory and that the economy is in a good position for a strong rebound in the second quarter. Therefore, we still expect real growth will be significantly above its potential rate over the rest of 2014 and 2015 as the improved underlying fundamentals exert themselves more forcefully. The March CPI contained some tentative signs of stabilization and the beginning of a pickup, supporting our forecast that inflation will slowly head back towards the FOMC's longer-run goal over the next couple of years. Consistent with our inflation outlook, we largely discount the recent buzz among some forecasters about incipient wage pressures, which are concentrated only in a few indexes: most indicators have not shown any acceleration with yearly changes still around 2%.

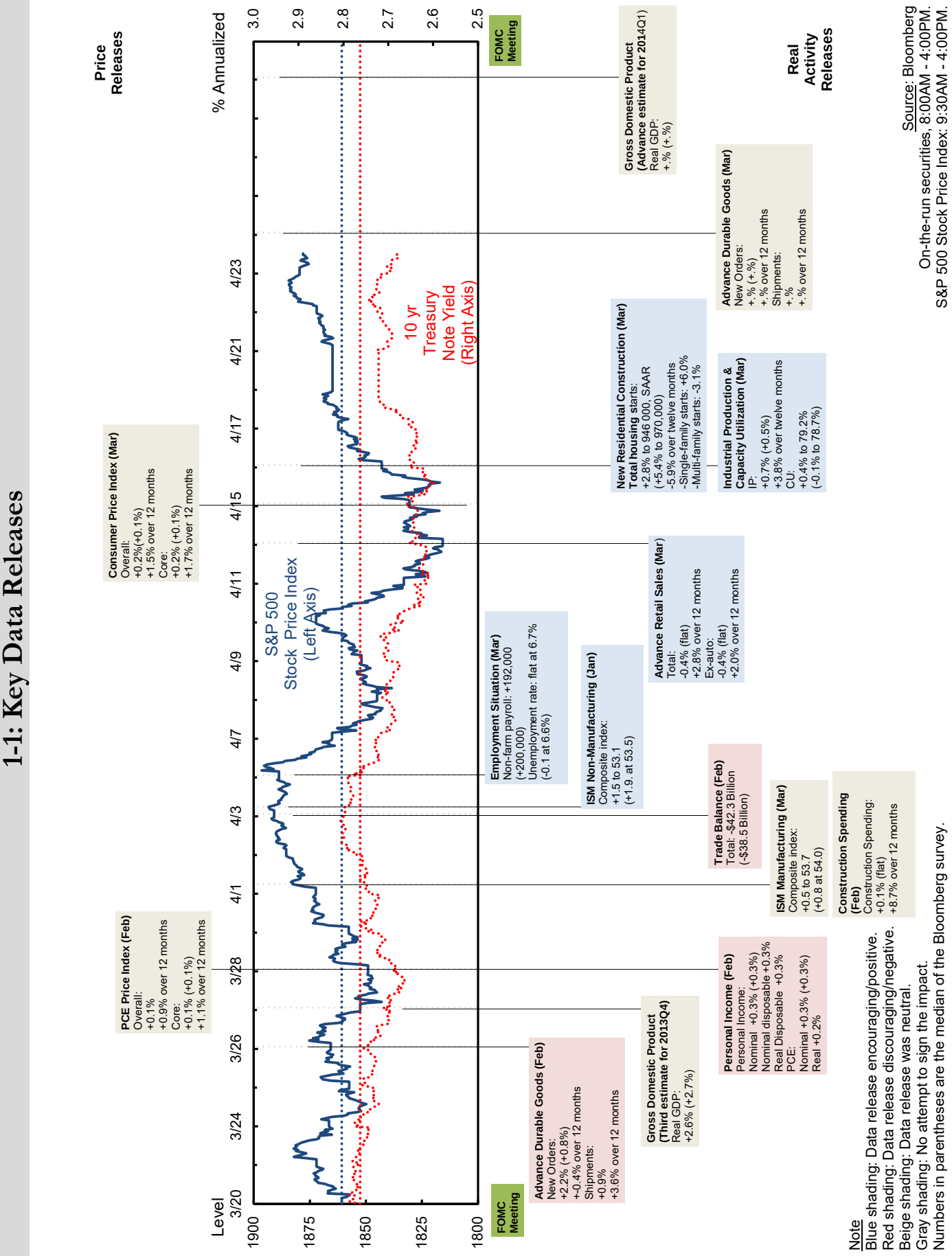
The developments during the intermeeting period were largely in accord with our central outlook. In addition, the changes in forward guidance made in the March FOMC statement were generally consistent with our prior recommendations. Therefore, our recommendation for the upcoming meeting is simple: stay the course on tapering and maintain the current guidance on the FFR path.

Looking a bit further into the future, one issue brought to the forefront by the discussion on the medium-term monetary policy implementation framework is the definition of lift-off in an environment with a large Federal Reserve balance sheet. An increase in policy rates is still far enough away in the future that many of the nuances of its mechanics do not yet need to be finalized. Nevertheless, as the asset purchase program nears its end, market participants will become increasingly attuned to signs of an impending change in the course of policy. Consequently, it will be important to discuss with the public what defines lift-off to preclude market participants from misinterpreting other money market developments as signs of policy tightening. Such a misinterpretation might cause the expected lift-off date to be moved forward, with a subsequent undesired tightening of

financial conditions. Depending on the upcoming decisions on the medium-term framework, lift-off may have to be (re)defined in terms of a policy rate (or rates) that will provide appropriate signals of the monetary stance at this time. If that rate turns out to be a market rate (such as the FFR) rather than an administered rate (such as the IOER), communication might also need to take into account the possibility of its control being less tight than it was for the FFR in the pre-2007 period. This relative lack of control might in turn muddle the strong signal usually associated with a change in the course of policy.

This communication challenge is distinct from the credibility issues associated with a central bank that is perceived to have little control of short-term rates and thus cannot influence financial conditions to implement its policy stance. Instead, we see the Federal Reserve as having developed sufficient tools to influence financial conditions appropriately, even under a large balance sheet. The challenge concerns the preparation for lift-off. This challenge should be addressed relatively soon, but it is largely independent of the contemplated implementation frameworks and so should not skew the deliberations on which among those frameworks is most desirable.

1-1: Key Data Releases



2. Central Forecast

Intermeeting Developments

Data released over the past several weeks have led us to further lower our estimate of growth of real GDP in 2014Q1 to 0.7% (annual rate) from 1.5% in the March Blackbook. At the same time, however, available data for the month of March has been somewhat stronger than expected, with the Citigroup Economic Surprise Index moving up to -23.6 as of April 21 after falling to a recent low of -45. This stronger-than-expected rebound in much of the March data supports our view that the slowing of growth in the first quarter is transitory, with severe winter weather playing a notable role.[1] Indeed, we have boosted our projection of growth in the second quarter by about ½ percentage point to 4%, thus leaving the entire first half growth rate essentially unchanged at around 2 ¼%.

Perhaps the clearest sign of a revival of economic activity was the 0.7% increase of private nonfarm hours worked in the month of March. With that gain, hours worked in the first quarter were up at a 1.6% annual rate, actually a bit better than the 1.5% annual rate of 2013Q4. Given this rate of growth of hours worked and the 0.7% rate of growth of real GDP, productivity in the nonfarm business sector likely declined at a 0.8% annual rate. As a comparison, productivity growth was negative in 2012Q4 (-1.5%) and 2013Q1 (-1.8%) when growth temporarily slowed.

The rebound of hours worked was widespread across industries but most pronounced in construction, the industry where our analysis showed the most significant impact from the severe winter weather of January and March. As expected, the surge in hours worked resulted in little change in average hourly earnings following a notable increase in February. On a 12-month change basis, the rate of increase of average hourly wages

[1] In a note released on April 14, Macroeconomic Advisers presented new estimates of the impact of severe winter weather on the Q1 growth rate of real GDP. They develop a monthly time series of snow fall at the county level, which they then aggregate to the national level based on population weights. This makes the snow fall series conceptually similar to the heating degree day series. Using deviations from a trailing five year monthly average for both heating degree days and snowfall, they concluded that the Q1 growth rate of real GDP was lowered by 1.4 percentage points while the Q2 growth rate will be boosted by 1.6 percentage points.

remains flat at just a little over 2%. Some increase in wage inflation is noticeable in the goods producing sector, but that is being offset by further slowing in the private service-providing sector. Labor's share of national income continued to decline over the second half of 2013 and, based on what we know at this time, declined further in 2014Q1.

Nonfarm payroll employment increased by 192,000 in March, about the same as the upwardly revised gain of February. The unemployment rate held steady at 6.7% in March, despite a 476,000 gain in employment registered in the household survey. The labor force increased by 503,000 in March, due in part to an increase in the labor force participation rate to 63.2 from its value of 63.0 in both January and February. It is too soon to tell whether this signals the long-awaited reversal of the downward trend in the participation rate which has been part of our forecast for some time. But it is worth noting that there continues to be steady improvement in the labor market differential, or the percent of consumers who regards jobs as plentiful minus the percent who regard jobs as hard to get, as measured by the Conference Board's monthly survey of households.

Real personal consumption expenditures rose by a respectable 0.2% in February, however, the January growth rate was revised down to 0.1% from the initial estimate of 0.3%. If the January and February data are not revised, and real PCE in March grew at the rate of February, real PCE would increase at just a 1.5% annual rate in the first quarter versus 3.3% in the fourth quarter. The most pronounced slowing is in durable goods, particularly motor vehicles and parts. However, available data on consumer spending also point to a significant rebound in March. The March data on motor vehicle sales surprised to the upside, reaching 16.40 million units (seasonally adjusted annual rate), comparable to the pace of last November. For the entire first quarter sales averaged 15.66 million units versus 15.68 in 2013Q4. In addition, retail sales excluding motor vehicles and parts rose a strong 0.7%, while the February level was revised up somewhat. Finally, March was even colder, based on the deviation of heating degree days from a trailing five year monthly average, than was February, suggesting a further increase in spending on utilities. Based on available data, we expect growth of real PCE of 2% (annual rate) in the first quarter. And given the monthly pattern of increases in real PCE

over the first quarter, the stage is set for a rebound to 3 ½%, possibly higher, in the second quarter.

Housing starts also perked up somewhat in March, although housing market indicators overall continue to be mixed. Single-family housing starts rose 6% (monthly rate) in March on the heels of a 2.9% increase in February. But the March level of 635,000 (seasonally-adjusted annual rate) remained below the 661,000 average of the fourth quarter. Moreover, single-family permits were relatively stable over the January-March period and near the quarterly average of 593,000, nearly 5% below the fourth quarter average. Sales of new single-family homes, defined as signed sales contracts, surprised to the downside in March, falling a steep 14.5% on the heels of a 4.5% decline in February. Multi-family starts fell to 311,000 in March, well below the 347,000 average of 2013Q4. However, multi-family permits averaged 390,000 in the first quarter, essentially the same as in the fourth quarter. Sales of existing homes, a lagging indicator of housing market activity, fell somewhat further in March to 4.59 million units (seasonally-adjusted annual rate), the lowest since June of 2012. For the entire first quarter, the average level of existing home sales was 6.9% below the fourth quarter average level, which was 7.1% below the third quarter average. This suggests that there was another significant decline in brokers' commissions in the first quarter, which, combined with the slower growth of private residential construction put in place, is likely to result in another decline of real residential investment in the first quarter.

The high-frequency data pertaining to business fixed investment (BFI) is only available through February (Advance Durable Goods for March is due out on Thursday, April 24). That data have been mixed and at this point suggest some slowing in the rate of growth of BFI in the first quarter. Private nonresidential construction rose by 1.2% in February following a 1.0% decline in January. However, levels for December and January were revised up substantially, such that the January-February average level is 8.9% (annual rate) above the fourth quarter average. There is substantial variation within the nonresidential category, with gains in categories such as lodging, office, communication, and manufacturing, but weakness in categories such as commercial, including retail, and

amusement and recreation. In addition, the rate of growth of construction costs appears to have slowed in the first quarter. Thus, at this point it looks like growth of real business investment in nonresidential structures will be around 10% (annual rate) in the first quarter following a 1.8% decline in the fourth quarter. In contrast, both orders and shipments of nondefense capital goods were quite soft in January and February, suggesting essentially no growth of real business investment in new equipment following a 10.9% annual rate increase in the fourth quarter. The sources of strength in the fourth quarter were aircraft, trucks, buses, and trailers, agricultural equipment, and computers. While this is pure speculation, those large increases may have been spurred in part by the pending expiration of the bonus depreciation provision. While the monthly data do not provide as much detail as the quarterly NIPA data, the January-February weakness in orders and shipments has been in computers and transportation equipment.

After growing rapidly in the fourth quarter, the data for January and February suggest that real exports declined in the first quarter, with declines widespread across the major categories of goods while exports of services continued to grow. Similarly, real imports of goods appear to have declined modestly in the first quarter while imports of services continued to expand. From a +1.0 percentage point growth contribution in the fourth quarter, the net export growth contribution is expected to have swung to -0.5 percentage points in the first quarter.

Also as expected, the pace of inventory accumulation slowed in the first quarter. Taking account of the data for January and February along with assumptions for March, it appears that inventory accumulation exerted a 0.7 percentage point drag on the 2014Q1 growth rate following a zero growth contribution in the fourth quarter. The bulk of this slowing of inventory accumulation is accounted for by retail inventories of motor vehicles and parts. Production of motor vehicles and parts declined at a 3.4% annual rate in the first quarter following a 14.5% increase of production in the fourth quarter. Imports of autos also fell sharply in the first quarter. Excluding motor vehicles and parts, manufacturing output rose at a 2.0% annual rate in the first quarter, down from 3.6% in the fourth quarter, with the slowing concentrated in January.

After a 12.8% (annual rate) decline in real federal government consumption and gross investment in 2013Q4, we expect essentially no change in the first quarter. However, of all of the components of final expenditures, real federal government consumption and gross investment presents the greatest challenge in terms of making reasonably accurate estimates based on high frequency data. Federal revenues continue to surprise to the upside, being up 16% in March from March of 2013. Individual receipts were up 30% over that period. CBO's mid-April update of the current law baseline projects a deficit of just 2.8% of GDP in FY2014, down from 3.0% of GDP in the baseline released in early February. The deficit was 4.1% of GDP in FY2013 and 9.8% of GDP in FY2009.

State and local government receipts are also rising at a faster pace, although not as rapidly as at the federal level. Total receipts rose 2.9% in 2013 versus 0.5% in 2012. Tax receipts rose 3.7% in 2013, up from 2.9% in 2012. In contrast, transfer receipts (primarily federal grants-in-aid) have stabilized after falling sharply in 2011 and 2012. Despite the improved growth of receipts, growth of real consumption and gross investment was just 0.2% (Q4/Q4) in 2013, and remained quite sluggish in the first quarter.

Price inflation moved up somewhat in the first quarter as energy prices increased, after falling in 2013Q4, and food prices rose at a faster pace. The total CPI rose at a 1.9% annual rate in the first quarter, up from 1.1% in the fourth quarter. On a four-quarter change basis, total CPI inflation was 1.4% in Q1 versus 1.2% in Q4. The core CPI rose at a 1.6% annual rate in the first quarter, the same as in 2013Q4. Core services prices rose at a modestly higher rate in the first quarter (2.5% versus 2.4%) while core goods prices fell at a somewhat faster pace (-1.0% versus -0.6%). The four-quarter change in the core CPI was 1.6% in the first quarter versus 1.7% in the preceding three quarter. Measured in this way, the rate of decline of core goods intensified somewhat while the rate of change of core services was quite stable. Within core services, the rate of increase of shelter prices firmed somewhat while the rate of increase of medical services prices slowed somewhat.

Lastly, a small resurgence in C&I loan growth has attracted attention recently. Between January, 2013 and January, 2014, C&I loan growth reported in the H8 slowed from 13.5 percent (year-over-year) to 6.5 percent. Between January, 2014 and April 9 (the latest), C&I loan growth has rebounded to 10.4 percent. One potentially relevant question is whether the resurgence reflects expanding supply or stronger demand. Judging from the Senior Loan Officers Opinion Survey, it seems both forces are at play. The net percent of senior loan officers reporting loosening standards was 13.7 percent in the first quarter of this year, with no loan officers reported tightening standards. On the other hand, the net percent reporting stronger demand was 16.4 percent in the first quarter, with only 6.8 percent reporting weaker demand. In the end, however, it may not matter whether the rebound is driven by supply or demand. While the resurgence would appear to be a favorable development, it should be noted that bank loan growth in general and C&I loan growth in particular are lagging or at most coincident indicators of GDP and business spending. That fact has been well known since the early 1990s when research on the bank lending channel provided evidence that monetary aggregates contained greater predictive content than bank loans for GDP and its components. C&I loans are also a component of the Conference Boards' Index of Lagging Indicators. Indeed, the bottom line in a recent Goldman Sachs piece on the resurgence was that C&I loan growth is "…at best a coincident, and perhaps a slightly lagging, indicator of investment growth." Accordingly, the resurgence, while welcome, does not likely provide any new information about the outlook.

The Outlook

The recent flow of data has given us increased confidence that our interpretation of the slowing of growth in the first quarter was correct. The expected slowing of exports and inventory investment, combined with unusually severe winter weather, dampened economic activity in January and February, only to be followed by a notable rebound in March. As mentioned above, for largely arithmetic reasons, we expect growth of real GDP to rebound sharply in the second quarter, likely into the high 3% to low 4% (annual rate) range. However, the prediction of strong growth in the second quarter should not be

interpreted as a fundamental strengthening just as the slow growth of the first quarter was not a fundamental weakening. Indeed, the growth rate for the entire first half of 2014 is between 2 ¼% to 2 ½% (annual rate), only slightly below what we were expecting at the end of 2013.

By the second half of 2014 we anticipate that growth will move up to around 3 ¼% and then to 3 ½% in 2015 as the improved underlying fundamentals exert themselves more forcefully. Those improved fundamentals are well known at this point. Both the asset and the liability side of consumer's balance sheets are effectively repaired, with household liabilities beginning to expand. The excess housing built up over the previous decade has been worked off, and home prices continue to rise rapidly due to a shortage of homes for sale. Fiscal consolidation at both the federal and the state and local levels is largely over. In addition, credits standards continue to gradually ease, while overall financial conditions remain supportive. And growth prospects among many of our major trading partners have improved.

All else equal, the stronger growth of output should translate into stronger growth of employment, with the unemployment rate declining to just over 6% by the end of 2014 and to around 5 ¼% by the end of 2015. However, there is considerable uncertainty around this projected path of the unemployment rate due to uncertainty over the future path of the participation rate. The participation rate has averaged 63.0 in January and February, up from 62.9 in the fourth quarter. We expect it to begin trending upward in the near future, reaching 63.4 by 2015Q4.

We expect inflation to rise gradually over the next couple of years, and to be near the FOMC objective by the end of 2015, at which time we expect inflation to stabilize. This forecast is based on the projected gradual increase in the levels of resource utilization, which would ease downward pressure on firms' marginal costs and prices, a firming in global demand, and the upward pull exercised by stable inflation expectations on actual inflation. Underpinning the latter assumption is the broad stability of long-term inflation expectations across different financial and survey measures, combined with ongoing

moderate growth of wages and unit labor costs, all observations consistent with anchored inflation expectations.

2-1: Projections of Key Variables

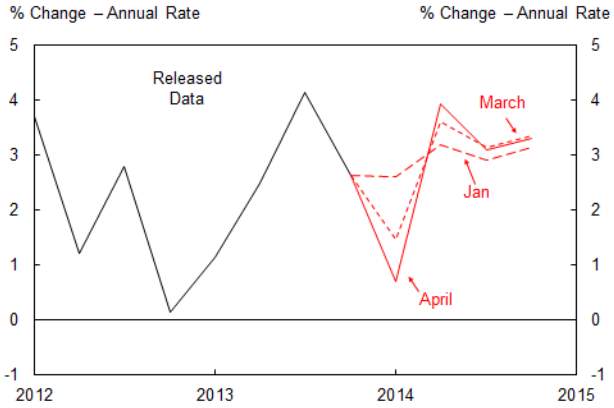
	Core PCE Inflation		Real GDP Growth		Unemployment Rate*		Fed Funds Rate**	
	March	April	March	April	March	April	March	April
2013								
Q1	*1.3*	*1.3*	*1.1*	*1.1*	*7.7*	*7.7*	*0-0.25*	*0-0.25*
Q2	*0.6*	*0.6*	*2.5*	*2.5*	*7.5*	*7.5*	*0-0.25*	*0-0.25*
Q3	*1.4*	*1.4*	*4.1*	*4.1*	*7.2*	*7.2*	*0-0.25*	*0-0.25*
Q4	*1.3*	*1.3*	*2.4*	*2.6*	*7.0*	*7.0*	*0-0.25*	*0-0.25*
2014								
Q1	1.2	1.2	*1.5*	0.7	*6.6*	6.7	0-0.25	0-0.25
Q2	1.3	1.4	*3.6*	3.9	*6.4*	6.5	0-0.25	0-0.25
Q3	1.4	1.4	*3.1*	3.1	*6.2*	6.4	0-0.25	0-0.25
Q4	1.5	1.5	*3.4*	3.3	*6.1*	6.3	0-0.25	0-0.25
2015								
Q1	1.6	1.6	3.3	3.3	*5.9*	6.2	0-0.25	0-0.25
Q2	1.7	1.7	3.4	3.6	*5.7*	5.8	0.25	0.25
Q3	1.8	1.8	3.6	3.7	*5.6*	5.6	0.5	0.5
Q4	1.9	1.9	3.5	3.4	*5.3*	5.4	1.0	1.0
Q4/Q4								
2012	*1.7*	*1.7*	*2.0*	*2.0*	*-0.8*	*-0.8*	*0.0*	*0.0*
2013	*1.2*	*1.2*	*2.5*	*2.6*	*-0.7*	*-0.7*	*0.0*	*0.0*
2014	1.3	1.4	2.9	2.8	*-1.1*	-1.0	0.0	0.0
2015	1.7	1.7	3.6	3.5	*-1.1*	-0.8	1.0	1.0

Columns reflect the forecast dates. Numbers in gray are from the previous Blackbook, and numbers in italics are released data.
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.
**Quarterly values are the end-of-quarter value. Yearly values are the difference between the end-of-year value in the previous year and the end-of-year value in the listed year.

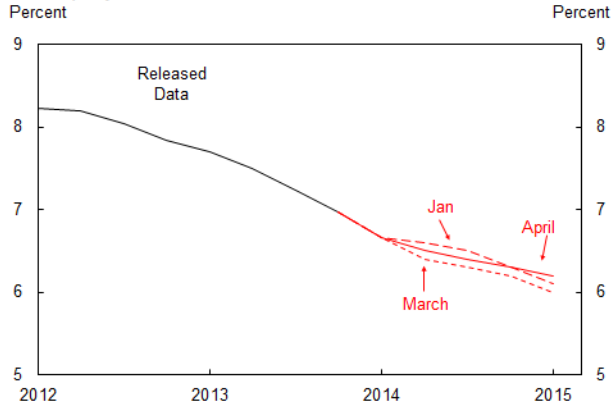
2-2: Evolution of Projected Quarterly Paths

Key Indicators

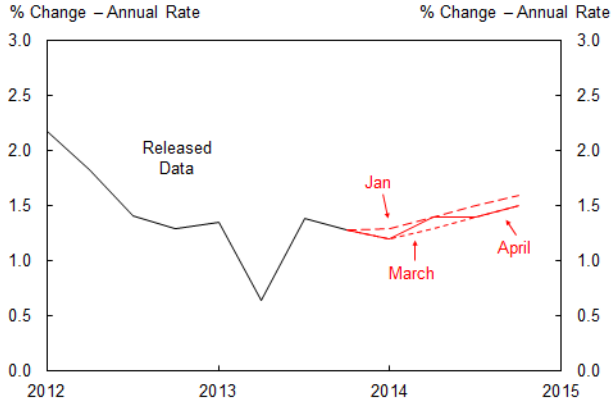
Real GDP Growth



Unemployment Rate

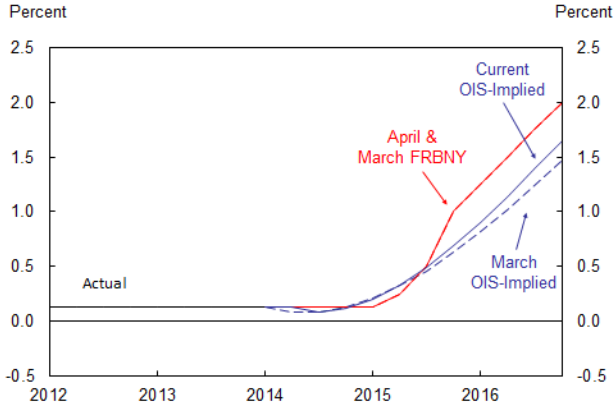


Core PCE Inflation

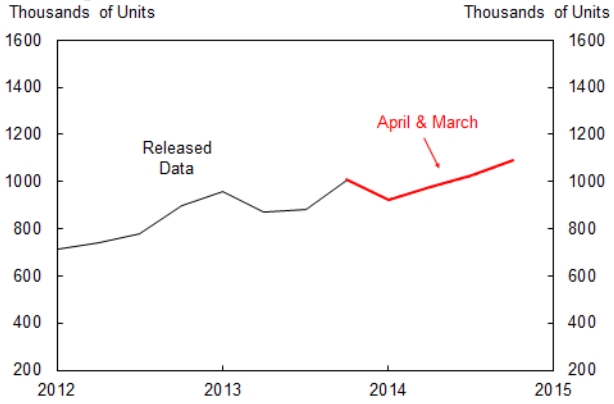


Forecast Assumptions

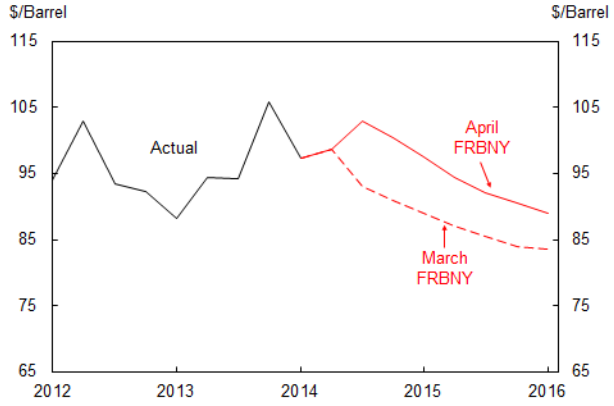
Federal Funds Rate



Housing Starts



Crude Oil



Source: FRBNY (MMS and IR Functions) and Federal Reserve Board

2-3: Near-Term Projections

	Growth Rates (AR)			Growth Contributions (AR)		
	2013Q4	2014Q1	2014Q2	2013Q4	2014Q1	2014Q2
OUTPUT						
Real GDP	2.6	0.7	3.9	2.6	0.7	3.9
	(2.4)	(1.5)	(3.6)	(2.4)	(1.5)	(3.6)
Final Sales to Domestic Purchasers	1.6	1.8	3.9	1.6	1.8	3.9
	(1.2)	(2.4)	(3.6)	(1.3)	(2.4)	(3.6)
Consumption	3.3	2.0	3.4	2.2	1.4	2.3
	(2.5)	(2.5)	(3.1)	(1.7)	(1.7)	(2.1)
BFI: Equipment	10.9	2.0	10.0	0.6	0.1	0.5
	(10.5)	(5.0)	(10.0)	(0.6)	(0.3)	(0.5)
BFI: Nonresidential Structures	-1.8	10.0	14.0	-0.1	0.3	0.4
	(0.2)	(6.0)	(14.0)	(0.0)	(0.2)	(0.4)
BFI: Intellectual Property Products	4.0	4.0	4.0	0.2	0.2	0.2
	(8.0)	(4.0)	(4.0)	(0.3)	(0.2)	(0.2)
Residential Investment	-7.9	-4.1	18.9	-0.3	-0.1	0.6
	(-8.8)	(7.3)	(15.0)	(-0.3)	(0.2)	(0.5)
Government: Federal	-12.8	0.0	-2.0	-1.0	0.0	-0.1
	(-12.8)	(-1.0)	(-2.0)	(-1.0)	(-0.1)	(-0.1)
Government: State and Local	0.0	0.5	1.3	0.0	0.1	0.1
	(-0.5)	(0.3)	(1.3)	(-0.1)	(0.0)	(0.1)
Inventory Investment	--	--	--	0.0	-0.6	-0.4
	--	--	--	(0.1)	(-0.8)	(-0.3)
Net Exports	--	--	--	1.0	-0.5	0.4
	--	--	--	(1.0)	(-0.1)	(0.3)
INFLATION						
Total PCE Deflator	1.1	1.4	1.7			
	(1.0)	(1.5)	(1.5)			
Core PCE Deflator	1.3	1.2	1.4			
	(1.3)	(1.2)	(1.3)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	1.8	-0.8	2.8			
	(1.8)	(1.8)	(2.0)			
Compensation per Hour	1.7	1.8	1.8			
	(1.7)	(1.9)	(2.0)			
Unit Labor Costs	-0.1	2.6	-1.0			
	(-0.1)	(0.1)	(-0.0)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-4: Medium-Term Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2013	2014	2015	2013	2014	2015
OUTPUT						
Real GDP	2.6	2.8	3.5	2.6	2.8	3.5
	(2.5)	(2.9)	(3.5)	(2.5)	(2.9)	(3.5)
Final Sales to Domestic Purchasers	1.6	3.1	3.7	1.7	3.1	3.8
	(1.5)	(3.2)	(3.7)	(1.6)	(3.3)	(3.7)
Consumption	2.3	3.0	3.1	1.6	2.0	2.1
	(2.1)	(3.0)	(3.1)	(1.5)	(2.0)	(2.1)
BFI: Equipment	3.9	7.9	12.0	0.2	0.4	0.7
	(3.8)	(8.7)	(12.0)	(0.2)	(0.5)	(0.7)
BFI: Nonresidential Structures	-0.7	11.5	10.0	0.0	0.3	0.3
	(-0.2)	(10.5)	(10.0)	(-0.0)	(0.3)	(0.3)
BFI: Intellectual Property Products	3.0	4.0	4.0	0.1	0.2	0.2
	(4.0)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	6.9	6.4	13.5	0.2	0.2	0.4
	(6.6)	(10.5)	(11.5)	(0.2)	(0.3)	(0.4)
Government: Federal	-6.2	-1.5	-2.0	-0.5	-0.1	-0.1
	(-6.2)	(-1.8)	(-2.0)	(-0.5)	(-0.1)	(-0.1)
Government: State and Local	0.2	0.9	1.9	0.0	0.1	0.2
	(0.1)	(0.8)	(1.9)	(0.0)	(0.1)	(0.2)
Inventory Investment	--	--	--	0.7	-0.2	0.0
	--	--	--	(0.8)	(-0.2)	(-0.0)
Net Exports	--	--	--	0.2	-0.2	-0.3
	--	--	--	(0.2)	(-0.1)	(-0.3)
INFLATION						
Total PCE Deflator	1.0	1.6	1.8			
	(1.0)	(1.5)	(1.8)			
Core PCE Deflator	1.2	1.4	1.7			
	(1.2)	(1.3)	(1.7)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	1.3	1.3	1.6			
	(1.3)	(1.7)	(1.5)			
Compensation per Hour	0.3	1.8	2.1			
	(0.3)	(2.0)	(2.2)			
Unit Labor Costs	-0.9	0.5	0.5			
	(-0.9)	(0.3)	(0.7)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-4: Medium-Term Projections, Continued

	Q4/Q4 Growth Rates		
	2013	2014	2015
INFLATION			
Total CPI Inflation	1.2	2.0	2.2
	(1.2)	(2.0)	(2.2)
Core CPI Inflation	1.7	1.8	2.2
	(1.7)	(1.8)	(2.2)
GDP Deflator	1.4	2.2	2.0
	(1.4)	(1.9)	(2.0)
PRODUCTIVITY AND LABOR COSTS*			
Output	2.9	3.5	4.4
	(2.9)	(3.6)	(4.3)
Hours	1.7	2.1	2.9
	(1.7)	(2.0)	(2.8)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	7.0	6.3	5.4
	(7.0)	(6.2)	(5.4)
Participation Rate (Avg. Q4 Level)	62.9	63.2	63.5
	(62.9)	(63.1)	(63.4)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	200	204	299
	(182)	(201)	(296)
INCOME			
Personal Income	1.6	4.2	4.2
	(1.6)	(3.9)	(4.3)
Real Disposable Personal Income	-0.1	2.6	2.3
	(-0.2)	(2.3)	(2.5)
Personal Saving Rate	4.3	4.1	3.5
	(4.5)	(4.0)	(3.5)
Corporate Profits Before Taxes	6.2	0.8	-0.1
	(4.2)	(1.7)	(0.4)

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-5: Comparison with Other Forecasts

Real GDP Growth

	Release Date	2013Q4	2014Q1	2013 Q4/Q4	2014 Q4/Q4
FRBNY	3/13/2014	2.6	0.7	2.6	2.8
		(2.4)	(1.5)	(2.5)	(2.9)
Blue Chip	4/10/2014	2.4	1.9	2.5	2.7
		(2.4)	(1.9)	(2.5)	(2.7)
Median SPF	2/14/2014	--	2.0	2.7	2.6
		(-1.8)	(2.5)	(1.7)	(2.6)
Macro Advisers	4/4/2014	2.6	0.9	2.6	2.9
		(2.4)	(1.5)	(2.5)	(3.0)
FRBNY-DSGE	4/24/2014	--	0.7	--	1.2
		(1.8)	(2.0)	(2.2)	(1.9)

Core PCE Inflation

	Release Date	2013Q4	2014Q1	2013 Q4/Q4	2014 Q4/Q4
FRBNY	3/13/2014	1.3	1.2	1.2	1.4
		(1.3)	(1.2)	(1.2)	(1.4)
Median SPF	2/14/2014	1.5	1.5	1.2	1.7
		(1.5)	(1.7)	(1.2)	(1.6)
Macro Advisers	4/4/2014	1.3	1.2	1.2	1.4
		(1.3)	(1.2)	(1.2)	(1.4)
FRBNY-DSGE	4/24/2014	--	1.2	--	1.0
		(1.1)	(0.9)	(1.1)	(1.0)

CPI Inflation

	Release Date	2013Q4	2014Q1	2013 Q4/Q4	2014 Q4/Q4
FRBNY	3/13/2014	1.1	1.9	1.2	2.0
		(1.1)	(2.2)	(1.2)	(2.0)
Blue Chip	4/10/2014	1.1	1.8	1.2	1.9
		(1.1)	(1.9)	(1.2)	(2.0)
Median SPF	2/14/2014	1.8	1.7	1.4	1.8
		(1.8)	(1.7)	(1.4)	(2.0)
Macro Advisers	4/4/2014	1.1	1.9	1.2	1.9
		(1.1)	(2.0)	(1.2)	(1.9)

Core CPI Inflation

	Release Date	2013Q4	2014Q1	2013 Q4/Q4	2014 Q4/Q4
FRBNY	3/13/2014	1.6	1.6	1.7	1.8
		(1.6)	(1.6)	(1.7)	(1.8)
Median SPF	2/14/2014	1.9	1.8	1.8	1.9
		(1.9)	(1.9)	(1.8)	(2.0)
Macro Advisers	4/4/2014	1.6	1.5	1.7	1.6
		(1.6)	(1.6)	(1.7)	(1.7)

*Note: Numbers in gray are from the previous Blackbook

3. Uncertainty & Risks

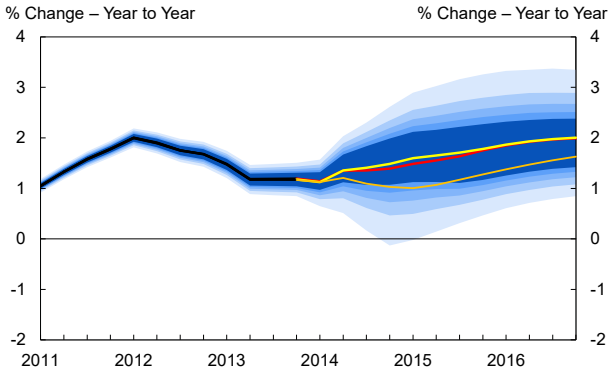
Because recent developments generally have been in accord with our central outlook, our overall assessment of the risks has not changed materially over the intermeeting period. Based on the difference between the modal central forecast and the expected value from our forecast distributions, the risks remained roughly balanced for core PCE inflation and for real GDP growth through most of the forecast horizon [Exhibit 3-1]. We also see the uncertainty around the forecast as having declined modestly over the period.

The small decrease in uncertainty reflects that the recent data have been consistent with the story behind our central scenario, where the weakness seen earlier in the year would be transitory. In our framework, we adjust to such developments by raising the probability of the central scenarios and reducing the probabilities of some of the alternative scenarios. For this Blackbook the reductions were primarily in the upside *Faster Growth* scenario and the downside *Fiscal Consolidation* scenario [Exhibit 3-2]. With these changes, there has been a slight narrowing of the 90 percent probability intervals for both real GDP growth and core PCE inflation [Exhibit 3-3]. If the data continue to be consistent with our outlook, we expect to narrow these intervals more substantially over the next FOMC cycle.

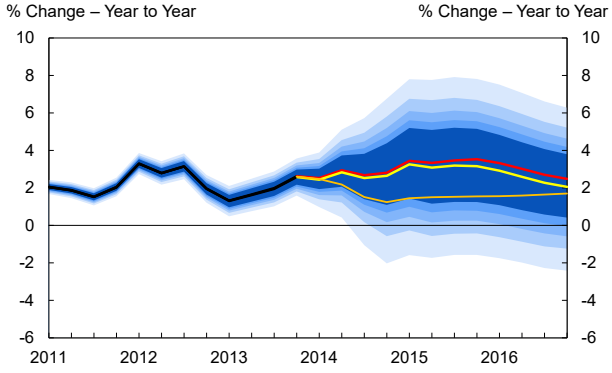
Comparing the recent data and our current central forecast with the forecast distribution from a year earlier, the current central forecast for inflation is in the lower part of the year-ago inflation distribution over most of the forecast horizon, reflecting the low inflation data of the past year and its impact on our outlook [Exhibit 3-3]. In contrast, the current real GDP growth forecast is within the center of the year-ago forecast distribution over most of the forecast horizon.

3-1: Forecast Distributions

Core PCE Inflation Forecast Distribution



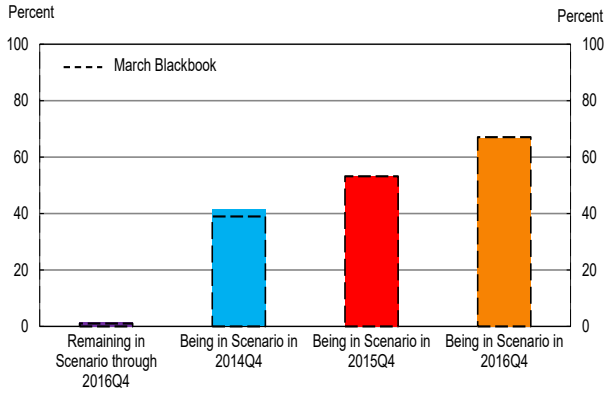
Real GDP Growth Forecast Distribution



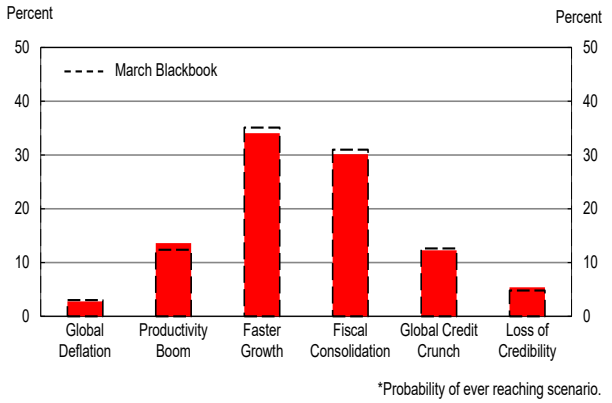
The yellow line is the expected value of the forecast distribution, the red line is the FRBNY central projection, the orange line is the DSGE forecast, and the black line is released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter change will be within the respective range.

3-2: Scenario Probabilities

Central Scenario Probabilities



Alternative Scenario Probabilities*



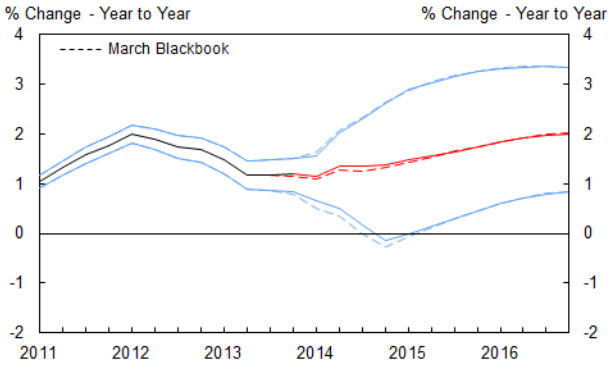
*Probability of ever reaching scenario.

The left chart shows the probability of remaining in the central scenario through the end of the forecast horizon and the probabilities of being in the central scenario at the end of the next three years. The right chart shows the probabilities of ever reaching an alternative scenario over the forecast horizon, an assessment of the overall likelihood of each alternative scenario. A short description of the scenarios and the methodology to perform risk assessment is in the Appendix.

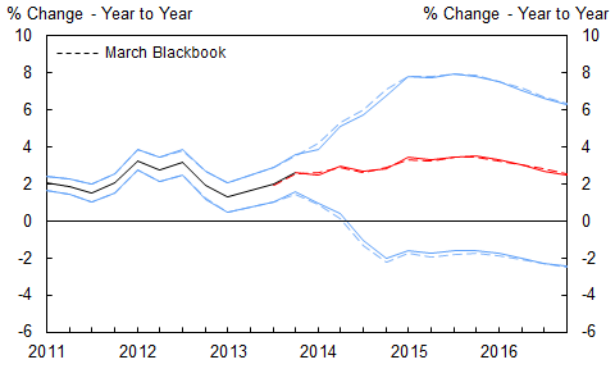
Source: MMS Function (FRBNY)

3-3: Evolution and Performance of Forecast Distributions

Change in Core PCE Inflation Forecast Distribution

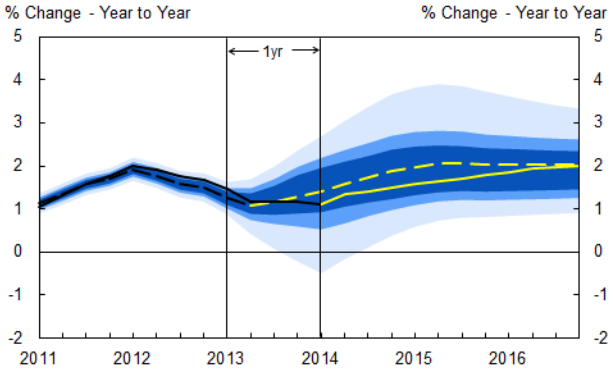


Change in Real GDP Growth Forecast Distribution

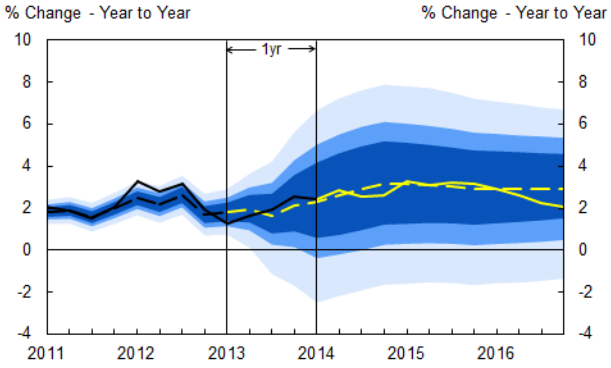


The red lines are the central scenario projections, black lines are released data, and blue lines represent upper and lower 90 percent forecast probability intervals. Dashed lines represent forecasts from the previous Blackbook.

One-Year Comparison of Core PCE Inflation Forecast Distribution and Expected Value



One-Year Comparison of Real GDP Growth Forecast Distribution and Expected Value



The solid yellow lines are the current central scenario projections and the dashed yellow lines are the year-ago Blackbook central scenario projections. Black lines are released data and the blue lines represent upper and lower 50, 70 and 90 percent forecast probability intervals from the year-ago Blackbook.

Source: MMS Function (FRBNY)

Special Topic: The Decline in U.S. Borrowing

Tom Klitgaard and Preston Mui

The United States is borrowing less from the rest of the world. From 2000 to 2008, current account deficits were, on average, equal to 5.0 percent of GDP. This reliance on foreign funds eased during the recession and then rebounded during the first stage of the recovery. Since 2011, however, borrowing has trended down and in 2013 borrowed funds fell to 2.3 percent of GDP, the smallest share of GDP since 1997.

The United States relies on foreign funding because its spending exceeds its income. Another way of stating this phenomenon is that the economy does not save enough to cover its investment spending so it has to rely on foreign saving to fill the gap.

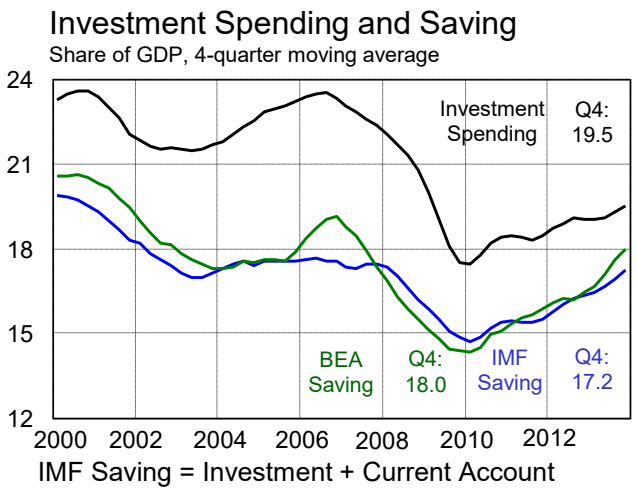
The amount of external borrowing fell during the recent recession as investment spending fell more than saving. Both saving and investment spending recovered, with the amount of external borrowing rising from 2.5 percent of GDP in 2009 to 3.0 percent in 2010. Since then, saving has been rising faster than investment spending.

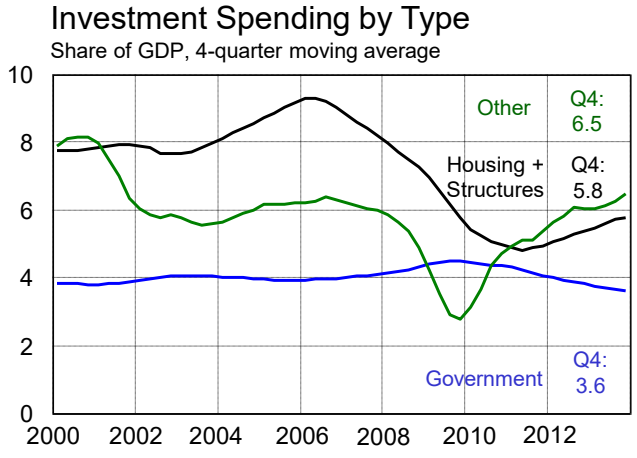
Investment spending is being held back by construction spending, with other private investment spending back to pre-recession levels as a share of GDP. Government investment spending at below pre-recession levels is also a contributing factor, although the shortfall is not large as a share of GDP.

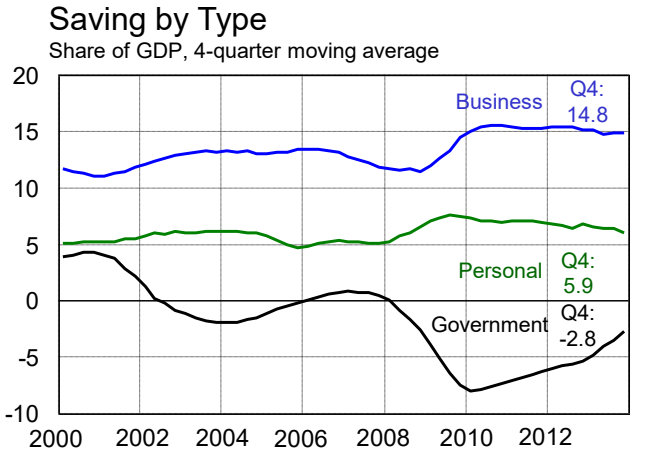
The BEA measures saving as the sum of personal, business, and government saving. Business saving is the biggest component, with personal saving less than half as large. Both rose in 2009-2010 and remain above pre-recession levels. The most volatile component is government saving which started to improve from a very low level in 2011 then surged in 2013, in part because of higher tax rates.

The forecast is that the rate of borrowing will stop falling in 2014 and stabilize near last year's level. Still, just holding steady would represent a substantial reduction in the gap between spending and income from pre-recession levels.

(Note that the BEA measure of saving in the national accounts is greater than the IMF measure, which is the sum of investment spending and the current account balance. The BEA saving measure has borrowing falling even more to 1.5 percent of GDP in 2013.)







Appendix

In this Appendix, we provide brief descriptions of the alternative scenarios used in this Blackbook [A-1], and of the methodology underlying our risk assessment and forecast distributions [A-2].

A-1. Alternative Scenario Descriptions

Our first alternative scenario considers the impact of productivity growth above our assumed trend of about 1.5% on a nonfarm business sector basis (*Productivity Boom)*. The second scenario (*Fiscal Consolidation)* assesses the consequences of below-trend productivity growth. We consider four additional scenarios. In one (*Faster Growth*), "headwinds" subside more quickly than expected, leading to stronger aggregate demand effects from monetary and fiscal policy. In another (*Loss of Credibility*), the public and investors lose confidence in the current stances of monetary and fiscal policy. In the other two (*Global Credit Crunch* and *Global Deflation*), renewed stresses in global financial and economic conditions have an adverse impact on U.S. real economic growth and inflation; the differences between the two mainly reflect differing assessments of the persistence of the negative effects.

A-2. Methodology to construct the forecast distribution

Our approach to producing the FRBNY forecast distributions is a generalization of techniques used at the Bank of England and other central banks to depict the uncertainty and balance of risks around a forecast. It allows for a dynamic balance of risks that is jointly assessed over inflation and output growth.

Three primary components underlie these forecast distributions: (1) a central scenario with modal inflation and output growth characterized by the central forecast described in Section 2, (2) alternative scenarios with specific inflation and output implications that differ from those of the central scenario, and (3) probabilities that the economy will enter those alternative scenarios. This approach to quantifying uncertainty and risks allows us

to interpret the forecast distribution for output growth and inflation, as well as analyze the impact on that distribution of changing the probabilities of the alternative scenarios.

We set the long-run behavior of our central forecast at the FOMC's longer-run inflation goal and our estimate of the potential growth rate. We also assume that, if the economy enters an alternative scenario, it eventually returns to the central scenario and remains in that scenario thereafter.

We conduct a simulation exercise to generate paths for inflation and output growth; we then perform calculations about our forecast distribution that reflect our risk assessment. This exercise consists in generating a large number of indicator series, with each entry in a given series corresponding to a quarter in the forecast horizon; for each of these series, each quarter's value indicates only the prevailing scenario in that quarter. To generate these scenario-indicator series, we set two parameters for each alternative scenario: (1) the probability that the economy will leave the central scenario and enter the alternative scenario—the "initial probability"—and (2) the probability that the economy will remain in the alternative scenario once it enters the scenario—the "persistence."

After creating the indicator series, we generate, for each series, a path for inflation and a path for output growth, with each entry in a given path corresponding to a quarter in the forecast horizon. For a given indicator series and a given quarter, the values of the associated inflation and output growth paths are determined by a draw from the indicated joint distribution of inflation and output growth, based on the scenario the indicator series points to for that quarter. If, for example, the series indicates that the economy is in the central scenario, we draw inflation and output values from a distribution centered at the central forecast. If instead the series indicates the economy is in an alternative scenario, we draw values from a modified version of the central scenario distribution that is consistent with the alternative scenario.

FOMC BACKGROUND MATERIAL

RESEARCH AND STATISTICS GROUP

FRBNY Blackbook

June 2014

CONFIDENTIAL (FR) Class II FOMC

FRBNY BLACKBOOK

June 2014

CONTENTS

APPENDIX

1. Policy Recommendation and Rationale

Our assessment of the economic outlook has not changed significantly since the last Blackbook. Although current estimates point to a previously unanticipated decline in output in the first quarter, the data releases during the intermeeting period suggest the weakness was largely transitory and that the economy is in a good position to display solid growth throughout the rest of the year. Therefore, we still anticipate real growth will be significantly above our estimate of its potential rate over the rest of 2014 and 2015 as the improved underlying fundamentals exert themselves more forcefully. The CPI and PCE deflator releases for April furthered the view that inflation has stabilized and that tentative signs of a pickup are emerging, supporting our forecast that inflation will slowly move towards the FOMC's longer-run goal over the next couple of years. The risks to real activity and inflation remain roughly balanced.

Because the developments during the intermeeting period were largely in accord with our central outlook, our recommendation for the upcoming meeting is to stay the course on tapering and maintain the current guidance on the FFR path. With an anticipated end to the asset purchase program in the fall or winter, greater focus on issues related to the eventual normalization of the policy stance as well as the medium-term monetary policy framework has become warranted.

The last comprehensive set of guidelines about policy normalization issued in June 2011 was built on the notion that a relatively quick return to a "normal" balance sheet – one with the smallest levels consistent with efficient policy implementation and a composition similar to the pre-crisis norm – would be appropriate to achieve a smooth and sustainable convergence to the dual mandate objectives. Subsequent communication has partially moved away from the notion of a rapid decline in the size of the balance sheet. Sales of long-term SOMA assets are no longer actively contemplated. Consequently, with a considerably larger balance sheet likely at the onset of normalization and a slower expected pace to its subsequent decline, the Federal Reserve will have to conduct policy with a sizable amount of reserves for a lengthy period.

In formulating a coherent framework for balance sheet and interest rate policy in such an environment, a renewed commitment to do what is necessary to achieve the dual mandate in a balanced way and in the context of financial stability is required. Far from being an empty platitude, this emphasis on allocative efficiency and macroeconomic stabilization can shed light on the first principles ("what to achieve") to guide the design and implementation of a successful normalization strategy, relegating the choice of instruments and frameworks ("how to achieve that") to tactics.

A precondition for delivering on the objectives is that the monetary transmission mechanism operates efficiently. In this light, during normalization, we recommend changes in the stance of policy to affect the "general level of short-term interest rates" and to influence financial conditions broadly. In practice, such changes could likely be achieved through concurrent increases in the target range of the effective federal funds rate (FFR) and the interest rate on excess reserves (IOER), the former viewed as a proxy for short-term borrowing costs for nonfinancial institutions that are not dependent on bank loans and the latter as an indicator of short-term borrowing costs from depository institutions. This mixture of administered and market rates essentially represents the status quo, and maintaining it would provide continuity in the characterization of the monetary policy stance. The effective FFR expanded to include the Eurodollar market would likely provide a more representative measure of short-term rates, and thus would be a more suitable indicator of the policy stance. No indication should be offered that the FOMC is targeting a point for the FFR at the center of the band described by the overnight reverse repo rate (ON RRP) and the IOER rate – instead the FFR effective rate target should be stated as a range; in practice, it would be prudent for the Committee to raise the upper end of the FFR target range to 10 basis points above the IOER rate, which would allow for the possibility of alternative market behaviors once lift-off were to commence.

This characterization would place less emphasis on the setting of the ON RRP in policy communication than some have advocated. While the ON RRP has appeared to help to

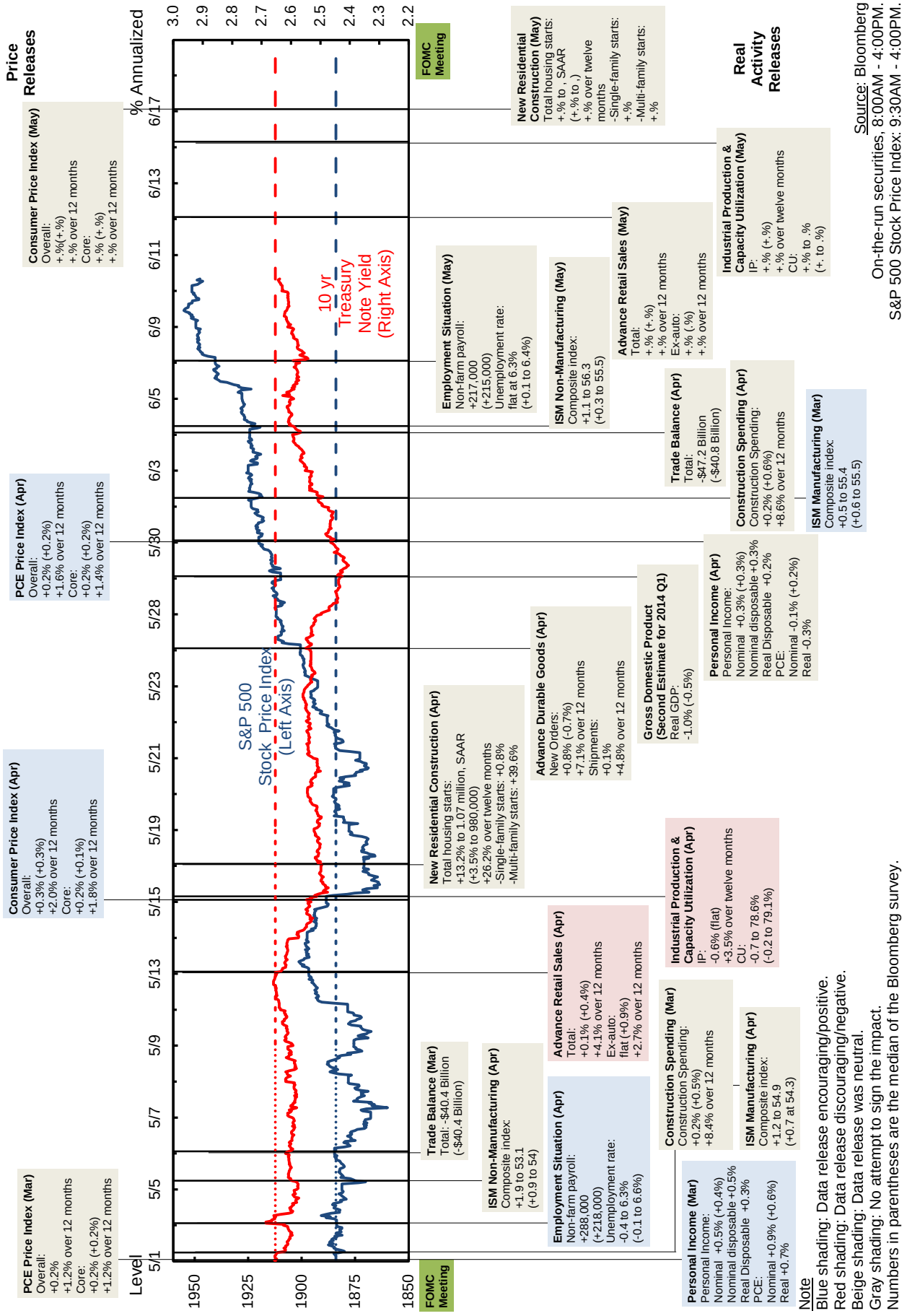
set a floor for overnight rates and thereby likely will play a crucial role for the control of short-term rates, it is still a new and relatively untested tool whose ability to affect the monetary transmission mechanism requires further investigation. For the conduct of policy, we would argue in favor of a relatively large spread between IOER and ON RRP rates, perhaps on the order of the current spread.

Another important issue concerns the sequencing of lift-off and the halt to reinvestments. Again, first principles imply that any decision on this matter should be based on its contribution to the achievement of the dual mandate objectives. In contrast to the June 2011 guidelines, we favor lift-off occurring first, and then ending reinvestments when economic and financial conditions warrant it; that is, when the exit from the zero lower bound appears to be sustainable and the risks of reversion are deemed as negligible. By adopting this strategy there would be less risk of an unwarranted pulling forward of the expected lift-off date and tightening in financial conditions from changing the reinvestment policy that would jeopardize a smooth take-off of interest rates.

More generally, in our view the balance sheet remains part of the overall stance of policy, and consequently also requires continued guidance about its evolution. Even though the bar should be set rather high to promote an active role for balance sheet policy, its ability to affect term premia and financial conditions to support achieving the dual mandate objectives should not be overlooked or dismissed a priori. We therefore advocate a state contingent policy for the size and composition of the balance sheet over the medium term. Communication about a desired long-run size of the balance sheet could also be added as a key element of balance sheet management, although a decision on this matter would seem more appropriate when a consensus emerges on whether to operate a corridor or a floor system. That decision should not be made prematurely, as the Committee will be better informed after it gains more experience with managing interest rate guidance post-lift-off using the tools it developed in an environment with a large balance sheet.

A shorter-term issue is the clarification of the forward guidance in paragraph six of the current FOMC statement. At the moment, there is no shared viewpoint about why participants expect the FFR to be materially below its longer-run normal level at the end of 2016, even though most participants in the SEP expect unemployment and inflation gaps to be small at that time. Our view is that the gradual rise to the equilibrium policy rate reflects the constraints imposed by the zero lower bound (and possibly other long-lasting "headwinds" associated with the financial crisis), which require maintaining the FFR lower for longer than suggested by historical behavior to achieve the dual mandate objectives over the long-run.

1-1: Key Data Releases



Source: Bloomberg
On-the-run securities, 8:00AM - 4:00PM.
S&P 500 Stock Price Index: 9:30AM - 4:00PM.

Note
Blue shading: Data release encouraging/positive.
Red shading: Data release discouraging/negative.
Beige shading: Data release was neutral.
Gray shading: No attempt to sign the impact.
Numbers in parentheses are the median of the Bloomberg survey.

2. Central Forecast

Intermeeting Developments

Based on the second estimate, growth of real GDP in 2014Q1 was revised down to -1.0% (annual rate) from the first estimate of 0.1%. This downward revision was mainly due to a much lower pace of inventory investment, with the growth contribution being revised to -1.6 percentage points from the first estimate of -0.6 percentage points. The growth contribution from net exports was also revised downward, to -1.0 percentage points from -0.8 percentage points. In contrast, the growth contribution from finals sales to domestic purchasers was revised up to 1.6 percentage points from 1.5 percentage points. The April report on international trade included revisions to the first quarter data that suggest that the Q1 growth rate will be revised to around -1 ½% with the release of the third estimate at the end of June.

Even though output fell in the first quarter, hours worked in the nonfarm business sector rose at a 2.2% annual rate. As a result, productivity declined at a 3.2% annual rate, the steepest decline since the first quarter of 2008. This data suggests that, not only did the severe winter weather prevent people from getting to their workplace, it also made it difficult to accomplish very much even when they were able to work. Unit labor costs soared, rising at a 5.7% annual rate. This development was reflected in the first quarter income data. Corporate profits fell to 13.4% of national income from a post WWII record of 14.7% in 2013Q4. Labor compensation rose from 60.7% of national income to 61.7% in the first quarter, the largest quarterly increase in five years.

Available data for the second quarter have been mixed, but we expect growth to rebound to around 3 ½% (annual rate). The labor market data has been particularly encouraging. The April-May average gain in nonfarm payroll employment moved up to 250,000 from just under 200,000 over the preceding six months. Hours worked in the nonfarm business sector are likely to increase at a 3% annual rate versus 2.2% in Q1. While growth of average hourly earnings has slowed in the second quarter, the strong increase in hours

worked is producing gains in private nominal wage and salary income of around 4 ½% (annual rate). That is not a spectacular rate of increase but better than over the preceding three quarters.

Real personal consumption expenditures (PCE) fell 0.3% in April, but this follows a 0.8% increase in March. Moreover, nearly half of the April decline was due to reduced household consumption of utilities, as the weather returned to normal following a very cold March. Data on consumer confidence for the month of May was mixed. The Conference Board's Index of Consumer Confidence rose to 83.0, from 81.7 in April, remaining near the highest level since January of 2008. In contrast, the University of Michigan Index of Consumer Sentiment slipped a bit in May, declining to 81.9 from 84.1 in April. Nonetheless, sales of light-weight motor vehicles surprised to the upside in May, reaching a 16.7 million annual rate. A three month moving average of light vehicle sales has reached 16.4 million units, the highest since March of 2007. Despite the decline in April, we expect growth of real PCE of around 3% (annual rate), comparable to the pace of the preceding two quarters.

The various indicators of the single-family housing market we follow continue to be mixed. A three-month moving average of sales of new single-family homes declined in March and April, with the April level 4.7% below that of a year ago. In contrast, a three-month moving average of single-family housing starts edged higher in March and April and is modestly above the level of a year ago. The National Association of Realtors' Pending Home Sales Index, a monthly measure of the level of signed sales contracts for existing homes, edged up in March and April but remains 9.2% below the level of April of 2013. Contract interest rates on 30-year fixed rate mortgages have declined by about 50 basis points from their recent peak, but remain about 90 basis points above the levels of last May. The Mortgage Bankers Association's Purchase Mortgage Application Index remains stuck at around 180, which is 18% below the peak reached last April. The Core Logic National Home Price Index continues to increase, although the rate of increase has begun to slow. The 12-month change of this index was 10.5% in April, down from 11.9% in February.

Unlike the single-family sector, starts and permits of multi-family housing units remain on a clear, though choppy, uptrend. A three-month moving average of multi-family starts and permits were 355,000 (seasonally-adjusted annual rate) and 427,000, respectively, in April, 13.4% and 16% above year-ago levels, respectively. The year-over-year rate of increase of the price of rent of shelter has moved up to 2.75% as of April versus 2.2% in April of 2013. The rate of increase of owners' equivalent rent has increased by 55 basis points to 2.62% whereas rent of primary residence, or tenant rent, has increased by 32 basis points to 3.05%. A quarterly index of Apartment Market Conditions published by the National Multi Housing Council rose back above 50 in 2014Q2, indicating that building owners and managers saw the market tightening somewhat. However, this index had reached a peak of 90 in 2011Q2 and has been on a downward trend since then, likely reflecting the increase in production and conversion of single-family properties into rentals as they come out of the foreclosure process. The decline of this index may be signaling a slowing of rent increases later this year or in 2015.

Both new orders and shipments of nondefense capital goods declined in April, by -1.0% and -0.6%, respectively. But three and six month changes in both are solidly positive, while new orders have been roughly 7 ½% above shipments for the past two months. Thus, after declining at a 3.1% annual rate in the first quarter, we now expect real business investment in new equipment to expand at a 6% annual rate in 2014Q2. In contrast, private nonresidential construction put in place declined again in April, making it quite likely that this category of real business fixed investment will decline or grow only modestly in the second quarter. The Architectural Billings Index, a leading indicator of construction activity, dipped below 50 in March and April after reaching 54.3 in September of 2013. Values below 50 are associated with declining construction activity six to twelve months in the future.

Available data suggest that real consumption and gross investment in the state and local government sector will expand in the second quarter after declining at a 1.8% annual rate in the first quarter. State and local government construction put in place rose 1.4% in

April after falling in the first quarter. Moreover, the April and May average of gains in employment in the state and local sector were somewhat above the average monthly gains of the period from January through March. In contrast, real consumption and gross investment at the federal level is expected to resume declining in the second quarter following a modest increase in the first quarter. Employment at the federal level declined in April and May, federal construction put in place fell in April, and defense outlays appear to be on a sustained downward trend.

As mentioned above, real exports fell sharply in the first quarter while real imports rose modestly. This decline of real exports was broad based following considerable strength in the fourth quarter. Based on the monthly trade data, real exports of goods rebounded in April. However, real imports of goods grew at an even faster pace in April, suggesting that the net export growth contribution is likely to be essentially zero this quarter.

Following the deep decline of the inventory growth contribution in the first quarter, a key part of the expectation of a strong rebound of growth of GDP in the second quarter is a swing of the inventory growth contribution into positive territory. At this point we have only the manufacturing and wholesale trade inventory data for the month of April. Manufacturing output fell at a 4.7% annual rate in April, with declines in many durable and nondurable goods industries. In addition, motor vehicle sales were brisk in May, which likely resulted in further declines of auto and truck inventories. In contrast, the ISM manufacturing index has increased for four straight months, reaching 55.4 in May. The production component of that index has increased from a recent low of 48.2 in February to 61.0 in May. Given what we know at this point, it is quite possible that the inventory growth contribution for Q2 will come in below what we have penciled in.

The 12-month change of the core PCE deflator rose to 1.4% in April from 1.2% in March. The 12-month change of health care services prices did increase to 1.45% from 0.79% in March as the March 2013 level of health care services prices dropped out of the calculation, and the lower April 2013 level became the base. However, this change in base had a relatively small impact on the 12-month change of core inflation. The

monthly change of medical care services moved up to 0.2% in April after having averaged 0.04% per month over the preceding four months. In addition, over the past six months there has been some firming in the rate of increase of prices of shelter, recreation, food services and accommodations, and other services, including education and communication. In contrast, the six-month decline of nonfood, nonenergy goods prices is slightly deeper than the 12-month decline.

The Outlook

As indicated in the April Blackbook, we are reasonably confident that the decline of real GDP in the first quarter was due to temporary factors and that growth will rebound in 2014Q2. The order of magnitude of the second quarter rebound remains uncertain, however, but at this point it appears that it will not be quite as strong as we expected in April.

From a first half growth rate of just 1%, over the second half of 2014 we anticipate that growth will move up to around 3 ¼% and then to 3 ½% in 2015. As has been the case for some time, the basis for this more rapid pace of growth is that the headwinds restraining growth subside while the improved underlying fundamentals exert themselves more forcefully. These improved fundamentals include the fact that the asset and the liability side of consumer's balance sheets are effectively repaired, with household net worth restored to pre-crisis levels and liabilities beginning to expand. The excess housing built up over the previous decade has been worked off, and home prices continue to rise rapidly due to a shortage of homes for sale. As demonstrated by financial markets and the surge of M&A activity this year, risk aversion is beginning to subside. Fiscal consolidation at both the federal and the state and local levels is largely over. In addition, credits standards continue to gradually ease, while overall financial conditions remain supportive. And growth prospects among many of our major trading partners have improved.

Specifically, these improved fundamentals result in a marked improvement in the growth of fixed investment over the forecast horizon. This increase in investment provides a boost to income growth, allowing consumer spending to strengthen somewhat further while keeping the personal saving rate essentially unchanged. Real export growth strengthens somewhat over the forecast horizon, but the strengthening of domestic demand produces a significant increase in the rate of growth of real imports, such that the net export growth contribution is, on average, modestly negative. Growth of inventories keeps pace with growth of final sales, such that inventory-sales ratios remain relatively stable.

All else equal, the stronger growth of output should translate into stronger growth of employment, with the unemployment rate declining to just over 6% by the end of 2014 and to around 5 ¼% by the end of 2015. However, there is considerable uncertainty around this projected path of the unemployment rate due to uncertainty over the future path of the participation rate. The participation rate averaged 62.8 in April and May, down from 63.1 in the first quarter. We expect it to begin trending upward in the near future, reaching 63.4 by 2015Q4. But as each quarter goes by without the participation rate moving higher, the pace of the increase needed to get to 63.4 by the end of 2015 gets steeper and steeper.

We expect inflation to rise gradually over the next couple of years, and to be near the FOMC objective by the end of 2015, at which time we expect inflation to stabilize. This forecast is based on the projected gradual increase in the levels of resource utilization, which would ease downward pressure on firms' marginal costs and prices, a firming in global demand, and the upward pull exercised by stable inflation expectations on actual inflation. Underpinning the latter assumption is the broad stability of long-term inflation expectations across different financial and survey measures, combined with ongoing moderate growth of wages and unit labor costs.

2-1: Projections of Key Variables

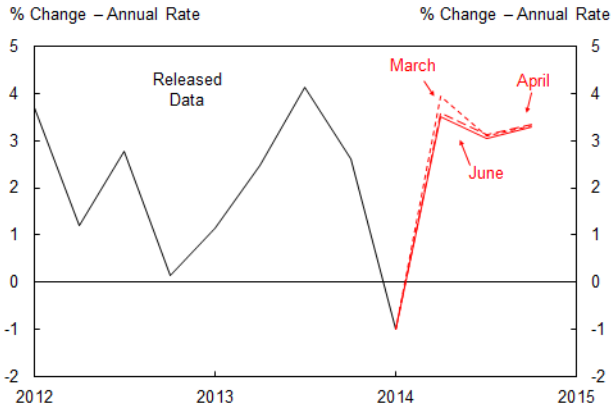
	Core PCE Inflation		Real GDP Growth		Unemployment Rate*		Fed Funds Rate**	
	April	June	April	June	April	June	April	June
2013								
Q1	*1.3*	*1.3*	*1.1*	*1.1*	*7.7*	*7.7*	*0-0.25*	*0-0.25*
Q2	*0.6*	*0.6*	*2.5*	*2.5*	*7.5*	*7.5*	*0-0.25*	*0-0.25*
Q3	*1.4*	*1.4*	*4.1*	*4.1*	*7.2*	*7.2*	*0-0.25*	*0-0.25*
Q4	*1.3*	*1.3*	*2.6*	*2.6*	*7.0*	*7.0*	*0-0.25*	*0-0.25*
2014								
Q1	1.2	1.2	*0.7*	-1.0	*6.7*	6.7	*0-0.25*	*0-0.25*
Q2	1.4	1.8	*3.9*	3.5	*6.5*	6.3	0-0.25	0-0.25
Q3	1.4	1.5	*3.1*	3.1	*6.4*	6.1	0-0.25	0-0.25
Q4	1.5	1.5	*3.3*	3.3	*6.3*	6.0	0-0.25	0-0.25
2015								
Q1	1.6	1.6	3.3	3.4	*6.2*	5.9	0-0.25	0-0.25
Q2	1.7	1.7	3.6	3.6	*5.8*	5.7	0.25	0.25
Q3	1.8	1.8	3.7	3.6	*5.6*	5.4	0.5	0.5
Q4	1.9	1.9	3.4	3.6	*5.4*	5.2	1.0	1.0
Q4/Q4								
2012	*1.7*	*1.7*	*2.0*	*2.0*	*-0.8*	*-0.8*	*0-0.25*	*0-0.25*
2013	*1.2*	*1.2*	*2.6*	*2.6*	*-0.7*	*-0.7*	*0-0.25*	*0-0.25*
2014	1.4	1.5	2.8	2.2	*-0.7*	-1.0	0-0.25	0-0.25
2015	1.7	1.7	3.5	3.6	*-0.9*	-0.8	1.0	1.0

Columns reflect the forecast dates. Numbers in gray are from the previous Blackbook, and numbers in italics are released data.
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.
**Quarterly values are the end-of-quarter value. Yearly values are the difference between the end-of-year value in the previous year and the end-of-year value in the listed year.

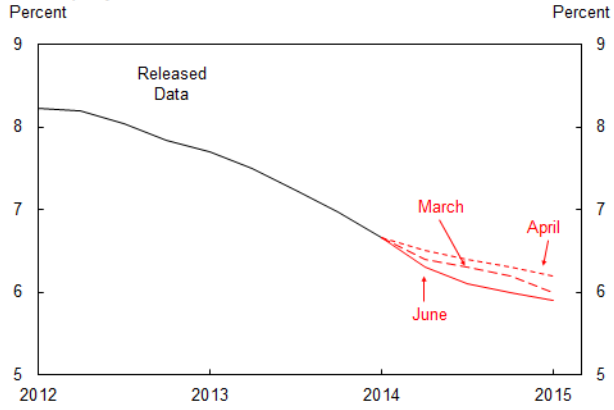
2-2: Evolution of Projected Quarterly Paths

Key Indicators

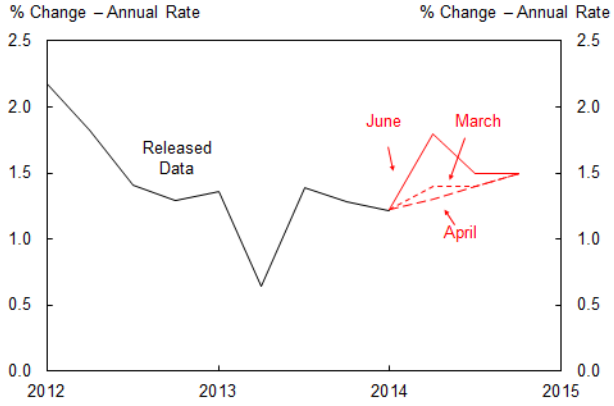
Real GDP Growth



Unemployment Rate

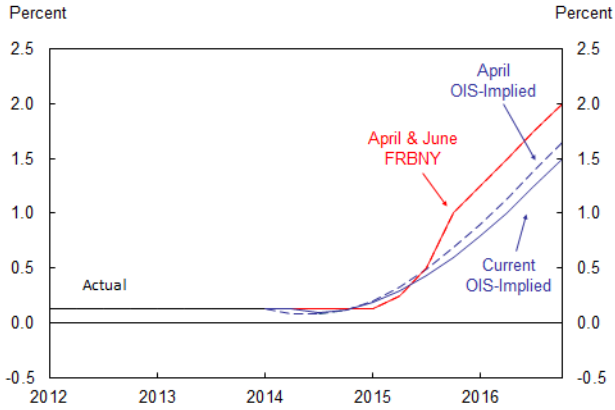


Core PCE Inflation

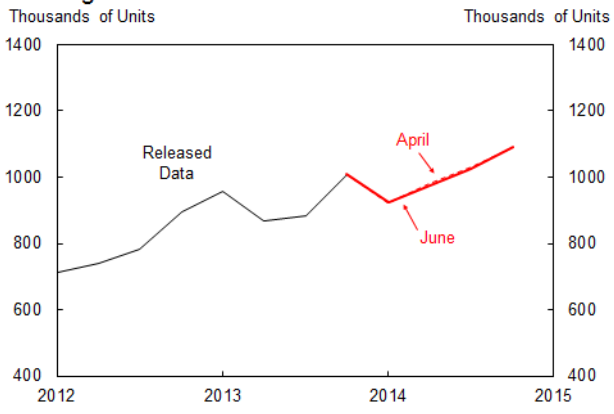


Forecast Assumptions

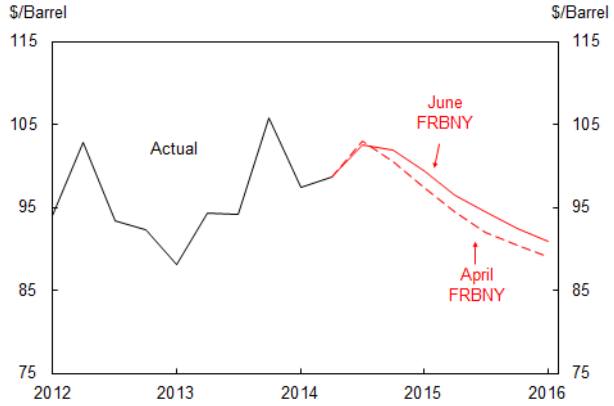
Federal Funds Rate



Housing Starts



Crude Oil



Source: FRBNY (MMS and IR Functions) and Federal Reserve Board

2-3: Near-Term Projections

	Growth Rates (AR)			Growth Contributions (AR)		
	2013Q4	2014Q1	2014Q2	2013Q4	2014Q1	2014Q2
OUTPUT						
Real GDP	2.6	-1.0	3.5	2.6	-1.0	3.5
	(2.6)	(0.7)	(3.9)	(2.6)	(0.7)	(3.9)
Final Sales to Domestic Purchasers	1.6	1.6	2.9	1.6	1.6	3.0
	(1.6)	(1.8)	(3.9)	(1.6)	(1.8)	(3.9)
Consumption	3.3	3.1	3.1	2.2	2.1	2.1
	(3.3)	(2.0)	(3.4)	(2.2)	(1.4)	(2.3)
BFI: Equipment	10.9	-3.1	6.0	0.6	-0.2	0.3
	(10.9)	(2.0)	(10.0)	(0.6)	(0.1)	(0.5)
BFI: Nonresidential Structures	-1.8	-7.5	4.0	-0.1	-0.2	0.1
	(-1.8)	(10.0)	(14.0)	(-0.1)	(0.3)	(0.4)
BFI: Intellectual Property Products	4.0	5.1	4.0	0.2	0.2	0.2
	(4.0)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	-7.9	-5.1	9.3	-0.3	-0.2	0.3
	(-7.9)	(-4.1)	(18.9)	(-0.3)	(-0.1)	(0.6)
Government: Federal	-12.8	0.7	-2.0	-1.0	0.1	-0.1
	(-12.8)	(0.0)	(-2.0)	(-1.0)	(0.0)	(-0.1)
Government: State and Local	0.0	-1.8	1.5	0.0	-0.2	0.2
	(0.0)	(0.5)	(1.3)	(0.0)	(0.1)	(0.1)
Inventory Investment	--	--	--	0.0	-1.6	0.6
	--	--	--	(0.0)	(-0.6)	(-0.4)
Net Exports	--	--	--	1.0	-1.0	-0.1
	--	--	--	(1.0)	(-0.5)	(0.4)
INFLATION						
Total PCE Deflator	1.1	1.4	2.0			
	(1.1)	(1.4)	(1.7)			
Core PCE Deflator	1.3	1.2	1.8			
	(1.3)	(1.2)	(1.4)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	2.3	-3.8	1.7			
	(1.8)	(-0.8)	(2.8)			
Compensation per Hour	1.7	2.3	1.6			
	(1.7)	(1.8)	(1.8)			
Unit Labor Costs	-0.6	6.1	-0.1			
	(-0.1)	(2.6)	(-1.0)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-4: Medium-Term Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2013	2014	2015	2013	2014	2015
OUTPUT						
Real GDP	2.6	2.2	3.6	2.6	2.2	3.6
	(2.6)	(2.8)	(3.5)	(2.6)	(2.8)	(3.5)
Final Sales to Domestic Purchasers	1.6	2.7	3.7	1.7	2.7	3.8
	(1.6)	(3.1)	(3.7)	(1.7)	(3.1)	(3.8)
Consumption	2.3	3.1	3.3	1.6	2.1	2.3
	(2.3)	(3.0)	(3.1)	(1.6)	(2.0)	(2.1)
BFI: Equipment	3.9	5.1	12.0	0.2	0.3	0.7
	(3.9)	(7.9)	(12.0)	(0.2)	(0.4)	(0.7)
BFI: Nonresidential Structures	-0.7	3.4	10.0	0.0	0.1	0.3
	(-0.7)	(11.5)	(10.0)	(0.0)	(0.3)	(0.3)
BFI: Intellectual Property Products	3.0	4.3	4.0	0.1	0.2	0.2
	(3.0)	(4.0)	(4.0)	(0.1)	(0.2)	(0.2)
Residential Investment	6.9	3.7	12.5	0.2	0.1	0.4
	(6.9)	(6.4)	(13.5)	(0.2)	(0.2)	(0.4)
Government: Federal	-6.2	-1.3	-2.0	-0.5	-0.1	-0.1
	(-6.2)	(-1.5)	(-2.0)	(-0.5)	(-0.1)	(-0.1)
Government: State and Local	0.2	0.4	1.0	0.0	0.0	0.1
	(0.2)	(0.9)	(1.9)	(0.0)	(0.1)	(0.2)
Inventory Investment	--	--	--	0.7	-0.3	0.0
	--	--	--	(0.7)	(-0.2)	(-0.0)
Net Exports	--	--	--	0.2	-0.2	-0.3
	--	--	--	(0.2)	(-0.2)	(-0.3)
INFLATION						
Total PCE Deflator	1.0	1.7	1.9			
	(1.0)	(1.6)	(1.8)			
Core PCE Deflator	1.2	1.5	1.7			
	(1.2)	(1.4)	(1.7)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	1.4	0.3	1.6			
	(1.3)	(1.3)	(1.6)			
Compensation per Hour	0.3	1.9	2.0			
	(0.3)	(1.8)	(2.1)			
Unit Labor Costs	-1.1	1.5	0.4			
	(-0.9)	(0.5)	(0.5)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-5: Comparison with Other Forecasts

Real GDP Growth

	Release Date	2014Q1	2014Q2	2013 Q4/Q4	2014 Q4/Q4
FRBNY	6/10/2014	-1.0	3.5	2.6	2.2
		(0.7)	(3.9)	(2.6)	(2.8)
Blue Chip	6/10/2014	-1.0	3.7	2.6	2.2
		(1.9)	(3.4)	(2.5)	(2.7)
Median SPF	5/16/2014	--	3.3	2.6	2.4
		(2.0)	(3.0)	(2.7)	(2.6)
Macro Advisers	6/6/2014	-1.0	3.9	2.6	2.4
		(0.9)	(3.6)	(2.6)	(2.9)
FRBNY-DSGE	6/10/2014	-1.0	3.7	--	2.1
		(0.7)	(1.3)	--	(1.2)

Core PCE Inflation

	Release Date	2014Q1	2014Q2	2013 Q4/Q4	2014 Q4/Q4
FRBNY	6/10/2014	1.2	1.8	1.2	1.5
		(1.2)	(1.4)	(1.2)	(1.4)
Median SPF	5/16/2014	1.5	1.5	--	1.5
		(1.5)	(1.5)	(1.2)	(1.6)
Macro Advisers	6/6/2014	1.2	1.7	1.2	1.5
		(1.2)	(1.4)	(1.2)	(1.4)
FRBNY-DSGE	6/10/2014	1.2	1.8	--	1.4
		(1.2)	(1.0)	--	(1.0)

CPI Inflation

	Release Date	2014Q1	2014Q2	2013 Q4/Q4	2014 Q4/Q4
FRBNY	6/10/2014	1.9	2.6	1.2	2.3
		(1.9)	(2.3)	(1.2)	(2.0)
Blue Chip	6/10/2014	1.9	2.3	1.2	2.1
		(1.8)	(1.8)	(1.2)	(1.9)
Median SPF	5/16/2014	--	1.9	--	1.9
		(1.7)	(1.7)	(1.4)	(1.8)
Macro Advisers	6/6/2014	1.9	2.7	1.2	2.0
		(1.9)	(1.6)	(1.2)	(1.9)

Core CPI Inflation

	Release Date	2014Q1	2014Q2	2013 Q4/Q4	2014 Q4/Q4
FRBNY	6/10/2014	1.6	2.4	1.7	2.0
		(1.6)	(1.6)	(1.7)	(1.8)
Median SPF	5/16/2014	--	1.8	--	1.8
		(1.8)	(1.8)	(1.8)	(1.9)
Macro Advisers	6/6/2014	1.6	2.3	1.7	1.9
		(1.5)	(1.8)	(1.7)	(1.6)

*Note: Numbers in gray are from the previous Blackbook

3. Uncertainty & Risks

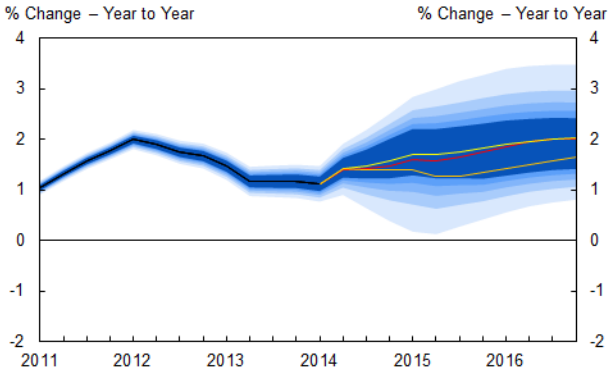
Recent developments generally have been in accord with our central outlook; therefore, our assessment of the balance of risks has not changed materially over the intermeeting period. Based on the difference between the modal central forecast and the expected value from our forecast distributions, the risks continued to be roughly balanced for core PCE inflation and for real GDP growth through most of the forecast horizon [Exhibit 3-1]. We also see the uncertainty around the projection as having declined over the period.

The further decrease in uncertainty reflects that, despite the unexpected real GDP decline in 2014Q1, the recent data mostly have been consistent with the story behind our central scenario, where the weakness in the first quarter would prove to be transitory. In our framework, we adjust to such developments by lowering the probabilities of some of the alternative scenarios. For this Blackbook, the reductions were primarily in the upside *Faster Growth* scenario and the downside *Fiscal Consolidation* scenario [Exhibit 3-2]. The decline in Q1 productivity also led us to lower slightly the probability of the *Productivity Boom* scenario. With these changes, the 90 percent probability intervals for both real GDP growth and core PCE inflation have narrowed through 2015 [Exhibit 3-3]. If the data continue to be consistent with our outlook, we expect to narrow these intervals further, which would put the uncertainty assessment close to more typical levels after a prolonged period of greater than normal uncertainty.

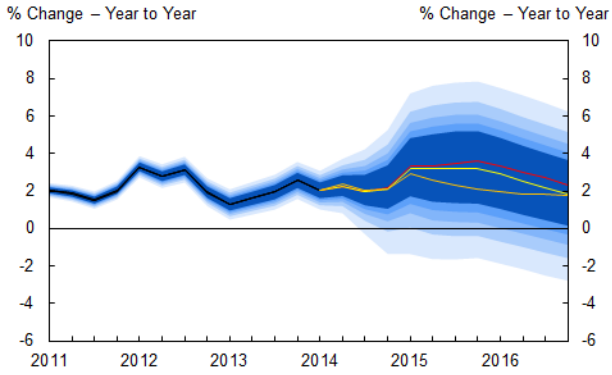
Comparing the recent data and our current central forecast to the forecast distribution from a year earlier, the current projection for inflation is in the lower part of the year-ago inflation distribution until the 2016 forecast horizon, reflecting the low inflation data for most of the past year and its impact on our outlook [Exhibit 3-3]. The current real GDP growth forecast also is in the lower half of the year-ago forecast distribution over the rest of this year, reflecting the impact of the 2014Q1 real GDP decline on the four-quarter change for the next few quarters.

3-1: Forecast Distributions

Core PCE Inflation Forecast Distribution



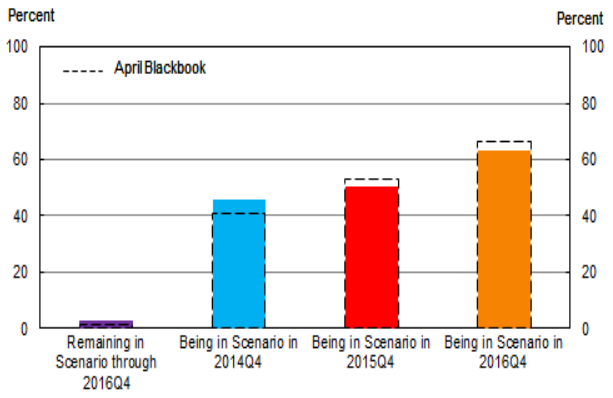
Real GDP Growth Forecast Distribution



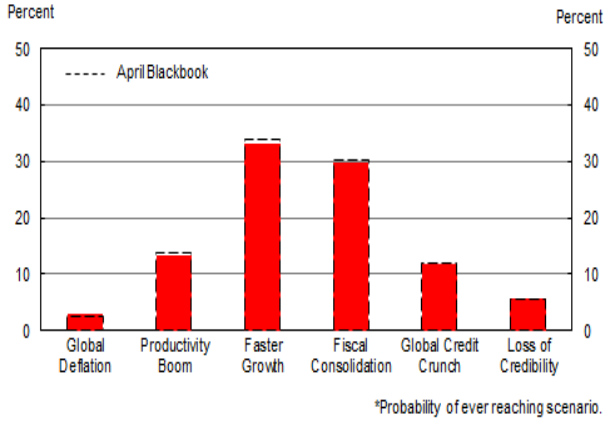
The yellow line is the expected value of the forecast distribution, the red line is the FRBNY central projection, the orange line is the DSGE forecast, and the black line is released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter change will be within the respective range.

3-2: Scenario Probabilities

Central Scenario Probabilities



Alternative Scenario Probabilities*

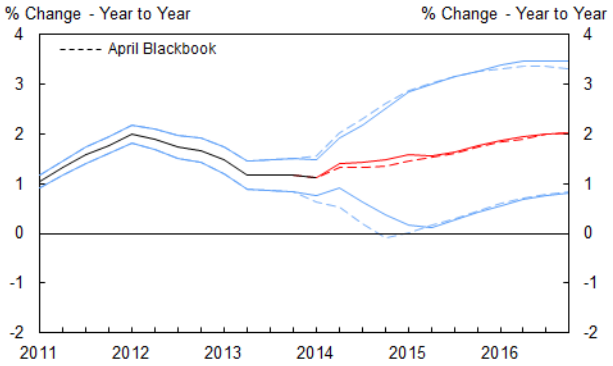


The left chart shows the probability of remaining in the central scenario through the end of the forecast horizon and the probabilities of being in the central scenario at the end of the next three years. The right chart shows the probabilities of ever reaching an alternative scenario over the forecast horizon, an assessment of the overall likelihood of each alternative scenario. A short description of the scenarios and the methodology to perform risk assessment is in the Appendix.

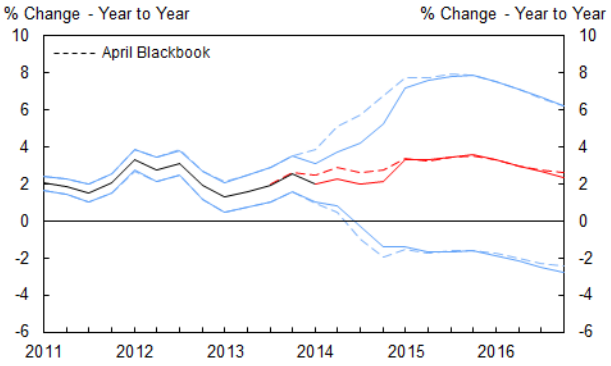
Source: MMS Function (FRBNY)

3-3: Evolution and Performance of Forecast Distributions

Change in Core PCE Inflation Forecast Distribution

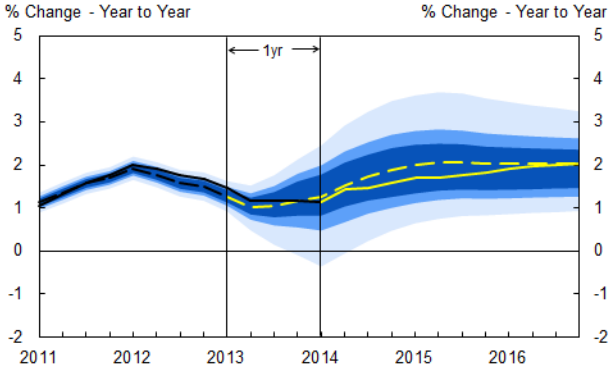


Change in Real GDP Growth Forecast Distribution

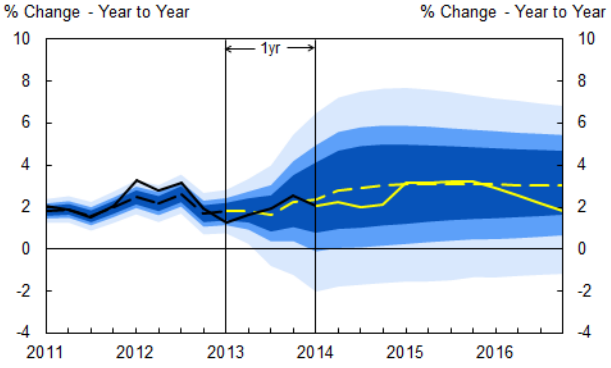


The red lines are the central scenario projections, black lines are released data, and blue lines represent upper and lower 90 percent forecast probability intervals. Dashed lines represent forecasts from the previous Blackbook.

One-Year Comparison of Core PCE Inflation Forecast Distribution and Expected Value



One-Year Comparison of Real GDP Growth Forecast Distribution and Expected Value



The solid yellow lines are the current central scenario projections and the dashed yellow lines are the year-ago Blackbook central scenario projections. Black lines are released data and the blue lines represent upper and lower 50, 70 and 90 percent forecast probability intervals from the year-ago Blackbook.

Source: MMS Function (FRBNY)

Special Topic: Back to the Drawing Board
Enhancements to the SEP

With forward guidance turning more qualitative, market expectations are no longer anchored by quantitative thresholds. The SEP is therefore likely to assume a more central role in shaping expectations on the evolution of the policy stance and influencing market pricing. There are, however, some well-known problems with the SEP, and with the interest rate projection—the 'dot chart', in particular:

- A problem of overall **interpretation**, as the projections of output, unemployment and inflation by any particular participant are not related to one another, nor are they related to the interest rate projections of the same participant. As the *central tendency* of any single projection reflects the views of different subsets of participants, it is unclear in what sense this tendency represents the overall view of the Committee.
- A problem of **communication**, more specific to the policy projections, in those cases in which the message of the dots appears to conflict with the policy stance communicated in the FOMC statement.
- As each participant bases the projections on his/her own assessment of the appropriate policy path, the individual projections are based on heterogeneous conditioning assumptions, making their **aggregation** problematic.

Based on various ideas we elaborated in the past year in response to the FOMC initiative on a proposed consensus forecast, we suggest here three possible steps to address the communication challenge presented by the SEP in its current form. These steps range from a minimal departure from the status quo to a more radical modification of the policy assumptions underlying the projections.

1. **Maintain the current structure but distinguish voters from non-voters**
   Use different 'dots' (for example, filled and empty dots, or color-coded dots) for voters and non-voters in the chart; include median and range of the voting members' projections in the tables reporting the forecast of economic activity.
   Rationale: By emphasizing the projections of the *voting* members, this approach would provide greater context to the policy decision. Moreover, the identification of the voters as a group would most likely reduce the discrepancy between the policy stance in the statement and the one conveyed by the SEP.

2. **Maintain the current structure, but provide complete attribution of forecasts**
   Use for example color coded lines and dots to identify all participants across projections, even without disclosure of their names.
   Rationale: Such a representation would not only distinguish the projections of voters from those of non-voters, but would also link the projections of the different variables to each individual participant, giving a representation of their individual 'reaction functions'. Under this approach, it might be necessary to

create separate charts for voters and non-voters to make the projections easier to read.

3. **Change the current structure, providing a common policy path**
   Elicit projections based on a common policy path agreed upon by the Committee, rather than each participant's assessment "based on his or her judgment of appropriate monetary policy."
   Rationale: Conditioning on a common policy path would transform the SEP into a Committee consensus view. It would also encourage more discussion among participants of the perceived effects of a proposed policy on the economy.

   A major issue with this proposal is that participants may not want to be constrained to express their views conditional on a policy path that may differ significantly from what they consider appropriate policy. One way to address this issue could be to provide *two alternative paths* to the participants, each reflecting one of the policy stances underlying the alternatives in the statement drafts. Each participant would then be asked to provide projections for economic activity under both paths, as well as to indicate which of the two paths is *closer* to his/her view of appropriate policy– his/her *preferred* alternative. Because the policy paths are meant to provide realistic, and alternative, descriptions of the likely policy options considered at the FOMC meeting, the preferences expressed by the participants would align their projections to the views of the Committee. One could think of the two paths as a 'baseline' (B) and an alternative that can be more or less accommodative (A or C), depending on the state of the economy. Following the discussion at the meeting, the SEP would publish the set of projections corresponding to the policy stance that receives the majority of the preferences of the participants (or alternatively of the voters only), including a discussion of alternative views. The dispersion of projections under a common path would reflect more clearly differences in the participants' view of the transmission mechanism, and of the state of the economy, rather than individual views on the appropriate stance of policy.

Further considerations
The common policy paths may not be specified as lines (modal scenarios), but rather as intervals (confidence bands), to reflect the uncertainty surrounding the policy choice. The need to characterize uncertainty, as distinct from the dispersion of forecasts, extends to the projection of the other variables.

Appendix

In this Appendix, we provide brief descriptions of the alternative scenarios used in this Blackbook [A-1], and of the methodology underlying our risk assessment and forecast distributions [A-2].

A-1. Alternative Scenario Descriptions

Our first alternative scenario considers the impact of productivity growth above our assumed trend of about 1.5% on a nonfarm business sector basis (*Productivity Boom)*. The second scenario (*Fiscal Consolidation)* assesses the consequences of below-trend productivity growth. We consider four additional scenarios. In one (*Faster Growth*), "headwinds" subside more quickly than expected, leading to stronger aggregate demand effects from monetary and fiscal policy. In another (*Loss of Credibility*), the public and investors lose confidence in the current stances of monetary and fiscal policy. In the other two (*Global Credit Crunch* and *Global Deflation*), renewed stresses in global financial and economic conditions have an adverse impact on U.S. real economic growth and inflation; the differences between the two mainly reflect differing assessments of the persistence of the negative effects.

A-2. Methodology to construct the forecast distribution

Our approach to producing the FRBNY forecast distributions is a generalization of techniques used at the Bank of England and other central banks to depict the uncertainty and balance of risks around a forecast. It allows for a dynamic balance of risks that is jointly assessed over inflation and output growth.

Three primary components underlie these forecast distributions: (1) a central scenario with modal inflation and output growth characterized by the central forecast described in Section 2, (2) alternative scenarios with specific inflation and output implications that differ from those of the central scenario, and (3) probabilities that the economy will enter those alternative scenarios. This approach to quantifying uncertainty and risks allows us

to interpret the forecast distribution for output growth and inflation, as well as analyze the impact on that distribution of changing the probabilities of the alternative scenarios.

We set the long-run behavior of our central forecast at the FOMC's longer-run inflation goal and our estimate of the potential growth rate. We also assume that, if the economy enters an alternative scenario, it eventually returns to the central scenario and remains in that scenario thereafter.

We conduct a simulation exercise to generate paths for inflation and output growth; we then perform calculations about our forecast distribution that reflect our risk assessment. This exercise consists in generating a large number of indicator series, with each entry in a given series corresponding to a quarter in the forecast horizon; for each of these series, each quarter's value indicates only the prevailing scenario in that quarter. To generate these scenario-indicator series, we set two parameters for each alternative scenario: (1) the probability that the economy will leave the central scenario and enter the alternative scenario—the "initial probability"—and (2) the probability that the economy will remain in the alternative scenario once it enters the scenario—the "persistence."

After creating the indicator series, we generate, for each series, a path for inflation and a path for output growth, with each entry in a given path corresponding to a quarter in the forecast horizon. For a given indicator series and a given quarter, the values of the associated inflation and output growth paths are determined by a draw from the indicated joint distribution of inflation and output growth, based on the scenario the indicator series points to for that quarter. If, for example, the series indicates that the economy is in the central scenario, we draw inflation and output values from a distribution centered at the central forecast. If instead the series indicates the economy is in an alternative scenario, we draw values from a modified version of the central scenario distribution that is consistent with the alternative scenario.

FOMC BACKGROUND MATERIAL

RESEARCH AND STATISTICS GROUP

FRBNY Blackbook

July 2014

FRBNY BLACKBOOK

July 2014

CONTENTS

APPENDIX

1. Policy Recommendation and Rationale

The economic and financial developments in the intermeeting period have led to modest changes in our forecast, and there are still significant uncertainties around our outlook. Nevertheless, the economy appears to be moving somewhat closer to mandate-consistent objectives, and thus some recalibration of our monetary policy stance is warranted.

Real GDP growth in the first quarter was revised to show a sizable decline (which should lead to an extraordinary fall in labor productivity), with a downward revision in health care spending as the main driver. Moreover, consumption growth appears to have remained subdued in the second quarter, in part because continued flat health care expenditures. Given the uncertainties about health care spending in light of the ongoing implementation of the Affordable Health Care Act, there could still be sizable revisions in the future. But for now, we assess that real consumption is on a somewhat lower path than previously anticipated, which has contributed to a modest reduction in our real GDP forecast over the rest of this year and next.

In contrast to the weak Q1 GDP performance, there have been encouraging signals concerning the labor market. Payroll growth has shown considerable momentum, with average monthly readings rising from 190,000 in Q1 to 272,000 in Q2. The unemployment rate also continued its decline, reaching an average of 6.2% in Q2. These positive signals have led us to lower our projected path for the unemployment rate. Nevertheless, there remain several indications of continued softness in the labor market. The employment to population ratio has risen only modestly, indicating that recent employment growth will have to be sustained to have much effect on that ratio. Additionally, the hiring rate has risen only modestly from the subdued levels of recent years. The quits rate shows little sign of improvement over the last six months, reflecting continued tepid labor demand. Most measures of compensation growth remain low by pre-recession standards.

The housing market is also an area of potential concern. Single-family housing starts and building permits have shown little improvement over the past year, remaining at very low levels.

While new and existing home sales appeared to have picked up recently, it is not clear yet that they are rising outside of recent ranges.

The inflation data of recent months have been somewhat higher, but the 12-month changes of the CPI and PCE deflator as well as most measures of underlying inflation remain below levels consistent with the FOMC objective. Nevertheless, the increase in core measures has been somewhat more rapid than we expected. At this time, we see some of the unanticipated increase as reflecting transitory factors; the behavior of core PCE inflation relative to our SiCo measure is consistent with this assessment. Consequently, even though we have raised our inflation forecast some, we have maintained our overall outlook that inflation will slowly move towards the FOMC's longer-run goal over the next couple of years.

We currently view the risks to real activity and inflation as roughly balanced, although we are monitoring closely the impact of recent geopolitical events on this assessment. Given our outlook and risk assessment, our recommendation for the upcoming meeting is to stay the course on tapering and to pull slightly forward the timing of expected lift-off relative to past recommendations. This modal scenario would have the asset purchase program ending after the October FOMC meeting, and have lift-off of the FFR in 2015Q1. This shift is appropriate because we now project smaller deviations of unemployment and inflation from their mandate-consistent levels than in previous Blackbooks.

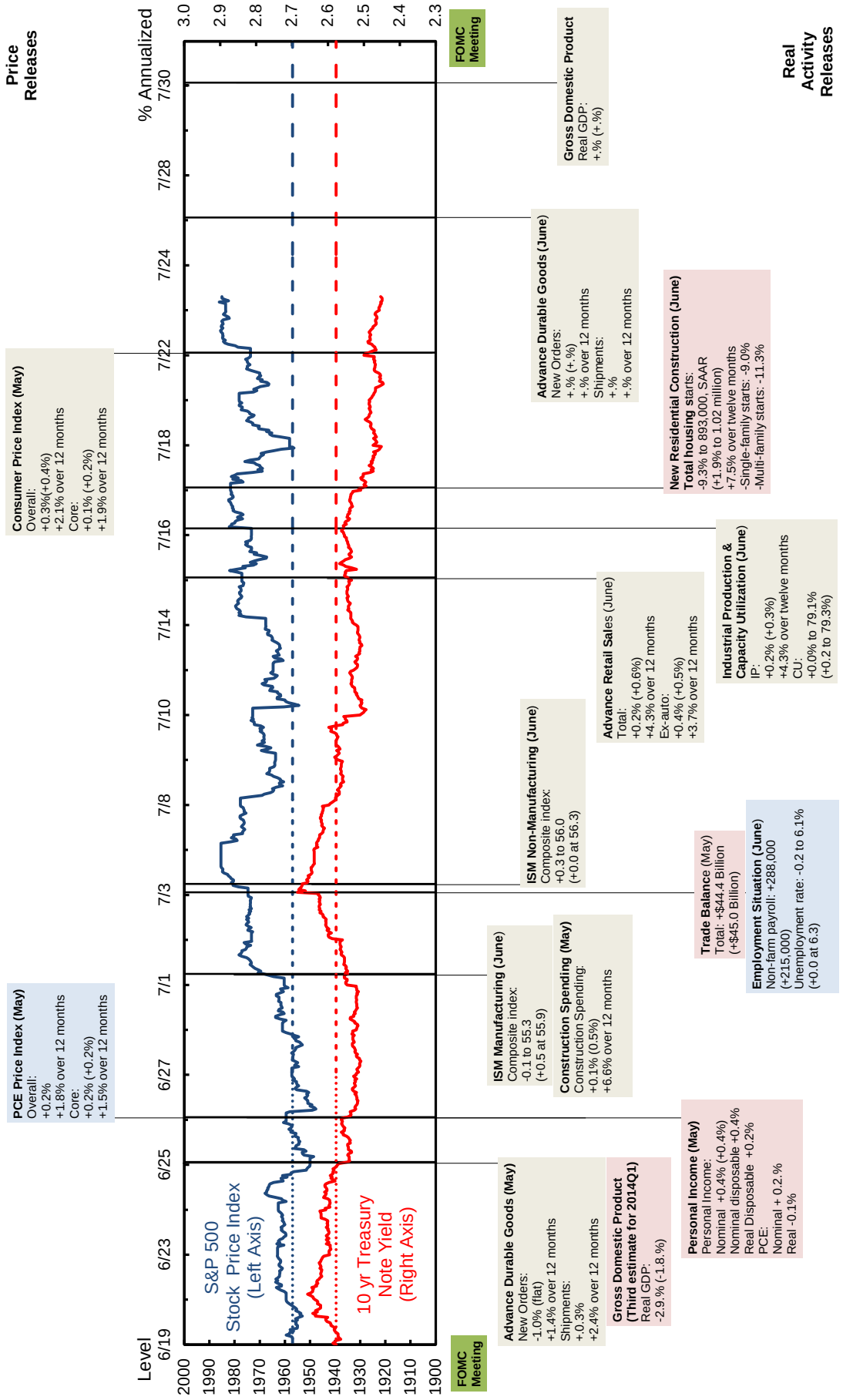
Even so, we should not overreact to the recent good news. Partially, this reflects apt caution in the presence of considerable uncertainty about future fundamentals and persistent headwinds, especially in light of our past experience with false starts and "green shoots." But, at a deeper level, inertia and continuity in policy-making is a key feature of a well-calibrated monetary stance. Past and current forward guidance have led market participants to extrapolate and price in a highly accommodative stance well past the time economic conditions would allow for an exit from the zero bound. Reneging on this promise would damage credibility and make it more difficult to fulfill the dual mandate in the future. Therefore, there is a trade-off for policymakers between losing credibility from a policy stance that appears to be "behind the curve" and gaining

credibility from delivering on past promises. Anticipating the lift-off no earlier than 2015Q1 seems appropriate in light of this trade-off.

For now we do not recommend that the Committee modifies the statement language describing its state-contingent forward guidance. The fifth paragraph of the FOMC statement projects a "considerable time" between the end of the asset purchase program and the first interest rate increase. A reasonable interpretation of this forward guidance is that there should be at least two FOMC meetings with a press conference before the lift-off is implemented, which would make March 2015 the terminus post quem for the start of monetary policy normalization. We view this broad guidance as consistent with our recommended path.

Going forward, market participants and the public will be placing greater focus on the issues related to the eventual normalization of the policy stance and the medium-term framework. Therefore, it is important for the FOMC to communicate clearly on these issues and to formulate an effective policy for that period in order to help maintain the appropriate stance for policy. In a box of this Blackbook we propose a set of guidelines and principles for normalization, whose purpose is to update and replace the analogous guidelines published in June 2011, as well as to integrate subsequent communication on the prospective path of the SOMA portfolio.

1-1: Key Data Releases



Source: Bloomberg
On-the-run securities, 8:00AM - 4:00PM.
S&P 500 Stock Price Index: 9:30AM - 4:00PM.

Note
Blue shading: Data release encouraging/positive.
Red shading: Data release discouraging/negative.
Beige shading: Data release was neutral.
Gray shading: No attempt to sign the impact.
Numbers in parentheses are the median of the Bloomberg survey.

2. Central Forecast

Intermeeting Developments

Data received over the intermeeting period has been quite mixed. For example, in the third estimate, growth of real GDP in the first quarter of 2014 was revised down once again, this time to -2.9% (annual rate). Moreover, while still reasonably robust, projections of growth in the second quarter have been marked down somewhat, such that growth of real GDP for the entire first half of 2014 is now expected to be essentially zero. Nonetheless, labor market conditions improved significantly over the second quarter. The unemployment rate declined to 6.1% in June, down from 6.7% as recently as March. Along with this strengthening of demand for labor, inflation moved up notably in recent months, though it remains below the FOMC's target rate.

The revisions to BEA's estimate of growth of real GDP in 2014Q1 have been substantial. The first estimate was +0.1% (AR). Conceptually, the first quarter data were generally in line with the consensus expectations. In particular, both inventory investment and net exports exerted large drags on growth after have provided significant positive growth contributions over the second half of 2013. However, growth of business fixed investment and of state and local consumption and gross investment were below expectations, possibly due to larger than anticipated adverse weather effects. In contrast, growth of real PCE was stronger than expected, due in part to the assumption by the BEA that consumption of health care expenditures increased substantially because of the expansion of the Medicaid program under the Affordable Care Act (ACA).

By the third estimate, however, growth of real GDP was revised down to -2.9% (AR), due in large part to a downward revision of growth of real PCE from 3.1% to just 1.0%. The downward revision of growth of real PCE was mainly due to a sharp contraction in consumption of health care services, particularly from nonprofit hospitals, as the first quarter results of the Quarterly Services Survey (QSS) were incorporated into the GDP source data. In conversations with analysts at BEA, we have learned that health care consumed under the Medicaid program did expand in the first quarter in line with their expectations. However, this effect was swamped by

the steep decline in consumption of hospital services following a large increase in the fourth quarter. There is some skepticism within BEA that health care consumption behaved as the QSS depicts. But the Census Bureau, which conducts the QSS, has responded by noting that there has not been a change in the QSS methodology. One potential explanation is that both patients and providers pulled forward hospital procedures due to concerns about lost coverage and, possibly, reduced reimbursement rates.

At this time we believe that growth rebounded to around 3% in the second quarter, somewhat less than was expected in June. Much of the markdown is in real PCE. We had thought that real PCE would move up to about 3% in the second quarter, reflecting a rebound from the sluggish 1% growth of the first quarter and the improvement in underlying fundamentals. However, our current estimate of growth of real PCE in the second quarter is 1 ¾%. While spending on durable goods was robust in the second quarter, spending on nondurable goods and on services was quite sluggish. Household spending on utilities declined as the weather reverted to more normal patterns. Consumption of health care services began to increase in April and May, but is likely to decline for the quarter as a whole. In addition, real spending on gasoline and on food and beverages (for consumption off premises) declined, perhaps reflecting more rapid price increases.

Elsewhere, the second quarter expenditure data have shaped up much as expected. Growth of investment in nonresidential and residential structures as well as state and local government consumption and gross investment rebounded in the second quarter, due in part to more seasonal weather following the harsh winter. Business investment in new equipment is expected to increase in the 5% to 10% range following a modest decline in the first quarter. The rate of growth of new orders for nondefense capital goods excluding aircraft has begun to move higher, and, based on a three month moving average, the May level of such orders was 3.3% above shipments, the highest since last July. Real exports look to have increased at nearly a 6% annual rate in the second quarter following a steep decline in the first quarter. However, growth of real imports also rebounded in the second quarter, such that the net export growth contribution is expected to be -0.1 percentage point. But this is a big improvement over the first quarter when that growth contribution was -1.5 percentage points.

The supply side data for the second quarter have been consistent with the expenditure data. Hours worked by private payroll employees increased at a 3.8% annual rate in 2014Q2, up from 1.6% in the first quarter. Manufacturing output increased at a 6.7% annual rate in the second quarter, up from just 1.4% in the first quarter. The pace of inventory accumulation is expected it increase substantially, contributing 0.8 percentage points to the Q2 growth rate versus -1.7 percentage points in the first quarter.

In addition to hours worked, most other labor market data exhibited substantial improvement in the second quarter. The average monthly change in total payroll employment over the second quarter moved up to 270,000, the highest in two years. Year-over-year growth of average hourly earnings held steady at around 2%, but given the strong increase of hours worked, there was a nearly 6% (annual rate) increase in our proxy for private wage and salary income. The unemployment rate declined to 6.1% in June, bringing the decline from March to 0.6 percentage points. The labor force participation rate held steady at 62.8, but was down 0.4 percentage points from the March level. The employment to population ratio was 59.0 in June, up from 58.9 in March.

Lastly, inflation moved higher over the second quarter. The 12-month change of the total CPI reached 2.1% in May, up from 1.1% in February, and stayed at 2.1% in June. Most of this increase was due to energy prices, followed by the core index, and then food. The twelve-month increase of the core CPI rose to 2.0% in May from 1.6% in February, but then moved down to 1.9% in June. The bulk of the increase in core inflation was in the core services component, led by air fares, rents, and medical care services. In June, the rates of increase of airfares and of health care services slowed sharply, supporting the view that the large increases of previous months were likely temporary. In contrast, the rate of increase of rents, particularly tenant rents, remained at or near recent levels.

The Outlook

We continue to believe that, after several years of growth around 2%, the economy is in transition to above-potential growth over the remainder of 2014 and all of 2015. The logic underlying this forecast is unchanged. The headwinds that have restrained growth over the past several years have subsided, allowing substantially improved underlying fundamentals to exert themselves more forcefully. These improved fundamentals include the fact that the asset and the liability side of consumer's balance sheets are effectively repaired, with household net worth restored to pre-crisis levels and liabilities beginning to gradually expand. The excess housing built up over the previous decade has been worked off, and home prices continue to rise rapidly due to a shortage of homes for sale. As demonstrated by financial markets and the surge of M&A activity this year, risk aversion is beginning to subside. Fiscal consolidation at both the federal and the state and local levels is largely over. In addition, credits standards continue to gradually ease, while overall financial conditions remain supportive. And growth prospects among many of our major trading partners have improved.

These improved fundamentals result in a strengthening in the growth of fixed investment over the forecast horizon. This increase in investment provides a boost to income growth, allowing consumer spending to strengthen somewhat further while keeping the personal saving rate essentially unchanged. Real export growth strengthens somewhat over the forecast horizon, but the strengthening of domestic demand produces a significant increase in the rate of growth of real imports, such that the net export growth contribution is, on average, modestly negative.

A wide range of high frequency indicators suggest that the US economy entered the second half of 2014 with a fair amount of momentum, consistent with our modal forecast. In addition to the labor market, manufacturing output, and new orders for nondefense capital goods mentioned above, consumer spending on durable goods remains strong, with sales of light weight motor vehicles reaching nearly 17 million (annual rate) in June, the highest since January of 2006. Sales of existing homes increased in April, May, and June after nearly 9 consecutive monthly declines, suggesting that the housing market is adjusting to the higher level of mortgage interest rates. Similarly, the National Association of Home Builders' Housing Market Index rose to 53 in

early July after reaching a recent low of 45 in May. The Architecture Billings Index has moved up to 52.6 in May after six months of relatively weak readings. And both the ISM Manufacturing and Nonmanufacturing indices moved back up to the mid-50 range in the second quarter after a lull in the first quarter.

That being said, we have lowered our projected growth rates of real GDP for 2014H2 and for all of 2015 by between ¼% and ½% to 3% and 3 ¼%, respectively, reflecting a reassessment of the likely path of growth of real PCE and of the growth rate potential GDP. The path of the unemployment rate over the forecast horizon has been lowered by about ¼ percent point due to the steeper than expected decline over the second quarter and acknowledgement that the labor force participation rate is unlikely to increase at the rate previously expected. The projected path for inflation is unchanged.

As noted above, over the past year there have been unusual developments regarding the rate of growth of consumption of health care services. For example, including health care services, real PCE grew at an annual rate of 2.6% over the second half of 2013, but then slowed to 1.4% over the first half of 2014. Excluding health care services, those corresponding growth rates were 2.3% and 1.8%, respectively. Keep in mind that the second half of 2013 growth of real PCE was likely boosted by powerful wealth effects as household net worth soared. This information has led us to believe that, while growth of real PCE is likely to increase over the second half of 2014 and into 2015, that growth path is probably ¼ to ½ percentage point lower than we previously thought. This in turn implies that the path of the personal saving rate is somewhat higher than previously thought and higher than would be expected from the long-run relationship between the personal saving rate and household net worth over disposable income. This is consistent with the view that, in the wake of the financial crisis and the sluggish recovery to date, households have higher than normal demand for precautionary saving.

Once we receive the revised NIPA data resulting from the annual revision, we will undertake a full reassessment of our assumption regarding the economy's potential growth rate. But evidence is building that potential is lower than the 2 ¼% we have been assuming for some time. An Okun's relationship over the period since mid-2009 suggests that potential is in the 1 ¾% to 2%

range. In addition, the rate of growth of the labor force and of trend productivity are below what would be consistent with our existing assumption.

The stronger growth of output should translate into stronger growth of employment and a continuation of the downward trend of the unemployment rate. Despite the fact that we have lowered projected growth somewhat in this cycle, the path of the unemployment rate is about 0.2 percentage points lower over the entire horizon, averaging 5.8% in 2014Q4 and 5% in 2015Q4. Part of this decline is simply recognition of the fact that the unemployment rate fell more than expected over the course of 2014Q2. But in addition, with the continued decline of the labor force participation rate, it no longer seems realistic to assume that it will rise to 63.4 by 2015Q4. In this cycle we have delayed rising to 63.4 to 2016Q4. But like our estimate of potential, we need to reevaluate this underlying assumption. A recent paper released by the Council of Economic Advisors concludes that, at best, the participation rate is like to stabilize near recent levels through 2016 before resuming a downward trend.

Our corresponding inflation forecast is essentially unchanged. The rate of increase of the core PCE deflator is expected to gradually increase over the forecast horizon and to be near the FOMC objective by the end of 2015. In this cycle, the four-quarter change of the core PCE deflator is 1.9% versus 1.8% in June, reflecting the slightly lower path of the unemployment rate. The four-quarter change of the total PCE deflator is also projected to be 1.9% in 2015 due to the fact that oil prices are expected to decline over the forecast horizon. In addition to the gradual reduction of slack, the gradually higher path for inflation is due to rising marginal costs of production as well as a declining exchange value of the dollar. However, long-term inflation expectations, a key driver of the inflation process, are assumed to be well anchored over the forecast horizon, limiting the increase in inflation set in motion by these other forces.

2-1: Projections of Key Variables

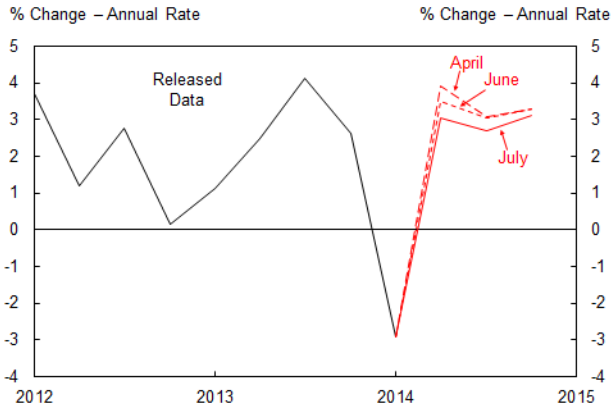
	Core PCE Inflation		Real GDP Growth		Unemployment Rate*		Fed Funds Rate**	
	June	July	June	July	June	July	June	July
2013								
Q1	*1.3*	*1.3*	*1.1*	*1.1*	*7.7*	*7.7*	*0-0.25*	*0-0.25*
Q2	*0.6*	*0.6*	*2.5*	*2.5*	*7.5*	*7.5*	*0-0.25*	*0-0.25*
Q3	*1.4*	*1.4*	*4.1*	*4.1*	*7.2*	*7.2*	*0-0.25*	*0-0.25*
Q4	*1.3*	*1.3*	*2.6*	*2.6*	*7.0*	*7.0*	*0-0.25*	*0-0.25*
2014								
Q1	*1.2*	*1.2*	*-1.0*	*-2.9*	*6.7*	*6.7*	*0-0.25*	*0-0.25*
Q2	1.8	1.9	*3.5*	3.0	*6.3*	6.2	0-0.25	0-0.25
Q3	1.5	1.7	*3.1*	2.7	*6.1*	6.0	0-0.25	0-0.25
Q4	1.5	1.8	*3.3*	3.1	*6.0*	5.8	0-0.25	0-0.25
2015								
Q1	1.6	1.8	3.4	3.0	5.9	5.5	0-0.25	0-0.25
Q2	1.7	1.8	3.6	3.3	5.7	5.4	0.25	0.25
Q3	1.8	1.9	3.6	3.2	5.4	5.2	0.5	0.5
Q4	1.9	1.9	3.6	3.4	5.2	5.0	1.0	1.0
Q4/Q4								
2012	*1.7*	*1.7*	*2.0*	*2.0*	*-0.8*	*-0.8*	*0-0.25*	*0-0.25*
2013	*1.2*	*1.2*	*2.6*	*2.6*	*-0.9*	*-0.9*	*0-0.25*	*0-0.25*
2014	1.5	1.6	2.2	1.5	-1.0	-1.2	0-0.25	0-0.25
2015	1.7	1.8	3.6	3.2	-0.8	-0.8	1.0	1.0

Columns reflect the forecast dates. Numbers in gray are from the previous Blackbook, and numbers in italics are released data.
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.
**Quarterly values are the end-of-quarter value. Yearly values are the difference between the end-of-year value in the previous year and the end-of-year value in the listed year.

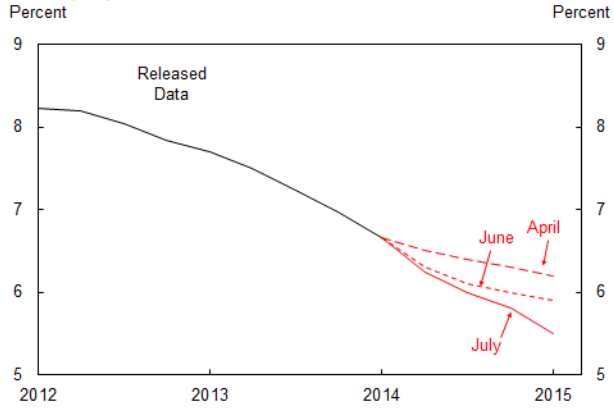
2-2: Evolution of Projected Quarterly Paths

Key Indicators

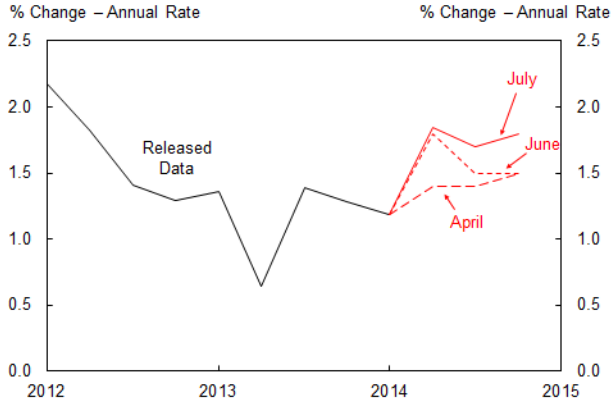
Real GDP Growth



Unemployment Rate

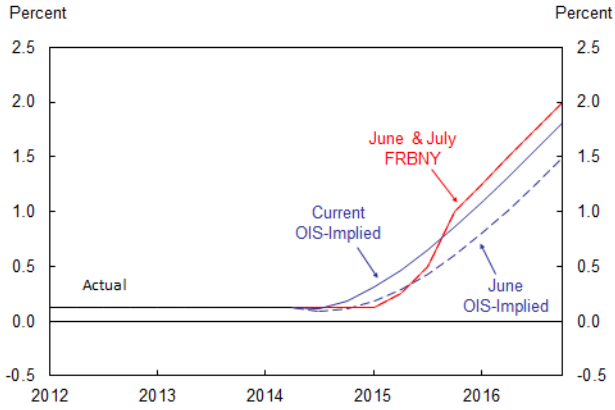


Core PCE Inflation

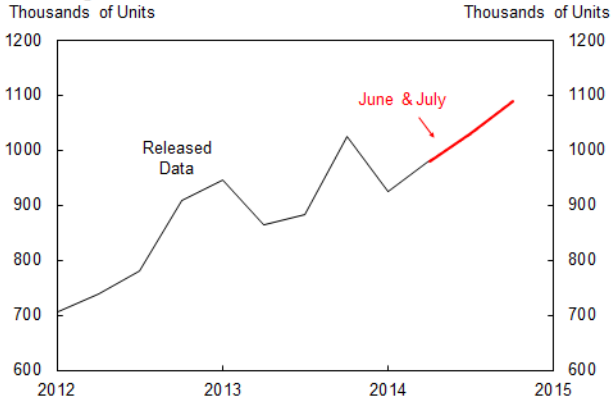


Forecast Assumptions

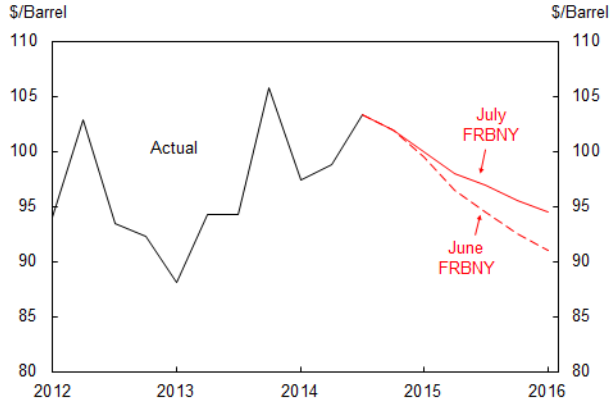
Federal Funds Rate



Housing Starts



Crude Oil



Source: FRBNY (MMS and IR Functions) and Federal Reserve Board

2-3: Near-Term Projections

	Growth Rates (AR)			Growth Contributions (AR)		
	2014Q1	2014Q2	2014Q3	2014Q1	2014Q2	2014Q3
OUTPUT						
Real GDP	-2.9	3.0	2.7	-2.9	3.0	2.7
	(-1.0)	(3.5)	(3.1)	(-1.0)	(3.5)	(3.1)
Final Sales to Domestic Purchasers	0.3	2.2	2.5	0.3	2.3	2.6
	(1.6)	(2.9)	(2.9)	(1.6)	(3.0)	(2.9)
Consumption	1.0	1.8	2.5	0.7	1.3	1.7
	(3.1)	(3.1)	(3.0)	(2.1)	(2.1)	(2.1)
BFI: Equipment	-2.8	6.0	8.0	-0.2	0.3	0.4
	(-3.1)	(6.0)	(8.0)	(-0.2)	(0.3)	(0.4)
BFI: Nonresidential Structures	-7.7	3.0	5.0	-0.2	0.1	0.1
	(-7.5)	(4.0)	(8.0)	(-0.2)	(0.1)	(0.2)
BFI: Intellectual Property Products	6.3	4.0	4.0	0.2	0.2	0.2
	(5.1)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	-4.2	9.0	5.0	-0.1	0.3	0.2
	(-5.1)	(9.3)	(4.0)	(-0.2)	(0.3)	(0.1)
Government: Federal	0.6	-2.0	-2.0	0.1	-0.1	-0.1
	(0.7)	(-2.0)	(-2.0)	(0.1)	(-0.1)	(-0.1)
Government: State and Local	-1.7	2.8	1.0	-0.2	0.3	0.1
	(-1.8)	(1.5)	(1.0)	(-0.2)	(0.2)	(0.1)
Inventory Investment	--	--	--	-1.7	0.8	-0.4
	--	--	--	(-1.6)	(0.6)	(0.0)
Net Exports	--	--	--	-1.5	-0.1	0.5
	--	--	--	(-1.0)	(-0.1)	(0.1)
INFLATION						
Total PCE Deflator	1.4	2.2	2.1			
	(1.4)	(2.0)	(1.8)			
Core PCE Deflator	1.2	1.9	1.7			
	(1.2)	(1.8)	(1.8)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	-5.9	0.7	1.3			
	(-3.8)	(1.7)	(1.7)			
Compensation per Hour	2.3	1.9	2.0			
	(2.3)	(1.6)	(1.6)			
Unit Labor Costs	8.2	1.2	0.7			
	(6.1)	(-0.1)	(-0.1)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-4: Medium-Term Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2013	2014	2015	2013	2014	2015
OUTPUT						
Real GDP	2.6	1.5	3.2	2.6	1.5	3.2
	(2.6)	(2.2)	(3.6)	(2.6)	(2.2)	(3.6)
Final Sales to Domestic Purchasers	1.6	1.9	3.3	1.7	2.0	3.3
	(1.6)	(2.7)	(3.7)	(1.7)	(2.7)	(3.8)
Consumption	2.3	2.0	2.8	1.6	1.4	2.0
	(2.3)	(3.1)	(3.3)	(1.6)	(2.1)	(2.3)
BFI: Equipment	3.9	4.9	10.0	0.2	0.3	0.6
	(3.9)	(5.1)	(12.0)	(0.2)	(0.3)	(0.7)
BFI: Nonresidential Structures	-0.7	1.6	8.0	0.0	0.0	0.2
	(-0.7)	(3.4)	(10.0)	(0.0)	(0.1)	(0.3)
BFI: Intellectual Property Products	3.0	4.6	4.0	0.1	0.2	0.2
	(3.0)	(4.3)	(4.0)	(0.1)	(0.2)	(0.2)
Residential Investment	6.9	3.6	12.5	0.2	0.1	0.4
	(6.9)	(3.7)	(12.5)	(0.2)	(0.1)	(0.4)
Government: Federal	-6.2	-1.3	-2.0	-0.5	-0.1	-0.1
	(-6.2)	(-1.3)	(-2.0)	(-0.5)	(-0.1)	(-0.1)
Government: State and Local	0.2	0.8	1.5	0.0	0.1	0.2
	(0.2)	(0.4)	(1.0)	(0.0)	(0.0)	(0.1)
Inventory Investment	--	--	--	0.7	-0.3	0.0
	--	--	--	(0.7)	(-0.3)	(0.0)
Net Exports	--	--	--	0.2	-0.2	-0.1
	--	--	--	(0.2)	(-0.2)	(-0.3)
INFLATION						
Total PCE Deflator	1.0	1.9	1.9			
	(1.0)	(1.7)	(1.9)			
Core PCE Deflator	1.2	1.6	1.8			
	(1.2)	(1.5)	(1.7)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	1.4	0.0	1.4			
	(1.4)	(0.3)	(1.6)			
Compensation per Hour	0.3	2.0	2.1			
	(0.3)	(1.9)	(2.0)			
Unit Labor Costs	-1.1	2.0	0.7			
	(-1.1)	(1.5)	(0.4)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-5: Comparison with Other Forecasts

Real GDP Growth

	Release Date	2014Q1	2014Q2	2014 Q4/Q4	2015 Q4/Q4
FRBNY	7/22/2014	-2.9	3.0	1.5	3.2
		(-1.0)	(3.5)	(2.2)	(3.6)
Blue Chip	7/10/2014	-2.9	3.3	1.6	2.9
		(-1.0)	(3.7)	(2.2)	(3.0)
Median SPF	5/16/2014	--	3.3	2.4	3.1
		--	(3.3)	(2.4)	(3.1)
Macro Advisers	7/8/2014	-2.9	2.7	1.6	3.2
		(-1.0)	(3.9)	(2.4)	(3.3)
FRBNY-DSGE	6/10/2014	--	3.1	1.1	1.7
		(-1.0)	(3.7)	(2.1)	(2.1)

Core PCE Inflation

	Release Date	2014Q1	2014Q2	2014 Q4/Q4	2015 Q4/Q4
FRBNY	7/22/2014	1.2	1.9	1.6	1.8
		(1.2)	(1.8)	(1.5)	(1.8)
Median SPF	5/16/2014	1.5	1.5	1.5	1.8
		(1.5)	(1.5)	(1.5)	(1.8)
Macro Advisers	7/8/2014	1.2	1.9	1.6	1.8
		(1.2)	(1.7)	(1.5)	(1.7)
FRBNY-DSGE	6/10/2014	--	1.9	1.4	1.4
		(1.2)	(1.8)	(1.4)	(1.3)

CPI Inflation

	Release Date	2014Q1	2014Q2	2014 Q4/Q4	2015 Q4/Q4
FRBNY	7/22/2014	1.9	3.0	2.4	2.3
		(1.9)	(2.6)	(2.3)	(2.3)
Blue Chip	7/10/2014	1.9	2.8	2.3	2.1
		(1.9)	(2.3)	(2.1)	(2.0)
Median SPF	5/16/2014	--	1.9	1.9	2.1
		--	(1.9)	(1.9)	(2.1)
Macro Advisers	7/8/2014	1.9	2.9	2.4	1.5
		(1.9)	(2.7)	(2.0)	(1.6)

Core CPI Inflation

	Release Date	2014Q1	2014Q2	2014 Q4/Q4	2015 Q4/Q4
FRBNY	7/22/2014	1.6	2.5	2.0	2.2
		(1.6)	(2.4)	(2.0)	(2.2)
Median SPF	5/16/2014	--	1.8	1.8	2.1
		--	(1.8)	(1.8)	(2.1)
Macro Advisers	7/8/2014	1.6	2.6	2.0	1.9
		(1.6)	(2.3)	(1.9)	(1.9)

*Note: Numbers in gray are from the previous Blackbook

3. Uncertainty & Risks

Recent developments have had modest and roughly offsetting effects on our risk assessment; therefore, we see the balance of risks as not having changed materially over the intermeeting period. Based on the difference between the modal central forecast and the expected value from our forecast distributions, the risks remain roughly balanced for core PCE inflation and for real GDP growth through most of the forecast horizon [Exhibit 3-1]. We also see the uncertainty around the projection as little changed over the period.

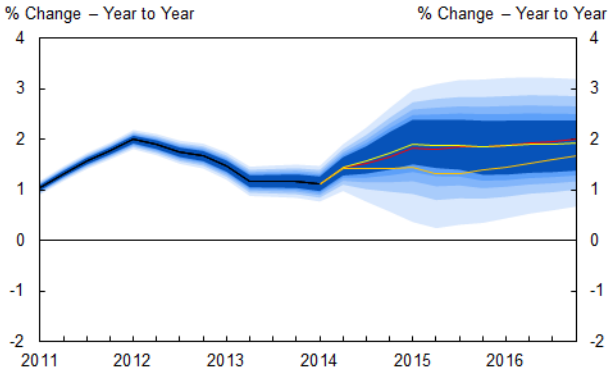
Although the recent data releases generally still suggest that real growth will continue to rebound from the decline in 2014Q1, the extent of the downward revision in 2014Q1 real GDP and PCE as well as the recent escalation of geopolitical tensions indicate some additional uncertainties that offset a reduction associated with the data releases. For this Blackbook, these additional uncertainties are captured through a higher probability on the *Fiscal Consolidation* scenario, which has features of a short-term aggregate supply shock [Exhibit 3-2]. The likelihood of a further downward revision to already-low Q1 productivity led us to lower further the probability of the *Productivity Boom* scenario. The recent resilience of financial markets to various financial and geopolitical developments led to a small reduction in the probability of the *Global Credit Crunch* scenario. With these changes, the width of the 90 percent probability intervals for both real GDP growth and core PCE inflation is little changed, even though the position of the interval shifted with the changes in the central forecast [Exhibit 3-3]. If financial markets and economic data show that these geopolitical developments have had little impact on the U.S. economy, our assessment of uncertainty could be reduced in the next cycle.

Comparing the recent data and our current central forecast to the forecast distribution from a year earlier, the current projection for inflation is now in the middle rather than the lower part of the year-ago inflation distribution, reflecting the higher inflation data of recent months and their impact on our inflation forecast [Exhibit 3-3]. The current real GDP growth forecast is in the lower half of the year-ago forecast distribution over the rest of this year, reflecting the impact of the 2014Q1 real GDP decline and real PCE revision on our outlook for real GDP growth. The current forecast also moves toward the lower part of the year-ago distribution for 2016, as we

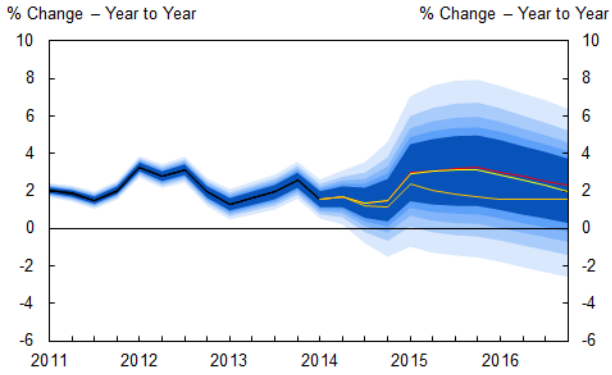
now assess that the economy will achieve maximum sustainable employment—and thus real growth returns to its potential rate—more quickly than we thought a year ago.

3-1: Forecast Distributions

Core PCE Inflation Forecast Distribution



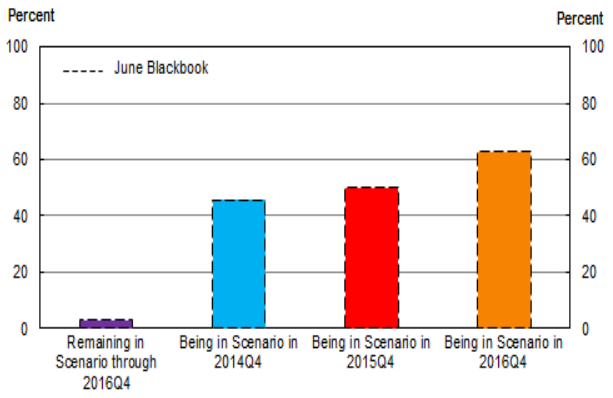
Real GDP Growth Forecast Distribution

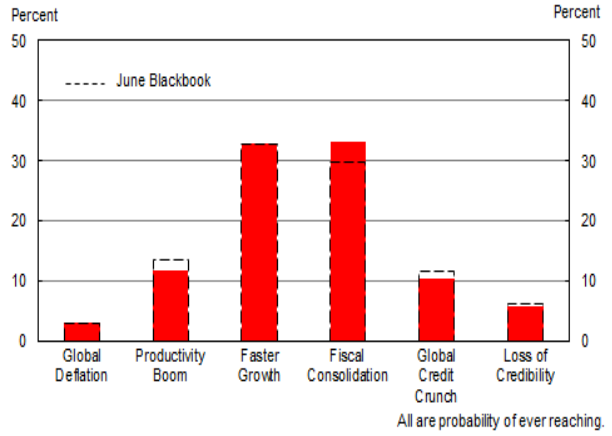


The yellow line is the expected value of the forecast distribution, the red line is the FRBNY central projection, the orange line is the DSGE forecast, and the black line is released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter change will be within the respective range.

3-2: Scenario Probabilities

Central Scenario Probabilities



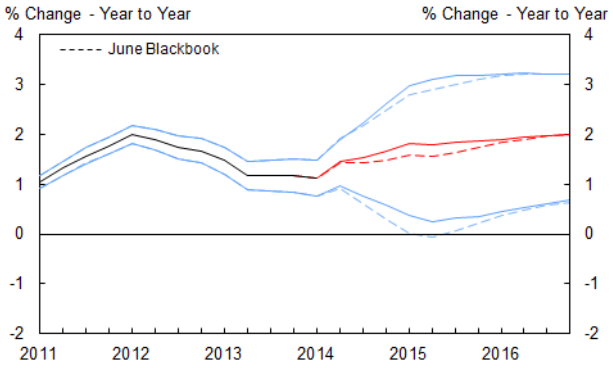


The left chart shows the probability of remaining in the central scenario through the end of the forecast horizon and the probabilities of being in the central scenario at the end of the next three years. The right chart shows the probabilities of ever reaching an alternative scenario over the forecast horizon, an assessment of the overall likelihood of each alternative scenario. A short description of the scenarios and the methodology to perform risk assessment is in the Appendix.

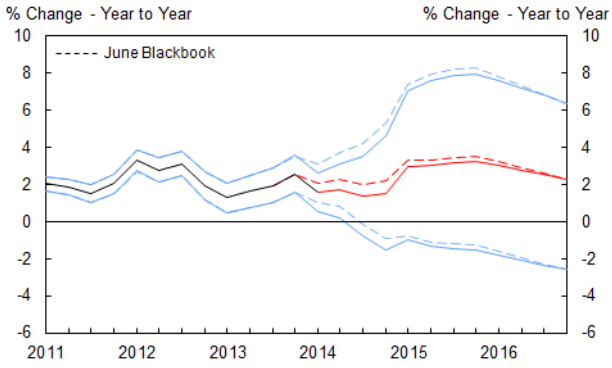
Source: MMS Function (FRBNY)

3-3: Evolution and Performance of Forecast Distributions

Change in Core PCE Inflation Forecast Distribution

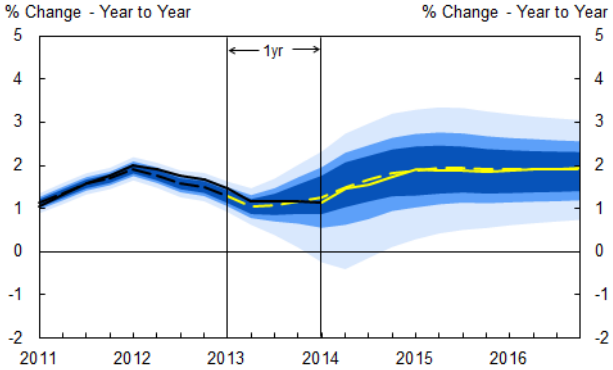


Change in Real GDP Growth Forecast Distribution

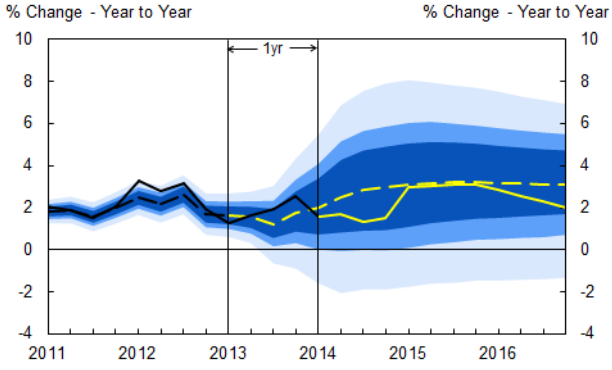


The red lines are the central scenario projections, black lines are released data, and blue lines represent upper and lower 90 percent forecast probability intervals. Dashed lines represent forecasts from the previous Blackbook.

One-Year Comparison of Core PCE Inflation Forecast Distribution and Expected Value



One-Year Comparison of Real GDP Growth Forecast Distribution and Expected Value



The solid yellow lines are the current central scenario projections and the dashed yellow lines are the year-ago Blackbook central scenario projections. Black lines are released data and the blue lines represent upper and lower 50, 70 and 90 percent forecast probability intervals from the year-ago Blackbook.

Source: MMS Function (FRBNY)

Policy Normalization Principles and Strategy

Policy normalization is defined as the sequence of steps to raise short-term interest rates and to reduce the size of the Federal Reserve's securities holdings toward levels the Committee views as normal in the longer run.

- The Committee will determine the timing and pace of policy normalization so as to promote its statutory mandate of maximum employment and price stability.
- The Committee intends to return to implementing monetary policy primarily through actions that influence the general level of short-term interest rates.
- When economic conditions and the economic outlook warrant a less accommodative monetary stance, the Committee will begin the process of policy normalization by raising the target range for the federal funds rate. Subsequently, the primary means of modifying the stance of monetary policy will be changing the target range for the federal funds rate.
- Adjustments to the interest rate paid on reserve balances will be the primary means used to keep the federal funds rate within its target range. In addition, the Committee will adjust the rate at which the Federal Reserve executes overnight repurchase agreements and may use additional tools to establish adequate control over the federal funds rate.
- At an appropriate time after the Committee first increases its target range for the federal funds rate, it will cease or reduce reinvestments of payments of principal received from securities held in the System Open Market Account. This step will lead to a gradual decline in the Federal Reserve's securities holdings and in the level of bank reserve balances.
- The Committee does not plan to sell agency mortgage-backed securities to normalize its securities holdings, although limited sales might be warranted in the longer run to reduce or eliminate residual holdings.
- The Committee anticipates that the Federal Reserve will, in the longer run, hold predominantly Treasury securities and no more securities than necessary to implement monetary policy efficiently and effectively.
- The Committee will choose the details of its normalization strategy to support the effective implementation of monetary policy while promoting financial stability and avoiding disruptions to the smooth functioning of financial markets. The Committee is prepared to adjust its approach to policy normalization if necessary in light of economic and financial developments.

Appendix

In this Appendix, we provide brief descriptions of the alternative scenarios used in this Blackbook [A-1], and of the methodology underlying our risk assessment and forecast distributions [A-2].

A-1. Alternative Scenario Descriptions

Our first alternative scenario considers the impact of productivity growth above our assumed trend of about 1.5% on a nonfarm business sector basis (*Productivity Boom)*. The second scenario (*Fiscal Consolidation)* assesses the consequences of below-trend productivity growth. We consider four additional scenarios. In one (*Faster Growth*), "headwinds" subside more quickly than expected, leading to stronger aggregate demand effects from monetary and fiscal policy. In another (*Loss of Credibility*), the public and investors lose confidence in the current stances of monetary and fiscal policy. In the other two (*Global Credit Crunch* and *Global Deflation*), renewed stresses in global financial and economic conditions have an adverse impact on U.S. real economic growth and inflation; the differences between the two mainly reflect differing assessments of the persistence of the negative effects.

A-2. Methodology to construct the forecast distribution

Our approach to producing the FRBNY forecast distributions is a generalization of techniques used at the Bank of England and other central banks to depict the uncertainty and balance of risks around a forecast. It allows for a dynamic balance of risks that is jointly assessed over inflation and output growth.

Three primary components underlie these forecast distributions: (1) a central scenario with modal inflation and output growth characterized by the central forecast described in Section 2, (2) alternative scenarios with specific inflation and output implications that differ from those of the central scenario, and (3) probabilities that the economy will enter those alternative scenarios. This approach to quantifying uncertainty and risks allows us

to interpret the forecast distribution for output growth and inflation, as well as analyze the impact on that distribution of changing the probabilities of the alternative scenarios.

We set the long-run behavior of our central forecast at the FOMC's longer-run inflation goal and our estimate of the potential growth rate. We also assume that, if the economy enters an alternative scenario, it eventually returns to the central scenario and remains in that scenario thereafter.

We conduct a simulation exercise to generate paths for inflation and output growth; we then perform calculations about our forecast distribution that reflect our risk assessment. This exercise consists in generating a large number of indicator series, with each entry in a given series corresponding to a quarter in the forecast horizon; for each of these series, each quarter's value indicates only the prevailing scenario in that quarter. To generate these scenario-indicator series, we set two parameters for each alternative scenario: (1) the probability that the economy will leave the central scenario and enter the alternative scenario—the "initial probability"—and (2) the probability that the economy will remain in the alternative scenario once it enters the scenario—the "persistence."

After creating the indicator series, we generate, for each series, a path for inflation and a path for output growth, with each entry in a given path corresponding to a quarter in the forecast horizon. For a given indicator series and a given quarter, the values of the associated inflation and output growth paths are determined by a draw from the indicated joint distribution of inflation and output growth, based on the scenario the indicator series points to for that quarter. If, for example, the series indicates that the economy is in the central scenario, we draw inflation and output values from a distribution centered at the central forecast. If instead the series indicates the economy is in an alternative scenario, we draw values from a modified version of the central scenario distribution that is consistent with the alternative scenario.

FOMC BACKGROUND MATERIAL

RESEARCH AND STATISTICS GROUP

FRBNY Blackbook

September 2014

CONFIDENTIAL (FR) Class II FOMC

FRBNY BLACKBOOK

September 2014

CONTENTS

APPENDIX

1. Policy Recommendation and Rationale

While the economic and financial developments during the intermeeting period have been broadly consistent with our forecast assumptions, mixed signals from recent economic data and continuing geopolitical tensions suggest that the outlook remains highly uncertain. Our modal scenario for tapering and lift-off of the policy rate is unchanged relative to the previous Blackbook, with the asset purchase program ending after the October FOMC meeting, and the lift-off of the FFR occurring no earlier than 2015Q1.

The underlying premises behind our outlook are little changed, but our projections for real GDP growth in the second half of 2014 and 2015 are somewhat lower. Despite a surprisingly strong pace of investment growth and net exports, the recent data on consumption expenditures suggest a softer growth profile than previously anticipated. In addition, the labor market reports for July and August indicated a slower pace of improvement in labor market conditions relative to Q2. Nevertheless, given that other data releases were more positive, we interpret the disappointing data to be largely transitory deviations from the ongoing pattern of a gradual improvement in underlying fundamentals. We therefore maintain in our modal scenario that this improvement in underlying fundamentals will continue and bring the economy close to the Fed's 'maximum' employment objective by the end of 2016.

Following the somewhat rapid increase in the spring, inflation measures in recent months appear to have leveled off below the FOMC objective (both our SiCo measure and core PCE inflation have been around 1.5 percent over the last few months). Supporting our projection that inflation will remain below objective for some time, we identify a number of factors that potentially could exert downward pressure on inflation. First, the recent sizable contributions from rent inflation should begin to wane as rent inflation slows down and approaches the pace of income growth. Next, the pass-through of dollar appreciation, including that following the recent ECB decision to engage in further accommodative policy, could exert downward pressure on goods inflation. Finally, oil and commodity prices have fallen recently. Although we view these developments as largely transitory in nature, they might exert some influence on underlying measures of inflation. At the same time, longer-term inflation expectations remain well anchored, even though TIPS-

based measures of long-term inflation compensation are in the lower part of their post-recession ranges. In sum, as we project a reduction in resource slack, we anticipate inflation under our central forecast to revert gradually to its longer-run goal.

With these developments in mind, we expect the target range for the federal funds rate to be raised sometime between the latter part of 2015 Q1 and mid-2015. In state-contingent terms, lift-off should not occur until there is confidence that the economy has gained sufficient momentum and reached "escape velocity" from the liquidity trap. This condition is consistent with current forward guidance, according to which the 0-25 basis points range for the FFR will be maintained for a "considerable time" after the end of the asset purchase program. Relative to the prescription of popular simple-rule benchmarks for the appropriate stance of policy in "normal times" - that is, in absence of the zero lower bound, and in conditions of low uncertainty about the outlook - this is a somewhat delayed lift-off. For example, a Taylor rule with moderate inertia would prescribe a lift-off in late-2014 or early 2015.

The case for delaying the lift-off is based on two considerations. First, it reduces the probability of a costly policy reversal following a premature lift-off. At the zero lower bound, the tail risks and costs of an unexpected deterioration of the outlook are high compared to those of an unanticipated improvement, which raises the option value of waiting. If economic conditions were to worsen *after* the lift-off, a reversal or suspension of policy tightening would be difficult to communicate, be of possibly limited efficacy, and would entail severe reputational costs, as the case of Japan illustrates too well (as do the recent policy reversals in Australia, Sweden, and Norway). An unexpected worsening of economic conditions in the last part of the year or in early 2015 (i.e. *before* lift-off) could be countered by further postponing the lift-off date, while if economic conditions were improving at a faster pace than expected, the FOMC would exercise its option to begin the normalization process or varying its speed.

Second, a delayed lift-off provides continuity in our policy strategy. Past and current forward guidance have led market participants to price-in a highly accommodative stance well past the time when economic conditions would imply an exit from the zero bound under standard policy rules. Removing policy accommodation as soon as economic conditions improve would only

damage credibility and makes it more difficult to fulfill the dual mandate in the future. Because the cyclical improvement may still be dependent on current and expected policy support, removal of accommodation could dispel the very preconditions for the ongoing recovery and push the economy back into stagnation. Once again, the premature policy tightening in Japan in 2006 and other countries in similar circumstances provide a cautionary tale.

These arguments suggest that the FOMC should be very confident in its modal forecast before embarking on the normalization process. In this regard, the inflation outlook and the FOMC's confidence in the return of inflation to the 2% objective over a one-to-two year horizon can provide a particularly useful signal for the appropriate timing of lift-off, especially given the difficulty in assessing the overall health of the labor market in the current environment. As long as inflation remains quiescent below mandate-consistent levels, implying that the costs associated with downside risks are higher than those associated with upside risks, raising rates would be premature.

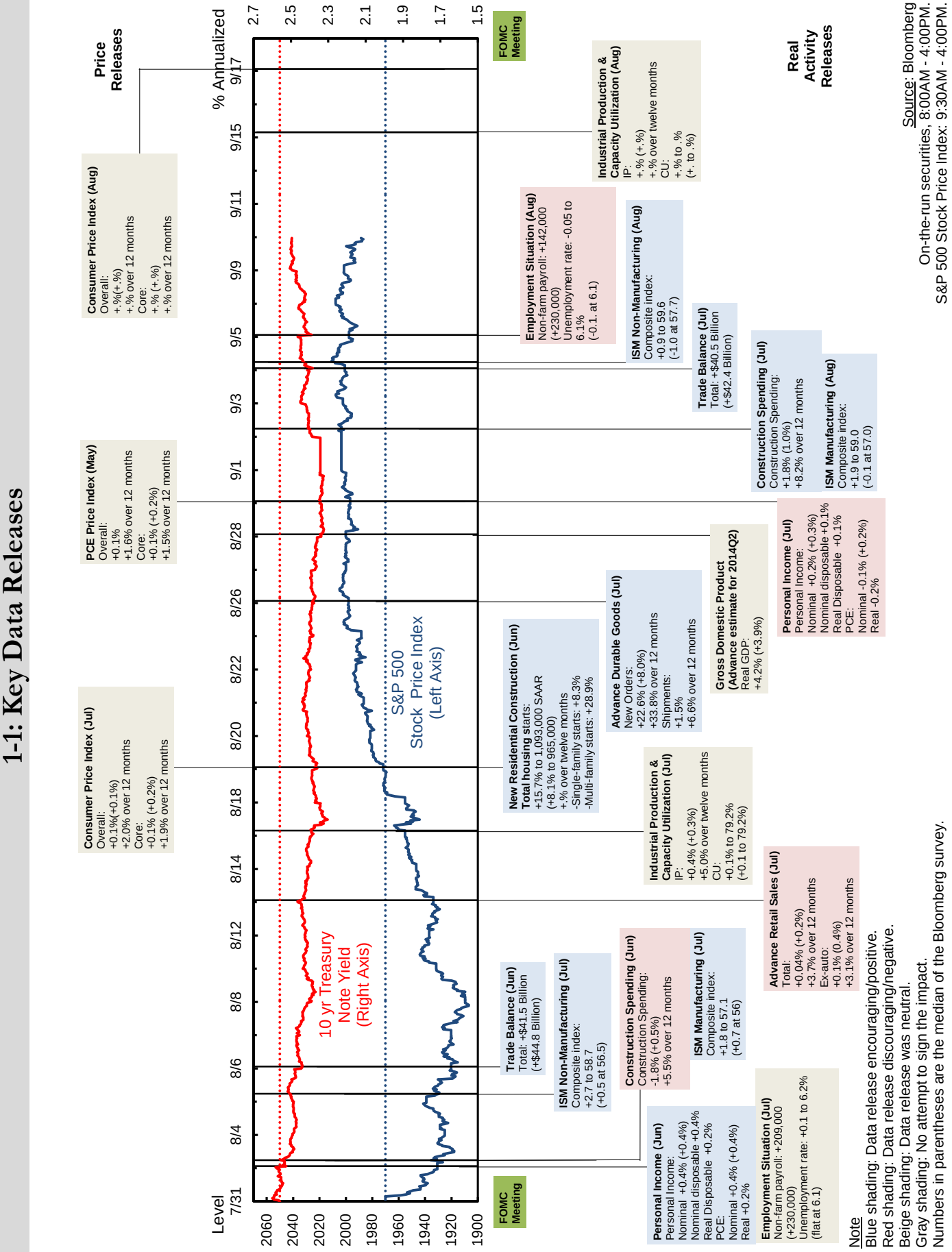
Of course, the benefits of patience as discussed above need to be balanced against the possible risks to financial stability and growth associated with an overly accommodative monetary policy. As financial conditions improved, we have continued to observe a significant reduction in perceived risks and ensuing compression in credit spreads, suggesting that market participants have regained some of their risk appetite. Associated with greater risk appetite, vulnerabilities in some markets (e.g. leveraged loans) have risen notably, but overall financial vulnerabilities appear to be contained at this time. Nonetheless, the FOMC will need to continue to monitor financial conditions, and should communicate its readiness to vary the timing and speed of policy normalization in response to emerging signs of financial vulnerabilities and overheating, in order to prevent future adverse policy trade-offs.

Conditional on our forecast, we project a rather steep pace of post lift-off normalization, with the FFR reaching one percent at the end of 2015 and 1.5 percent four quarters after lift-off. This speed of adjustment, which is not too dissimilar from what is expected by market participants such as Blue Chip Financial forecasters, is projected to gradually close both inflation and unemployment gaps by the end of 2016. If the Committee "does its homework" and the timing

of lift-off is properly calibrated along the lines stated above, barring new adverse shocks, there should be no need to take a pause after the first few rate increases and the pace of interest rate tightening should proceed with sufficient drive, on balance. Instead of such a pause, we recommend two alternative forms of "insurance." First, the end of reinvestment should not occur until the FFR is well above zero, thus maintaining the downward pressure on long-term rates provided by balance sheet policies. Second, the FOMC should continue to communicate that it will not raise the FFR to near its estimated "neutral rate" level as soon as employment and inflation gaps are closed, as such communication has, up to now, been an important part of the overall accommodative policy stance.

From a tactical viewpoint, whether the rate increases after lift-off should occur at evenly spaced intervals and/or be of equal magnitude cannot be predicted in advance. At the end of the day the pace of normalization should be state-contingent reflecting the evolution of the outlook. Furthermore, appropriate communication should continue to guide markets "forward," providing and explaining the FOMC's rationale for each step along the normalization path.

1-1: Key Data Releases



Source: Bloomberg
On-the-run securities, 8:00AM - 4:00PM.
S&P 500 Stock Price Index: 9:30AM - 4:00PM.

Note
Blue shading: Data release encouraging/positive.
Red shading: Data release discouraging/negative.
Beige shading: Data release was neutral.
Gray shading: No attempt to sign the impact.
Numbers in parentheses are the median of the Bloomberg survey.

2. Central Forecast

Intermeeting Developments

US economic indicators released over the intermeeting period have tended to surprise to the upside. The Citigroup US Economic Surprise Index has moved up to around +40 recently from around -10 at the time of the July FOMC meeting. Nonetheless, our projection for growth of real GDP over the second half of 2014 is essentially unchanged at around 2 ¾% to 3% (annual rate).

The July data on construction spending, orders for and shipments of nondefense capital goods, and exports were all quite encouraging and consistent with our narrative that the growth contribution from business fixed investment and net exports would increase in the second half of 2014. After slowing over the first four months of 2014, growth of nonresidential construction put in place rose to a 20.2% annual rate over the three months ending in July. The Architectural Billings Index, a leading indicator of construction activity, has increased for four consecutive months, reaching 55.8 in July, its highest level since July of 2007. Construction spending in the state and local government sector is also now rising briskly. The ratio of new orders over shipments for nondefense capital goods excluding aircraft has risen steadily over the past year, a development which in the past signaled stronger business investment in new equipment. Real exports of goods were up at an 11.2% annual rate over the three months ending in July.

Manufacturing output rose sharply in July, increasing at an 11.4% annual rate. However, this reflected an unusually large 217.5% annual rate increase in output of motor vehicles and parts, which we attribute to the fact that fewer than normal assembly lines were closed for model-year retooling. There is likely to be a payback for this surge in coming months. Excluding motor vehicles, manufacturing output rose at a 5% annual rate in July, still fairly strong but below the 6.0% growth of the second quarter.

Total housing starts rose 15.7% in July, which is the strongest monthly increase since last November. As has been the case for some time, the bulk of the increase was in the multifamily sector, where starts rose 28.9% to the highest level since January of 2006. Single-family starts

rose 8.3% in July, and this has been the strongest monthly gain for this series in eight months. However, the absolute level of single-family starts is about the same as in early 2013, and the level of single-family permits is running below the level of starts. So while residential investment is expanding, its overall growth contribution continues to be less than that of past expansions. Sales of existing homes have increased over the past four months, but the July level remains 4.3% below that of July of 2013. The 12-month change of the CoreLogic national home price index was essentially unchanged at 7.4% in July, down from a recent peak of 11.5% in 2013Q4. Also according to CoreLogic, distressed sales were down to less than 10% of all home sales in June of this year.

While much of the July data flow produced upside surprises, the July data on real personal consumption expenditures was surprisingly weak. It was already known that motor vehicle sales fell from 16.9 million (annual rate) in June to 16.5 million in July. In addition, it was known that July was unusually cool, reducing household consumption of electricity. Nonetheless, stripping out the volatile motor vehicles and parts and energy components, real PCE grew at just a 0.2% annual rate in July. Moreover, the growth of this measure of consumer spending has slowed notably over the past four months, down to rates comparable to those of mid-2011 and mid-2012. This slowing is occurring at the same time that consumers' assessments of current conditions have risen to the highest levels since late 2007 and equity values have reached record highs.

The available data for August has been mixed. Consumer confidence continued to improve, with a notable improvement in assessments of labor market conditions. Sales of light-weight vehicles soared in August, rising to 17.5 million units (seasonally-adjusted annual rate) from 16.5 million in July and the highest monthly sales volume since January of 2006. This likely overstates the underlying trend, however, as end of model year incentives were strong this year and Labor Day Weekend sales were included in the August sales figures. The ISM (Institute for Supply Management) manufacturing composite index increased 1.9 points to 59 in August. The ISM (Institute for Supply Management) non-manufacturing composite index edged up another 0.9 percentage points to 59.6 in August—the highest level in nine years.

However, the employment situation for August turned out to be a downside surprise and suggests that the pace of improvement in labor market conditions has slowed. Nonfarm payroll employment rose by just 142,000 in August, with employment gains of June and July revised downward by a cumulative 30,000. The July-August average monthly gain in payroll employment is 177,000, down from 267,000 per month in the second quarter. Similarly, the July-August increase in hours worked is 1.9% (annual rate) versus 3.8% in the second quarter.

The 12-month change of average hourly earnings was 2.1% in July, about where it has been for a year and a half. At the industry level, 12-month growth rates of average hourly earnings are very mixed. For example, wage increases in the leisure and hospitality industry have moved notably higher while there has been continued slowing in education and health services. While the four-quarter change of unit labor costs is quite volatile, unit labor costs increased somewhat faster than the deflator of the nonfarm business sector over the first half of 2014, such that labor's share of national income actually increased somewhat after stabilizing over 2013.

After rising from around 1% at the beginning of 2014, the 12-month change of the total PCE deflator reached 1.6% in June of this year and stayed at that rate in July. Both energy and food prices contributed to the increase of the overall inflation rate. But in recent months the rate of increase of food prices has stabilized while the rate of increase of energy prices has declined. The 12-month change in the core PCE index rose from 1.2% at the beginning of the year to 1.5% in May, where it stayed in June and July. This increase in core inflation has been most pronounced in non-energy services, such as rents, recreation services, and food services and accommodations. Looking back at the supply chain, prices of nonpetroleum imports and intermediate materials excluding foods and feeds have begun to increase after falling in 2013. However, the rate of increase is relatively modest. In contrast, prices of crude nonfood materials have fallen for five consecutive months.

The Outlook

From mid-2009 through mid-2014, the US economy grew at a compound annual rate of 2.2%, which is only modestly above our revised estimate of the economy's potential growth rate—2%.

Several times over that period it looked as though growth was on the verge of breaking through the various headwinds that were restraining it. But each time some external shock or a tightening of fiscal policy pushed the economy back to the roughly 2% growth path.

As mentioned above, we are again at one of those points in time when several economic indicators are suggesting that the growth rate of real GDP is on the verge of moving up, possibly to average 3% or so for the next several quarters. Of particular note is the fact that recent high frequency data suggest that business fixed investment may finally be moving to a higher growth path. Indeed, it is doubtful that the US economy can move to a higher growth path without a more substantial growth contribution from this expenditure component.

These recent events are entirely consistent with our long-standing narrative for the US economy. In that narrative, the headwinds that have restrained growth over the past several years will gradually subside, allowing the substantially improved underlying fundamentals to exert themselves more forcefully. These improved fundamentals include the largely repaired consumer balance sheets combined with gradually improving access to credit. In addition, while mortgage underwriting standards remain quite tight, the excess supply of housing has been worked off, and both home prices and rents suggest that the supply of housing is not keeping pace with demand. As demonstrated by financial markets conditions and the surge of M&A activity, risk aversion is beginning to subside. Finally, fiscal consolidation at both the federal and the state and local levels has largely run its course.

It should be noted, however, that as was the case in the July forecast, we now expect the path of real consumer spending to be somewhat less strong than was the case earlier this year. Recall that over the second half of 2013 growth of real PCE moved up to nearly 3% (annual rate), the highest since the very early stages of recovery in 2010. The personal saving rate, which had averaged 7.6% over the second half of 2012, was down to 4.4% by 2013Q4. This was consistent with the past relationship between the personal saving rate and household net worth. However, over the first half of 2014 the saving rate has moved higher and is likely to reach 5.6% for 2014Q3, despite the fact that household net worth has continued to rise. The personal saving rate is running at least 2 percentage points above what the historical relationship with household net

worth would suggest. This is consistent with the view that, in the wake of the financial crisis and the sluggish recovery to date, households have higher than normal demand for precautionary saving. It is also consistent with the idea of consumption smoothing in the face of an increase in taxes.

Another reason for dampening somewhat the assumed path of real PCE is that the growth impulse from the consumer durable goods cycle is likely to weaken going forward. For example, sales of light-weight motor vehicles have steadily recovered from the depths of the recession to an average of 17.5 million units (annual rate) over the three months ending in August. While there may be some additional upside potential to these sales given the quite long period over which they were depressed relative to fundamentals, it seems unlikely that they will continue to grow at the 10 percent rate of the past year.

For the second half of 2014 we now project that real GDP will grow at a compound annual rate of around 3%, bringing the 2014 Q4/Q4 growth rate to 1.9%. We anticipate that growth will remain at roughly that level in 2015 (3.2% Q4/Q4) before slowing to around 2 1/2% in 2016 as the cycle continues to age and rising interest rates begin to bite. The unemployment rate declines over that period but at a more gradual rate than over the past year, reflecting our assumptions of some cyclical improvement in the rate of growth of productivity and gradual increases in both the labor force participation rate and the average work week. The unemployment rate is projected to decline to around 5 ½% by 2015Q4 and then to 5 ¼% by 2016Q4.

Our corresponding inflation forecast is essentially unchanged. The rate of increase of the core PCE deflator is expected to gradually increase over the forecast horizon and to be near the FOMC objective by the end of 2015. In addition to the gradual reduction of slack, the gradually higher path for inflation is due to rising marginal costs of production as well as a declining exchange value of the dollar. However, long-term inflation expectations, a key driver of the inflation process, are assumed to be well anchored over the forecast horizon, limiting the increase in inflation set in motion by these other forces.

2-1: Projections of Key Variables

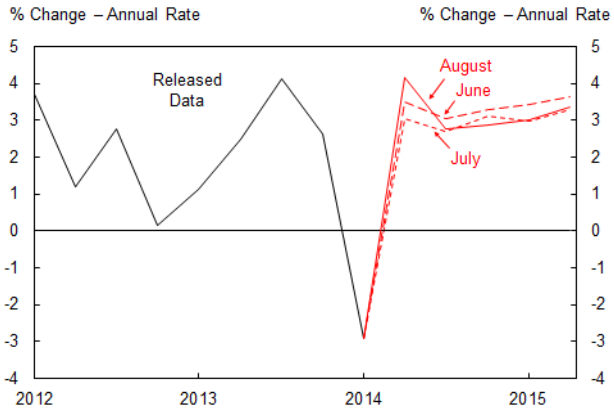
	Core PCE Inflation		Real GDP Growth		Unemployment Rate*		Fed Funds Rate**	
	July	August	July	August	July	August	July	August
2013								
Q1	*1.3*	1.4	*1.1*	2.7	*7.7*	7.7	*0-0.25*	0-0.25
Q2	*0.6*	1.0	*2.5*	1.8	*7.5*	7.5	*0-0.25*	0-0.25
Q3	*1.4*	1.4	*4.1*	4.5	*7.2*	7.2	*0-0.25*	0-0.25
Q4	*1.3*	1.3	*2.6*	3.5	*7.0*	7.0	*0-0.25*	0-0.25
2014								
Q1	*1.2*	1.2	*-2.9*	-2.1	*6.7*	6.7	*0-0.25*	0-0.25
Q2	*1.9*	1.9	*3.0*	4.2	*6.2*	6.2	*0-0.25*	0-0.25
Q3	1.7	1.5	2.7	2.8	6.0	6.2	0-0.25	0-0.25
Q4	1.8	1.5	3.1	3.0	5.8	6.1	0-0.25	0-0.25
2015								
Q1	1.8	1.6	3.0	3.0	5.5	6.0	0-0.25	0.38
Q2	1.8	1.7	3.3	3.4	5.4	5.8	0.25	0.63
Q3	1.9	1.8	3.2	3.2	5.2	5.7	0.50	0.88
Q4	1.9	1.9	3.4	3.1	5.0	5.6	1.0	1.0
Q4/Q4								
2012	*1.7*	1.6	*2.0*	*1.6*	*-0.8*	*-0.8*	*0-0.25*	0-0.25
2013	*1.2*	1.3	*2.6*	3.1	*-0.7*	-0.9	*0-0.25*	0-0.25
2014	1.6	1.5	1.5	1.9	-1.0	-0.9	0-0.25	0-0.25
2015	1.8	1.7	3.2	3.2	-1.5	-0.5	1.0	1.0

Columns reflect the forecast dates. Numbers in gray are from the previous Blackbook, and numbers in italics are released data.
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.
**Quarterly values are the end-of-quarter value. Yearly values are the difference between the end-of-year value in the previous year and the end-of-year value in the listed year.

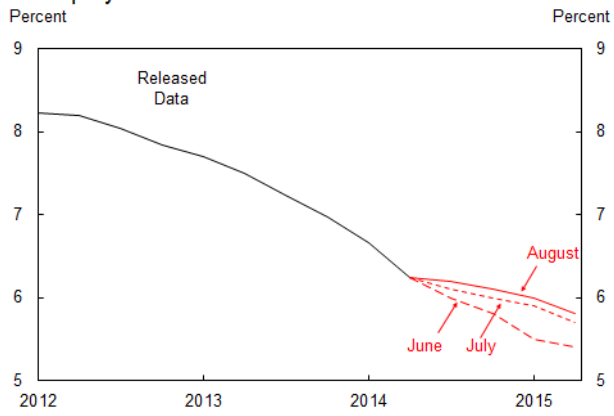
2-2: Evolution of Projected Quarterly Paths

Key Indicators

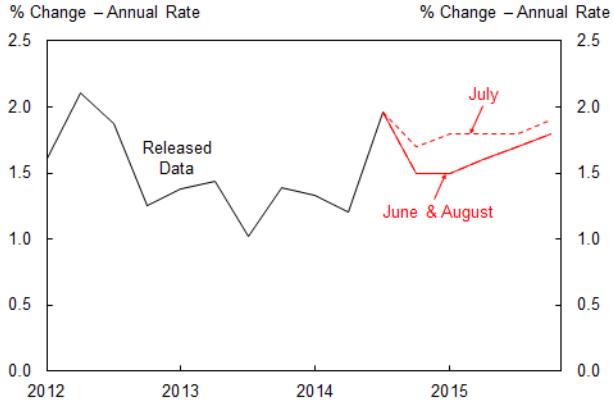
Real GDP Growth



Unemployment Rate

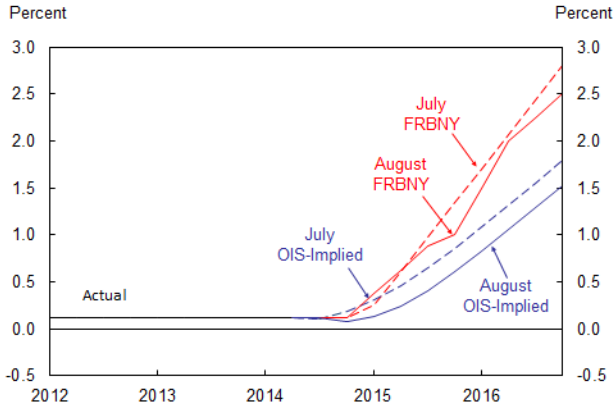


Core PCE Inflation

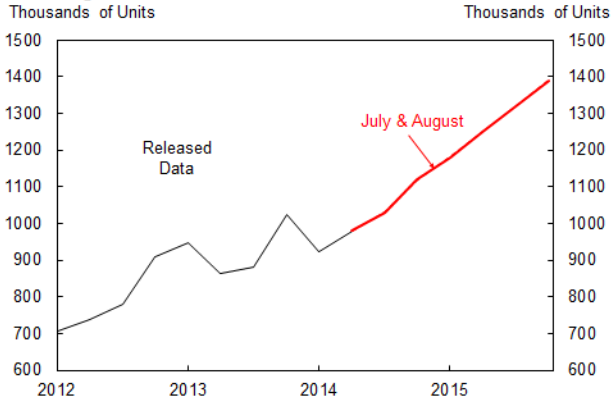


Forecast Assumptions

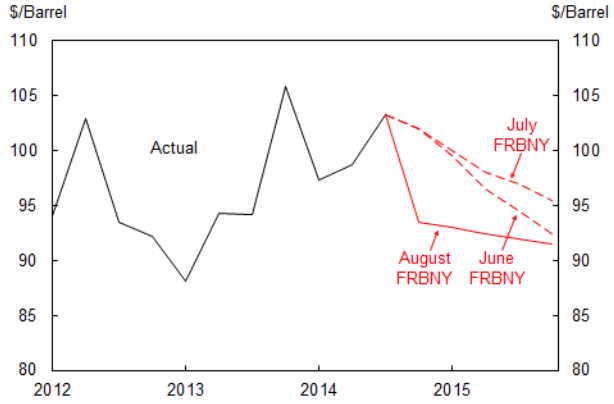
Federal Funds Rate



Housing Starts



Crude Oil



Source: FRBNY (MMS and IR Functions) and Federal Reserve Board

2-3: Near-Term Projections

	Growth Rates (AR)			Growth Contributions (AR)		
	2014Q3	2014Q4	2015Q1	2014Q3	2014Q4	2015Q1
OUTPUT						
Real GDP	2.8	3.0	3.0	2.8	3.0	3.0
	(2.7)	(3.1)	(3.0)	(2.7)	(3.1)	(3.0)
Final Sales to Domestic Purchasers	2.4	2.5	2.9	2.4	2.6	3.0
	(2.5)	(2.7)	(3.1)	(2.6)	(2.8)	(3.1)
Consumption	1.5	2.3	2.5	1.0	1.5	1.7
	(2.5)	(2.6)	(2.7)	(1.7)	(1.8)	(1.8)
BFI: Equipment	10.0	10.0	8.0	0.6	0.6	0.5
	(8.0)	(9.0)	(10.0)	(0.4)	(0.5)	(0.6)
BFI: Nonresidential Structures	10.0	8.0	7.0	0.3	0.2	0.2
	(5.0)	(7.0)	(8.0)	(0.1)	(0.2)	(0.2)
BFI: Intellectual Property Products	4.0	4.0	4.0	0.2	0.2	0.2
	(4.0)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	10.0	2.5	13.2	0.3	0.1	0.4
	(5.0)	(5.0)	(10.0)	(0.2)	(0.2)	(0.3)
Government: Federal	-2.0	-2.0	-2.0	-0.1	-0.1	-0.1
	(-2.0)	(-2.0)	(-2.0)	(-0.1)	(-0.1)	(-0.1)
Government: State and Local	2.3	1.5	1.5	0.3	0.2	0.2
	(1.0)	(1.3)	(1.5)	(0.1)	(0.1)	(0.2)
Inventory Investment	--	--	--	-0.2	-0.2	-0.4
	--	--	--	(-0.4)	(0.0)	(-0.2)
Net Exports	--	--	--	0.5	0.6	0.4
	--	--	--	(0.5)	(0.3)	(0.1)
INFLATION						
Total PCE Deflator	1.5	1.5	1.7			
	(2.1)	(2.0)	(1.9)			
Core PCE Deflator	1.5	1.5	1.6			
	(1.7)	(1.8)	(1.8)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	2.0	1.6	1.6			
	(1.3)	(1.4)	(1.4)			
Compensation per Hour	2.4	2.2	2.2			
	(2.0)	(1.9)	(1.9)			
Unit Labor Costs	0.4	0.6	0.6			
	(0.7)	(0.5)	(0.5)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-4: Medium-Term Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2013	2014	2015	2013	2014	2015
OUTPUT						
Real GDP	3.1	1.9	3.2	3.1	1.9	3.2
	(2.6)	(1.5)	(3.2)	(2.6)	(1.5)	(3.2)
Final Sales to Domestic Purchasers	2.2	2.2	3.1	2.3	2.2	3.1
	(1.6)	(1.9)	(3.3)	(1.7)	(2.0)	(3.3)
Consumption	2.8	1.9	2.6	1.9	1.3	1.8
	(2.3)	(2.0)	(2.8)	(1.6)	(1.4)	(2.0)
BFI: Equipment	6.2	7.3	8.0	0.3	0.4	0.5
	(3.9)	(4.9)	(10.0)	(0.2)	(0.3)	(0.6)
BFI: Nonresidential Structures	4.5	7.5	7.0	0.1	0.2	0.2
	(-0.7)	(1.6)	(8.0)	(0.0)	(0.0)	(0.2)
BFI: Intellectual Property Products	2.7	4.3	4.0	0.1	0.2	0.2
	(3.0)	(4.6)	(4.0)	(0.1)	(0.2)	(0.2)
Residential Investment	6.9	3.4	14.1	0.2	0.1	0.5
	(6.9)	(3.6)	(12.5)	(0.2)	(0.1)	(0.4)
Government: Federal	-6.3	-1.3	-2.0	-0.5	-0.1	-0.1
	(-6.2)	(-1.3)	(-2.0)	(-0.5)	(-0.1)	(-0.1)
Government: State and Local	1.2	1.4	1.5	0.1	0.2	0.2
	(0.2)	(0.8)	(1.5)	(0.0)	(0.1)	(0.2)
Inventory Investment	--	--	--	0.5	-0.1	-0.1
	--	--	--	(0.7)	(-0.3)	(0.0)
Net Exports	--	--	--	0.3	-0.2	0.1
	--	--	--	(0.2)	(-0.2)	(-0.1)
INFLATION						
Total PCE Deflator	1.0	1.7	1.8			
	(1.0)	(1.9)	(1.9)			
Core PCE Deflator	1.3	1.5	1.7			
	(1.2)	(1.6)	(1.8)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	2.0	0.3	1.6			
	(1.4)	(0.0)	(1.4)			
Compensation per Hour	-0.1	3.3	2.3			
	(0.3)	(2.0)	(2.1)			
Unit Labor Costs	-2.1	3.0	0.7			
	(-1.1)	(2.0)	(0.7)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-5: Comparison with Other Forecasts

Real GDP Growth

	Release Date	2014Q3	2014Q4	2014 Q4/Q4	2015 Q4/Q4
FRBNY	9/9/2014	2.8	3.0	1.9	3.2
		(2.7)	(3.1)	(1.5)	(3.2)
Blue Chip	9/10/2014	3.0	3.0	2.0	2.9
		(3.2)	(3.1)	(1.6)	(2.9)
Median SPF	8/15/2014	3.0	3.1	2.1	3.1
		(2.9)	(3.2)	(2.4)	(3.1)
Macro Advisers	8/7/2014	3.0	3.3	2.0	3.1
		(3.3)	(3.3)	(1.6)	(3.2)
FRBNY-DSGE	9/9/2014	3.0	2.8	2.1	1.9
		--	--	(1.1)	(1.7)

Core PCE Inflation

	Release Date	2014Q3	2014Q4	2014 Q4/Q4	2015 Q4/Q4
FRBNY	9/9/2014	1.5	1.5	1.5	1.7
		(1.7)	(1.8)	(1.6)	(1.8)
Median SPF	8/15/2014	1.8	1.9	1.7	1.9
		(1.7)	(1.7)	(1.5)	(1.8)
Macro Advisers	8/7/2014	1.8	1.7	1.6	1.8
		(1.7)	(1.7)	(1.6)	(1.8)
FRBNY-DSGE	9/9/2014	1.5	1.2	1.5	1.5
		--	--	(1.4)	(1.4)

CPI Inflation

	Release Date	2014Q3	2014Q4	2014 Q4/Q4	2015 Q4/Q4
FRBNY	9/9/2014	1.9	2.1	2.2	2.2
		(2.3)	(2.2)	(2.4)	(2.3)
Blue Chip	9/10/2014	2.0	2.0	2.2	2.1
		(2.5)	(1.9)	(2.3)	(2.1)
Median SPF	8/15/2014	2.2	2.0	2.3	2.2
		(1.9)	(1.9)	(1.9)	(2.1)
Macro Advisers	8/7/2014	2.5	1.8	2.3	1.5
		(3.4)	(1.4)	(2.4)	(1.5)

Core CPI Inflation

	Release Date	2014Q3	2014Q4	2014 Q4/Q4	2015 Q4/Q4
FRBNY	9/9/2014	1.9	1.9	2.0	2.2
		(1.9)	(1.9)	(2.0)	(2.2)
Median SPF	8/15/2014	2.1	2.1	2.1	2.1
		(1.8)	(1.9)	(1.8)	(2.1)
Macro Advisers	8/7/2014	2.1	2.0	2.1	1.9
		(2.1)	(1.8)	(2.0)	(1.9)

*Note: Numbers in gray are from the previous Blackbook

3. Uncertainty & Risks

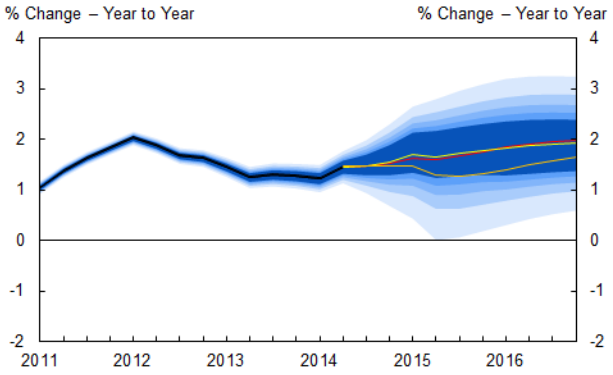
Recent developments have had only minor effects on our risk assessment and, thus, we see the balance of risks as not having changed materially over the intermeeting period. Based on the difference between the modal central forecast and the expected value from our forecast distributions, the risks remain roughly balanced for core PCE inflation and for real GDP growth through most of the forecast horizon [Exhibit 3-1]. We also see the uncertainty around the projection as having declined marginally over the period.

The annual revisions of GDP and productivity did not substantially change our view of the developments over the past few years, which contributed to a small reduction in uncertainty. Otherwise, the economic and financial developments over the intermeeting period suggest little change on net for the forecast distribution: for example, a number of encouraging U.S. data releases were offset by some less encouraging U.S. releases as well as weaker-than-expected data releases in some of the major foreign economies, while financial markets data gave varying signals regarding the outlook and risks. For this Blackbook, the small reduction in uncertainty from the annual revisions is captured through lower probabilities on the *Fiscal Consolidation* and *Faster Growth* scenarios [Exhibit 3-2]. With these changes, the width of the 90 percent probability intervals for both real GDP growth and core PCE inflation narrowed modestly at shorter horizons, but were little changed at longer horizons [Exhibit 3-3].

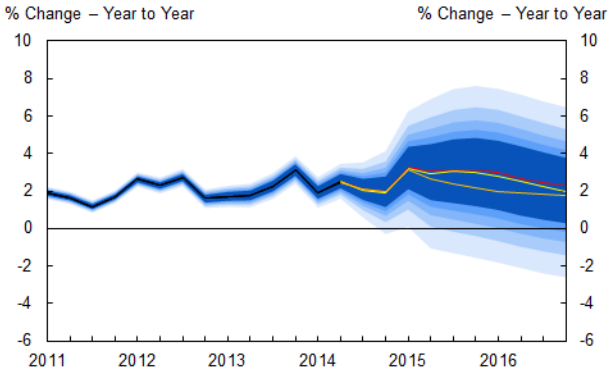
Comparing the recent data and our current central forecast to the forecast distribution from a year earlier, the current projection for inflation is in the lower half of the year-ago inflation distribution, but still reasonably near the year-ago central scenario [Exhibit 3-3]. This is consistent with recent inflation data releases that suggest near-term stabilization of inflation at levels somewhat below the FOMC objective. The current real GDP growth forecast is in the lower half of the year-ago forecast distribution for the second half of this year, reflecting the impact of the 2014Q1 real GDP decline on the four-quarter change of real GDP. The current forecast also moves into the lower portion of the year-ago distribution at longer horizons, as we have lowered our estimate of potential GDP growth in this Blackbook.

3-1: Forecast Distributions

Core PCE Inflation Forecast Distribution



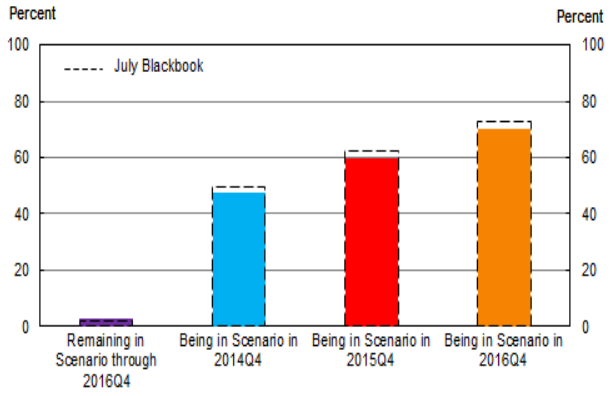
Real GDP Growth Forecast Distribution



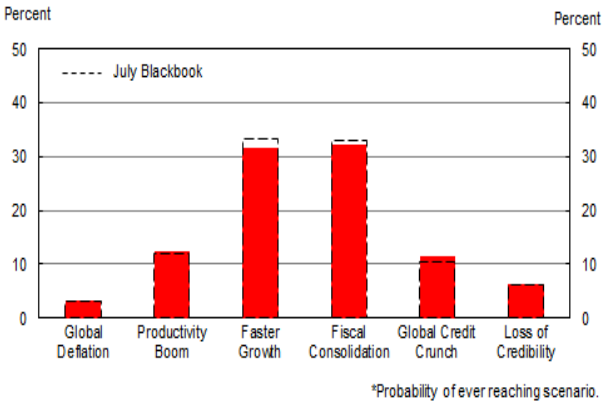
The yellow line is the expected value of the forecast distribution, the red line is the FRBNY central projection, the orange line is the DSGE forecast, and the black line is released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter change will be within the respective range.

3-2: Scenario Probabilities

Central Scenario Probabilities



Alternative Scenario Probabilities*

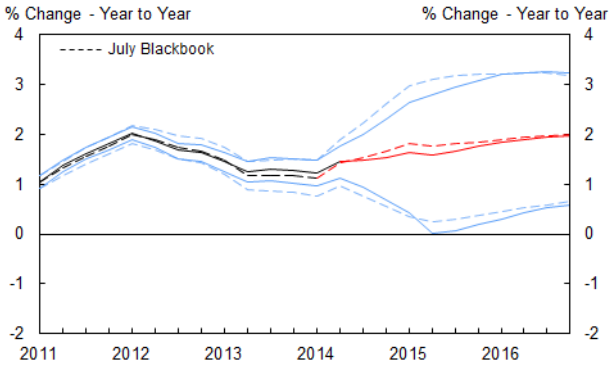


The left chart shows the probability of remaining in the central scenario through the end of the forecast horizon and the probabilities of being in the central scenario at the end of the next three years. The right chart shows the probabilities of ever reaching an alternative scenario over the forecast horizon, an assessment of the overall likelihood of each alternative scenario. A short description of the scenarios and the methodology to perform risk assessment is in the Appendix.

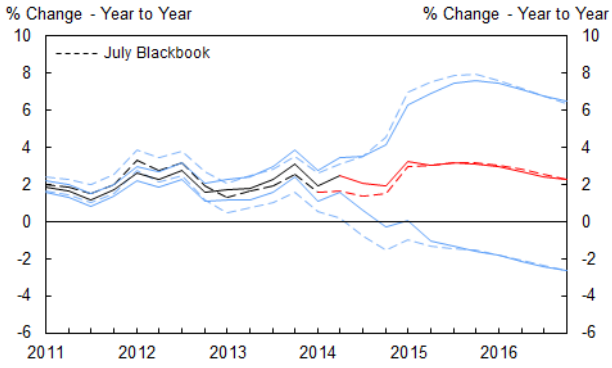
Source: MMS Function (FRBNY)

3-3: Evolution and Performance of Forecast Distributions

Change in Core PCE Inflation Forecast Distribution

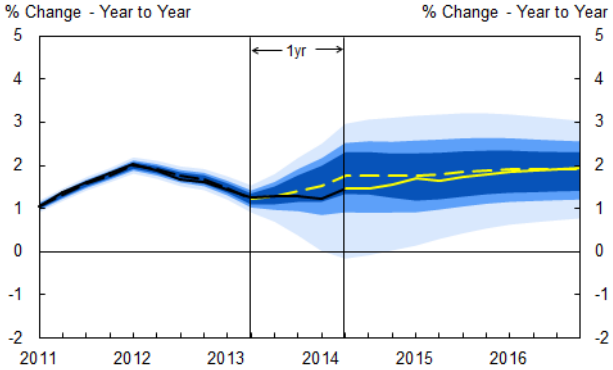


Change in Real GDP Growth Forecast Distribution

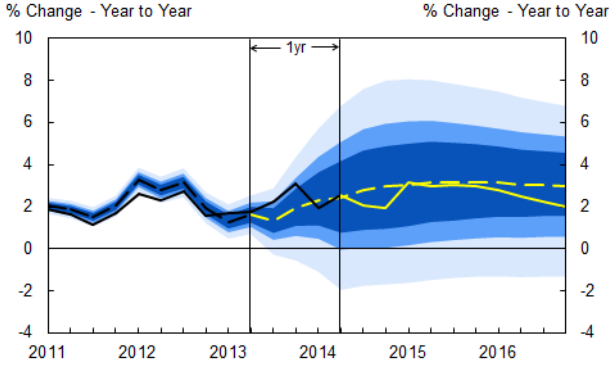


The red lines are the central scenario projections, black lines are released data, and blue lines represent upper and lower 90 percent forecast probability intervals. Dashed lines represent forecasts from the previous Blackbook.

One-Year Comparison of Core PCE Inflation Forecast Distribution and Expected Value



One-Year Comparison of Real GDP Growth Forecast Distribution and Expected Value



The solid yellow lines are the current central scenario projections and the dashed yellow lines are the year-ago Blackbook central scenario projections. Black lines are released data and the blue lines represent upper and lower 50, 70 and 90 percent forecast probability intervals from the year-ago Blackbook.

Source: MMS Function (FRBNY)

Appendix

In this Appendix, we provide brief descriptions of the alternative scenarios used in this Blackbook [A-1], and of the methodology underlying our risk assessment and forecast distributions [A-2].

A-1. Alternative Scenario Descriptions

Our first alternative scenario considers the impact of productivity growth above our assumed trend of about 1.5% on a nonfarm business sector basis (*Productivity Boom).* The second scenario (*Fiscal Consolidation)* assesses the consequences of below-trend productivity growth. We consider four additional scenarios. In one (*Faster Growth*), "headwinds" subside more quickly than expected, leading to stronger aggregate demand effects from monetary and fiscal policy. In another (*Loss of Credibility*), the public and investors lose confidence in the current stances of monetary and fiscal policy. In the other two (*Global Credit Crunch* and *Global Deflation*), renewed stresses in global financial and economic conditions have an adverse impact on U.S. real economic growth and inflation; the differences between the two mainly reflect differing assessments of the persistence of the negative effects.

A-2. Methodology to construct the forecast distribution

Our approach to producing the FRBNY forecast distributions is a generalization of techniques used at the Bank of England and other central banks to depict the uncertainty and balance of risks around a forecast. It allows for a dynamic balance of risks that is jointly assessed over inflation and output growth.

Three primary components underlie these forecast distributions: (1) a central scenario with modal inflation and output growth characterized by the central forecast described in Section 2, (2) alternative scenarios with specific inflation and output implications that differ from those of the central scenario, and (3) probabilities that the economy will enter those alternative scenarios. This approach to quantifying uncertainty and risks allows us to interpret the forecast distribution

for output growth and inflation, as well as analyze the impact on that distribution of changing the probabilities of the alternative scenarios.

We set the long-run behavior of our central forecast at the FOMC's longer-run inflation goal and our estimate of the potential growth rate. We also assume that, if the economy enters an alternative scenario, it eventually returns to the central scenario and remains in that scenario thereafter.

We conduct a simulation exercise to generate paths for inflation and output growth; we then perform calculations about our forecast distribution that reflect our risk assessment.
This exercise consists in generating a large number of indicator series, with each entry in a given series corresponding to a quarter in the forecast horizon; for each of these series, each quarter's value indicates only the prevailing scenario in that quarter. To generate these scenario-indicator series, we set two parameters for each alternative scenario: (1) the probability that the economy will leave the central scenario and enter the alternative scenario—the "initial probability"—and (2) the probability that the economy will remain in the alternative scenario once it enters the scenario—the "persistence."

After creating the indicator series, we generate, for each series, a path for inflation and a path for output growth, with each entry in a given path corresponding to a quarter in the forecast horizon. For a given indicator series and a given quarter, the values of the associated inflation and output growth paths are determined by a draw from the indicated joint distribution of inflation and output growth, based on the scenario the indicator series points to for that quarter. If, for example, the series indicates that the economy is in the central scenario, we draw inflation and output values from a distribution centered at the central forecast. If instead the series indicates the economy is in an alternative scenario, we draw values from a modified version of the central scenario distribution that is consistent with the alternative scenario.

FOMC BACKGROUND MATERIAL

RESEARCH AND STATISTICS GROUP

FRBNY Blackbook

October 2014

CONFIDENTIAL (FR) Class II FOMC

FRBNY BLACKBOOK

October 2014

CONTENTS

APPENDIX

1. Policy Recommendation and Rationale

Since the last FOMC meeting, the economic and financial data have provided mixed signals amid a rise in global asset price volatility. Although our central forecast is broadly unchanged relative to the previous Blackbook, the uncertainty around that outlook has increased, particularly for inflation, and some downside risks have re-emerged. Based on our assessment of these conflicting developments, we recommend ending the asset purchase program after the October FOMC meeting, and expect the FFR lift-off to occur in mid-2015 at the earliest.

We made fairly minor changes to the outlook for real GDP growth. The August data on real PCE suggested greater momentum in consumption than previously expected, but the September retail sales data mitigated that positive signal. The August trade data indicated a higher net export contribution in Q3, but recent global asset price movements and foreign data releases point to a less favorable foreign demand outlook, posing a downside risk to net exports in the near-to-medium term. Recent data releases for nonresidential and residential construction indicated some reduction in momentum in those sectors. On a more positive note, the September labor market report was generally solid and led us to mark down our unemployment projections for 2015 and 2016. On net, we project that the economy will approach the FOMC's maximum employment objective by the end of 2015 due to continuing gradual improvement in underlying fundamentals, but we assess more uncertainty and greater downside risks around our outlook for real activity.

We also see more uncertainty surrounding the inflation outlook. After rising some in the spring, core PCE inflation has settled to around 1.5 percent. The recent data and the sharp fall in oil prices have led us to mark down the near-term inflation projections. More importantly, the perceived deterioration in the global growth outlook, the associated dollar appreciation and commodity price decline, and the fall over the past few months in TIPS-based measures of long-term inflation compensation indicate greater uncertainty and more downside risks to the anticipated medium-term return of inflation to the FOMC's objective.

Based on this outlook and risk assessment, we expect the target range for the federal funds rate to be first raised around mid-2015 *at the earliest*, with significant probability that the lift-off may

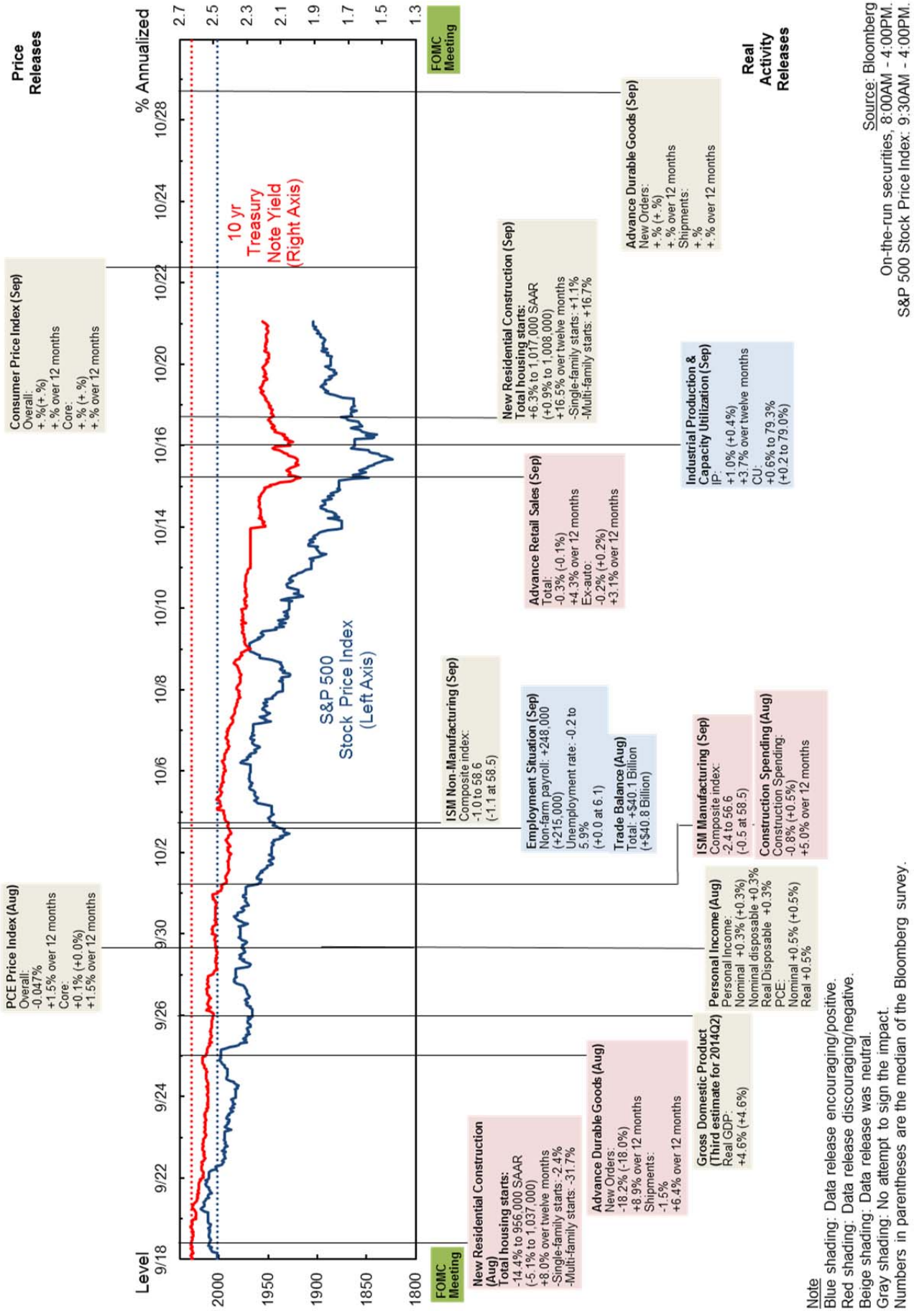
have to be delayed until near year-end. This represents a somewhat later lift-off relative to both the previous Blackbook and simple-rule benchmarks (such as a Taylor rule with moderate inertia). In state-contingent terms, our view is that the lift-off should not occur until there is confidence that the economy has attained sufficient momentum and reached "escape velocity" from the liquidity trap, in part to appropriately reduce the probability of a subsequent costly policy reversal (as has been seen in Japan, Australia, and Sweden). Although our unemployment projections suggest we are on track to close the unemployment gap at the end of 2015, it is much less clear that this is the case for the inflation gap; or relatedly, nominal income growth is more likely to disappoint relative to previous projections. We thus view forward guidance that is more explicitly linked to the inflation outlook and the degree of uncertainty about convergence to the 2% longer-run objective over a one-to-two year horizon as a useful anchor for the appropriate timing of lift-off, complementing and clarifying the language on a "considerable" period between the end of the current LSAP program and lift-off.

To sum up, the Committee's forward guidance regarding the FFR lift-off date should clearly reflect the extent of its confidence about the economic outlook. The Committee should communicate *(i)* that it is carefully monitoring information on whether the current pace of recovery provides sufficient momentum for inflation to return to target over the appropriate time horizon, and *(ii)* that the probability of a less-than-desirable economic performance over the medium term is sufficient to make it appropriate to maintain the current target range for the federal funds rate for a considerable time, provided that longer-term inflation expectations remain well anchored. Of course, the benefits of such patience need to be balanced against the possible risks to financial stability and growth associated with an overly accommodative monetary policy. The FOMC should communicate its readiness to vary the timing and speed of policy normalization in response to signs of financial vulnerabilities, in order to preclude future adverse policy trade-offs.

Finally, in regard to the LSAP program, our current assessment is that it would not be appropriate to delay the anticipated conclusion of the program after the upcoming FOMC meeting. We would note that a further severe deterioration of global fundamentals may warrant a pause, which would be consistent with the "not on a preset course" language and the state-

contingent nature of the taper, even at its very last stage. However, the changes in the outlook and risks at this point do not rise to this standard, and further purchases would be inconsistent with the high bar for changes demonstrated earlier in the taper process. Consequently, an extension of the program may prove to be counterproductive, as market participants could perceive it as an overly pessimistic, confidence-deflating response. Instead, the Committee should consider the end of the program as an opportunity to send a sober but unambiguous reminder that appropriately calibrated policy can successfully support an improvement in labor market conditions and mitigate tail risks, as well as to restate its intention to "do whatever it takes" to restore full employment and price stability despite adverse external circumstances and persistent headwinds.

1-1: Key Data Releases



2. Central Forecast

Intermeeting Developments

U.S. economic indicators released over the intermeeting period provided mixed signals concerning the near-term prospects for the U.S. economy. The Citigroup U.S. Economic Surprise Index, while still positive, has drifted down to around 20 recently after having moved up to around +40 in mid-September. Our projection for growth of real GDP over the second half of 2014 has been lowered to 2.6% (annual rate), from 2.9% in September.

The third estimate of growth rate of real GDP in 2014Q2 was revised up to 4.6% (annual rate) from the second estimate of 4.2%. Growth of real personal consumptions expenditures was unchanged at 2.5%, whereas the consensus expected an upward revision to 2.9%. Before the third estimate, information from the Quarterly Services Survey was released indicating that consumption of health care services in the second quarter would be revised upward by a fair amount, boosting growth of total PCE. However, other categories of spending on services were revised lower. Since consumption spending did not provide the boost to GDP growth that was widely anticipated, the upward revisions in other expenditure components were somewhat greater than expected, particularly for business fixed investment.

Real disposable personal income grew 0.3% in August, compared to +0.1% in July and 0.3% monthly gains in April through June. Real personal consumption expenditures rose by 0.5% in August, the largest increase since March and a significant jump after a -0.1% contraction in July. Boosted by a strong increase in sales of auto and parts, durable goods expenditures grew at a relatively fast pace in August while growth of nondurable expenditures was modest. Service expenditures grew by 0.4%, after being flat on average in the four preceding months. However, the available data on consumer spending in September suggest a significant slowing took place in the final month of the third quarter. Sales of light-weight motor vehicles fell 6.3% in September, to 16.4 million units (annual rate) (sales were boosted in August by a relatively early Labor Day weekend). And retail sales excluding autos, building materials, and gasoline fell 0.2% in September. At this time it looks like real PCE increased at a 2% annual rate in the third

quarter, down from 2.5% in the second quarter but comparable to the pace over the entire first half of 2013.

Total housing starts increased a bit further in the third quarter, rising to an annual rate of 1.024 million units from 0.985 million units in the second quarter. Along with increased spending on additions and alterations and brokers' commissions, we anticipate that real residential investment increased at a 7.5% annual rate in the third quarter, comparable to the 8.8% annual rate increase of the second quarter. However, the September housing starts report suggested that housing construction has lost some of its forward momentum. The three-month moving average of single-family housing starts and permits were little changed from that of earlier in the year. The data on multi-family starts were better, with the three-month moving average of multi-family start rising to 378,000 in September, the highest since March of 2006. However, the three-month moving average of multi-family permits was 399,000 for September, essentially the same as in the second quarter of this year and somewhat below the level of 2013Q4.

Data on orders and shipments for nondefense capital goods suggest that growth of real business investment in new nonresidential equipment in the third quarter will be comparable to the 11.2% (annual rate) growth of the second quarter. Moreover, new orders continue to run ahead of shipments, suggesting that this component of final expenditures had momentum going into the fourth quarter. In contrast, based on data through August, growth of real investment in nonresidential structures is expected to slow to the low single digit range in the third quarter after increasing at a 12.6% annual rate in the second quarter.

Growth of government consumption spending and gross investment at the state and local level is expected to slow to around 1 ¾% (annual rate) in the third quarter, down from 3.4% in the second quarter. The rates of growth of both employment and construction spending have both slowed significantly. At the federal level, defense outlays increased in the third quarter, but spending in all other categories declined sharply. Federal employment excluding the Postal Service continued to decline, though the rate of decline slowed. On balance, we anticipate that real spending at the federal level declined further in the third quarter.

The trade data for July and August continued to be very encouraging. In real terms, we now expect exports to increase at an annual rate of 6% in the third quarter, down from 11% in the second quarter, while imports are expected to increase at a modest 2% annual rate, down from 11% in the second quarter. Our current expectation is for a net export growth contribution of +0.5 percentage points in the third quarter after an average of -1.0 percentage points over the first half of 2014.

Growth of manufacturing output was quite choppy in the third quarter, due in part to this year's auto plant closings for retooling purposes not conforming to the pattern of the recent past. For the quarter as a whole, manufacturing output rose at a 3.5% annual rate, down from 6.7% in the second quarter. Growth of motor vehicle output continued to be quite robust, but growth of production of IT equipment and all remaining categories slowed. With growth of final sales well maintained at around 3 ¼% (annual rate) while growth of manufacturing output slowed and imports declined, we expect that the pace of inventory investment slowed in the third quarter, resulting in a growth contribution of around -0.4 percentage point.

Growth of both payroll employment and of hours worked also slowed somewhat in the third quarter, though they remained respectable. The average monthly change of nonfarm payroll employment was 224,000 in 2014Q3, down from 267,000 in the second quarter. The bulk of this slowing was in the private service-providing sector. The rate of growth of hours worked by private sector employees slowed to an annual rate of 2.8% in Q3 from 3.8% in Q2, a slowing that was broader based. The four-quarter change of average hourly earnings was about 2% in the third quarter, about where it has been since early 2013. The unemployment rate fell to 5.9% in September and averaged 6.1% for the entire third quarter. The labor force participation rate declined from 62.8% in August to 62.7% in September. The employment-to-population ratio was unchanged at 59.0%.

After rising over the first half of 2014, both total and core PCE deflator inflation have slowed in recent months. The 12-month change of the total PCE deflator was 1.46% in August, down from 1.65% in May. The 12-month change of energy prices slowed to essentially zero in August from 3.3% in March and April. In contrast, the 12-month change of prices of food for home

consumption rose to 2.2% in August from just 0.6% in January of this year. The 12-month change of the core PCE deflator has stabilized at 1.5% over the four months ending in August after starting the year at 1.2%. Prices of durable goods continue to decline steeply, though the rate of decline has moderated some. The rate of increase of prices of clothing and footware and other nondurable goods also has slowed in recent months. Within the non-energy services category, the rate of increase of rents continues to edge higher, reaching 2.8% in July and August. However, the recent rate of increase of health care prices has been relatively stable at just under 1 ½% while price increases for transportation and recreation services have slowed.

The Outlook

Recap of September Blackbook Forecast

In our September Blackbook we presented a modal forecast of real GDP growth of around 3% (annual rate) over the second half of 2014, with growth then moving up to around 3 ¼% (Q4/Q4) in 2015 before slowing to around 2 ½% in 2016. The logic of that forecast was that the fundamentals of the economy had improved over the past few years, and would continue to improve as financial conditions remain very accommodative. Those improved fundamentals included the largely repaired consumer balance sheets, improving access to credit, stronger conditions in the housing market, the prospective end of fiscal consolidation, and the subsiding of risk aversion in financial markets.

Under these conditions, the unemployment rate was projected to decline at a more gradual rate than over the past year, reflecting some cyclical improvement in productivity growth and gradual increases in both the labor force participation rate and the average work week, and reach 5 ½% by 2015Q4 and 5 ¼% by 2016Q4. Finally, core PCE inflation was expected to gradually increase to be near the FOMC objective by the end of 2015. In addition to the reduction of slack, this projected path for inflation was due to rising marginal costs of production as well as a declining exchange value of the dollar. However, long-term inflation expectations were assumed to be well anchored over the forecast horizon, limiting the increase in inflation set in motion by these other forces.

However, as we enter the final quarter of 2014, the news has been dominated by declines in equity values, long-term interest rates, and oil prices, with increased price volatility in many markets. These developments have been associated with increasing concern about foreign growth prospects, particularly for the Euro area and China. To top it off, the Ebola virus has spread farther and faster than expected, including into the U.S. To attempt to sort through the effect of these developments on the outlook for growth and inflation, we tackle each individually.

Dollar appreciation and downgraded foreign growth prospects

The nominal trade-weighted dollar has been trending up since mid-2011. However, since early July the rate of appreciation has intensified—from the first week of July through the second week of October it has risen at a 16% annual rate. At the same time there have been growing concerns about global growth prospects. If sustained, these developments are a clear negative for the U.S. growth outlook. Based on simulations of internal models, the potential impact of a 10% appreciation of the dollar (phased in over three quarters) combined with a ¼ percentage point reduction of trade-weighted global growth would reduce the net export growth contribution by ½ percentage point over four quarters, with the potential impact on growth of GDP likely approaching a full percentage point. Over the same period core inflation is about ½ percentage point lower. At the end of the four quarter period the unemployment rate would likely be at least one full percentage point higher than in the baseline.

To reflect these recent developments, in this forecast we have both raised the projected path of the exchange value of the dollar and lowered global growth, particularly for 2014. For example, in 2014 the nominal trade weighted exchange rate is expected to rise by 4 ¼% (Q4/Q4) versus 1.8% in September. GDP weighted global growth is now assumed to be 2.5% (Q4/Q4) in 2014 versus 2.7% in the September Blackbook. Changes to assumptions for global growth and the exchange rate in 2015 and 2016 are quite modest. These changes lower the net export growth contribution in 2014, 2015, and 2016 by 0.1, 0.2, and 0.1 percentage points, respectively.

Energy and other commodity prices

At this writing the spot price of WTI is just under $84, which is down roughly $10 per barrel since mid-September and more than $20 per barrel since July. Several other commodity price indices have softened since mid-year, including industrial metals, textiles, and several categories of food stuffs. Determining the relative impacts of increased supplies versus weaker prospective demand is highly speculative. Nonetheless, in the cases of petroleum and many grains, it does appear that increased supply has played a significant role. In particular, much of the decline of petroleum prices appears to be due to supply decisions by Saudi Arabia in the face of increased production in North America.

In the near term, this development results in a clear plus for the U.S. Based on recent trends in real consumption of energy, the fully anticipated price decline results is a savings of around $50 billion for U.S. consumers--$200 billion at an annual rate. Additional savings will be realized by the business and government sectors. In the forecast we have boosted real consumer spending in 2014Q4 and 2015Q1 to take account of this increase in real disposable income. The personal saving rate is modestly higher in the very near term. This boost to consumer spending may underestimate the full near-term benefit. On the other hand, with the U.S. more actively engaged in oil and natural gas exploration and production, the fall of oil prices also introduces a depressing effect on such activity that would be a lingering offset to the near term benefits.

Financial conditions

After rising to a little over 2000 during the third week of September, the S&P 500 has declined about 5% as of this writing. The yield on the 10-year Treasury bond has fallen by about 40 basis points over that same period. Finally, the spread of the yield on 10 corporate bonds rated by S&P as BB+ (junk bonds) over the 10-year Treasury yield has increased by about 55 basis points.
The net effect of these developments, if they are sustained, on U.S. growth over the forecast horizon is highly uncertain, though we suspect it will be somewhat negative. In particular, academic research, as well as internal models, find a role for high yield credit spreads in business investment spending, and so we have dampened that spending modestly in 2015.

Overall, projected growth of real GDP (Q4/Q4) in 2014 is unchanged at 1.9% but has been lowered from 3.2% to 2.9% for 2015. Projected growth for 2016 is essentially unchanged. Total PCE inflation for 2014 is much lower, at 1.2% (Q4/Q4) versus 1.7% in the September Blackbook. For 2015 it has been lowered to 1.6%, from 1.8%, while in 2016 it has been lowered to 1.9% from 2.0%. The projected rate of increase of the core PCE deflator is unchanged at 1.5% for 2014 but has been lowered to 1.6% in 2015, from 1.8%, reflecting the higher path of the exchange rate and some modestly higher slack in the economy. For 2016 core PCE inflation is projected at 1.9%, down from 2.0%. Lastly, the projected path of the unemployment rate is modestly lower in the near term, despite the somewhat slower growth of total output, reflecting recent data as well as yet another lowering of the path of the participation rate. The unemployment rate is now expected to average 5.4% in 2015Q4, versus 5.6% in the September Blackbook. For 2016Q4 the projected unemployment rate is unchanged at 5 ¼%.

2-1: Projections of Key Variables

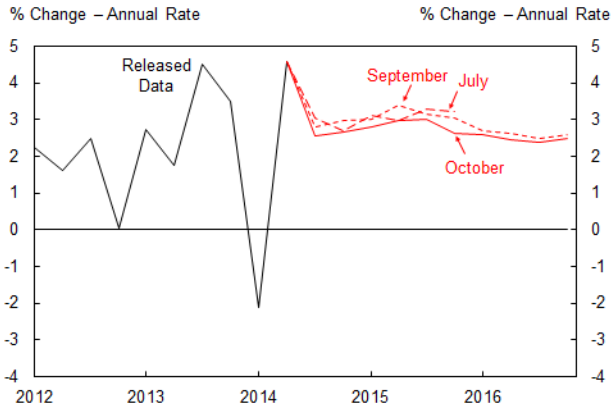
	Core PCE Inflation		Real GDP Growth		Unemployment Rate*		Fed Funds Rate**	
	Sept	Oct	Sept	Oct	Sept	Oct	Sept	Oct
2013								
Q1	*1.4*	1.4	*2.7*	2.7	*7.7*	7.7	*0-0.25*	0-0.25
Q2	*1.0*	1.0	*1.8*	1.8	*7.5*	7.5	*0-0.25*	0-0.25
Q3	1.4	1.4	4.5	4.5	7.2	7.2	0-0.25	0-0.25
Q4	1.3	1.3	3.5	3.5	7.0	7.0	0-0.25	0-0.25
2014								
Q1	1.2	1.2	-2.1	-2.1	6.7	6.7	0-0.25	0-0.25
Q2	1.9	2.0	4.2	4.6	6.2	6.2	0-0.25	0-0.25
Q3	1.5	1.4	2.8	2.6	6.2	6.1	0-0.25	0-0.25
Q4	1.5	1.3	3.0	2.7	6.1	5.8	0-0.25	0-0.25
2015								
Q1	1.6	1.5	3.0	2.8	6.0	5.7	0.38	0.38
Q2	1.7	1.5	3.4	3.0	5.8	5.6	0.63	0.63
Q3	1.8	1.6	3.2	3.0	5.7	5.4	0.88	0.88
Q4	1.9	1.7	3.1	2.6	5.6	5.4	1.0	1.0
2016								
Q1	-	1.8	-	2.6	-	5.3	-	1.50
Q2	-	1.9	-	2.5	-	5.2	-	2.00
Q3	-	2.0	-	2.4	-	5.2	-	2.25
Q4	-	2.0	-	2.5	-	5.3	-	2.5
Q4/Q4								
2013	1.3	1.3	3.1	3.1	-0.9	-0.9	0-0.25	0-0.25
2014	1.5	1.5	1.9	1.9	-0.9	-1.2	0-0.25	0-0.25
2015	1.7	1.6	3.2	2.9	-0.5	-0.4	1.0	1.0
2016	2.0	1.9	2.6	2.5	-0.3	-0.1	2.5	2.5

Columns reflect the forecast dates. Numbers in gray are from the previous Blackbook, and numbers in italics are released data.
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.
**Quarterly values are the end-of-quarter value. Yearly values are the difference between the end-of-year value in the previous year and the end-of-year value in the listed year.

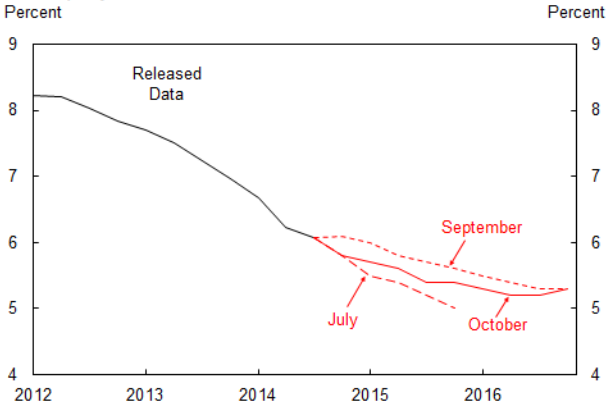
2-2: Evolution of Projected Quarterly Paths

Key Indicators

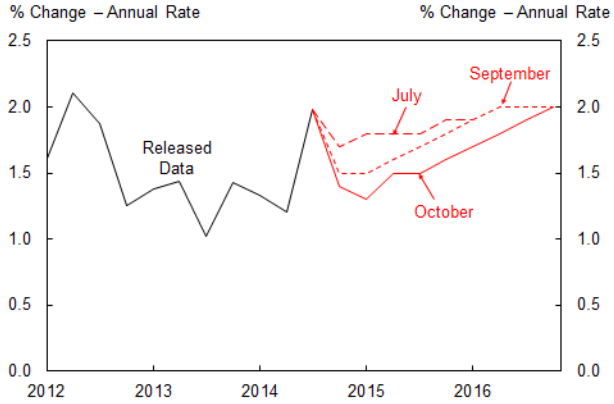
Real GDP Growth



Unemployment Rate

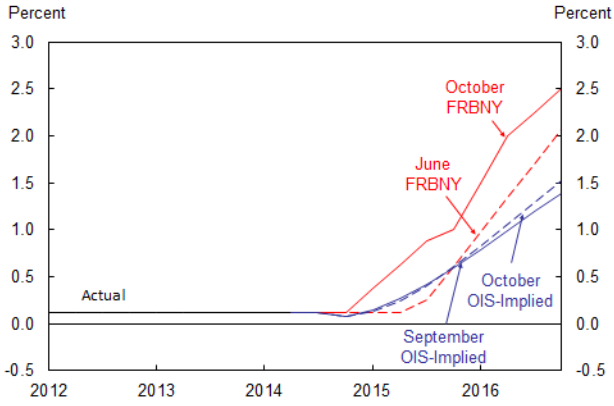


Core PCE Inflation

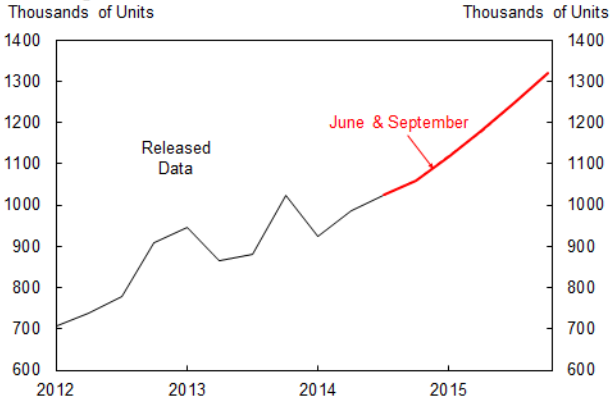


Forecast Assumptions

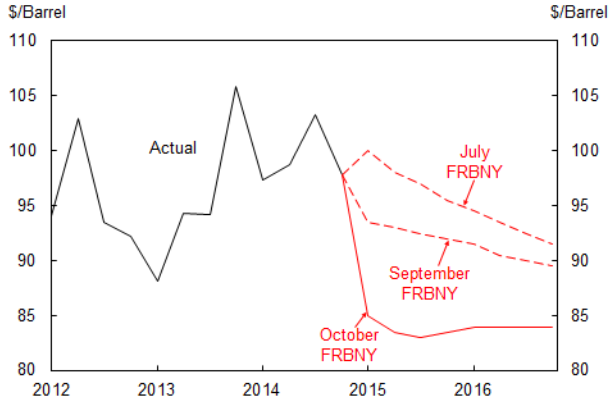
Federal Funds Rate



Housing Starts



Crude Oil



Source: FRBNY (MMS and IR Functions) and Federal Reserve Board

2-3: Near-Term Projections

	Growth Rates (AR)			Growth Contributions (AR)		
	2014Q3	2014Q4	2015Q1	2014Q3	2014Q4	2015Q1
OUTPUT						
Real GDP	2.6	2.7	2.8	2.6	2.7	2.8
	(2.8)	(3.0)	(3.0)	(2.8)	(3.0)	(3.0)
Final Sales to Domestic Purchasers	2.4	2.7	2.8	2.4	2.7	2.9
	(2.4)	(2.5)	(2.9)	(2.4)	(2.6)	(3.0)
Consumption	2.0	2.7	2.5	1.4	1.9	1.7
	(1.5)	(2.3)	(2.5)	(1.0)	(1.5)	(1.7)
BFI: Equipment	10.0	8.0	8.0	0.6	0.5	0.5
	(10.0)	(10.0)	(8.0)	(0.6)	(0.6)	(0.5)
BFI: Nonresidential Structures	3.0	4.0	5.0	0.1	0.1	0.1
	(10.0)	(8.0)	(7.0)	(0.3)	(0.2)	(0.2)
BFI: Intellectual Property Products	4.0	4.0	4.0	0.2	0.2	0.2
	(4.0)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	7.5	2.5	12.0	0.2	0.1	0.4
	(10.0)	(2.5)	(13.2)	(0.3)	(0.1)	(0.4)
Government: Federal	-2.5	-2.0	-2.0	-0.2	-0.1	-0.1
	(-2.0)	(-2.0)	(-2.0)	(-0.1)	(-0.1)	(-0.1)
Government: State and Local	1.8	1.5	1.5	0.2	0.2	0.2
	(2.3)	(1.5)	(1.5)	(0.3)	(0.2)	(0.2)
Inventory Investment	--	--	--	-0.4	-0.2	-0.3
	--	--	--	(-0.2)	(-0.2)	(-0.4)
Net Exports	--	--	--	0.5	0.1	0.2
	--	--	--	(0.5)	(0.6)	(0.4)
INFLATION						
Total PCE Deflator	1.2	0.0	1.3			
	(1.5)	(1.5)	(1.7)			
Core PCE Deflator	1.4	1.3	1.5			
	(1.5)	(1.5)	(1.6)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	0.9	1.6	1.6			
	(2.0)	(1.6)	(1.6)			
Compensation per Hour	2.3	2.2	2.3			
	(2.4)	(2.2)	(2.2)			
Unit Labor Costs	1.4	0.6	0.7			
	(0.4)	(0.6)	(0.6)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-4: Medium-Term Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2014	2015	2016	2014	2015	2016
OUTPUT						
Real GDP	1.9	2.9	2.5	1.9	2.9	2.5
	(1.9)	(3.2)	(2.6)	(1.9)	(3.2)	(2.6)
Final Sales to Domestic Purchasers	2.3	2.9	2.6	2.3	3.0	2.6
	(2.2)	(3.1)	(2.6)	(2.2)	(3.1)	(2.7)
Consumption	2.1	2.6	2.5	1.5	1.8	1.7
	(1.9)	(2.6)	(2.5)	(1.3)	(1.8)	(1.7)
BFI: Equipment	7.0	7.0	5.2	0.4	0.4	0.3
	(7.3)	(8.0)	(5.5)	(0.4)	(0.5)	(0.3)
BFI: Nonresidential Structures	5.5	5.5	4.2	0.2	0.2	0.1
	(7.5)	(7.0)	(5.5)	(0.2)	(0.2)	(0.2)
BFI: Intellectual Property Products	4.5	4.0	4.0	0.2	0.2	0.2
	(4.3)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	3.2	12.0	7.0	0.1	0.4	0.2
	(3.4)	(14.1)	(7.0)	(0.1)	(0.5)	(0.3)
Government: Federal	-1.4	-2.0	-2.0	-0.1	-0.1	-0.1
	(-1.3)	(-2.0)	(-2.0)	(-0.1)	(-0.1)	(-0.1)
Government: State and Local	1.3	1.5	1.5	0.1	0.2	0.2
	(1.4)	(1.5)	(1.5)	(0.2)	(0.2)	(0.2)
Inventory Investment	--	--	--	-0.1	-0.1	0.1
	--	--	--	(-0.1)	(-0.1)	(0.1)
Net Exports	--	--	--	-0.3	0.0	-0.2
	--	--	--	(-0.2)	(0.1)	(-0.1)
INFLATION						
Total PCE Deflator	1.2	1.6	1.9			
	(1.7)	(1.8)	(2.0)			
Core PCE Deflator	1.5	1.6	1.9			
	(1.5)	(1.7)	(2.0)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	0.1	1.6	1.6			
	(0.3)	(1.6)	(1.6)			
Compensation per Hour	3.3	2.4	2.7			
	(3.3)	(2.3)	(2.7)			
Unit Labor Costs	3.3	0.8	1.1			
	(3.0)	(0.7)	(1.1)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-5: Comparison with Other Forecasts

Real GDP Growth

	Release Date	2014Q3	2014Q4	2014 Q4/Q4	2015 Q4/Q4
FRBNY	10/21/2014	2.6	2.7	1.9	2.9
		(2.8)	(3.0)	(1.9)	(3.2)
Blue Chip	10/10/2014	3.1	3.0	2.1	2.9
		(3.0)	(3.0)	(2.0)	(2.9)
Median SPF	8/15/2014	3.0	3.1	2.1	3.1
		(2.9)	(3.2)	(2.4)	(3.1)
Macro Advisers	10/7/2014	3.3	3.0	2.2	2.8
		(3.0)	(3.3)	(2.0)	(3.1)
FRBNY-DSGE	10/21/2014	2.6	2.4	2.1	2.1
		(3.0)	(2.8)	(2.1)	(1.9)

Core PCE Inflation

	Release Date	2014Q3	2014Q4	2014 Q4/Q4	2015 Q4/Q4
FRBNY	10/21/2014	1.4	1.3	1.5	1.6
		(1.5)	(1.5)	(1.5)	(1.7)
Median SPF	8/15/2014	1.8	1.9	1.7	1.9
		(1.7)	(1.7)	(1.5)	(1.8)
Macro Advisers	10/7/2014	1.4	1.5	1.5	1.8
		(1.8)	(1.7)	(1.6)	(1.8)
FRBNY-DSGE	10/21/2014	1.4	1.2	1.4	1.4
		(1.5)	(1.2)	(1.5)	(1.5)

CPI Inflation

	Release Date	2014Q3	2014Q4	2014 Q4/Q4	2015 Q4/Q4
FRBNY	10/21/2014	1.3	2.1	2.1	2.2
		(1.9)	(2.1)	(2.2)	(2.2)
Blue Chip	10/10/2014	1.4	1.6	2.0	2.0
		(2.0)	(2.0)	(2.2)	(2.1)
Median SPF	8/15/2014	2.2	2.0	2.3	2.2
		(1.9)	(1.9)	(1.9)	(2.1)
Macro Advisers	10/7/2014	1.3	0.9	1.8	1.5
		(2.5)	(1.8)	(2.3)	(1.5)

Core CPI Inflation

	Release Date	2014Q3	2014Q4	2014 Q4/Q4	2015 Q4/Q4
FRBNY	10/21/2014	1.4	1.9	1.9	2.2
		(1.9)	(1.9)	(2.0)	(2.2)
Median SPF	8/15/2014	2.1	2.1	2.1	2.1
		(1.8)	(1.9)	(1.8)	(2.1)
Macro Advisers	10/7/2014	1.3	1.7	1.8	2.0
		(2.1)	(2.0)	(2.1)	(1.9)

*Note: Numbers in gray are from the previous Blackbook

3. Uncertainty & Risks

The economic and financial market developments over the intermeeting period have increased our assessment of uncertainty around the outlook and led us to shift the balance of risks modestly. Based on the difference between the modal central forecast and the expected value from our forecast distributions and the changes in the overall forecast distributions, the risks are now skewed some to the downside both for core PCE inflation and for real GDP growth [Exhibits 3-1 and 3-3]. We see the uncertainty around both the real GDP growth and inflation projections as above historical norms.

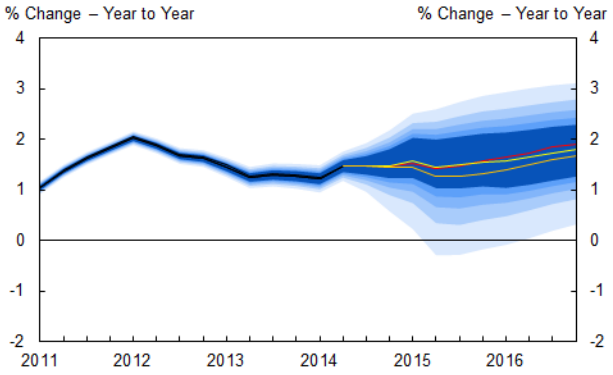
The changes in our risk assessment and forecast distributions reflect the impact of the number of crosscurrents. In the U.S., data releases on real activity during the intermeeting period were mixed. Even though the September labor market report was generally solid, the inflation data were somewhat soft. In addition, data on global economic activity and inflation were on the weaker side. Inflation compensation measures in the U.S. and the euro area fell to quite low levels. In financial markets, asset prices displayed greater realized and implied volatility, commodity prices fell, and there were signs of somewhat greater financial stress. We incorporated these developments in this Blackbook through a number of changes in scenario probabilities [Exhibit 3-2]. The perceived greater risks of slower growth and lower inflation in a number of foreign economies were reflected by increases in the probabilities of the *Global Credit Crunch* (a shorter-lived global recession) and *Global Deflation* (a more persistent global downturn with a prolonged negative impact on inflation) scenarios. The declines in inflation compensation and commodity prices led to a reduction in the probability of the *Loss of Credibility* (an upside inflation risk) scenario. With these changes, the widths of the 90 percent probability intervals for both real GDP growth and core PCE inflation have widened modestly and the distributions have shifted somewhat downward [Exhibit 3-3].

Comparing the recent data and our current central forecast to the forecast distribution from a year earlier, the current projection for inflation is in the lower half of the year-ago inflation distribution and moderately below the year-ago central scenario [Exhibit 3-3]. This is consistent with recent inflation data releases that suggest near-term stabilization of inflation at levels

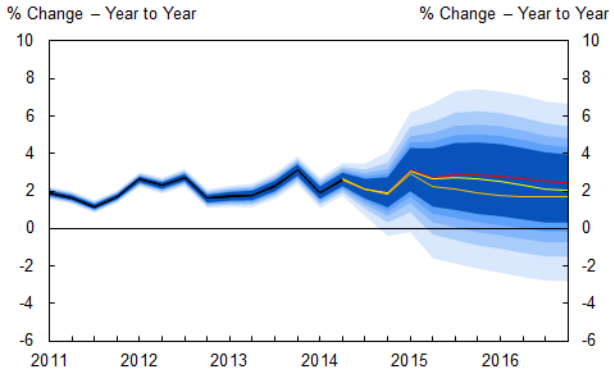
somewhat below the FOMC objective. The current real GDP growth forecast is near the middle of the year-ago forecast distribution and is fairly close to the year-ago central scenario. These patterns indicate that the basic contours of our real activity central forecast have not changed a great deal over the past year even though the risk assessment and forecast distribution have shifted some in response to the developments over this time.

3-1: Forecast Distributions

Core PCE Inflation Forecast Distribution



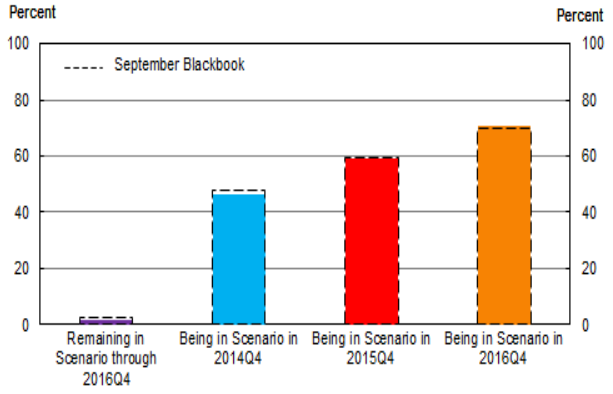
Real GDP Growth Forecast Distribution



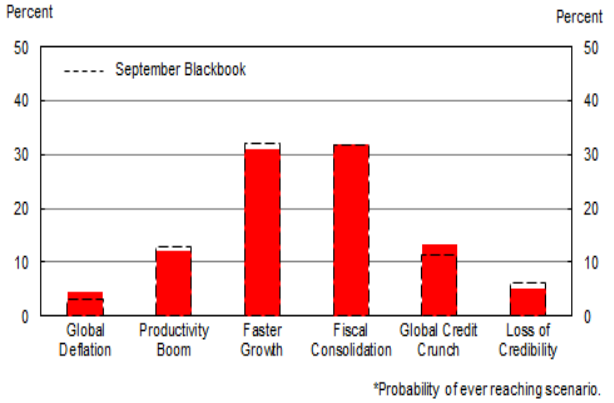
The yellow line is the expected value of the forecast distribution, the red line is the FRBNY central projection, the orange line is the DSGE forecast, and the black line is released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter change will be within the respective range.

3-2: Scenario Probabilities

Central Scenario Probabilities



Alternative Scenario Probabilities*

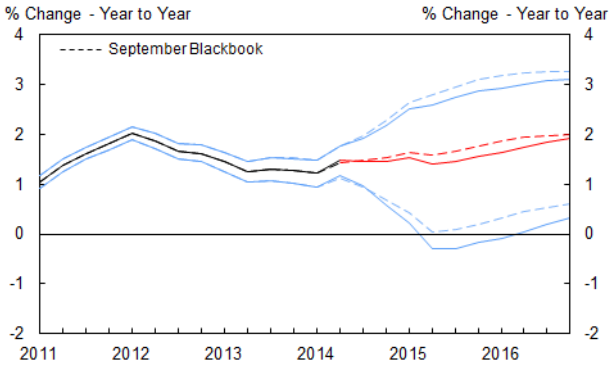


The left chart shows the probability of remaining in the central scenario through the end of the forecast horizon and the probabilities of being in the central scenario at the end of the next three years. The right chart shows the probabilities of ever reaching an alternative scenario over the forecast horizon, an assessment of the overall likelihood of each alternative scenario. A short description of the scenarios and the methodology to perform risk assessment is in the Appendix.

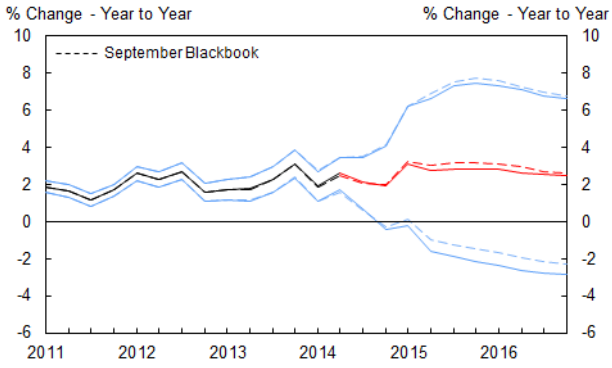
Source: MMS Function (FRBNY)

3-3: Evolution and Performance of Forecast Distributions

Change in Core PCE Inflation Forecast Distribution

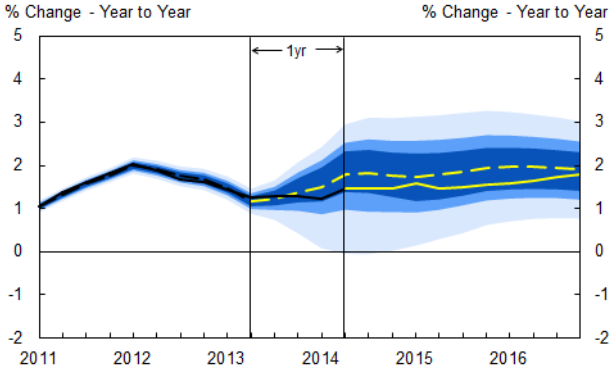


Change in Real GDP Growth Forecast Distribution

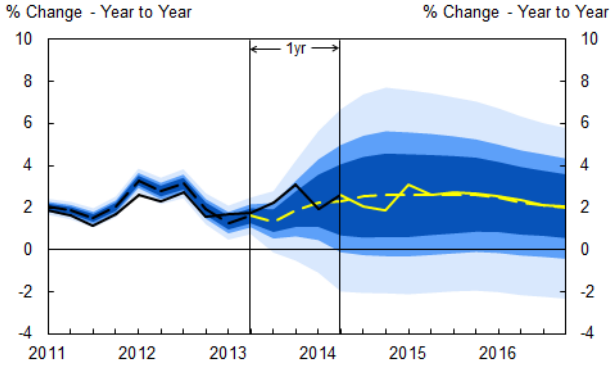


The red lines are the central scenario projections, black lines are released data, and blue lines represent upper and lower 90 percent forecast probability intervals. Dashed lines represent forecasts from the previous Blackbook.

One-Year Comparison of Core PCE Inflation Forecast Distribution and Expected Value



One-Year Comparison of Real GDP Growth Forecast Distribution and Expected Value



The solid yellow lines are the current central scenario projections and the dashed yellow lines are the year-ago Blackbook central scenario projections. Black lines are released data and the blue lines represent upper and lower 50, 70 and 90 percent forecast probability intervals from the year-ago Blackbook.

Source: MMS Function (FRBNY)

Appendix

In this Appendix, we provide brief descriptions of the alternative scenarios used in this Blackbook [A-1], and of the methodology underlying our risk assessment and forecast distributions [A-2].

A-1. Alternative Scenario Descriptions

Our first alternative scenario considers the impact of productivity growth above our assumed trend of about 1.5% on a nonfarm business sector basis (*Productivity Boom).* The second scenario (*Fiscal Consolidation)* assesses the consequences of below-trend productivity growth. We consider four additional scenarios. In one (*Faster Growth*), "headwinds" subside more quickly than expected, leading to stronger aggregate demand effects from monetary and fiscal policy. In another (*Loss of Credibility*), the public and investors lose confidence in the current stances of monetary and fiscal policy. In the other two (*Global Credit Crunch* and *Global Deflation*), renewed stresses in global financial and economic conditions have an adverse impact on U.S. real economic growth and inflation; the differences between the two mainly reflect differing assessments of the persistence of the negative effects.

A-2. Methodology to construct the forecast distribution

Our approach to producing the FRBNY forecast distributions is a generalization of techniques used at the Bank of England and other central banks to depict the uncertainty and balance of risks around a forecast. It allows for a dynamic balance of risks that is jointly assessed over inflation and output growth.

Three primary components underlie these forecast distributions: (1) a central scenario with modal inflation and output growth characterized by the central forecast described in Section 2, (2) alternative scenarios with specific inflation and output implications that differ from those of the central scenario, and (3) probabilities that the economy will enter those alternative scenarios. This approach to quantifying uncertainty and risks allows us to interpret the forecast distribution

for output growth and inflation, as well as analyze the impact on that distribution of changing the probabilities of the alternative scenarios.

We set the long-run behavior of our central forecast at the FOMC's longer-run inflation goal and our estimate of the potential growth rate. We also assume that, if the economy enters an alternative scenario, it eventually returns to the central scenario and remains in that scenario thereafter.

We conduct a simulation exercise to generate paths for inflation and output growth; we then perform calculations about our forecast distribution that reflect our risk assessment.
This exercise consists in generating a large number of indicator series, with each entry in a given series corresponding to a quarter in the forecast horizon; for each of these series, each quarter's value indicates only the prevailing scenario in that quarter. To generate these scenario-indicator series, we set two parameters for each alternative scenario: (1) the probability that the economy will leave the central scenario and enter the alternative scenario—the "initial probability"—and (2) the probability that the economy will remain in the alternative scenario once it enters the scenario—the "persistence."

After creating the indicator series, we generate, for each series, a path for inflation and a path for output growth, with each entry in a given path corresponding to a quarter in the forecast horizon. For a given indicator series and a given quarter, the values of the associated inflation and output growth paths are determined by a draw from the indicated joint distribution of inflation and output growth, based on the scenario the indicator series points to for that quarter. If, for example, the series indicates that the economy is in the central scenario, we draw inflation and output values from a distribution centered at the central forecast. If instead the series indicates the economy is in an alternative scenario, we draw values from a modified version of the central scenario distribution that is consistent with the alternative scenario.

FOMC BACKGROUND MATERIAL

RESEARCH AND STATISTICS GROUP

FRBNY Blackbook

December 2014

FRBNY BLACKBOOK

December 2014

CONTENTS

APPENDIX

1. Policy Recommendation and Rationale

Developments since the last FOMC meeting, particularly the November labor market report, indicate significant momentum in U.S. real economic activity. While the economy appears to be moving somewhat closer to mandate-consistent objectives in a manner consistent with our modal projections, some uncertainty remains about the sustainability of this forward momentum. In particular, recent dollar appreciation and oil price declines are developments whose eventual effects are difficult to judge at this time. Based on our current outlook as well as our evaluation of risks, we maintain our October recommendation for keeping the FFR at its current level until mid-2015 and reemphasize the state contingency of the policy decisions.

Economic data releases in the intermeeting period have generally been positive. Most notably, data releases on the labor market indicated a well-sustained pace of improvement in the labor market. Real GDP growth in 2014Q3 was above our expectations. The October data on real PCE and November motor vehicle sales indicate stronger consumption growth in 2014Q4 than we thought in the October Blackbook. In addition, lower energy prices should provide more support to real incomes and consumption over the near term. Both the manufacturing and nonmanufacturing ISM indices point to strong momentum in their respective sectors; however, business investment indicators were rather soft. For now, we see these developments as largely consistent with our central outlook, and have made only fairly minor changes to our projections for real GDP growth in 2015-16. Furthermore, we still see some uncertainty and downside risks around our outlook for real activity due to global developments. In particular, while the recent oil price decline may boost household disposable income and spending, that decline and dollar appreciation could be detrimental to investment and external demand. Taking this all into account, we project that the economy will approach the FOMC's maximum employment objective sometime in 2016.

Although our unemployment projections suggest that we are on track to close the unemployment gap by sometime in 2016, significant uncertainty still surrounds the anticipated medium term return of inflation to the FOMC's objective. After rising some in the spring, core PCE inflation settled to around 1.5 percent, and only marginally inched up in October. Moreover, even though

average hourly earnings rose more robustly in November, wage growth indicators generally remained subdued. In the context of deterioration in the global growth outlook, appreciation of the dollar, and a fall in commodity prices, the recent declines in the Michigan Survey inflation expectations and in TIPS-based measures of long-term inflation compensation raise the possibility of longer-run inflation expectations becoming less anchored to the downside. While this risk remains marginal and thus should not be unduly emphasized in communication, we nevertheless recommend that movements in indicators of inflation compensation and expectations be monitored closely.

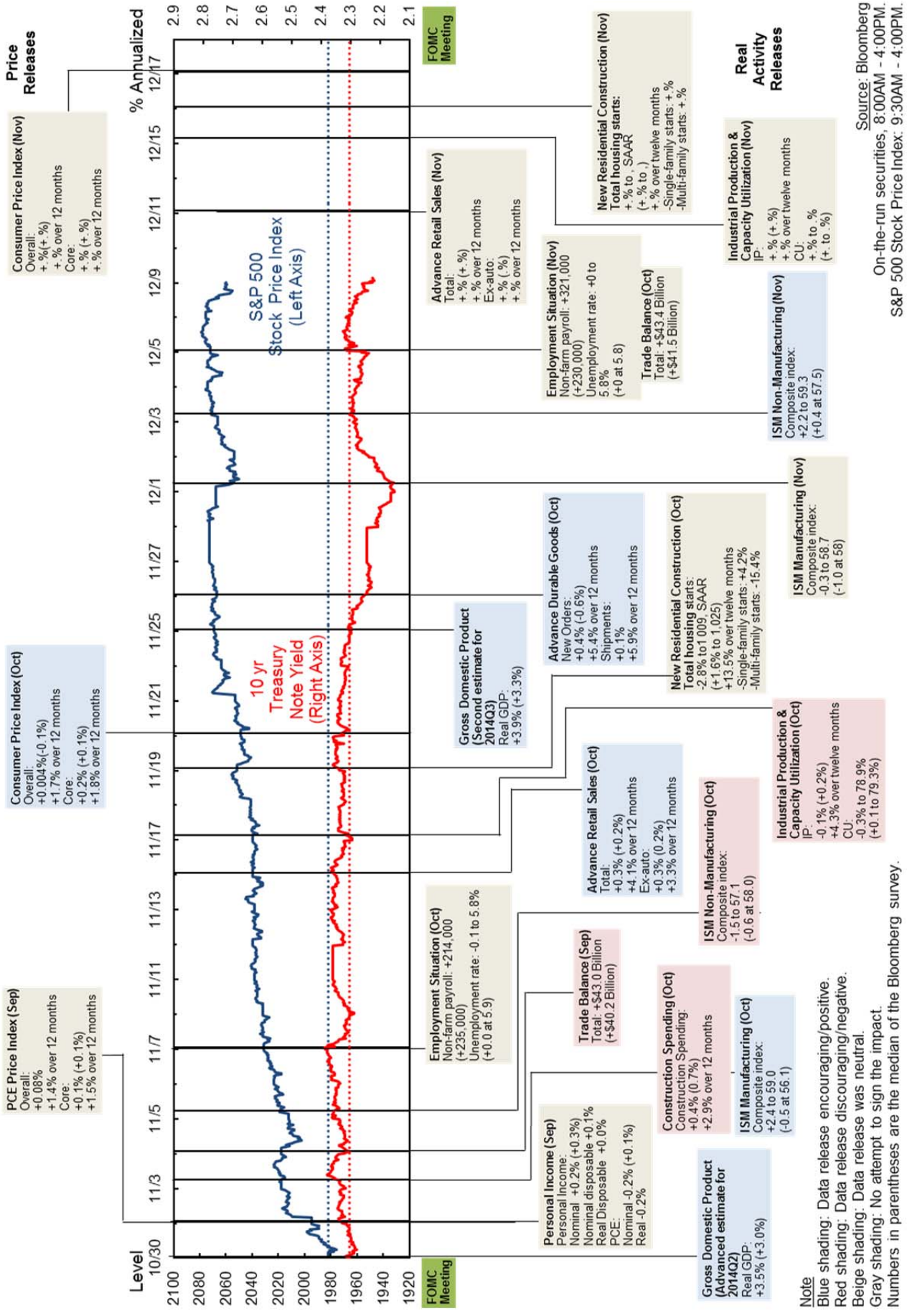
Based on our outlook and risk assessment, we continue to recommend that the target federal funds rate remains at the current range until mid-2015. In state-contingent terms, our view is that the lift-off should not occur until there is confidence that the economy has attained sufficient momentum and reached "escape velocity" from the liquidity trap, in part to appropriately reduce the probability of a subsequent costly policy reversal (as has been seen in Japan, Australia, and Sweden). Given our assessment, June 2015 remains the modal scenario for lift-off, although there is now a somewhat higher probability of an earlier lift-off (and somewhat lower probability of a later one) contingent on the upcoming data as well as the evolution of global risks.

In October we recommended to clarify the language on a "considerable" period between that meeting and lift-off by linking forward guidance more explicitly to the inflation outlook and the degree of convergence to the 2% longer-run objective over a one-to-two year horizon. We still view the miss from the inflation objective as a primary concern at this stage; however, the downward pressure on inflation from energy prices and other global forces could complicate this strategy. If the impact of these factors is transitory, as in our central outlook, policy should "look through" these factors by concentrating on core and other measures of underlying inflation as well as longer-run inflation expectations, much like the mirror case of the commodity price increases in 2011. However, if there is a more persistent and widespread impact, and the risk of un-mooring longer-term inflation expectations becomes more substantial, then it will be important to evaluate the extent to which inflation remains below objective because of weak aggregate demand versus other factors, and appropriately adjust the policy path.

In the December statement we would welcome the replacement of the "considerable time" language in favor of language more directly indicative of the Committee's preferences and reaction function, provided that the new language is explicitly flagged as consistent with previous guidance. Such an acknowledgement would be imperative to mitigate the risks that the new forward guidance may prompt an undue tightening in financial conditions.

To sum up, the Committee's forward guidance regarding the FFR lift-off date should clearly reflect the extent of its confidence about the economic outlook. The Committee should communicate *(i)* that it is carefully monitoring information on whether the current pace of recovery provides sufficient momentum for employment and inflation to return to objectives over the appropriate time horizon, and *(ii)* that the timing of the lift-off and the pace of normalization depend on the speed at which both FOMC's objectives are achieved. Of course, the benefits of being patient in removing policy accommodation need to be balanced against the possible risks to inflation and growth, including financial stability risks, associated with an overly accommodative monetary policy. The FOMC should communicate its readiness to adjust the timing and speed of policy normalization in response to signs of financial vulnerabilities, in order to preclude future adverse policy trade-offs.

1-1: Key Data Releases



2. Central Forecast

Intermeeting Developments

In a bit of an upside surprise, the rate of growth of real GDP in 2014Q3 was revised up to 3.9% (annual rate) from the advance estimate of 3.5%. The consensus expectation had been for a modest downward revision. Reflecting more inventory investment than assumed in the advance estimate, the inventory growth contribution for the third quarter was revised up from -0.7 percentage points to -0.1 percentage points, in line with expectations. In addition, the growth contribution from net exports was revised downward from +1.3 percentage points to +0.8 percentage points, also in line with expectations. What was unanticipated, however, was an upward revision to growth of final sales to domestic purchasers from 2.7% to 3.2%. In particular, growth of real PCE was revised up to 2.2%, from 1.8%, while growth of fixed investment was revised up to 6.2% from 4.7%, led by a fairly substantial upward revision to growth of business investment in new equipment. The rate of growth of the total PCE deflator was revised up to 1.3% (annual rate) from 1.2%, but the rate of increase of the core PCE deflator was unchanged at 1.4%. The four-quarter percent change of the core PCE deflator was 1.5%, the same as in the second quarter.

The second estimate of real GDP for 2014Q3 also provided the first estimate of corporate profits for the quarter. Such profits rose by $43.8 billion, remaining at 14.1% of national income. Corporate profits, while still a historically high share of national income, have not fully recovered from the sharp decline experienced in 2014Q1. Over the second half of 2013 they equaled 14.55% of national income. Also revealed in the second estimate is the fact that labor compensation in the second and third quarters of 2014 was revised down by 0.6% and 0.7%, respectively. After rising by 1.1 percentage points of national income to 61.7% in the first quarter, labor's share declined to 60.8% in the third quarter, which is only modestly higher than the average of the second half of 2013. The personal saving rate for the third quarter has been revised down to 5.0% from 5.5%. Despite this downward revision, the personal saving rate is still high relative to the level of household net worth.

At this writing our projection for growth in the fourth quarter is 2 ½%. In part this slowing is due to lumpiness in defense spending, which increased at a 15.9% annual rate in the third quarter (contributing 0.7 percentage points to the overall growth rate). A modest negative growth rate for defense outlays is anticipated in the fourth quarter, for a swing of about 0.8 percentage points. Another important part of the anticipated slowing is a sharp decline in the net export growth contribution, from +0.8 percentage points to around zero. This is not expected to be a temporary development, however, as the net export growth contribution is likely to be slightly negative over the entire forecast horizon. Finally, at this point, growth of business fixed investment is expected to slow somewhat following two relatively strong quarters. Under the modal forecast, this is expected to be a temporary slowing. But with a 2½ % growth rate in the final quarter of the year, the growth rate of the second half would be 3.2% (annual rate), quite close to what we have been projecting for the second half of 2014 for some time.

Despite the relatively low projected growth rate for real GDP in Q4, consumer spending appears to be gathering momentum, likely benefiting from continued gradual improvement of the labor market, restored household net worth, and the steep decline of energy prices. Excluding spending on motor vehicles and parts and electricity and natural gas, real PCE increased 0.4% in October, the strongest since last February. Motor vehicles sales rebounded to 17.2 million units (annual rate) in November, a notable improvement over the 16.8 million unit pace of the third quarter. Moreover, November was unusually cold, likely leading to a surge in spending to heat homes. We expect real PCE growth of around 3% (annual rate) in the fourth quarter, the strongest of this year. In addition, the stage is set for continued relatively strong consumer spending in the first quarter of 2015. In particular, the decline of energy prices has turned out to be larger and more persistent than previously expected, and retail prices may go down even further. Based on energy usage of 2013Q4, it is likely that by December between $50 and $60 billion of household income will be freed up for spending on other goods and services or for saving.

In recent months data on both starts and sales of single-family homes have also improved. In October, single-family starts rose to 696,000 (seasonally-adjusted annual rate), 15.4% above year ago levels. Similarly, in recent months sales of new single-family homes have been running around 450,000 units (SAAR), up from around 400,000 units in June and July. Roughly 75% of

new home sales are now purchased with conventional financing, up from around 57% over the first half of 2010.

While consumer-related expenditures appear to be gaining strength, the same cannot be said for business fixed investment. Over the second and third quarters, business investment in nonresidential equipment rose at an 11% annual rate. But October data on orders and shipments of nondefense capital goods, as well as imports and exports of capital goods, suggest that a major slowing is underway in the fourth quarter, with low single-digit growth expected at this time. Growth of real business investment in nonresidential structures slowed to just 1.1% (annual rate) in 2014Q3, down from 12.6% in the second quarter. (Growth of investment in petroleum and natural gas structures slowed in the third quarter after rising at a roughly 20% annual rate over the first half of the year.) Based on the data for October, growth of real business investment in nonresidential structures is likely to remain in the low single digits in the fourth quarter as well.

In addition to the recent sluggishness in the high frequency data pertaining to business fixed investment, the rate of growth of nominal exports has slowed sharply in recent months. The annualized three-month change of exports of goods and services slowed from 20% in May 2014 to -1% in both September and October. In contrast, growth of imports of goods and services has picked up in recent months. As a consequence, the net export growth contribution is expected to shrink from +0.8 percentage points in the third quarter to essentially zero in the fourth quarter.

Even though the expenditure data point to about a 2 ½% annual rate growth rate of real GDP for the fourth quarter, the supply side data have been quite strong. Based on the employment data for October and November, hours worked in the nonfarm business sector are on track to increase at a 2 ¾% to 3% annual rate in the fourth quarter, the strongest quarterly gain since 2012Q1. (While average hourly earnings are likely to increase at no more than a 2% annual rate for the quarter, the gain in wage and salary income should be a respectable 5 %.) The October data on industrial production was also fairly upbeat. There was a decline in motor vehicle assemblies, but this followed very strong increases in the second and third quarters. Manufacturing output excluding motor vehicles increased at a 3.7% annual rate in both September and October. The ISM manufacturing index for November was essentially unchanged at a relatively high 58.7. The new

orders and production components remained in the mid-60s. (The new export orders component, which slipped to 51.5 in October, bounced back to 55 in November. However, this series still appears to be on a downward trend since early 2014.) Given this tension between the expenditure data and production data, the fourth quarter will either see a significant slowing of growth of productivity or expenditures will prove considerably stronger than we now anticipate.

The PCE price index rose modestly in October (+0.05% to two decimal places). Energy prices fell about 2.0%, after declining 0.8% and 2.7% in September and August, respectively. Food prices were flat, after increasing 0.2% in September. The 12-month change in the overall PCE deflator was 1.4%, essentially unchanged from the previous two months. The core PCE deflator rose 0.2% in October, above the average monthly increase of 0.1% of the previous three months. The 12-month change in the core index was 1.6% (1.55% to two digits), somewhat above the readings of the previous months. The "market-based" core measure was up 0.1% in October, and its 12-month change was 1.4%. Inflation in the shelter category continues to edge higher, while inflation in the health services category, already surprisingly low, appears to be slowing further. Prices of non-food, non-energy goods continue to decline.

The Outlook

In our October Blackbook we presented a modal forecast of real GDP growth of around 3% (annual rate) over the second half of 2014, with growth then moving up to around 3% (Q4/Q4) in 2015. In 2016 growth is then expected to slow to around 2 ½% reflecting both a natural aging of the cycle as well as the ongoing process of normalization of monetary policy. The logic of that forecast was that the fundamentals of the economy had improved over the past few years, and would continue to improve as financial conditions remain very accommodative. Those improved fundamentals included largely repaired consumer balance sheets, improving access to credit, stronger conditions in the housing market, the prospective end of fiscal consolidation, and the subsiding of risk aversion in financial markets. Relative to September, both the growth and inflation outlook for 2015 and 2016 had been dampened somewhat due mainly to some additional marking down of global growth combined with an anticipated further appreciation of the dollar.

In this forecast round, projected growth of real GDP in both 2015 and 2016 is essentially unchanged. Energy prices have fallen somewhat more than expected in October, and equity values have more than recovered from their mid-October swoon. As a result we have boosted somewhat the projected growth of real PCE over the forecast horizon. However, this has been offset by a downward adjustment of the net export growth contribution, reflecting somewhat stronger growth of imports.

In this forecast round we have lowered by about ¼ percentage point the path of the unemployment rate, to around 5 ¼% by 2015Q4 and to around 5% by 2016Q4. The fact is that we have been fighting a lower path for the unemployment rate for some time by raising variables such as the average work week and the participation rate. However, those variables refuse to comply with our assumptions and so it is time to relax these assumptions a bit.

Both the total and the core PCE deflators are expected to increase 1.6% (Q4/Q4) in 2015 and 1.9% in 2016. In addition to the reduction of slack, this projected path for inflation is due to rising marginal costs of production. In addition, long-term inflation expectations are assumed to be well anchored over the forecast horizon, acting as a gravitational force pulling actual inflation toward the FOMC's long-term objective.

The risks to the forecast for growth appear to be reasonably well balanced. With an improving labor market and improved sentiment, we could very well see a stronger revival of both consumer spending and housing in 2015 and 2016 than we now expect. If so, that would likely provide an additional boost to business investment spending. In contrast, it is not clear that we have adequately taken into account the effect of dollar appreciation and slower growth abroad. In addition, while the sharp energy price decline is turning out to be a major positive for US consumers, we may be underestimating the downside effects of reduced oil and gas exploration and production.

2-1: Projections of Key Variables

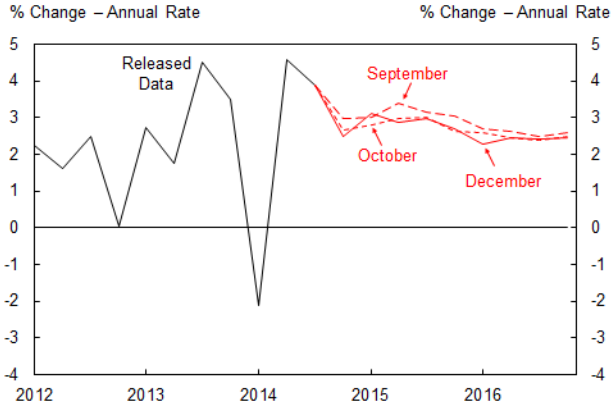
	Core PCE Inflation		Real GDP Growth		Unemployment Rate*		Fed Funds Rate**	
	Oct	Dec	Oct	Dec	Oct	Dec	Oct	Dec
2014								
Q1	*1.2*	*1.2*	*-2.1*	*-2.1*	*6.7*	*6.7*	*0-0.25*	*0-0.25*
Q2	*2.0*	*2.0*	*4.6*	*4.6*	*6.2*	*6.2*	*0-0.25*	*0-0.25*
Q3	1.4	1.4	2.6	3.9	6.1	6.1	0-0.25	0-0.25
Q4	1.3	1.7	2.7	2.5	5.8	5.8	0-0.25	0-0.25
2015								
Q1	1.5	1.5	2.8	3.1	5.7	5.6	0.38	0.38
Q2	1.5	1.5	3.0	2.9	5.6	5.4	0.63	0.63
Q3	1.6	1.6	3.0	3.0	5.4	5.2	0.88	0.88
Q4	1.7	1.7	2.6	2.7	5.4	5.1	1.00	1.00
2016								
Q1	1.8	1.8	2.6	2.3	5.3	5.1	1.50	1.50
Q2	1.9	1.9	2.5	2.4	5.2	5.0	2.00	2.00
Q3	2.0	2.0	2.4	2.4	5.2	5.0	2.25	2.25
Q4	2.0	2.0	2.5	2.5	5.3	5.0	2.50	2.50
Q4/Q4								
2013	1.3	1.3	3.1	3.1	-0.9	-0.9	0-0.25	0-0.25
2014	1.5	1.6	1.9	2.2	-1.2	-1.2	0-0.25	0-0.25
2015	1.6	1.6	2.9	2.9	-0.4	-0.7	1.00	1.00
2016	1.9	1.9	2.5	2.4	-0.1	-0.1	2.50	2.50

Columns reflect the forecast dates. Numbers in gray are from the previous Blackbook, and numbers in italics are released data.
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.
**Quarterly values are the end-of-quarter value. Yearly values are the difference between the end-of-year value in the previous year and the end-of-year value in the listed year.

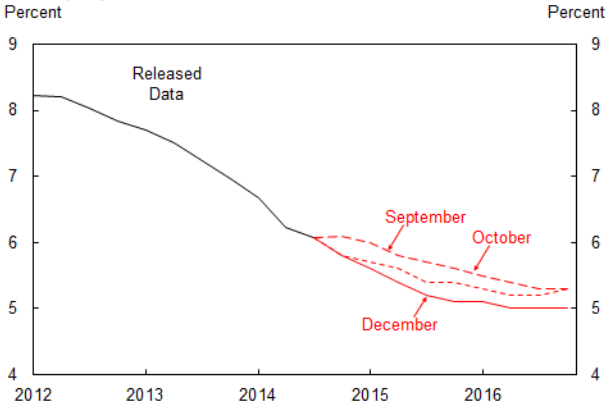
2-2: Evolution of Projected Quarterly Paths

Key Indicators

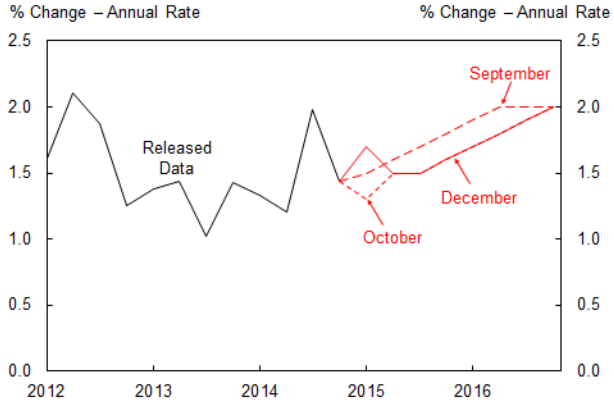
Real GDP Growth



Unemployment Rate

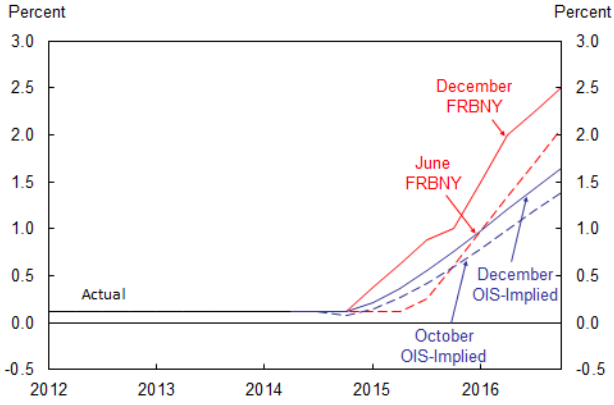


Core PCE Inflation

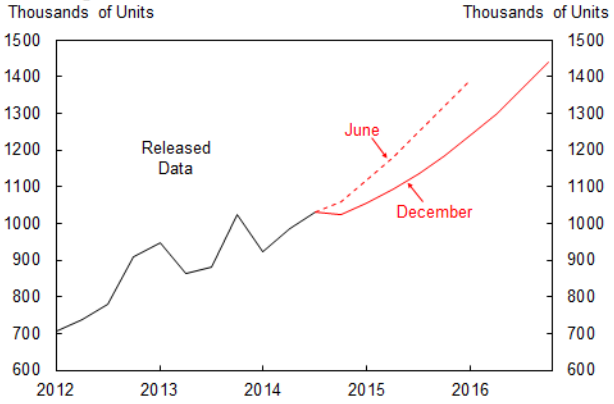


Forecast Assumptions

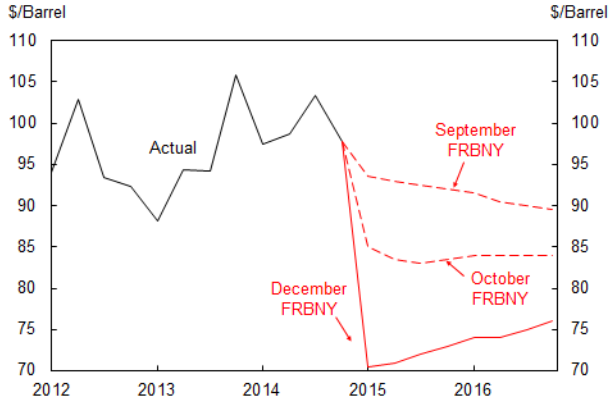
Federal Funds Rate



Housing Starts



Crude Oil



Source: FRBNY (MMS and IR Functions) and Federal Reserve Board

2-3: Near-Term Projections

	Growth Rates (AR)			Growth Contributions (AR)		
	2014Q4	2015Q1	2015Q2	2014Q4	2015Q1	2015Q2
OUTPUT						
Real GDP	2.5	3.1	2.9	2.5	3.1	2.9
	(2.7)	(2.8)	(3.0)	(2.7)	(2.8)	(3.0)
Final Sales to Domestic Purchasers	2.7	3.4	2.9	2.8	3.4	3.0
	(2.7)	(2.8)	(2.9)	(2.7)	(2.9)	(3.0)
Consumption	3.0	3.3	2.7	2.0	2.2	1.8
	(2.7)	(2.5)	(2.6)	(1.9)	(1.7)	(1.8)
BFI: Equipment	4.0	8.0	8.0	0.2	0.5	0.5
	(8.0)	(8.0)	(7.0)	(0.5)	(0.5)	(0.4)
BFI: Nonresidential Structures	5.0	5.0	5.0	0.1	0.1	0.1
	(4.0)	(5.0)	(6.0)	(0.1)	(0.1)	(0.2)
BFI: Intellectual Property Products	6.0	6.0	6.0	0.2	0.2	0.2
	(4.0)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	4.0	10.0	9.0	0.1	0.3	0.3
	(2.5)	(12.0)	(14.0)	(0.1)	(0.4)	(0.4)
Government: Federal	-2.0	-2.0	-2.0	-0.1	-0.1	-0.1
	(-2.0)	(-2.0)	(-2.0)	(-0.1)	(-0.1)	(-0.1)
Government: State and Local	1.5	1.5	1.5	0.2	0.2	0.2
	(1.5)	(1.5)	(1.5)	(0.2)	(0.2)	(0.2)
Inventory Investment	--	--	--	-0.2	-0.3	0.0
	--	--	--	(-0.2)	(-0.3)	(0.0)
Net Exports	--	--	--	0.0	0.0	-0.1
	--	--	--	(0.1)	(0.2)	(0.0)
INFLATION						
Total PCE Deflator	0.1	1.4	1.5			
	(0.0)	(1.3)	(1.5)			
Core PCE Deflator	1.7	1.5	1.5			
	(1.3)	(1.5)	(1.5)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	0.4	1.6	1.6			
	(1.6)	(1.6)	(1.6)			
Compensation per Hour	1.9	2.1	2.1			
	(2.2)	(2.3)	(2.2)			
Unit Labor Costs	1.6	0.5	0.5			
	(0.6)	(0.7)	(0.6)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-4: Medium-Term Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2014	2015	2016	2014	2015	2016
OUTPUT						
Real GDP	2.2	2.9	2.4	2.2	2.9	2.4
	(1.9)	(2.9)	(2.5)	(1.9)	(2.9)	(2.5)
Final Sales to Domestic Purchasers	2.5	3.1	2.6	2.5	3.1	2.6
	(2.3)	(2.9)	(2.6)	(2.3)	(3.0)	(2.6)
Consumption	2.2	2.9	2.5	1.5	2.0	1.7
	(2.1)	(2.6)	(2.5)	(1.5)	(1.8)	(1.7)
BFI: Equipment	6.1	7.7	6.0	0.4	0.5	0.4
	(7.0)	(7.0)	(5.2)	(0.4)	(0.4)	(0.3)
BFI: Nonresidential Structures	5.3	4.7	3.2	0.1	0.1	0.1
	(5.5)	(5.5)	(4.2)	(0.2)	(0.2)	(0.1)
BFI: Intellectual Property Products	5.6	5.7	5.0	0.2	0.2	0.2
	(4.5)	(4.0)	(4.0)	(0.2)	(0.2)	(0.2)
Residential Investment	2.4	9.0	6.0	0.1	0.3	0.2
	(3.2)	(12.0)	(7.0)	(0.1)	(0.4)	(0.2)
Government: Federal	1.6	-2.0	-2.0	0.1	-0.1	-0.1
	(-1.4)	(-2.0)	(-2.0)	(-0.1)	(-0.1)	(-0.1)
Government: State and Local	1.1	1.5	1.5	0.1	0.2	0.2
	(1.3)	(1.5)	(1.5)	(0.1)	(0.2)	(0.2)
Inventory Investment	--	--	--	-0.1	-0.1	0.0
	--	--	--	(-0.1)	(-0.1)	(0.1)
Net Exports	--	--	--	-0.3	-0.1	-0.2
	--	--	--	(-0.3)	(0.0)	(-0.2)
INFLATION						
Total PCE Deflator	1.3	1.6	1.9			
	(1.2)	(1.6)	(1.9)			
Core PCE Deflator	1.6	1.6	1.9			
	(1.5)	(1.6)	(1.9)			
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	0.2	1.6	1.5			
	(0.1)	(1.6)	(1.6)			
Compensation per Hour	2.2	2.2	2.5			
	(3.3)	(2.4)	(2.7)			
Unit Labor Costs	1.9	0.6	1.0			
	(3.3)	(0.8)	(1.1)			

Note: Numbers in parentheses are from the previous Blackbook.
*Nonfarm business sector.

2-5: Comparison with Other Forecasts

Real GDP Growth

	Release Date	2014Q4	2015Q1	2014 Q4/Q4	2015 Q4/Q4
FRBNY	12/8/2014	2.5	3.1	2.2	2.9
		(2.7)	(2.8)	(1.9)	(2.9)
Blue Chip	12/10/2014	2.5	2.9	2.2	2.9
		(3.0)	(2.9)	(2.1)	(2.9)
Median SPF	11/17/2014	2.7	2.8	2.2	3.0
		(3.1)	(3.1)	(2.1)	(3.1)
Macro Advisers	11/18/2014	2.2	2.5	2.0	2.8
		(3.0)	(2.7)	(2.2)	(2.8)
FRBNY-DSGE	12/8/2014	2.5	2.2	2.2	2.1
		(2.4)	(2.5)	(2.1)	(2.1)

Core PCE Inflation

	Release Date	2014Q4	2015Q1	2014 Q4/Q4	2015 Q4/Q4
FRBNY	12/8/2014	1.7	1.5	1.6	1.6
		(1.3)	(1.5)	(1.5)	(1.6)
Median SPF	11/17/2014	1.6	1.7	1.5	1.8
		(1.9)	(1.9)	(1.7)	(1.9)
Macro Advisers	11/18/2014	1.4	1.5	1.5	1.7
		(1.5)	(1.6)	(1.5)	(1.8)
FRBNY-DSGE	12/8/2014	1.7	1.3	1.6	1.2
		(1.2)	(1.2)	(1.4)	(1.4)

CPI Inflation

	Release Date	2014Q4	2015Q1	2014 Q4/Q4	2015 Q4/Q4
FRBNY	12/8/2014	0.2	1.8	1.6	2.0
		(2.1)	(2.2)	(2.1)	(2.2)
Blue Chip	12/10/2014	0.2	1.0	1.6	1.8
		(1.6)	(1.9)	(2.0)	(2.0)
Median SPF	11/17/2014	1.0	1.8	1.8	1.9
		(2.0)	(2.1)	(2.3)	(2.2)
Macro Advisers	11/18/2014	0.1	0.8	1.5	1.7
		(0.9)	(0.5)	(1.8)	(1.5)

Core CPI Inflation

	Release Date	2014Q4	2015Q1	2014 Q4/Q4	2015 Q4/Q4
FRBNY	12/8/2014	1.9	2.0	1.8	2.0
		(1.9)	(2.0)	(1.9)	(2.2)
Median SPF	11/17/2014	1.7	1.9	1.8	2.0
		(2.1)	(2.1)	(2.1)	(2.1)
Macro Advisers	11/18/2014	1.6	1.7	1.8	1.9
		(1.7)	(1.8)	(1.8)	(2.0)

*Note: Numbers in gray are from the previous Blackbook

3. Uncertainty & Risks

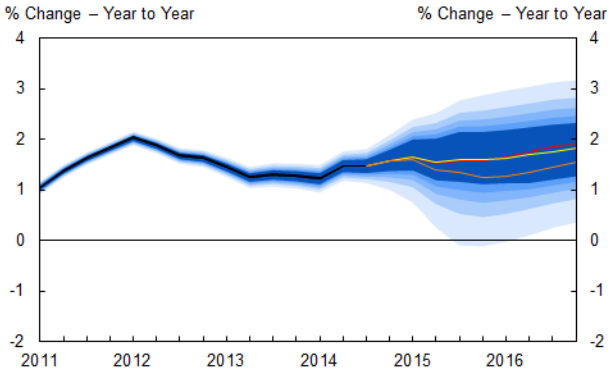
The developments over the intermeeting period have led us to reduce our assessment of uncertainty around the outlook and to shift the balance of risks modestly. Based on the difference between the modal central forecast and the expected value from our forecast distributions [Exhibit 3-1], as well as the changes in the overall forecast distributions, the risks are now roughly balanced both for core PCE inflation and for real GDP growth [Exhibit 3-3]. We see the uncertainty around the real GDP growth projection as above historical norms, while that around the inflation projection as near those norms.

The changes in our risk assessment and forecast distributions reflect the impact of a number of crosscurrents. In the U.S., data releases on real activity during the intermeeting period were generally positive; of particular note were the robust October and November labor market reports. The inflation data over the period were somewhat higher than they had been in recent months. In contrast, data on global economic activity and inflation continued to be on the weak side. Longer-term inflation compensation measures in the U.S. and the euro area fell further reaching quite low levels. In financial markets, oil prices continued to fall, but asset prices displayed less volatility, equity prices increased, and financial stress measures improved somewhat. We incorporated these developments in this Blackbook through a number of changes in scenario probabilities [Exhibit 3-2]. The possibility that the decline in oil prices could have a more persistent effect on U.S. real economic growth and inflation, which would be similar to that of a positive productivity shock, was incorporated through an increase in the probability of the *Productivity Boom* scenario. Because of the generally solid data and higher equity prices, we reduced the probability of the negative *Fiscal Consolidation* scenario. The apparent reduction in financial stress led to a small reduction in the probability of the *Global Credit Crunch* scenario. Although we did not reduce it further, the probability of the *Loss of Credibility* scenario remains unusually low, consistent with the low levels of longer-run inflation compensation. With these changes, the widths of the 90 percent probability intervals for both real GDP growth and core PCE inflation have narrowed somewhat and the distributions exhibit roughly balanced risks through most of the forecast horizon [Exhibit 3-1].

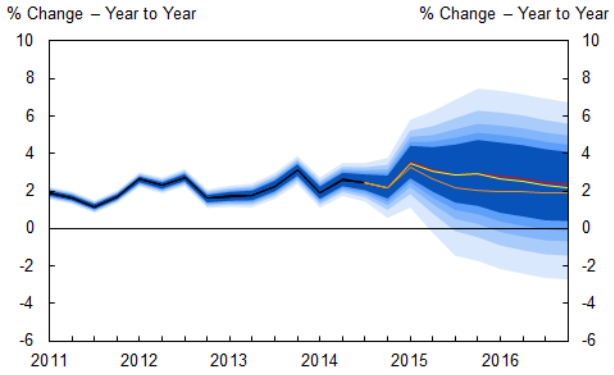
Comparing the recent data and our current central forecast to the forecast distribution from a year earlier, the current projection for inflation is within the middle of the year-ago inflation distribution and near the year-ago central scenario, reflecting the somewhat higher inflation data in the intermeeting period [Exhibit 3-3]. Although it shows some greater near-term volatility, the current real GDP growth forecast is near the middle of the year-ago forecast distribution and is fairly close to the year-ago central scenario. These patterns indicate that the basic contours of our central forecast have not changed a great deal on net over the past year.

3-1: Forecast Distributions

Core PCE Inflation Forecast Distribution



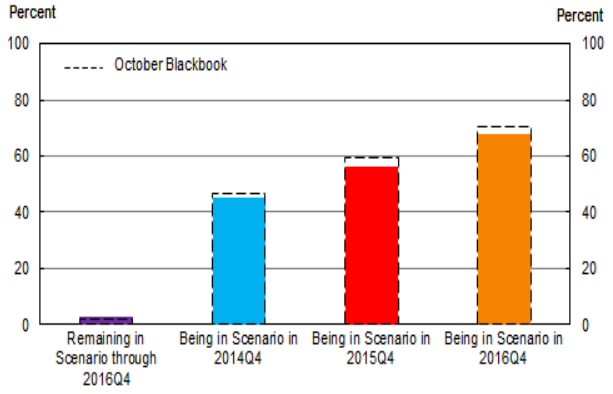
Real GDP Growth Forecast Distribution



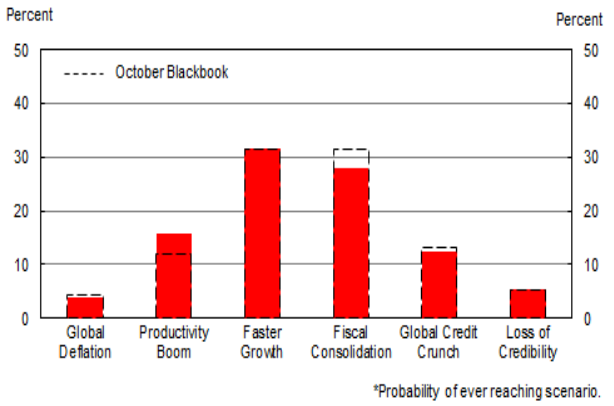
The yellow line is the expected value of the forecast distribution, the red line is the FRBNY central projection, the orange line is the DSGE forecast, and the black line is released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter change will be within the respective range.

3-2: Scenario Probabilities

Central Scenario Probabilities



Alternative Scenario Probabilities*

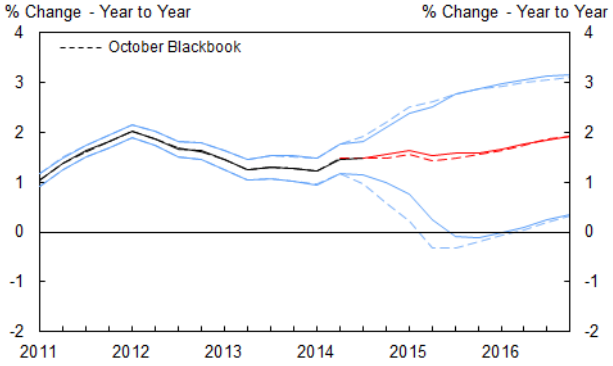


The left chart shows the probability of remaining in the central scenario through the end of the forecast horizon and the probabilities of being in the central scenario at the end of the next three years. The right chart shows the probabilities of ever reaching an alternative scenario over the forecast horizon, an assessment of the overall likelihood of each alternative scenario. A short description of the scenarios and the methodology to perform risk assessment is in the Appendix.

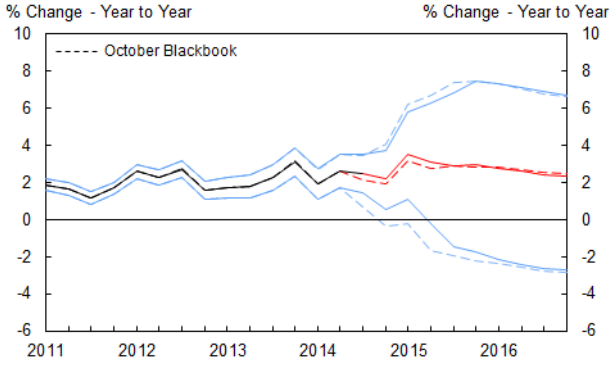
Source: MMS Function (FRBNY)

3-3: Evolution and Performance of Forecast Distributions

Change in Core PCE Inflation Forecast Distribution

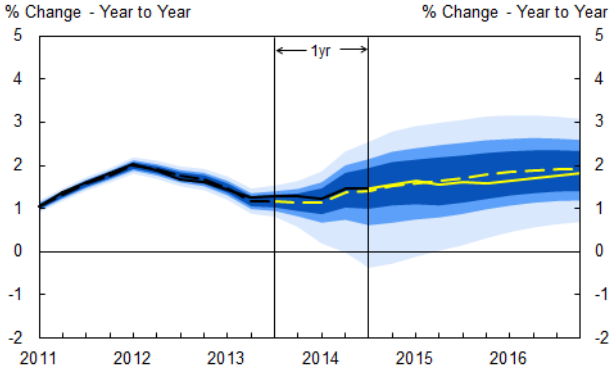


Change in Real GDP Growth Forecast Distribution

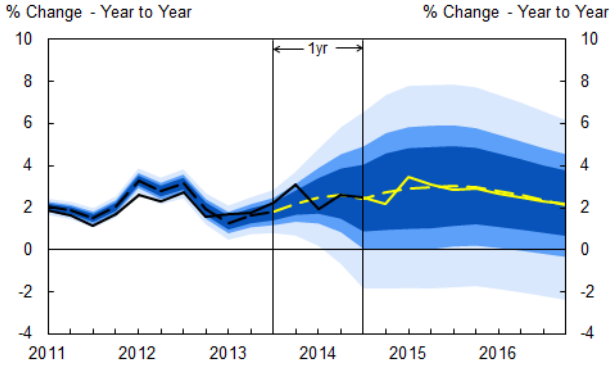


The red lines are the central scenario projections, black lines are released data, and blue lines represent upper and lower 90 percent forecast probability intervals. Dashed lines represent forecasts from the previous Blackbook.

One-Year Comparison of Core PCE Inflation Forecast Distribution and Expected Value



One-Year Comparison of Real GDP Growth Forecast Distribution and Expected Value



The solid yellow lines are the current expected values from the forecast distributions and the dashed yellow lines are the year-ago Blackbook expected values. Black lines are released data and the blue shaded areas represent 50 (darkest shade), 70, and 90 (lightest shade) percent forecast probability intervals from the year-ago Blackbook.

Source: MMS Function (FRBNY)

Appendix

In this Appendix, we provide brief descriptions of the alternative scenarios used in this Blackbook [A-1], and of the methodology underlying our risk assessment and forecast distributions [A-2].

A-1. Alternative Scenario Descriptions

Our first alternative scenario considers the impact of productivity growth above our assumed trend of about 1.5% on a nonfarm business sector basis (*Productivity Boom).* The second scenario (*Fiscal Consolidation)* assesses the consequences of below-trend productivity growth. We consider four additional scenarios. In one (*Faster Growth*), "headwinds" subside more quickly than expected, leading to stronger aggregate demand effects from monetary and fiscal policy. In another (*Loss of Credibility*), the public and investors lose confidence in the current stances of monetary and fiscal policy. In the other two (*Global Credit Crunch* and *Global Deflation*), renewed stresses in global financial and economic conditions have an adverse impact on U.S. real economic growth and inflation; the differences between the two mainly reflect differing assessments of the persistence of the negative effects.

A-2. Methodology to construct the forecast distribution

Our approach to producing the FRBNY forecast distributions is a generalization of techniques used at the Bank of England and other central banks to depict the uncertainty and balance of risks around a forecast. It allows for a dynamic balance of risks that is jointly assessed over inflation and output growth.

Three primary components underlie these forecast distributions: (1) a central scenario with modal inflation and output growth characterized by the central forecast described in Section 2, (2) alternative scenarios with specific inflation and output implications that differ from those of the central scenario, and (3) probabilities that the economy will enter those alternative scenarios. This approach to quantifying uncertainty and risks allows us to interpret the forecast distribution

for output growth and inflation, as well as analyze the impact on that distribution of changing the probabilities of the alternative scenarios.

We set the long-run behavior of our central forecast at the FOMC's longer-run inflation goal and our estimate of the potential growth rate. We also assume that, if the economy enters an alternative scenario, it eventually returns to the central scenario and remains in that scenario thereafter.

We conduct a simulation exercise to generate paths for inflation and output growth; we then perform calculations about our forecast distribution that reflect our risk assessment.
This exercise consists in generating a large number of indicator series, with each entry in a given series corresponding to a quarter in the forecast horizon; for each of these series, each quarter's value indicates only the prevailing scenario in that quarter. To generate these scenario-indicator series, we set two parameters for each alternative scenario: (1) the probability that the economy will leave the central scenario and enter the alternative scenario—the "initial probability"—and (2) the probability that the economy will remain in the alternative scenario once it enters the scenario—the "persistence."

After creating the indicator series, we generate, for each series, a path for inflation and a path for output growth, with each entry in a given path corresponding to a quarter in the forecast horizon. For a given indicator series and a given quarter, the values of the associated inflation and output growth paths are determined by a draw from the indicated joint distribution of inflation and output growth, based on the scenario the indicator series points to for that quarter. If, for example, the series indicates that the economy is in the central scenario, we draw inflation and output values from a distribution centered at the central forecast. If instead the series indicates the economy is in an alternative scenario, we draw values from a modified version of the central scenario distribution that is consistent with the alternative scenario.