FRBNY BLACKBOOK

RESEARCH AND STATISTICS GROUP

FOMC Background Material

January 2011

CONFIDENTIAL (FR) Class II FOMC

FRBNY BLACKBOOK

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EXHIBITS

EXHIBIT OVERVIEW

1. Policy Recommendation and Rationale

The outlook and risks for U.S. growth and inflation have not changed sufficiently during the intermeeting period to warrant a change in our policy recommendation. Therefore, as in the October and December Blackbooks, we recommend maintaining the target for the federal funds rate in the 0-0.25% range through 2012Q2 , two quarters after the lift-off date associated with the current market-implied path. We also support maintaining the existing policy of reinvesting principal payments from securities holdings and reaffirming the intention of the FOMC to purchase $600 billion of long-term Treasury securities by the end of 2011Q2.

Our rationale for staying the course may be summarized as follows. Although developments over the intermeeting period led us to raise our projection for near-term real-GDP growth, they had little impact on our medium-term forecasts for real activity and inflation. On the bright side, a number of recent data releases suggest some reduction in the downside risks and a modest increase in the upside risks to economic activity, as well as a mild reduction to downside risks to inflation. The rise in long-term yields and the positive trend in stock market valuations reflect, to some extent, market participants' more optimistic assessment of future economic conditions. Nevertheless, continuing sources of weakness, such as falling housing prices, lukewarm developments in the labor market, and uncertainties associated with the European sovereign debt crisis, suggest that the recovery remains vulnerable to negative developments. Hence the shift in the balance of risks has been moderate at best, and the balance itself clearly remains skewed to the downside. Moreover, future improvements in macroeconomic conditions likely remain tied to the effectiveness of the LSAP program and the forward guidance provided by the FOMC's statements.

In addition, core inflation, along with other underlying inflation measures, remains too low for comfort, despite recent upticks in the headline numbers. Commodity prices have risen with the recovery in emerging market economies, but their impact on core prices should remain muted in the near term.

We reiterate that the ongoing balance sheet expansion will be most effective if the FOMC also provides forward guidance that associates the degree of monetary accommodation with specific objectives. In the current environment, with core inflation quite low, a reference to the cumulated deviations of inflation from mandate-consistent levels, combined with a commitment to maintain the current policy accommodation until the repayment of any "inflation debt" is within reach, could reinforce market expectations of loose financial conditions, help maintain medium-term inflation expectations near present levels, and pave the way for a smoother exit from the current accommodative monetary policy stance when the time comes.

2. Evolution of Outlook and Risks

2.1 Central Forecast

After a mid-year "soft patch", the pace of growth of the US economy strengthened over the closing months of 2010 to a considerably greater extent than anticipated in the previous Blackbook forecast. Based on available data, we estimate that real GDP grew at a 3 ¼% annual rate in 2010H2, one half percentage point faster than over the first half of the year. The upside surprise to growth was heavily concentrated in consumer spending, with real PCE estimated to have increased at a 3 ¼% annual rate over 2010H2 versus 2% over 2010H1. There was a notable increase in light–weight vehicle sales in 2010Q4, to 12.3 million units (annual rate) versus an average of just 11.2 million units over the first half of the year. In addition to some improvement in labor market conditions and an overall improvement in financial conditions, it is reportedly the case that lending standards for vehicle financing have eased somewhat. In addition to the relatively strong pace of consumer spending, growth of exports remained strong over the second half of 2010. The growth contribution from government increased, particularly within the state and local sector, as stimulus projects finally got underway. In contrast, growth of business fixed investment slowed somewhat relative to the first half of the year. In addition, housing market activity turned out to be even weaker than expected, with real residential investment declining at a 12 ½% annual rate over the final six months of 2010. Overall, real final sales increased around 3 ½% (annual rate) over the second half versus just 1% over the first half of the year.

Despite the fact that growth surprised to the upside, the improvement in labor market conditions has been grudging. Private nonfarm payroll employment increased an average of around 125,000 per month over the second half of the year, only modestly above the 100,000 per month average of the first half. Moreover, the growth of hours worked over the second half of 2010 was slightly slower than over the first half reflecting a marked pick up in the rate of growth of productivity. The unemployment rate averaged 9.6% in 2010Q4, about where it was at the beginning of the year. Consistent with this continued large amount of slack in the economy, trend inflation moved lower over the second half of 2010. The core PCE deflator increased around 0.5% (annual rate) in 2010H2 versus 1.1% over 2010H1.

Conditioning assumptions. We continue to assume that potential GDP growth is around 2 ½%. This is composed of 1% trend hours growth and trend productivity growth of around 1 ½% (on a GDP basis, which is equivalent to about 1 ¾% on a nonfarm business sector basis). The Board staff estimates of potential in the January Tealbook are 2.5% for 2010 and 2011 and 2.6% for 2012, all unchanged from December.

We expect the lower degree of inflation persistence evident since the early 1990s to continue. This assumption is in contrast to the greater degree of inflation persistence assumed in recent Board staff forecasts. In our central scenario, inflation expectations remain well anchored. This assumption is central to our projection of a gradual rise of core inflation back toward the midpoint of the FOMC's objective for core PCE inflation of 1.5% to 2.0%.

The FRBNY outlook for foreign real GDP growth has been increased modestly to 3.8% (Q4/Q4 on a GDP-weighted basis) in 2010, 3.1% in 2011, and 3.2% in 2012. This reflects an upgrading of growth prospects for the emerging economies while that of the developed economies has been downgraded somewhat. Similarly, the Board staff projections for foreign GDP growth are also modestly higher at 3.7% in 2010, 2.9% in 2011, and 3.4% in 2012.

The projected path of oil prices over the forecast horizon has been raised once again. We expect an average price of WTI of $94.50 per barrel for 2011Q4, $7.50 per barrel higher than in December. The Board assumes $95.00 per barrel for 2011Q4, $5 per barrel higher than in December. Further out, the oil futures curve is quite flat, with assumptions of $94 and $96 for 2012Q4 for us and the Board, respectively.

As is our usual practice, our assumptions regarding federal fiscal policy are the same as those of the Tealbook. As was the case in December, the Tealbook forecast incorporates the fiscal agreement enacted late last year. In addition to the extension of all of the 2001-2003 tax cuts for two years, that agreement includes a two percentage point reduction in the employees share of the OASDI payroll tax and a provision that allows businesses to expense all qualified investment in 2011, followed by 50 percent bonus depreciation on investment put in place in 2012. According to the Joint Committee on Taxation, the two year revenue loss associated with these two provisions are $112 billion and $110 billion, respectively. The Board's fiscal impulse measure now suggests that fiscal policy will add 0.3 percentage points to growth in 2011. However, in 2012 fiscal policy is anticipated to subtract 0.7 percentage points from GDP growth as the payroll tax reduction in investment expensing provisions expires, the emergency unemployment benefits are phased out, and the grants to state and local governments included in the 2009 stimulus bill are exhausted.

The Tealbook assumption for equity prices, which we also adopt, is little changed. From a somewhat higher base than assumed in December, equity prices increase at an 11% annual rate through the end of 2012 with the endpoint value essentially unchanged. The main driver of this increase in equity prices is the return of the equity premium to more normal levels. The Board's assumed path of the nominal exchange value of the dollar is somewhat lower than in December with a decline of 1.4% in 2010, 2.1% in 2011, and 2.3% in 2012.

Finally, as a rule we adopt the Board's assumed path of home prices. In the December

Tealbook the Board staff introduced a significantly more downbeat assessment of the likely path of home prices over the forecast horizon. Following some firming over the first half of 2010, all widely-followed national home price indices have come under renewed downward pressure in the third quarter. The Core Logic repeat sales home price index (formerly known as the Loan Performance Home Price Index) declined at an 8.6% annual rate in 2010Q3 (based on the seasonally-adjusted index). This index has continued to decline rapidly in the fourth quarter of 2010, falling at a 16.5% annual rate in November, more than the Board staff had been assuming. As a result, the projected path of home prices has been lowered once again, with prices continuing to decline through 2011 and then stabilize in 2012.

The Outlook. We continue to believe that conditions are now in place for a self-reinforcing recovery generating above-potential growth, a declining unemployment rate, and some firming of core inflation. The strengthening of growth over the second half of 2010 is certainly consistent with that view. Specifically, we expect growth of real GDP of 4% (Q4/Q4) in both 2011 and 2012, with the unemployment rate approaching 7% by the end of 2012. Moreover, with slack being absorbed, import prices rising, and inflation expectations well anchored, core inflation is expected to begin moving higher over this forecast horizon, reaching around 1 ½% by the end of 2012. All of these values are essentially unchanged from the December Blackbook.

Several factors underlie this expectation of above potential growth. First, aided by the second installment of large scale asset purchases announced by the FOMC in early November, overall financial conditions have improved in recent months. The S&P500 is up about 22% since late August. Moreover, as measured by the Senior Loan Officer Survey, bank lending standards have begun to ease modestly and C&I loans on bank balance sheets have started to increase. Second, the household deleveraging process appears to be quite far along. Based on historical relationships, the current level of the personal saving rate appears to be about where it should be given current levels of household net worth. Indeed, according to the Flow of Funds data for 2010Q3, the rate of decline of household liabilities has begun to slow while more recent data indicate that non revolving consumer debt (excluding mortgages) is beginning to expand. Third, while quite low at the moment, housing market activity is likely to begin to improve in the months ahead as the labor market improves and housing affordability remains high. Fourth, continued favorable growth prospects among our major trading partners along with a lower exchange value of the dollar are expected to produce sustained strong growth of exports. Fifth, improving domestic and foreign demand is likely to induce stronger growth of business investment. Sixth, with incomes rising, tax revenues to state and local governments are beginning to recover and help put that sector on a more solid fiscal position. Lastly, the passage of the recently announced fiscal agreement further enhances growth prospects for 2011. In particular, the 2 percentage point reduction of the employee's share of the OASDI payroll tax is likely to boost consumer spending and the immediate expensing of business investment is likely to boost investment in equipment and software.

The underlying fundamentals of the economy are expected to continue to improve in 2012, with a better-established recovery of the housing sector and modest growth of business investment of nonresidential structures. However, the federal fiscal impulse will turn negative as the payroll tax rate and depreciation rates return to previous levels. Thus, growth of real GDP in 2012 is likely to be about the same as in 2011.

2.2 Alternative Scenarios and Risks

The risk assessment has improved modestly over the intermeeting period. On the inflation front the risks have decreased, particularly on the downside. On the real activity front the downside risks also have been reduced, while upside risks have increased somewhat. These changes primarily reflect the impact of a number of positive releases on the real economy over the intermeeting period, which were mirrored by improvements in financial markets. Not all sectors of the economy registered improvements –i.e., the housing market is still depressed; payroll growth remains lukewarm–hence the change in the risk assessment over the period was quite modest.

The mix of scenarios has changed considerably since last Blackbook, with the introduction of a new scenario and the consolidation of some of the previously existing ones [Exhibit C-1]. Specifically, we introduced the *Faster Growth/Recovery* scenario to capture the possibility that the recent improvement in some of the aggregate demand indicators signals a rebound in real activity closer to the recoveries following previous severe recessions. The probability of ever entering this scenario is assessed at almost 10 percent. This scenario envisions an output path that is quite similar to that of the *Productivity Boom* scenario, but because this stronger growth is driven by demand rather than productivity, the path for inflation is higher [Exhibit C-2]. The *Fiscal Consolidation* and the *Productivity Slowdown* scenarios were consolidated into one, since their output and inflation paths were quite similar. With a probability of ever entering it of about 30%, the resulting "new" *Fiscal Consolidation* scenario is the second most likely scenario after the *Productivity Boom*, which has an associated probability of slightly below 35%. The likelihood of the *Global Deflation* has been decreased substantially, as the increase in commodity prices and strength in emerging market economies point to a lower risk of widespread deflation, and the probability of ever reaching it is now well below 5%. The likelihood of the *Loss of Credibility* scenario is unchanged at almost 10%. The paths for core PCE inflation and real GDP growth associated with the previously existing scenarios have changed only as a result of changes in the *Central* scenario, as all alternative scenarios are defined relative to our modal forecast [Exhibit C-2].

These changes in our risk assessment result in an upward shift in the 5th percentile of the forecast distribution for core PCE inflation, consistent with a reduction in downside inflation risks [Exhibit C-3]. Upside risks to inflation also have diminished, especially in the short run, as indicated by the downward move in the 95th percentile of the forecast distribution. The increased upside and decreased downside risks to real activity have led to an upward shift in the forecast distribution for real GDP growth. The "Low Inflation/Deflation Probability and Distribution" chart shows that the likelihood of negative inflation over the 2010-2012 period has decreased over the intermeeting period. Mirroring the improved balance of risks for output, the "Scale of Recovery Through End of 2011" shows that we currently expect the recovery to be stronger than we did in December. The likelihood of a robust recovery, such as the one seen after the 1981-2 recession, is however still fairly small, below 10%.

Exhibit C-3 also shows, for comparison, the mean forecasts from the FRBNY DSGE model. The forecasts for inflation are in line with the *Central Scenario* forecasts. The forecasts for output are close to the *Central Scenario* in the short run, but the DSGE model does not foresee a rebound in output in late 2011 and 2012.

3. Forecast Comparison

3.1 Comparison with Private Forecasters[1]

The FRBNY forecast for real GDP growth lies above the range of private forecasts for 2010Q4, and is at the upper end of this range for 2011 (Q4/Q4) and 2012 (Q4/Q4). Our inflation projections for 2010Q4, 2011 (Q4/Q4), and 2012 (Q4/Q4) are generally close to private forecasts, with the exception of Macro Advisers. For 2011 (Q4/Q4), FRBNY forecasts are slightly higher than Macro Advisers, a difference which widens to between 0.5 and 1 percentage point by 2012 (Q4/Q4).

Real GDP Growth. Since the last FOMC meeting, private forecasts for 2010Q4 have been revised upwards.[2] The FRBNY forecast is now 4.0%, up from 3.2% in the December Blackbook, and above those of Blue Chip (3.2%) and Macro Advisers (2.9%). Compared to the previous Blackbook, the FRBNY forecast for 2011 (Q4/Q4) is unchanged at 4.0%, and is identical to Macro Advisers and above Blue Chip (3.3%). Our forecast for 2012 (Q4/Q4), also 4.0%, is above Macro Advisers (3.6%) and Blue Chip (3.2%).

[1] The details of the forecast comparison are in Exhibit B-8. Release dates of the private forecasts discussed in this section are in parentheses: Blue Chip consensus (12/10), SPF (11/15), and Macro Advisers (12/06). Quarterly numbers are SAAR.
[2] Note that we refer here only to the Blue Chip and Macro Advisers forecast revisions, as the Median SPF has not been updated since the last FOMC meeting.

Inflation. The FRBNY projection for core PCE in 2010 (Q4/Q4), revised down from 0.6% in the December Blackbook to 0.3%, is similar to Macro Advisers (0.4%) and below Median SPF (1.0%). As in the previous Blackbook, our 2011 (Q4/Q4) and 2012 (Q4/Q4) forecasts for core PCE inflation (1.0% and 1.5%, respectively, both unchanged from the previous Blackbook) lie between Median SPF (1.2% and 1.6%, respectively) and Macro Advisers (0.8% and 1.0%, respectively). Our forecast for headline inflation for 2011 (Q4/Q4) is 1.6%, and lies within the range of private forecasts. For 2012 (Q4/Q4), our forecast rises to 2.0%, a full percentage point above that of Macro Advisers (1.0%). The FRBNY projection for core CPI in 2010 (Q4/Q4) is 0.5%, close to Macro Advisers (0.4%), and for 2011 (Q4/Q4), at 1.2%, lies between Macro Advisers (0.9%) and Median SPF (1.3%).

4. Robustness of Policy Recommendation

4.1 Sensitivity to Alternative Scenarios and Policy Rules

Our current policy recommendation is to maintain the target range for the federal funds rate at 0–0.25% through 2012Q2 – as in the last Blackbook. Our recommendation is consistent with the *Baseline* policy rule under the *Central*, *Global Deflation*, *Fiscal Consolidation*, and *Productivity Boom* scenarios [Exhibit D-1]. Under the *Loss of Credibility* scenario the *Baseline* policy rule suggests anticipating the lift-off to next quarter, 2011Q2. Under the new *Faster Recovery* scenario the lift-off would occur in 2011Q3.

Exhibit D-2 shows the prescription of various policy rules under the expected value of the forecast distribution. Under the expected path for output and inflation the *Baseline* policy rule prescribes a lift-off in 2012Q1, in line with current market expectations. The *Nutter* rule, which entails a strong response to inflation and no response to the output gap, prescribes a first rate hike in 2011Q3. Conversely, under the *Asymmetric Price Targeting* rule the FFR would remain close to zero until the end of the forecast horizon. Exhibit D-2 shows also the implied nominal FFR ignoring the zero bound for the *Outcome-based* rule. Under the expected value of the forecast distribution, the unconstrained nominal FFR reaches -3% by 2012Q3 and remains below zero until the end of 2013.

Exhibit D-3 shows the prescriptions from alternative policy rules. The *Nutter* rule prescribes a lift-off that is immediate (2011Q1) under the *Loss of Credibility* scenario, and would occur within 2011 for all other scenarios. FFR paths under the *Asymmetric Price Targeting* rule are at the lower bound (.25%) throughout the forecast horizon, while those for the *Outcome-based* rule are below zero through mid-2012 under all scenarios except for the new *Faster Recovery* scenario, under which the renormalization would occur in 2011.

Exhibit D-1 shows the real FFR rates implied by the *Baseline* rule under the various scenarios, ignoring the zero bound constraint. Under the *Central* scenario this rule implies a slow renormalization of the real rate, increasing from about -3% in the current quarter to zero by 2013. Exhibit D-3 shows the real rate (under alternative scenarios) for *Asymmetric Price Targeting*, the *Nutter*, and the *Outcome-based* rules. We also use the DSGE model to assess the current stance of monetary policy. We perform a counterfactual exercise by eliminating current and past policy shocks. We find that the DSGE model predicts a counterfactual FFR for the current quarter roughly in line with the policy rate.

4.2 Comparison to Market Expectations

During the intermeeting period the start of the renormalization process implied by FFR futures shifted forward by one quarter, from 2011Q4 to 2012Q1. The implied renormalization process is also quite gradual, with rates below 1% through the end of 2012. Primary dealers' expectation for the path of the fed funds target rate was little changed, with the median dealer expectation for the timing of the first tightening remaining at Q2 2012. On average, respondents assign a probability larger than 40% to the lift-off occurring in 2012Q4 or later. More than 80% of respondents expect the total cumulative size of the asset purchase program to be between 600 and 900bn, with the remainder expecting a larger size, between 900 and 1200bn. Dealers were also asked to estimate the size of the SOMA portfolio at year-end for each of the next 5 years. They expect the size of the year-end SOMA portfolio to peak this year, with a median estimate of $2.7 trillion for 2011, and decline gradually thereafter.

5. Significant Developments

5.1 Economic Developments

Real Activity. *GDP*: Real GDP grew 2.6% at an annual rate in 2010Q3, a mild upward revision of the preliminary estimate of 2.5%. The revision was below consensus expectations, mostly due to the downward revision in the growth of real personal consumption expenditures (PCE), from 2.8% to 2.4%. Offsetting the PCE downward revision was an upward revision in inventory investment, whose growth contribution was revised from 1.3 to 1.6 percentage points.

Production: Total industrial production increased 0.8% in December after rising 0.3% in November. Manufacturing production rose 0.4% in December and 3.3% (annualized) in the fourth quarter as a whole, a rate of increase more moderate than in the previous two quarters. The overall capacity utilization rate increased from 75.4% in November to 76.0% in December which was the highest reading since August 2008. During the same time period, manufacturing capacity utilization rate rose to 73.2% from 72.9%. Despite considerable rebounds over the past year, both capacity utilization indicators remain well below their 20- and 30-year averages (respectively, just below 80% for overall capacity and a little over 78% for the manufacturing sector).

Construction: The value of construction put in place increased 0.4% in November, a better reading than consensus expectations. Moreover, levels of construction spending in September and October were revised upward, so that the level of construction spending in November was significantly better than expected.

Orders and Shipments: New orders at durable goods manufacturers fell 0.3% in November, a decline concentrated in aircraft orders. Orders excluding transportation increased 2.4%, after rising a revised 0.1% in October. Inventories at durable goods manufacturers increased 0.8%. Shipments of nondefense capital goods excluding aircraft rose 1.1% in November, a figure suggesting that equipment spending growth in Q4 may be more moderate than it was earlier in 2010. Orders for these goods increased 2.6% in November.

ISM: The ISM manufacturing composite index was little changed in December in line with expectations, increasing 0.4 points to 57.0 and suggesting continued expansion in manufacturing activity. The ISM non-manufacturing index rose for the fourth straight month in December, climbing another 2.1 points to 57.1, a new 4.5-year high.

PCE: Personal consumption expenditures rose 0.4% in nominal terms and 0.3% in real terms in November. The related increases in October were revised upward, from 0.4% to 0.7% in nominal terms and from 0.3% to 0.5% in real terms. As a result of higher or upward revised consumption expenditures, the personal saving rate fell to 5.3% in November, and the October rate was revised down to 5.4% from 5.7%.

Inventories: Total business inventories rose 0.2% in November, following an upwardly revised 0.8% increase in October. For the second consecutive month the total business inventory-sales ratio moved lower, falling to 1.25 in November from 1.27 in October.

Home sales/starts: Overall existing home sales (single-family and condos/coops) increased 12.3% in December to 5.28 million units (seasonally adjusted annual rate), far above expectations. Single-family existing home sales rose 11.8% in December to a level of 4.64 million units. The paces of sales for all existing homes and for single-family homes were the highest since May, when sales had been boosted by tax credit. With this latest increase, existing home sales are reasonably close to the levels that prevailed in the late 1990s and early 2000s, prior to the 2003-05 real estate surge. The overall inventory of existing homes listed for sale was 3.56 million units at the end of December and represented a 8.1 month supply. The inventory of single-family homes was equivalent to a 7.8 month supply. Both of these inventories-sales ratios have improved considerably in recent months but remain elevated compared to more typical levels of about 5-6 months. New single-family homes were sold at a 290,000 unit annual rate in November, below the consensus expectation of 300,000 units. To put this number in perspective, in 2005 nearly 1.3 million new single-family homes were sold.

Total housing starts unexpectedly fell 4.3% in December to 529,000 (seasonally-adjusted annual rate) units, following a 3.8% increase in November. Revisions to the levels of housing starts in November and October were quite modest. In contrast, housing permits rose 16.7% to 635,000 (seasonally-adjusted annual rate), well above consensus expectations. The same dichotomy between starts and permits characterizes single-family housing. Single-family starts fell sharply in December, down 9.0% to just 417,000 units. In addition, there was a downward revision to the November level of single-family housing starts by 1.5%. In contrast, single-family permits rose by 5.5% to 440,000 units following a 3.2% increase in November. Severe weather may have played a role in the decline in single-family starts. As a result, the single-family permit series may be a better indicator of underlying conditions in that sector, although at just 440,000 units single-family permits are still well below the average level over the first half of 2010.

Labor: Total nonfarm payroll employment rose 103,000 in December, below the consensus expectation of a gain of 150,000. Employment changes for the preceding two months were revised up by a total of 70,000. Total private payroll employment rose by 113,000, also below expectations; employment in the federal government increased 10,000, while employment in the state and local sector continued to decline. Hours worked by all private sector employees rose a modest 0.1% in December. Average hourly earnings increased 0.1% in December and were up just 1.8% on a year-over-year basis, as wage growth continues to be subdued. The unemployment rate fell to 9.4% in December, reflecting both a sharp drop in the estimated number of unemployed and in the labor force. The labor force participation rate declined from 64.5% to 64.3%, the lowest it has been since 1984. The employment-to-population ratio rose slightly to 58.3%, marginally above its low since 1983.

Prices and Income. *CPI*: The overall CPI increased 0.5% in December, its highest monthly gain since June 2009. The December jump was led by strong increases in energy prices, up 4.6% in December and 7.7% over a year ago. On a 12-month basis the change in the headline index was 1.5%, still well below the inflation rates of 2% or more observed between December 2009 and May 2010. The core CPI rose 0.1% in December, the same as in November. Its 12-month change was 0.8%, creeping up from 0.7% in November and 0.6% in October (this series' record low).

PCE deflator: The PCE price index rose 0.1% in November. Its 12-month change was 1.0%, down from 1.2% in October. The core PCE price index also rose 0.1% in November. Its 12-month change was 0.8%, unchanged from October and the record low for this series since its beginning in 1959. Overall, these data suggest no signs of inversion in the declining trajectory for core inflation since early 2010.

Personal income: Nominal personal income increased 0.3% in November, while disposable income in real terms increased by 0.2%.

Home Prices: The non-seasonally adjusted CoreLogic national home price index, which covers the entire housing market, fell 1.6% in November (seasonally adjusted data are not available yet). The 12-month change in the index was -5.1%, the fourth consecutive month that this change has been negative, and the largest 12-month decline since October 2009. The November level of the index is only 1.2% above the recent trough of March 2009.

Seasonally-adjusted data for October are available for all main home price indices. The Case-Shiller 20 city composite home price index fell 1.0% in October while the decline in September was also revised to -1.0% from the initial estimate of -0.8%. The 12-month change was -0.8%. The seasonally-adjusted FHFA purchase-only national home price index fell 0.7% in October and was down 3.4% on a 12-month change basis, a somewhat smaller decline than the -3.8% of September. The seasonally-adjusted CoreLogic National Home Price Index fell -1.5% in October, the fifth consecutive monthly decline.

Trade. The trade deficit narrowed slightly from a revised $38.4 billion in October to $38.3 billion in November. Both export volumes and import volumes fell by small amounts over the previous month. Export volumes fell 0.6 percent, but were still up 12.2 percent over the year. Nonoil import volumes were 0.7 percent lower than the previous month, resulting in a 13.3 percent increase over the year. Oil volumes were up 3.4 percent this month, following a huge decline in the previous month. These data suggest that the net export contribution to GDP growth will be 2.5 percentage points in 2010 Q4.

Foreign Data Releases. The data released over the intermeeting period were generally encouraging. There was a slowdown in foreign growth in Q3, but most major countries appear to have had similar or better growth in Q4 with substantial momentum entering 2011. Japan is the notable exception as output appears to have dropped in Q4 with the end of fiscal stimulus measures.

Euro area: Manufacturing finally moved up in November after being relatively unchanged since March 2010. This improvement is tied to a pickup in exports in October and November. Euro area business and consumer confidence measures continued to rise through December with the economic sentiment index exceeding its long-run average by 6 percent. At the depth of the downturn, the index was 30 percent below the average. The labor market is showing no signs of tightening with the unemployment rate at 10.1 percent in November, essentially where it has been since November 2009. The consumer price index breached the ECB 2.0 percent limit, rising 2.2 percent over the year in December, up from 1.9 percent in November. The increase was due to energy prices, with core unchanged at 1.1 percent in October. Oil prices at current levels will keep the index above 2.0 percent through at least mid-year.

U.K.: Manufacturing output rose 8 percent (saar) in October and 7 percent in November, while the manufacturing PMI reached a 16-year high in December. The services and construction PMIs, though, fell below the threshold that signals an expansion. CPI inflation jumped to 3.7 percent in December, up from 3.3 percent in November. Inflation was boosted by a sales tax hike and higher energy prices.

Japan: Production was up in November after five consecutive monthly declines. Most of the drop in the second half of the year was due to firms anticipating the end of an aggressive government incentive program for autos. A survey of producers' forecasts suggests that manufacturing production improved again in December and into January. Confidence measures (PMI, Economy Watchers) ticked up in December, although they are still at relatively low levels. Headline consumer price inflation turned positive in November, as prices increased 0.1 percent over the year because of higher energy prices. The index of core prices was down 1.0 percent.

EM Asia: China ended 2010 on a very strong note, powered by domestic demand, to push growth for the year to 9.8 percent (Q4/Q4). Acceleration in new credit to well above the government's annual target was a key driver. Exports also picked up toward year-end. Higher food prices are contributing to mounting inflationary pressures. CPI inflation did back down to 4.6 percent over the year in December, after hitting 5.1 percent in November, lowered by base effects, but sequential price momentum remains strong.

Latin America: Brazil's consumer demand fundamentals including record high employment and confidence remain supportive of growth. Demand-side pressures, alongside a sharp increase in food prices, have boosted inflation to 5.9 percent in December. Consumer demand is also strengthening in Mexico**,** but at a very gradual pace while investment spending remains stagnant. Rising agricultural prices pushed inflation to 4.4 percent in December.

5.2 Financial Markets

Domestic Financial Markets.   Over the intermeeting period, Treasury yields and the expected path of policy rates changed little on net, while equity markets rose modestly. Market-based measures of expected inflation over the next five years increased, whereas expected inflation 5 to 10 years out was essentially unchanged.

Nominal Interest Rates: Treasury yields changed little since the last FOMC meeting, after rising sharply during the fall. The 10-year Treasury yield increased about 10 basis points over the intermeeting period to 3.37% on January 18. The yield on the 2-year note was basically unchanged on net over the intermeeting period, closing at 0.59% on January 18. (Exhibit A-3: Treasury Yields)

Expected Policy Rate Path: The expected path of the fed funds rate inferred from futures markets also changed little since the last FOMC meeting. Market prices are consistent with a target federal funds rate of 0.0-0.25% through 2011. Professional forecasters have revised down their expected policy paths over the medium term to levels closer to those implied by market prices. The median expectation from the Blue Chip Financial Forecasts Survey for the first quarter of 2012 was 0.47% in December, down from 0.55% in November. (Exhibit A-5: Policy Expectations)

Inflation Compensation: Market-based measures of expected inflation over the next five years increased since the last FOMC meeting, whereas expected inflation 5 to 10 years out stayed largely unchanged. The 0-5 year inflation compensation rose 29 basis points to 2.05% on January 18, and is now at the low end of the 2-2.75% range observed in the years before the crisis. Meanwhile, 5-10 year inflation compensation was essentially unchanged over the intermeeting period, at 3.08% on January 18. The 5-10 year measure remains well within the range observed in recent years, suggesting that inflation expectations remain well-anchored. (Exhibit A-4: Real Yields and Implied Inflation)

Equity Markets: Equity markets rose modestly over the intermeeting period with the S&P 500 up about 4%. The S&P 500 has now risen roughly 25% from its summer 2010 lows and is at its highest level since September 2008. Implied equity volatility as measured by the VIX is now at about 16%, down slightly from its level at the beginning of the intermeeting period and near its lowest level since before the financial crisis. (Exhibit A-6: Equity)

Credit Spreads: Credit spreads declined moderately over the intermeeting period. Spreads on A-rated corporates, for example, narrowed 10 basis points to 147 basis points. Spreads on financials also narrowed moderately, with A-rated and BBB-rated spreads coming in 14 and 25 basis points, to 209 basis points and 333 basis points, respectively. (Exhibit A-7: Credit)

Money Markets: Most measures of money market stress were little changed over the intermeeting period. The FX basis implied by euro/dollar swap spreads, which may be indicative of stresses on overseas borrowers of U.S. dollars, has ticked down in recent weeks after peaking in late December. (Exhibit A-9: Money Markets)

Foreign Financial Markets. *Euro Area*: Peripheral yields were mixed over the period, with Spanish and Greek yields falling across the curve, while Irish, Italian, and Portuguese yields rose. Several downgrades by ratings agencies drove price action in late December. Of note, Standard & Poor's placed Belgium on negative watch, citing that country's political impasse as a potential risk insofar as it could hinder fiscal consolidation. Core euro area sovereign yields rose across the curve with the most pronounced moves in the 2-year sector. The January 13 ECB meeting and the shift in tone on inflation were the key drivers of these moves. The euro appreciated about 0.5 percent against the U.S. dollar over the intermeeting period, while euro area equity indices increased slightly.

Japan: Expectations that the Bank of Japan would maintain exceptionally low policy rates kept short-term rates relatively anchored, causing investors to focus on the longer-end of the yield curve. Low volumes and thin liquidity conditions associated with light holiday trading prompted some volatility in long-term interest rates. Nonetheless, long-term Japanese government bond yields were little changed since the December FOMC meeting. Over the same period, the Japanese yen appreciated approximately 2 percent against the U.S. dollar – in line with a narrowing in the corresponding interest rate differentials. The exchange rate is slightly below its pre-intervention level of ¥83 per dollar.

Emerging Asia: The Chinese yuan appreciated 1 percent against the dollar over the intermeeting period in line with gains in other EM Asian currencies. Chinese locally traded shares fell by 6 percent on tightening measures even as Hong Kong-traded H-shares rose a bit. Equity performance in the rest of the region was mixed, with a 5 percent gain in Korea and declines of 5 percent in India and Indonesia due to inflation concerns. These concerns caused local yields in EM Asia to spike, with five-year rates up by 52 basis points.

Latin America: Latin American currencies appreciated by 1 percent against the dollar, led by gains in the Colombian and Mexican pesos. Of note, the Chilean peso weakened by 4 percent after the authorities announced a $12 billion reserve purchase program. Brazil announced new measures to contain appreciation pressures, including reserve requirement hikes on banks' short dollar positions and intervention in the forward market. Latin American shares gained 2 percent over the intermeeting period.

5.3 Global Economic Policy

Euro Area: The ECB kept the policy rate at 1.0 percent at its January meeting. There were no major announcements about the Bank's financing operations which will allow for full allotment through April 2011. Trichet's comments at the press conference after the meeting seemed to hint at a shift in focus from the crisis in peripheral countries back to inflation. Trichet noted "evidence of short-term upward pressure on overall inflation, mainly owing to energy prices," and said that "very close monitoring is warranted." Market participants noted that Trichet's comments suggested that the timing of rate hikes could move forward, though only one prominent forecaster changed its call. Following a jump in rate expectations and an appreciation of the euro, ECB officials said there was no "need for an interest rate change in the foreseeable future," with inflation risks "more or less balanced."

After purchasing smaller amounts of peripheral sovereign debt in late December, the pace of ECB purchases increased in early January with the ECB buying € 2.3 billion in the week ending January 11. The cumulative amount of peripheral debt purchased now totals €75.9 billion.

Japan: The Bank of Japan left its overnight call rate unchanged at "around 0.0 to 0.1 percent" at its December monetary policy meeting. Additionally, the Bank announced its decision to extend the temporary U.S. dollar swap agreement with the Federal Reserve and continue U.S. dollar funds supplying operations through August 1, 2011. Since the announcement of its Asset Purchase Program in October, the Bank has purchased assets of ¥102 billion in corporate bonds, ¥21 billion in exchange-traded funds (ETFs), and ¥2 billion in Japanese real estate investment trusts (J-REITs). While the corporate bond purchases amount to 20 percent of the total committed to by the Bank, those for ETFs and J-REITs account for less than 5 percent of the pledged amount. Since the program announcement in October, option-adjusted corporate bond spreads in Japan have narrowed as much as 13 basis points for investment grade paper. Meanwhile, the TSE REIT index increased almost 19 percent over the same period, while the TOPIX index rose approximately 14 percent.

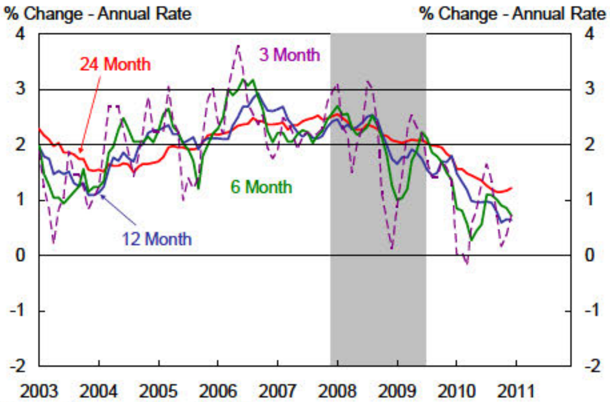
EM Asia: The pace of monetary tightening in EM Asia has picked up reflecting growing official concern with the inflation outlook. Authorities in China hiked policy rates by 25 basis points for the second time in the current cycle and also raised bank reserve requirements by 50 basis points following three similar hikes in the November-December period. Further tightening moves, including stricter administrative measures, are in store given strong credit growth. Authorities in Korea and Thailand both raised rates by 25 basis points last week, the third time in the current cycle for Korea and the fourth time for Thailand. Authorities in India are widely expected to increase rates by 25 basis points later this month.

Latin America: In Mexico, analysts expect the central bank to hold rates steady until January 2012, unchanged from the prior outlook. In Brazil, the central bank resumed its tightening cycle with a 50 basis points increase in its policy rate on January 20. Analysts look for 100 basis points in additional hikes in 2011. The current cycle may be accompanied by new macroprudential measures, following the central bank's December announcement of higher capital requirements aimed at auto loans. In the first weeks of 2011, the central bank imposed a 60 percent reserve requirement on banks' short dollar positions in the foreign exchange spot market and re-initiated intervention in the currency derivatives market. Both measures are aimed at containing currency appreciation pressures. In Argentina, monetary policy continues to be very accommodative, with the authorities overshooting one of the 2010 monetary targets after revising the target upward in Q3 of last year.

A. Significant Developments

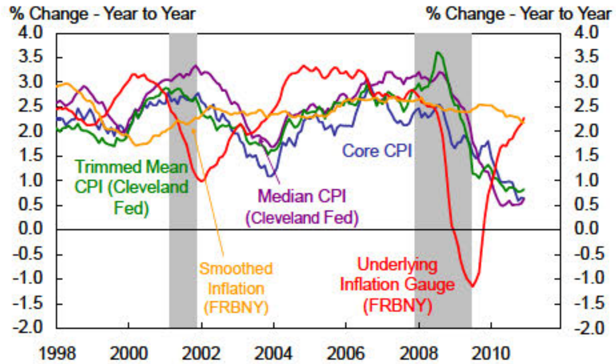
Exhibit A-1:
Measures of Trend Inflation

Core CPI Inflation over Various Horizons



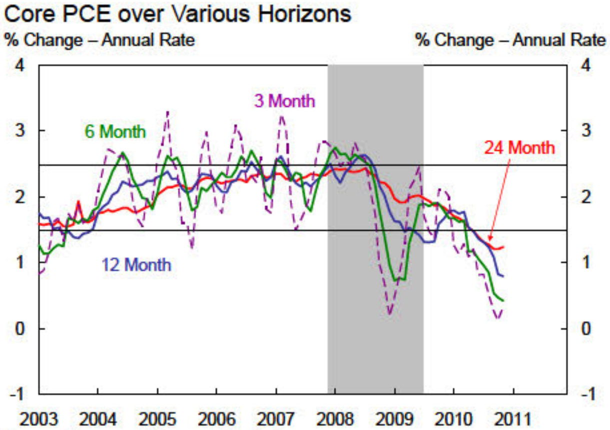
Source: Bureau of Labor Statistics

Alternative Measures of CPI Inflation



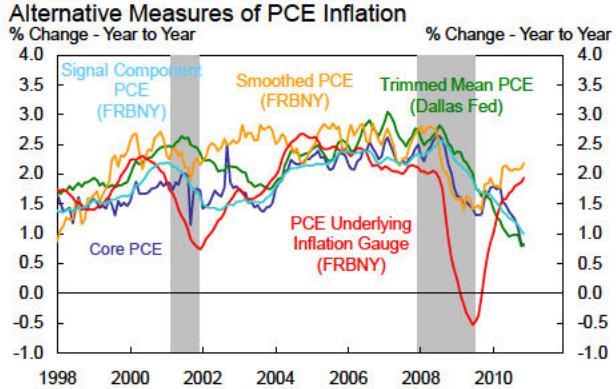
Source: Bureau of Labor Statistics, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Core PCE over Various Horizons



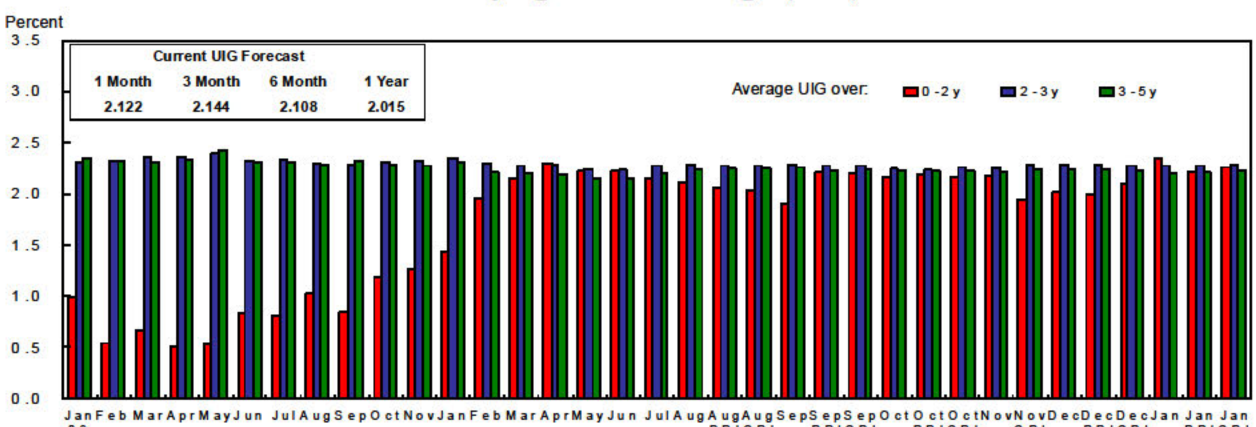
Source: Bureau of Economic Analysis

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)

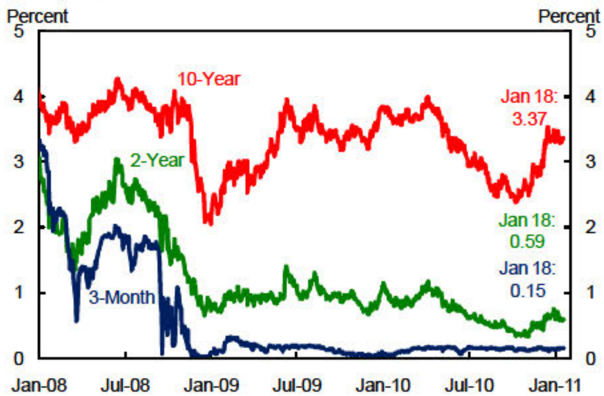


Source: MMS Function (FRBNY) and Swiss National Bank

A. Significant Developments

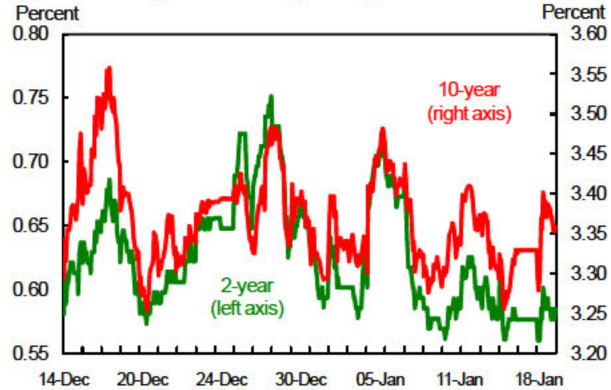
Exhibit A-3:
Treasury Yields

Short- and Long-Term Rates



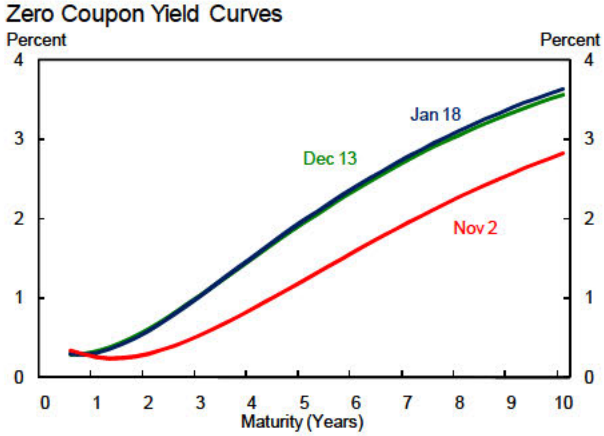
Source: Bloomberg
Note: Yields of on-the-run securities.

Short- and Long-Term Rates (Intraday)



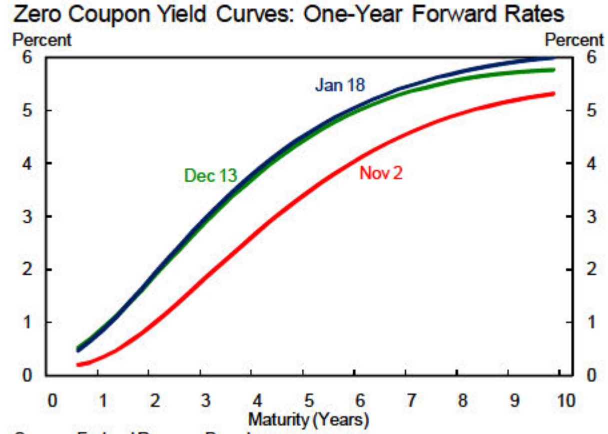
Source: Bloomberg
Note: On-the-run securities, 8:00 am to 4:00 pm.

Zero Coupon Yield Curves



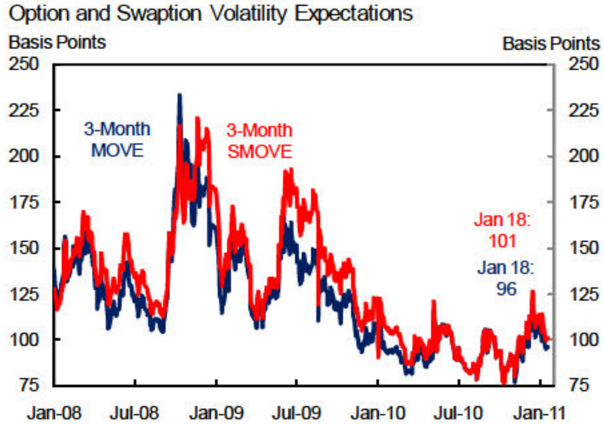
Source: Federal Reserve Board

Zero Coupon Yield Curves: One-Year Forward Rates



Source: Federal Reserve Board

Option and Swaption Volatility Expectations

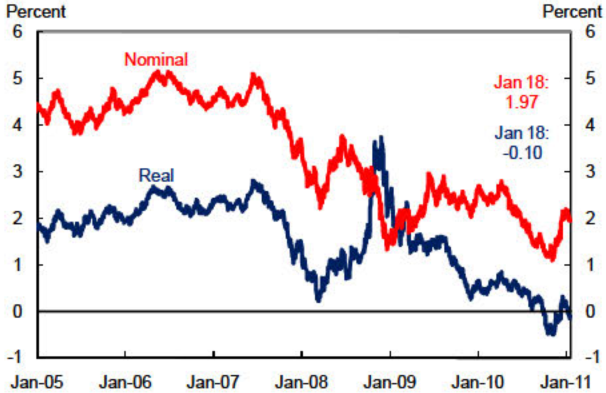


Source: Federal Reserve Board, Barclays, and FRBNY

A. Significant Developments

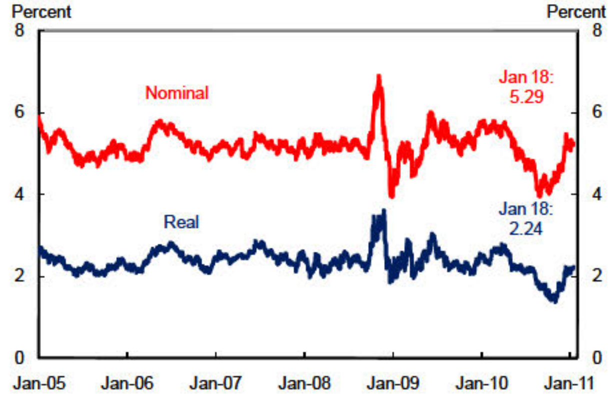
Exhibit A-4:
Real Yields and Implied Inflation

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

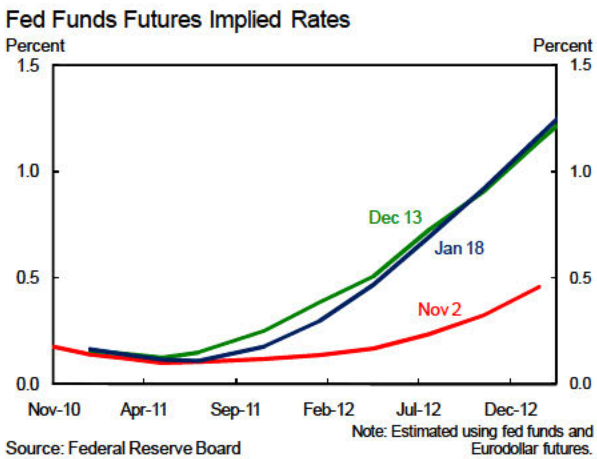
Note: On-the-run securities, 8:00 am to 4:00 pm.

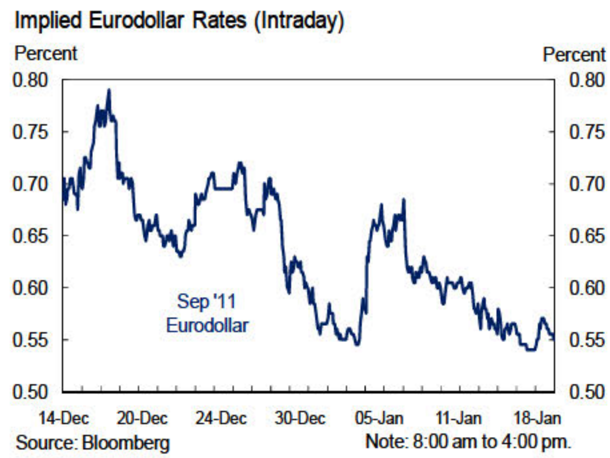
Implied Inflation from Inflation Swaps: 0-5, 5-10 Year Horizon

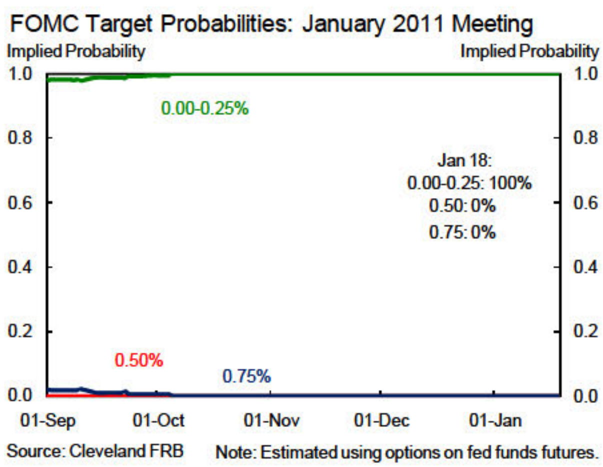
Source: Barclays

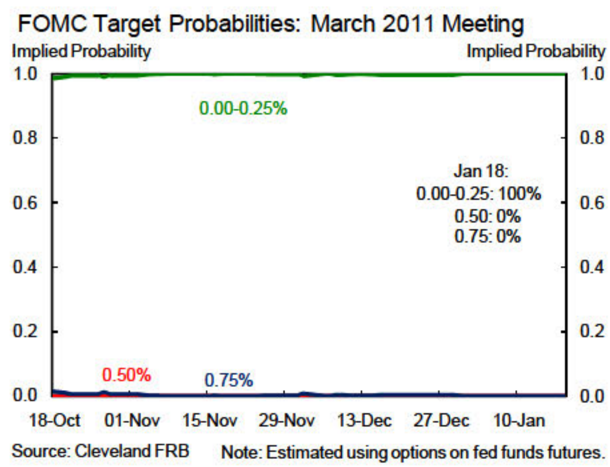
A. Significant Developments

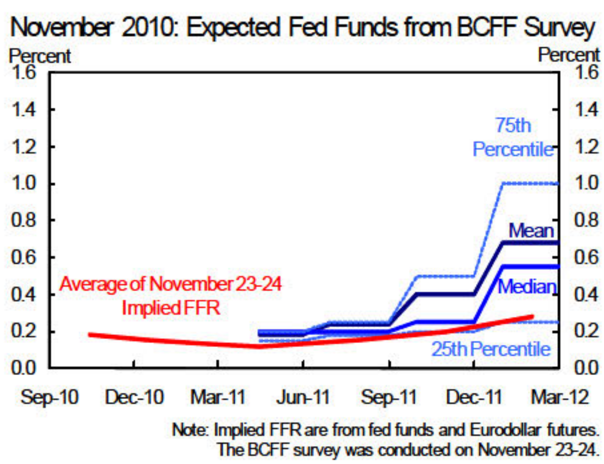
Exhibit A-5:
Policy Expectations

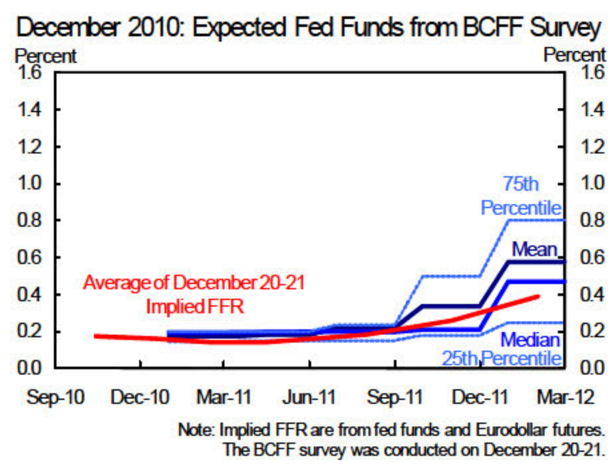








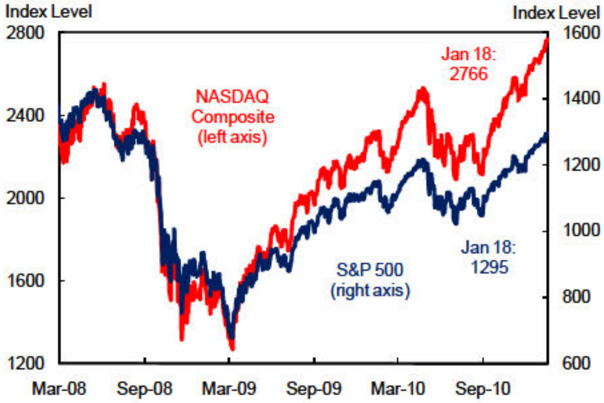




A. Significant Developments

Exhibit A-6:
Equity

Equity Index Levels

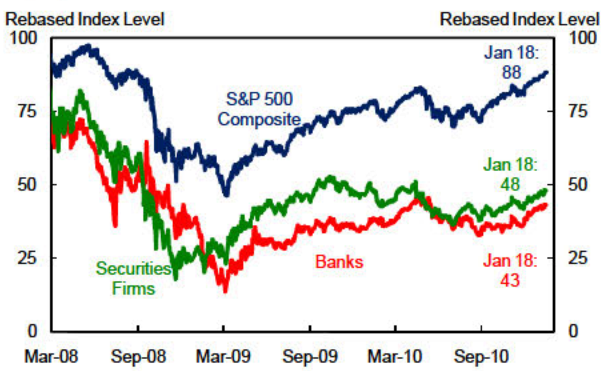


Source: Datastream

S&P 500 Indices (Intraday)

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

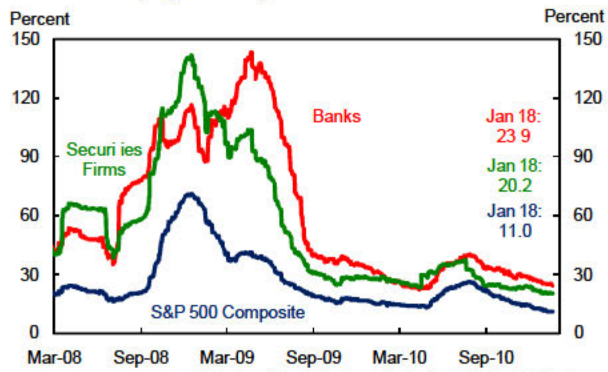
Equity Performance



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: Datastream

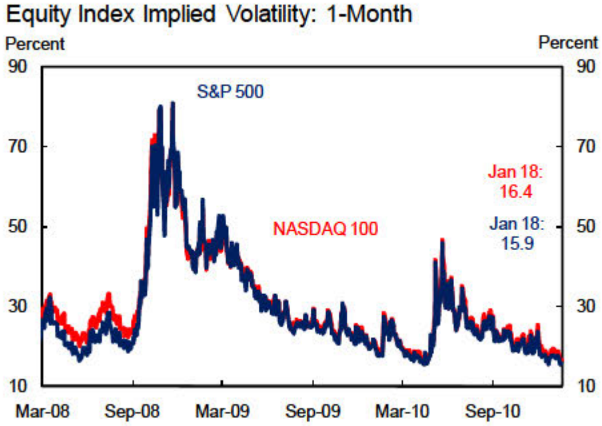
Historical Equity Volatility



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.

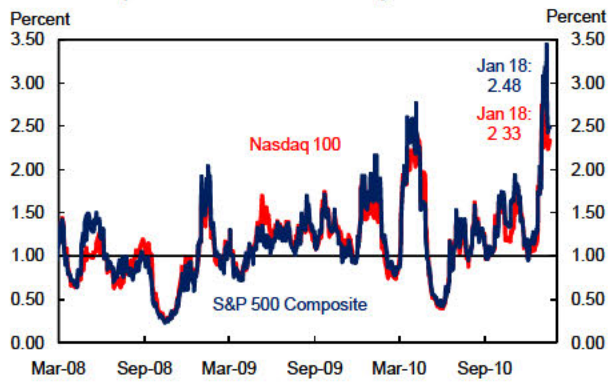
Source: Datastream

Equity Index Implied Volatility: 1-Month



Source: Datastream

Ratio of Implied to Realized Volatility



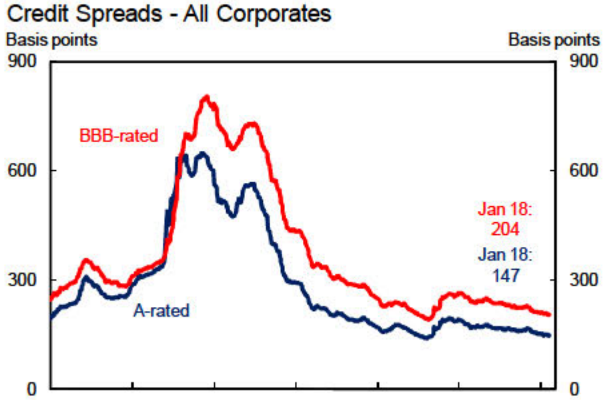
Source: Datastream

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

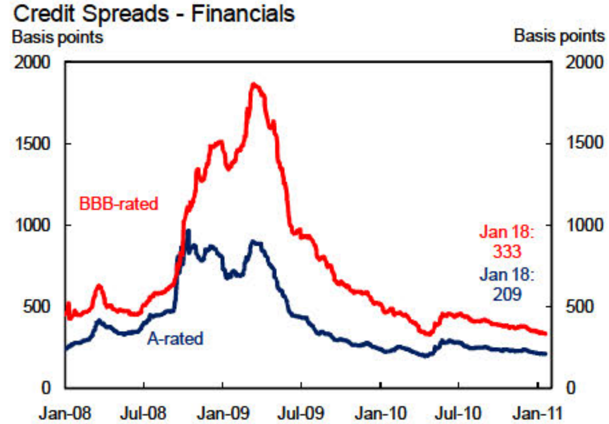
Credit Spreads - All Corporates



Source: Merrill Lynch

Note: Option-adjusted spreads.

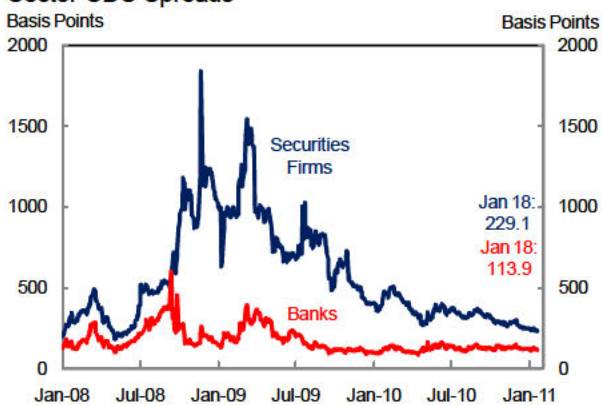
Credit Spreads - Financials



Source: Merrill Lynch

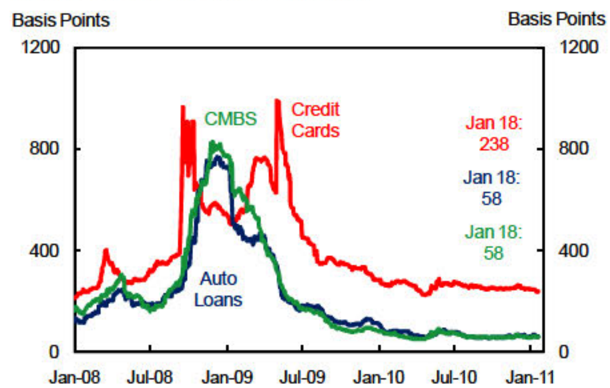
Note: Op ion-adjusted spreads.

Sector CDS Spreads



Source: CMA

AAA-Rated ABS/CMBS Spreads



Source: Merrill Lynch

Note: Option-adjusted spreads.

Mortgage Market Rates

Source: Bloomberg

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

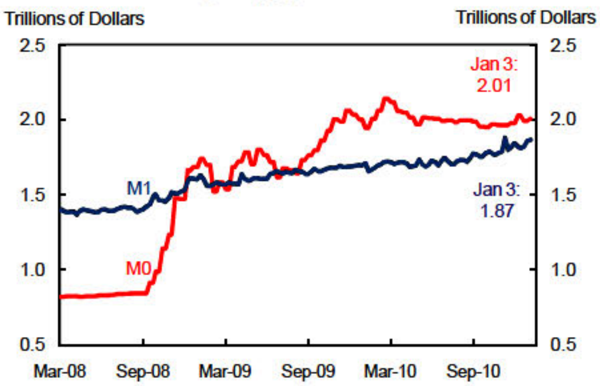
5-Year Agency Debt Spreads

Source: Bloomberg

A. Significant Developments

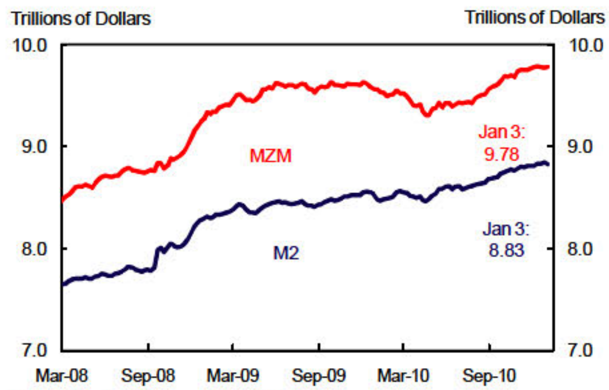
Exhibit A-8:
Money and Banking

Measures of Money Supply: M0, M1



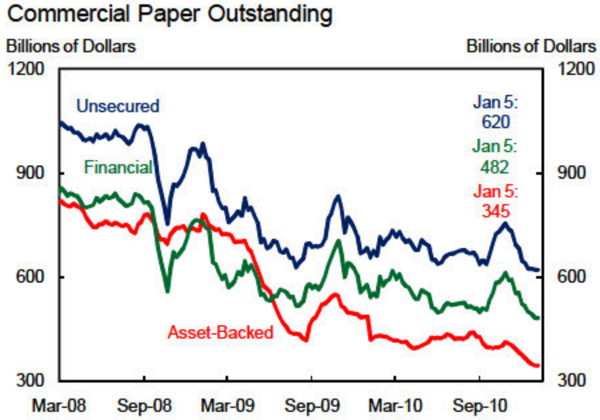
Source: Federal Reserve Board, Haver

Measures of Money Supply: M2, MZM



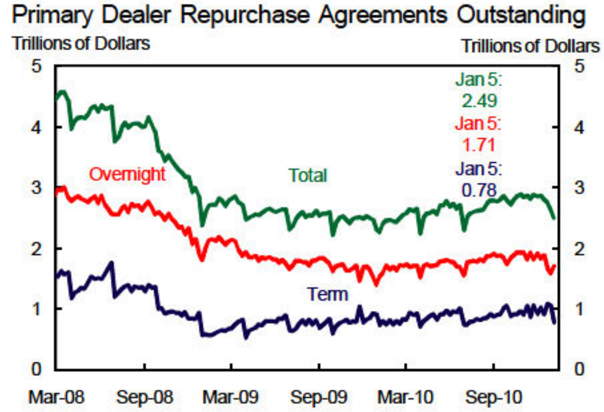
Source: Federal Reserve Board, Haver

Commercial Paper Outstanding



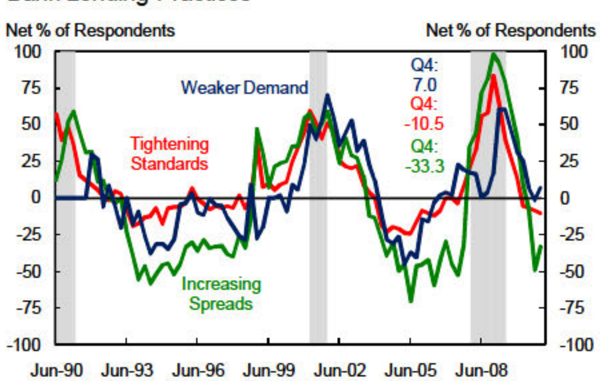
Source: Federal Reserve Board

Primary Dealer Repurchase Agreements Outstanding



Source: Federal Reserve Board

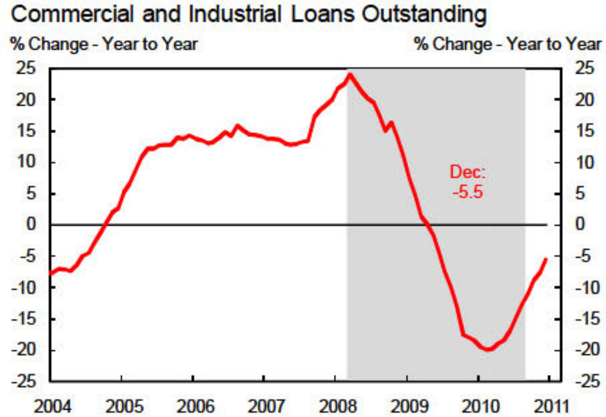
Bank Lending Practices



Source: Federal Reserve Board

Note: Data cover C&I loans to large- and medium-sized firms.

Commercial and Industrial Loans Outstanding

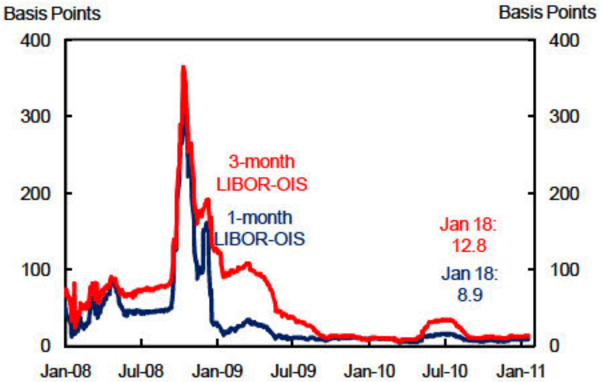


Source: Federal Reserve Board

A. Significant Developments

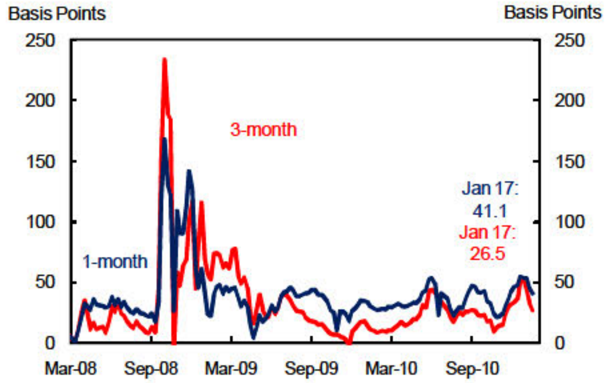
Exhibit A-9:
Money Markets

Libor to OIS



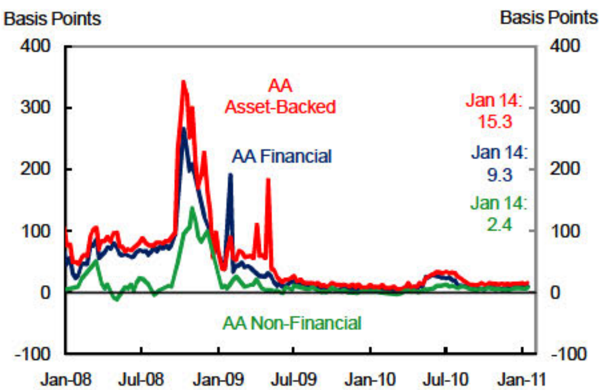
Source: Federal Reserve Board, Bloomberg

Euro-Dollar Swap Implied Basis Spreads



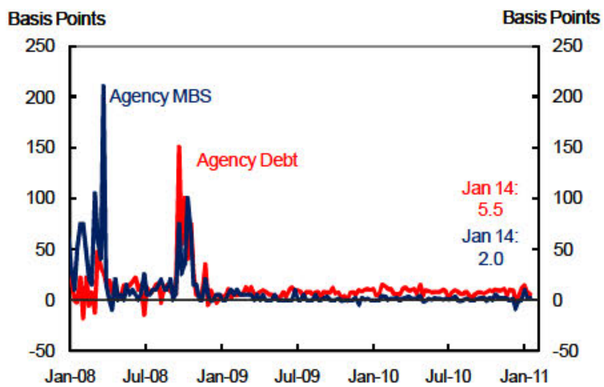
Source: Reuters, Tullett

3-Month CP Rates over OIS



Source: Federal Reserve Board, Haver, Bloomberg

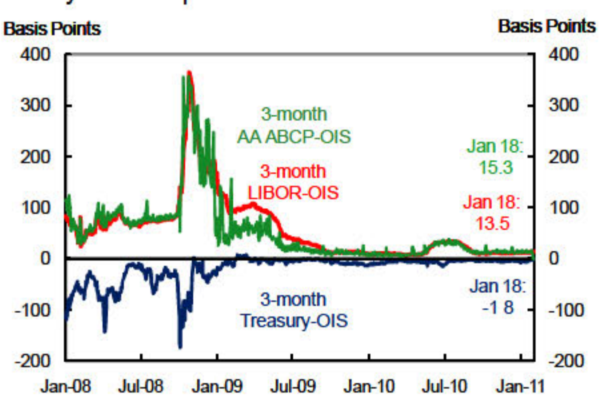
Overnight Financing Spreads



Source: Bloomberg

Note: Spreads are between overnight agency debt and MBS and Treasury general collateral repo rates.

Money Market Spreads



Source: Federal Reserve Board, Bloomberg

A. Significant Developments

Exhibit A-10:
Estimates of Term Premia in Treasury Yields

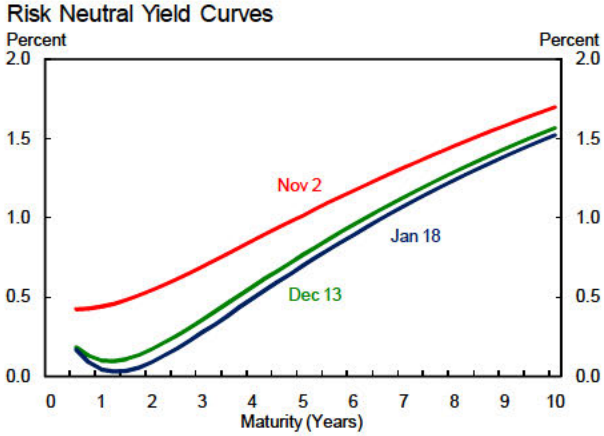
10-Year Treasury and Term Premia

Source: FRBNY calculations, Federal Reserve Board

10-Year Treasury and Term Premia

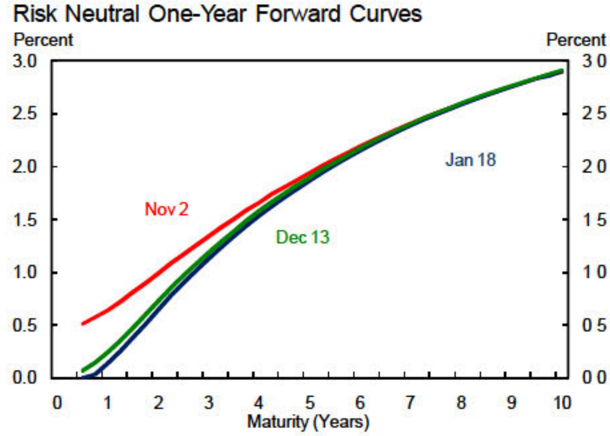
Source: FRBNY calculations, Federal Reserve Board

Risk Neutral Yield Curves



Source: FRBNY calculations

Risk Neutral One-Year Forward Curves



Source: FRBNY calculations

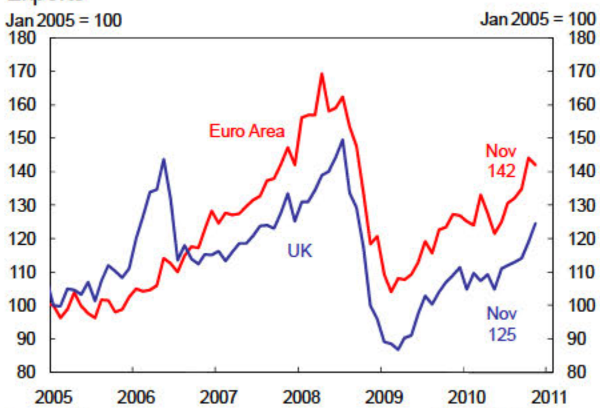
Term Premium for 10-Year Treasury and 6-Month MOVE Index

Source: FRBNY calculations, Haver, Merrill Lynch

A. Significant Developments

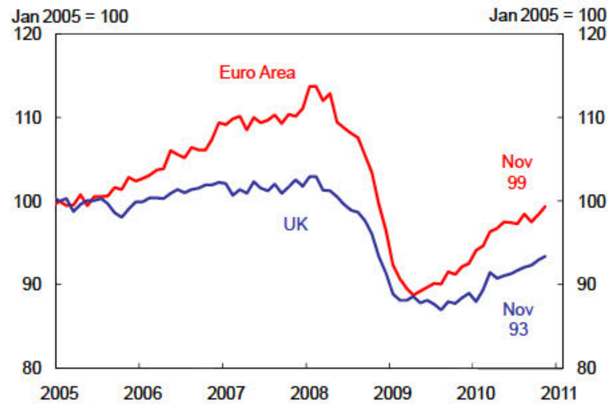
Exhibit A-11: Exports and Industrial Production

Exports



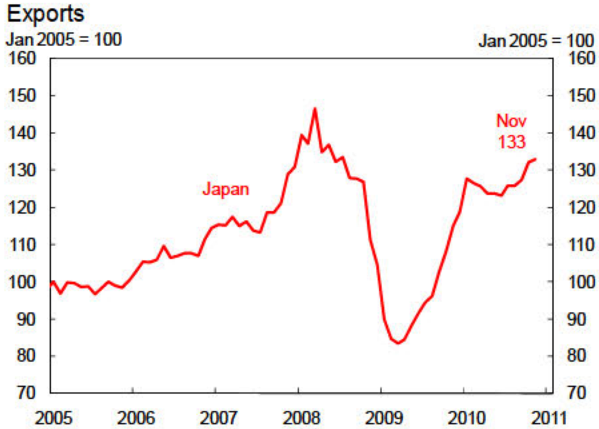
Source: Haver Note: In Dollar Terms

Industrial Production



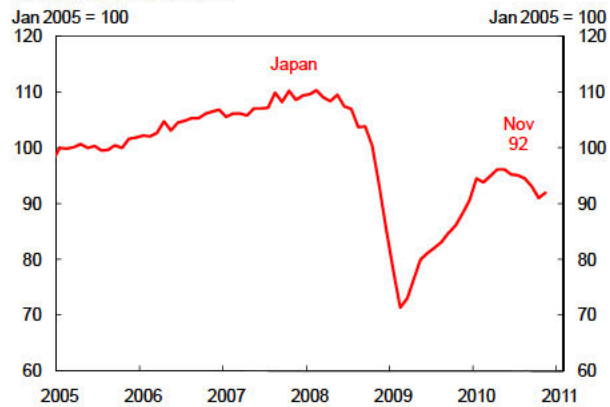
Source: Haver

Exports



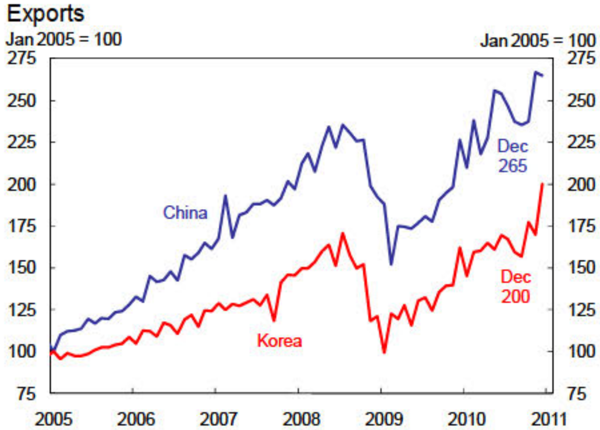
Source: Haver Note: In Dollar Terms

Industrial Production



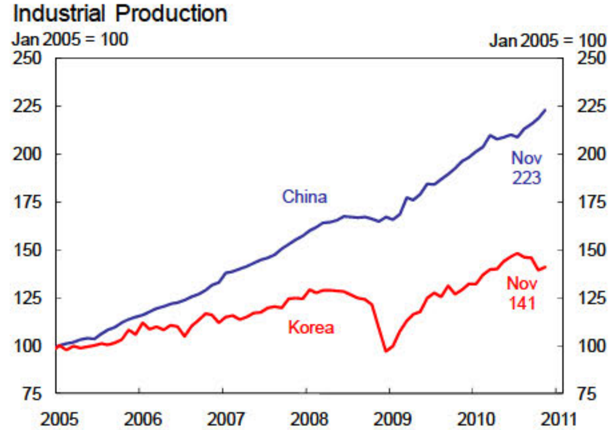
Source: Haver

Exports



Source: Haver Note: In Dollar Terms

Industrial Production

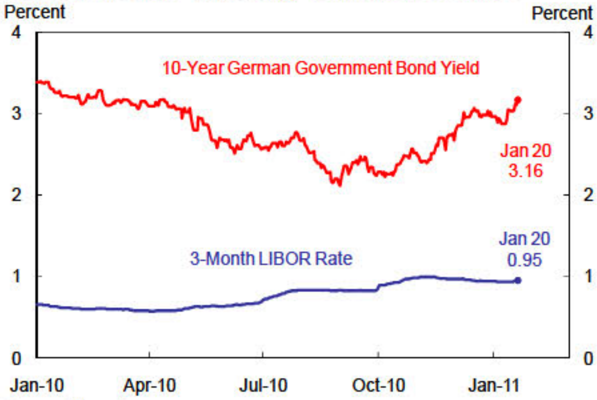


Source: Haver

A. Significant Developments

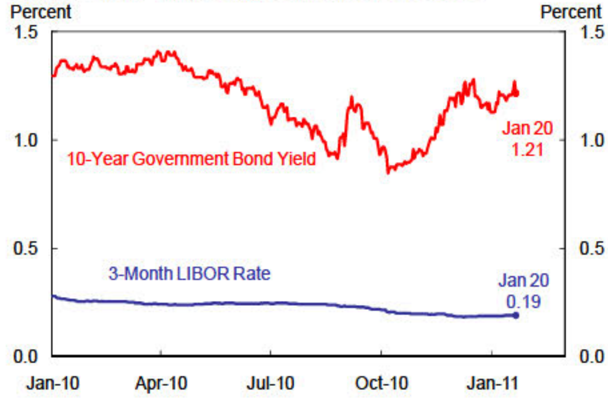
Exhibit A-12:
Global Interest Rates and Equity Markets

Euro Area Short- and Long-Term Interest Rates



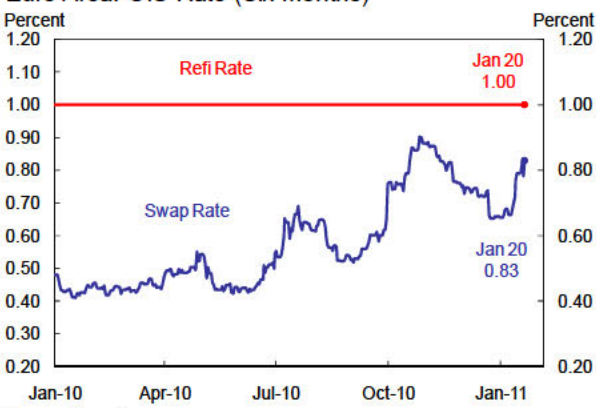
Source: Bloomberg

Japan Short- and Long-Term Interest Rates



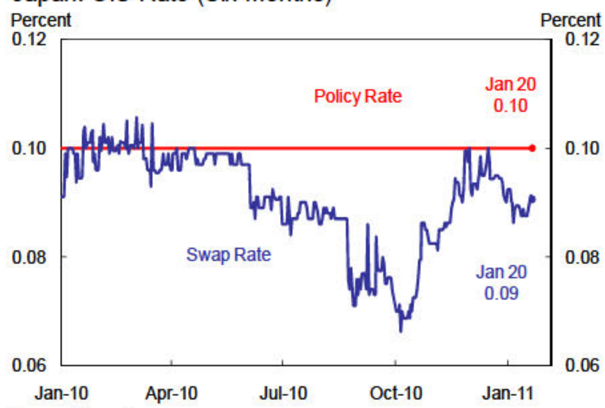
Source: Bloomberg

Euro Area: OIS Rate (Six Months)



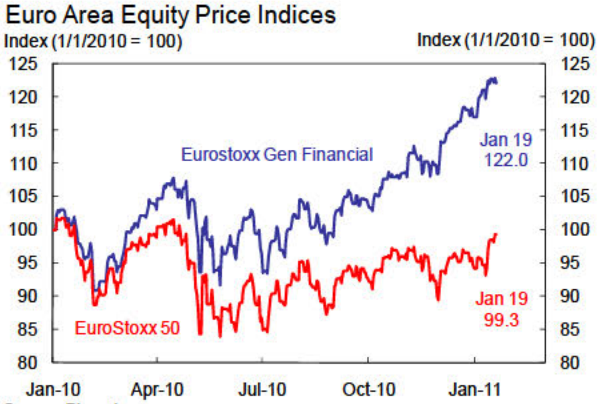
Source: Bloomberg

Japan: OIS Rate (Six Months)



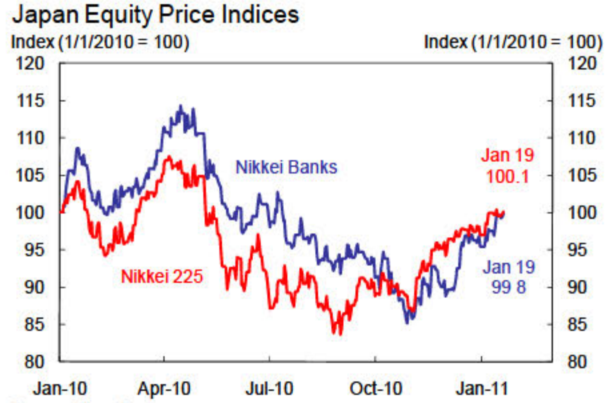
Source: Bloomberg

Euro Area Equity Price Indices



Source: Bloomberg

Japan Equity Price Indices



Source: Bloomberg

A. Significant Developments

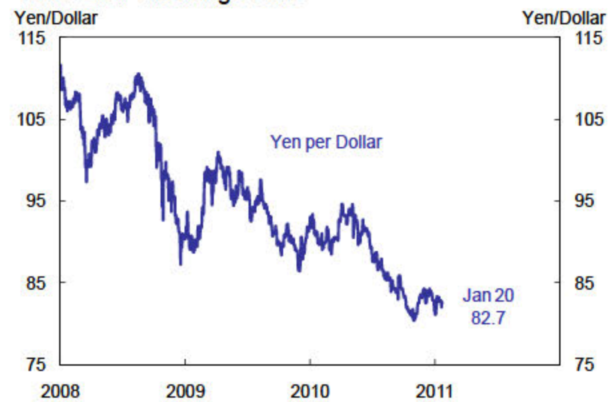
Exhibit A-13:
Exchange Rates

Dollar-Euro Exchange Rate

Source: Bloomberg

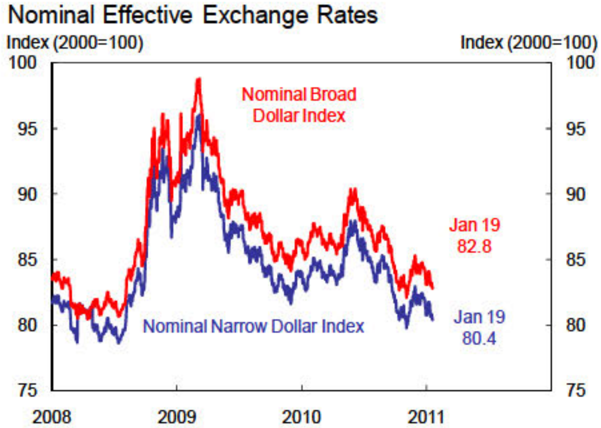
Note: Exchange rate scale is inverted.

Yen-Dollar Exchange Rate



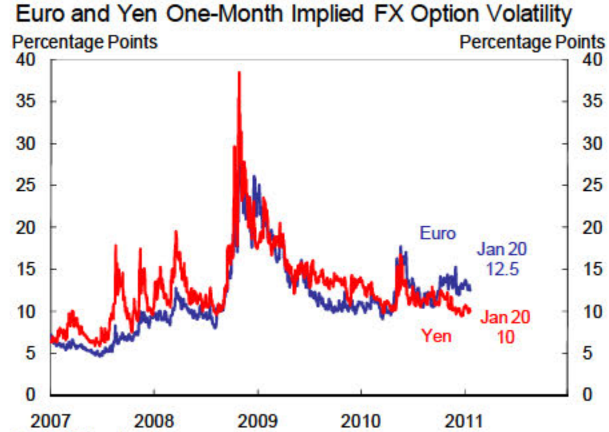
Source: Bloomberg

Nominal Effective Exchange Rates



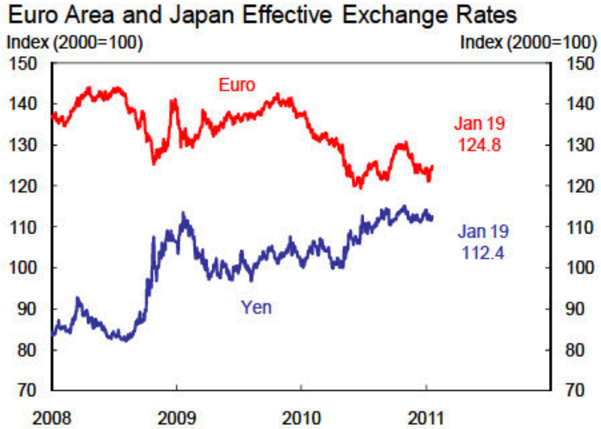
Source: Bloomberg and JPMorgan

Euro and Yen One-Month Implied FX Option Volatility



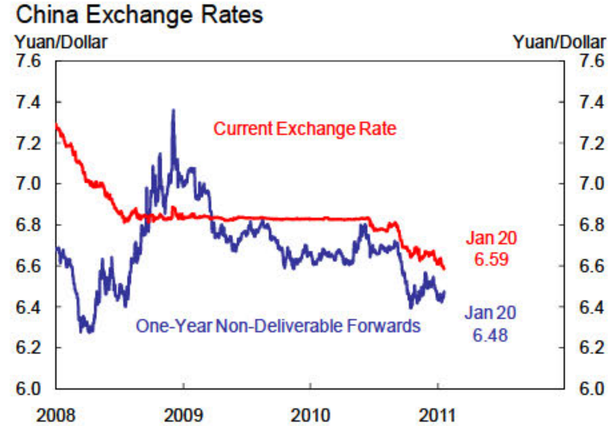
Source: Bloomberg

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

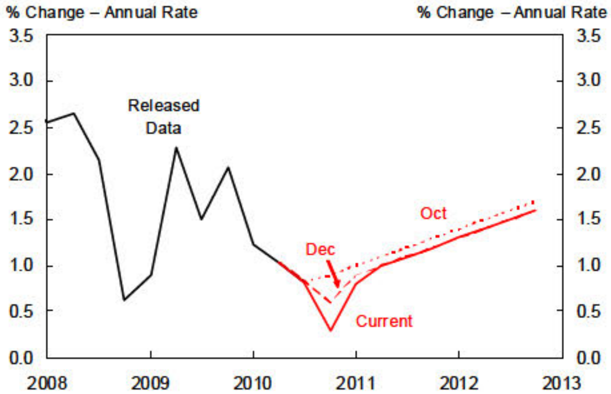
	Core PCE Inflation			Real GDP Growth			Unemployment Rate*			Fed Funds Rate**		
	Oct	Dec	Jan	Oct	Dec	Jan	Oct	Dec	Jan	Oct	Dec	Jan
2010												
Q1	*1.2*	*1.2*	*1.2*	*3.7*	*3.7*	*3.7*	*9.7*	*9.7*	*9.7*	*0-0.25*	*0-0.25*	*0-0.25*
Q2	1.0	*1.0*	*1.0*	1.7	*1.7*	*1.7*	9.7	*9.7*	*9.6*	*0-0.25*	*0-0.25*	*0-0.25*
Q3	0.8	0.8	*0.5*	2.0	2.5	*2.6*	9.6	9.6	*9.6*	*0-0.25*	*0-0.25*	*0-0.25*
Q4	0.9	0.6	0.3	1.8	3.2	4.0	9.9	9.7	9.6	0-0.25	0-0.25	*0-0.25*
2011												
Q1	1.0	0.9	0.8	3.6	3.1	3.6	9.4	9.4	9.3	0-0.25	0-0.25	0-0.25
Q2	1.1	1.0	1.0	3.6	3.7	3.6	9.0	9.1	9.1	0-0.25	0-0.25	0-0.25
Q3	1.2	1.1	1.1	3.3	3.2	3.1	8.6	9.0	8.9	0-0.25	0-0.25	0-0.25
Q4	1.3	1.2	1.2	5.5	6.0	5.9	8.3	8.3	8.6	0-0.25	0-0.25	0-0.25
2012												
Q1	1.4	1.3	1.3	4.9	4.4	4.1	7.6	7.7	8.3	0-0.25	0-0.25	0-0.25
Q2	1.5	1.4	1.4	3.8	3.6	3.5	7.4	7.4	8.1	0-0.25	0-0.25	0-0.25
Q3	1.6	1.5	1.5	3.6	3.2	3.0	7.2	7.3	7.7	0.25	0.25	0.25
Q4	1.7	1.6	1.6	5.8	5.3	5.6	7.0	6.8	7.4	0.5	0.5	0.5
Q4/Q4												
2009	*1.7*	*1.7*	*1.7*	*0.2*	*0.2*	*0.2*	*3.1*	*3.1*	*3.1*	*0.0*	*0.0*	*0.0*
2010	1.0	0.9	0.8	2.3	2.8	3.0	-0.1	-0.3	*-0.3*	0.0	0.0	*0.0*
2011	1.2	1.0	1.0	4.0	4.0	4.0	-1.6	-1.4	-1.0	0.0	0.0	0.0
2012	1.5	1.5	1.5	4.5	4.1	4.1	-1.3	-1.5	-1.2	0.5	0.5	0.5

Note: Columns reflect the forecast dates. Numbers in gray are from previous Blackbooks, 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.

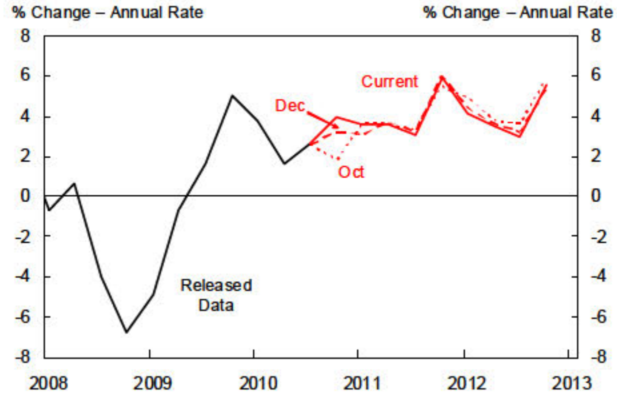
B. FRBNY Forecast Details

Exhibit B-2: Evolution of Projected Quarterly Paths of Key Indicators and Forecast Assumptions

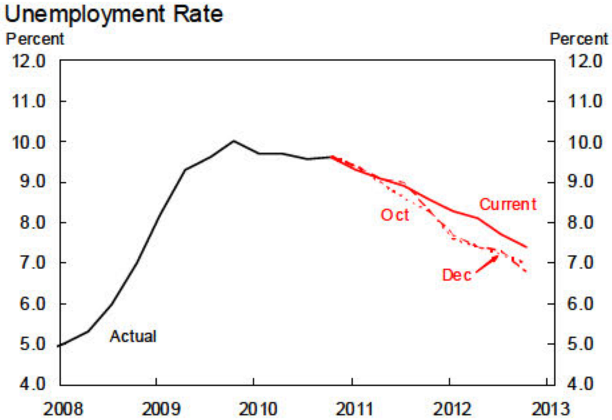
Core PCE Inflation



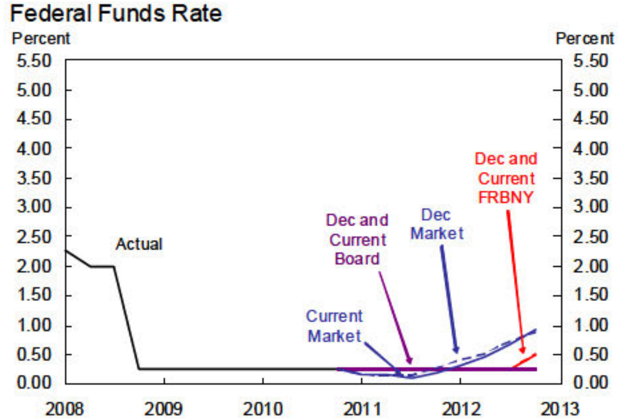
Real GDP Growth



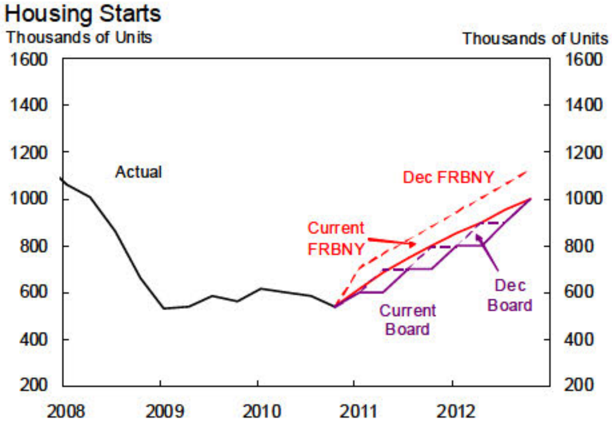
Unemployment Rate



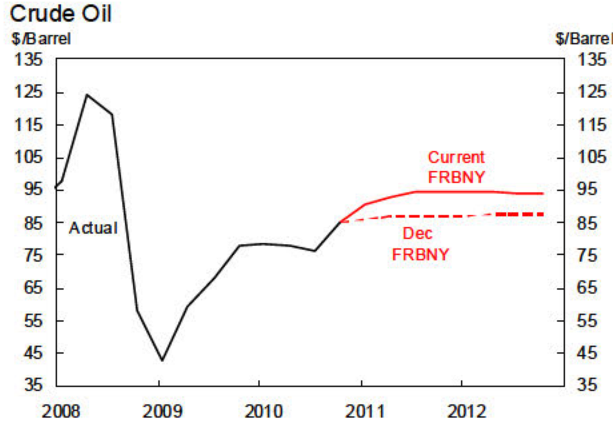
Federal Funds Rate



Housing Starts



Crude Oil



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

B. FRBNY Forecast Details

Exhibit B-3: Near-Term Projections

	Quarterly Growth Rates (AR)		Quarterly Growth Contributions (AR)	
	2010Q4	2011Q1	2010Q4	2011Q1
OUTPUT				
Real GDP	4.0	3.6	4.0	3.6
	(3.2)	(3.1)	(3.2)	(3.1)
Final Sales to Domestic Purchasers	3.4	2.9	3.4	3.0
	(2.0)	(2.8)	(2.1)	(2.9)
Consumption	4.0	2.7	2.8	1.9
	(2.5)	(2.6)	(1.7)	(1.9)
BFI: Equipment and Software	5.0	12.0	0.4	0.8
	(8.0)	(10.0)	(0.6)	(0.7)
BFI: Nonresidential Structures	-3.0	0.0	-0.1	0.0
	(-3.0)	(2.0)	(-0.1)	(0.1)
Residential Investment	5.3	5.5	0.1	0.1
	(-5.0)	(2.5)	(-0.1)	(0.1)
Government: Federal	5.0	0.6	0.4	0.1
	(1.0)	(0.6)	(0.1)	(0.1)
Government: State and Local	-1.3	0.6	-0.2	0.1
	(-0.9)	(0.6)	(-0.1)	(0.1)
Inventory Investment	--	--	-2.0	-0.2
	--	--	(-0.9)	(-0.9)
Net Exports	--	--	2.5	0.8
	--	--	(2.0)	(1.1)
INFLATION				
Total PCE Deflator	1.8	2.5		
	(1.7)	(1.3)		
Core PCE Deflator	0.3	0.8		
	(0.6)	(0.9)		
PRODUCTIVITY AND LABOR COSTS*				
Output per Hour	2.7	2.4		
	(2.0)	(1.8)		
Compensation per Hour	1.0	1.3		
	(1.0)	(1.3)		
Unit Labor Costs	-1.7	-1.2		
	(-1.0)	(-0.5)		

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

B. FRBNY Forecast Details

Exhibit B-4: Real GDP and Inflation Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2010	2011	2012	2010	2011	2012
OUTPUT						
Real GDP	3.0	4.0	4.1	3.0	4.0	4.1
	(2.8)	(4.0)	(4.1)	(2.8)	(4.0)	(4.1)
Final Sales to Domestic Purchasers	2.9	3.4	3.4	3.0	3.5	3.4
	(2.6)	(3.5)	(3.6)	(2.7)	(3.6)	(3.7)
Consumption	2.6	3.0	3.0	1.9	2.1	2.1
	(2.3)	(3.0)	(3.0)	(1.7)	(2.1)	(2.1)
BFI: Equipment and Software	16.2	13.0	8.0	1.0	0.9	0.8
	(17.3)	(12.0)	(8.0)	(1.1)	(0.9)	(0.8)
BFI: Nonresidential Structures	-6.5	3.0	8.0	-0.2	0.1	0.1
	(-7.0)	(5.0)	(8.0)	(-0.2)	(0.1)	(0.2)
Residential Investment	-4.2	5.9	13.0	-0.1	0.1	0.2
	(-6.6)	(16.0)	(20.0)	(-0.2)	(0.4)	(0.4)
Government: Federal	6.1	1.5	1.6	0.5	0.1	0.1
	(5.1)	(1.5)	(1.6)	(0.4)	(0.1)	(0.1)
Government: State and Local	-1.0	0.6	1.3	-0.1	0.1	0.1
	(-0.8)	(0.6)	(1.3)	(-0.1)	(0.1)	(0.1)
Inventory Investment	--	--	--	0.8	0.2	0.2
	--	--	--	(0.9)	(-0.0)	(0.3)
Net Exports	--	--	--	-0.7	0.4	0.4
	--	--	--	(-0.9)	(0.4)	(0.2)
INFLATION						
Total PCE Deflator	1.2	1.7	1.8			
	(1.2)	(1.4)	(1.8)			
Core PCE Deflator	0.8	1.0	1.5			
	(0.9)	(1.0)	(1.5)			
Total CPI Inflation	1.1	1.6	2.0			
	(1.1)	(1.5)	(1.9)			
Core CPI Inflation	0.6	1.2	1.7			
	(0.6)	(1.3)	(1.7)			
GDP Deflator	1.4	1.4	1.7			
	(1.4)	(1.3)	(1.7)			

Note: Numbers in parentheses are from the previous Blackbook.

B. FRBNY Forecast Details

Exhibit B-5: Projections of Other Key Economic Variables

	Q4/Q4 Growth Rates		
	2010	2011	2012
INTEREST RATE ASSUMPTIONS			
Federal Funds Rate (End-of-Year)	0-0.25	0-0.25	0.5
	0-0.25	0-0.25	(0.5)
10-Year Treasury Yield (Avg. Q4 Level)	2.8	3.8	4.4
	(2.8)	(3.8)	(4.4)
PRODUCTIVITY AND LABOR COSTS*			
Output	3.9	5.2	5.2
	(3.6)	(5.2)	(5.4)
Hours	2.1	3.1	3.5
	(2.0)	(3.5)	(3.6)
Output per Hour	1.7	2.1	1.8
	(1.6)	(1.7)	(1.7)
Compensation per Hour	1.3	1.4	2.3
	(1.3)	(1.4)	(2.3)
Unit Labor Costs	-0.4	-0.7	0.6
	(-0.3)	(-0.3)	(0.6)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	9.6	8.6	7.4
	(9.7)	(8.3)	(6.8)
Participation Rate (Avg. Q4 Level)	64.4	64.8	65.3
	(64.5)	(64.9)	(65.3)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	82	278	356
	(80)	(344)	(376)
INCOME			
Personal Income	3.7	5.2	5.5
	(4.1)	(5.1)	(5.7)
Real Disposable Personal Income	2.2	3.8	2.8
	(2.5)	(4.0)	(2.9)
Personal Saving Rate	5.3	6.1	5.8
	(5.8)	(6.8)	(6.6)
Corporate Profits Before Taxes	17.2	4.6	5.0
	(7.0)	(4.8)	(4.8)

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)		
	2010	2011	2012	2010	2011	2012
OUTPUT						
Real GDP	3.0	4.0	4.1	2.9	3.8	4.4
	(2.8)	(4.0)	(4.1)	(2.7)	(3.7)	(4.4)
GDP Growth Contributions						
Final Sales to Domestic Purchasers	3.0	3.5	3.4	3.0	3.8	3.9
	(2.7)	(3.6)	(3.7)	(2.7)	(2.7)	(3.7)
Consumption	1.9	2.1	2.1	1.9	2.5	2.7
	(1.7)	(2.1)	(2.1)	(1.7)	(2.5)	(2.8)
BFI	0.9	1.0	0.9	0.9	1.0	0.8
	(0.9)	(1.0)	(1.0)	(0.9)	(0.8)	(0.7)
Residential Investment	-0.1	0.1	0.2	-0.1	0.2	0.3
	(-0.2)	(0.4)	(0.4)	(-0.2)	(0.2)	(0.3)
Government	0.4	0.2	0.2	0.3	0.1	0.1
	(0.3)	(0.2)	(0.2)	(0.4)	(0.1)	(0.2)
Inventory Investment	0.8	0.2	0.2	0.5	0.0	0.3
	(0.9)	(-0.0)	(0.3)	(0.8)	(-0.1)	(0.4)
Net Exports	-0.7	0.4	0.4	-0.5	0.1	0.2
	(-0.9)	(0.4)	(0.2)	(-1.0)	(0.2)	(0.0)
INFLATION						
Total PCE Deflator	1.2	1.7	1.8	1.2	1.3	1.0
	(1.2)	(1.4)	(1.8)	(1.2)	(1.1)	(0.9)
Core PCE Deflator	0.8	1.0	1.5	0.8	1.0	1.0
	(0.9)	(1.0)	(1.5)	(0.9)	(0.9)	(0.9)
INTREST RATE ASSUMPTION						
Fed Funds Rate (End-of-Year)	0-0.25	0-0.25	0.5	0-0.25	0-0.25	0-0.25
	0-0.25	0-0.25	(0.5)	0-0.25	0-0.25	0-0.25
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	1.7	2.1	1.8	1.7	1.5	1.9
	(1.6)	(1.7)	(1.7)	(1.3)	(1.7)	(2.1)
Compensation per Hour	1.3	1.4	2.3	1.5	1.9	2.3
	(1.3)	(1.4)	(2.3)	(1.6)	(1.9)	(2.1)
Unit Labor Costs	-0.4	-0.7	0.6	-0.2	0.4	0.4
	(-0.3)	(-0.3)	(0.6)	(0.2)	(0.2)	(0.0)
LABOR MARKET						
Unemployment Rate (Avg. Q4 Level)	9.6	8.6	7.4	9.6	8.9	7.8
	(9.7)	(8.3)	(6.8)	(9.7)	(9.0)	(7.9)
Participation Rate (Avg. Q4 Level)	64.4	64.8	65.3	64.5	64.6	64.6
	(64.5)	(64.9)	(65.3)	(64.5)	(64.6)	(64.6)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	82	278	356	83	217	308
	(80)	(344)	(376)	(75)	(225)	(291.7)
SAVING						
Personal Saving Rate (Avg. Q4 Level)	5.3	6.1	5.8	5.4	6.0	5.2
	(5.8)	(6.8)	(6.6)	(5.6)	(6.2)	(5.3)
HOUSING						
Housing Starts (Avg. Q4 Level, Thous.)	580	805	1000	500	700	1000
	(635)	(885)	(1125)	(500)	(800)	(1000)

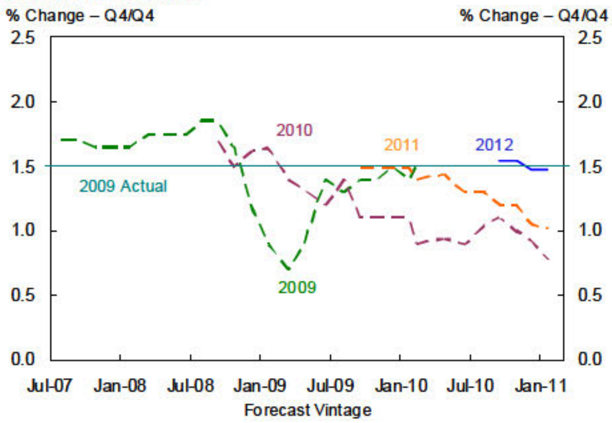
B. FRBNY Forecast Details

Exhibit B-7: Evolution of FRBNY and Board Forecasts since Mid-2007

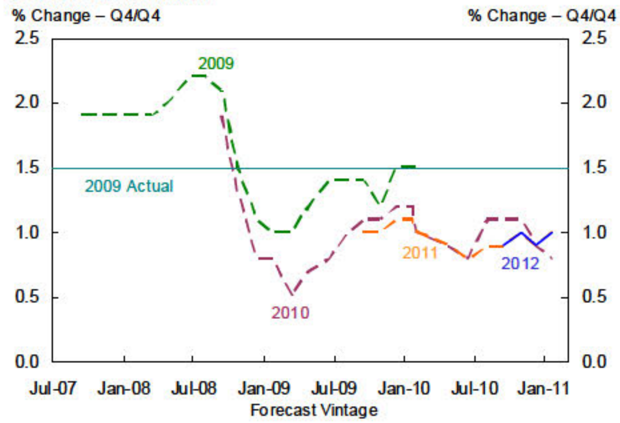
FRBNY

Board

Core PCE Inflation



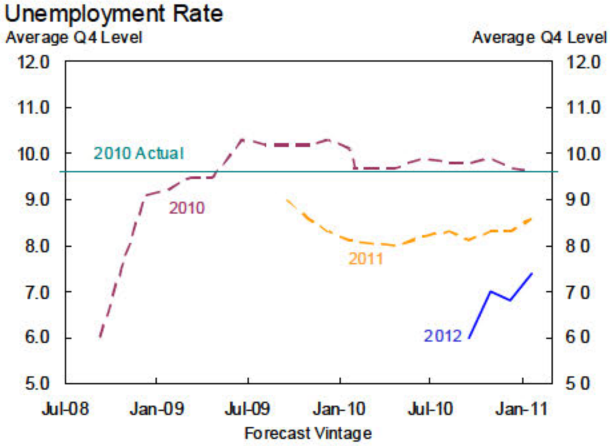
Core PCE Inflation



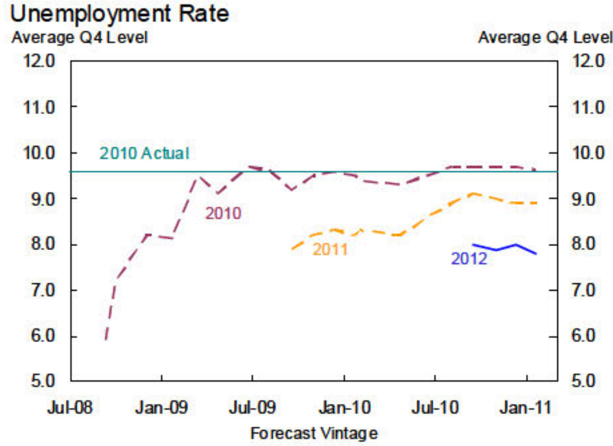
Real GDP Growth

Real GDP Growth

Unemployment Rate



Unemployment Rate



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	2010Q4	2011Q1	2011 Q4/Q4	2012 Q4/Q4
FRBNY	1/20/2011	4.0	3.6	4.0	4.1
		(3.2)	(3.1)	(4.0)	(4.1)
Blue Chip	1/10/2011	3.2	3.2	3.3	3 2
		(2.5)	(2.5)	(2.9)	--
Median SPF	11/15/2010	2.2	2.4	2.8	--
		(2.8)	(2.3)	--	--
Macro Advisers	1/19/2011	2.9	4.0	4.0	3.6
		(2.0)	(2.4)	(3.7)	(4 0)

Core PCE Inflation

	Release Date	2010Q4	2011Q1	2011 Q4/Q4	2012 Q4/Q4
FRBNY	1/20/2011	0.3	0.8	1.0	1.5
		(0.6)	(0.9)	(1.0)	(1.5)
Median SPF	11/15/2010	1.0	1.1	1.2	1.6
		(1.1)	(1.4)	(1.5)	(1.7)
Macro Advisers	12/28/2010	0.4	0.7	0.8	1 0
		(0.6)	(0.7)	(0.7)	(0.8)

CPI Inflation

	Release Date	2010Q4	2011Q1	2011 Q4/Q4	2012 Q4/Q4
FRBNY	1/20/2011	2.1	1.6	1.6	2 0
		(2.3)	(1.6)	(1.5)	(1 9)
Blue Chip	1/10/2011	2.2	2.0	1.8	2 0
		(2.1)	(1.7)	(1.6)	--
Median SPF	11/15/2010	1.9	1.6	1.6	1.9
		(1.6)	(1.8)	(1.8)	(2.1)
Macro Advisers	12/28/2010	2.3	1.9	1.2	1.0
		(2.2)	(1.4)	(0.7)	(0.9)

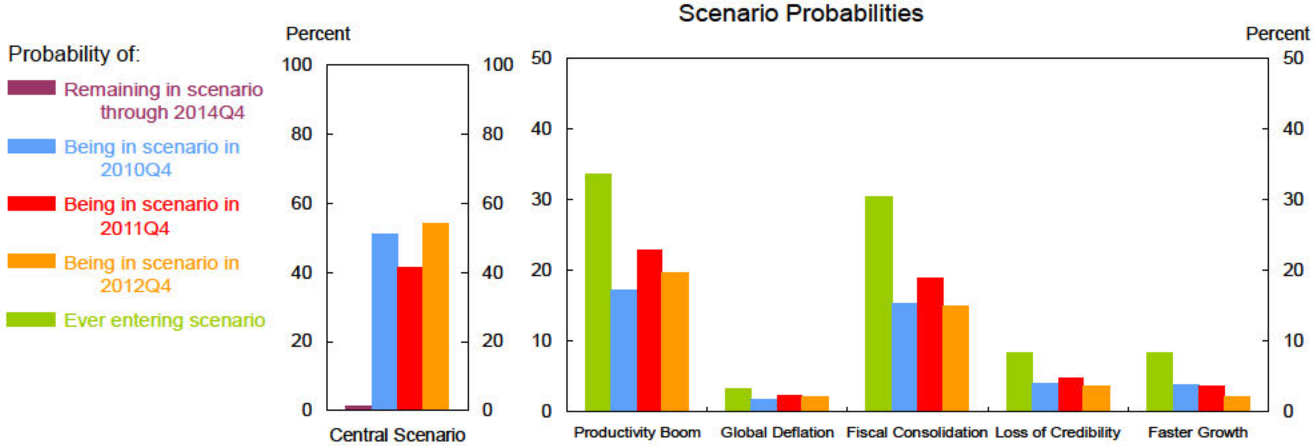
Core CPI Inflation

	Release Date	2010Q4	2011Q1	2011 Q4/Q4	2012 Q4/Q4
FRBNY	1/20/2011	0.5	1.1	1.2	1.7
		(0.4)	(1.1)	(1.3)	(1.7)
Median SPF	11/15/2010	1.0	1.1	1.3	1.7
		(1.2)	(1.2)	(1.5)	(1.9)
Macro Advisers	12/28/2010	0.4	0.7	0.9	1.1
		(0.4)	(0.7)	(0.7)	(0.9)

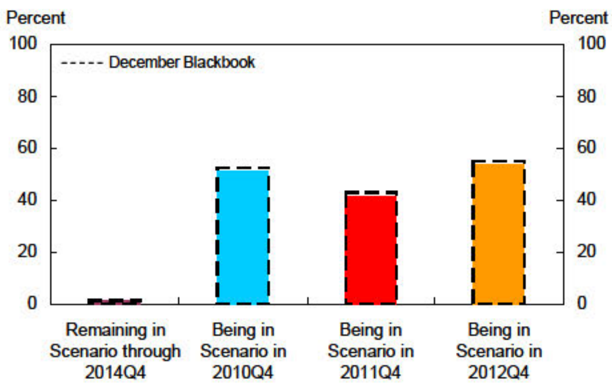
C. FRBNY Forecast Distributions

Exhibit C-1: Risks

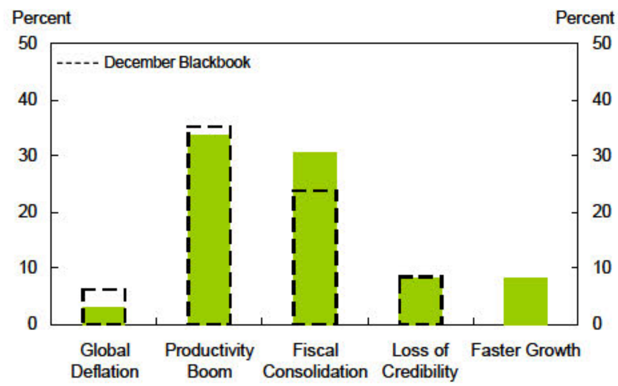
Scenario Probabilities



Change in Central Scenario Probabilities



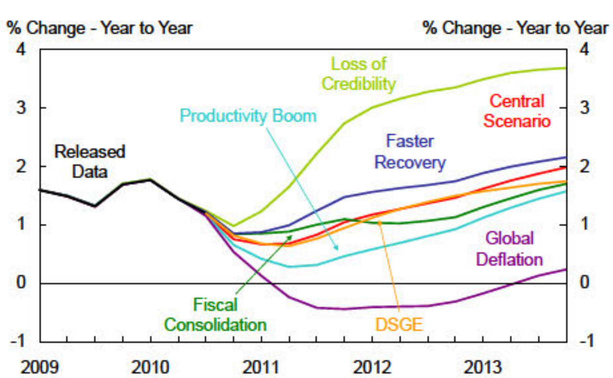
Change in Alternative Scenario Probabilities*



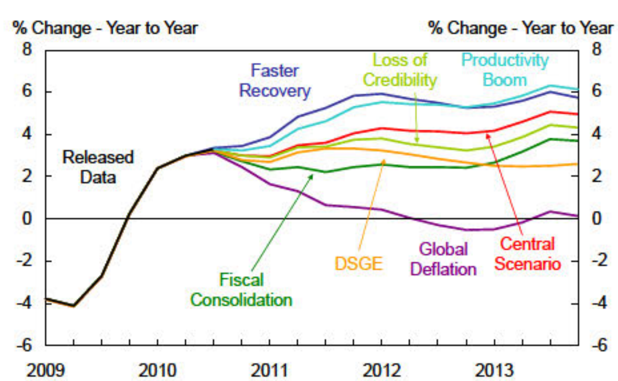
*Probability of ever reaching scenario

Exhibit C-2: Projections under Alternative Scenarios

Core PCE Inflation under Alternative Scenarios



Real GDP Growth under Alternative Scenarios

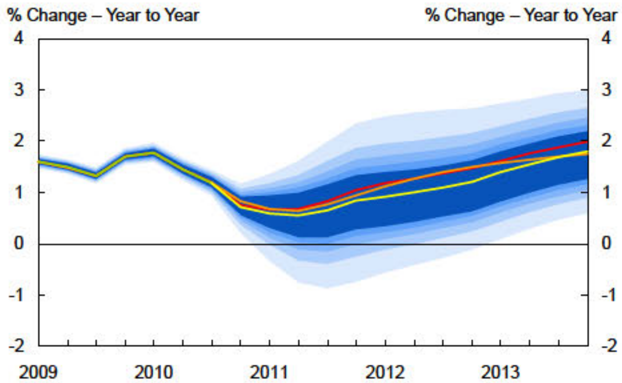


Source: MMS Function (FRBNY)

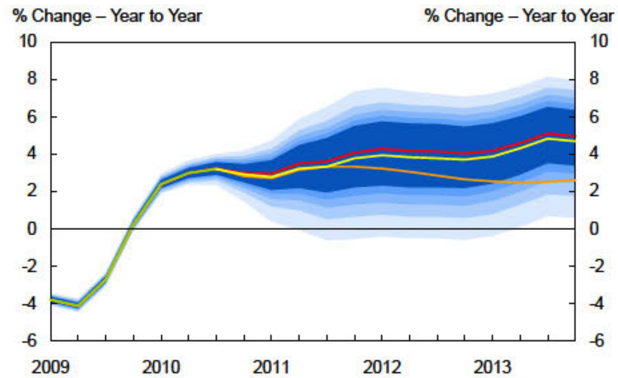
C. FRBNY Forecast Distributions

Exhibit C-3: Inflation and Output Forecast Distributions

Core PCE Inflation Forecast Distribution

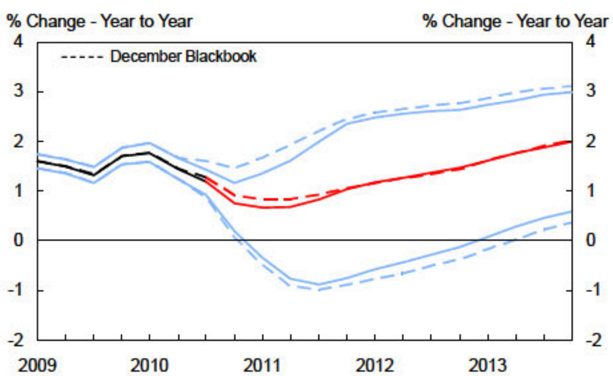


Real GDP Growth Forecast Distribution

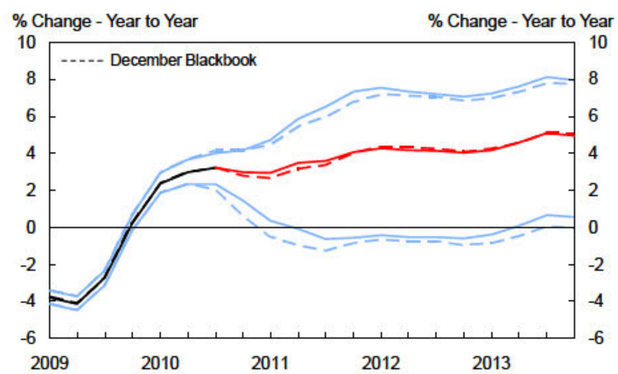


The yellow line represents the expected value of the forecast distribution, the red line represents the FRBNY central projection, the orange line represents the DSGE forecast, and the green line represents released data. The shading represents the 50, 60, 70, 80 and 90 percent probability that the four-quarter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

Change in Core PCE Inflation Forecast Distribution

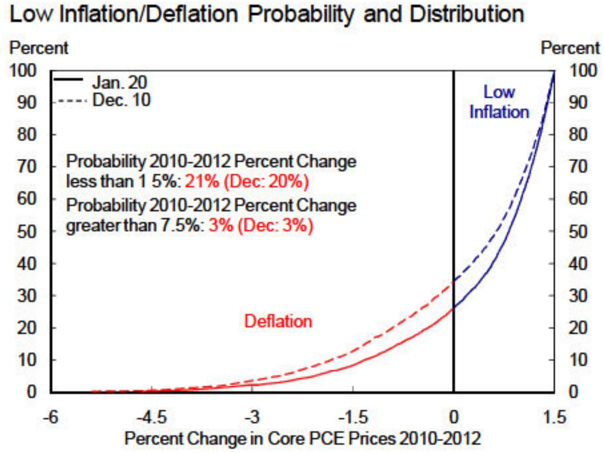


Change in Real GDP Growth Forecast Distribution

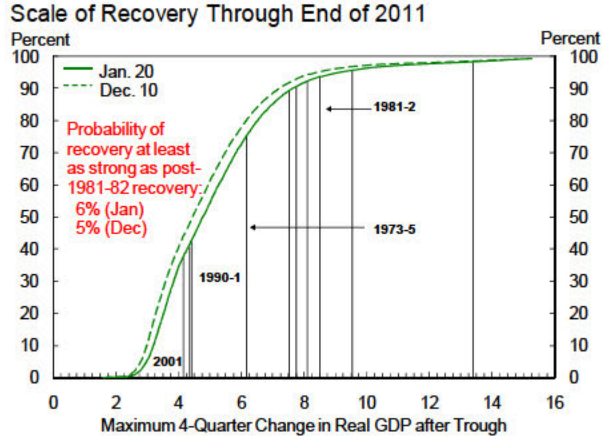


The blue lines are the 90% chance the four-quarter change will be within the lines, the red line is the central scenario projection, and the black line is released data. Dashed lines represent forecasts from the previous Blackbook.

Low Inflation/Deflation Probability and Distribution



Scale of Recovery Through End of 2011

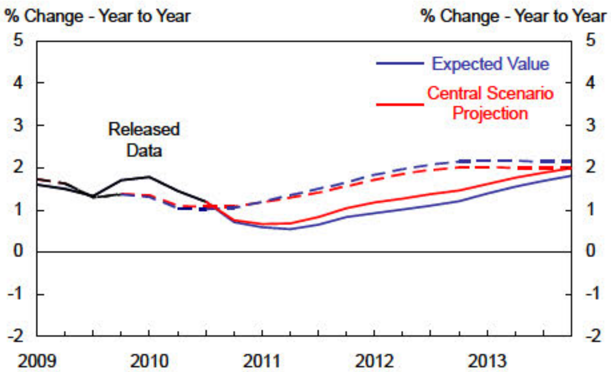


Source: MMS Function (FRBNY)

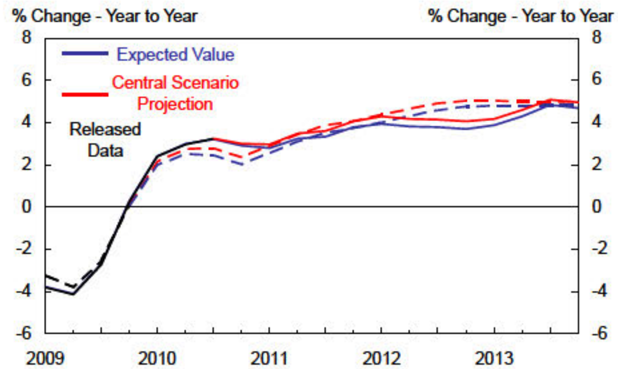
C. FRBNY Forecast Distributions

Exhibit C-4: Evolution and Performance of Inflation and Output Forecast Distributions

One-Year Comparison of Core PCE Inflation Forecast

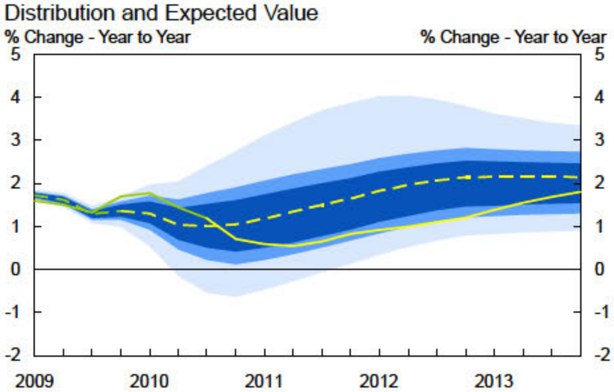


One-Year Comparison of Real GDP Growth Forecast

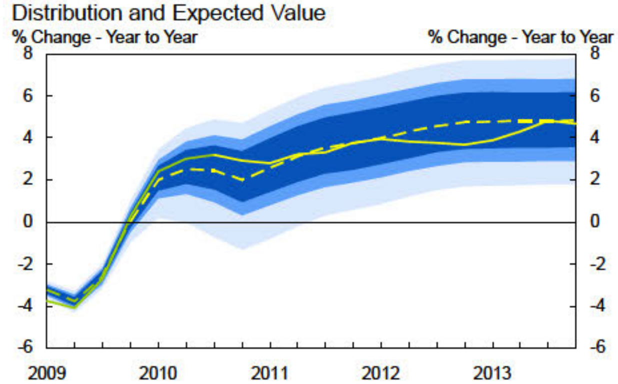


The solid lines represent the current central scenario projection and expected value, while the dashed lines represent those from the year-ago Blackbook.

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



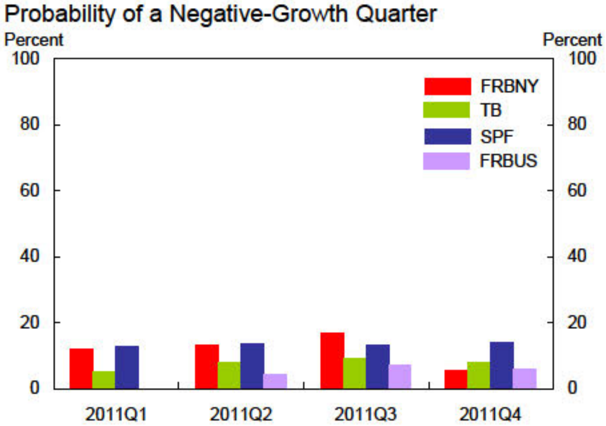
One-Year Comparison of Real GDP Growth Forecast Distribution and Expected Value



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 green lines are released data.

Exhibit C-5: Probability of a Negative Growth Quarter

Probability of a Negative-Growth Quarter

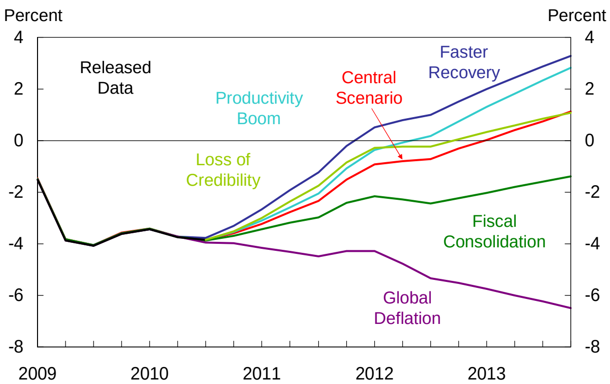


Source: MMS Function (FRBNY)

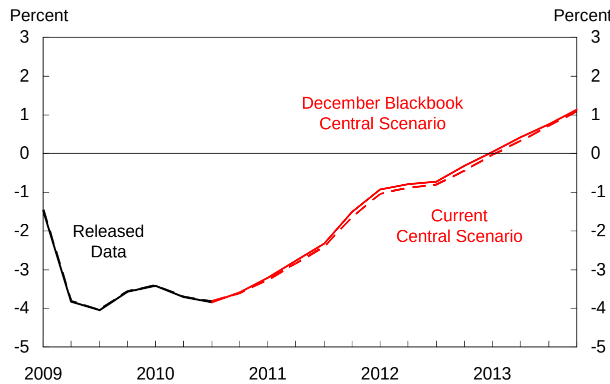
D. FRBNY Fed Funds Rate Projections

Exhibit D-1: *Baseline*
Policy Rule Analysis

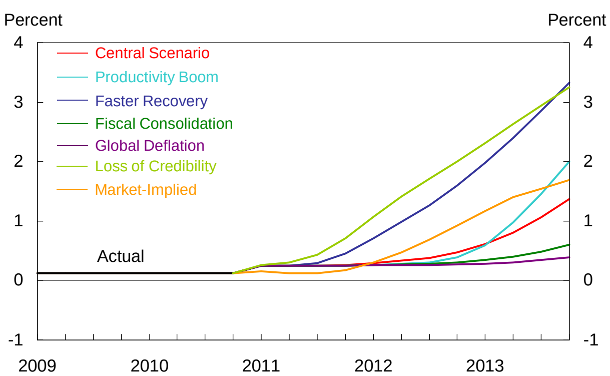
Real FFR under Alternative Scenarios



Change in Central Scenario Real FFR



Nominal FFR under Alternative Scenarios



Change in Central Scenario and Market-Implied Nominal FFR

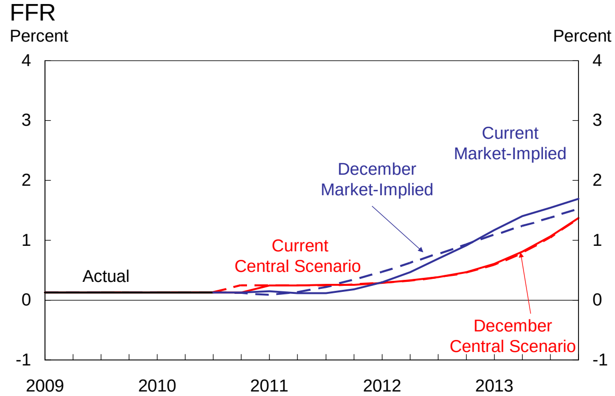
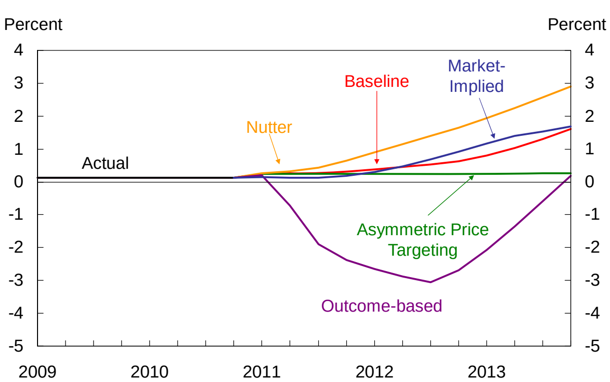


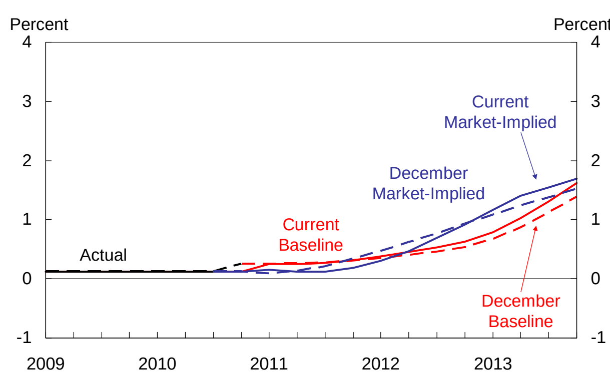
Exhibit D-2: Alternative Policy Rules under Expected Value of Forecast Distribution

Nominal FFR using Alternative Policy Rules*



*Evaluated using yellow line from C-3

Change in *Baseline** and Market-Implied Nominal FFR



*Evaluated using yellow line from C-3

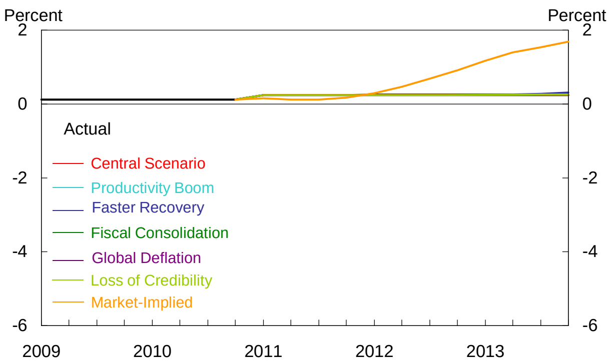
Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

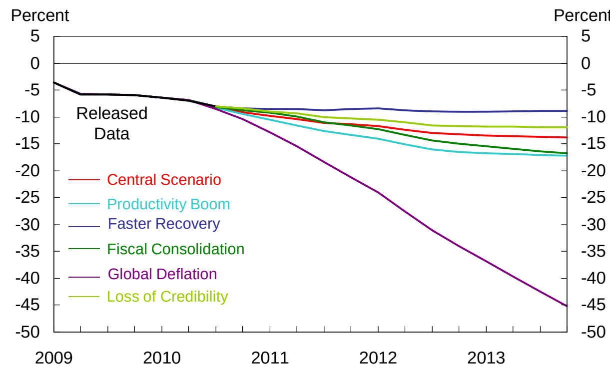
Exhibit D-3: Alternative Policy Rule Analysis

Policy Rule: *Asymmetric Price Targeting*

Nominal FFR under Alternative Scenarios

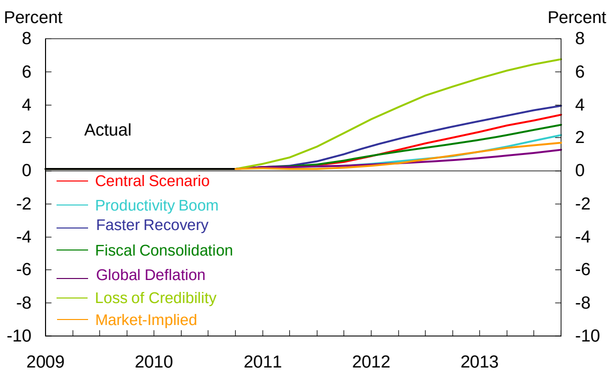


Real FFR under Alternative Scenarios

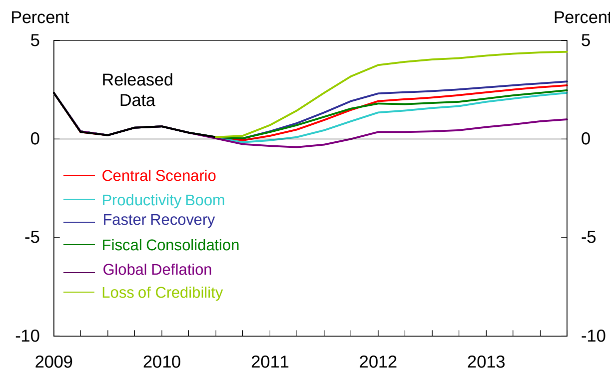


Policy Rule: *Nutter*

Nominal FFR under Alternative Scenarios

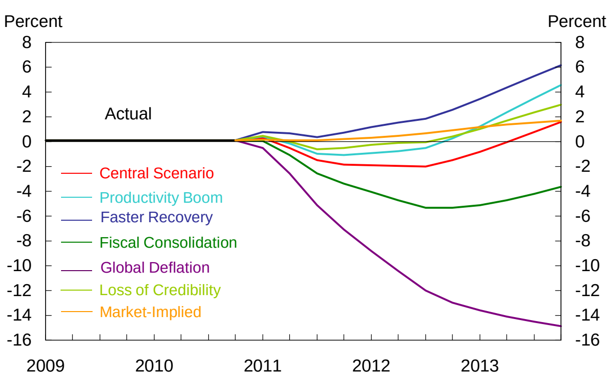


Real FFR under Alternative Scenarios

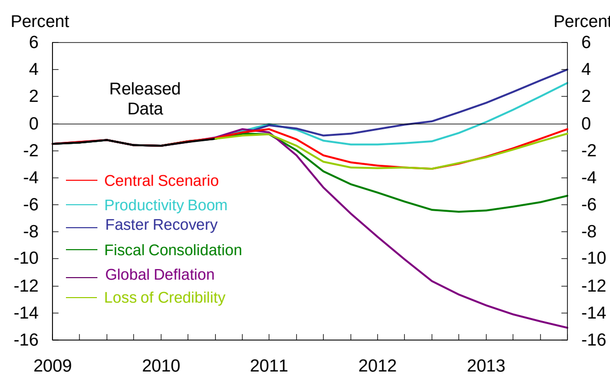


Policy Rule: *Outcome-based*

Nominal FFR under Alternative Scenarios



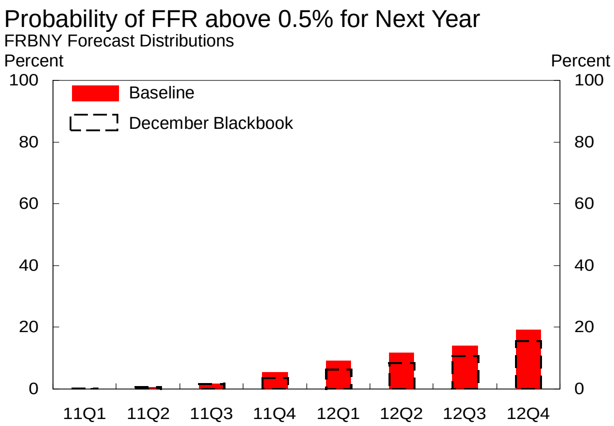
Real FFR under Alternative Scenarios

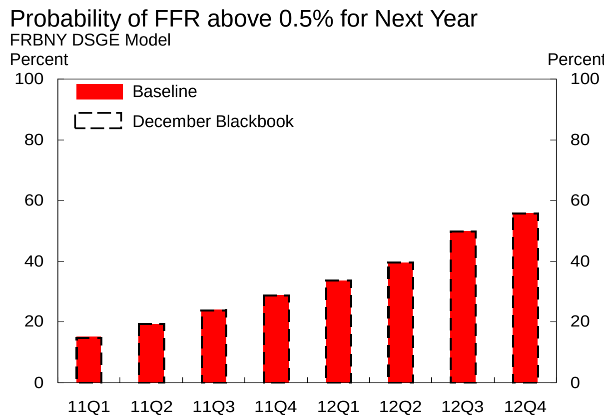


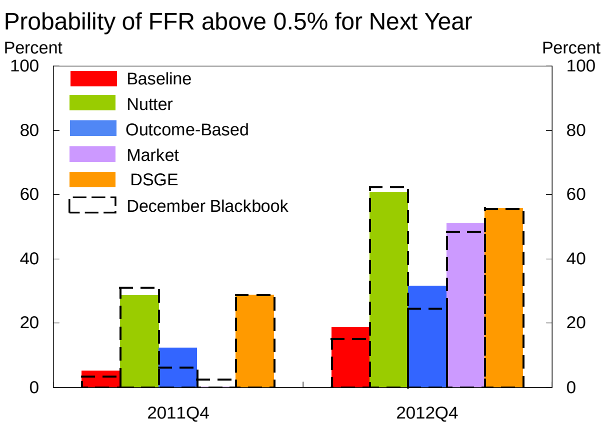
Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

Exhibit D-4: FFR Probabilities







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.

Source: MMS Function (FRBNY)

Alternative Scenario Descriptions

In this abbreviated version of the Exhibit C documentation, we include brief descriptions of the alternative scenarios used in this Blackbook. Full documentation, including a description of the methodology, is included in the Appendix.

Our first alternative scenario considers the impact of above-trend productivity growth. Our current assumption of trend productivity growth is around 1.75% 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 a new scenario (*Faster Growth/Recovery*). We also currently consider four additional scenarios. In one (*Faster Growth/Recovery*), the recent "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*), the recent stresses in global financial and economic conditions continue to 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*

After a lull in the mid-2000s, productivity growth has been robust and above our current estimate of trend productivity growth. This rapid growth raises the possibility that the lull in productivity growth in mid-decade was a cyclical development and that medium- and long-term productivity growth will be closer to that of previous post-WWII periods of high productivity growth (pre-1973 and the mid-1990s through the mid-2000s). 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 subdue inflation.

Alternative 2: *Fiscal Consolidation*

Events in Europe in 2010 and so far in 2011 concerning the fiscal position of several euro zone countries raise issues about the possible economic consequences if similar concerns were to develop about the sustainability of the U.S. government's fiscal position. 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 a decline in output growth below that of the central forecast. As the U.S. government responds to those concerns by 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 likely depreciation of the dollar and possible increases in inflation expectations[3]. [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/Recovery*

The recovery from the 2007-09 recession has been quite weak, especially given the severe drop in real activity during the recession. Factors behind the slow pace of recovery 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

[3] 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.

recent real PCE and other aggregate demand indicators raise the possibility that the process of mending may be beginning to reach an end. The *Faster Growth/Recovery* 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 and from the fiscal stimulus associated with the fiscal agreement passed in December 2010, 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 continued elevated levels of some commodity prices are consistent with such commentary. Even though the FOMC has made its commitment to low rates contingent on “subdued inflation trends” and “stable inflation expectations,” it is possible that market participants may begin to believe that the FOMC is not credibly committed to keeping inflation around the presumed implicit target level, especially if the unemployment rate remains high. 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 a rise in inflation and inflation expectations above forecast.

Alternative 5: *Global Credit Crunch*

Although financial markets are generally notably healthier than they were during the most extreme periods of 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 wealth losses during the crisis, of which only a small part has been recovered, and volatility in equity markets is still elevated. 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 it to be between 3.00% and 3.75% over the near-term). 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 point to low inflation in many regions of the world. With inflation at such levels, sluggish growth in some parts of the world, 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 get 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, and in many simulations in which the economy enters the *Global Deflation* scenario the level of output in 2013 does not surpass the 2009Q2 peak.

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/Recovery*: 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.

Policy Rule Descriptions

In this abbreviated version of the Exhibit D documentation, we include a description of policy rules used in this Blackbook. Full documentation, including the methodology description, is included in the Appendix.

In both our *Baseline* and alternative policy rule specifications, the policy rate responds to deviations of inflation from target and of output from potential (except for the *Nutter* rule, which ignores output deviations), while incorporating some degree of inertia. For each of the FFR paths and each of the policy rules, we determine these deviations using the inflation and output paths generated in Exhibit C.

Baseline Policy Rule Specification:

$$\mathrm{i}_t = \rho \mathrm{i}_{t-1} + (1-\rho)\left[\mathrm{i}^* + \varphi_\pi\left(\pi_t - \pi^*\right) + \varphi_x \mathrm{x}_t\right]$$

$\rho = 0.8$ (interest rate smoothing parameter)
$\mathrm{i}^* =$ 3.75 in short-term, moving to 4.25 (neutral FFR)
$\pi^* = 1.75$ (core PCE inflation target)
$\varphi_\pi = 1.5$ (weight on inflation deviations)
$\varphi_x = 0.5$ (weight on output gap)
π_t : core PCE, 4-quarter average
x_t : output gap, using 2.7% potential growth rate, moving to 2.6%
i_{t-1} : interest rate in previous quarter

The two variants of the *Baseline* rule that we use are the *Asymmetric Price Targeting* and *Nutter* rules. The *Asymmetric Price Targeting* rule is designed to combat deflation by instituting price-level targeting. This rule reacts more slowly than the *Baseline* rule to initial increases in inflation, maintaining a lower policy rate for a longer period of time.[4] In each quarter over the forecast horizon, the rule reacts to the cumulative gap between a 1.5% price level path and the actual path on the downside; the rule is asymmetric because price-level targeting is only implemented on the downside. When the cumulative gap in

[4] All of the policy rules are subject to an effective lower bound of 0.25%.

inflation is greater than 1.5% per year, the policy rule reverts to targeting the gap between four-quarter changes in inflation and the inflation objective, just as in the *Baseline* rule.

The *Nutter* rule reacts more strongly than the Baseline rule to changes in inflation. Specifically, the *Nutter* rule increases the weight on deviations of core PCE inflation from the target (φ_π = 2 instead of 1.5). The *Nutter* rule does not react to changes in the output gap.

In addition to the *Baseline* rule and the two variants, we also consider the FFR paths generated by the Board staff's *Outcome-based* rule. The most significant difference between the three FRBNY rules and the *Outcome-based* rule is that the FRBNY rules offer a prescription for future behavior based on policymaker preferences and views of the economy, whereas the *Outcome-based* rule is a statistical description of the average of past FOMC behavior. Specifically, the *Outcome-based* rule calculates an FFR for a given quarter as a function of the FFR in the previous two quarters, the current quarter's four-quarter core PCE inflation, and the output gap for the current and the previous quarter using parameters estimated from real-time historical data (1988-2006)[5].

We also want to compare the policy paths and distributions calculated using these rules with the market-implied path and distribution. In these charts, we use the standard path of market policy expectations derived from fed funds and Eurodollar futures contracts that is pictured in Exhibit A-5. For Exhibit D-4, we construct a distribution for the market-implied path by assuming it has a normal distribution centered at the standard, market-implied path, with a standard deviation derived from options markets (pictured in Exhibit A-6).

Using a weighting scheme, it is possible to combine the *Baseline* and the two variants into an *Average* rule that may better reflect market beliefs about FOMC preferences and views of the structure of the economy than does any individual rule. (That is, we can think of the market-implied path as reflecting an amalgam of different perceived FOMC

[5] *Outcome-based* rule: $i_t = 1.20*i_{t-1} - 0.39*it\text{-}2 + 0.19*(1.17 + 1.73*\pi_t + 3.66*x_t - 2.72*x_{t-1})$

preferences, etc.) Each cycle we construct the *Average* rule by taking the weighted average of the *Baseline* rule and the two FRBNY-derived variants that matches the market-implied path as closely as possible. (We do not currently display the *Average* rule or the weights used to calculate the *Average* rule in the Blackbook). Examining the change in the weights used to construct the *Average* rule from one cycle to the next can provide insight into the reasons behind shifts in the market path not explained by changes in the outlook.