FRBNY BLACKBOOK

August 2009

FRBNY Blackbook

RESEARCH AND STATISTICS GROUP

FOMC Background Material

August 2009

CONFIDENTIAL (FR) Class II FOMC

CONTENTS

EXHIBITS

EXHIBIT OVERVIEW

1. Policy Recommendation and Rationale

Our policy recommendation is to maintain the target range for the federal funds rate at 0–0.25% until the end of 2010. We also suggest continuing the asset purchase program at the current pace and leaving its size unchanged.

The policy recommendation is based on slight improvements in the outlook for economic activity and inflation since the June FOMC cycle. Financial and credit market conditions have shown further signs of stabilization, while the housing sector is showing some consistent evidence that it is bottoming out. Moreover, extreme downside risk to the outlook seems to have dissipated. However, the outlook for economic growth remains weak, with the unemployment rate expected to continue to rise over the near-term. In addition, there is still a non-negligible risk that inflation will fall below levels consistent with long-term growth and price stability. In our view, these considerations justify a reaffirmation to maintain the current accommodative stance of monetary policy for an extended period of time.

Since the June FOMC meeting, we have observed additional signs that the asset purchase program has helped to stabilize mortgage rates, reduce spreads, and bring long-term yields more in line with historical standards. Moreover, the termination of this program appears to be well understood by market participants. Therefore, it is our view that the current pace of the asset purchase program is consistent with the FOMC's stated interest rate policy and provides ongoing support to mortgage lending and overall conditions in financial markets. The continued commitment to the asset purchase program should also contribute to better aligning market expectations for the federal funds rate over the medium-term horizon with our recommended path.

Recent readings of inflation expectations from market and survey measures appear to be consistent with the objective of price stability. Nevertheless, concerns over the large projected fiscal deficits provide an upside risk to inflation. Given the current size of the Fed's balance sheet, the committee should continue to describe the tools available for the renormalization process as well as reiterate its commitment to undertake all appropriate policy actions as necessary in response to the evolution of the economic outlook.

2. Evolution of Outlook and Risks

2.1 Central Forecast

Conditioning assumptions. The benchmark revision of the NIPA data released at the end of July indicates that real GDP declined 1.9% over the four quarters of 2008 rather than 0.8% as previously estimated. As a consequence, the recession of 2008-2009 has been both the longest and the deepest of the post-WWII period with a peak-to-trough decline of real GDP of 3 ¾% (assuming that 2009Q2 was the trough). Nonetheless, data received over the intermeeting period have been consistent with the expectation that a recovery will unfold over the second half of 2009, aided by the preemptive path of monetary policy, various initiatives to foster financial market stability, and aggressive fiscal stimulus measures. In fact, we have boosted projected growth over the second half of 2009 to between 1 ½% and 1 ¾% (annual rate) due primarily to the fact that inventories declined much more than expected in 2009Q2. In addition, the response to the "cash for clunkers" rebate program has been quite a bit stronger than initially assumed, with the expectation that its size will be increased from $1 billion to $3 billion. This is likely to result in light vehicle assemblies being higher than previously assumed in both 2009Q3 and Q4. The faster second half growth, combined with a lower assumed path for the labor force participation rate, lead us to project an unemployment rate of 10% for 2009Q4 rather than the 10 ½% foreseen in the June Blackbook.

Aside from this somewhat stronger near term outlook, our projection over the remainder of the forecast horizon is essentially unchanged. Growth is likely to remain below potential over the first half of 2010 as consumer spending continues to face considerable headwinds. The unemployment rate edges upward in this environment, peaking near 10 ¼% by mid 2010. By the second half of 2010 business investment spending begins to recover while consumer spending strengthens, with aggregate growth moving up toward potential and the unemployment rate leveling off. By 2011 a more traditional cyclical recovery takes hold with growth accelerating to about 2 ½% above its potential rate and the unemployment rate declining by 1 to 1 ½ percentage points. Barring a significant decline in the economy's potential growth rate, this point forecast implies that a large output gap will persist over this entire period, exerting downward pressure on prices and wages. The risks to this modal forecast for growth and inflation remain skewed to the downside. Accordingly, the central projection assumes that the path of the federal funds rate is unchanged at 0–0.25% over the entire forecast horizon. [Exhibit B-2]. Moreover, an explicit underlying assumption of our forecast is that various Fed and Treasury initiatives to improve liquidity and restore more normal functioning of financial markets will have increasingly beneficial effects over time and thereby ease overall financial conditions.

The outlook for foreign growth has improved over the intermeeting period. Foreign GDP (on a GDP-weighted basis) is expected to contract by just 0.1% in 2009 (Q4/Q4) versus 0.7% in the last Blackbook. For 2010, projected foreign growth has been boosted to 2.6% from 2.3%. For the second half of 2009 the outlook for both developed and developing economies has improved. However, for 2010 the upgrading of foreign growth is due mainly to the improved outlook for the developed economies, particularly the Euro area, Canada, and the UK. Despite this improvement in global growth prospects, the projected path of oil prices is essentially unchanged from the last Blackbook. We expect the price of West Texas Intermediate grade oil to average $70 per barrel in 2009Q4, and to rise to $76.50 per barrel by 2010Q4. Our assumed path for oil prices is somewhat lower than that of the August Greenbook, presumably due to the faster foreign growth expected by the Board staff .

The assumptions regarding fiscal policy in this Blackbook are unchanged from April. The fiscal stimulus provided by the American Recovery and Reinvestment Act of 2009 will continue to build through mid-2010. The initial wave of stimulus came primarily through reductions of personal tax payments and increases in transfer payment to households, both of which boosted the growth of real disposable income in the first half of 2009. The second wave is likely to be in the form of increased government gross investment. At this time we do not anticipate that a second fiscal stimulus package will be enacted. However, with the unemployment rate likely to remain at or somewhat above 10% in 2010, a second package is certainly a possibility.

As is our usual practice, our assumptions for equity prices, the real exchange value of the dollar, and home prices are similar to those of the Greenbook. Equity prices are assumed to increase at an annual rate of about 15% over the forecast horizon, although from a higher starting point than in June. The exchange value of the dollar (trade-weighted basis) is assumed to decline about 4.4% (Q4/Q4) in 2009 and another 1% in 2010. The Greenbook forecast envisions somewhat more depreciation of the dollar. While recent home price performance has been somewhat better than expected, the Board staff has raised their estimate of the number of foreclosure initiations over the forecast horizon. They continue to expect the Loan Performance home price index to decline a further 17% by the end of 2010 for a total peak-to-trough decline of 33%.

Our analysis of the revised NIPA data suggests that the economy’s potential growth rate is about 0.1 percentage point lower than previously though. But given the substantial uncertainty around this estimate, we are maintaining our working assumption that potential GDP growth is between 2 ½% and 2 ¾%. This is composed of 1% to 1 ¼% trend hours growth (although we assume this growth will begin to decline in 2010) 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 has maintained their estimate of potential over the forecast horizon at 2.0%.

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 the gradual rise of core inflation back toward the midpoint of the FOMC’s objective for core PCE inflation of 1.5% to 2.0%.

Inflation. Total consumer price inflation, as measured by the PCE deflator, was essentially zero over the first half of 2009 as the effects of the sharp decline of commodity prices during 2008Q4 worked their way through the system. Over the second half of 2009 we expect total consumer price deflator to rise at a nearly 2% annual rate as the effects of the run up of energy prices this year are felt. For all of 2009 the PCE deflator is likely to increase at just 1% (Q4/Q4). The core PCE deflator rose at a 1.6% annual rate over the first half of 2009, somewhat higher than we had anticipated, due in large measure to unexpected firmness in prices of motor vehicles and unusually large increases in tobacco prices stemming from an increase in taxes. For the second half of 2009 we expect core inflation to slow to around 1% (annual rate) as these temporary factors dissipate and ongoing slowing of core services prices dominates the movement of this price index.

In 2010 we expect total and core inflation rates to converge and to begin moving toward the mandate consistent range. However, it will likely take until 2011 before that process is complete. Clearly, given the fact that the output gap is now quite large and expected to remain so through next year, there are downside risks to that projection. However, there are upside risks as well. With the aggressive global monetary and fiscal policy response to the ongoing financial crisis, the rebound of the global economy could be considerably stronger than anticipated. Moreover, concerns regarding the fiscal condition of the US could lead to downward pressure on the dollar and upward pressure on inflation expectations.

Real activity. The key feature of our central scenario is that consumer spending remains sluggish over the next year, due to the substantial headwinds confronting the household sector. With the effects of the stimulus bill on taxes and transfers largely behind us, and with the increase in energy prices, real disposable income is likely to grow only very slowly, if it does not decline outright. Moreover, households have experienced a truly massive decline in wealth, which is likely to be felt across a broader range of households than in past episodes, as declining home prices represent a major portion of the current decline. Finally, credit conditions, while gradually easing, will remain tight relative to the recent past. A second key feature of our outlook is that while it appears that the correction in housing production is over, it is unlikely that we will experience the surge of residential investment typical of the early stages of most post-WWII recoveries. In addition to tightened mortgage underwriting standards, high volumes of existing homes will continue to come onto the market through the foreclosure process. Indeed, home prices are expected to decline at least through the end of 2010, with a cumulative peak-to-trough decline in the Case-Shiller 10 city composite home price index of around 40%. Through 2009Q1 that index was down 31% from its 2006Q2 peak.

With consumption and residential investment recovering on a gradual path, it follows that any recovery of business investment in new equipment and software and new structures is likely to be delayed. This is even more the case given the steepness of the decline of output during the recession, which has led to capacity utilization rates at historic lows, rapidly rising retail and office vacancy rates, and sharply declining prices for existing commercial real estate. Finally, as growth of final demand in the US recovers, we will likely see a reversal of recent trends such that imports grow substantially faster than exports.

The risks to our central projection for real activity are substantial and are skewed to the downside. In the near-term, the key risk is that financial market conditions and consumer and business confidence do not improve as assumed. This in turn leads to lower than expected asset prices, less recovery in the supply of credit and, therefore, an even weaker path for final demand. A related risk is that, even if financial markets and asset prices behave as assumed, the decline of household net worth embedded in this central projection induces a steeper-than-expected increase of the personal saving rate, keeping consumer spending weaker for longer. The sharp increase in the prime age male unemployment rate during the current cycle, combined with the large share of workers nearing retirement age, make this risk particularly acute. Finally, an important risk over the medium term is the uncertainty surrounding our assumption of the economy's potential growth rate. There is considerable concern that with the weakness of business investment and the reallocation of labor and capital that needs to occur, the economy's potential growth rate has slowed significantly.

2.2 Alternative Scenarios and Risks

Over the past four months a substantial fraction of the downside risk to the economy has been removed, following improved financial conditions and further evidence of stabilization in economic activity. In addition, the NIPA revisions, while showing that the current recession is deeper than previously thought, have removed some of the short run uncertainty regarding the current state of the economy. The *Global Credit Crunch* is still the most likely scenario, with an associated probability of about 30% [Exhibit C-1], but its likelihood is more than 10 percentage points less than it was at the beginning of the year. The probability associated with the *Global Deflation* scenario, which entails an even worse contraction than the *Global Credit Crunch* scenario, is currently almost negligible, due to the lack of evidence that a deflationary spiral is under way either domestically or internationally. The probability associated with the more inflationary scenarios, namely the *Loss of Credibility* and the *Effects of Overheating*, is the same as in June. However, the reduced likelihood of deflationary scenarios implies that the risks in terms of inflation have progressively become more balanced.

Exhibit C-2 shows that the paths for Core PCE inflation and output growth associated with the *Global Credit Crunch* and *Global Deflation* scenarios have mildly changed for the better in the intermeeting period. Both scenarios currently entail zero or very low inflation, but no deflation. In terms of output, they now imply a slower recovery than under the *Central* scenario (with 12-month growth reverting to zero only in mid-2010 and mid-2011for the *Global Credit Crunch* and *Global Deflation* scenarios, respectively), but no longer do they entail a dramatic recession, as was the case earlier in the year.

The changes in the probabilities and paths associated with the various scenarios and the release of the NIPA revisions affected the forecast distributions for inflation relative to the previous Blackbook mostly in the short run [Exhibit C-3]. The most noticeable change in the output distribution concerns the 5th quintile, which has moved upward through 2009. In the previous Blackbook the 5th quintile of the 12-month real GDP growth forecast distribution reached -8% in 2009Q3, while currently it is about -5%. The removal of the uncertainty about the severity of the current contraction is evident from the “Depth of Recession” chart. The chart shows that the four-quarter drop in output is currently estimated to be in the neighborhood of 4%, with very small probability associated with a contraction larger than 5%. In the last Blackbook the likelihood of an output drop larger than 5% was still above 20%. The “Depth of Deflation” chart [Exhibit C-3] shows that the uncertainty about inflation has not changed nearly as dramatically in the intermeeting period.

Special Topic

The GDP Benchmark Revision

Richard Peach Redacted *Charles Steindel* Redacted

The July release of the initial estimate of 2009Q2 National Accounts data was, as usual, accompanied by a "benchmark" revision of the numbers.

The benchmark revision included normal incorporation of new source information, recomputed seasonal adjustment factors for the last few years, and changes in concepts and organization of the accounts which, in principle, affected the data back through 1929. The historic benchmark revisions were minor. The more prosaic revisions of the recent numbers were of considerable moment, however, revealing that the output decline in 2008 was substantially larger than earlier thought. On the income side, consumer saving was revised up noticeably, but corporate profits were pared.

<u>Benchmark Changes</u>

The revision contained no changes in GDP concepts of any significance. The income numbers no longer show the large quarterly distortions associated with major disasters. The prior practice had been to book all loss of physical capital as additions to "consumption of fixed capital" in the quarter the disaster occurred. This had the effect of depressing profits and profit-like components of personal income (proprietors' income and rents). BEA will now remove such losses from the capital consumption series and has created a separate account to adjust the capital stock measure. The practical effect is that the large declines in National Income previously seen in 2001Q3 and 2005Q3 no longer appear in the data. Nominal GDP was never directly affected by the income accounting related to disasters.

The other noticeable conceptual change is the removal of spending at restaurants from non-durable food spending and its classification as consumer spending on services. As a consequence, the core PCE price measure now includes spending at restaurants. This change has the effect of boosting historic core PCE deflator growth by about 0.2 percentage points (Figure 1). More recently, however, this effect was partially offset by reductions in the growth of non-market prices.

<u>Revisions of the Recent Numbers</u>

The most notable revision was a major downgrading of real growth over the course of 2008 (Figures 2 and 3). On a Q4/Q4 basis, real GDP is now estimated to have declined 1.9% during 2008, much worse than the prior estimate of a 0.9% drop.

Moreover, growth of real GDP in 2007Q4 was revised upward. The upshot is that the current downturn has been much steeper than previously thought. As of 2009Q2, real GDP is 3.9% below the year ago level, the sharpest four quarter decline of the post-WWII period.

The downward revision in 2008 was widespread across final sales categories, as well as in inventory investment. Thus, there is nothing to alter our thinking on the scope of the recession, as opposed to its scale.

The new information also suggests that productivity growth in 2008 will be marked down substantially; we think the new numbers (to be released on August 11) will show that nonfarm productivity rose 0.9% over the four quarters of 2008, compared to the previous estimate of a more robust 2.2% gain. While it appears that compensation per hour will also be reduced significantly, the indications are that unit labor cost growth will now show a gain in excess of 2.0%, compared to the prior estimate of 1.8%.

Elsewhere in the revisions, some components of nominal spending in this decade were boosted, with a quite noticeable upward revision in the level of business fixed investment (Figure 4). Current dollar spending in this category is now a full 9.0% higher in both 2007 and 2008 than earlier reported. As the BFI deflators were little changed, the level of real investment spending was also boosted, implying that growth of business capital stock will also be revised up.

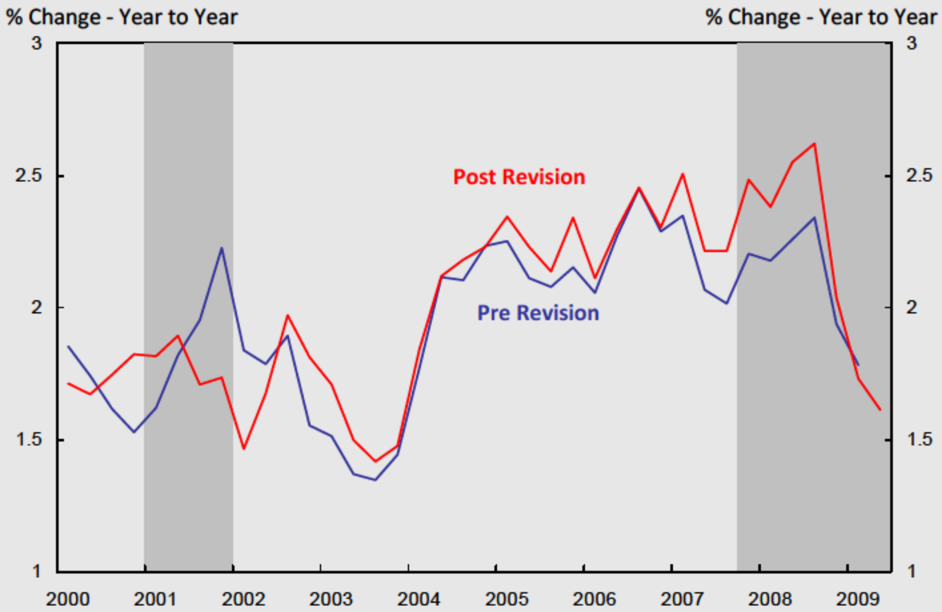
The likely upward revision to the recent trend growth of capital stock suggests that estimates of trend growth in total factor productivity will be marked down, though substantially more detailed information will be needed to make a definitive assessment.

On the income side, the new information shows substantially higher personal income levels for most recent years, although for 2009Q1 personal income was revised lower. Fairly massive upward revisions were made to estimates of rental and proprietors' income. However, the upward revision to personal income in 2008 was smaller than in prior years, as a sharp downward revision to dividends and a slight reduction of labor compensation offset much of the gain. Estimates of corporate profits were reduced in 2006-2008, with a trim in 2008 of nearly 8.0%.

With nominal GDP and national income levels boosted, the profit share of national income in late 2008 and early 2009 now stands at a bit over 9.0%--a full percentage point less than earlier estimates (Figure 5). While the corporate profit share is down sharply from its recent peak of 13.7% in 2006Q3, it remains well above earlier cyclical lows.

Current dollar consumer spending levels were also revised up, but to a lesser extent than income. As a consequence estimates of the personal saving rate were increased by roughly a full percentage point for every year from 2001 through 2008 (Figure 6). Of course, this revision does not negate the decline in saving that occurred in those years, but stronger income flows than previously estimated suggest that households were perhaps not as extravagant as we thought. One major take-away from the revision is that it helps resolve some anomalies in the numbers we had been seeing earlier. Most importantly, the large downward revision in 2008 growth helps accounting for the large decline in reported employment without quite as baffling a growth in productivity (alternately, the Okun's law relationships are more consistent with historical evidence).

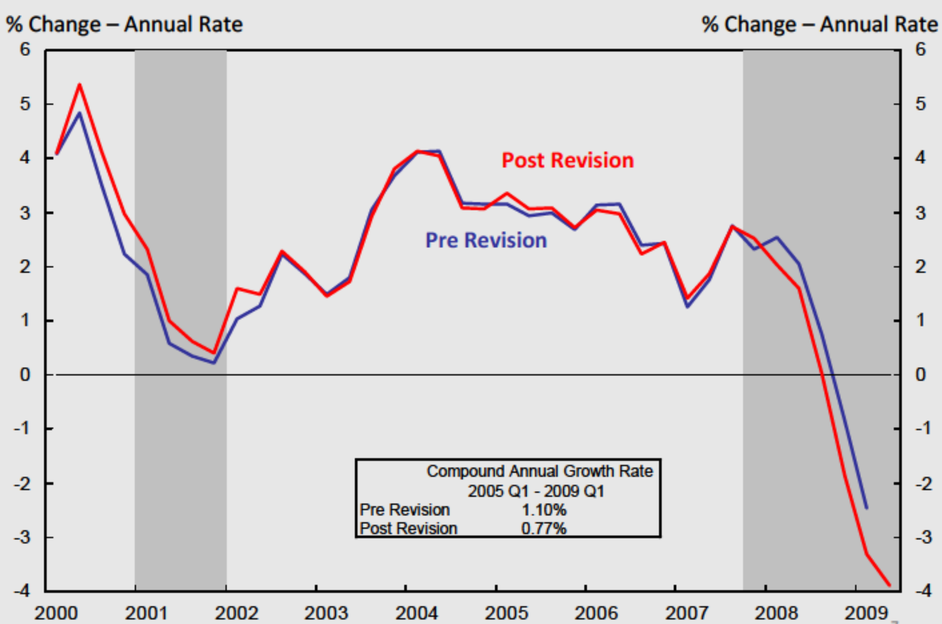
Figure 1: Core PCE Deflator Growth Rate



Source: Bureau of Economic Analysis

Note: Shading represents NBER recessions.

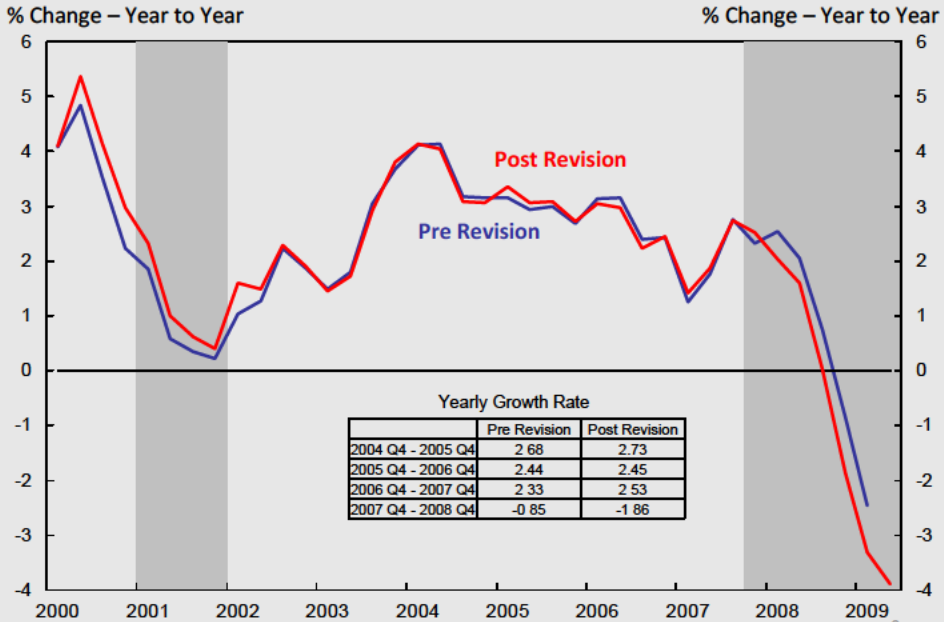
Figure 2: Real GDP Growth Rate



Source: Bureau of Economic Analysis

Note: Shading represents NBER recessions.

Figure 3: Real GDP Growth



	Pre Revision	Post Revision
2004 Q4 - 2005 Q4	2 68	2.73
2005 Q4 - 2006 Q4	2.44	2.45
2006 Q4 - 2007 Q4	2 33	2 53
2007 Q4 - 2008 Q4	-0 85	-1 86

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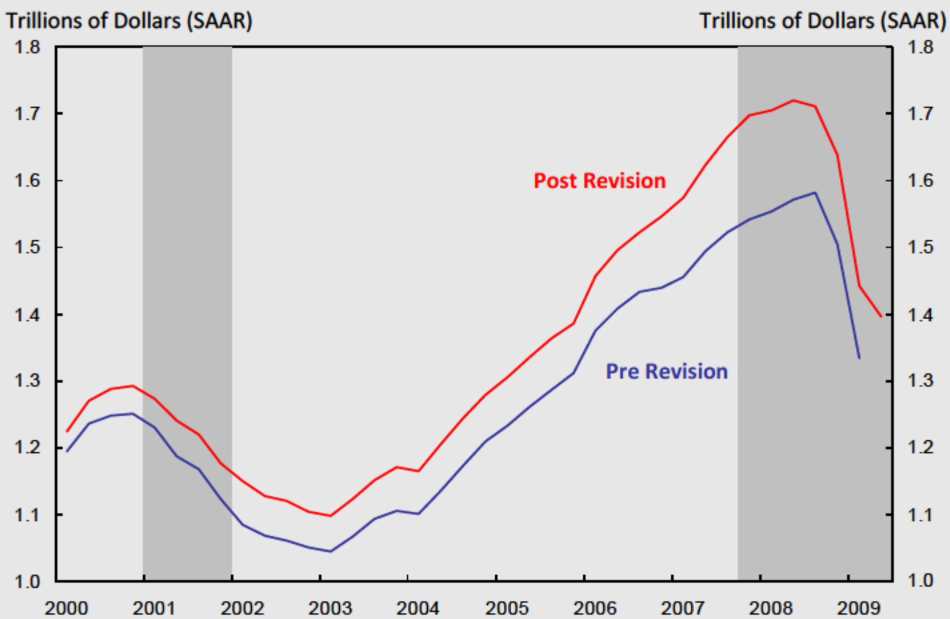
Source: Bureau of Economic Analysis

Note: Shading represents NBER recessions.

Figure 4: Private Nonresidential Fixed Investment



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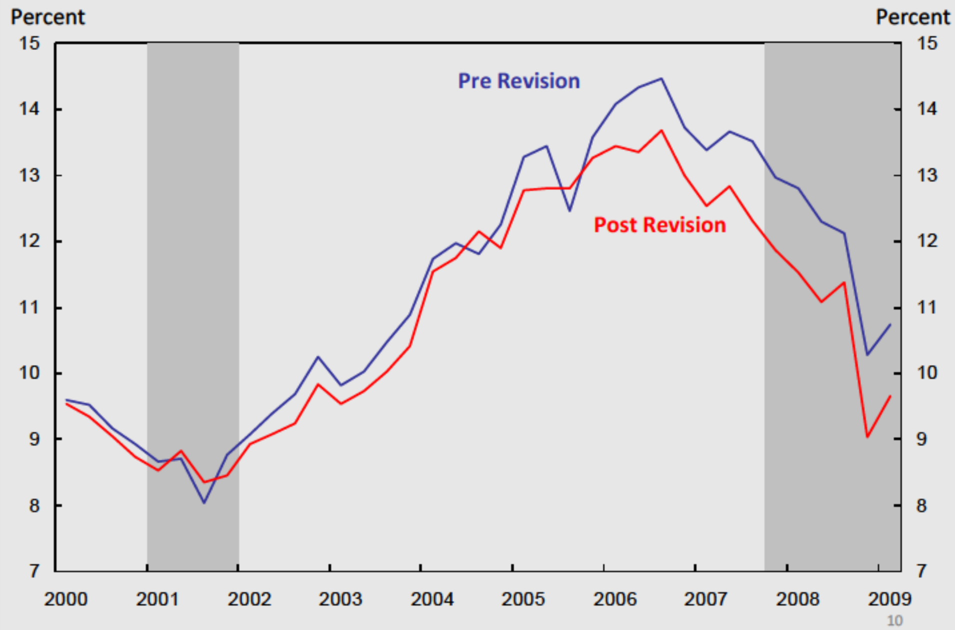
Source: Bureau of Economic Analysis

Note: Shading represents NBER recessions.

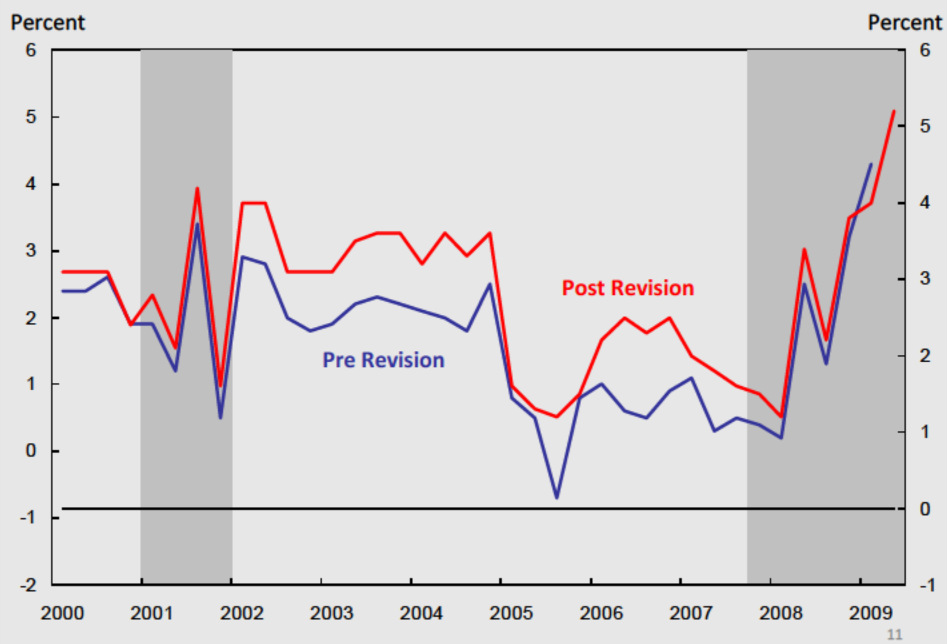
Figure 5: Corporate Profits' Share of National Income



Source: Bureau of Economic Analysis

Note: Shading represents NBER recessions.

Figure 6: Personal Saving Rate



Source: Bureau of Economic Analysis

Note: Shading represents NBER recessions.

3. Forecast Comparison

3.1 Greenbook Comparison

Both the Greenbook and the Blackbook project the Federal Funds Rate (FFR) to remain in the current target range of 0.00–0.25% through the end of 2010.

The differences between the FRBNY and the Board's staff forecasts for economic activity have somewhat increased relative to the June Blackbook. The Greenbook forecast is now more pessimistic than the FRBNY forecast for 2009, mostly due to differing forecasts for inventory investment (-0.1 percentage point growth contribution vs. 0.5, respectively). The Greenbook forecast for final sales to domestic purchasers has also deteriorated since June, while ours remained unchanged, leaving us both at a -2.2 percentage point growth contribution in 2009.

As in the June Blackbook, there is only a marginal difference in FRBNY and the Board's staff projection for core PCE inflation.

Conditioning Assumptions. The Board's staff assumes conditions in financial markets will continue to improve relative to the previous Greenbook. In particular, the path of equity prices has been raised above the June projection while the spread between yields on BBB-rated corporate bonds and long-term Treasury yields is expected to further narrow. Long-term rates are expected to gradually increase in response to improved economic conditions. Holdings of agency debt at the end of 2009 are expected to be $50 billion less than in the June Greenbook while purchases of Treasury securities and agency mortgage-backed securities are assumed to continue at the current pace.

The Board's staff outlook for foreign economic activity has improved since the last FOMC. The broad real dollar is expected to continue depreciating at the current pace for the next year and a half.

International. Both the Greenbook and the Blackbook forecasts incorporate an improved outlook for net exports of about 0.2 percentage points relative to the June

FOMC. We now expect a growth contribution from net exports in 2009 of 0.7 percentage points, compared to 0.9 in the Board's forecast. For 2010, the Blackbook projects a drag of 0.4 percentage points, compared to a drag of 0.1 in the Board's forecast. As in June, these differences depend on our view that import growth will rebound faster than is assumed by the Board's staff.

Inflation. Our forecast for core PCE inflation in 2009 has decreased from 1.4% to 1.3%, but it is still very much aligned with the Greenbook forecast (unchanged at 1.4%). Both the Blackbook and Greenbook forecasts for 2010 core PCE have increased by 0.2 percentage points in response to the change in the definition of the core measure. As a consequence, our projection for 2010 core PCE inflation is still 0.4 percentage points higher than the Greenbook forecast (1.4% versus 1.0%, respectively). The differences in total PCE inflation for 2009 and 2010 have not changed since the June FOMC meeting, although both forecasts now expect lower inflation in 2009 and higher inflation in 2010.

Real Activity. The Board's staff forecast for GDP growth is now lower than ours in 2009 Q4/Q4 (-1.4% versus -1.1%) but still substantially higher in 2010 Q4/Q4 (3.1% versus 2.0%).

Relative to the June Blackbook, we now expect a smaller growth contribution from consumption in 2009; however, this is more than offset by a smaller drag in business fixed investment and by a larger contribution from government spending and net exports. Conversely, the Board's staff anticipates the reduction in the growth contribution of consumption to be exacerbated by a deterioration in business fixed investment (structures) and inventories.

For 2010, the Blackbook forecast now anticipates a smaller growth contribution from consumption than in June, but a smaller drag in net exports. In the Greenbook forecast, instead, a very minor reduction in the growth contribution of consumption is more than offset by the smaller drag in net exports.

Our forecast for the unemployment rate in 2009 is now perfectly aligned with the Board's staff projection at 10.0%. While the Board's forecast has remained unchanged since June, our projection has been substantially reduced because of the lower participation rate. For 2010, both the Blackbook and the Greenbook forecasts have reduced the projected unemployment rate by 0.1 percentage point. Our forecast is still substantially higher than the Board's for 2010 (10.2% versus 9.6%), partly due to the Greenbook assumption of a lower labor participation rate.

Uncertainty around forecasts. As in June, our forecast has significantly greater inflation and output uncertainty than the Greenbook. The Blackbook still assigns more probability to lower inflation this year than the Greenbook (a 15th percentile of 0.5% vs. 1.0%). For 2010, the bottom of the 70% probability interval for the inflation forecast is now aligned with the Greenbook at 0.3%, while substantial discrepancy remains at the top of the interval (2.3% in the Blackbook versus 1.7% in the Greenbook). This difference reflects the lower path for core inflation projected by the Board's staff. The downside risk to GDP growth in 2009 in the Blackbook has decreased, relative to June, from -4.0% to -2.8%. Nonetheless, this number is still higher than the Greenbook estimate (-2.2%). For 2010, the lower end of the 70% forecast interval in the Blackbook has worsened from -0.7% to -1.0%, while the reading in the Greenbook has moved up slightly from 1.3% to 1.4%.

To assess the importance of the differences between our outlook and the Greenbook forecasts, in Table 2 we calculate the percentile of the Greenbook forecasts for core PCE inflation and GDP growth in our forecast distribution (June values are in parentheses). The difference between the output growth forecasts of the Greenbook and the Blackbook, relative to June, has somewhat decreased for 2009 and is roughly unchanged for 2010. The forecasts for core inflation are still fairly aligned for 2009, while the Board's staff forecast for 2010 remains in the lower end of our staff forecast distribution.

Table 1: Comparison of 70% Intervals around FRBNY and Board Forecasts

	Core PCE Inflation		Real GDP Growth	
	FRBNY	*Board*	*FRBNY*	*Board*
2009	0.5, 1.9 (0.3, 2.2)	1.0, 1.7 (0.9, 1.9)	-2.8, -0.1 (-4.0, 0.4)	-2.2, -0.6 (-2.3, 0.2)
2010	0.3, 2.3 (0.2, 2.1)	0.3, 1.7 (0.0, 1.5)	-1.0, 3.6 (-0.7, 3.6)	1.4, 4.9 (1.3, 4.6)
2011	0.9, 2.7 (1.0, 2.6)	n/a (n/a)	2.2, 6.6 (2.5, 6.5)	n/a (n/a)

Table 2: Percentile of Greenbook Forecast in FRBNY Forecast Distribution

	Core PCE Inflation	Real GDP Growth
2009	59 (57)	47 (60)
2010	39 (34)	78 (76)
2011	16 (8)	55 (54)

Alternative Greenbook forecasting scenarios. The August Greenbook explores six alternative scenarios. In four of them, the outlook for either real GDP or inflation (or both) is more pessimistic than in the extended Greenbook baseline forecast. The Federal Funds Rate (FFR) remains unchanged at the effective lower bound (0.125%) at least until the end of 2011 in four of the scenarios.

Three of the more pessimistic scenarios (*Intensified Financial Fragility*, *Higher Inflation Expectations* and *Labor Market Damage*) are similar to scenarios presented in the June Greenbook, with *the Intensified Financial Fragility* corresponding to the earlier *False Dawn* scenario. The new pessimistic scenario is labeled *Higher Savings Rate*.

The most optimistic scenario (*Faster Pace of Financial Recovery*) replaces the previously labeled *Early Liftoff*. The *Deflation* scenario in the June Greenbook is now substituted by a scenario of *Greater Disinflation* (which entails a lower risk of deflation although inflation is much lower than in the baseline).

Intensified Financial Fragility: This scenario considers a reversal of the recent positive signals from financial markets. Banks suffer bigger loan losses and have trouble raising capital, implying a further deterioration in their balance sheets. Renewed financial distress manifests itself in higher corporate bond premia (about 200 basis points) and lowers equity prices by 30% relative to the baseline in 2010. Additionally, interest rates on conventional mortgages increase by 100 basis points and home prices fall 5% more than in the baseline. This economic environment implies a contraction in private spending. Real GDP falls by 1.25% in 2009H2 while unemployment peaks at 11% in late 2010. In 2010 the economy starts recovering gradually as financial conditions improve and credit availability is restored. Because unemployment remains high through 2013, inflation remains subdued, delaying an eventual tightening of monetary policy.

Higher Saving Rate: This new scenario assumes that the saving rate will remain close to current readings through 2013, reaching a peak of 7% in 2010. This assumption leads real GDP to contract in 2009H2 and to rise less rapidly in 2010 than in the baseline. As a consequence, unemployment is higher and inflation is lower, delaying the monetary policy renormalization until mid 2013.

Faster Pace of Financial Recovery: In this scenario, financial conditions improve faster than currently anticipated, leading to an increase in private spending. The economic background is almost exactly the reverse of the one in the *Intensified Financial Fragility* scenario, with risk premiums on corporate bonds 100 basis points lower, the stock market 35% higher and house prices 10% higher. Improved private demand brings unemployment down to 9% by the end of 2010 while inflation is slightly above the baseline forecast. As a consequence of the improved economic conditions, the renormalization process for the FFR starts in early 2011.

Higher Inflation Expectations: This scenario assumes that the rapid expansion of the Federal Reserve's balance sheet raises public concerns about higher future inflation. Long-run inflation expectations increase to 3% by early 2010, feeding into current inflation. The core PCE inflation rate averages 1.5% in 2010 and reaches 2.5% by 2013. These developments force an early increase of the FFR from the effective lower bound by mid-2011 but leave real activity little changed relative to the baseline.

Greater Disinflation: This scenario postulates that the current weakness in demand generates more reductions in prices than in the baseline. Core PCE inflation equals 0.5% in 2009H2 and is close to 0% in 2010 and 2011. With the nominal FFR at the effective lower bound, the real FFR is above the baseline path and, consequently, so are real long rates. However the increase in the long rates is not expected to be big enough to change the outlook for real GDP in any significant way.

Labor Market Damage: The hypothesis behind this scenario is that the depth of the current downturn impairs labor market efficiency. The NAIRU reaches 6.5% in 2010 and remains at such high levels through 2011, possibly due to large inter-sectoral adjustments or the adverse effect of the unemployment spell on workers' skills. This negative supply shock reduces household income and corporate profits, hence consumption and investment are weaker than in the baseline. Real GDP increases in 2009H2 and 2010 but only by 0.6% and 2.25% respectively. The unemployment rate peaks at 11% in 2010. However, the gap between actual unemployment and the NAIRU is smaller than in the baseline, implying slightly higher core PCE inflation (+0.1 percentage point). These inflationary pressures nevertheless only materialize toward the end of the forecast horizon.

3.2 Comparison with Private Forecasters[1]

The FRBNY forecast for 2009 (Q4/Q4) is in line with the Blue Chip real GPD growth estimate and with the median SPF core PCE inflation estimate, while Macro Advisers is more upbeat about real GDP growth in 2009 (Q4/Q4). For 2010 (Q4/Q4) there are more significant differences, with the FRBNY forecast for GDP more pessimistic than all the others. For all the inflation measures, Macro Advisers forecast for 2010 (Q4/Q4) is again significantly lower than our projections. Forecasts are reported in Exhibit B-8.

GDP Growth. The FRBNY forecast for GDP growth in 2009Q3 is 2.5%, a significant increase from the 0.7% estimate of the June Blackbook. This is in line with Macro Advisers' latest forecast. The PSI model, the Blue Chip and the median SPF all forecast a significantly slower GDP growth for 2009Q3, at 1.2%, 1.0% and 0.4%, respectively. In contrast, our GDP growth forecast for 2009Q4, at 0.8%, is significantly lower than the private forecasters' numbers: 1.9% for the Blue Chip, 1.7% for the median SPF and 2.7% for the Macro Advisers. Our projections for the whole year (2009 (Q4/Q4)) is of a decline of 1.1% in GDP growth, the same as the Blue Chip forecast. Macro Advisers forecast for 2009 (Q4/Q4) is significantly more optimistic, at -0.5% (this number was actually revised upwards from the previous level of -0.9%). For 2010 (Q4/Q4), the FRBNY forecast is 2.0%, significantly below both Blue Chip (2.7%) and Macro Advisers (3.5%). The overall dispersion of Q4/Q4 forecasts is similar to the one in the June Blackbook, except for the more optimistic Macro Advisers forecast for 2009 (Q4/Q4).

Core PCE Inflation. Our forecasts for core PCE inflation in 2009Q3 and 2009Q4, respectively 1.2% and 1.0%, are in line with the median SPF and Macro Advisers. Our Q4/Q4 estimates, while perfectly in line with the median SPF, are slightly below Macro Advisers' estimate for 2009 (1.3% vs. 1.5%), and significantly above for 2010 (1.4% vs. 0.7%). This discrepancy is similar to the one registered in the June Blackbook.

[1] Release dates of the private forecasts discussed in this section are in parentheses: Blue Chip consensus (07/10), SPF (05/15), Macro Advisers (07/29 for real GDP growth; 07/07 for inflation measures), and the PSI Model (08/03).

CPI Inflation. Our forecast for 2009Q3 CPI inflation, which at 6.6% is substantially above the June Blackbook, reflects purely temporary factors. The Blue Chip, the median SPF and the Macro Advisers all have lower estimates (2.5%, 1.6% and 3.8%, respectively). For 2009Q4 the FRBNY forecast, at 1.6%, is in line with the Blue Chip and median SPF, but above Macro Advisers' 1.0%. For 2009 (Q4/Q4) CPI inflation, our forecast was revised upwards to 1.7%, from 0.7%. The private forecasts are more in line with our previous estimate, most likely because their release dates are all prior to the July CPI release, which showed higher gasoline prices. For 2010 (Q4/Q4), our forecast of 1.6% is higher than the Macro Advisers estimate of 1.1%.

Core CPI Inflation. For core CPI inflation, the FRBNY forecasts for the second half of the year, revised upwards from the June Blackbook, are both higher than Macro Advisers estimates (1.8% vs. 1.3% for 2009Q3 and 1.5% vs. 0.8% for 2009Q4). A similar discrepancy holds for year-to-year estimates: our 2009(Q4/Q4) and 2010(Q4/Q4) forecast are 1.8% and 1.4%, above Macro Advisers' estimates of 1.5% and 1.0%, respectively.

4. Robustness of Policy Recommendation

4.1 Sensitivity to Alternative Scenarios and Policy Rules

Our current policy recommendation is to keep the target federal funds rate in the 0–0.25% range through 2010. This recommendation is consistent with the *Baseline* policy rule under *all* scenarios except the *Loss of Credibility* scenario [Exhibit D-1], as well as under the expected value of the forecast distribution [Exhibit D-2], as has been the case since the beginning of 2009. Because of the gradualism wired into the *Baseline* policy rule, even under the *Loss of Credibility* scenario the increase in the FFR by the beginning of 2011 is very modest, about 1%, which is about 100bp below the current market-implied path for the federal funds rate.

As discussed in the previous Blackbook, we have introduced the *Nutter* rule in order to rationalize market expectations. This rule places high emphasis on inflation and none on output. Under the expected value of the forecast distribution, as well as under the *Effects of Overheating* scenario, this rule indeed produces a FFR path that is comparable to that implied by federal funds futures [Exhibit D-2 and Exhibit D-3]. Not surprisingly, the *Nutter* rule implies a path that is steeper than the market-implied one under the *Loss of Credibility* scenario [Exhibit D-3]. All other rules (*Asymmetric Price Targeting* and *Outcome-based*) result in a FFR path that is close to zero until the end of 2011. For the *Outcome-based* rule, we show the nominal FFR ignoring the zero bound, which implies that the FFR is as low as -6% by the end of 2010 under the expected value of the forecast distribution.

For all rules except the *Nutter* there is no change in the nominal FFR paths given that they are all constrained by the zero bound. Much of the information provided in this section is therefore about the *shadow* real rates - that is, the real FFR rates implied by the various rules under the various scenarios *ignoring* the zero bound constraint. Exhibit D-1 shows that, under the different scenarios, the "shadow" real rate implied by the *Baseline* rule is in the neighborhood of -4% in 2009Q3, depending on the scenario. These figures can be interpreted as indicating the desired level of expected inflation under each scenario, given that the nominal FFR is constrained at zero. Exhibit D-3 shows the real rate under two of the alternative policy rules, namely the *Asymmetric Price Targeting* and the *Outcome-based* rule.

As a robustness check, we also use the DSGE-VAR and the DSGE models to assess the current stance of monetary policy. We perform a counterfactual exercise eliminating past policy shocks and find that both models predict a counterfactual FFR for the current quarter in line with the policy rate.

4.2 Comparison to Market Expectations

While the market-implied FFR path has moved down a bit in the intermeeting period, it still implies that the beginning of the renormalization process occurs in the first half of 2010 – earlier than envisioned in our policy recommendation. The market path can be reconciled with our outlook by assuming that the market places more weight on the *Nutter* policy rule, which places high emphasis on inflation and none on output. Forecasts from the primary dealers are more in line with our policy recommendation, and have not changed substantially since June. The majority of primary dealers currently expect the FOMC to start raising rates no earlier than 2010Q4.

5. Significant Developments

5.1 Economic Developments

U.S. Data Releases. Data over the intermeeting period were largely in line with expectations. Housing sector data on starts, sales and prices are now showing more encouraging signs of stabilization. Consumer spending remains weak, with the unemployment rate continuing to rise. Benchmark revisions released toward the end of the period indicated a more severe contraction in economic activity, in GDP terms, during the current recession. The larger output loss is more consistent with the magnitude of declines in employment and hours reported in previous data releases.

Real activity. *GDP:* Output fell 1.0% (saar) in 2009Q2 according to the advance estimate, better than the median forecast of a 1.5% decline. Net exports were a major contributor to growth reflecting a collapse in imports, and spending at the federal as well as state and local levels helped to moderate the downturn. Consumer spending remains weak and there was a sharp decline in nonfarm inventories. Taken together, the composition of demand suggests some increased uncertainty for output over the near-term.

Production: Industrial production declined 0.4% in June, slightly better than the median forecast. The milder contraction is consistent with the view that output is bottoming out. Manufacturing output declined 0.6%, with capacity utilization in that sector falling to 64.6% which represents another historical low reading.

Orders and Shipments: Orders for manufactured goods increased 0.4% in June. Orders and shipments of nondefense capital goods ex aircraft rose 2.6% and 0.7%, respectively, in June and were somewhat higher than the numbers incorporated into the initial estimate of Q2 GDP. Taken together, the data offer additional support of a bottoming out in manufacturing.

Retail Sales: Total retail sales rose 0.6% in June, but sales excluding autos, building materials and gasoline fell 0.1%. The release continues to point to a weakened outlook for consumption.

Inventories: The change in real private inventories subtracted 0.8 percentage points from Q2 GDP. Private businesses decreased inventories by $141.1 billion (2005 dollars) in Q2, following a decrease of $113.9 (2005 dollars) billion in Q1. The decline in inventories in Q2 was greater than expected. Going forward, the anticipated turnaround in inventory investment may take place sooner and be stronger than previously thought, and thereby provide a significant boost to output growth in 2009H2.

Productivity: No data releases during the intermeeting period.

Home Sales/Starts: Sales of existing homes rose 3.6% in June to 4.89 million units (saar), above expectations. New single-family home sales registered an 11% increase, well above the consensus expectation. Inventories of new unsold homes have continued to decline, with an 8.8 months supply at the current pace representing the lowest month's supply since October 2007.

Housing starts rose 3.6% in June to 582,000 units (saar), significantly above expectations. Single-family starts surprised even more to the upside, rising 14.4 % to 470,000 units. June marks the fourth consecutive month in which single-family starts have increased.

House Prices: The FHFA home price index rose 0.9% in May, although it remains down 5.6% on a year-over-year basis. The rise is notable for the significant increases in the Pacific and South Atlantic regions. The Case-Shiller (nsa) home price index for 20 large metropolitan areas rose 0.45% in May, the first monthly increase since July 2006. The index is down 17.1% from a year ago.

Construction Spending: Aggregate construction spending in June was stronger than expected and rose by 0.3%. Private nonresidential expenditure fell by 0.4%, with earlier reported increases for the series in April and May revised to indicate no change and a small decline, respectively.

Flow of Funds: No data release during the intermeeting period.

Labor market. *Nonfarm Payrolls:* Nonfarm payrolls dropped by 247,000 in July, which was less severe than the expected loss of around 325,000. In addition, data revisions suggest job losses in recent months were less than previously reported, with current loss estimates of 303,000 and 443,000 for May and June, respectively, versus earlier loss estimates of 322,000 and 467,000. The unemployment rate decreased slightly from 9.5% to 9.4%, the first decline since April 2008. The decline in the unemployment rate was accompanied by a decline in the labor force participation rate from 65.7% to 65.5%. Aggregate hours remained unchanged in July, with average hourly earnings increasing by 0.2%. Initial claims declined to 550,000, while continuing claims increased to 6.3 million. The July Labor Market report offers more signs that the labor market is steadying, but the size of job losses and the average duration of unemployment are indicative of a gradual healing process.

Employment Cost Index: The ECI increased 0.4% over the three months ending in June, putting it only 1.85% above its year ago level. For private industry workers, the ECI only rose 1.5% on a year-over-year basis and marked the smallest percentage change since the series began in 1980. The very slow pace of wage growth raises concerns about the prospects for income growth and consumption going forward.

Trade. The trade deficit narrowed from $28.8 billion in April to $26.0 billion in May. Import volumes fell, pulled down by a steep drop in oil imports. Export volumes rebounded from a poor April showing, but were still below Q1 levels. The advance estimate of GDP reported a net export contribution of 1.4 percentage points for Q2 GDP growth, down from the Q1 contribution of 2.6 percentage points.

Inflation. *CPI:* The CPI and core CPI increased 0.7% and 0.2%, respectively, in June, with both increases 0.1% above expectations. During the past 12 months, the CPI is down 1.2% and the core CPI is up 1.75%. Core goods prices increased 0.3% in June, while core services prices only increased 0.1%. This is the fifth straight month in which the increase in core CPI goods prices has exceeded that for core CPI services. Because of the weakness and higher degree of historical persistence in core services prices relative to core goods prices, these considerations raise concerns of building pressures for a decline in core inflation.

PCE Deflator: The PCE deflator rose 0.5% in June, likely reflecting the increase in gasoline prices, and is 0.4% below its year-ago reading. Core PCE increased 0.2% in June and was also 1.5% higher over the year. The core PCE reading reflects the redefinition of the index to include restaurant prices, resulting in a 0.2% (annual rate) upward revision to the series.

Surveys. *ISM Manufacturing:* The index posted increases in both June and July, and now stands at 48.9. The index has increased for seven consecutive months. While readings just below 50.0 are seen as a sign of steady to slightly declining manufacturing activity, as a rough rule of thumb readings above 41.2 are generally associated with an expansion in the overall economic activity.

ISM Non-Manufacturing: The service sector declined at a faster rate in July, which came as a surprise after months of slowing declines. The index increased 3.0 points to 47 in June, but then slipped to 46.4 in July. A reading of 50.0 indicates growth.

Foreign Data Releases. The end of the global downturn is strongly suggested by better production and export data and improvements in global confidence measures.

Europe: Euro area industrial production finally increased in May, while confidence measures continued to improve in July. The unemployment rate hit 9.4% in June with the number of unemployed up 27% over the year.

U.K. GDP contracted 3.2% (saar) in Q2. Production increased in June for the first time since March 2008. The labor market continues to worsen while the housing market is stabilizing.

Asia: Japanese production and exports surged in Q2, but remain well below year-ago levels. The Tankan survey in June showed an improvement in business sentiment for the first time in two years.

China's GDP grew 18% (saar) in Q2, pushed higher by policy lending and fiscal stimulus. Credit is up more the $1.1 trillion (25% of GDP) since the end of 2008. Exports remain weak. Output in Q2 was also surprisingly strong in Korea and Singapore.

Latin America: There are tentative signs that the Mexican manufacturing sector is stabilizing. Brazil's GDP appears to have increased in Q2, helped by the expansion in state bank lending and tax cuts on auto purchases.

5.2 Financial Markets

U.S. Markets. Financial market conditions continued to improve over the intermeeting period. Equity markets rallied, reflecting better than expected second quarter earnings reports as well as somewhat more positive economic data releases. At the same time, corporate credit spreads tightened considerably, especially in the high yield sector. While on balance nominal Treasury yields remain largely unchanged since the last FOMC meeting, they did experience some volatility over the intermeeting period. The term structure of real rates flattened slightly, thereby offsetting the steepening observed prior to the June FOMC meeting. Fed Funds and Eurodollar futures markets were also quite volatile, but did not significantly depart from their June FOMC levels.

Driven mostly by positive second quarter corporate earnings reports and by somewhat improved macroeconomic conditions, broad equity indices rose significantly over the past weeks, ending the intermeeting period about 12% higher. Financial shares performed largely in line with the broader market.

Credit market conditions have also improved notably since the June FOMC meeting with single-A corporate bond option-adjusted spreads narrowing 66 basis points to 2.27% and BB-rated corporate bond spreads narrowing 157 basis points to 6.21%. Financial sector credit spreads have performed similarly to the broader market since their decline halted prior to the June FOMC meeting. [Exhibit A-7]

Short-term funding conditions continued to improve over the intermeeting period. The US dollar denominated 3-month Libor rate has declined to 47 basis points from 61 basis points at the time of the June FOMC meeting. Over the same period, the 3-month Libor-OIS spread has fallen to a current level of 27 basis points which is well below the values seen since August 2007 but still above the pre-crisis levels of just a few basis points. [Exhibit A-8]

Nominal Treasury yields continued to be volatile since the last FOMC meeting but ended the intermeeting period largely unchanged on balance. Forward looking measures of Treasury yield volatility have retraced some of their recent increase, but are still elevated by historical standards. This implies that market participants continue to expect relatively high levels of interest rate volatility going forward. [Exhibit A-3 and Exhibit A-6]

A model of the term structure of Treasury yields maintained in the Capital Markets Research Function at the New York Fed suggests that much of the recent dynamics in nominal interest rates can be attributed to movements in term premia. The close correlation between term premium estimates from the model and the MOVE index, a measure of expected future Treasury yield volatility implied by option data, corroborate the interpretation that the former captures a premium that investors demand for being exposed to interest rate risk. [Exhibit A-11]

The term structure of real rates has flattened over the intermeeting period, largely retracing the steepening observed prior to the June FOMC meeting. Accordingly, near-term implied breakeven inflation rates have decreased slightly while long-term breakeven inflation has increased somewhat. Expected inflation at the 5-year horizon currently stands at 1.16%, while the 5-year forward breakeven inflation rate increased by 39 basis points over the same period to a current level of 3.24%. [Exhibit A-4]

While Fed Funds and Eurodollar futures prices continued to be volatile, they ended the intermeeting period largely unchanged with respect to their June FOMC levels. Taking into account a constant risk-premium following the assumptions maintained by staff at the Board of Governors, the futures prices currently imply a tightening of policy starting in the second quarter of 2010. [Exhibit A-5]

As time-varying term premia potentially distort the expected Fed Funds path inferred from futures markets, it is useful to also consider direct measures of private sector expectations. The Blue Chip Financial Forecasts (BCFF) survey provides a comprehensive dataset about private sector expectations of financial conditions. The survey is conducted on a monthly basis and queries about 45 professional forecasters about their average expectations for a range of financial indicators including the Fed Funds rate over the next five quarters ahead.

While the path of policy implied by Fed Funds and Eurodollar futures steepened markedly between May and June, the mean and median forecasts from the Blue Chip survey did not change much over that period. However, at the same time the disagreement among forecasters, especially for the third quarter of 2010, increased considerably. According to the most recent BCFF survey, conducted on July 22 and 23, average Fed Funds forecasts are again largely unchanged with respect to June while the median forecast for the third quarter of 2010 decreased from 0.7% to 0.5%. More importantly, the disagreement among forecasters as measured by the interquartile range of individual expectations fell markedly in July, thereby more than reversing the increase in forecast dispersion seen between May and June.

Of note, the mean and median forecasts from the BCFF survey are somewhat higher than the corresponding forecasts form the Desk's Primary Dealer survey. While the median Dealer currently predicts the Fed Funds rate to be at 0.125% and 0.5% in the third and fourth quarter of 2010, the median forecasts from the Blue Chip panel are 0.5% and 1.0% for the same two quarters, respectively. This implies that the median forecaster in the BCFF expects the Fed to raise interest rates one quarter earlier than the median Dealer currently predicts. The difference between the two surveys is likely primarily due to compositional effects. Indeed, a look at the individual forecasts reveals that those institutions which are present in both surveys largely report the same forecasts even though the BCFF surveys was conducted about 10 days before the Dealer survey. [Exhibit A-12]

Finally, while the Federal Reserve has continued its outright purchases of Treasury, agency MBS and agency debt securities at a relatively constant pace, demand for most liquidity facilities has continued to decline over the intermeeting period, reflecting further improvements in funding conditions. Accordingly, the composition of the Fed's balance sheet has continued to shift from short-term lending facilities to outright holdings of Treasury and agency securities. [Exhibit A-8 and Exhibit A-9]

Foreign Markets. Global funding conditions improved over the inter-meeting period, as LIBOR-OIS spreads declined 12 and 37 basis points, respectively, in the euro area and the U.K.

- As participation in the U.S. dollar auctions by the ECB, the Swiss National Bank, the Bank of England and the Bank of Japan continued to decline since the last FOMC meeting, the allotted amounts of dollars in these auctions were also scaled down. In another sign of improved liquidity conditions, the ECB, the SNB and the Bank of England are to discontinue their 28-day dollar auctions.

- The Bank of Japan extended the duration of its range of financial market support programs from September through the end of 2009. This 3-month extension was shorter than expected and might signal that the Bank is preparing to start to unwind these programs by year-end.

Liquidity conditions for emerging market economies are improving with a decreasing need for liquidity support for these economies and declining external debt spreads. Credit conditions remain tight although there are signs of stabilization in Emerging Asia.

- Reflecting ongoing improvements in liquidity conditions, the Bank of Korea reduced its Federal Reserve dollar swap line to $8 billion, allowing $8.3 billion to roll off since mid-March. After a one-time draw in April, Mexico made no more use of its dollar swap line.

- Particularly in Emerging Europe credit conditions are tight; for example, Hungary saw a large pull-back in Swiss franc-based lending to both households and firms. Emerging Asia showed some signs of a credit thaw. Mortgage and corporate credit lending appeared to recover slowly in Korea and Singapore. Of course, China is a notable outlier with a large, government-induced surge in lending volumes.

Signaling an easing of the global economic slowdown, higher reported earnings for the financial sector, as well as declining risk aversion amongst investors, resulted in higher global equities since the last FOMC meeting.

- In Europe and Japan, equities were up between 4% and 10%, whereas emerging market equities showed even larger gains, in particular in Emerging Asia. European financials also gained substantially on the back of higher reported financial sector earnings – for example, Barclays and Deutsche Bank rose, respectively, 30% and 14%.

- Euro area and U.K. 10-year government bond yields decreased 18 and 13 basis points, respectively, since the last FOMC meeting. The euro area decline can be attributed in equal parts to declines in break-even inflation rates and in real interest rates, as euro area inflationary pressures abated substantially. This potentially gives the ECB some leeway to allow for a more accommodative policy stance. In the U.K., bond yields declined after the Bank of England unexpectedly increased its bond purchase program on August 6th.

The trade-weighted U.S. dollar index fell over the period as the growth outlook abroad became much more positive and investors' risk appetite increased. The dollar depreciated *vis-à-vis* the euro and the yen by 3% and 1%, respectively. The dollar remained broadly unchanged against the Chinese yuan and forward contracts suggest modest dollar weakening over the next 12 months.

5.3 Global Economic Policy

With some central banks continuing to ease their policies over the intermeeting period, there are mixed signals that the global loosening cycle that began last September is nearing an end:

- The ECB kept its policy rate unchanged at 1.00% at its July and August meetings. Under the one-year refinancing program it started up last month, the ECB lent banks €442 billion, much more than expected. In addition, the purchase of €60 billion in covered bonds started on July 6th, with €5 billion spent so far. As a consequence, yield spreads on covered bonds relative to German government bonds narrowed over the intermeeting period and issuance activity picked up. This program is set to finish by July 2010.

- The Bank of England also kept its policy rate unchanged, but decided at both its June and July meetings to maintain the total amount of asset purchases financed with central bank reserves at GBP 125 billion rather than increase it further. However, at its August meeting the Bank unexpectedly decided to expand its asset purchase program to GBP 175 billion, which it thinks it can complete over the next three months. The main rationale for the decision seems to be persistently tight credit conditions and a very moderate money supply growth despite the asset purchases.

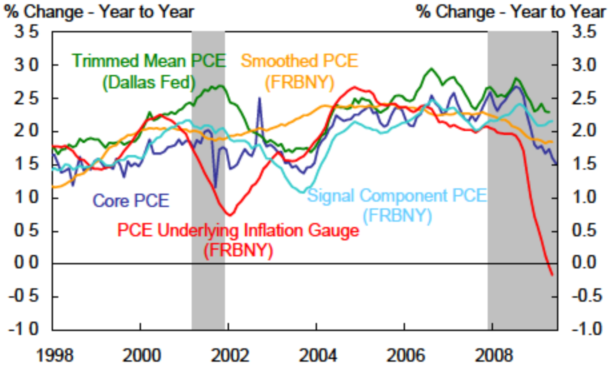
- Of the remaining G-20 central banks, the Swedish Riksbank surprised the markets as it cut its policy rate by 25 basis points to 0.25% on July 2nd and committed to keep its rate at this level over the coming year. Canada and Switzerland kept their policy rates unchanged, with the SNB continuing the outright purchase of Swiss franc bonds and interventions to prevent the Swiss currency from appreciating against the euro.

- Elsewhere, central banks in Brazil, Mexico and Hungary lowered their respective policy rates between 25 and 100 basis points each. In Emerging Asia outside China, monetary easing looks largely complete, whereas in China loan growth has been slowing after the earlier policy-induced surge and authorities are implementing minor restrictions on bank lending. U.S. dollar reserves have been increasing over the period in Emerging Asia, Brazil, Russia and Turkey, as authorities attempted to limit an appreciation of their domestic currencies relative to the dollar.

A. Significant Developments

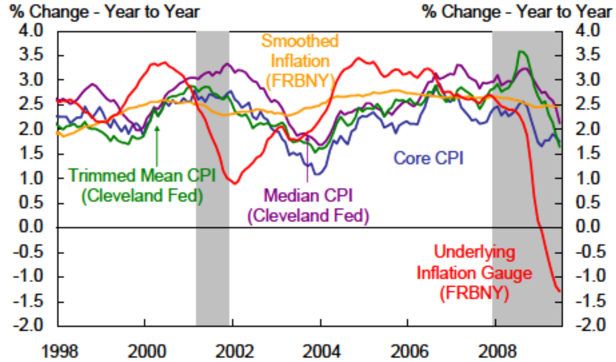
Exhibit A-1:
Measures of Trend Inflation

Alternative Measures of PCE Inflation



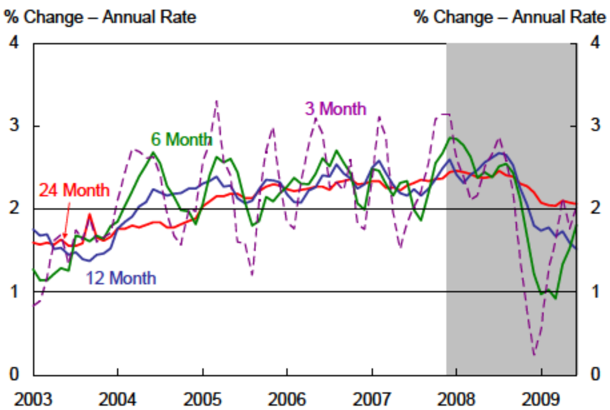
Source: Bureau of Economic Analysis, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Alternative Measures of CPI Inflation



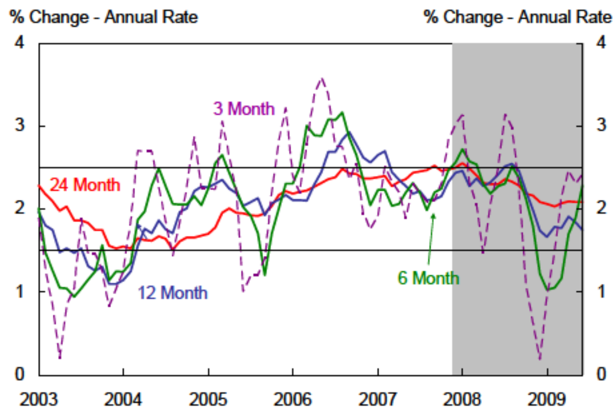
Source: Bureau of Labor Statistics, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Core PCE over Various Horizons



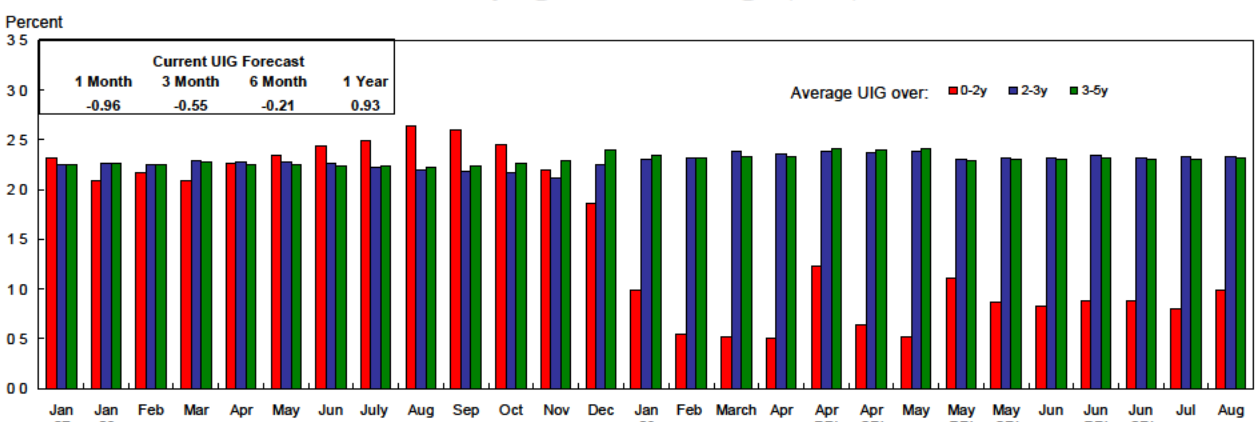
Source: Bureau of Economic Analysis

Core CPI Inflation over Various Horizons



Source: Bureau of Labor Statistics

Exhibit A-2:
Underlying Inflation Gauge (UIG)

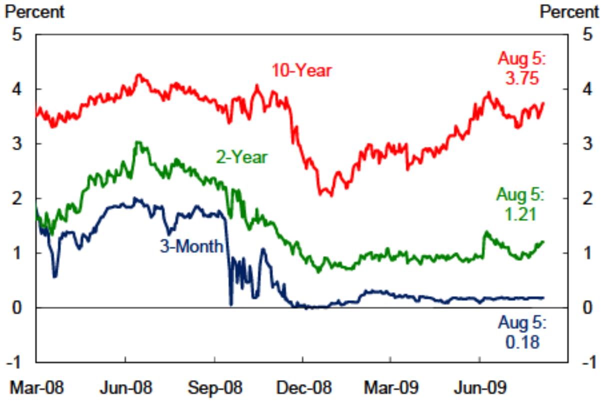


Source: MMS Function (FRBNY) and Swiss National Bank

A. Significant Developments

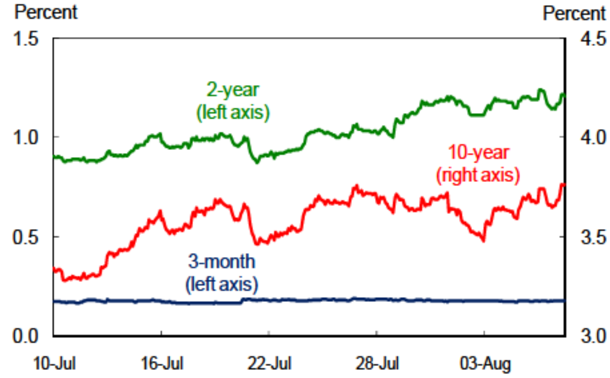
Exhibit A-3:
Treasury Yields

Short- and Long-Term Rates



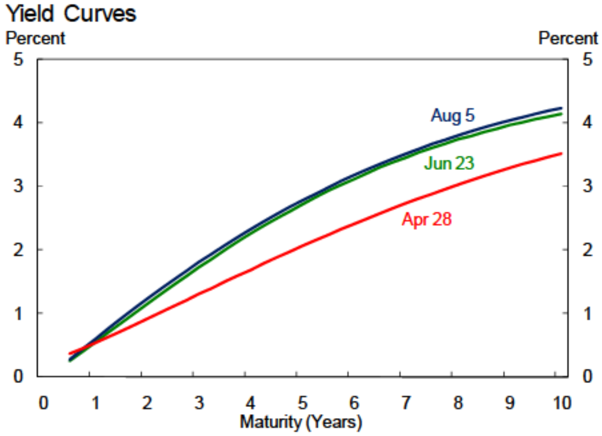
Source: Bloomberg Note: Yields of on-the-run securities

Short- and Long-Term Rates (Intraday)



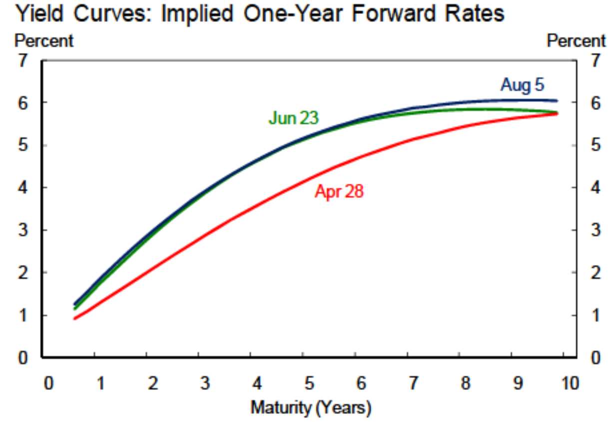
Source: Bloomberg Note: On-the-run securities, 8:00 am to 4:00 pm.

Yield Curves



Source: Federal Reserve Board

Yield Curves: Implied One-Year Forward Rates

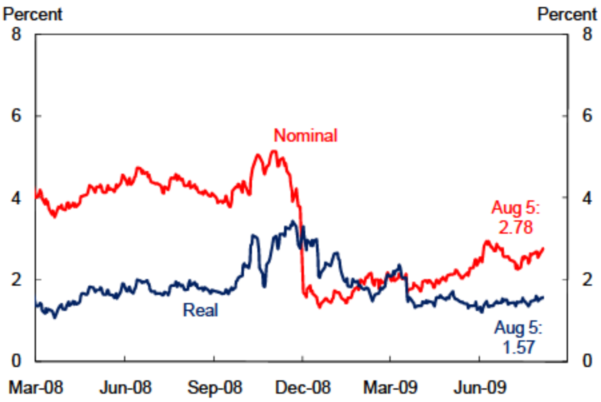


Source: Federal Reserve Board

A. Significant Developments

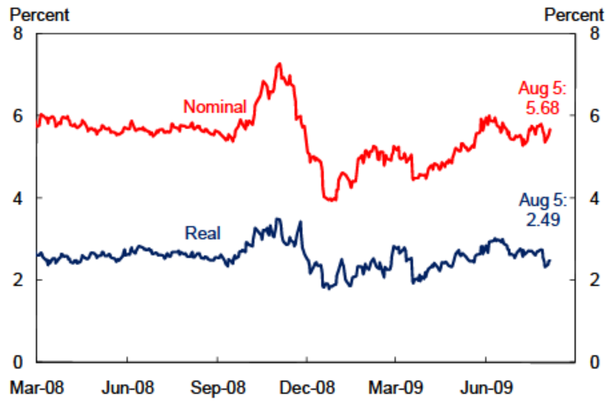
Exhibit A-4:
Real Yields and Implied Inflation

5 Year Spot Rate



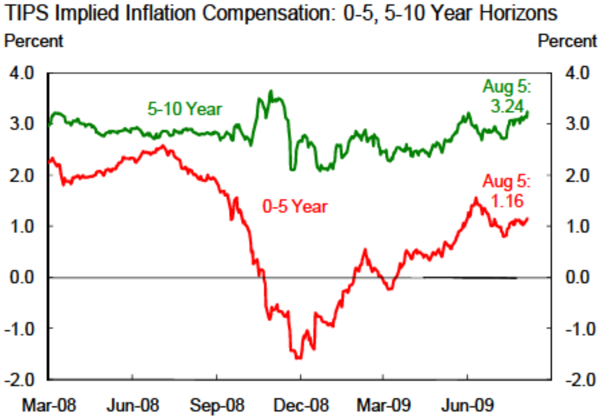
Source: Federal Reserve Board

5-10 Year Forward Rates



Source: Federal Reserve Board

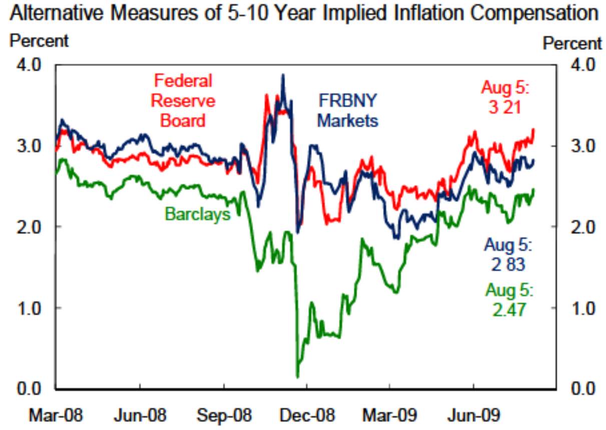
TIPS Implied Inflation Compensation: 0-5, 5-10 Year Horizons



Source: Federal Reserve Board

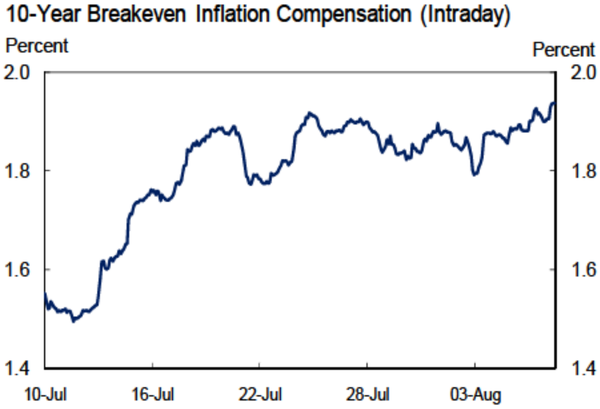
Note: Carry-adjusted

Alternative Measures of 5-10 Year Implied Inflation Compensation



Source: Federal Reserve Board, Barclays, and FRBNY calculations

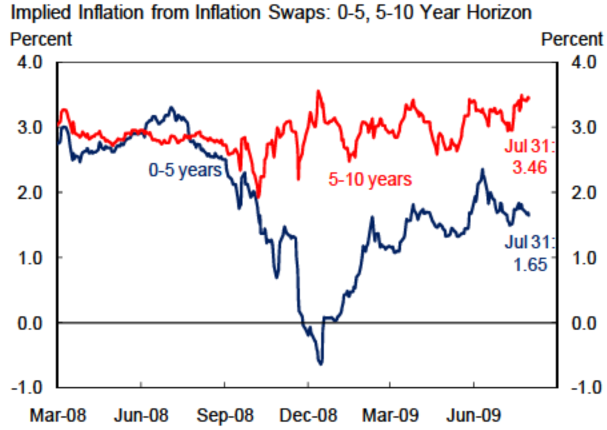
10-Year Breakeven Inflation Compensation (Intraday)



Source: Bloomberg

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

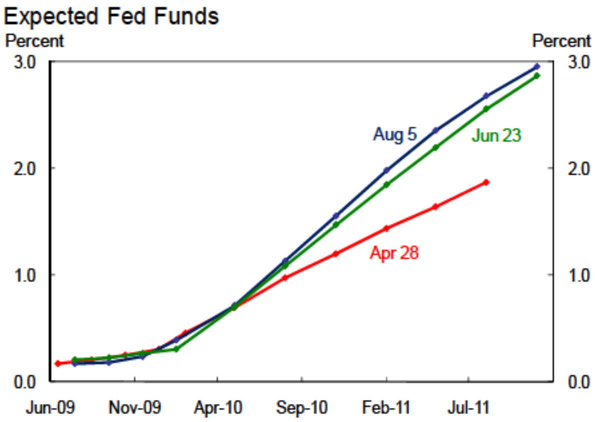
Implied Inflation from Inflation Swaps: 0-5, 5-10 Year Horizon



Source: Barclays

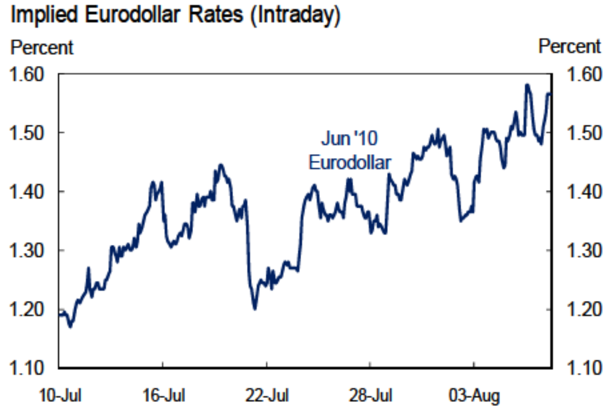
A. Significant Developments

Exhibit A-5:
Policy Expectations



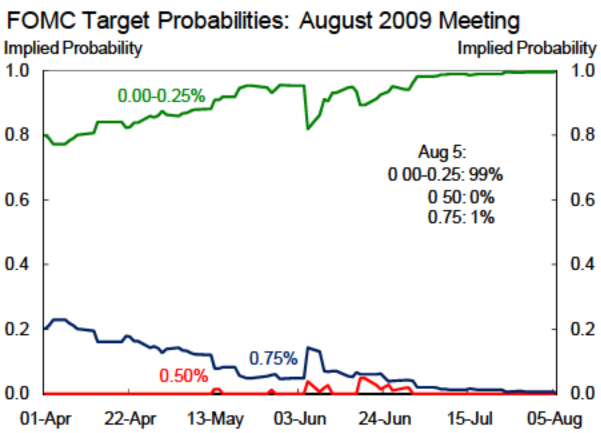
Source: Federal Reserve Board

Note: Estimated using fed funds and Eurodollar futures.



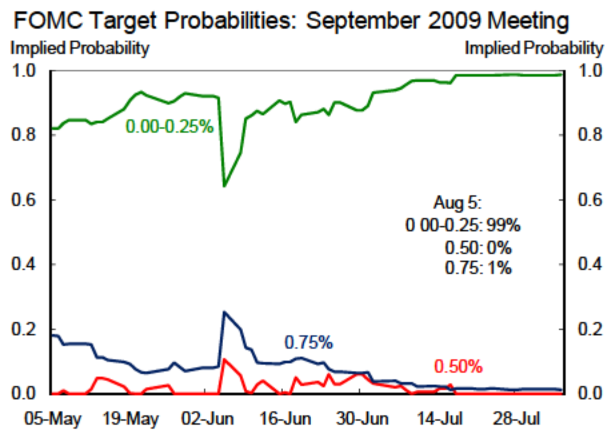
Source: Bloomberg

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



Source: Cleveland FRB

Note: Estimated using options on fed funds futures.



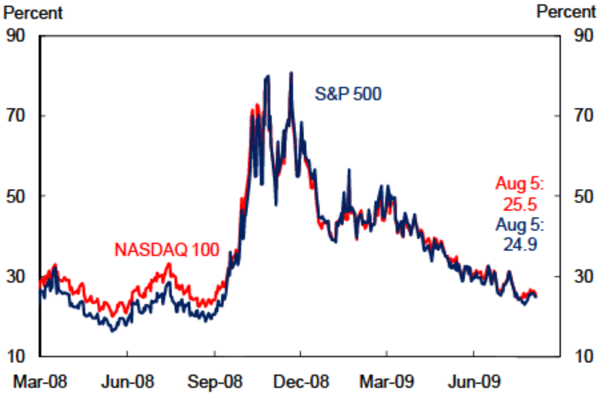
Source: Cleveland FRB

Note: Estimated using options on fed funds futures.

A. Significant Developments

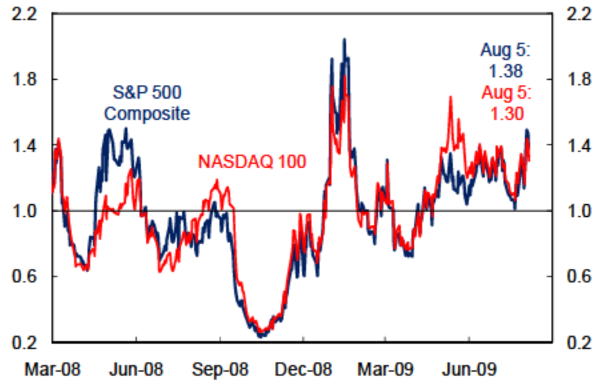
Exhibit A-6:
Implied Volatility

Equity Index Implied Volatility: 1-Month



Source: Datastream

Ratio of Implied to Realized Volatility



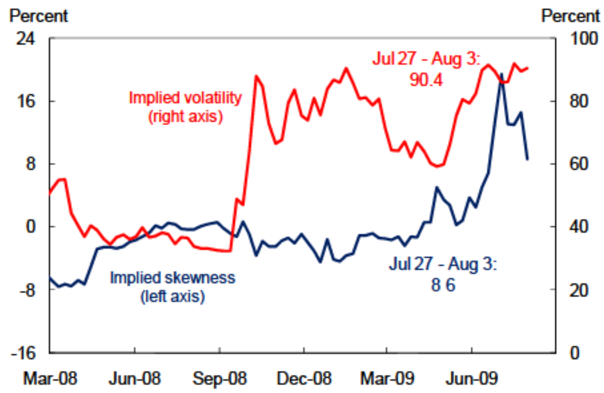
Source: Datastream

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

Option and Swaption Volatility Expectations

Source: Merrill Lynch, Haver

Eurodollar Options: Implied Skewness and Volatility

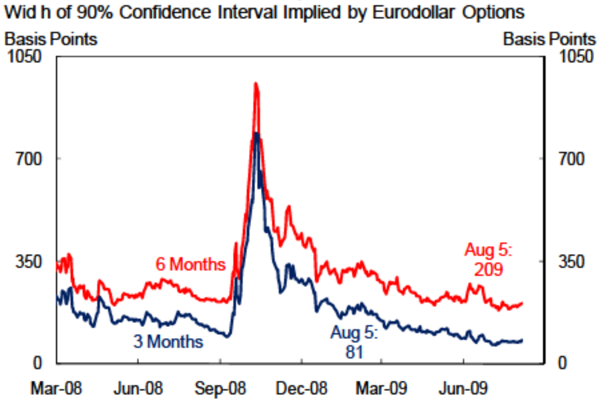


Source: CME and FRBNY calculations

Note: Weekly averages based on 3-9 month implied volatilities from Eurodollar futures options.

Short-Term Interest Rate Expectations

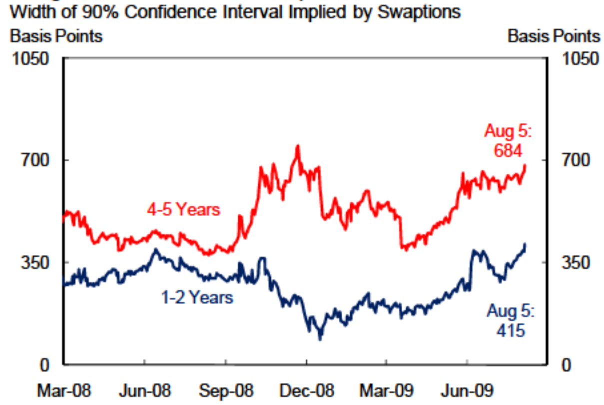
Wid h of 90% Confidence Interval Implied by Eurodollar Options



Source: Datastream, FRBNY calculations

Long-Term Interest Rate Expectations

Width of 90% Confidence Interval Implied by Swaptions



Source: Datastream, FRBNY calculations

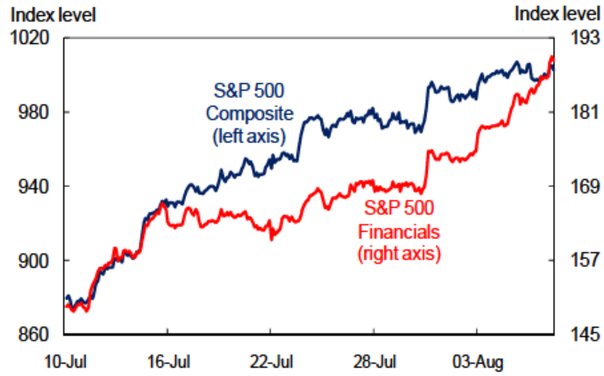
A. Significant Developments

Exhibit A-7:
Equity and Credit

Equity Index Levels

Source: Datastream

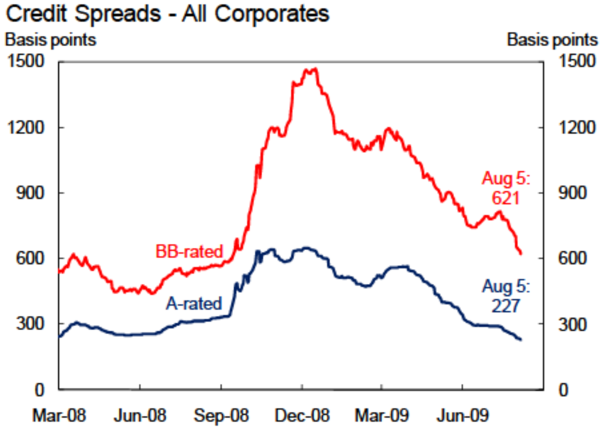
S&P 500 Indices (Intraday)



Source: Bloomberg

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

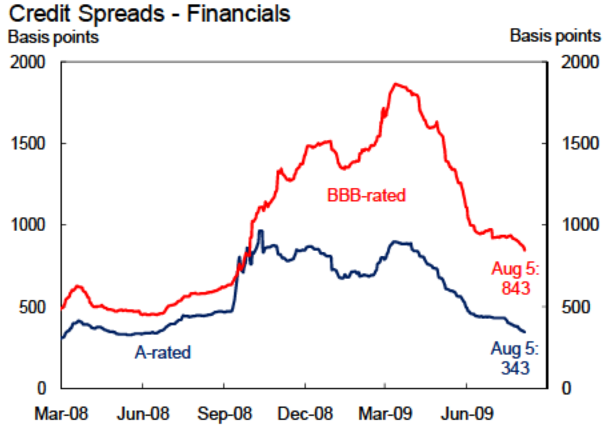
Credit Spreads - All Corporates



Source: Merrill Lynch

Note: Option-adjusted spreads.

Credit Spreads - Financials



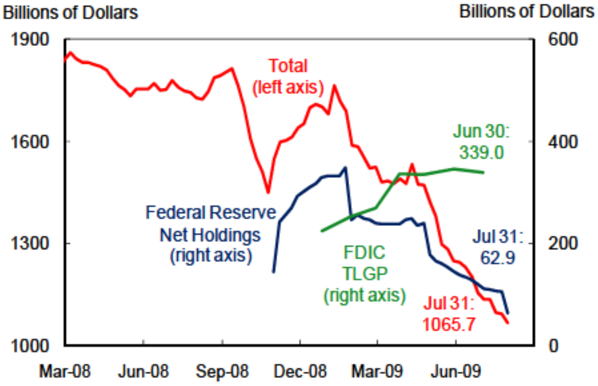
Source: Merrill Lynch

Note: Option-adjusted spreads.

A. Significant Developments

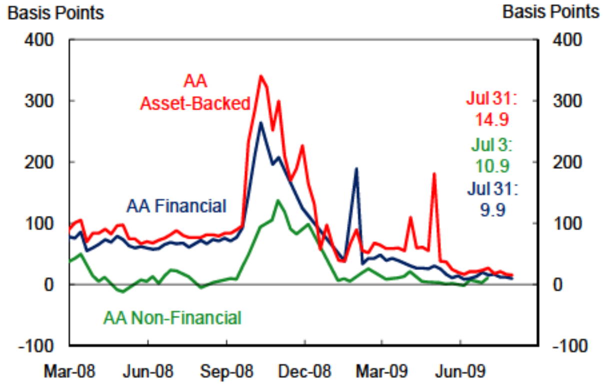
Exhibit A-8: Liquidity Facilities

CPFF and Commercial Paper Outstanding



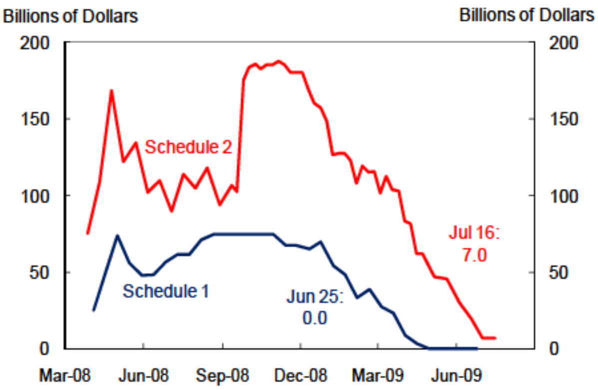
Source: Federal Reserve Board, Haver

3-month CP Rates over OIS



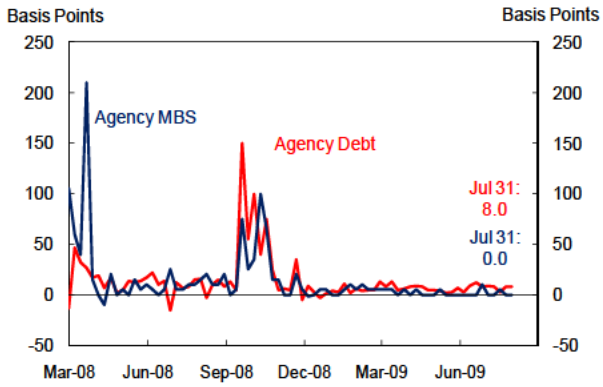
Source: Federal Reserve Board, Haver, Bloomberg

TSLF Total Outstanding



Source: Federal Reserve Bank of New York

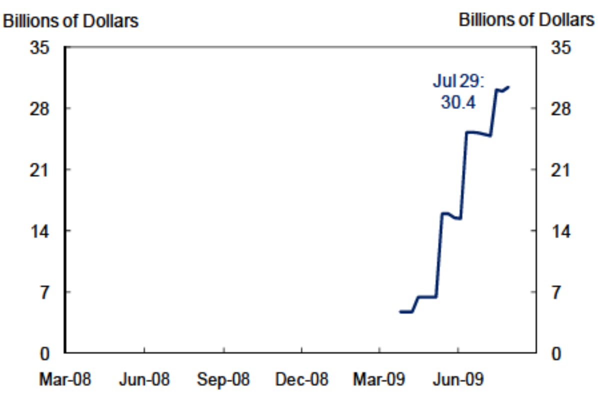
Overnight Financing Spreads



Source: Bloomberg

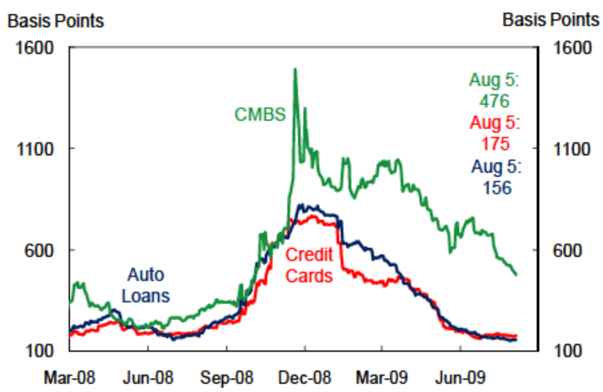
Note: Spreads are between overnight agency debt and MBS and Treasury general collateral repo rates

TALF Total Outstanding



Source: Federal Reserve Board

AAA-Rated ABS/CMBS Spreads



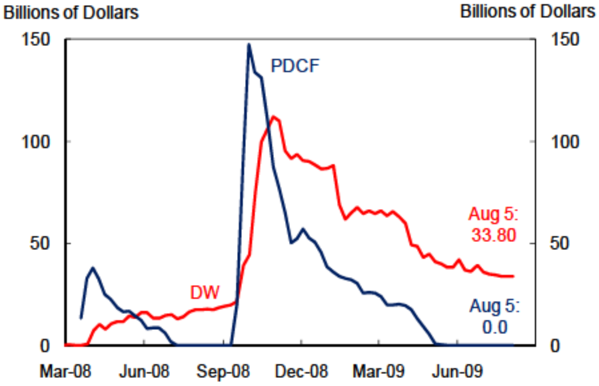
Source: Merrill Lynch

Note: Option-adjusted spreads.

A. Significant Developments

Exhibit A-8:
Liquidity Facilities

Discount Window and PDCF Borrowing

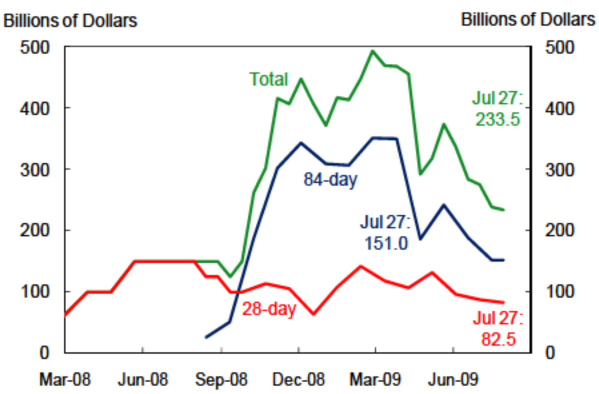


Source: Federal Reserve Board

Sector CDS Spreads

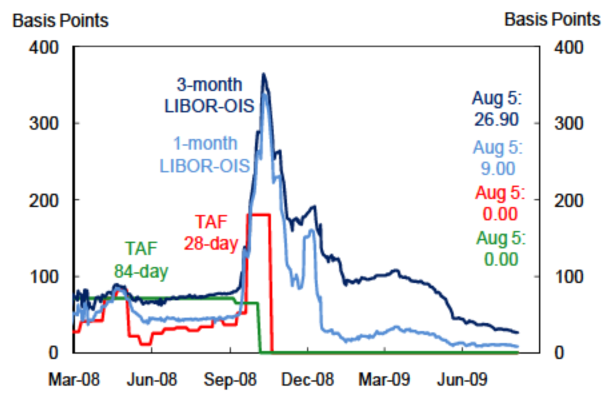
Source: Datastream

TAF Total Outstanding



Source: Federal Reserve Board

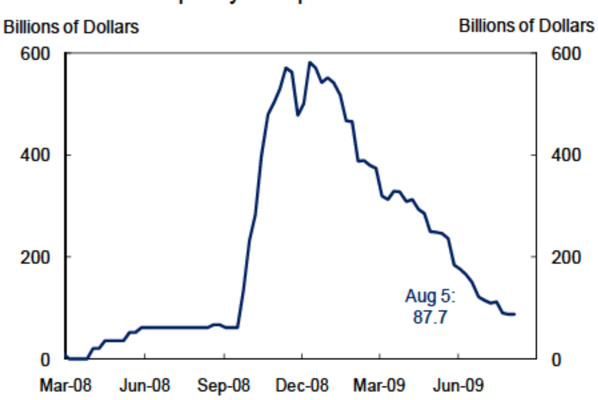
TAF Spreads and Libor to OIS



Source: Federal Reserve Board, Bloomberg

Note: The TAF spread is defined as the stop-out rate less the minimum bid rate.

Central Bank Liquidity Swaps



Source: Federal Reserve Board, Bloomberg

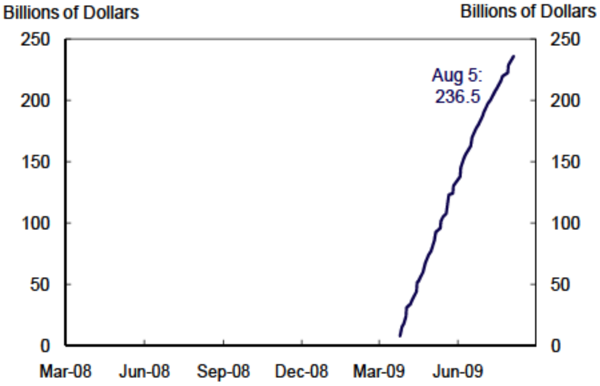
Euro-Dollar Swap Implied Basis Spreads

Source: Reuters, Tullett

A. Significant Developments

Exhibit A-9:
Outright Purchase Program

Treasury Outright Purchases

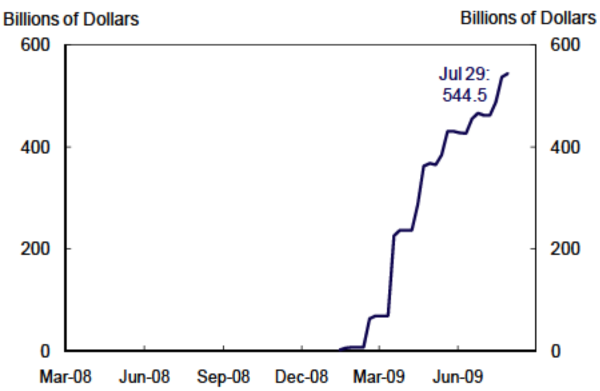


Source: Federal Reserve

Treasury Rates

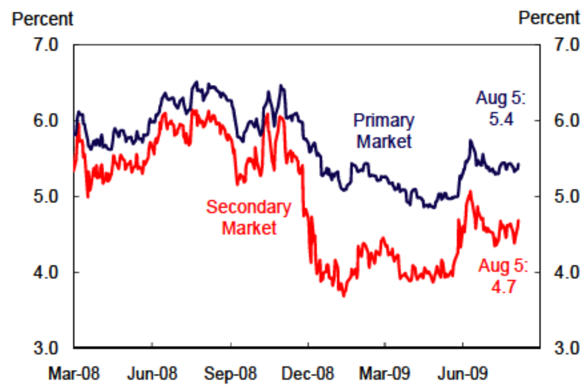
Source: Wall Street Journal, Haver

Agency MBS Net Outright Purchases



Source: Federal Reserve

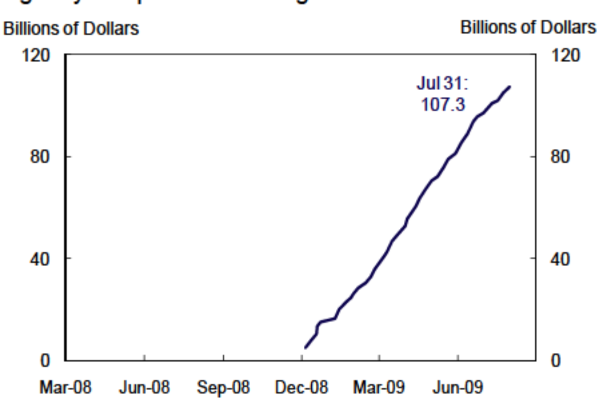
Mortgage Market Rates



Source: Bloomberg

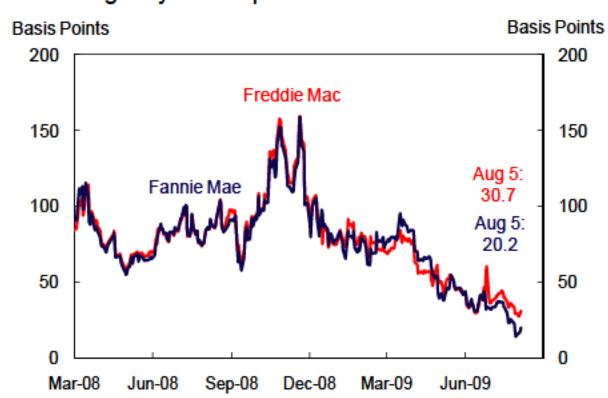
Note: 30-Year Fixed Mortgage rate and Fannie Mae current coupon yield.

Agency Coupon Debt Outright Purchases



Source: Federal Reserve

5-Year Agency Debt Spreads

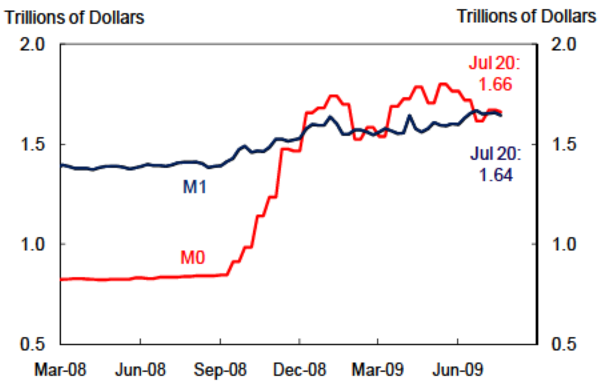


Source: Bloomberg

A. Significant Developments

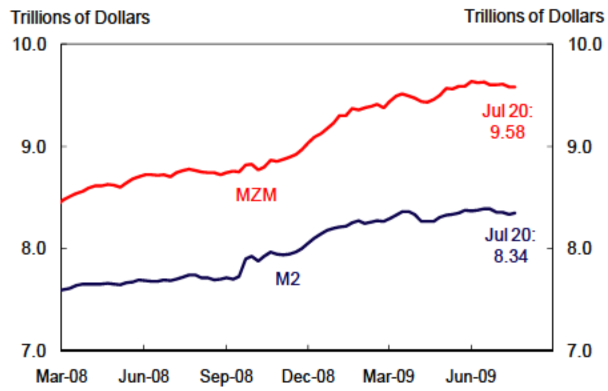
Exhibit A-10:
Money and Banking

Measures of Money Supply: M0, M1



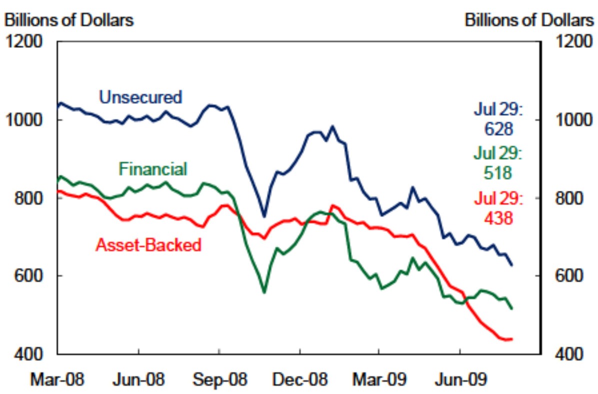
Source: Federal Reserve Board, Haver

Measures of Money Supply: M2, MZM



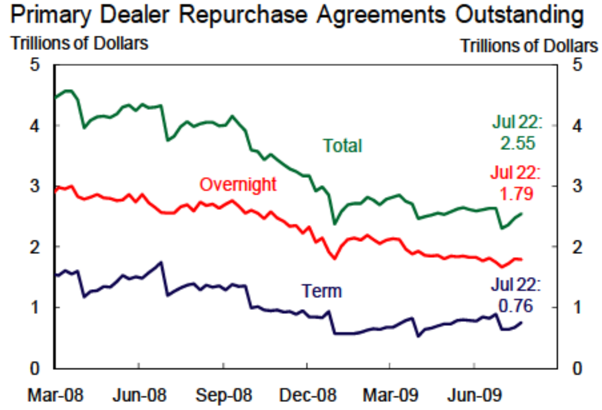
Source: Federal Reserve Board, Haver

Commercial Paper Outstanding



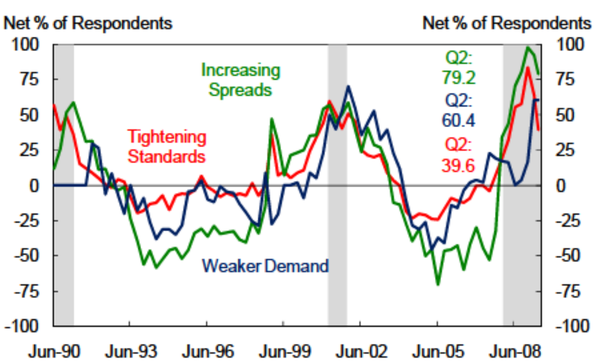
Source: Federal Reserve Board

Primary Dealer Repurchase Agreements Outstanding



Source: Federal Reserve Board

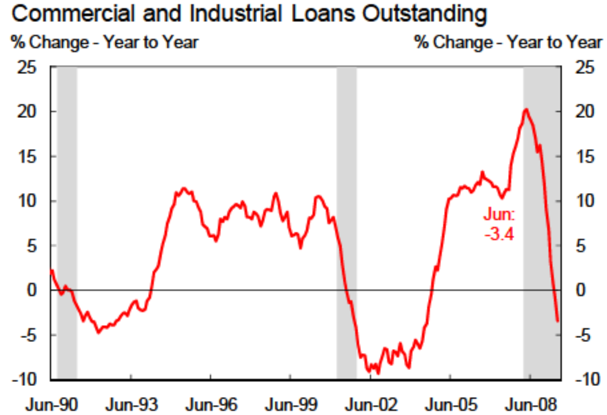
Bank Lending Practices



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

Source: Federal Reserve Board

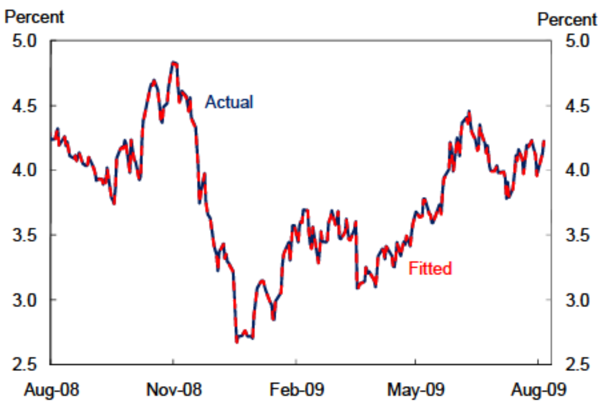
Commercial and Industrial Loans Outstanding



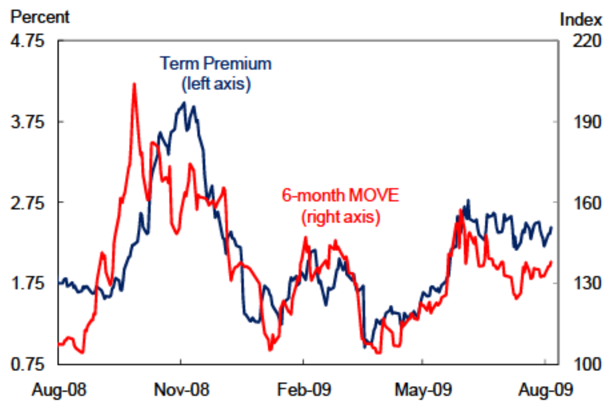
Source: Federal Reserve Board

A. Significant Developments

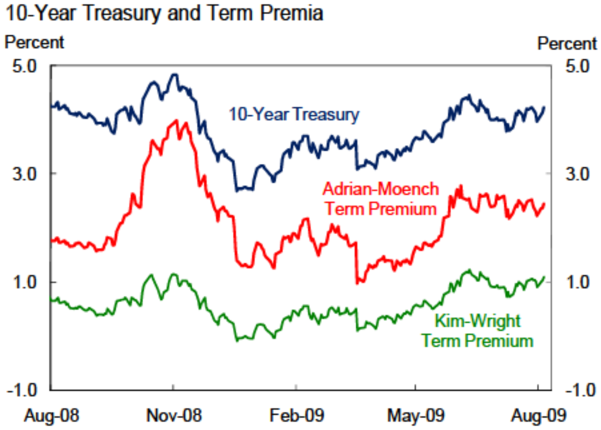
Exhibit A-11:
Estimates of Term Premia in Treasury Yields



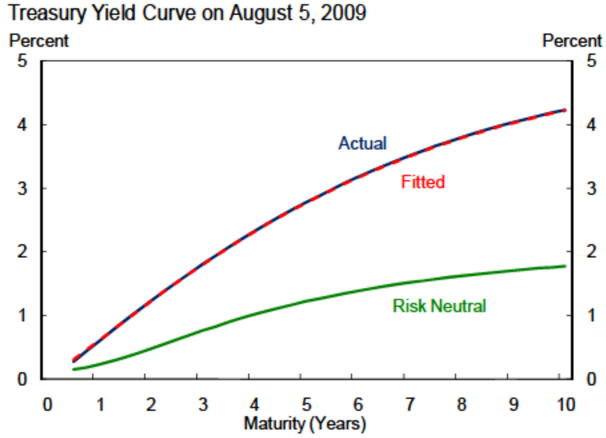
Source: Authors' calculations, Federal Reserve Board



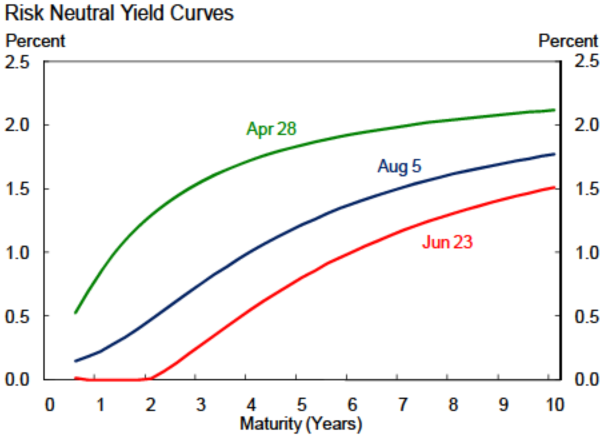
Source: Authors' calculations, Haver, Merrill Lynch



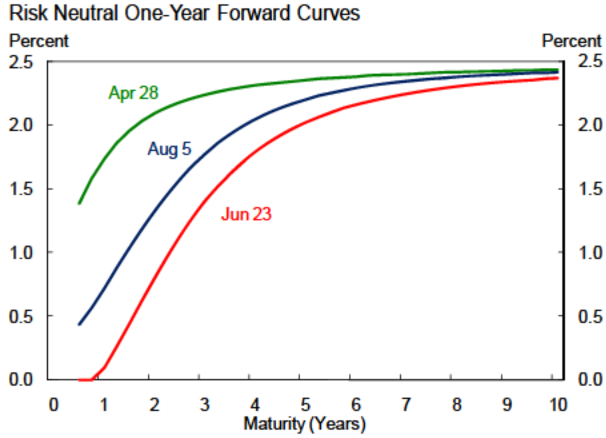
Source: Authors' calculations, Federal Reserve Board



Source: Authors' calculations, Federal Reserve Board



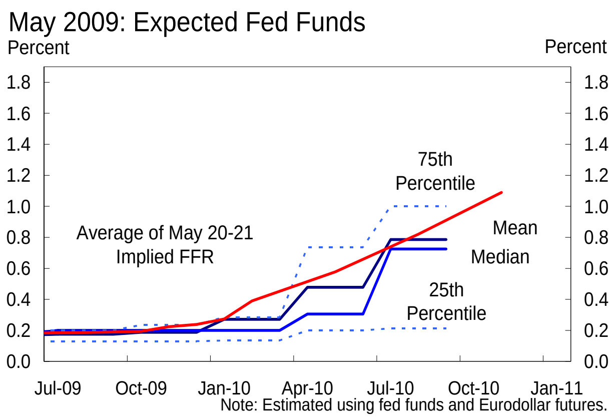
Source: Authors' calculations



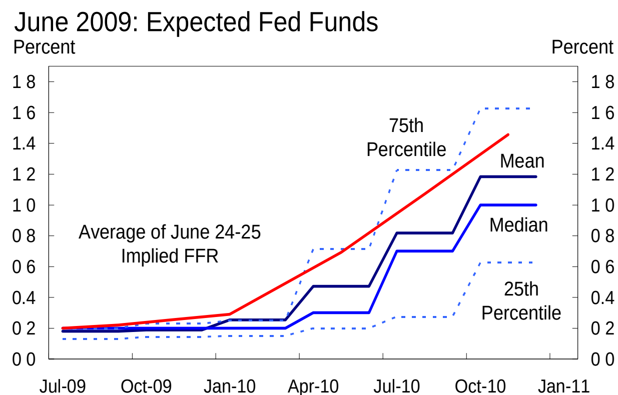
Source: Authors' calculations

A. Significant Developments

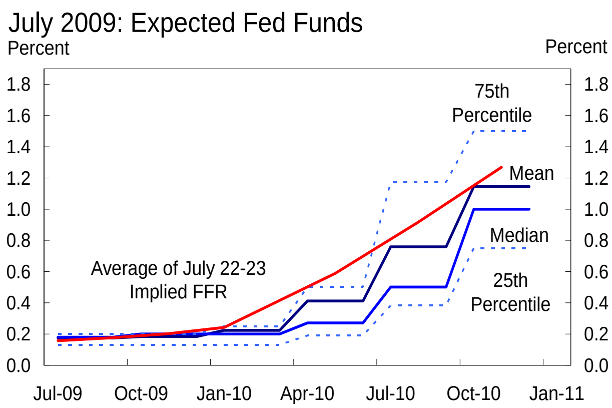
Exhibit A-12:
Blue Chip Financial Forecasts: Policy Expectations



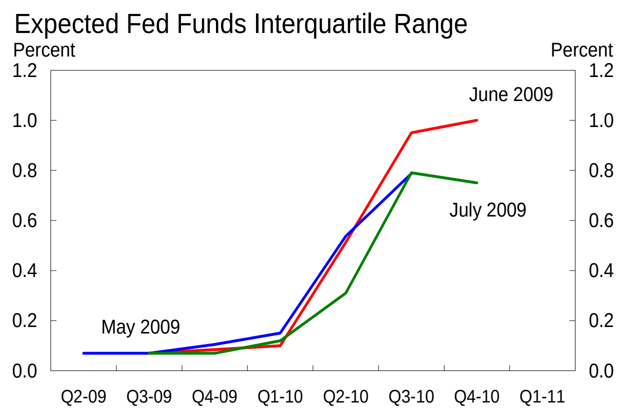
Note: Estimated using fed funds and Eurodollar futures.
The BCFF survey was conducted on May 20-21.



Note: Estimated using fed funds and Eurodollar futures.
The BCFF survey was conducted on June 24-25.



Note: Estimated using fed funds and Eurodollar futures.
The BCFF survey was conducted on July 22-23.



Source: Blue Chip Financial Forecasts

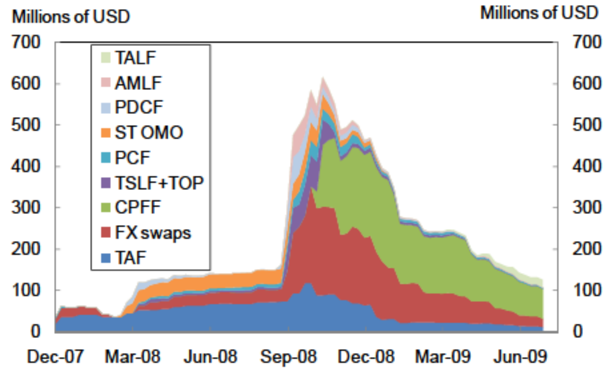
A. Significant Developments

Exhibit A-13:
Income Effects of Fed Balance Sheet Changes

Recent Developments

- Total facility interest income over the four weeks ending July 22 was $549mn, down from $646mn over the previous four weeks. The difference is largely driven by smaller outstanding amounts in the CPFF and the FX swaps.
- 2009 pro-forma income from the liquidity facilities has declined commensurately and is now $9.2bn.
- Pro forma income from all sources going forward is $59.4bn (based on the 7/22/09 balance sheet), with declining income from the facilities more than offset by increased income from securities held outright.

Weekly Income by Facility



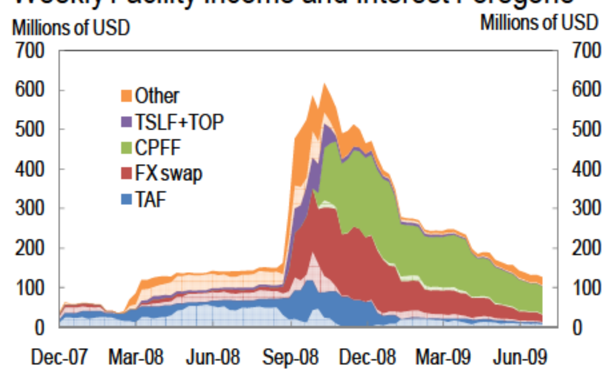
Sources: Federal Reserve, Bloomberg, foreign central banks.

Income Effects of Liquidity Facilities

Period	Interest/Fee Income	Interest Foregone	Difference
2008	11,773	3,713	8,060
2009 YTD	6,682	986	5,696
2009 Pro Forma	9,177	1,464	7,713
Last 4 weeks	549	80	469
Total since 8/8/07	**19,145**	**4,766**	**14,379**

Note: Figures in millions of USD.

Weekly Facility Income and Interest Foregone



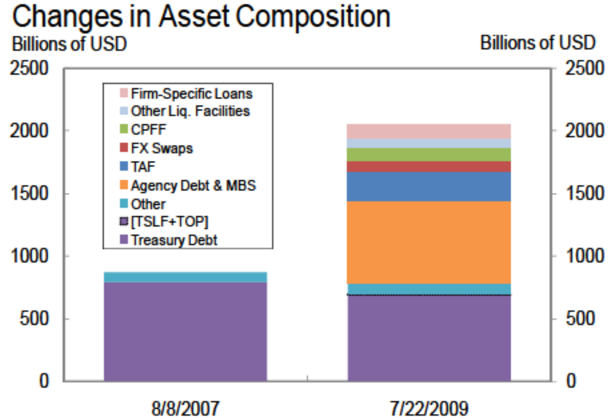
Note: Lighter colors indicate interest foregone.
Sources: Federal Reserve, Bloomberg, foreign central banks.

Pro Forma Income, Next 12 Months

Line Item	Balance Sheet 8/8/07	Balance Sheet 7/22/09	Difference
Sec. Held Outright	24,283	53,297	29,013
Liquidity Facilities	0	5,545	5,545
Firm-Specific Loans	0	2,111	2,111
Other	821	802	-19
Liabilities	-30	-2,370	-2,340
Net	**25,074**	**59,384**	**34,310**

Note: Estimates based on 8/8/07 and 7/22/09 balance sheets along with common (and current) assumptions about policy and market interest rates. Figures in millions of USD.

Changes in Asset Composition

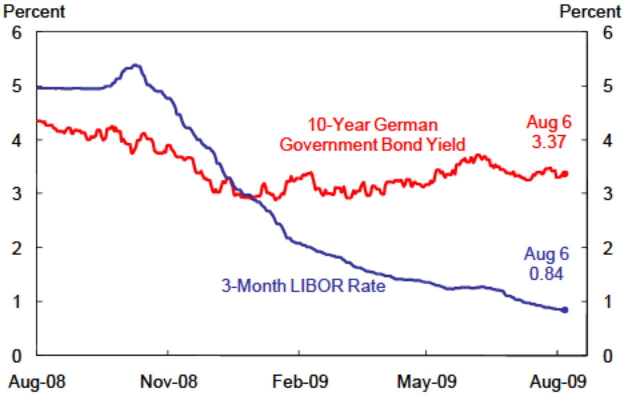


Source: Federal Reserve.

A. Significant Developments

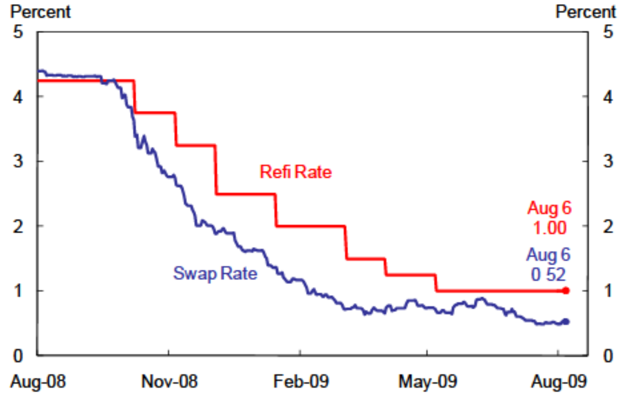
Exhibit A-14:
Global Interest Rates and Equity Markets

Euro Area Short- and Long-Term Interest Rates



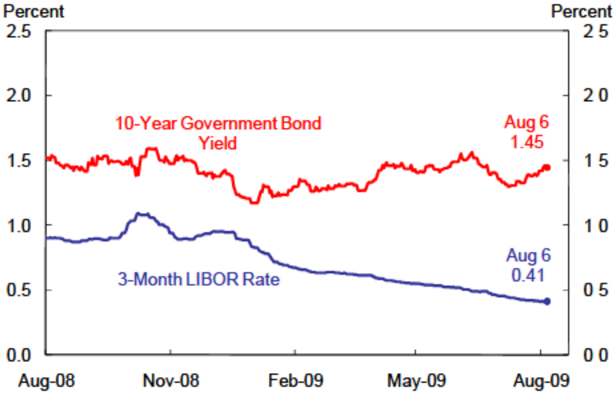
Source: Bloomberg

Euro Area: OIS Rate (Six Months)



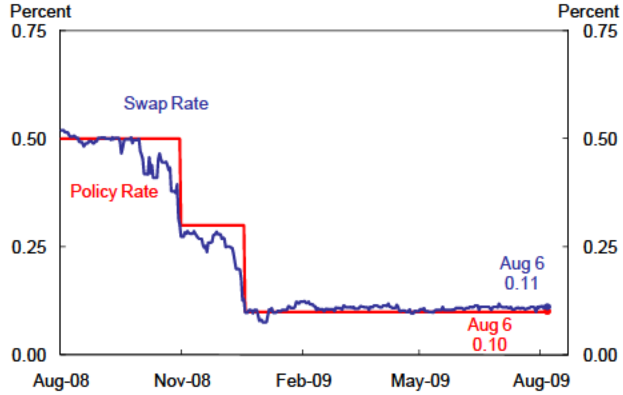
Source: Bloomberg

Japan Short- and Long-Term Interest Rates



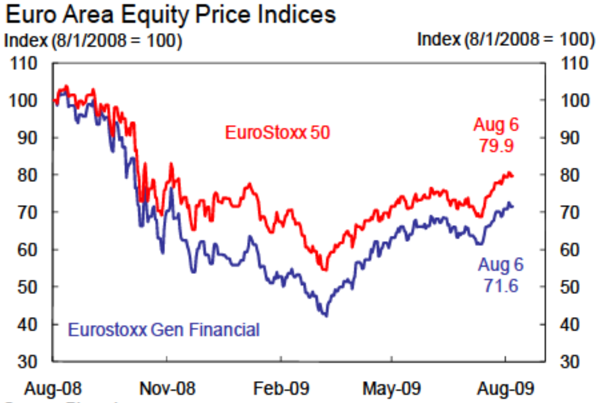
Source: Bloomberg

Japan: OIS Rate (Six Months)



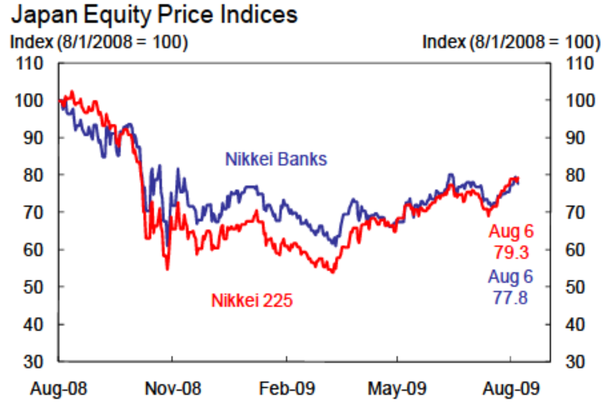
Source: Bloomberg

Euro Area Equity Price Indices



Source: Bloomberg

Japan Equity Price Indices

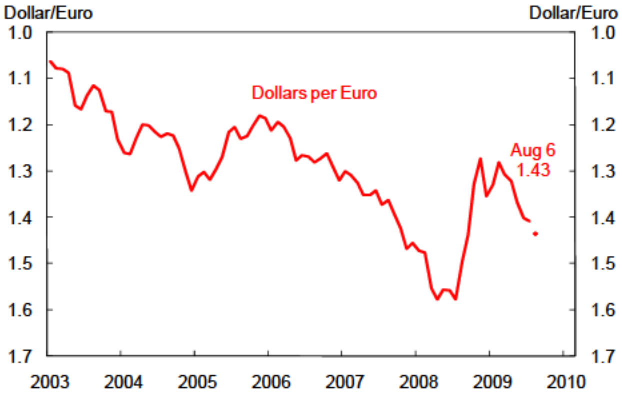


Source: Bloomberg

A. Significant Developments

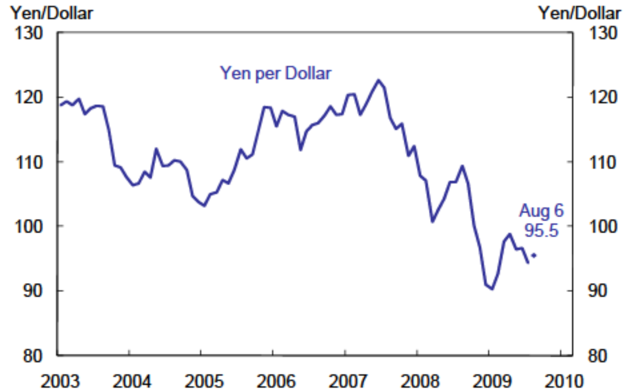
Exhibit A-15:
Exchange Rates

Dollar-Euro Exchange Rate



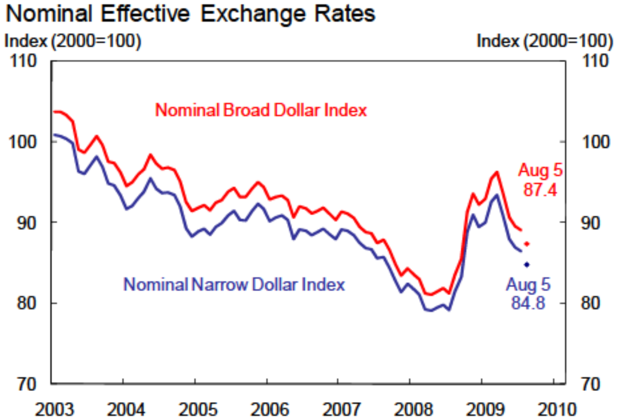
Source: Bloomberg Note: Data are monthly averages. Exchange rate scale is inverted.

Yen-Dollar Exchange Rate



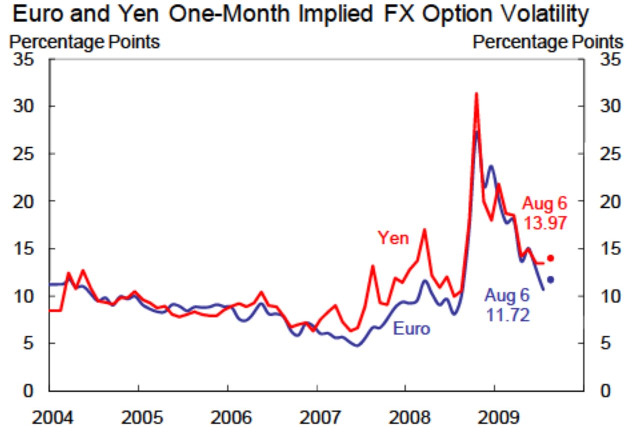
Source: Bloomberg Note: Data are monthly averages.

Nominal Effective Exchange Rates



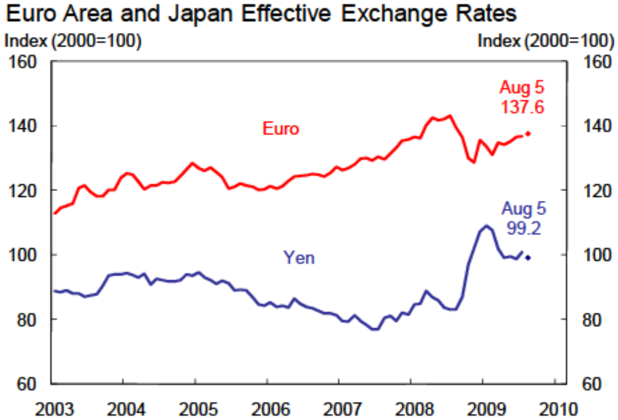
Source: Bloomberg and JPMorgan Note: Data are monthly averages.

Euro and Yen One-Month Implied FX Option Volatility



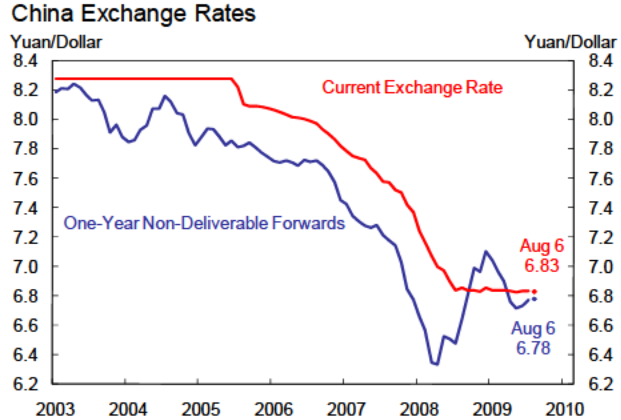
Source: Bloomberg

Euro Area and Japan Effective Exchange Rates



Source: Bloomberg and JPMorgan Note: Data are monthly averages.

China Exchange Rates



Source: Bloomberg Note: Data are monthly averages.

B. FRBNY Forecast Details

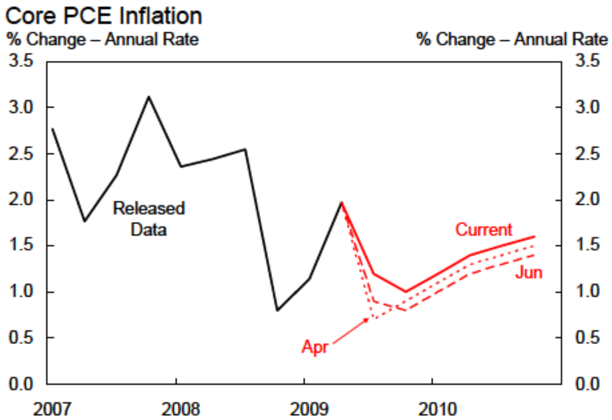
Exhibit B-1: Quarterly and Annual Projections of Key Variables

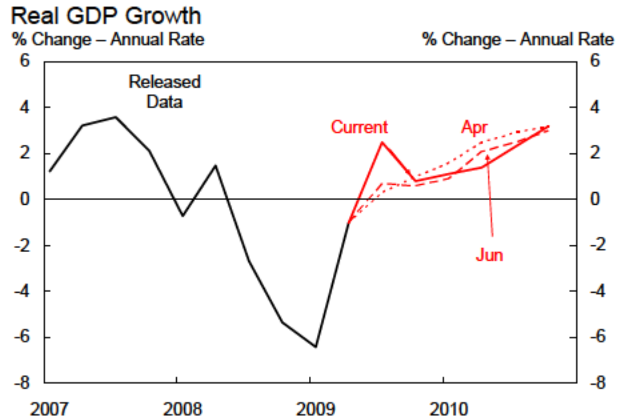
	Core PCE Inflation			Real GDP Growth			Unemployment Rate*			Fed Funds Rate**		
	Apr	Jun	Aug	Apr	Jun	Aug	Apr	Jun	Aug	Apr	Jun	Aug
2008												
Q1	*2.2*	*2.2*	*2.3*	*0.9*	*0.9*	*-0.7*	*4.9*	*4.9*	*4.9*	*2.3*	*2.3*	*2.3*
Q2	*2.1*	*2.1*	*2.4*	*2.8*	*2.8*	*1.5*	*5.4*	*5.4*	*5.4*	*2.0*	*2.0*	*2.0*
Q3	*2.4*	2.4	*2.5*	*-0.5*	*-0.5*	*-2.7*	*6.1*	*6.1*	*6.1*	*2.0*	*2.0*	*2.0*
Q4	*0.9*	*0.9*	*0.8*	*-6.3*	*-6.3*	*-5.4*	*6.9*	*6.9*	*6.9*	*0-0.25*	*0-0.25*	*0-0.25*
2009												
Q1	1.5	*1.5*	*1.1*	-6.2	*-5.7*	*-6.4*	*8.1*	*8.1*	*8.1*	*0-0.25*	*0-0.25*	*0-0.25*
Q2	0.6	2.4	*2.0*	-1.2	-0.8	*-1.0*	8.7	9.3	*9.3*	0-0.25	0-0.25	*0-0.25*
Q3	0.7	0.9	1.2	0.3	0.7	2.5	9.3	10.0	9.6	0-0.25	0-0.25	0-0.25
Q4	0.9	0.8	1.0	1.0	0.6	0.8	9.6	10.5	10.0	0-0.25	0-0.25	0-0.25
2010												
Q1	1.1	1.0	1.2	1.6	0.9	1.1	9.7	10.7	10.1	0-0.25	0-0.25	0-0.25
Q2	1.3	1.2	1.4	2.5	2.1	1.4	9.7	10.6	10.2	0-0.25	0-0.25	0-0.25
Q3	1.4	1.3	1.5	2.9	2.5	2.3	9.7	10.5	10.2	0-0.25	0-0.25	0-0.25
Q4	1.5	1.4	1.6	3.2	3.0	3.2	9.5	10.3	10.2	0-0.25	0-0.25	0-0.25
Q4/Q4												
2007	*2.2*	*2.2*	*2.5*	*2.3*	*2.3*	*2.5*	*0.4*	*0.4*	*0.4*	*-1.0*	*-1.0*	*-1.0*
2008	*1.9*	*1.9*	*2.0*	*-0.8*	*-0.8*	*-1.9*	*2.1*	*2.1*	*2.1*	*-4.0*	*-4.0*	*-4.0*
2009	0.9	1.4	1.3	-1.6	-1.3	-1.1	2.7	3.6	3.1	0.0	0.0	0.0
2010	1.3	1.2	1.4	2.6	2.1	2.0	-0.1	-0.2	0.2	0.0	0.0	0.0

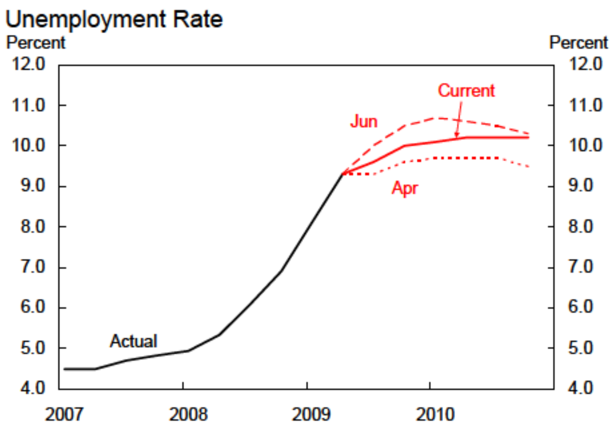
Note: Columns reflect the forecast dates. Numbers in gray are from previous Blackbooks, and numbers in italics are released data.
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.
**Quarterly values are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

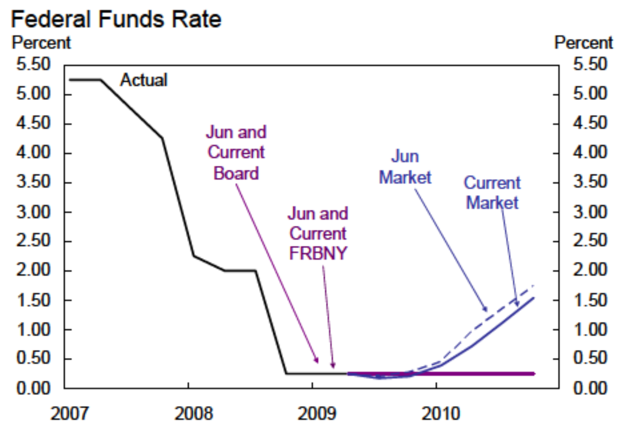
B. FRBNY Forecast Details

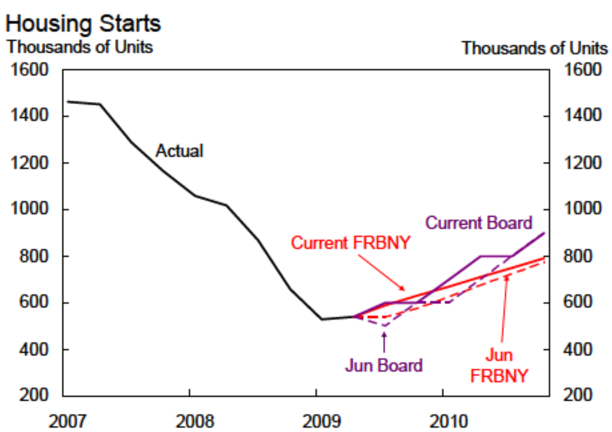
Exhibit B-2: Evolution of Projected Quarterly Paths of Key Indicators and Forecast Assumptions

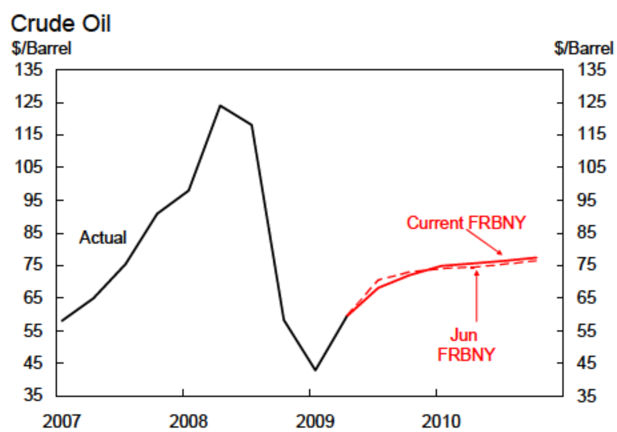












Source: MMS and IR Functions (FRBNY) and Federal Reserve Board

B. FRBNY Forecast Details

Exhibit B-3: Near-Term Projections

	Quarterly Growth Rates (AR)		Quarterly Growth Contributions (AR)	
	2009Q3	2009Q4	2009Q3	2009Q4
OUTPUT				
Real GDP	2.5	0.8	2.5	0.8
	(0.7)	(0.6)	(0.7)	(0.6)
Final Sales to Domestic Purchasers	-0.5	-0.1	-0.5	-0.1
	(-0.7)	(0.0)	(-0.7)	(0.0)
Consumption	1.4	1.0	1.0	0.7
	(1.0)	(1.2)	(0.7)	(0.8)
BFI: Equipment and Software	-12.5	-8.0	-0.8	-0.5
	(-15.0)	(-10.0)	(-0.9)	(-0.6)
BFI: Nonresidential Structures	-10.0	-8.0	-0.4	-0.3
	(-10.0)	(-8.0)	(-0.4)	(-0.3)
Residential Investment	-20.0	-10.0	-0.5	-0.2
	(-15.0)	(-10.0)	(-0.4)	(-0.3)
Government: Federal	1.5	1.5	0.1	0.1
	(1.5)	(1.5)	(0.1)	(0.1)
Government: State and Local	0.5	0.8	0.1	0.1
	(1.0)	(1.0)	(0.1)	(0.1)
Inventory Investment	--	--	3.7	1.6
	--	--	(1.8)	(1.6)
Net Exports	--	--	-0.6	-0.7
	--	--	(-0.4)	(-1.0)
INFLATION				
Total PCE Deflator	2.2	1.7		
	(2.1)	(1.4)		
Core PCE Deflator	1.2	1.0		
	(0.9)	(0.8)		
PRODUCTIVITY AND LABOR COSTS*				
Output per Hour	2.4	0.3		
	(0.5)	(0.5)		
Compensation per Hour	2.0	1.8		
	(2.0)	(1.8)		
Unit Labor Costs	-0.4	1.5		
	(1.5)	(1.5)		

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		
	2008	2009	2010	2008	2009	2010
OUTPUT						
Real GDP	-1.9	-1.1	2.0	-1.9	-1.1	2.0
	(-0.8)	(-1.3)	(2.1)	(-0.8)	(-1.3)	(2.1)
Final Sales to Domestic Purchasers	-2.1	-2.2	2.4	-2.2	-2.2	2.5
	(-1.7)	(-2.2)	(2.8)	(-1.8)	(-2.2)	(2.8)
Consumption	-1.8	0.4	2.2	-1.2	0.3	1.6
	(-1.5)	(0.9)	(2.7)	(-1.1)	(0.6)	(2.0)
BFI: Equipment and Software	-10.7	-17.4	2.3	-0.8	-1.2	0.1
	(-11.0)	(-20.8)	(1.2)	(-0.8)	(-1.4)	(0.1)
BFI: Nonresidential Structures	3.2	-19.2	2.6	0.1	-0.8	0.1
	(6.3)	(-19.0)	(2.6)	(0.2)	(-0.8)	(0.1)
Residential Investment	-21.0	-25.1	12.4	-0.8	-0.7	0.3
	(-19.4)	(-23.0)	(8.7)	(-0.8)	(-0.7)	(0.2)
Government: Federal	8.9	2.3	1.5	0.6	0.2	0.1
	(8.2)	(0.1)	(1.5)	(0.6)	(0.0)	(0.1)
Government: State and Local	-0.3	0.5	2.0	0.0	0.1	0.2
	(0.4)	(-0.6)	(3.1)	(0.0)	(-0.1)	(0.4)
Inventory Investment	--	--	--	-0.4	0.5	0.0
	--	--	--	(-0.2)	(0.5)	(-0.1)
Net Exports	--	--	--	0.7	0.7	-0.4
	--	--	--	(1.1)	(0.5)	(-0.6)
INFLATION						
Total PCE Deflator	1.7	0.9	1.8			
	(1.9)	(1.2)	(1.6)			
Core PCE Deflator	2.0	1.3	1.4			
	(1.9)	(1.4)	(1.2)			
Total CPI Inflation	1.5	1.7	1.6			
	(1.5)	(0.7)	(1.8)			
Core CPI Inflation	2.0	1.8	1.4			
	(2.0)	(1.4)	(1.4)			
GDP Deflator	1.9	1.1	1.8			
	(2.0)	(1.3)	(1.6)			

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		
	2008	2009	2010
INTEREST RATE ASSUMPTIONS			
Federal Funds Rate (End-of-Year)	0-0.25	0-0.25	0-0.25
	0-0.25	0-0.25	0-0.25
10-Year Treasury Yield (Avg. Q4 Level)	3.3	3.8	4.0
	(3.3)	(3.7)	(3.8)
PRODUCTIVITY AND LABOR COSTS*			
Output	-3.0	-1.9	2.2
	(-1.8)	(-2.2)	(2.3)
Hours	-4.0	-3.8	1.3
	(-4.0)	(-3.6)	(1.4)
Output per Hour	0.9	1.9	0.9
	(2.2)	(1.5)	(0.9)
Compensation per Hour	3.9	2.8	1.5
	(3.9)	(2.6)	(1.6)
Unit Labor Costs	2.9	0.8	0.6
	(1.6)	(1.1)	(0.7)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	6.9	10.0	10.2
	(6.9)	(10.5)	(10.3)
Participation Rate (Avg. Q4 Level)	65.8	65.5	65.6
	(65.8)	(65.8)	(65.8)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	-189	-366	101
	(-189)	(-382)	(137)
INCOME			
Personal Income	1.1	-0.4	2.8
	(2.1)	(0.7)	(2.6)
Real Disposable Personal Income	0.3	2.0	0.8
	(0.9)	(3.2)	(0.4)
Corporate Profits Before Taxes	-25.1	18.5	-3.5
	(-21.5)	(12.3)	(1.6)

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

B. FRBNY Forecast Details

Exhibit B-6: FRBNY and Greenbook Forecast Comparison

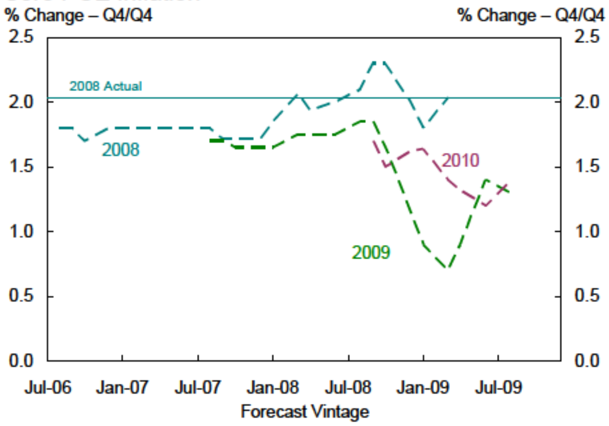
	FRBNY			Board		
	2008	2009	2010	2008	2009	2010
OUTPUT						
Real GDP	-1.9	-1.1	2.0	-1.9	-1.4	3.1
	(-0.8)	(-1.3)	(2.1)	(-0.8)	(-1.1)	(3.0)
GDP Growth Contributions						
Final Sales to Domestic Purchasers	-2.2	-2.2	2.5	-2.2	-2.2	2.7
	(-1.8)	(-2.2)	(2.8)	(-1.9)	(-1.8)	(2.9)
Consumption	-1.2	0.3	1.6	-1.3	0.2	1.9
	(-1.1)	(0.6)	(2.0)	(-1.1)	(0.6)	(2.0)
BFI	-0.7	-2.0	0.2	-0.7	-2.2	0.3
	(-0.6)	(-2.1)	(0.1)	(-0.6)	(-2.0)	(0.3)
Residential Investment	-0.8	-0.7	0.3	-0.8	-0.7	0.2
	(-0.8)	(-0.7)	(0.2)	(-0.8)	(-0.7)	(0.2)
Government	0.6	0.2	0.4	0.6	0.5	0.3
	(0.6)	(-0.1)	(0.5)	(0.6)	(0.3)	(0.4)
Inventory Investment	-0.4	0.5	0.0	-0.5	-0.1	0.5
	(-0.2)	(0.5)	(-0.1)	(-0.2)	(0.0)	(0.4)
Net Exports	0.7	0.7	-0.4	0.7	0.9	-0.1
	(1.1)	(0.5)	(-0.6)	(1.1)	(0.7)	(-0.3)
INFLATION						
Total PCE Deflator	1.7	0.9	1.8	1.7	1.1	1.3
	(1.9)	(1.2)	(1.6)	(1.9)	(1.4)	(1.1)
Core PCE Deflator	2.0	1.3	1.4	2.0	1.4	1.0
	(1.9)	(1.4)	(1.2)	(1.9)	(1.4)	(0.8)
INTREST RATE ASSUMPTION						
Fed Funds Rate (End-of-Year)	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25
	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	0.9	1.9	0.9	1.0	2.3	1.7
	(2.2)	(1.5)	(0.9)	(2.2)	(2.2)	(1.4)
Compensation per Hour	3.9	2.8	1.5	2.6	-0.4	1.2
	(3.9)	(2.6)	(1.6)	(3.9)	(2.6)	(1.2)
Unit Labor Costs	2.9	0.8	0.6	1.6	-2.6	-0.5
	(1.6)	(1.1)	(0.7)	(1.7)	(0.4)	(-0.2)
LABOR MARKET						
Unemployment Rate (Avg. Q4 Level)	6.9	10.0	10.2	6.9	10.0	9.6
	(6.9)	(10.5)	(10.3)	(6.9)	(10.0)	(9.7)
Participation Rate (Avg. Q4 Level)	65.8	65.5	65.6	65.9	65.6	65.3
	(65.8)	(65.8)	(65.8)	(65.9)	(65.6)	(65.3)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	-189	-366	101	-192	-383	150
	(-189)	(-382)	(137)	(-192)	(-358)	(150)
HOUSING						
Housing Starts (Avg. Q4 Level, Thous.)	658	630	790	700	600	900
	(658)	(575)	(775)	(700)	(600)	(900)

B. FRBNY Forecast Details

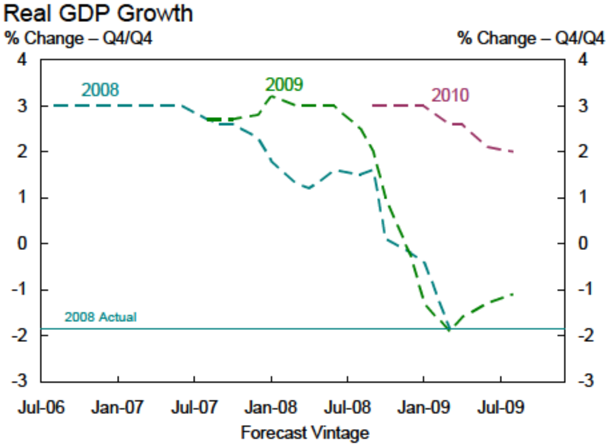
Exhibit B-7: Evolution of FRBNY and Board Forecasts since Mid-2006

FRBNY

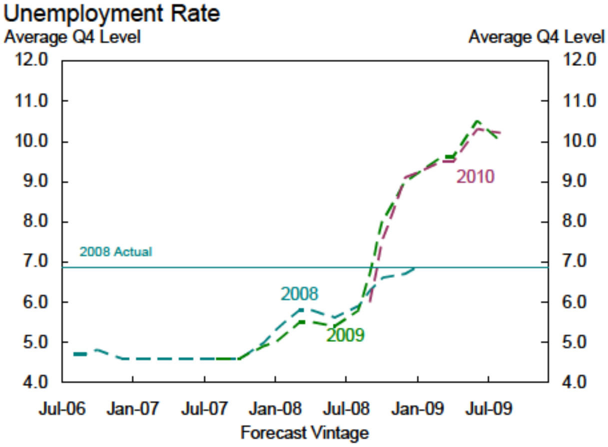
Core PCE Inflation



Real GDP Growth

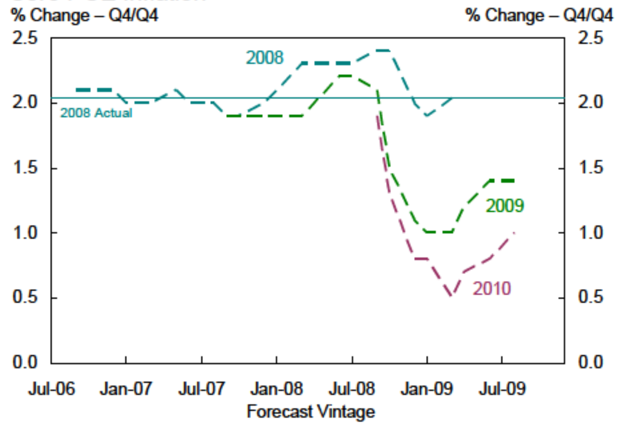


Unemployment Rate

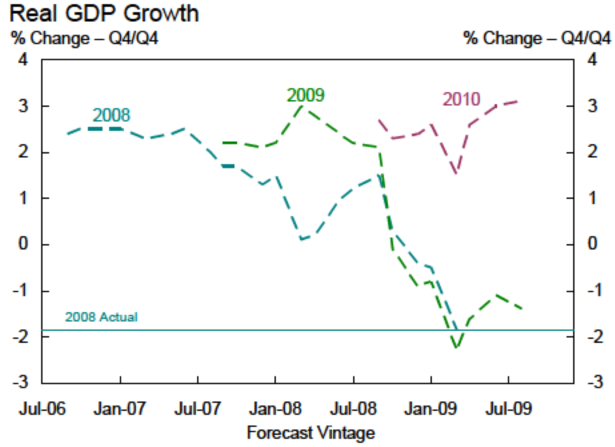


Board

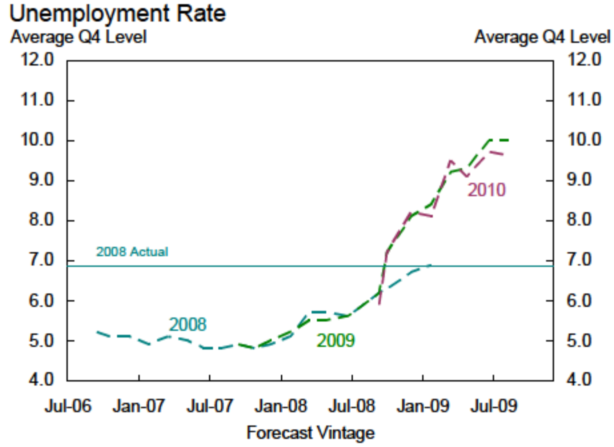
Core PCE Inflation



Real GDP Growth



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	2009Q3	2009Q4	2009 Q4/Q4	2010 Q4/Q4
FRBNY	8/7/2009	2.5	0.8	-1.1	2.0
		(0.7)	(0.6)	(-1.3)	(2.1)
PSI Model	8/3/2009	1.2	--	--	--
		(1.2)	--	--	--
Blue Chip	7/10/2009	1.0	1.9	-1.1	2.7
		(0.6)	(1.9)	(-1.3)	(2.8)
Median SPF	5/15/2009	0.4	1.7	-1.4	--
		(1.0)	(1.8)	(-1.1)	--
Macro Advisers	7/29/2009	2.6	2.7	-0.5	3.5
		(1.1)	(2.2)	(-0.9)	(3.4)

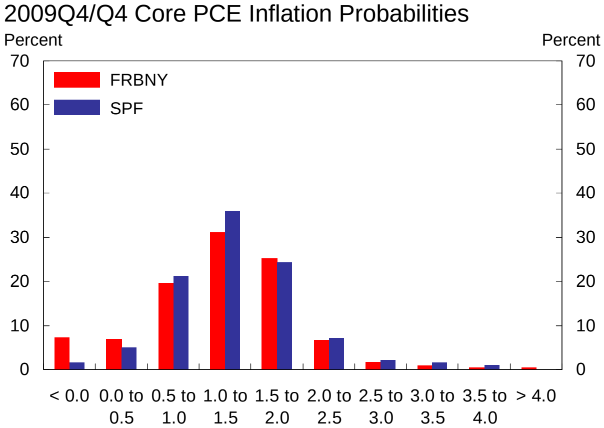
		Core PCE Inflation			
	Release Date	2009Q3	2009Q4	2009 Q4/Q4	2010 Q4/Q4
FRBNY	8/7/2009	1.2	1.0	1.3	1.4
		(0.9)	(0.8)	(1.4)	(1.2)
Median SPF	5/15/2009	1.2	1.2	1.3	1.4
		(1.1)	(1.1)	(1.1)	(1.5)
Macro Advisers	7/7/2009	1.4	0.9	1.5	0.7
		(1.3)	(0.9)	(1.4)	(0.6)

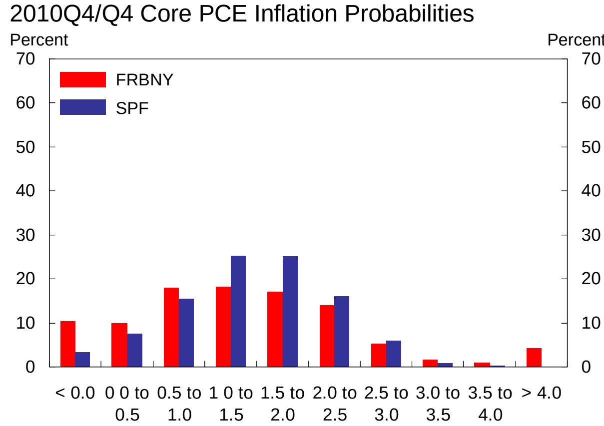
		CPI Inflation			
	Release Date	2009Q3	2009Q4	2009 Q4/Q4	2010 Q4/Q4
FRBNY	8/7/2009	6.6	1.6	1.7	1.6
		(2.9)	(1.3)	(0.7)	(1.8)
Blue Chip	7/10/2009	2.5	1.6	0.7	1.9
		(2.0)	(1.5)	(0.5)	(1.9)
Median SPF	5/15/2009	1.6	1.8	0.4	1.8
		(1.7)	(1.7)	(0.2)	(1.9)
Macro Advisers	7/7/2009	3.8	1.0	0.8	1.1
		(4.0)	(1.3)	(1.0)	(1.0)

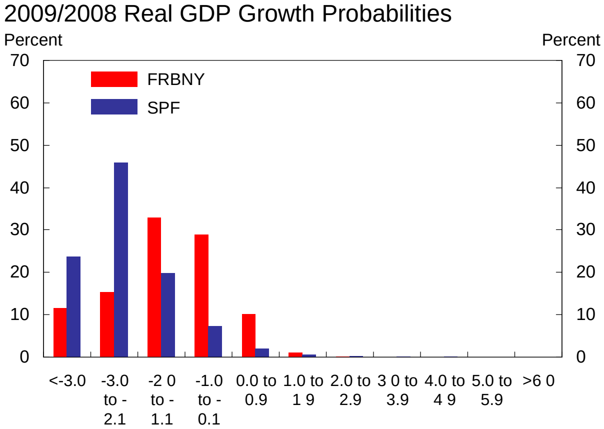
		Core CPI Inflation			
	Release Date	2009Q3	2009Q4	2009 Q4/Q4	2010 Q4/Q4
FRBNY	8/7/2009	1.8	1.5	1.8	1.4
		(0.9)	(1.0)	(1.4)	(1.4)
Median SPF	5/15/2009	1.3	1.3	1.3	1.4
		(1.3)	(1.3)	(1.2)	(1.6)
Macro Advisers	7/7/2009	1.3	0.8	1.5	1.0
		(1.3)	(1.1)	(1.5)	(0.9)

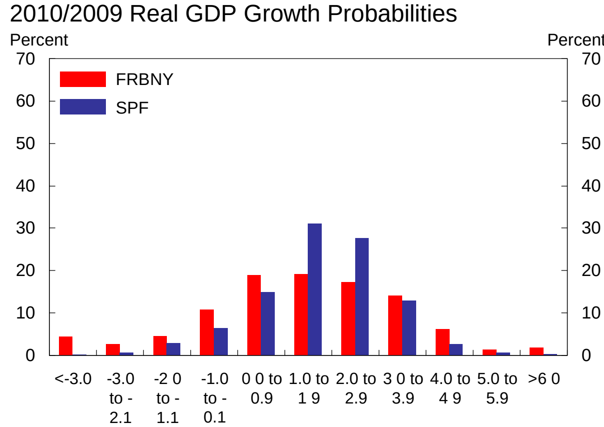
B. FRBNY Forecast Details

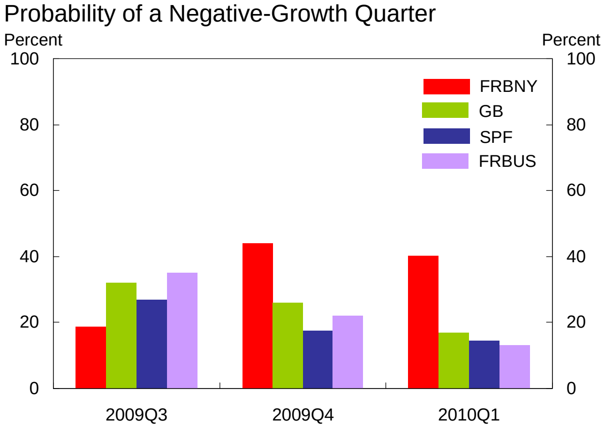
Exhibit B-9: FRBNY, SPF, and Board Forecast Comparison





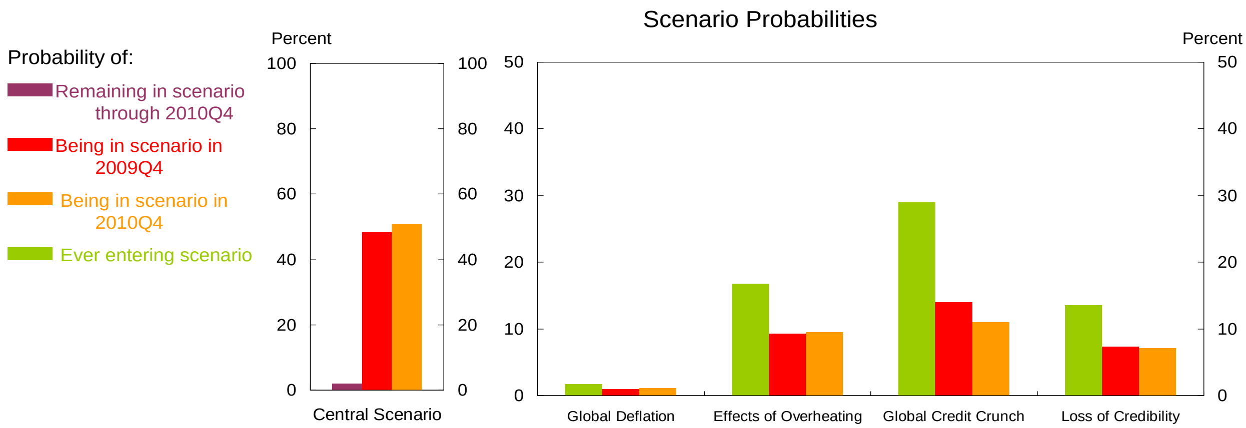


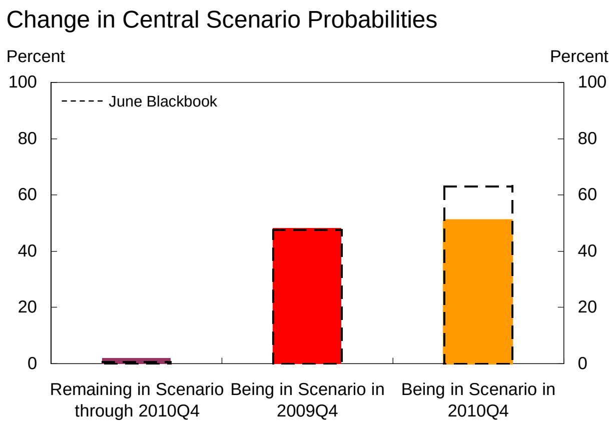


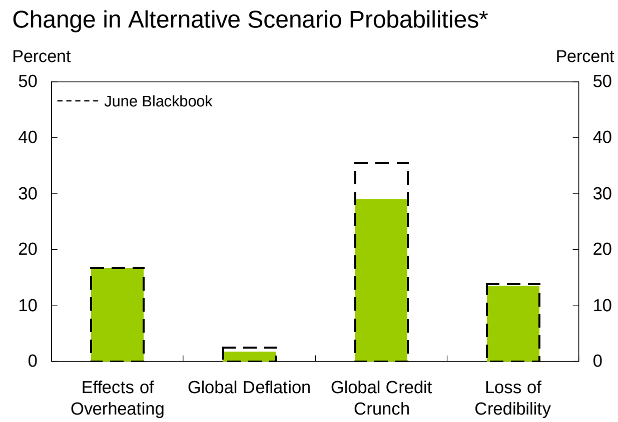


C. FRBNY Forecast Distributions

Exhibit C-1: Risks

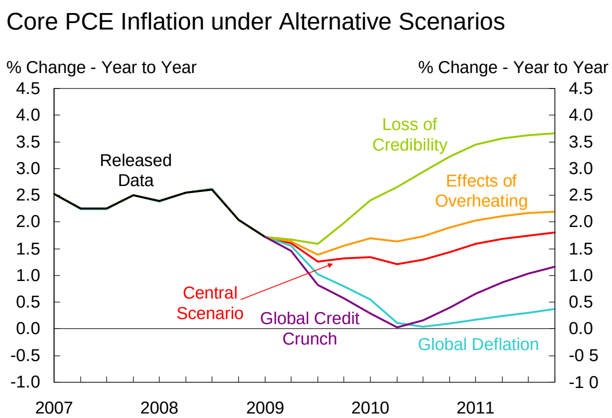


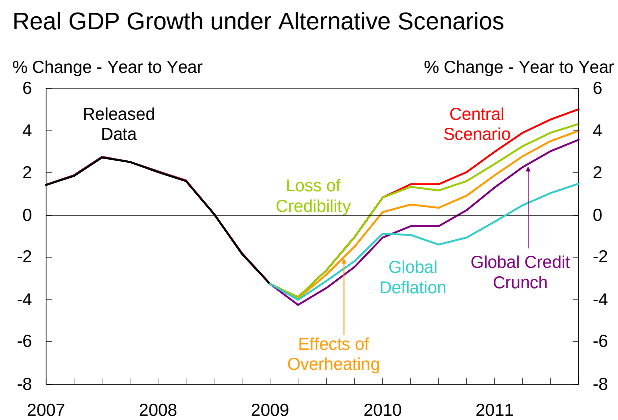




*Probability of ever reaching scenario

Exhibit C-2: Projections under Alternative Scenarios



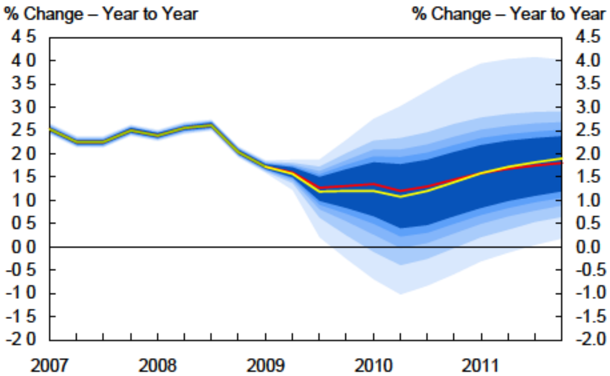


Source: MMS Function (FRBNY)

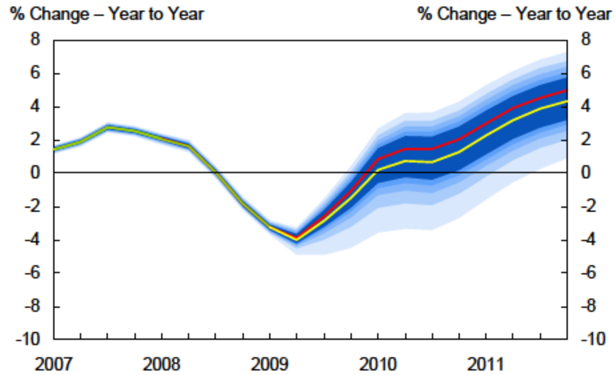
C. FRBNY Forecast Distributions

Exhibit C-3: Inflation and Output Forecast Distributions

Core PCE Inflation Forecast Distribution

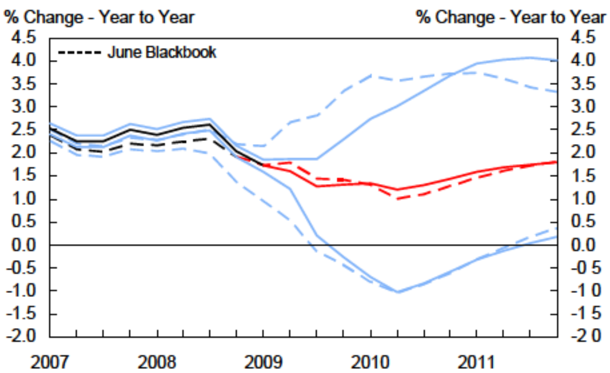


Real GDP Growth Forecast Distribution

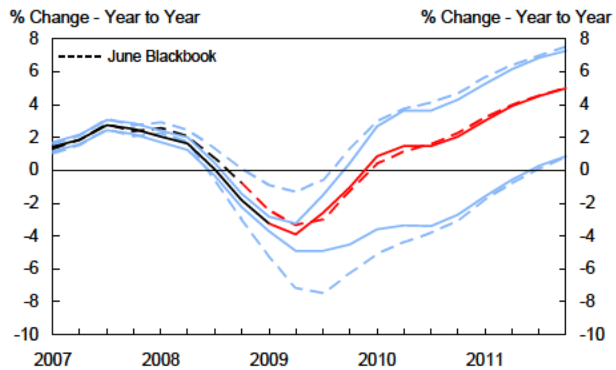


The yellow line is the expected value of the forecast distribution, the red line is the central scenario projection, and the green line is released data. The shading represents the 50, 60, 70, 80, and 90 percent chance that the four-quarter change will be within the respective range.

Change in Core PCE Inflation Forecast Distribution

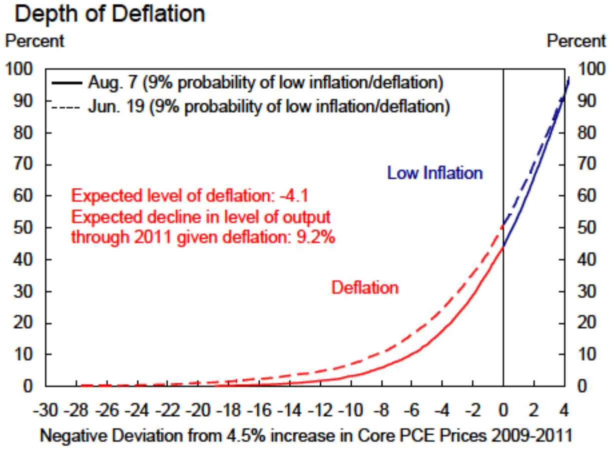


Change in Real GDP Growth Forecast Distribution

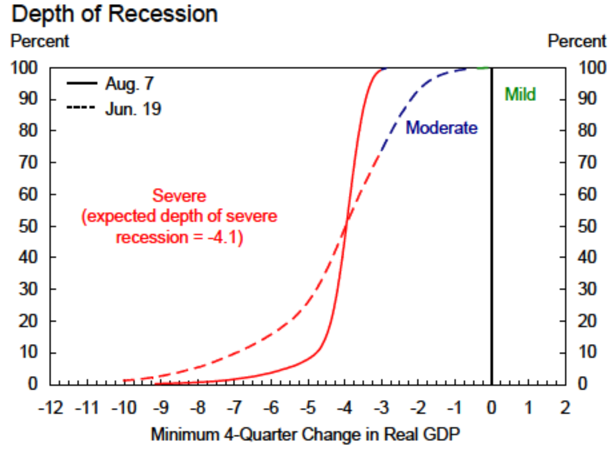


The blue lines are the 90% chance the four-quarter change will be within the lines, the red line is the central scenario projection, and the black line is released data. Dashed lines represent forecasts from previous Blackbook.

Depth of Deflation



Depth of Recession

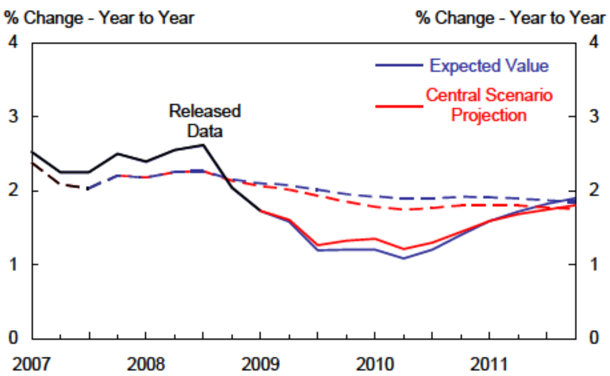


Source: MMS Function (FRBNY)

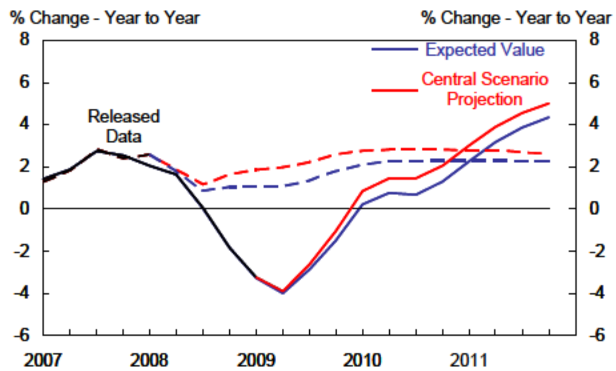
C. FRBNY Forecast Distributions

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

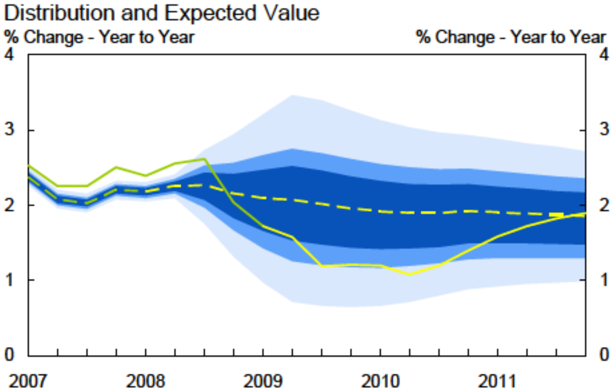
One-Year Comparison of Core PCE Inflation Forecast



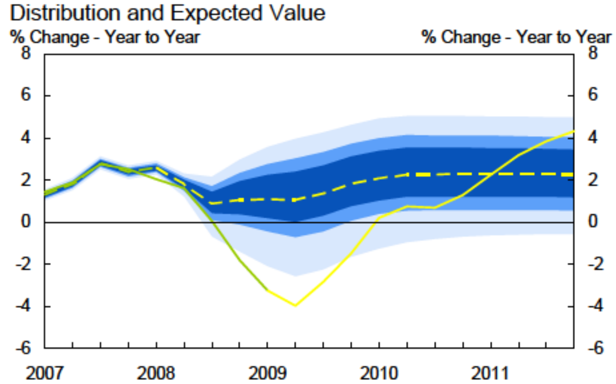
One-Year Comparison of Real GDP Growth Forecast



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



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



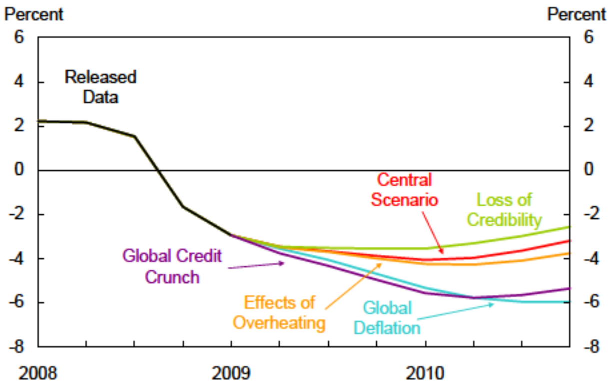
The solid yellow line is the **current** expected value of the forecast distribution, while the dashed yellow line is the **August 2008** expected value. The shading represents the 50, 70 and 90 percent probability intervals from the **August 2008** forecast. The green lines are released data.

Source: MMS Function (FRBNY)

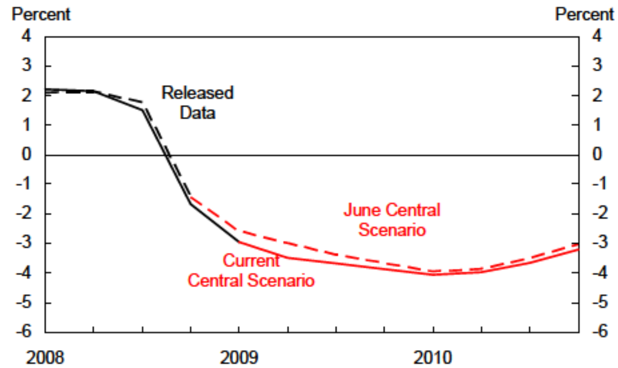
D. FRBNY Fed Funds Rate Projections

Exhibit D-1: *Baseline* Policy Rule Analysis

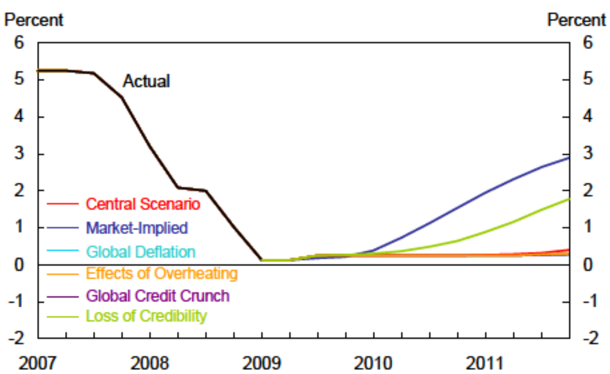
Real FFR under Alternative Scenarios



Change in Central Scenario Real FFR



Nominal FFR under Alternative Scenarios



Change in Central Scenario and Market-Implied Nominal FFR

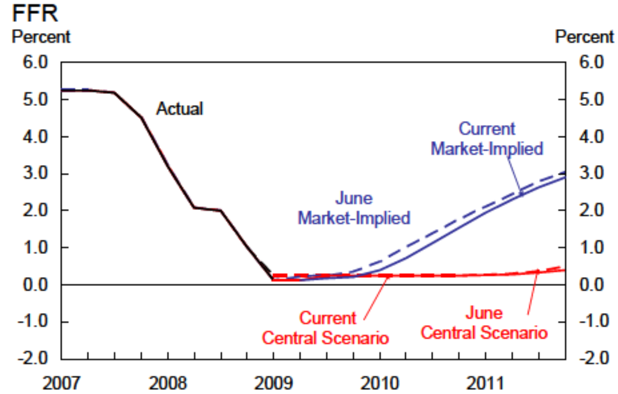
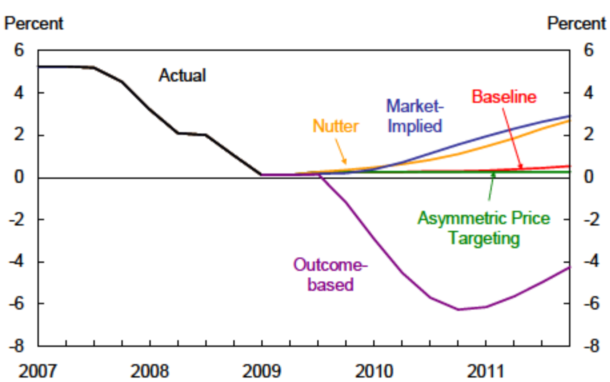


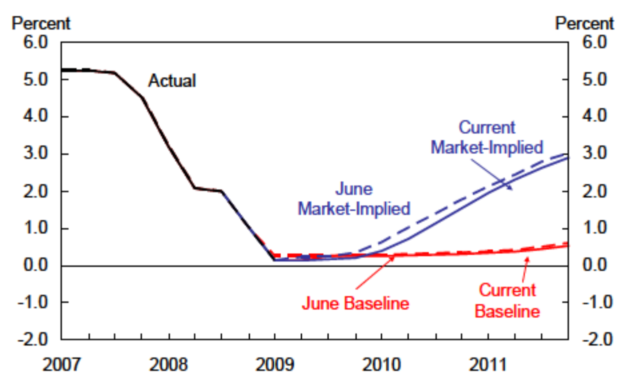
Exhibit D-2: Alternative Policy Rules under Expected Value of Forecast Distribution

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

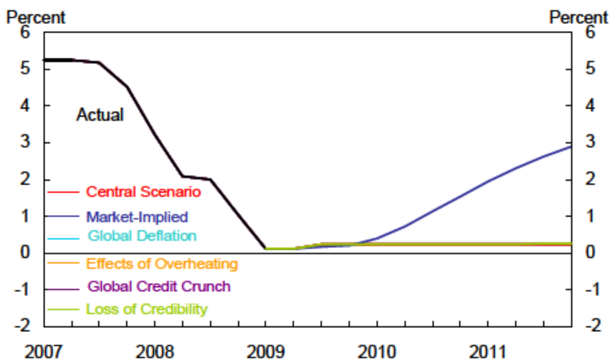
Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

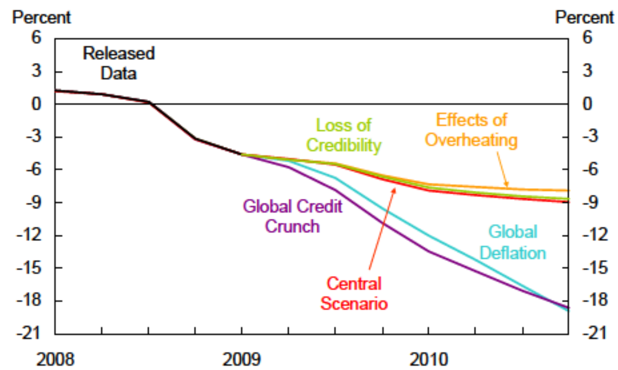
Exhibit D-3: Alternative Policy Rule Analysis

Policy Rule: *Asymmetric Price Targeting*

Nominal FFR under Alternative Scenarios

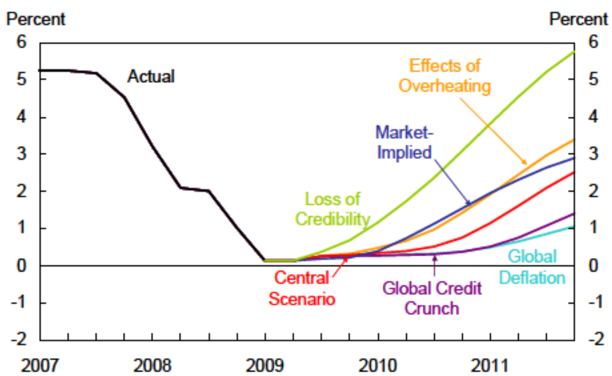


Real FFR under Alternative Scenarios

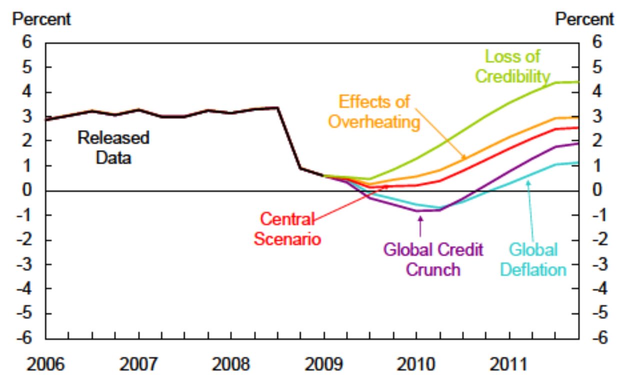


Policy Rule: *Nutter*

Nominal FFR under Alternative Scenarios

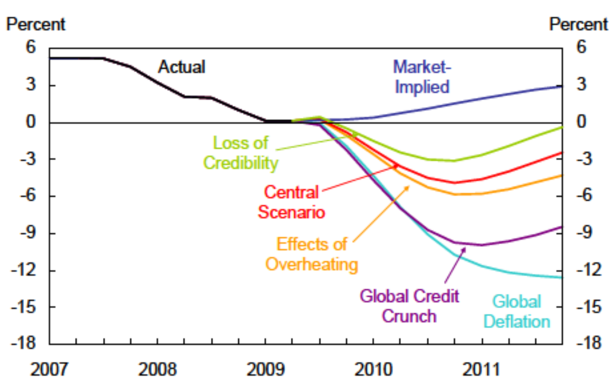


Real FFR under Alternative Scenarios

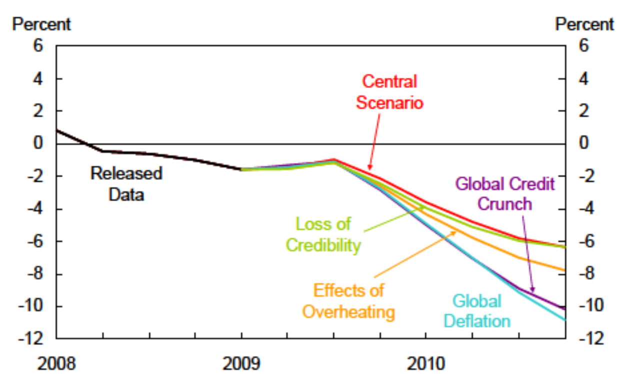


Policy Rule: *Outcome-based*

Nominal FFR under Alternative Scenarios



Real FFR under Alternative Scenarios



Source: MMS Function (FRBNY)

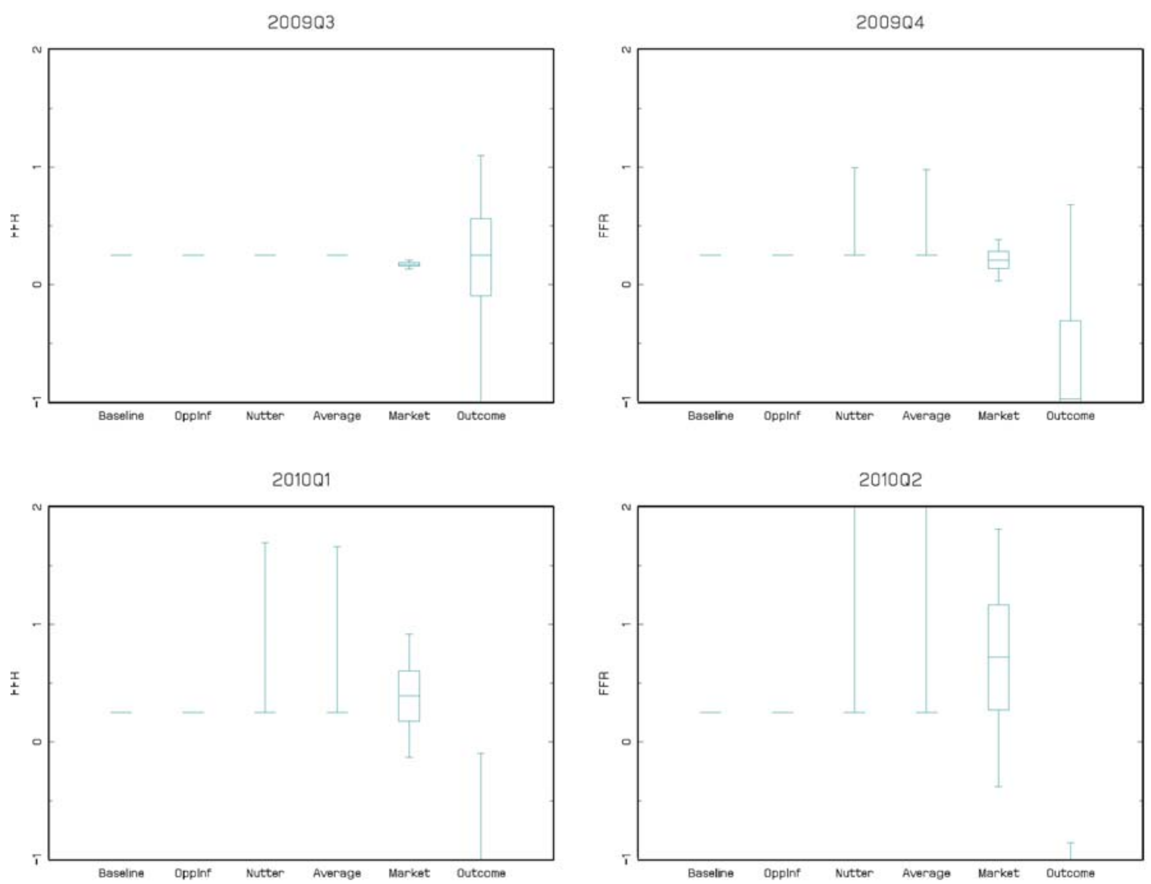
D. FRBNY Fed Funds Rate Projections

Exhibit D-4: Comparison between Market and Policy Rule FFR Expectations: 2009Q3

"Average" Weights:

Rule	Current	June Blackbook
Baseline	0.01	0.01
Opportunistic Disinflation	0.01	0.01
Nutter	0.98	0.98

Exhibit D-5: FFR Distributions

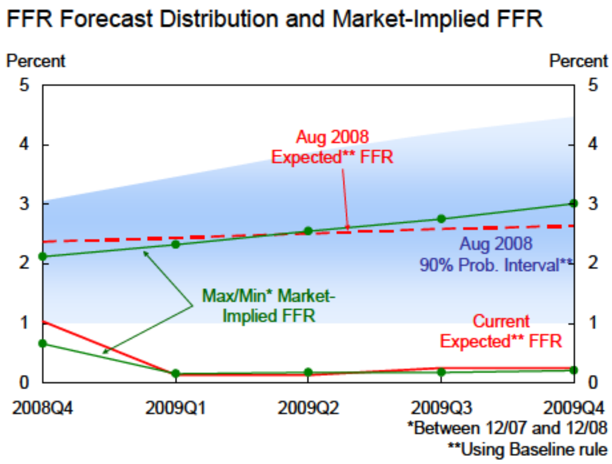


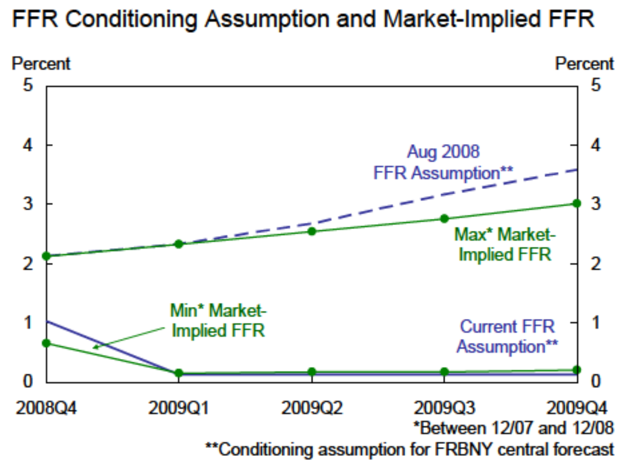
Note: The box represents the 50% probability interval, the line in the box the median, and the tails the 90% probability interval.

Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

Exhibit D-6: Evolution of FFR Expectations and Assumption





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 two alternative scenarios consider the impact of above- and below-trend productivity growth, respectively. In the post-war era, the United States has experienced three productivity epochs (pre-1973, High I; 1973 to mid-1990s, Low I; and mid-1990s to 2004, High II). The NIPA revisions in July 2006 and 2007 prompted us to reduce our estimate of potential output growth; thus our current central projection for medium- and long-term productivity growth is somewhat lower than that of the pre-1973 epoch.

Alternative 1: *Productivity Boom*

After a lull from 2004 through early 2007, productivity growth since has been robust and above our current estimate of trend productivity growth. Our projections for 2008Q2 productivity indicate that this pattern should continue. These patterns raise 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 the High II epoch, with some mixture of IT-driven production and applications leading the way. Support for this view comes from Moore's law on the doubling of computing power every 18 months. As such, we could see persistent productivity growth above our assumed trend, implying a higher potential growth rate and thus expected real growth that is higher than our current estimate (as well as a possible development of a larger output gap in 2008). Strong productivity growth would also limit labor cost pressures and thereby help to subdue inflation.

Alternative 2: *Productivity Slump*

The recent surge in productivity growth may reflect a new cyclical pattern whereby firms protective of their profit margins reduce labor input in anticipation of slower profit growth. Furthermore, it is possible that the longer-term upswing in productivity that began in the mid-1990s has ended as the IT-driven surge has run it course. If so, there could be an extended period of productivity growth below the trend in our central forecast. In addition, the increase in the level and volatility of energy and commodity prices could continue and lead to lower productivity growth, as occurred in the 1970s. Below-trend growth would not only imply a lower estimate of potential growth, but would also push inflation above the level projected in our central forecast.

We also consider four additional scenarios. Three are related to the impact of monetary policy on the economy and financial markets as well as possible FOMC misperceptions of its past and current policy stances. The other is related to the impact of developments in the global economy.

Alternative 3: *Effects of Overheating*

Motivated principally by concerns over the prospect of deflation, the FOMC adopted a deliberately accommodative policy stance in the aftermath of the global slowdown of 2000-2003. It is possible the FOMC markedly underestimated the equilibrium real interest rate (i.e. overestimated the degree of slack in the real resources) during this period. In this case, their accommodative policy would have stimulated aggregate demand growth in excess of potential and, ultimately, triggered inflation. The above-potential output growth from 2004 through mid-2006 and the persistent above-target inflation are consistent with such a scenario, as is the abrupt slowdown in real output growth that began in mid-2006. If this overheating episode occurred, it has likely passed already in the U.S.; however, there is a risk its effects will linger in the form of slightly above-forecast inflation and slightly below-forecast output growth.

Developments in the global economy during this period may have contributed to the economic conditions that motivated the initial policy and may also have made it more difficult for the FOMC to identify the overheating in real time. For example, one likely factor contributing to the deflation scare in the early part of this decade was the downward pressure on global goods prices triggered largely by growth in emerging economies' labor forces. Another critical factor may have been the exchange rate policies that a number of emerging market central banks adopted over this period. These polices and the associated dollar reserve accumulation, which were aimed at maintaining the dollar strong relative to their domestic currency, may have put significant downward pressure on long-term interest rates both in the U.S. and around the world, and in doing so, may have made it more difficult to correctly assess the equilibrium real interest rate during this period.

Alternative 4: *Global Credit Crunch*

The financial turmoil that started in the summer of 2007 has continued to put a significant strain on the availability of credit. In the U.S., financial conditions have tightened significantly and financial market stress has reached record high levels in recent months. 30-year fixed rate mortgage rates remain near their one-year high. In addition, global data for 2003Q3 have been largely negative. The intensification of the financial crisis together with global slowing of economic growth has lead to significant wealth losses and increased volatility in equity markets. Policy-makers worldwide have enacted measured to address the freezing of interbank markets and implemented a coordinated cut in policy rates. This combination of factors suggests the neutral rate is lower than 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 below our lower estimate of the neutral rate, tighter credit conditions and continued stresses in global financial markets, along with increased risk of a further deterioration in global economic conditions, create a risk that output growth will slow significantly below the level projected in the central forecast; this would likely be accompanied by inflation below the level in the central forecast.

Alternative 5: *Loss of Credibility*

One interpretation of recent higher inflation, higher financial market inflation compensation, higher commodity prices, and dollar depreciation is that inflation expectations have risen despite the FOMC continuing to state its price stability mandate, raising concern that the FOMC has started to lose its credibility on inflation. Although some FOMC communications have placed more emphasis on the upside inflation risks, the FOMC also has communicated continued concern about growth risks, thus providing signals that the FFR may remain low that have further fueled such concerns. It is possible that these statements and actions of the FOMC may lead to further increases in inflation and inflation expectations, such that firms and households begin to see the FOMC as not credible in regard to inflation. Such developments are likely to cause further rises in inflation and inflation expectations above forecast.

Alternative 6: *Global Deflation*

Recent price level indicators point to slowing or decreasing inflation in many regions of the world. Domestic measures of implied inflation have fallen sharply, suggesting that inflation expectations are also declining. These signals, coupled with falling global output as a result of financial market turmoil, suggest that there is an increased risk of global deflation going forward. This possibility is further exacerbated as central banks around the world cut interests rates and target rates approach 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. These factors would result in both inflation and output growth far below the levels projected in the central forecast. Although the onset of this slowdown would be later compared to other scenarios, global factors would cause these conditions to be more persistent.

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. *Productivity Slump*: inflation above central forecast, output below central forecast.
3. *Effects of Overheating*: inflation slightly above central forecast, output slightly below central forecast.
4. *Global Credit Crunch*: inflation below central forecast, output significantly below central forecast.
5. *Loss of Credibility*: inflation far above central forecast, output slightly 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, while incorporating some degree of inertia. For each of the FFR paths and each of the policy rules, we determine these deviations using the corresponding inflation and output paths.

Policy Rule – Baseline 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)

$\mathrm{i}^* = 2.00 - 3.00$ 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.[2] 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 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.

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

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 ($\varphi_\pi = 2$ 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)[3].

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 Exhibits D-4 and D-5, 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).

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