FRBNY BLACKBOOK

RESEARCH AND STATISTICS GROUP

FOMC Background Material

March 2010

CONFIDENTIAL (FR) Class II FOMC

FRBNY BLACKBOOK

March 2010

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 2011Q1, as well as to retain the current "extended period" language in the FOMC statement. We also suggest no changes in current plans for the large scale asset purchase programs, in which the agency debt and MBS purchases are due to be completed at the end of this month.

Data releases in the intermeeting period indicate some increase in the downside risks to our outlook for both real activity and inflation as well as a reduction in the more extreme upside inflation risks. Despite strong consumer spending in January, personal income and compensation were weaker than anticipated; moreover, compensation was revised downward considerably for the second half of 2009, suggesting income growth could remain tepid. Recent data show slow improvement at best in labor market conditions, which also impact future compensation growth. In addition, housing indicators suggest that the stabilization and recovery process of the housing market might take longer than expected. On inflation, the recent data indicate that underlying inflation remains subdued. The fast decline in unit labor costs induced by robust productivity growth and weak compensation growth suggests continuing downward pressure on prices. Moreover, the reduction in TIPS-implied forward inflation compensation measures has contributed to change our risk assessment for inflation.

Financial conditions showed some deterioration in the first half of the intermeeting period, reflecting concerns about the global economic outlook partly related to the Greek fiscal crisis. However, many of these trends reversed in the second half of the period as more dire concerns did not materialize. On net, equity prices increased modestly, implied volatilities fell, and credit spreads changed little. Nevertheless, financial conditions still suggest a modest recovery consistent with our outlook, and the implied future policy path from future markets moved down moderately over the intermeeting period.

In light of our outlook and risk assessment, we recommend maintaining the current accommodative stance of monetary policy until the economy appears to be on a self-

sustained path to recovery, which in our central scenario does not occur until the end of the first quarter of 2011. We therefore recommend retaining the "extended period" language in the FOMC statement.

Regarding the large scale asset purchase programs, we recommend that the FOMC re-iterate that the program is to be completed by the end of this month. We suggest that the FOMC statement give the Committee sufficient flexibility to adjust the size and composition of the System's asset holding as conditions warrant.

Even though we recommend maintaining the current accommodative policy stance, it is also important to continue to prepare for the eventual renormalization of policy. In doing so, clear communication that technical changes in liquidity provisions—for example, moving the discount rate spread toward more normal levels and tests of reverse repos and term deposits—do not represent changes in policy is important to ensure that financial conditions are not tightened prematurely. As seen when changes in the primary credit facility were announced during the intermeeting period, market participants were able to make this differentiation, in part because of the "extended period" language. To the extent that the technical changes can be communicated while "extended period" is still appropriate, this language should be helpful in addressing these communications issues.

2. Evolution of Outlook and Risks

2.1 Central Forecast

Real GDP rose at a robust 4.1% annual rate over the second half of 2009, likely marking the beginning of the recovery from the most severe downturn of the US economy since the Great Depression. The bulk of that growth (2.3 percentage points) was the result of an unusually pronounced inventory cycle associated with over 9% (annual rate) growth of industrial production following an even sharper decline over the first half of the year. Growth of final sales contributed a relatively muted 1.8 percentage points to the second half growth rate. After falling 1.7% over the preceding four quarters, real personal consumption expenditures increased at a 2 1/4% (annual rate) over the second half of

2009, boosted by tax cuts, increases in transfer payments, and the "cash for clunkers" program. Residential investment increased at a 12% annual rate over the final six months of 2009 after having declined for 14 consecutive quarters. Single-family housing starts rose by nearly 40% from 2009Q1 to 2009Q3, reflecting a larger-than-anticipated response to the first-time home buyer tax credit as well as the success of the Fed's purchases of agency MBS in lowering mortgage interest rates. However, as 2009 came to a close, the recovery of housing starts was stalling out, likely due to the fact that starts were pulled forward by the tax credit. Despite a very low capacity utilization rate, business investment in new equipment and software increased at a robust 18% annual rate in 2009Q4, likely due in part to the pending expiration of the bonus depreciation provision of the stimulus bill. On the negative side of the ledger, business investment in nonresidential structures continued to plunge and spending by state and local governments contracted despite significant transfers from the federal government. Finally, while exports rebounded sharply, net exports were a 0.5 percentage point drag on growth in the second half of the year, as imports also increased at a robust pace.

Despite the fact that growth of real GDP over the second half of 2009 turned out to be stronger than expected, labor market conditions continued to deteriorate, albeit at a slower pace. Output per hour in the nonfarm business sector rose a remarkable 5.8% over the four quarters of 2009, as hours worked in that sector fell 5.7%. The unemployment rate averaged 10.0% in 2009Q4, and would have been substantially higher absent the declines in the labor force participation rate and average work week that occurred over the prior year.

The total PCE deflator increased at a 2 ½% annual rate in the second half of 2009, led by sharp increases in energy prices. The core PCE deflator rose at a 1.4% annual rate over the same period, down from 1.6% over the first half of 2009. This slowing of core inflation is consistent with our view that the high degree to which resources are underutilized has put downward pressure on core inflation.

Conditioning assumptions.

We continue to assume 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 estimates of potential in the March Greenbook are 2.3% for 2010 and 2.5% for 2011. The increase in 2011 is due to a slight increase in trend productivity stemming from a somewhat faster pace of growth of business investment.

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%.

The outlook for foreign real GDP growth in 2010 is essentially unchanged at 3.0% (on a GDP-weighted basis). In 2011 we expect foreign growth to increase to 3.4%, a modest upward revision from January. The Board staff expects slightly more rapid growth of foreign GDP over the forecast horizon. The projected path of oil prices is somewhat lower ($82.00 per barrel by 2010Q4 versus $86.50 and $84.00 per barrel by 2011Q4

versus $89.00). Our assumed path for oil prices is modestly lower than that of the Greenbook.

Our assumptions regarding fiscal policy are the same as that of the Greenbook. As was the case in January, it is assumed that an additional $75 billion of grants to state and local governments will be enacted, as will the extension of emergency unemployment benefits and health insurance subsidies. In addition, it is assumed that most of the 2001 and 2003 tax cuts will be extended and the lower AMT exemption amount will be extended for the entire forecast horizon. New features of the Greenbook fiscal assumptions are that $13

billion of one-time payments to seniors and veterans will not be made. Instead, those funds will be devoted to subsidies to firms for hiring and retaining currently unemployed workers. This last provision is likely to pull into 2010 some hiring that otherwise would have occurred in 2011.

As is our usual practice, our assumptions for equity prices and the real exchange value of the dollar are similar to those of the Greenbook. Equity prices are assumed to increase at a 15% annual rate through 2011 from a base that is modestly lower than was assumed in the January Greenbook. This increase in equity values is driven to a large extent by an assumed decline in the equity premium. The exchange value of the dollar (trade-weighted basis) is assumed to decline 0.9% in 2010 and 2.5% in 2011.

Finally, our assumption regarding the future path of the Loan Performance Home Price Index is also the same as the Board's. With the release of recent data, that index has been revised up somewhat over 2008 and 2009 such that the decline from March 2006 through March 2009 is now reported at 31% versus the previous 34%. In the third quarter of 2009, the index increased at a nearly 16% annual rate but then declined at a 2.4% annual rate in the fourth quarter. The absolute level of the index in December of 2009 was exactly the same as in January of 2009. For 2010, the index is projected to decline 2 ¾% as further increases in distressed sales put renewed downward pressure on prices. In 2011, the index is expected to rise 1% as housing demand firms and the supply of distressed properties declines.

The Outlook.

The broad contours of our forecast remain as they have been for some time. While it appears that the US economy has begun to recover, we expect the first year of recovery to be sluggish relative to past recoveries due to structural imbalances that built up over the preceding boom. These imbalances include excessive leverage in the household sector, an excess supply of housing and commercial real estate, and severe fiscal imbalances in the state and local government sector. Further restraining growth is the fact that underwriting standards for a broad array of credit have tightened significantly over the

past few years.

That being said, in this Blackbook we have once again boosted projected growth of real GDP for 2010, to 2 ¾% (Q4/Q4) from 2 ¼% in January. Despite a significant downward revision to labor compensation over the second half of 2009, consumer spending in 2009Q4 and thus far in 2010Q1 is stronger than we had anticipated. Real PCE increased at a 1.7% (annual rate) in the fourth quarter, and at this writing it looks to be on track to grow at a 2 ½% to 3% annual rate in the first quarter. Of course, an implication of this firmer tone to consumer spending is that the personal saving rate is lower than anticipated. In addition, growth of business investment in equipment and software was quite a bit stronger than expected in 2009Q4. While we believe that some of that strength reflects the year-end expiration of a bonus depreciation provision included in the stimulus bill, this category of expenditures appears to have more forward momentum than previously thought. Indeed, production of IT equipment has been quite robust in recent months and that strength has continued in the new year. We expect growth to average just 2 ¼% to 2 ½% over the first half of 2010 but then to strengthen over the second half of the year and into 2011 as the restraint on growth from theses various structural imbalances begins to fade.

Underlying this projection is the expectation that financial market functioning continues to return to more normal conditions and that consumer and business confidence and the general appetite for risk continue to recover. With household income and balance sheets improving and credit flowing more normally, the substantial pent-up demand for consumer durables, housing, and business equipment and software will start to be satisfied. Moreover, the structural adjustments of state and local governments and of the commercial real estate sector will likely have run their course by that time.

Projected growth in 2010 is now roughly equal to our estimate of the potential growth rate. Moreover, we have included in our labor market projections the substantial hiring that will take place over the first half of the year for the Decennial Census. These two factors lower the projected path of the unemployment rate such that it remains slightly below 10% over 2010 rather than rising above 10% as previously expected. Then, in

2011, with growth solidly above potential, the unemployment rate begins to steadily decline, approaching 8% by the end of the year. We expect the recovery to gather further steam in 2012 with a 5% growth of real GDP and a fall in the unemployment rate to below 7%.

Barring a significant decline in either or both the level of the economy's potential output or its potential growth rate, this point forecast implies that a large output gap will persist over most of the forecast horizon. Accordingly, we expect core inflation to slow to around 1% (Q4/Q4) in 2010. But by late 2010 and into 2011, as final demand firms within the context of anchored inflation expectations, we expect core inflation to move up to the "mandate consistent" range.

The risks to our central projection for real activity are somewhat more balanced than in January but remain skewed to the downside. A key downside risk is that the loss of income and wealth suffered by the household sector induces a steeper-than-expected increase of the personal saving rate, keeping consumer spending weaker for longer. The sharp decrease in the prime age employment to population ratio 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. On the other hand, current estimates of labor productivity continue to surprise to the upside.

Another source of risk to the forecast is on the fiscal policy front. Under current law many of the tax provisions enacted in 2001 and 2003 are scheduled to expire at the end of 2010. The outcome of the debate over these provisions could potentially have a significant impact on both growth prospects and inflation expectations. Finally, relatively modest changes in variables such as productivity growth, the participation rate, and the average work week could end up having a significant impact on the ultimate path

of the unemployment rate.

The risks around the central scenario for inflation are relatively balanced. Clearly, the significant downside risk to the growth projection combined with the possibility of no meaningful decline in potential implies downside risk to the inflation projection. In contrast, with the aggressive global monetary and fiscal policy response to the financial crisis, there is also a risk of higher inflation.

The heightened uncertainty associated with the shape of recoveries from periods of banking and financial crisis as well as the uncertainty associated with the timing and synchronization of the removal of global policy accommodation result in highly elevated uncertainty around our central projection compared to typical levels over the last twenty years.

2.2 Alternative Scenarios and Risks

The risk assessment has worsened somewhat in the intermeeting period but the changes have only a minor effect on the forecast distribution. The probability associated with the *Global Credit Crunch* scenario has increased since the last Blackbook. This increase was in part due to turmoil associated with the Greek debt crisis, which showed that markets can still be fragile. Perhaps more importantly, the probability of this scenario was increased due to the weak core inflation numbers, which have rekindled deflationary concerns. In our forecast, the *Global Credit Crunch* scenario is associated with low inflation outcome, which is why its probability increases as low inflation outcomes appear more likely. A second change, albeit smaller, is the reduction of the likelihood of the *Loss of Credibility* scenario, which reflects both the inflation developments as well as the retrenching of TIPS breakeven rates.

The *Productivity Boom* scenario is still the most likely scenario, as was the case in the last Blackbook, with an associated probability of roughly 35% [Exhibit C-1]. The *Global Credit Crunch* scenario is the second most likely with an associated probability of just

over 20%. The *Effects of Overheating* and *Loss of Credibility* scenarios are assigned probabilities between 10% and 15%.

The paths for core PCE inflation and real GDP growth associated with the various scenarios have not changed much in the intermeeting period [Exhibit C-2]. The increase in the likelihood of the *Global Credit Crunch* scenario and the concurrent decrease in the likelihood of the *Loss of Credibility* scenario result in a downward shift in the forecast distribution for inflation [Exhibit C-3]. The 95th percentile of the distribution has shifted down by 50 basis points relative to January, and is now at 3.5% in 2012. The 5th percentile is also lower, albeit by a smaller amount. The Large Price Level Deviations chart (which replaces the Depth of Deflation chart) shows that these changes have a relatively small effect on the likelihood of very low inflation, however, which has increased from 7% to 9%. The forecast distribution for output growth is essentially

unchanged, as confirmed by the "Scale of Recovery Through 2011" chart, which is essentially the same as it was in last Blackbook.

Finally, Exhibit C-4 shows the evolution of our forecasts relative to 12 months ago. The actual paths for output and inflation are mostly within the 50% probability bands generated a year before, indicating that in early 2009 the probability distribution embedded in the forecasts appropriately reflected the risks the U.S. economy was to face in the following 12 months.

Special Topic

Assessing the Outlook for Personal Saving

Charles Steindel Redacted

After rising in the second half of 2008 and the first half of 2009, the personal saving rate appeared to have stabilized in the second half of 2009 at about 4%.

Although this rate is somewhat above the average rate in the first half of the 2000s, it is below that of prior decades. The FRBNY central forecast projects the saving rate to increase modestly to about 5¾% at the end of 2011. One risk to our outlook is that households, wary of future prospects and attempting to adjust their balance sheets, may desire to save more. This special topic examines the saving outlook using a simple model of the saving rate.

Household Wealth Movements

Considerable research has shown that movements in aggregate wealth are associated with movements in household saving, though the size and stability of the wealth effect remains a subject of disagreement. In any event, the surge in the ratio of household wealth to disposable income between 2003 and 2007 likely contributed to the period's low saving rate, and the wealth decline from late 2007 through 2009Q1 probably helped to prompt the saving rate rebound (Figure 1).

According to the Flow of Funds, aggregate household wealth increased over the last three quarters of 2009 by $5.6 trillion, with the rise heavily concentrated in stock market gains (both directly and indirectly held by households). These increases allowed for a modest improvement in the ratio of wealth to income, but it remains far below its peak.

Projecting the Saving Rate

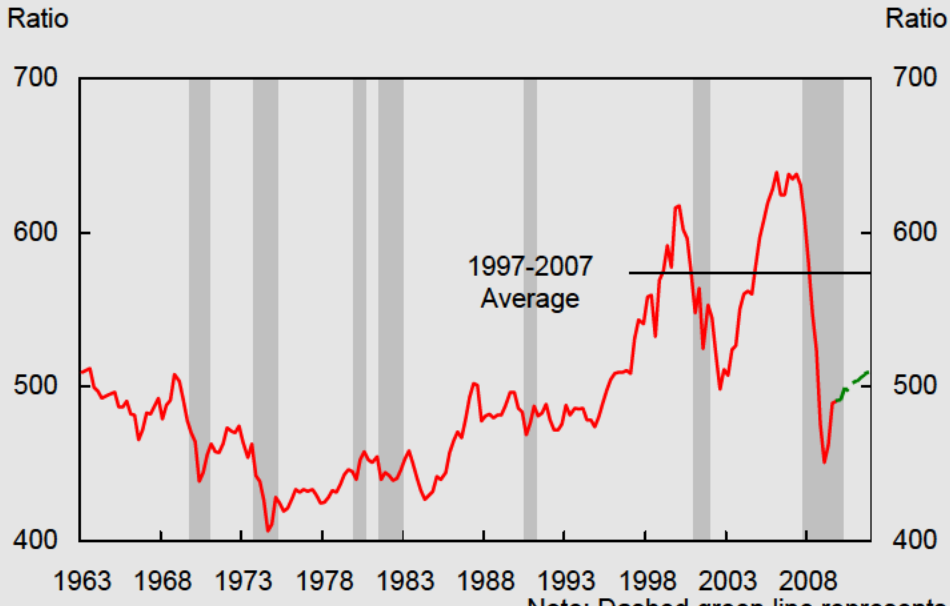
The saving rate in our model is driven by two factors. The first, as suggested by the previous section, is the aggregate household wealth-income ratio. The second is the 5-year moving standard deviation of GDP growth, which is interpreted as a measure of uncertainty affecting precautionary saving. This measure of volatility moved up during the recession (Figure 2).

In a simple regression over 1960-2008, the estimated coefficients on these two variables are statistically significant and have the expected signs. Moreover, the model captures the broad contours of saving rate movements over the sample period, although it over-predicted the recent saving rate; as was the case in 2002, households increased saving less following a sharp decline in wealth than this simple model predicts (Figure 3). Nonetheless, the prediction error was smaller in the second half of 2009 than in 2002.

To use this model to project the saving rate, we need forecasts for the two independent variables. For the wealth-income ratio, we use the FRBNY forecasts for nominal income and expenditures (to develop estimates of household asset purchases) and the assumptions for the growth of the stock market (15% annual rate) and of housing prices (2% annual rate) to develop forecast-consistent projections. (The nominal saving projections of course affect the wealth forecast, but varying saving assumptions would have little effect on the near-term wealth forecast, so for this purpose we can treat wealth as exogenous.) In this projection, the wealth-income ratio rises gradually through 2011, but its level remains subdued (Figure 1). For the GDP standard deviation, we assume it remains near recent levels.

The model's forecast through the end of 2011 does not call for a very high saving rate — indeed, the point forecast falls over the projection period. The model over-predicts the actual saving rate in 2009Q4, but its forecast in late 2011 is fairly close to the FRBNY projection (Figure 3). We also considered an alternative model of the saving rate, comparable to one discussed in the Economic Report of the President. This model, where the GDP volatility variable is replaced by the unemployment rate and a measure of banks' willingness to lend to households, produces similar results. A projection of a stable to gradually rising saving rate appears consistent with other elements of the FRBNY central forecast.

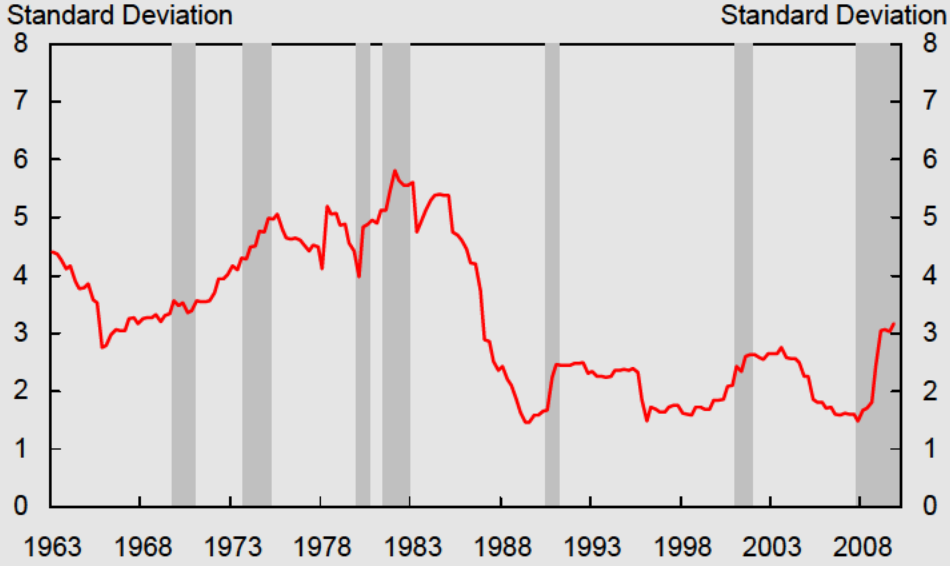
Figure 1: Household Wealth/Income Ratio



Source: Federal Reserve Board

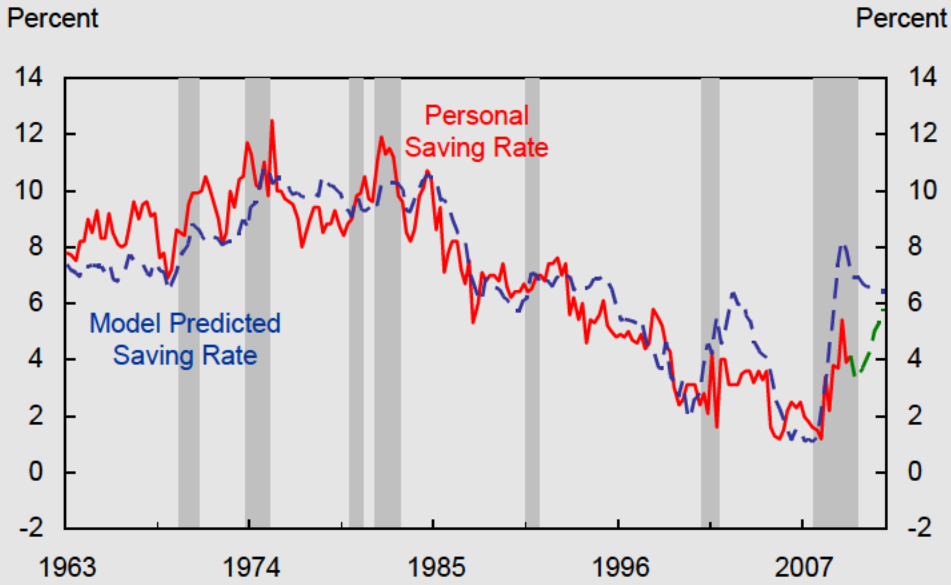
Note: Dashed green line represents FRBNY forecast.

Figure 2: Standard Deviation of GDP Growth over Previous Five Years



Source: Bureau of Economic Analysis

Figure 3: Personal Saving Rate



Note: Dashed green line represents FRBNY forecast.

Source: Bureau of Economic Analysis

Special Topic

The Housing Drag on Core Inflation

Stefano Eusepi Bart Hobijn (FRBSF) and Andrea Tambalotti Redacted

"…One participant noted that core inflation had been held down in recent quarters by unusually slow increases in the price index for shelter, and that the recent behavior of core inflation might be a misleading signal of the underlying inflation trend." (FOMC minutes, January 26-27, 2010)

Because of the unusual weakness in housing costs, reflecting the housing collapse, there is some concern that standard core inflation measures recently have provided misleadingly low signals of underlying inflation. If so, policy potentially could be too slow to react to incipient inflation pressures. This special topic addresses this concern and shows that the weakness in the BLS measures of housing costs is representative of a broad pattern of subdued price increases across consumption goods and services.

One of the striking facts within the aggregate inflation numbers of the last few years is the steady decline of the inflation rate in the shelter component of the CPI. Shelter inflation peaked at around 5% in 2006 and has been trending downwards since then, crossing into negative territory in the last part of 2009 (Figure 1).

The large share of shelter in core CPI expenditures (currently 42%) implies that the recent declines in shelter prices should result in a large drag on the rate of core inflation. Indeed, core CPI inflation excluding shelter over the last three months was 1.9% at an annual rate, as compared to 0.0% for the standard core. Nevertheless, our examination of the data indicates that the weakness in shelter inflation reflects a broader lack of pricing power across the economy.

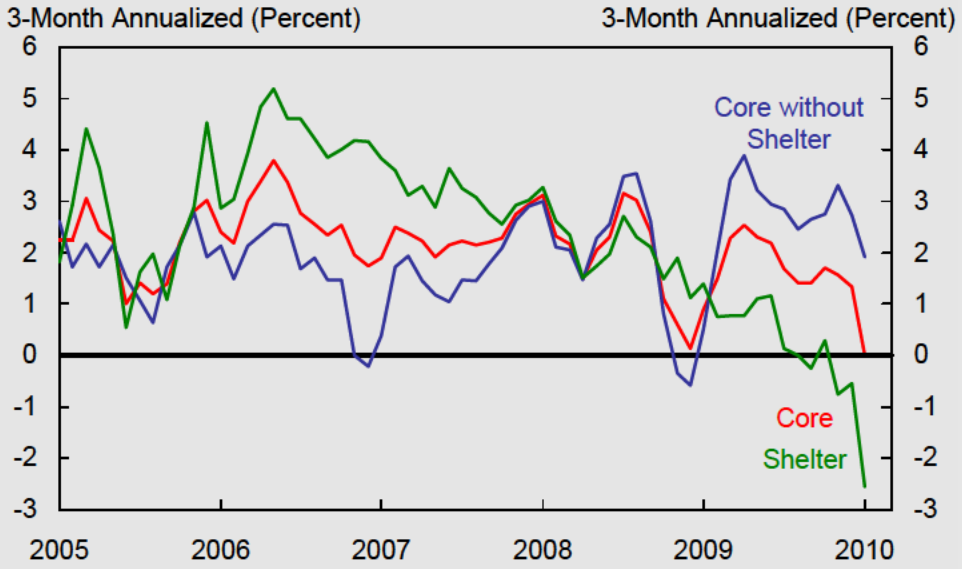
Figure 1 indicates that the broad movements in core CPI and core CPI excluding shelter have been similar over the past year, notwithstanding the discrepancy between the levels. Even excluding shelter, core inflation has slowed. Moreover, a closer look at the components of the shelter price index reveals that a non-negligible fraction of the discrepancy is not due to changes in housing costs (i.e. tenant rent and owners' equivalent rent), but rather to gyrations in the index for lodging away from home. This observation should help to assuage the concern that the extreme weakness in housing could lead to a misleading signal from core inflation about the underlying inflation trend.

Figure 2 provides more evidence in support of the view that the reduction in housing inflation reflects a general deceleration in inflation.

The figure compares inflation rates before and after September 2008 of the approximately fifty goods and services into which we can decompose core Personal Consumption Expenditures (PCE).[1] Points below the 45-degree line correspond to products for which inflation has decreased between the two periods. The size of the bubbles reflects the expenditure share of each category. Most of the points lie below the 45-degree line, confirming that disinflation has been a widespread phenomenon. Moreover, housing costs (large red disk) sits more or less at the center of the picture, close to that of many other large expenditure categories. This evidence leads us to conclude that the deceleration in housing inflation since the worsening of the recession in September 2008 was far from an outlier, but rather a fairly typical reflection of a broad-based deceleration in core inflation.

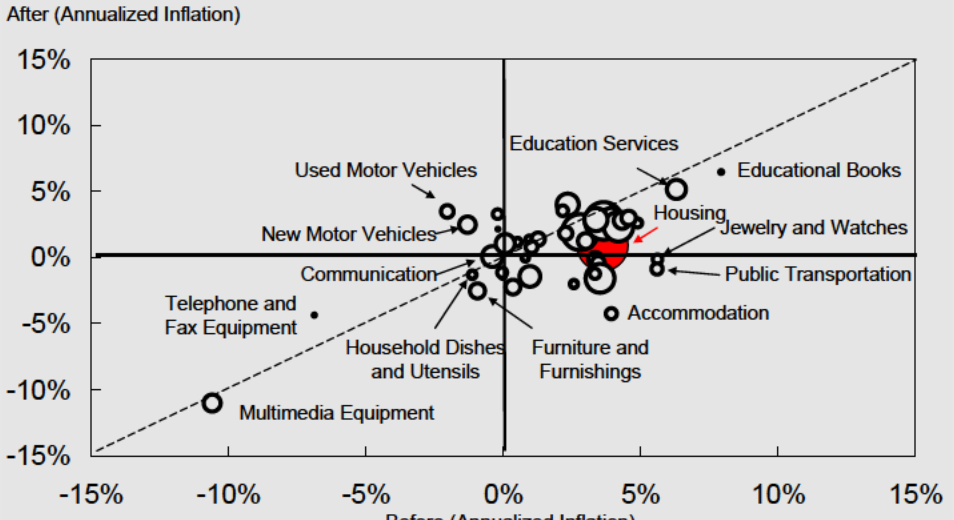
[1]For this exercise, we adopt the PCE rather than the CPI classification by "types of products" because the core PCE price index has been the underlying inflation measure most cited by the FOMC. Another advantage of the PCE over the CPI is that the PCE's somewhat broader definition of consumption expenditures implies a smaller share of housing costs in the index. However, the results would be very similar if we used the CPI classification instead.

Figure 1: Core CPI Inflation with and without Shelter



Source: Bureau of Labor Statistics

Figure 2:Core PCE Components Before and After Sep-2008



Source: Bureau of Economic Analysis, FRBSF/FRBNY Staff

Note: Before (Dec-05 to Sep-08); After (Sep-08 to Jan-10)

3. Forecast Comparison

3.1 Greenbook Comparison. The Greenbook forecasts for output and inflation changed during the intermeeting period. The forecast for output growth is closer to our projection than in the previous FMOC cycle, as the FRBNY forecasts has been raised modestly while the Greenbook forecast has been lowered some. While the Board staff forecast continues to be somewhat more optimistic for 2010, it is now broadly in line with our forecast for 2011.

Both the Blackbook and Greenbook forecasts for inflation have been lowered since January, and for 2010 they remain similar. For 2011 as in January, the FRBNY forecast has higher inflation, as the combination of somewhat stronger growth and anchored inflation expectations is expected to begin to push inflation toward the FOMC objective. In contrast, the Greenbook expects that the still significant output gap, combined with greater assumed inflation persistence, will keep inflation measures well below the objective.

Conditioning Assumptions. Relative to the January Greenbook, the Board staff now projects a slightly later start of the tightening process. The Greenbook assumes the Federal Funds Rate (FFR) to remain in the current target range of 0–0.25% through the end of 2011 (instead of 2011Q4 as in the January Greenbook) while the Blackbook central forecast assumes that the FFR will reach 1.50% by the end of 2011 (unchanged since the January Blackbook). Both the Greenbook and the Blackbook maintain their assumptions about nontraditional policy actions.

The other conditioning assumptions are little changed since the January Greenbook. There were only minor changes to the initial points in equity and home prices, and their assumed rates of changes over the forecast horizon remain the same. Therefore, on net, the Greenbook projection for household net worth is little changed since January.

Inflation. Both the Greenbook and the Blackbook forecasts for core PCE inflation in 2010 (Q4/Q4) are 0.2 percentage points lower relative to January and very similar to each

other at 1.0% and 0.9%, respectively. As in January, there are greater differences in the core PCE projections for 2011: the Greenbook projects core PCE at 1.0% in 2011, while we see it increasing to 1.4%.

Real Activity. Compared to January**,** the Board staff's forecast of real GDP growth is lower in both 2010 and 2011, reflecting the impact of weaker conditions in the housing sector and the downward revision to household income data.

We now expect a growth rate of real GDP of 2.8% in 2010 (Q4/Q4), which is 0.5 percentage points higher than January, while the corresponding Board staff forecast is 3.3% (from 3.6%). As in January, the main reasons for the differing point projections are the Board staff's higher consumption, business investment, and federal spending projections for 2010. There is now only a small difference in the GDP growth projections of the Greenbook and the Blackbook for 2011, with our forecast increased 0.2 percentage points to 4.3% (Q4/Q4) and the Board staff's estimate at 4.4% (down from 4.7%).

The unemployment rate projections show little change both in the Greenbook and the Blackbook compared to January. The Greenbook forecasts an unemployment rate of 9.4% in 2010Q4 and 8.3% in 2011Q4, while we expect the unemployment rate to be at 9.9% in 2010Q4 and to decline to 8.1% by 2011Q4.

Since January, the substantial discrepancy in the FRBNY and the Board staff projections for payroll employment in 2010 has narrowed but remains considerable. We now forecast payroll employment to increase 1.4 million in 2010 (compared to 604,000 in January) while the corresponding Greenbook forecast is now 2.2 million (compared to 2.5 million in January). The payroll forecasts for 2011 show a somewhat higher disagreement than in January. Our projection for payroll employment is an increase of 4.5 million (roughly 200,000 below January) while the Board staff expects an increase of 3.7 million, down by 500,000 in the intermeeting period**.** As in January, the difference is

partly explained by different assumptions about the evolution of productivity growth over the forecasting horizon, and may also reflect differing assumptions about average hours.

International Trade. The FRBNY forecast for the net export contribution to GDP growth for 2010 and 2011 is very close to the Board's forecast: the FRBNY forecast is for a net export contribution of 0.1 percentage points, whereas the Board's forecast is for a small drag of 0.1 percentage points. Both the FRBNY and the Board expect export growth to be higher than import growth over the next two years, in line with relatively stronger growth in major export markets than of U.S. domestic demand.

Uncertainty around Forecasts. There was little change in our and the Board staff's risk assessment relative to January. As in last FOMC cycle, the FRBNY forecast continues to have more downside risk to inflation in 2010 as captured by the lower bounds on the 70% confidence intervals. In contrast, for 2011 the Board forecast assigns a higher probability to lower inflation realizations. The Board staff's low inflation rate projections for 2011 and 2012 continue to be well within the lower half of our inflation forecast distribution.

Our forecast for real activity continues to have substantially more downside risk than the Greenbook forecast. With little change in the FRBNY forecast distribution and some convergence in the point forecasts, the Greenbook's forecast has moved towards the center of our output forecast distribution.

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

	Core PCE Inflation		**Real GDP Growth**	
	FRBNY	*Board*	*FRBNY*	*Board*
2010	-0.1, 1.7 (0.1, 1.9)	0.4, 1.6 (0.6, 1.7)	0.6, 4.3 (0.3, 3.9)	1.7, 4.9 (2.0, 5.2)
2011	0.5, 2.3 (0.6, 2.4)	0.1, 1.8 (0.2, 1.9)	2.0, 6.1 (1.9, 5.8)	2.7, 6.1 (3.1, 6.4)
2012	1.2, 2.8 (1.2, 2.8)	n/a (n/a)	2.8, 6.8 (2.8, 6.8)	n/a (n/a)

Table 2: Percentile of Greenbook Forecast in FRBNY Forecast Distribution

	Core PCE Inflation	Real GDP Growth
2010	59 (59)	66 (80)
2011	36 (33)	57 (66)
2012	12 (15)	48 (44)

Alternative Greenbook forecasting scenarios. The March Greenbook considers seven alternative scenarios. The first two evaluate opposite risks to aggregate demand. In the *Persistent caution* scenario consumers and firms are initially more pessimistic about household income and corporate earnings. Weaker aggregate demand leaves unemployment at 9.0% at the end of 2011, 0.7 percentage points above baseline and delays the first increase in the federal funds rate to mid-2012. In contrast, the S*tronger recovery* scenario features an increase in private fixed investment and outlays on consumer durables, promoting a faster recovery than baseline, more in line with historical norms. Lower slack in the labor market induces inflationary pressures, prompting an earlier increase of the federal funds rate by early 2011 and leaving the path for inflation little changed.

The third and fourth scenarios consider stronger structural productivity than under the baseline forecast. In the S*tronger productivity* scenario, higher labor productivity generates a roughly 1 percentage point higher GDP growth and a 0.5 percentage points lower inflation than baseline. Still, potential output rises more than actual output initially; as a result, economic slack increases, which delays the increase in the federal funds rate beyond 2012. The *Stronger productivity and weaker consumption* scenario features higher unemployment than baseline. Lower aggregate demand coupled with higher labor productivity holds the unemployment rate at 10.0% through 2011 and roughly 1.5 percentage points higher than baseline in 2012. As a result, the federal funds rate remains near zero until 2013.

In contrast with the previous two scenarios, the fifth and sixth scenarios evaluate the risks from overestimating potential output. In these scenarios, the initial output gap is assumed to be -3.75%, compared to -7.25% in the baseline. Moreover, policymakers mistakenly assume a higher gap and only slowly learn the true value by 2013. In the *Lower potential output* scenario excessive monetary accommodation induces about 0.5 percentage points higher inflation than baseline for 2012 and 2013-4. The moderate increase in inflation reflects the assumption that long-run inflation expectations remain anchored, as the private sector expects the policy mistake to be corrected over the medium run. The *Impaired credibility* scenario removes this last assumption; the public, which has a correct assessment of the output gap, interprets the policy accommodation as an increase in the FOMC's inflation objective. Long-run inflation expectations rise to 3% by the beginning of 2011, boosting core PCE inflation to about 2% over 2011 and 2.5% in 2014 (more than 1 percentage point above baseline). In response, the federal funds rate is raised more quickly than in the baseline, which contributes to lower economic activity.

The last scenario, *Greater disinflation*, features a tighter link between current inflation and long-term inflation expectations. As low inflation, induced by economic slack, feeds into lower long-term inflation expectations, core PCE inflation falls to zero by 2012 and remains there through the forecast horizon. As a response, the federal funds rate stays near zero until 2013, inducing a faster pace of GDP growth after 2011.

3.2 Comparison with Private Forecasters[1]

The FRBNY forecast for GDP growth is below private forecasts for 2010 and above them for 2011. Our inflation projections are generally in line with those of private forecasters for 2010. For 2011, the FRBNY forecasts are significantly above Macro Advisers' projections, which are closer to those of the Board staff. Forecasts are reported in Exhibit B-8. Note that the Median SPF forecasts are from the February (2010Q1) release.

[1] Release dates of the private forecasts discussed in this section are in parentheses: Blue Chip consensus (3/10), SPF (2/12), Macro Advisers (3/10), and the PSI Model (3/10). Quarterly numbers are SAAR.

GDP Growth. Relative to the last FOMC, both FRBNY and SPF forecasts for 2010 have been revised upwards, while the Blue Chip forecast has remained unchanged and the Macro Advisers forecast has been lowered. For 2010 (Q4/Q4) our projection of 2.8% growth is below the more optimistic estimate of 3.5% from Macro Advisers and slightly below the 2.9% and 3.0% forecasts of the Blue Chip and Median SPF, respectively. For 2011 (Q4/Q4), the FRBNY forecast of 4.3% is slightly above the Macro Advisers forecast (3.8%) and considerably higher than the Blue Chip (3.2%) and Median SPF (2.9%) forecasts.

Inflation. The FRBNY and private forecasters' projections for core PCE and core CPI are within a 0.9%-1.4% range for 2010 (Q4/Q4). Our 2011 (Q4/Q4) forecasts for core inflation, at 1.5% (core PCE) and 1.7% (core CPI), are the same as the Median SPF forecasts and above the forecasts of Macro Advisers (0.9% and 1.0%, respectively). The difference between our forecast and that of Macro Advisers probably reflects a stronger role for economic slack in the inflation process of the Macro Advisers model. Differences similar to those described above are also evident in the overall CPI forecast.

4. Robustness of Policy Recommendation

4.1 Sensitivity to Alternative Scenarios and Policy Rules

Our current policy recommendation consists of keeping the target federal funds rate in the 0–0.25% range through 2010, as was the case in the last Blackbook. Our recommendation is consistent with the *Baseline* policy rule under the expected value of the forecast distribution [Exhibit D-2], and also under all scenarios [Exhibit D-1]. Even under the *Loss of Credibility* scenario the FFR effectively does not increase until 2011Q1. Under all other scenarios the FFR starts increasing no earlier than 2011Q4. The FFR path for the *Baseline* rule under the *Loss of Credibility* scenario roughly coincides with market expectations until the end of 2011.

In terms of the prescriptions from alternative policy rules, the *Nutter* rule under the *Loss of Credibility* scenario is the only case where the FFR path differs significantly from our policy recommendation, since the first rate increase occurs in the current quarter [Exhibit

D-3]. The *Nutter* rule has a strong response to inflation and no response to the output gap. Under the expected value of the forecast distribution the prescriptions from this rule are close to the path obtained from market expectations, which are currently not too different from our policy recommendation. All other rules (*Asymmetric Price Targeting* and *Outcome-based*) result in a FFR path that is close to zero until the end of 2012. For the *Outcome-based* rule we show the implied nominal FFR ignoring the zero bound. Under the expected value of the forecast distribution the unconstrained nominal FFR is about-3% by mid-2011, returning to zero only by the end of 2012 [Exhibit D-2].

Exhibit D-1 shows the *shadow* real rates - that is, the real FFR rates implied by the various rules under the various scenarios *ignoring* the zero bound constraint. The "shadow" real rate implied by the *Baseline* rule under the *Central* scenario is between -3% and -4% in the current quarter. Given that the nominal FFR is constrained by the zero bound, this number indicates the desired level of expected inflation. Exhibit D-3 shows the real rate (under alternative scenarios) for *Asymmetric Price Targeting*, the *Nutter*, and the *Outcome-based* rules.

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. We find that the both the DSGE model and the DSGE-VAR model roughly predict a counterfactual FFR for the current quarter in line with the policy rate.

4.2 Comparison to Market Expectations

The market-implied FFR path shifted downward during the intermeeting period, and is now almost aligned with our recommended path. This is a substantial change relative to only a few months ago, when there was still a substantial divergence. The anticipated start of the renormalization process, as implied by the expected FFR from the market path (using the standard Board staff assumptions concerning term premia), occurs in the last quarter of this year. The responses from the primary dealers surveys about the expected timing of the first FFR increase show that the modal forecast is 2010Q3 while the mean is December 2010, in line with the market-implied FFR. These responses are essentially

the same as in the December survey. Both disagreement and uncertainty about the level of the FFR six months ahead have increased substantially relative to a few months ago, especially the former. This is likely due to the fact that as time passes the timing of the first rate increase becomes closer. Respondents expect that the "extended period" language will be retained in the FOMC statement for the current meeting, and that asset sales will only start after the first FFR increase.

5. Significant Developments

5.1 Economic Developments

U.S. Data Releases Overview. Data releases on real activity and inflation during the intermeeting period were largely consistent with our outlook. Real GDP growth was robust in 2009Q4, but indicators point to a relatively subdued pace of recovery in the first half of this year. Labor market data indicate that labor market conditions, although improved from the prevailing levels of last year, continued to be fairly weak. Measures of underlying inflation suggest that trend inflation remains subdued, consistent with downward pressure from low levels of resource utilization.

Real activity. *GDP:* Real GDP rose 5.9% (annual rate) in 2009Q4. However, much of the increase came from inventory investment, with a growth contribution of 3.9 percentage points. The growth contribution of real final sales was 2.0%. This mix of output is a negative for near-term growth, which is consistent with our expectation that 2010Q1 will see a noticeable downward shift in the GDP growth rate.

Productivity: Labor productivity in the nonfarm business sector increased 6.9% (annual rate) in 2009Q4. The four-quarter change was 5.8%. The path of compensation per hour was revised downward: its one-quarter change was 0.6% (annual rate), and its four-quarter change was 0.8%, the lowest since 1949. Unit labor costs fell 5.9% (annual rate) in 2009Q4 and the four-quarter change was -4.7%—a new low. High productivity growth appears favorable for the longer term, but because it has occurred alongside weakness in employee compensation its sustainability remains uncertain.

Production: Industrial production rose 0.9% in January. Manufacturing output rose 1.0%: the gains were fairly widespread across manufacturing industries. The January figures suggest, in line with many other indicators, including surveys and orders, that the manufacturing recovery has been fairly well sustained. With the gain in production the capacity utilization rate in manufacturing moved up to 69.2% in January, higher than any figure seen in 2009.

Personal income and consumption: Personal income rose 0.1% in January. While compensation rose 0.5%, property income types were weak to down. There were large downward revisions to the levels of employee compensation for the second half of 2009. Consumer spending increased 0.5% in current dollars and 0.3% in real terms, suggesting a somewhat firmer trajectory for spending than we had been anticipating. The personal saving rate was only 3.3%, a little more than half the recent peak of 6.4%.

Retail sales: Retail sales rose 0.3% in February, with an increase of 0.8% ex-autos, although there were moderate downward revisions to the January readings. Still, the numbers suggest that consumer spending may be firming. Ex-autos, building materials, and gasoline ("retail control," or the aggregate incorporated into the GDP estimates of consumer spending) sales rose 0.9% in February following a 0.6% increase in January. These numbers suggest that real consumer spending growth could be solid in the coming months.

Motor vehicle sales: Light motor vehicle sales were 10.8 million units (annual rate) in January and 10.4 million units in February. These rates were above the depressed year-ago levels, but below the average in the second half of 2009.

Consumer credit: Consumer credit outstanding increased $5.0 billion in January, which was the first increase in the series since January 2009. Revolving credit (mainly credit card balances) dropped $1.7 billion, the smallest since last July. Non-revolving credit rose $6.6 billion. The increase in credit outstanding is a sign that households appear

more willing to borrow, and lenders more willing to lend, as the financial markets continue to normalize.

Home sales: Home sales were weak in January, possibly reflecting a payback from the surge associated with the first-planned expiration of the first-time homebuyers' tax credit. Sales of new single-family homes declined a steep 11.2% in January to 309,000 units (seasonally-adjusted annual rate), a new historic low for the series, and 24% below the 2009Q3 average. The inventory of unsold new homes was essentially unchanged at the low level of 234,000 units. Sales of existing homes fell 7.2% in January to 5.05 million units (annual rate). Single-family sales fell 6.9% to a 4.43 million annual rate. Sales declined in all regions of the nation. The NAR's Pending Home Sales Index declined 7.6% to a level of 90.4, the lowest level since March 2009.

House prices: Including distressed sales, the Loan Performance National House Price Index fell 0.8% in December; excluding distressed sales, the index increased 0.3%. The pattern is consistent with a continued impact of foreclosures and distressed sales on house prices, which we expect will hold down house prices over the next several months. In contrast, the seasonally-adjusted S&P/Case-Shiller 20-MSA composite home price index rose 0.3% in December, the sixth consecutive monthly increase, bringing the 12-month decline of the index to -3.1%, the smallest since May 2007. The Federal Housing Finance Administration (FHFA) national purchase-only home price index fell 1.6% in December; the 12-month change was -1.5%.

Housing starts: Total housing starts rose 2.8% in January to 591,000 (seasonally adjusted annual rate). Single-family starts rose 1.5% to 484,000 units, and multi-family starts rose 9.2% to 107,000 units. Total housing permits fell 4.9% following two solid increases in November and December. The decline was concentrated in the multi-family category. Single-family permits were essentially unchanged at 507,000, a low level by historic standards but well above the January 2009 trough of 342,000 issuances. As with other housing market indicators released recently, this release signaled that after a significant

rebound over the first three quarters of 2009, levels of housing market activity have reached a plateau at levels that are quite low by historic standards.

Construction: Total nominal construction spending fell 0.6% in January following downwardly revised 1.2% and 2.5% declines in December and November, respectively. Private construction also fell 0.6% in January, but again this is on the heels of downwardly revised declines of 1.7% in December and 2.6% in November. Private residential construction increased 1.3% in January. In contrast, private nonresidential construction fell 2.1%, and was 26% below its October 2008 peak. State and local government construction declined 0.9% in January, the seventh consecutive monthly decline.

Orders and Shipments: New orders for manufactured goods increased 1.7% in January. Excluding transportation, orders increased a very modest 0.1%. Orders for durable goods manufacturers increased 2.6%, while those for nondurables (which are the same as shipments) increased 0.9%. Shipments by manufacturers increased 0.3%. Shipments of nondefense capital goods excluding aircraft (a monthly indicator for equipment spending) fell 1.7%. Orders for nondefense capital goods excluding aircraft decreased 4.1%. The capital spending data suggest some slowing of equipment spending at the beginning of the year.

Inventories: Manufacturers' inventories increased 0.2% in January, and the manufacturing inventories-shipments ratio was unchanged at 1.29, somewhat above the levels that prevailed during the mid-2000s. Wholesale trade inventories fell 0.2%, and the wholesale inventories-sales ratio moved down from 1.12 to 1.10—a new record low. Retail inventories fell 0.1% in January, and the retail trade inventories-sales ratio was unchanged at 1.37, matching its historical low. The total business inventories-sales ratio fell in January from 1.26 to 1.25, which is just above its historical low.

Flow of Funds: Aggregate domestic financial debt rose only 1.6% (annual rate) in 2009Q4, a record low for the series. Household debt fell for a seventh straight quarter

and in the business sector the rate of decline was a record 3.2%. Federal government debt increased 12.6% (annual rate), a slower pace than that of 2009Q3. Aggregate household net worth increased $700 billion in 2009Q4, a smaller increase than that of 2009Q3. The ratio of wealth to income was virtually unchanged. The aggregate ratio of owners' equity to household real estate moved up slightly to 38.1%. The nonfinancial corporate financing gap went from a -$204.6 billion annual rate in 2009Q3 to a -$17.7 billion annual rate in 2009Q4, indicating that nonfinancial corporations were a roughly neutral net supplier of funds in the capital market in 2009Q4.

Labor market. *Establishment survey:* Although it has shown mild improvement along some dimensions, the labor market remained fairly weak. Nonfarm payroll employment fell 36,000 in February, 26,000 in January, and 109,000 in December. Construction showed a large loss in February—possibly reflecting severe winter weather—but manufacturing had its second straight gain. Temporary help agencies continue their recent robust gains. The one-month diffusion index for all private industries moved up from 44.2 to 48.0, the highest since March 2008. However, average weekly hours in private business fell 0.3% and the index of aggregate hours worked also dropped 0.3%. Average hourly earnings rose 0.1%; the twelve-month gain was 1.9%, the same as in January. Average weekly earnings fell 0.2%.

Household survey: The unemployment rate was unchanged in February at 9.7%, but both the labor force and employment expanded. The participation rate moved up from 64.7% to 64.8%, and the ratio of employment to the working-age population grew from 58.4% to 58.5%. Both the average and median duration of unemployment spells fell, with the average declining from 30.2 to 29.7 weeks, and the median duration declining from 19.9 to 19.4 weeks.

JOLTS: The job openings rate increased to 2.1% in January, the highest since February 2009. The hires rate was unchanged at a low rate of 3.1%. The total separations rate remained low at 3.2%. The quits rate, which is an indication of workers' ability and

willingness to change jobs, was little changed at 1.4%. The rate of discharges and layoffs declined to 1.5%.

Unemployment claims: The unemployment claims data did not suggest much improvement in labor market conditions. Initial claims for unemployment insurance generally ran higher during the intermeeting period than they had in the previous period, with the four-week moving average currently around 475,000, compared to about 450,000 at the end of the previous intermeeting period. Continuing claims under regular state programs declined modestly, but claims under extended and emergency programs remained very high. This pattern is consistent with the lengthening of unemployment duration over recent months.

ECI: The Employment Cost Index (ECI) rose 0.5% from September to December, a touch higher than the 0.4% gains reported in Q2 and Q3. The four-quarter gain of 1.5% through Q4 was another new low for this series. Both wages and salaries and benefits increased 0.5% in Q4. The ECI is in line with all the other numbers showing major softness in compensation, which, of course, may be a negative for the consumer outlook.

Trade. The trade deficit narrowed to $37.3 billion in January, down from a revised $39.9 billion in December. Both export and import volumes declined in January, following strong growth in December. Oil volumes also fell, following a big jump in the previous month, and oil prices were flat. A large part of the improvement in the trade balance in January was due to declining imports of autos and oil. These data suggest the net export contribution to GDP growth will subtract 0.4 percentage points in Q1.

Inflation. *PCE Deflator:* The PCE price index increased 0.2% in January. The core PCE deflator rounded to no change (the actual movement was an increase of 0.005%), the smallest gain in the measure since December 2008. The 12-month change in the core measure was 1.4%, compared to 1.5% in December. Clearly, this measure of core inflation remains remarkably low. The "market-based" core PCE price measure also reported no change in January, and its 12-month change was 1.4%.

CPI: The CPI rose 0.2% in January while the index less food and energy fell 0.1%. The drop in the core index can be traced to a 0.5% decline in shelter costs. Owners' equivalent rent fell 0.1% and lodging away from home dropped 2.1%. Core service prices declined 0.2% and core goods prices rose 0.1%. The 12-month increase in the core index was 1.5%.

Surveys. *ISM surveys:* The ISM surveys indicated growth in both the manufacturing and non-manufacturing sectors in February. The ISM manufacturing index dipped 1.9 points to 56.5. Both the new orders and production indices fell, but both remain at high levels. The employment index rose to its highest level in more than 5 years. The prices paid index remained at a fairly high level. The ISM non-manufacturing index rose 2½ points to 53.0 in February—its highest level since the onset of recession in December 2007. The employment index rose to modestly under 50, still its highest level in almost two years. The prices paid measure was little changed at a moderately high level.

Federal Reserve surveys: The indications from these surveys were mixed, with greater strength evident in the New York and Philadelphia regions than in the Richmond and Dallas regions. The Empire State Manufacturing Survey index rose 9 points in February to 24.9. The Philadelphia Fed current activity index increased to 17.6 in February. The Dallas Fed index fell from 8.3 to -0.1 in February, reversing most of the gains in the prior two months. The Richmond Fed manufacturing index edged up modestly to +2 in February. In the parallel service sector survey, the revenue index fell 6 points to -15 in February, near the lower end of the range that prevailed in the second half of 2009, with declines among both retail and non-retail businesses.

Consumer surveys: The Reuters/Michigan consumer sentiment index fell modestly in early March to 72.5, near where it has been since January. Inflation expectations were little changed in early March: the median expected 5-year-ahead inflation rate held steady at 2.7%, which is at the lower end of its recent range, and the median 1-year-ahead rate edged up from 2.7% to 2.8%. The Conference Board Consumer Confidence Index fell

10.5 points to 46.0 in February, more than reversing the increases over the preceding three months. Though the index is above its historical low, it is below the troughs of the prior four recessions. Near-term inflation expectations edged back down from 5.3% to 5.2%, which is at the lower end of its recent range.

Foreign Macroeconomic Conditions

The data over the intermeeting period were mostly positive, with the recovery in global exports and production continuing. Business confidence measures are improving and unemployment rates are stabilizing. Foreign output is expected to increase 3.0% (Q4/Q4) in 2010 after rising 0.4% in 2009.

Europe: Euro area grew 0.4% (saar) in Q4, less than expected as only exports and government spending increased. A key drag in the region is consumption which has trended down for two years. More encouraging is the rise in industrial production in January and upward revisions to Q4 data. There now appears to be a clear recovery underway which more closely matches the ongoing improvement in business confidence measures. The recession in the U.K. finally ended with 1.2% (saar) growth in Q4.

Asia: Japanese GDP was up 3.7% (saar) in Q4, boosted by consumption and exports. Exports and manufacturing data moved higher in January, with survey responses pointing to another increase in February. Core prices were down 1.2% over the year in January. Last year, core prices were flat. China's February data for exports, production, investment spending and retail sales were all strong. Credit growth is decelerating in line with government targets.

Latin America: Mexico's economic growth was8.4% (saar), led by exports. Domestic demand indicators remain soft. Brazil's economy likely accelerated in Q4 and tight labor markets suggest inflation pressures are building.

5.2 Financial Markets

Domestic Financial Markets

Policy rate expectations shifted down modestly over the intermeeting period. Treasury yields were little changed, while credit spreads and inflation compensation narrowed. Amounts outstanding under the Fed's liquidity facilities continued to decline over the intermeeting period as short-term funding conditions remained stable and several facilities expired on February 1.

Policy rate expectations shifted down since the last FOMC meeting as Federal Reserve communication reinforced expectations of the target rate remaining exceptionally low for an extended period [Exhibit A-5]. Implied fed funds and Eurodollar futures rates suggest that market participants expect the policy rate to remain within its current range into early autumn and then rise to about 50 basis points by early 2011 and to about 1.75% by early 2012.

Nominal Treasury yields changed little, on net, since the last FOMC meeting, despite the shift in policy rate expectations [Exhibit A-3]. The 2- and 10-year yields both were up slightly during the intermeeting period, fluctuating within a range of 7-9 basis points around their early March levels of 90 basis points and 3.68% respectively. The 3-month yield, in contrast, has steadily increased from around 6 basis points at the end of January to 15 basis points in early March. Volatility in treasury markets continued its decline with the 3-month MOVE and SMOVE indices reaching their lowest levels since October 2007 [Exhibit A-6]. At the longer end of the yield curve, the 1-year expiration 10 year tenor swaption implied volatility reached its lowest level in more than 12 months.

Real yields increased over the intermeeting period at both the 5- and 10-year maturity, causing inflation compensation to decrease modestly [Exhibit A-4]. The carry-adjusted 5-year real yield increased 19 basis points to 0.57% on March 9, whereas the nominal yield increased 1 basis points to 2.39%, causing 0-5 year inflation compensation to decrease by 18 basis points to 1.78%. The 5-10 year inflation compensation declined 11

basis points to 2.98%. In addition Treasury successfully reintroduced a 30-year TIPS security for the first time since 2001 on February 22.

Equity markets increased over the intermeeting period, with broad indices up about 4% as of the March 9 close [Exhibit A-7] following a steep decline in late January. The S&P 500 is now 69% above its March 2009 low, but still 27% below its October 2007 high. Equity index implied volatility jumped higher on January 20 and 21 following the "Volcker Rule" announcement but has since returned to early January lows [Exhibit A-6]. Speculative grade credit spreads narrowed slightly since the last FOMC meeting, with BB spreads 24 basis points narrower at 462 basis points while investment grade credit spreads widened slightly with A credit spreads increasing by 4 basis points to 164 basis points as of March 9.

Amounts outstanding under the Fed's liquidity facilities continued to decline over the intermeeting period as short-term funding conditions remained stable [Exhibit A-8]. In addition, a number of liquidity facilities expired on February 1 without appreciable market reaction. The expiring facilities were the Treasury Securities Lending Facility (TSLF), the Primary Dealer Credit Facility (PDCF), the foreign central bank swap lines, the ABCP Money Market Liquidity Facility (AMLF), the Commercial Paper Funding Facility (CPFF), and the Money Market Investor Funding Facility (MMIFF). Outright purchases of agency debt and agency MBS continued as planned [Exhibit A-9]. On net, total Federal Reserve assets increased modestly since the last FOMC meeting reaching $2.3 trillion.

Commercial and industrial loans continued to decline in December at a year-over-year annual rate commensurate with November [Exhibit A-10]. Loans outstanding continued to decline through February 22 (the latest data available), albeit at a slower pace.

Foreign Financial Markets

Global funding conditions continued to normalize with three-month LIBOR-OIS spreads across Europe and Japan remaining broadly unchanged since the last FOMC meeting at levels within the 15-25 basis point range.

During the first part of the intermeeting period, concerns about the fiscal positions of peripheral euro-area member states and more generally about fiscal sustainability among developed economies led to declines in global equities and a steepening in global sovereign debt curves. In this period, Japanese, European, and emerging market equities declined, longer-dated government bond yields rose, and CDS spreads widened. As concerns over sovereign debt eased in recent weeks, equity markets regained many of their earlier losses and bond yields and CDS spreads narrowed.

Sovereign debt concerns were partially assuaged by Greece's announcement of additional fiscal consolidation measures and as expectations solidified regarding support from larger euro-area countries. At the end of the intermeeting period, however, investors still remained focused on the near-term funding outlook for Greece given its large redemptions scheduled for April and May, though its successful syndication of €5 billion in 10-year notes in early March supported a somewhat improved outlook.

By early March, European and Japanese 10-year government bond yields were roughly the same as at the last FOMC meeting. Comparable yields were up 22 basis points for the U.K. amidst growing concerns about its fiscal outlook.

The trade-weighted U.S. dollar index appreciated steadily since the last FOMC meeting. Relative to the euro, the dollar strengthening was more pronounced than implied by the overall index with gains of about 3%. More broadly, the euro depreciated with respect to other major currencies by almost 2%. This movement followed the perception that the euro area's recovery will lag other developed economies going forward, as exemplified by recent data releases, and by structural concerns over the fiscal outlook for Greece and other peripheral European countries.

In contrast to its overall trend, the dollar depreciated by more than 3 percent against Latin American currencies leading Colombia's central bank to announce daily purchases of $20 million to contain the domestic currency appreciation and Mexico's central bank to announce monthly auctions of $600 million in dollar put options, restoring a mechanism to facilitate reserve accumulation that was previously used from 1996 to 2001.

The dollar was virtually unchanged against the yen and also remained stable against the Chinese yuan. Forward contracts suggest some managed appreciation of the yuan is likely over the coming months.

5.3 Global Economic Policy

Developed nation central banks kept their policy stances at very accommodative levels over the intermeeting period, although they did take steps to begin curtailing some of the extraordinary liquidity support operations put in place during the crisis. In contrast, monetary authorities in emerging markets and commodities-oriented economies are either close to or have already implemented an explicit tightening of their policies.

The ECB kept its policy rate unchanged at 1.0% at its March meeting, as it has since last May, with Trichet noting continued uncertainty about the pace and evenness of the recovery in the euro area. However, the ECB continued to reduce the size of its liquidity support facilities. In December, it held its last 12-month refinancing operation and scheduled a final 6-month refinancing operation for the end of March. The ECB announced further at its March meeting that 3-month refinancing operations will return to their pre-crisis auction method with variable rates and a limited allotment of funds. The weekly and monthly refinancing auctions will, however, continue with a fixed rate of 1% and as much liquidity supplied as banks demand.

The Bank of Japan kept its policy rate close to the zero-bound at 0.10% and did not change the size or scope of its new ¥10 trillion 3-month term liquidity facility, despite ongoing concerns over the prospect of persistent consumer price deflation. To address

these concerns, future policy actions could include an expansion of the current credit program, a duration commitment for the near-zero policy rate, currency interventions, or increased monthly purchases of government bonds.

The Bank of England also kept its policy rate unchanged at 0.5% but announced a pause in its asset purchase program at its current stock of GBP 200 billion. MPC members indicated that such purchases could resume as warranted by market conditions. Chinese monetary authorities are expected to continue along a path of incremental increases in banks' reserve requirements and sterilization bill rates – they have increased reserve requirements for both small and large banks by 100 basis points over the past two months. Despite this expected gradual tightening, the stance of Chinese monetary policy should remain moderately accommodative in 2010.

Most of the remaining G-20 central banks kept their policy rates unchanged at historically low levels, including the Bank of Canada, the Swedish Riksbank and the Mexican central bank. One exception was Australia's central bank, which raised its policy rate by 25 basis points in early March, its fourth rate hike since October and a resumption of the tightening cycle it had paused unexpectedly in February. Australia's economy has responded rapidly to the uptick in the global demand for commodities, particularly by China, Australia's largest export partner, leading the central bank to get ahead of other G-20 central banks in pulling back on the historically very accommodative policy stance.

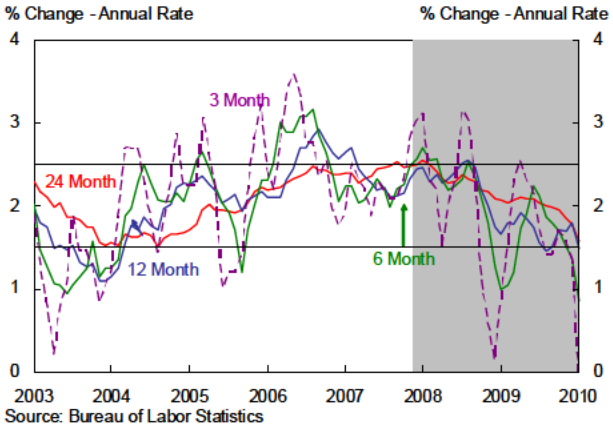
The rapid rate of economic recovery in Latin America and Emerging Asia outside China has spurred central banks in these regions to begin tightening policy. Brazil's central bank increased banks' reserve requirements in late February, drawing down most of the liquidity it had injected during the crisis. Bond markets in Brazil and Mexico are pricing in initial policy rate hikes by mid-year, with additional hikes by year-end. In India, the central bank's recent withdrawal of emergency liquidity support measures and increase in banks' reserve requirements should pave the way for hikes in the main policy rate in the coming weeks. Malaysia's central bank also started tightening policy, hiking rates by 25

basis points. Central banks elsewhere in Asia should follow by mid-year. U.S. dollar reserve purchases in Asia outside China dipped into negative territory in February amidst a global sell-off in risky assets, the first such reading since January 2009. However, reserve purchases have likely resumed with the recent market rebound.

A. Significant Developments

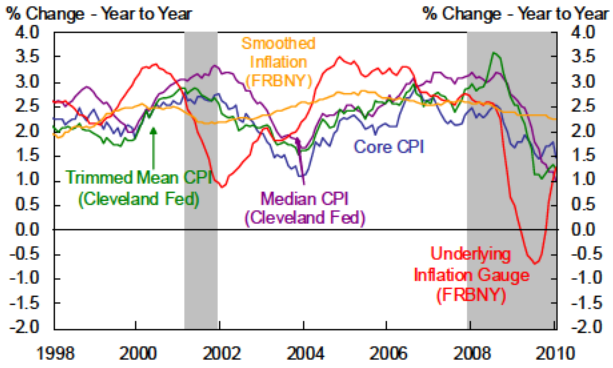
Exhibit A-1:
Measures of Trend Inflation

Core CPI Inflation over Various Horizons



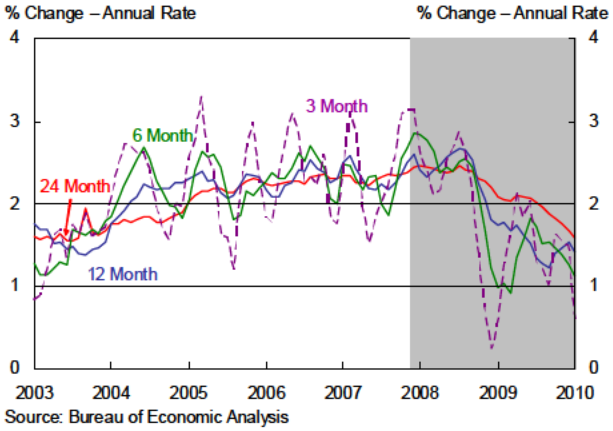
Source: Bureau of Labor Statistics

Alternative Measures of CPI Inflation



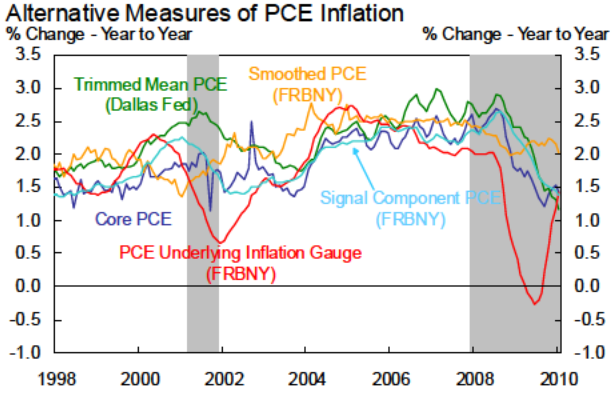
Source: Bureau of Labor Statistics, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Core PCE over Various Horizons



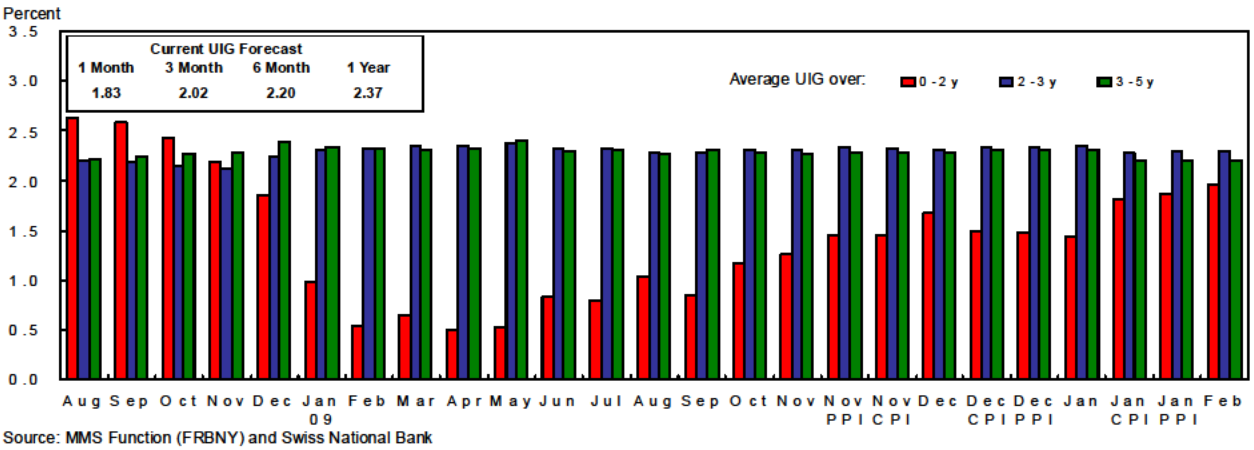
Source: Bureau of Economic Analysis

Alternative Measures of PCE Inflation



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

Exhibit A-2:
Underlying Inflation Gauge (UIG)

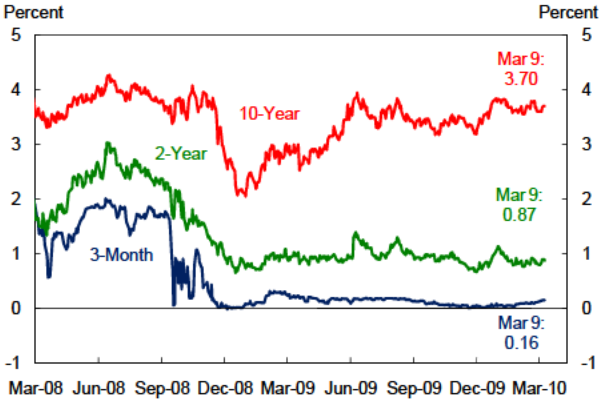


Source: MMS Function (FRBNY) and Swiss National Bank

A. Significant Developments

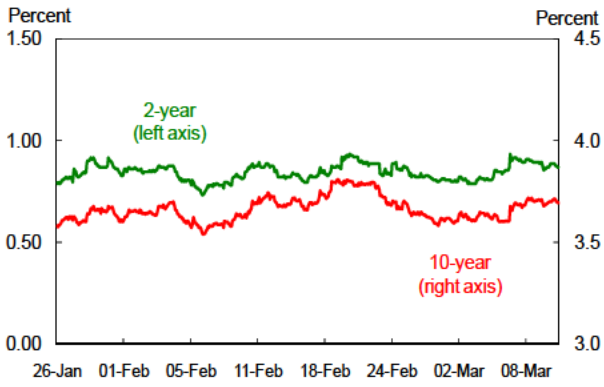
Exhibit A-3:
Treasury Yields

Short- and Long-Term Rates



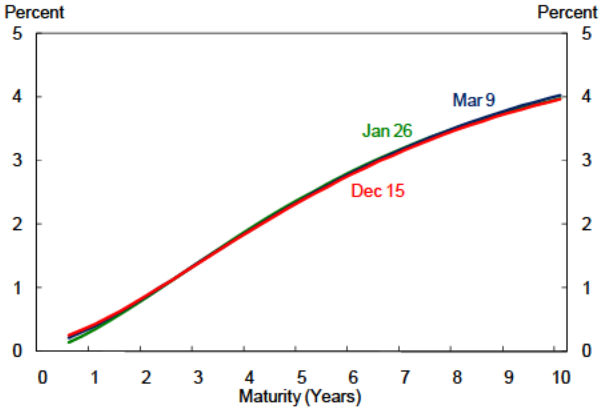
Source: Bloomberg Note: Yields of on-the-run securities.

Short- and Long-Term Rates (Intraday)



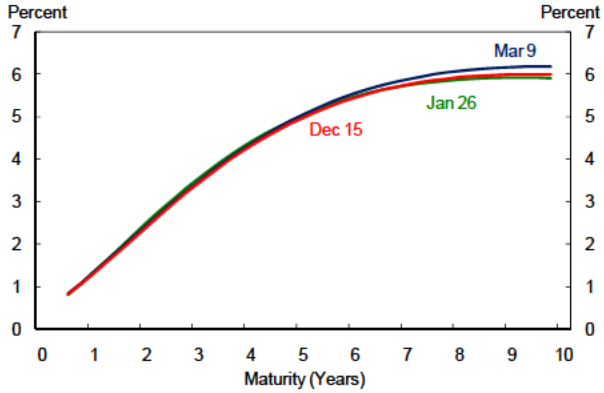
Source: Bloomberg Note: On-the-run securities, 8:00 am to 4:00 pm.

Yield Curves



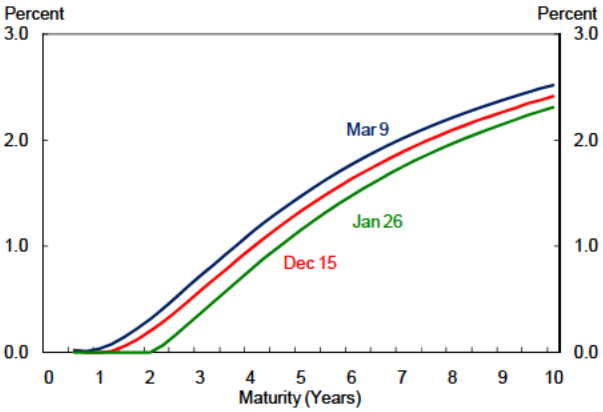
Source: Federal Reserve Board

Yield Curves: One-Year Forward Rates



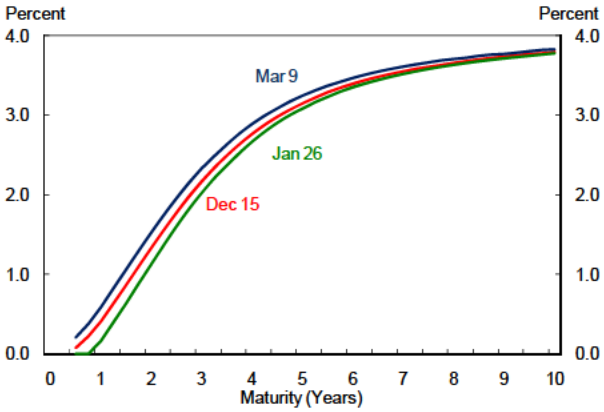
Source: Federal Reserve Board

Risk Neutral Yield Curves



Source: FRBNY calculations

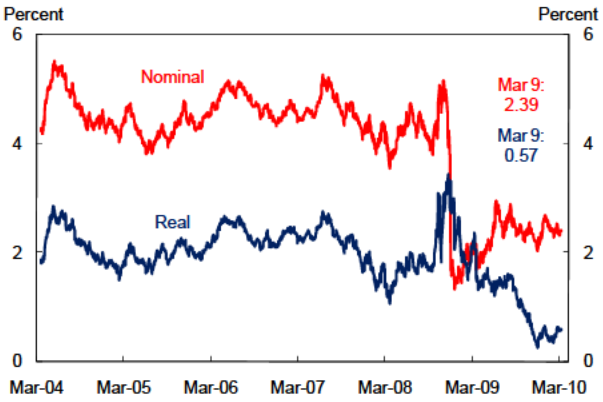
Risk Neutral One-Year Forward Curves



Source: FRBNY calculations

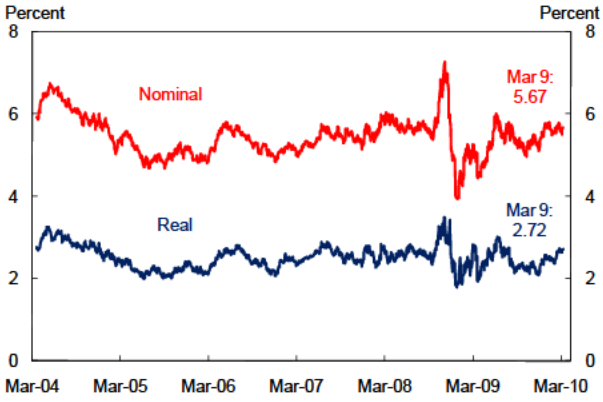
Exhibit A-4:
Real Yields and Implied Inflation

5 Year Spot Rate



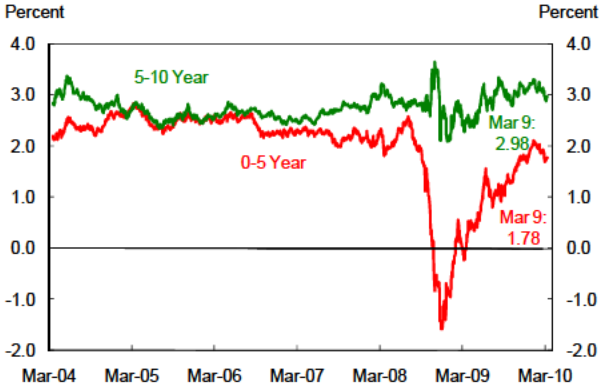
Source: Federal Reserve Board

5-10 Year Forward Rates



Source: Federal Reserve Board

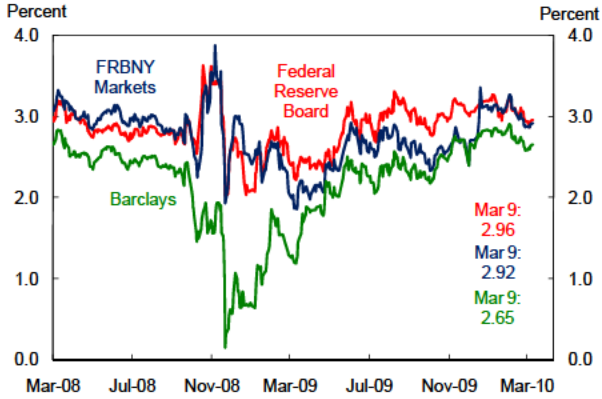
TIPS Implied Inflation Compensation: 0-5, 5-10 Year Horizons



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

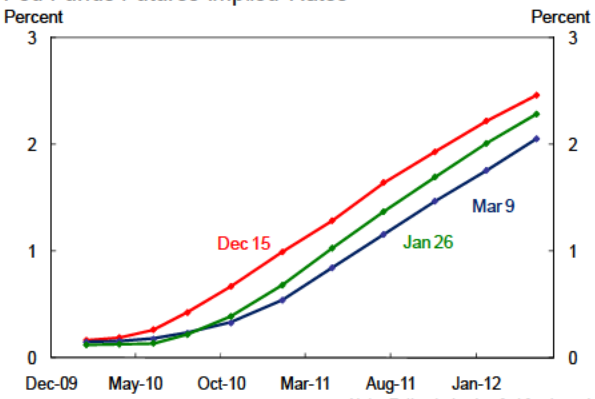
Note: On-the-run securities, 8:00 am to 4:00 pm.

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

Source: Barclays

Exhibit A-5:
Policy Expectations

Fed Funds Futures Implied Rates



Source: Federal Reserve Board

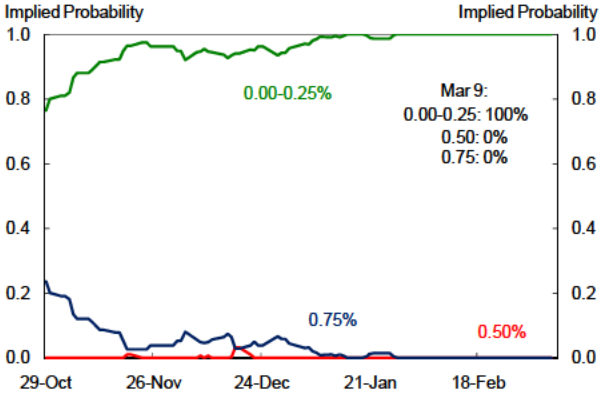
Note: Estimated using fed funds and Eurodollar futures.

Implied Eurodollar Rates (Intraday)

Source: Bloomberg

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

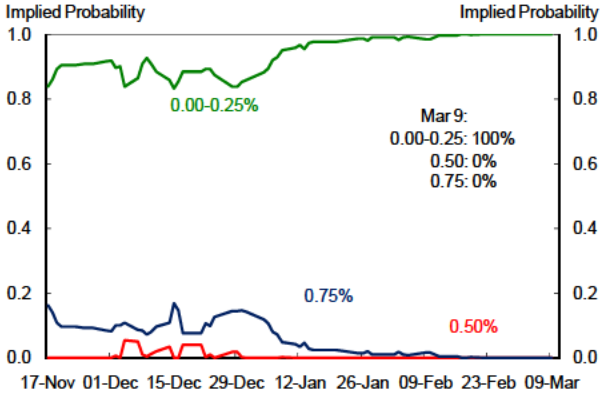
FOMC Target Probabilities: March 2010 Meeting



Source: Cleveland FRB

Note: Estimated using options on fed funds futures.

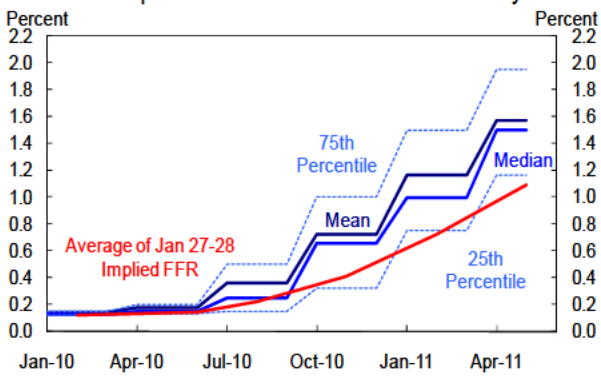
FOMC Target Probabilities: April 2010 Meeting



Source: Cleveland FRB

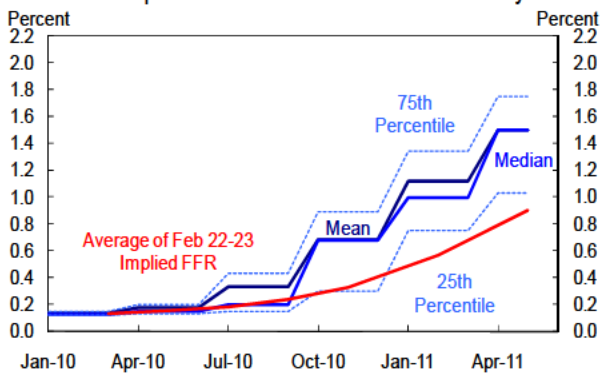
Note: Estimated using options on fed funds futures.

Jan 2010: Expected Fed Funds from BCFF Survey



Note: Implied FFR are from fed funds and Eurodollar futures. The BCFF survey was conducted on Jan 27-28.

Feb 2010: Expected Fed Funds from BCFF Survey



Note: Implied FFR are from fed funds and Eurodollar futures. The BCFF survey was conducted on Feb 22-23.

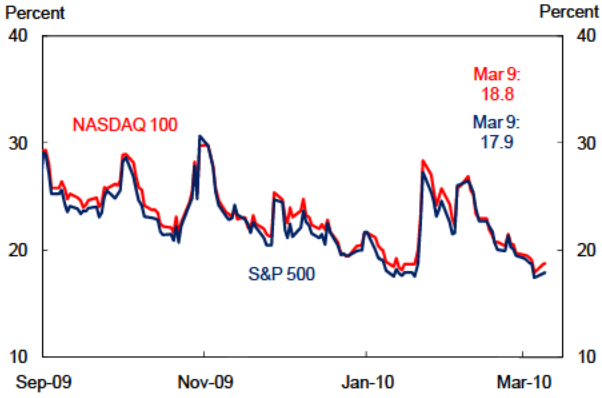
A. Significant Developments

Exhibit A-6:
Implied Volatility

Equity Index Implied Volatility: 1-Month

Source: Datastream

Equity Index Implied Volatility: 1-Month



Source: Datastream

Short-Term Interest Rate Volatility

Wid h of 90% Confidence Interval Implied by Eurodollar Options

Source: Datastream, FRBNY calculations

Long-Term Interest Rate Volatility

Width of 90% Confidence Interval Implied by Swaptions

Source: Datastream, FRBNY calculations

Option and Swaption Volatility Expectations

Source: Merrill Lynch, Haver

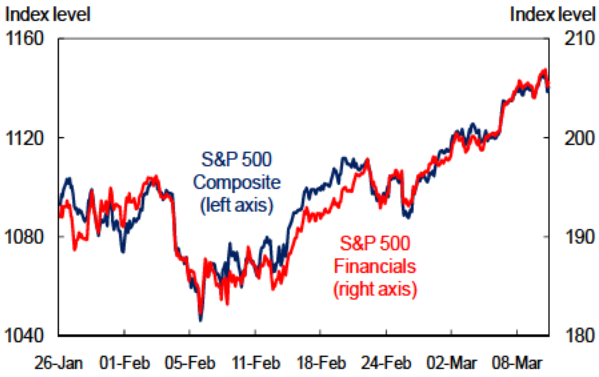
A. Significant Developments

Exhibit A-7:
Equity and Credit

Equity Index Levels

Source: Datastream

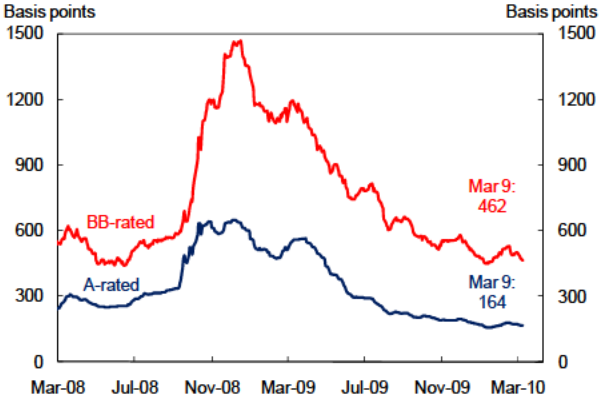
S&P 500 Indices (Intraday)



Source: Bloomberg

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

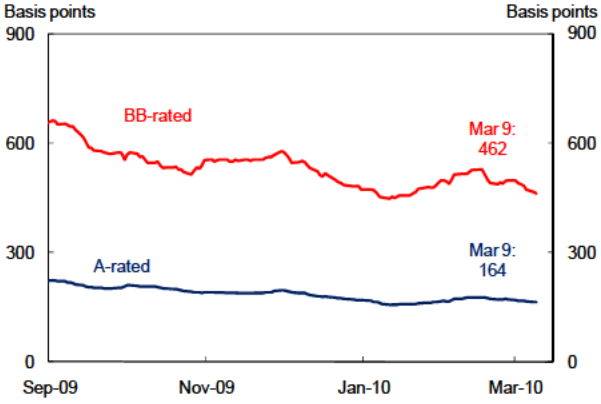
Credit Spreads - All Corporates



Source: Merrill Lynch

Note: Option-adjusted spreads.

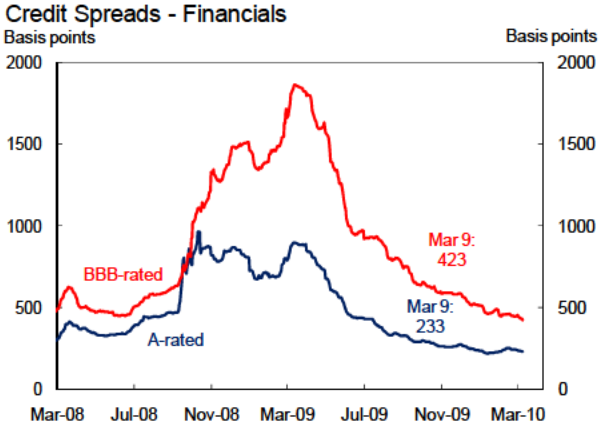
Credit Spreads - All Corporates



Source: Merrill Lynch

Note: Option-adjusted spreads.

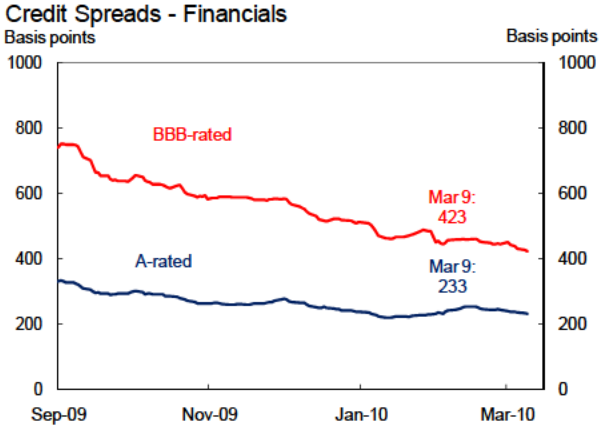
Credit Spreads - Financials



Source: Merrill Lynch

Note: Option-adjusted spreads.

Credit Spreads - Financials



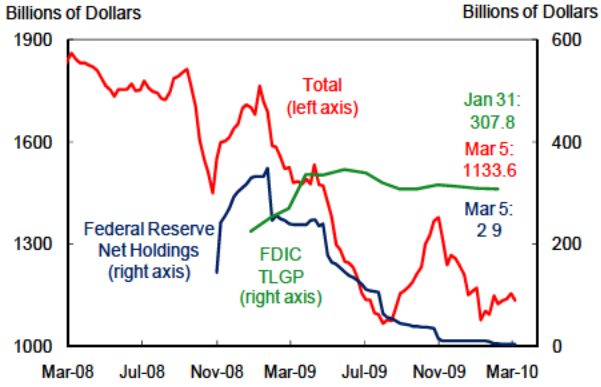
Source: Merrill Lynch

Note: Option-adjusted spreads.

A. Significant Developments

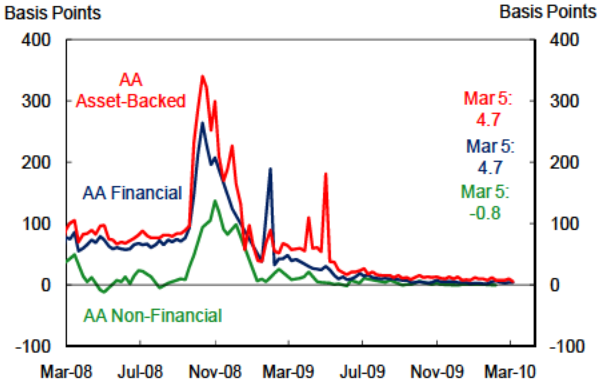
Exhibit A-8:
Liquidity Facilities

CPFF and Commercial Paper Outstanding



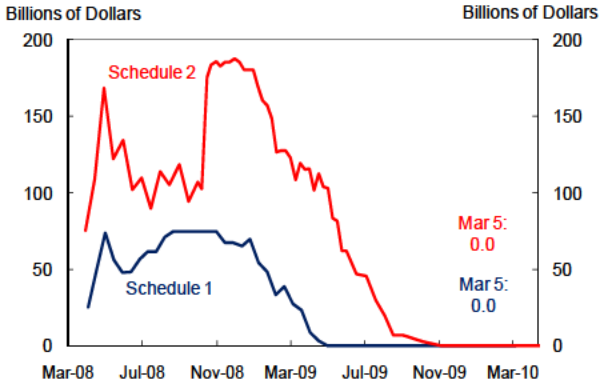
Source: Federal Reserve Board, Haver

3-Month CP Rates over OIS



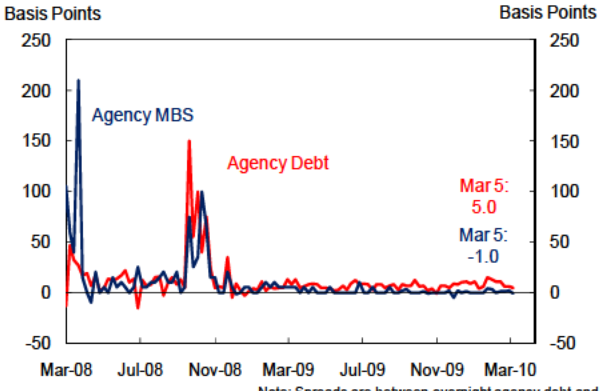
Source: Federal Reserve Board, Haver, Bloomberg

TSLF Outstanding



Source: Federal Reserve Bank of New York

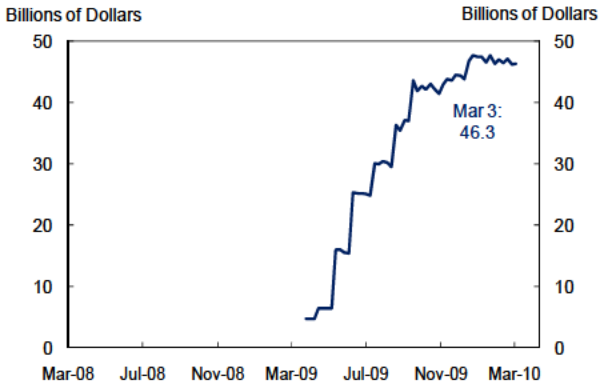
Overnight Financing Spreads



Source: Bloomberg

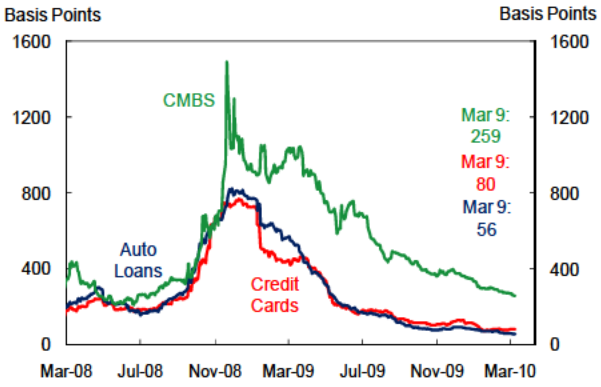
Note: Spreads are between overnight agency debt and MBS and Treasury general collateral repo rates.

TALF Outstanding



Source: Federal Reserve Board

AAA-Rated ABS/CMBS Spreads



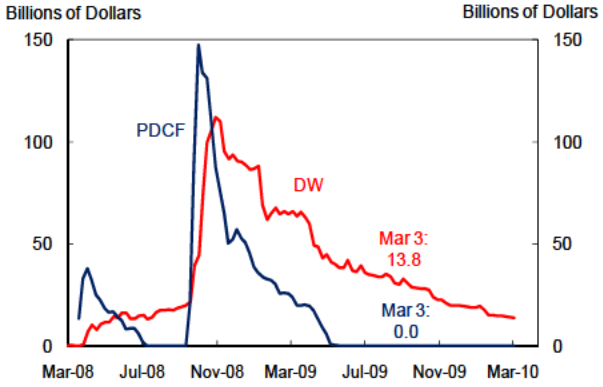
Source: Merrill Lynch

Note: Option-adjusted spreads.

A. Significant Developments

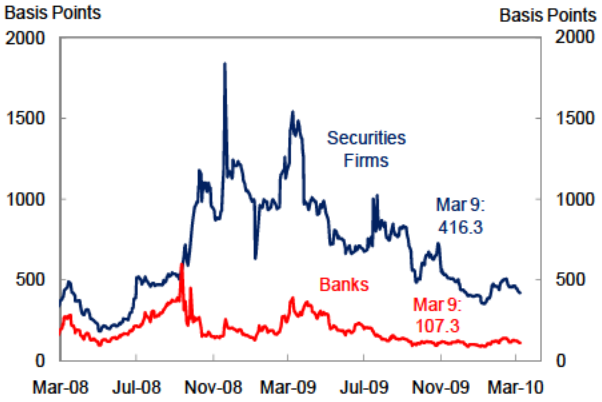
Exhibit A-8:
Liquidity Facilities

Discount Window and PDCF Borrowing



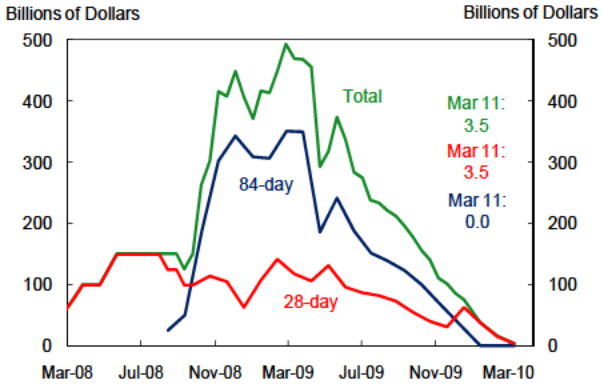
Source: Federal Reserve Board

Sector CDS Spreads



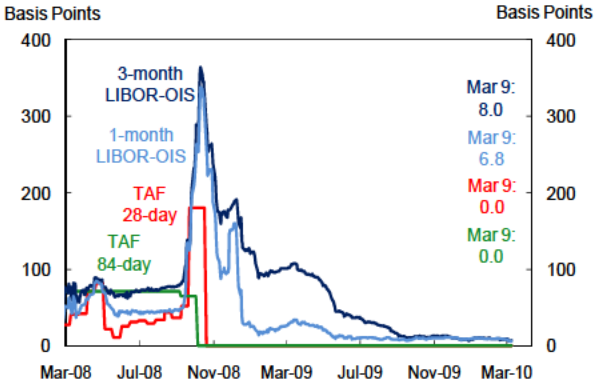
Source: CMA

TAF Outstanding



Source: Federal Reserve Board

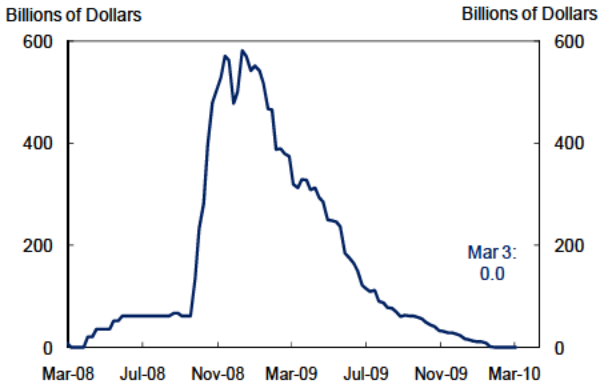
TAF Spreads and Libor to OIS



Source: Federal Reserve Board, Bloomberg

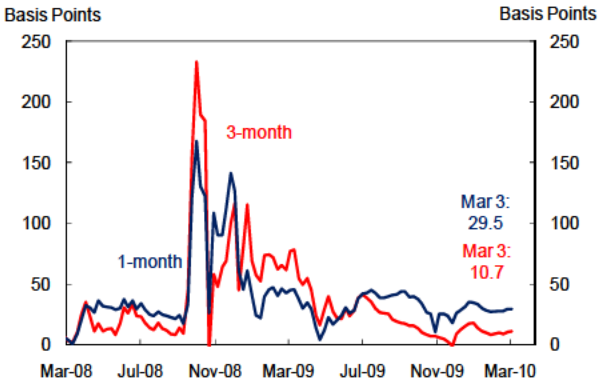
Note: The TAF spread is defined as the stop-out rate less the minimum bid rate.

Central Bank Liquidity Swaps



Source: Federal Reserve Board, Bloomberg

Euro-Dollar Swap Implied Basis Spreads

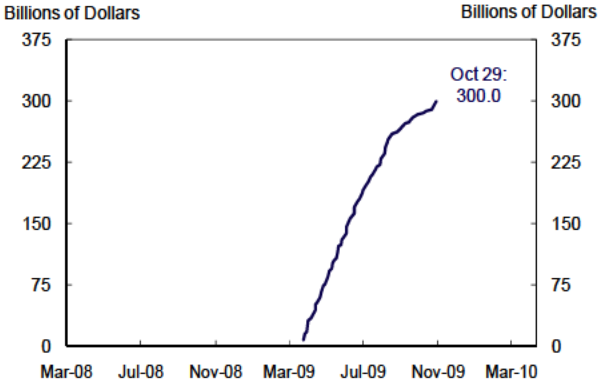


Source: Reuters, Tullett

A. Significant Developments

Exhibit A-9:
Outright Purchase Program

Treasury Outright Purchases

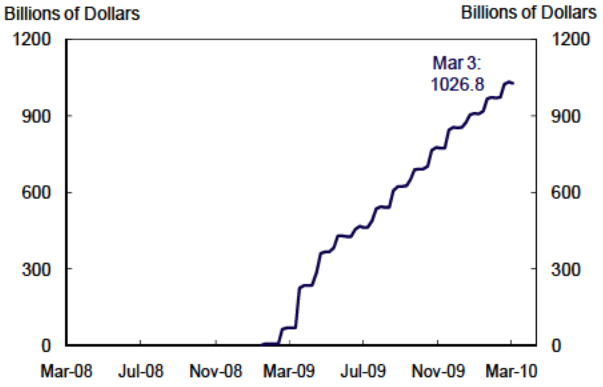


Source: Federal Reserve

Treasury Rates

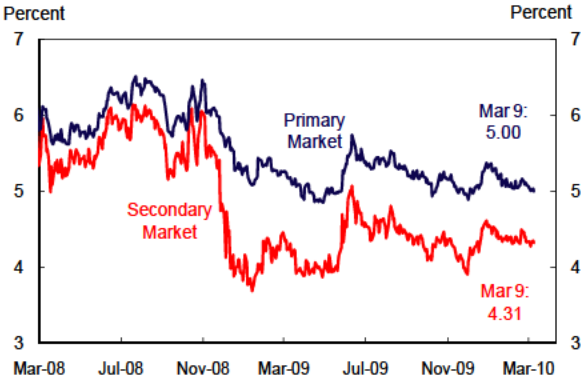
Source: Wall Street Journal, Haver

Agency MBS Net Outright Purchases



Source: Federal Reserve

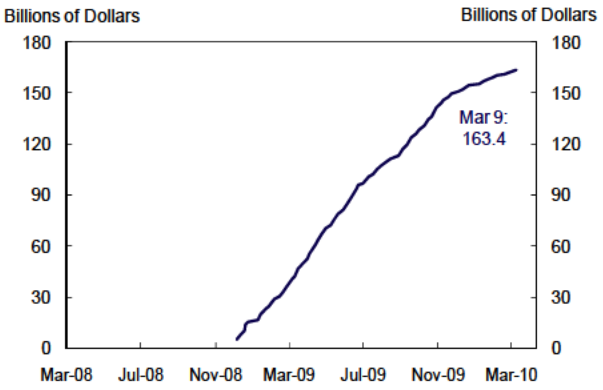
Mortgage Market Rates



Source: Bloomberg

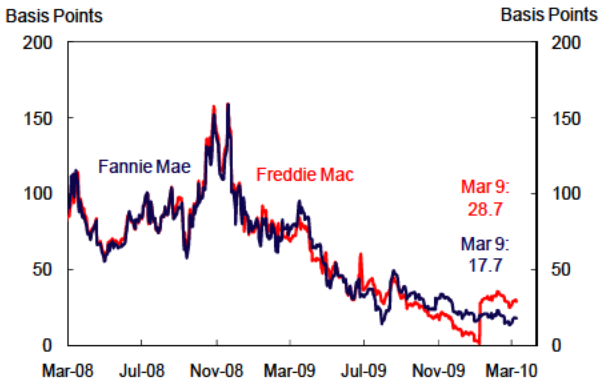
Note: 30-Year Fixed Mortgage rate and Fannie Mae current coupon yield.

Agency Coupon Debt Outright Purchases



Source: Federal Reserve

5-Year Agency Debt Spreads

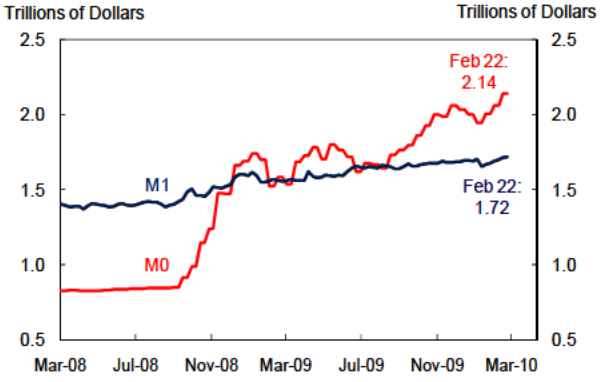


Source: Bloomberg

A. Significant Developments

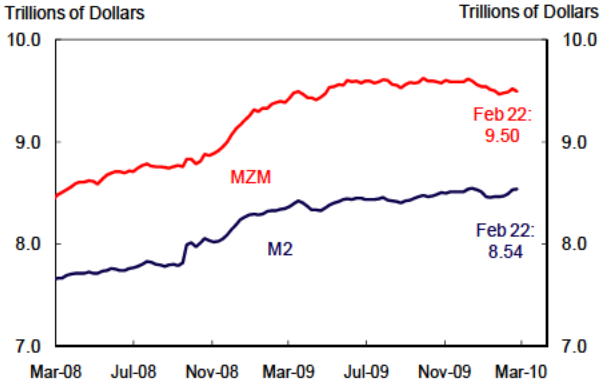
Exhibit A-10:
Money and Banking

Measures of Money Supply: M0, M1



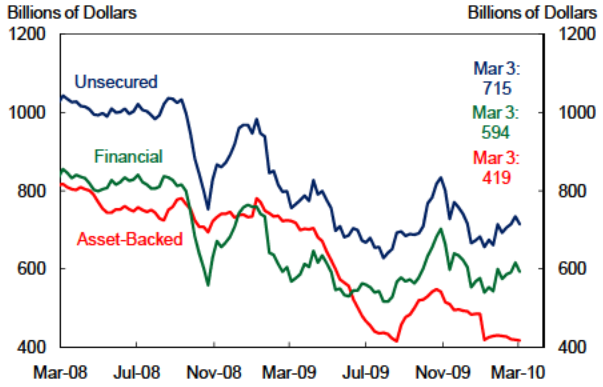
Source: Federal Reserve Board, Haver

Measures of Money Supply: M2, MZM



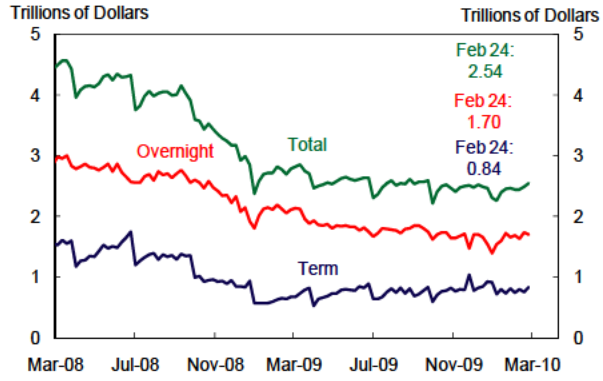
Source: Federal Reserve Board, Haver

Commercial Paper Outstanding



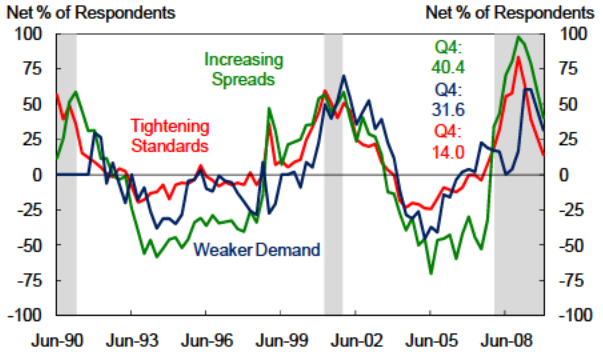
Source: Federal Reserve Board

Primary Dealer Repurchase Agreements Outstanding



Source: Federal Reserve Board

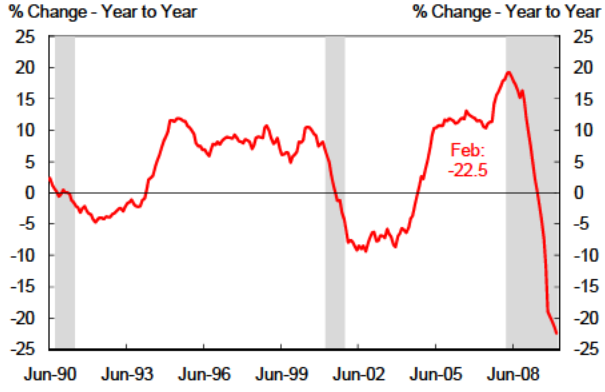
Bank Lending Practices



Source: Federal Reserve Board

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

Commercial and Industrial Loans Outstanding

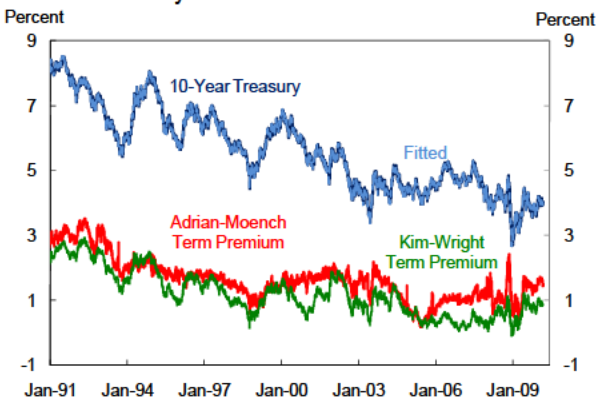


Source: Federal Reserve Board

A. Significant Developments

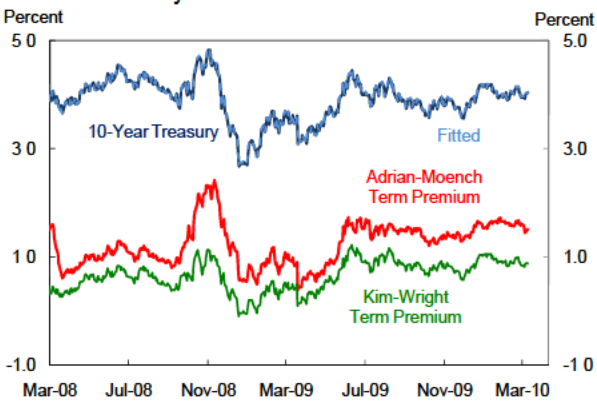
Exhibit A-11:
Estimates of Term Premia in Treasury Yields

10-Year Treasury and Term Premia



Source: FRBNY calculations, Federal Reserve Board

10-Year Treasury and Term Premia



Source: FRBNY calculations, Federal Reserve Board

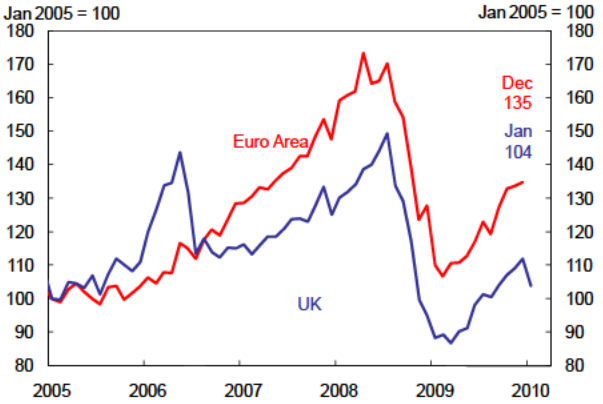
Term Premium for 10-Year Treasury and 6-Month MOVE Index

Source: FRBNY calculations, Haver, Merrill Lynch

A. Significant Developments

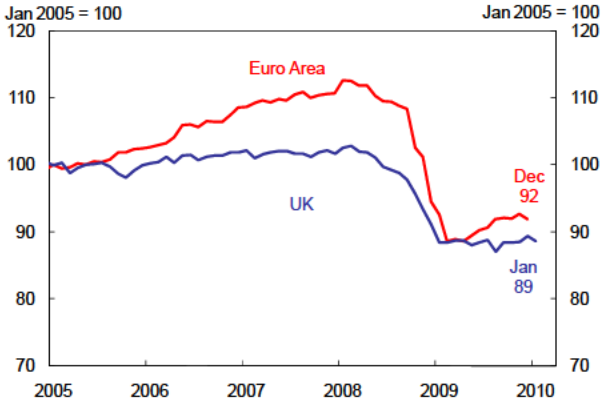
Exhibit A-12: Exports and Industrial Production

Exports



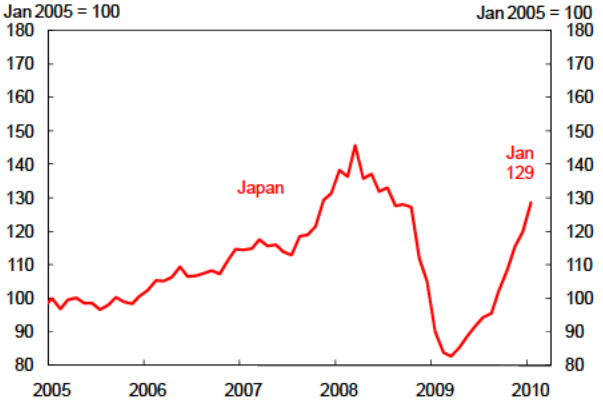
Source: Haver
Note: In Dollar Terms

Industrial Production



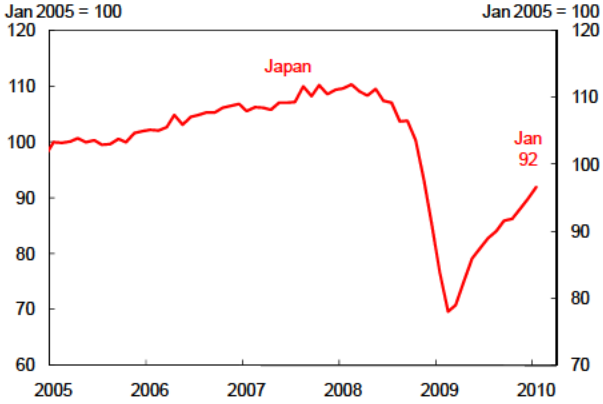
Source: Haver

Exports



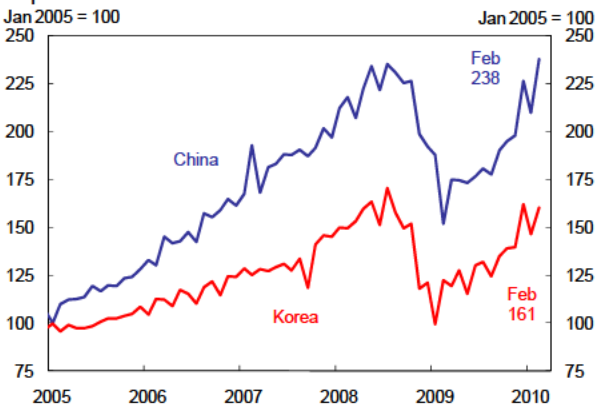
Source: Haver
Note: In Dollar Terms

Industrial Production



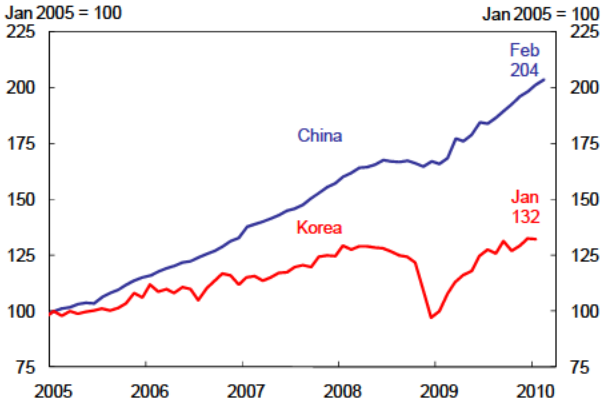
Source: Haver

Exports



Source: Haver
Note: In Dollar Terms

Industrial Production

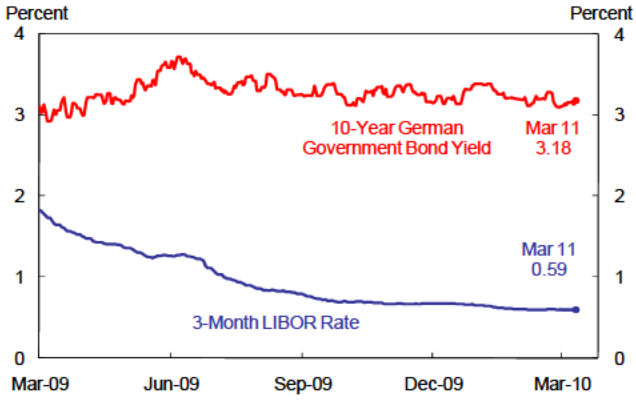


Source: Haver, CEIC

A. Significant Developments

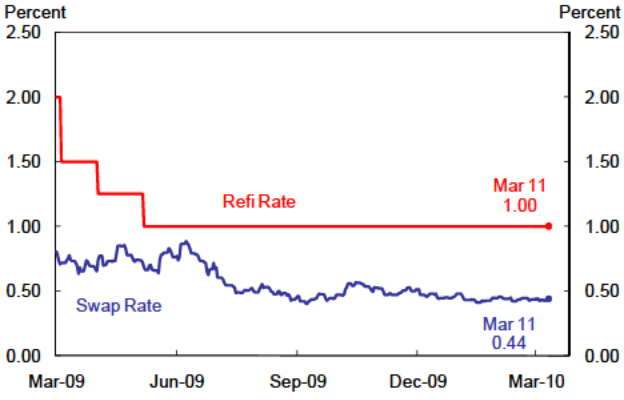
Exhibit A-13:
Global Interest Rates and Equity Markets

Euro Area Short- and Long-Term Interest Rates



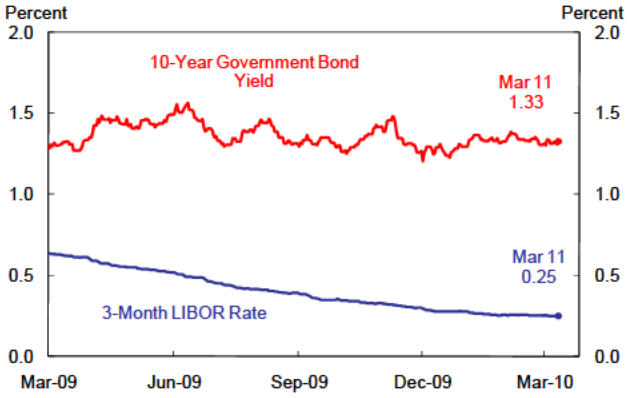
Source: Bloomberg

Euro Area: OIS Rate (Six Months)



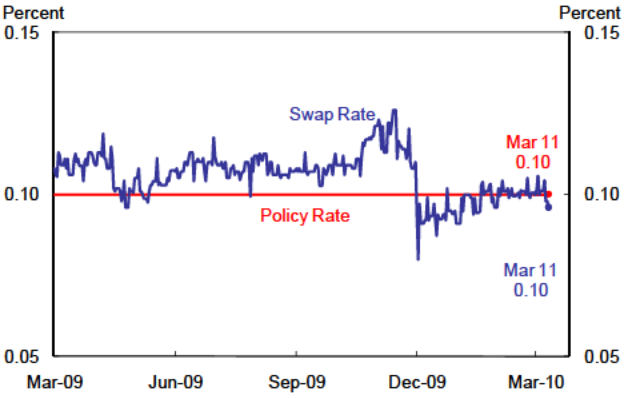
Source: Bloomberg

Japan Short- and Long-Term Interest Rates



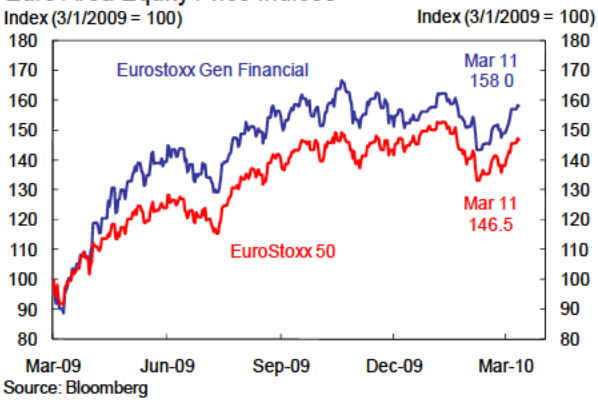
Source: Bloomberg

Japan: OIS Rate (Six Months)



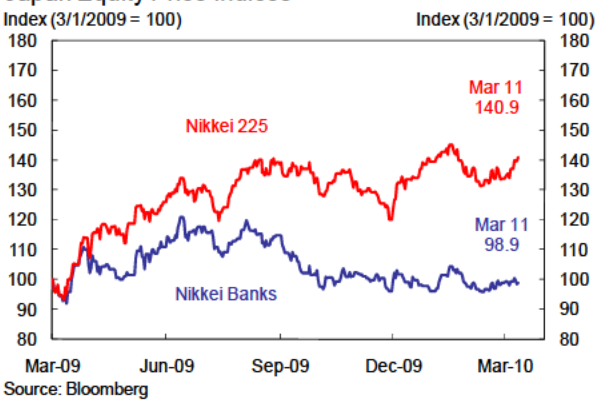
Source: Bloomberg

Euro Area Equity Price Indices



Source: Bloomberg

Japan Equity Price Indices

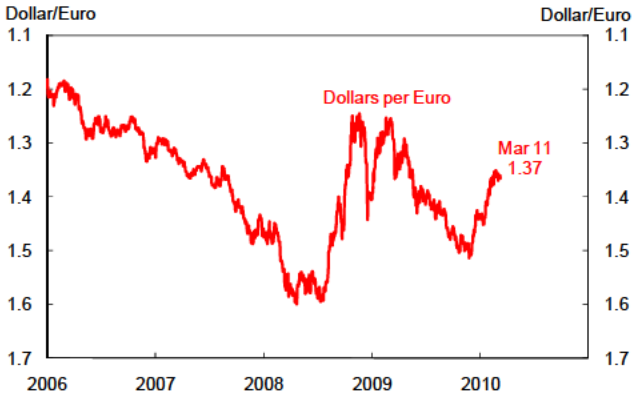


Source: Bloomberg

A. Significant Developments

Exhibit A-14:
Exchange Rates

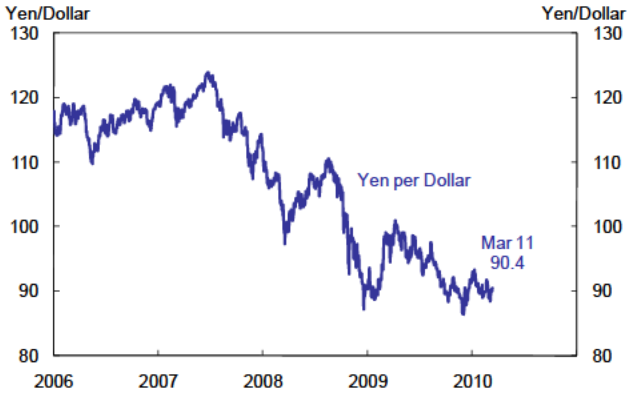
Dollar-Euro Exchange Rate



Source: Bloomberg

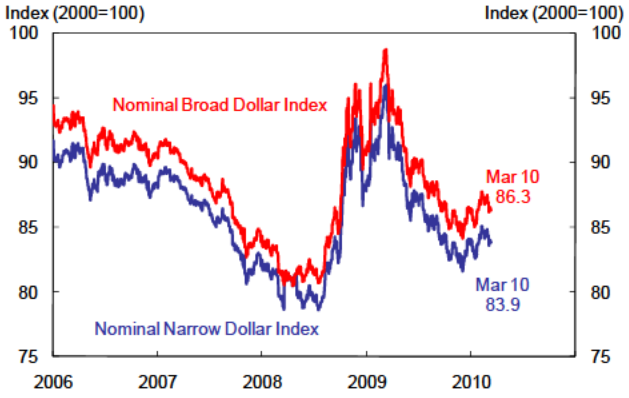
Note: Exchange rate scale is inverted.

Yen-Dollar Exchange Rate



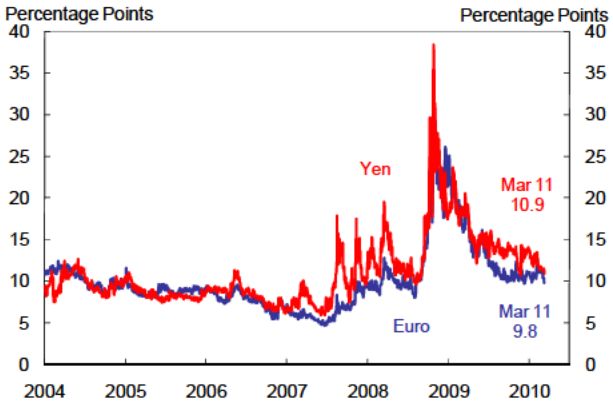
Source: Bloomberg

Nominal Effective Exchange Rates



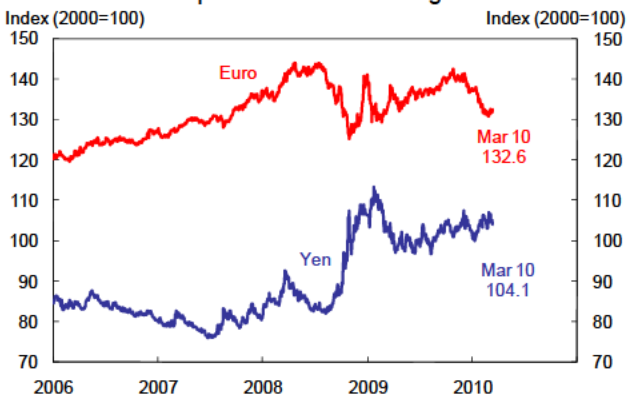
Source: Bloomberg and JPMorgan

Euro and Yen One-Month Implied FX Option Volatility



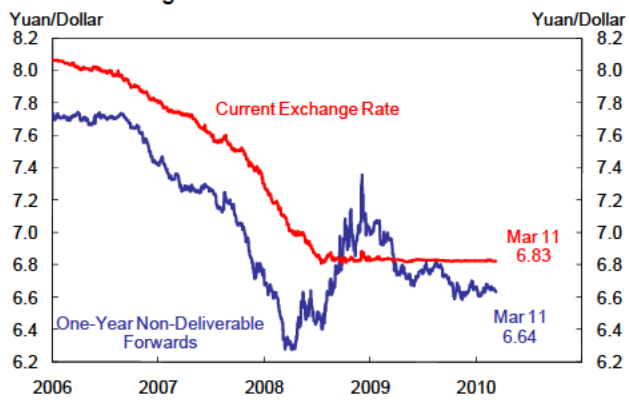
Source: Bloomberg

Euro Area and Japan Effective Exchange Rates



Source: Bloomberg and JPMorgan

China Exchange Rates



Source: Bloomberg

B. FRBNY Forecast Details

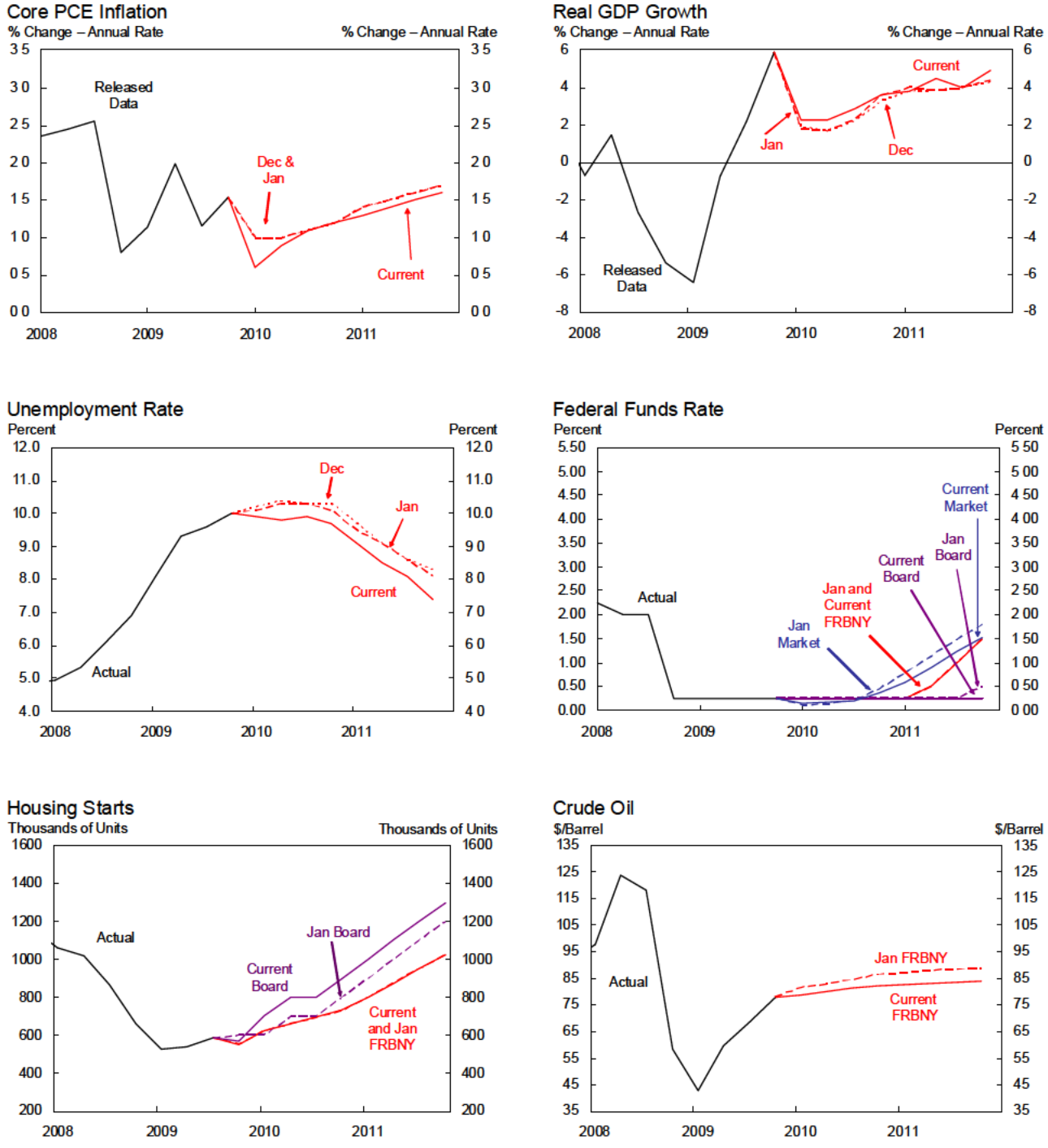
Exhibit B-1: Quarterly and Annual Projections of Key Variables

	Core PCE Inflation			Real GDP Growth			Unemployment Rate*			Fed Funds Rate**		
	Dec	Jan	Mar	Dec	Jan	Mar	Dec	Jan	Mar	Dec	Jan	Mar
2009												
Q1	*1.1*	*1.1*	*1.1*	*-6.4*	*-6.4*	*-6.4*	*8.1*	*8.2*	*8.2*	*0-0.25*	*0-0.25*	*0-0.25*
Q2	*2.0*	*2.0*	*2.0*	*-0.7*	*-0.7*	*-0.7*	*9.3*	*9.3*	*9.3*	0-0.25	*0-0.25*	*0-0.25*
Q3	1.3	*1.2*	*1.2*	2.8	*2.2*	*2.2*	*9.6*	*9.6*	*9.6*	*0-0.25*	*0-0.25*	*0-0.25*
Q4	1.6	1.2	*1.5*	4.6	5.3	*5.9*	10.1	*10.0*	*10.0*	0-0.25	*0-0.25*	*0-0.25*
2010												
Q1	1.0	1.0	0.6	1.9	1.8	2.3	10.2	10.1	9.9	0-0.25	0-0.25	0-0.25
Q2	1.0	1.0	0.9	1.7	1.7	2.3	10.4	10.3	9.8	0-0.25	0-0.25	0-0.25
Q3	1.1	1.1	1.1	2.2	2.3	2.9	10.3	10.3	9.9	0-0.25	0-0.25	0-0.25
Q4	1.2	1.2	1.2	3.3	3.6	3.6	10.3	10.1	9.7	0-0.25	0-0.25	0-0.25
2011												
Q1	1.4	1.4	1.3	3.8	4.0	3.8	9.7	9.5	9.1	0-0.25	0-0.25	0-0.25
Q2	1.5	1.5	1.4	3.9	3.9	4.5	9.1	9.1	8.5	0.5	0.5	0.5
Q3	1.6	1.6	1.5	4.0	4.0	4.0	8.6	8.6	8.1	1.0	1.0	1.0
Q4	1.7	1.7	1.6	4.3	4.4	4.9	8.3	8.1	7.4	1.5	1.5	1.5
Q4/Q4												
2008	*2.0*	*2.0*	*2.0*	*-1.9*	*-1.9*	*-1.9*	*2.1*	*2.2*	*2.2*	*-4.0*	*-4.0*	*-4.0*
2009	1.5	1.4	1.5	0.0	0.0	0.1	3.2	3.0	3.1	0.0	0.0	0.0
2010	1.1	1.1	0.9	2.2	2.3	2.8	0.2	0.1	-0.3	0.0	0.0	0.0
2011	1.5	1.5	1.4	4.0	4.1	4.3	-2.0	-2.0	-2.3	1.3	1.3	1.3

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)	
	2010Q1	2010Q2	2010Q1	2010Q2
OUTPUT				
Real GDP	2.3	2.3	2.3	2.3
	(1.8)	(1.7)	(1.8)	(1.7)
Final Sales to Domestic Purchasers	1.7	1.9	1.8	2.0
	(0.4)	(1.0)	(0.1)	(1.0)
Consumption	2.8	2.2	2.0	1.5
	(1.5)	(1.5)	(0.7)	(1.1)
BFI: Equipment and Software	6.0	5.0	0.4	0.3
	(-5.0)	(0.0)	(-0.3)	(0.0)
BFI: Nonresidential Structures	-10.0	-7.5	-0.3	-0.2
	(-15.0)	(-10.0)	(-0.5)	(-0.3)
Residential Investment	-10.0	6.6	-0.3	0.2
	(5.0)	(5.0)	(0.1)	(0.1)
Government: Federal	2.3	2.0	0.2	0.2
	(1.5)	(1.5)	(0.1)	(0.1)
Government: State and Local	-1.2	0.4	-0.1	0.0
	(-0.8)	(-0.2)	(-0.1)	(0.0)
Inventory Investment	--	--	0.9	0.2
	--	--	(2.0)	(0.5)
Net Exports	--	--	-0.4	0.1
	--	--	(-0.6)	(0.2)
INFLATION				
Total PCE Deflator	1.4	1.2		
	(1.7)	(1.8)		
Core PCE Deflator	0.6	0.9		
	(1.0)	(1.0)		
PRODUCTIVITY AND LABOR COSTS*				
Output per Hour	2.0	1.8		
	(2.5)	(2.0)		
Compensation per Hour	1.5	1.3		
	(1.5)	(1.3)		
Unit Labor Costs	-0.5	-0.5		
	(-1.0)	(-0.8)		

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		
	2009	2010	2011	2009	2010	2011
OUTPUT						
Real GDP	0.1	2.8	4.3	0.1	2.8	4.3
	(0.0)	(2.3)	(4.1)	(0.0)	(2.3)	(4.1)
Final Sales to Domestic Purchasers	-0.9	2.2	3.8	-0.9	2.2	3.9
	(-0.8)	(1.5)	(3.8)	(-0.8)	(1.3)	(3.7)
Consumption	1.0	2.3	2.4	0.7	1.6	1.7
	(1.1)	(1.8)	(2.6)	(0.7)	(1.1)	(1.7)
BFI: Equipment and Software	-7.7	6.5	14.2	-0.5	0.4	0.9
	(-9.3)	(2.3)	(14.2)	(-0.7)	(0.1)	(0.9)
BFI: Nonresidential Structures	-24.3	-6.3	8.1	-1.0	-0.2	0.2
	(-25.7)	(-6.5)	(9.0)	(-1.1)	(-0.2)	(0.3)
Residential Investment	-12.3	5.9	22.8	-0.4	0.2	0.6
	(-10.1)	(6.9)	(18.1)	(-0.3)	(0.2)	(0.5)
Government: Federal	3.6	2.0	1.5	0.3	0.2	0.1
	(5.6)	(1.5)	(1.5)	(0.4)	(0.1)	(0.1)
Government: State and Local	-0.1	0.6	2.5	0.0	0.1	0.3
	(0.2)	(0.2)	(2.5)	(0.0)	(0.0)	(0.3)
Inventory Investment	--	--	--	0.2	0.5	0.2
	--	--	--	(0.0)	(0.8)	(0.3)
Net Exports	--	--	--	1.0	0.1	0.1
	--	--	--	(0.9)	(0.0)	(-0.1)
INFLATION						
Total PCE Deflator	1.2	1.3	1.5			
	(1.2)	(1.4)	(1.6)			
Core PCE Deflator	1.5	0.9	1.4			
	(1.4)	(1.1)	(1.5)			
Total CPI Inflation	1.5	1.9	1.9			
	(1.6)	(1.5)	(1.9)			
Core CPI Inflation	1.7	1.2	1.7			
	(1.7)	(1.3)	(1.7)			
GDP Deflator	0.7	1.4	1.5			
	(1.1)	(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		
	2009	2010	2011
INTEREST RATE ASSUMPTIONS			
Federal Funds Rate (End-of-Year)	0-0.25	0-0.25	1.5
	0-0.25	0-0.25	(1.5)
10-Year Treasury Yield (Avg. Q4 Level)	3.5	3.9	4.2
	(3.5)	(3.9)	(4.2)
PRODUCTIVITY AND LABOR COSTS*			
Output	-0.2	3.3	5.3
	(-0.5)	(2.6)	(4.8)
Hours	-5.7	1.5	3.5
	(-5.5)	(0.8)	(3.6)
Output per Hour	5.8	1.8	1.7
	(5.3)	(1.7)	(1.3)
Compensation per Hour	0.8	1.4	1.7
	(2.3)	(1.4)	(1.7)
Unit Labor Costs	-4.7	-0.4	0.0
	(-2.9)	(-0.4)	(0.5)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	10.0	9.9	8.1
	(10.0)	(10.1)	(8.1)
Participation Rate (Avg. Q4 Level)	64.8	64.9	65.2
	(64.8)	(65.0)	(65.2)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	-448	117	371
	(-395)	(50)	(391)
INCOME			
Personal Income	-1.0	4.2	6.0
	(-0.3)	(3.7)	(6.0)
Real Disposable Personal Income	1.1	2.1	4.4
	(1.9)	(2.3)	(4.3)
Corporate Profits Before Taxes	32.7	4.8	4.8
	(35.1)	(2.8)	(4.9)

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

B. FRBNY Forecast Details

Exhibit B-6: FRBNY and Greenbook Forecast Comparison

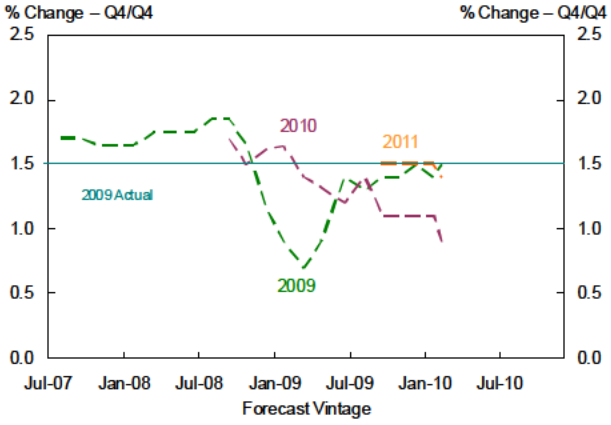
	FRBNY			Board		
	2009	2010	2011	2009	2010	2011
OUTPUT						
Real GDP	0.1	2.8	4.3	0.1	3.3	4.4
	(0.0)	(2.3)	(4.1)	(0.0)	(3.6)	(4.7)
GDP Growth Contributions						
Final Sales to Domestic Purchasers	-0.9	2.2	3.9	-1.0	2.9	4.1
	(-0.8)	(1.3)	(3.7)	(-1.0)	(3.3)	(4.5)
Consumption	0.7	1.6	1.7	0.7	1.8	2.5
	(0.7)	(1.1)	(1.7)	(0.8)	(2.0)	(2.6)
BFI	-1.6	0.2	1.2	-1.6	0.8	0.9
	(-1.7)	(-0.1)	(1.1)	(-1.7)	(0.7)	(1.0)
Residential Investment	-0.4	0.2	0.6	-0.4	0.0	0.5
	(-0.3)	(0.2)	(0.5)	(-0.4)	(0.1)	(0.6)
Government	0.3	0.2	0.4	0.3	0.3	0.2
	(0.5)	(0.2)	(0.4)	(0.3)	(0.5)	(0.3)
Inventory Investment	0.2	0.5	0.2	0.1	0.4	0.4
	(-0.0)	(0.8)	(0.3)	(0.1)	(0.4)	(0.4)
Net Exports	1.0	0.1	0.1	1.0	-0.1	-0.1
	(0.9)	(0.0)	(-0.1)	(1.0)	(-0.2)	(-0.1)
INFLATION						
Total PCE Deflator	1.2	1.3	1.5	1.2	1.3	1.0
	(1.2)	(1.4)	(1.6)	(1.3)	(1.4)	(1.1)
Core PCE Deflator	1.5	0.9	1.4	1.5	1.0	1.0
	(1.4)	(1.1)	(1.5)	(1.5)	(1.2)	(1.1)
INTREST RATE ASSUMPTION						
Fed Funds Rate (End-of-Year)	0-0.25	0-0.25	1.5	0-0.25	0-0.25	0-0.25
	0-0.25	0-0.25	(1.5)	0-0.25	0-0.25	(0.5)
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	5.8	1.8	1.7	5.7	0.8	1.2
	(5.3)	(1.7)	(1.3)	(5.1)	(0.8)	(1.1)
Compensation per Hour	0.8	1.4	1.7	0.8	2.2	2.5
	(2.3)	(1.4)	(1.7)	(2.4)	(2.4)	(2.2)
Unit Labor Costs	-4.7	(0.4)	(0.0)	-4.6	1.3	1.3
	(-2.9)	(-0.4)	(0.5)	(-2.5)	(1.6)	(1.2)
LABOR MARKET						
Unemployment Rate (Avg. Q4 Level)	10.0	9.9	8.1	10.0	9.4	8.3
	(10.0)	(10.1)	(8.1)	(10.0)	(9.5)	(8.2)
Participation Rate (Avg. Q4 Level)	64.8	64.9	65.2	64.9	64.7	64.6
	(64.8)	(65.0)	(65.2)	(64.9)	(64.8)	(64.7)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	-448	117	371	-450	183	308
	(-395)	(50)	(391)	(-400)	(208)	(350)
HOUSING						
Housing Starts (Avg. Q4 Level, Thous.)	554	730	1025	600	700	1000
	(554)	(730)	(1025)	(600)	(700)	(1100)

B. FRBNY Forecast Details

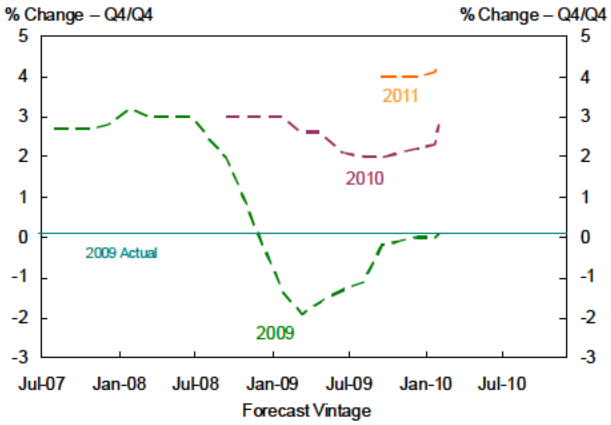
Exhibit B-7: Evolution of FRBNY and Board Forecasts since Mid-2006

FRBNY

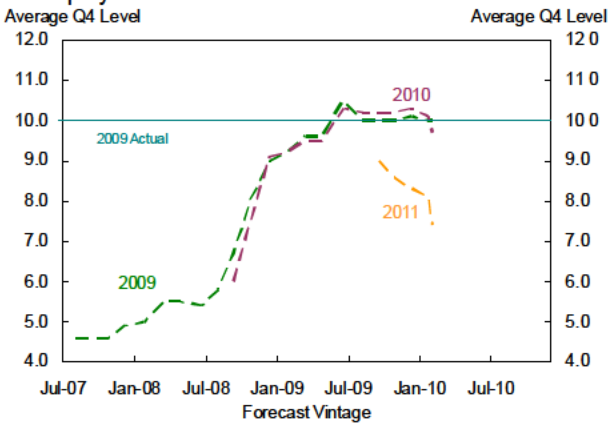
Core PCE Inflation



Real GDP Growth

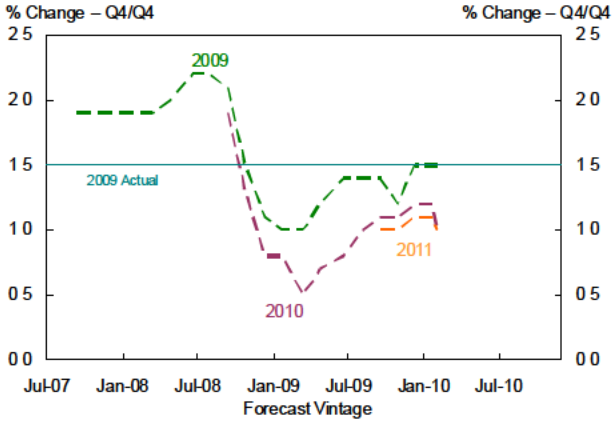


Unemployment Rate

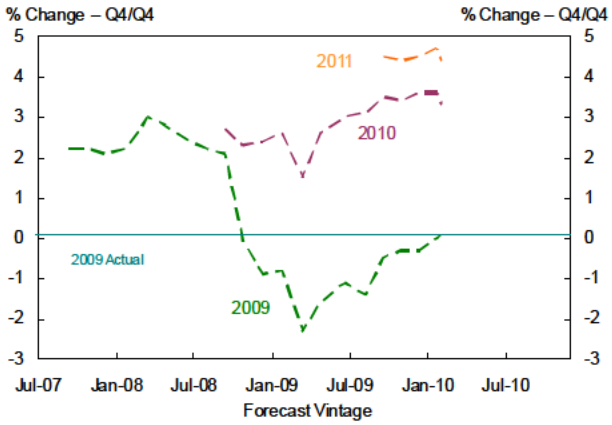


Board

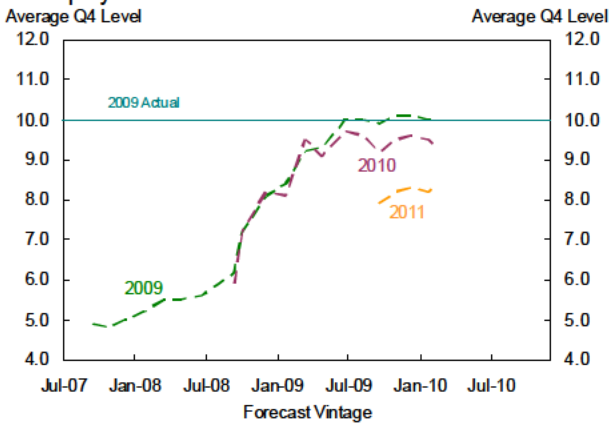
Core PCE Inflation



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	2010Q1	2010Q2	2010 Q4/Q4	2011 Q4/Q4
FRBNY	3/12/2010	2.3	2.3	2.8	4.3
		(1.8)	(1.7)	(2.3)	(4.1)
PSI Model	3/9/2010	1.7	1.4	--	--
		(1.1)	--	--	--
Blue Chip	3/10/2010	2.8	2.9	2.9	3 2
		(2.8)	(2.8)	(2.9)	--
Median SPF	2/12/2010	2.7	2.7	2.7	--
		(2.3)	(2.4)	(2.6)	--
Macro Advisers	3/12/2010	3.1	3.7	3.5	3.8
		(3.5)	(3.4)	(3.8)	(4.3)

Core PCE Inflation

	Release Date	2010Q1	2010Q2	2010 Q4/Q4	2011 Q4/Q4
FRBNY	3/12/2010	0.6	0.9	0.9	1.4
		(1.0)	(1.0)	(1.1)	(1.5)
Median SPF	2/12/2010	1.2	1.3	1.3	1.5
		(1.0)	(1.2)	(1.3)	(1.5)
Macro Advisers	3/8/2010	0.8	1.0	0.9	0 9
		(1.1)	(1.1)	(1.0)	(0 9)

CPI Inflation

	Release Date	2010Q1	2010Q2	2010 Q4/Q4	2011 Q4/Q4
FRBNY	3/12/2010	2.2	1.9	1.9	1 9
		(1.3)	(1.4)	(1.5)	(1 9)
Blue Chip	3/10/2010	2.0	1.5	1.8	2.1
		(1.8)	(1.6)	(1.8)	--
Median SPF	2/12/2010	2.1	1.4	1.7	2.1
		(1.5)	(1.5)	(1.7)	(2.1)
Macro Advisers	3/8/2010	1.9	0.6	1.2	1 0
		(1.2)	(1.1)	(1.1)	(1 0)

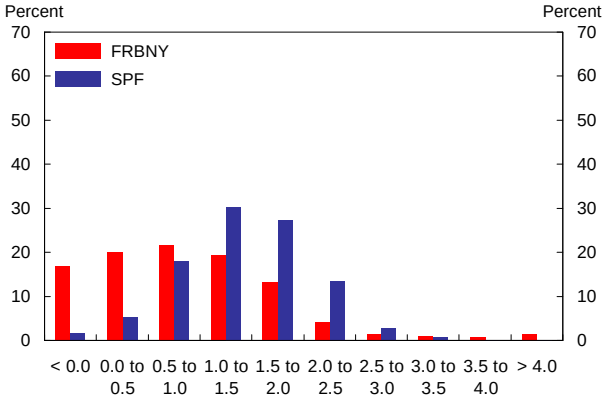
Core CPI Inflation

	Release Date	2010Q1	2010Q2	2010 Q4/Q4	2011 Q4/Q4
FRBNY	3/12/2010	0.3	1.6	1.2	1.7
		(1.1)	(1.2)	(1.3)	(1.7)
Median SPF	2/12/2010	1.3	1.4	1.4	1.7
		(1.2)	(1.4)	(1.4)	(1.8)
Macro Advisers	3/8/2010	0.3	1.1	0.9	1 0
		(1.0)	(1.1)	(1.0)	(0 9)

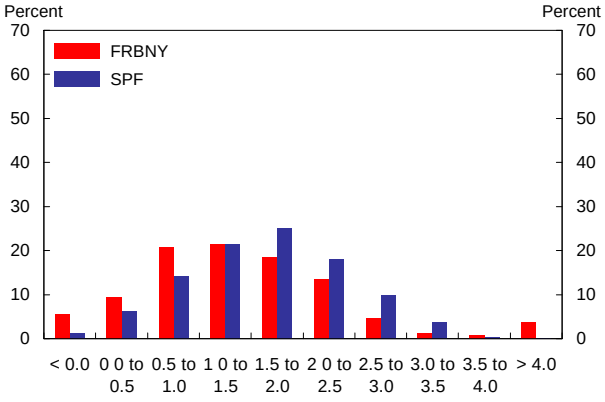
B. FRBNY Forecast Details

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

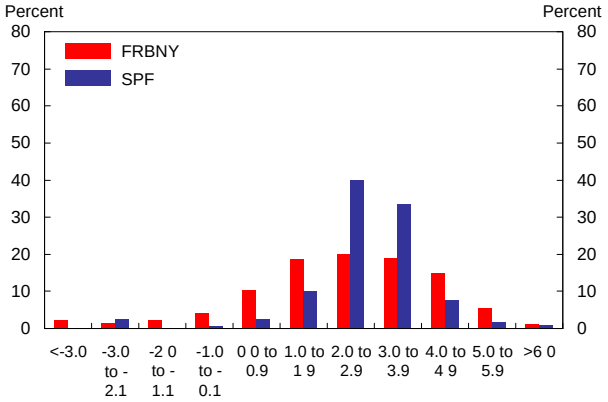
2010Q4/Q4 Core PCE Inflation Probabilities



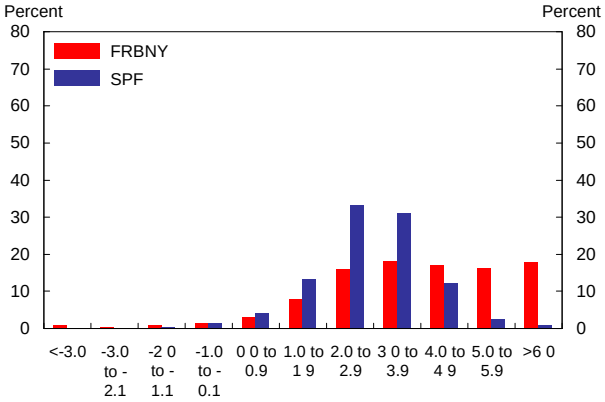
2011Q4/Q4 Core PCE Inflation Probabilities



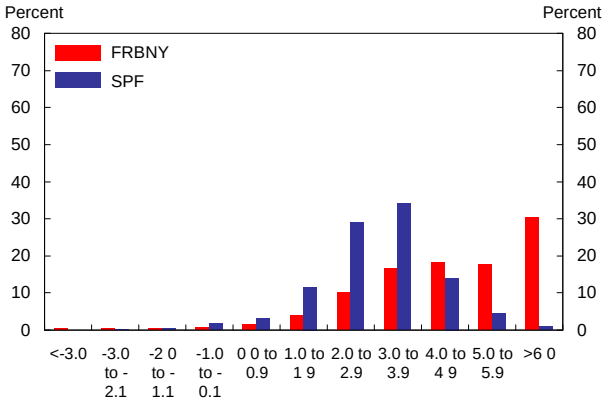
2010/2009 Real GDP Growth Probabilities



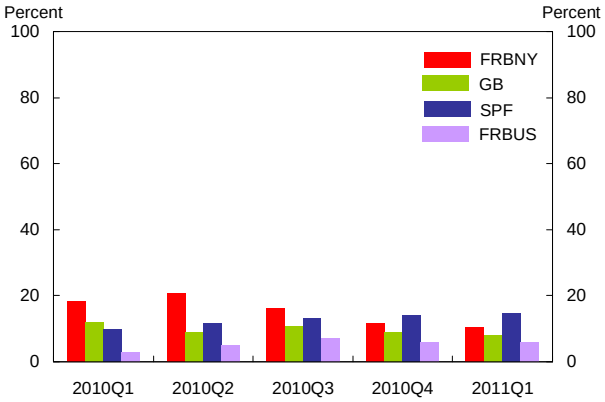
2011/2010 Real GDP Growth Probabilities



2012/2011 Real GDP Growth Probabilities

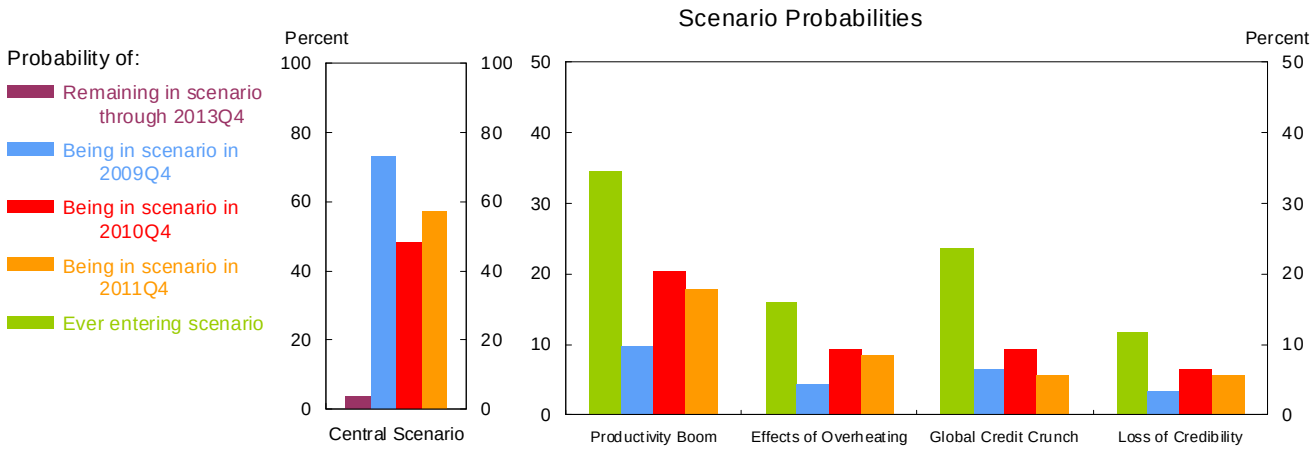


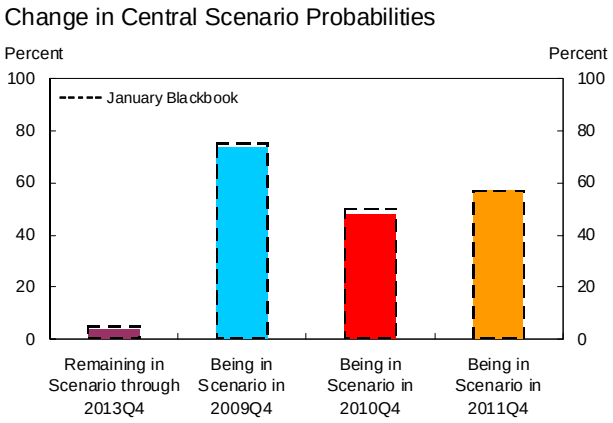
Probability of a Negative-Growth Quarter

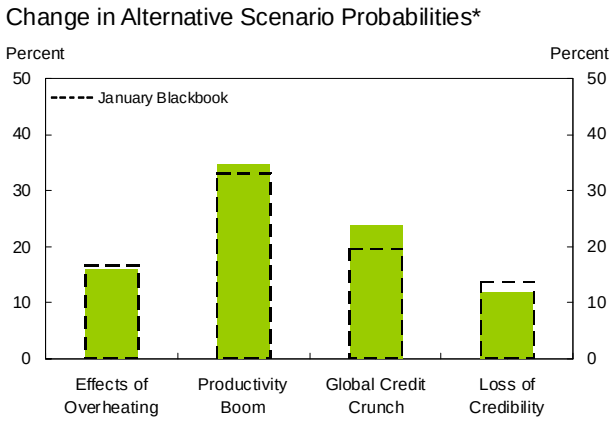


C. FRBNY Forecast Distributions

Exhibit C-1: Risks

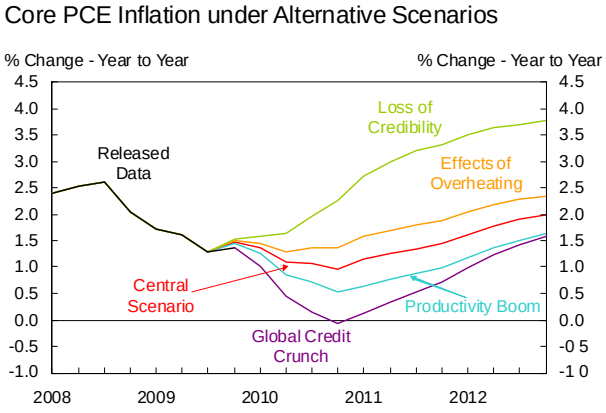


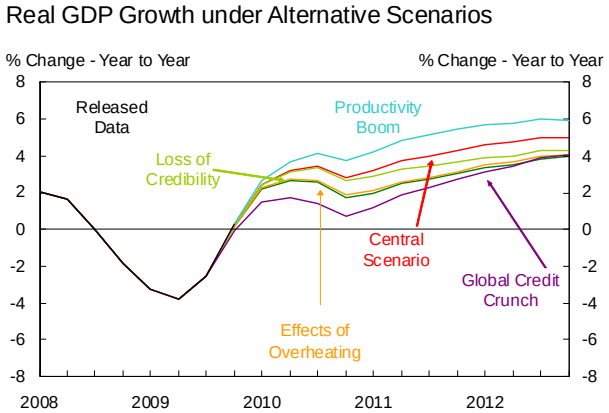




*Probability of ever reaching scenario

Exhibit C-2: Projections under Alternative Scenarios



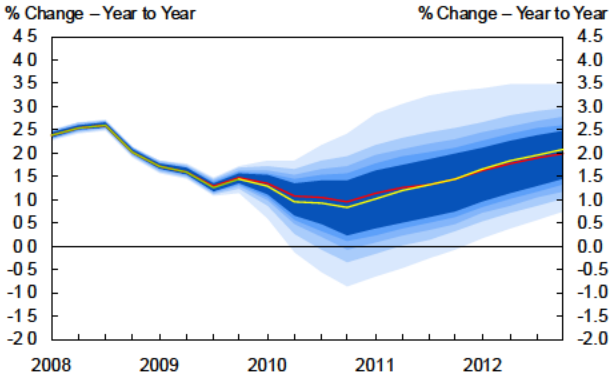


Source: MMS Function (FRBNY)

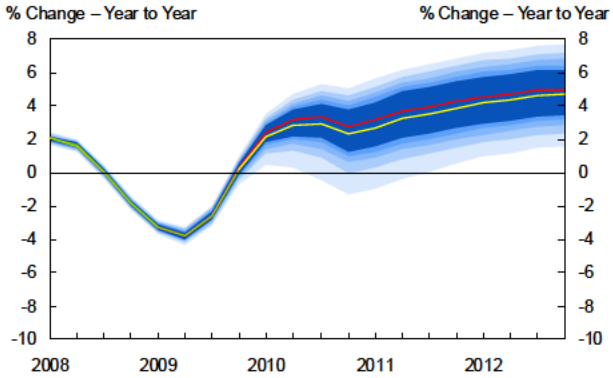
C. FRBNY Forecast Distributions

Exhibit C-3: Inflation and Output Forecast Distributions

Core PCE Inflation Forecast Distribution

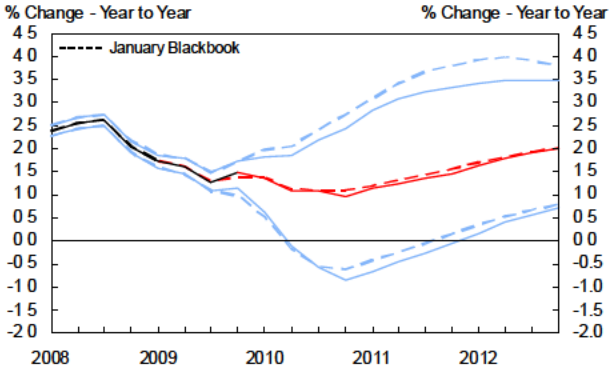


Real GDP Growth Forecast Distribution

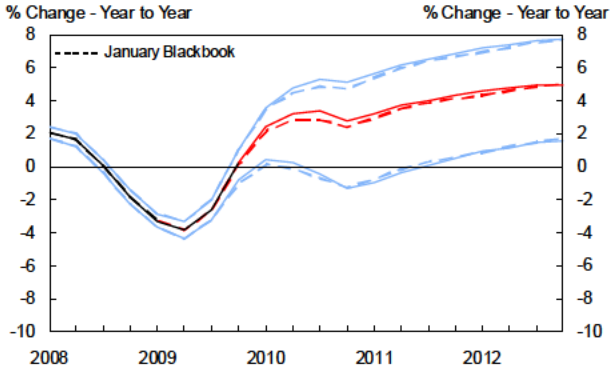


The yellow line is the expected value of the forecast distribution, the red line is the central scenario projection, and the green line is released data. The shading represents the 50, 60, 70, 80, and 90 percent chance that the four-quarter change will be within the respective range.

Change in Core PCE Inflation Forecast Distribution

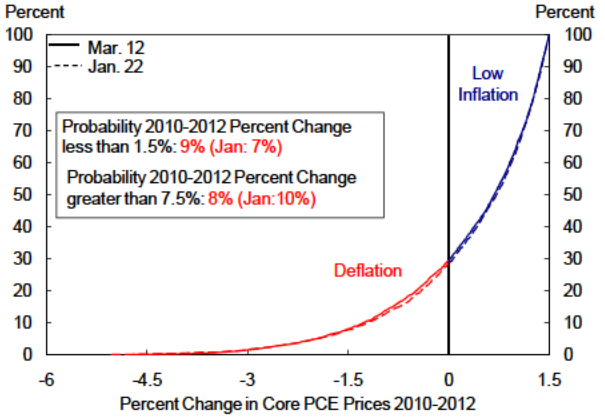


Change in Real GDP Growth Forecast Distribution

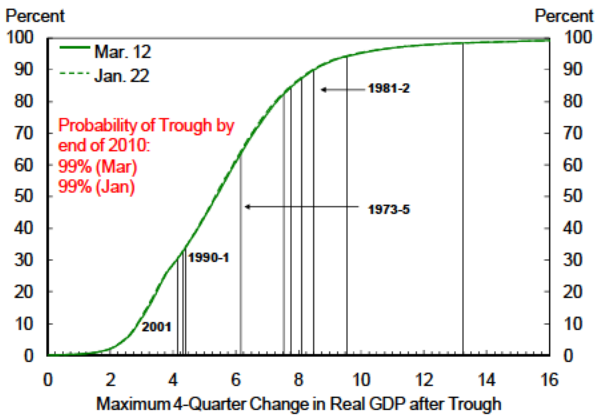


The blue lines are the 90% chance the four-quarter change will be within the lines, the red line is the central scenario projection, and the black line is released data. Dashed lines represent forecasts from previous Blackbook.

Large Price Level Deviations



Scale of Recovery Through End of 2011

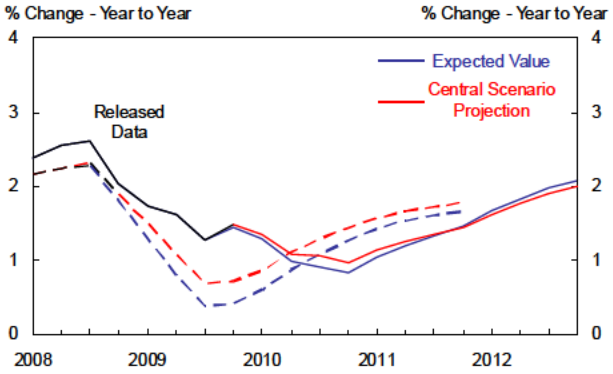


Source: MMS Function (FRBNY)

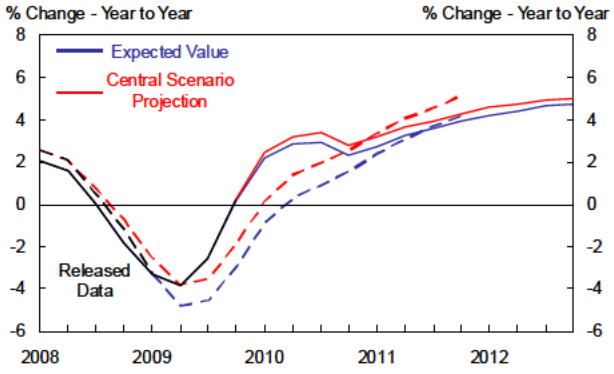
C. FRBNY Forecast Distributions

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

One-Year Comparison of Core PCE Inflation Forecast

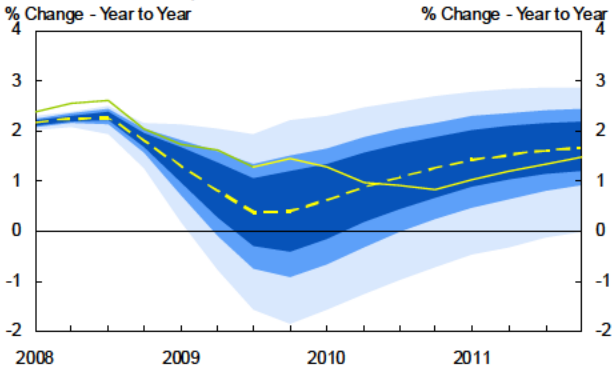


One-Year Comparison of Real GDP Growth Forecast

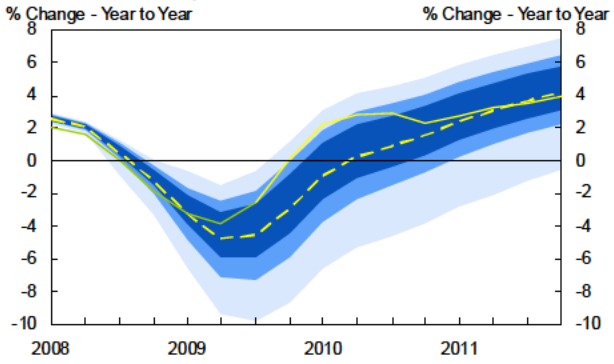


The solid lines represent the current central scenario projection and expected value, while the dashed lines represent those from the year-ago Blackbook.

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



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



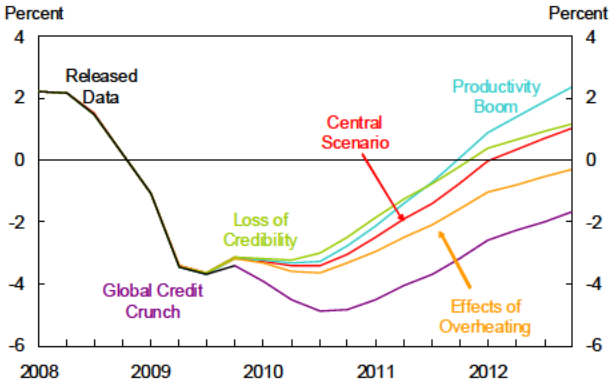
The solid yellow line is the **current** expected value of the forecast distribution, while the dashed yellow line is the expected value from the year-ago Blackbook. The shading represents the 50, 70 and 90 percent probability intervals from the year-ago forecast. The green lines are released data.

Source: MMS Function (FRBNY)

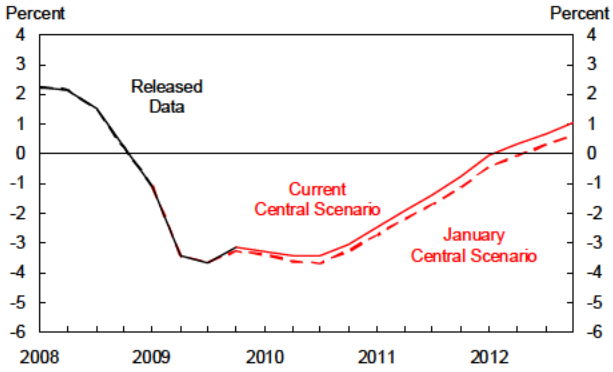
D. FRBNY Fed Funds Rate Projections

Exhibit D-1: *Baseline*
Policy Rule Analysis

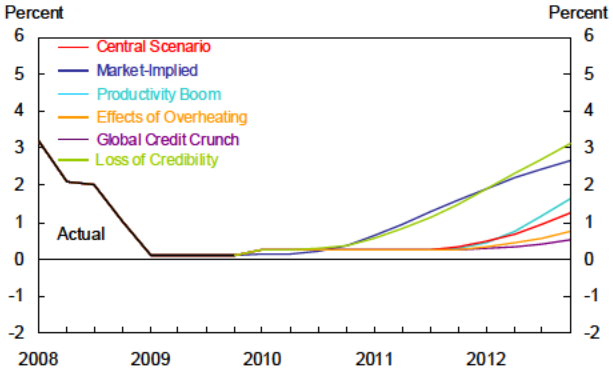
Real FFR under Alternative Scenarios



Change in Central Scenario Real FFR



Nominal FFR under Alternative Scenarios



Change in Central Scenario and Market-Implied Nominal FFR

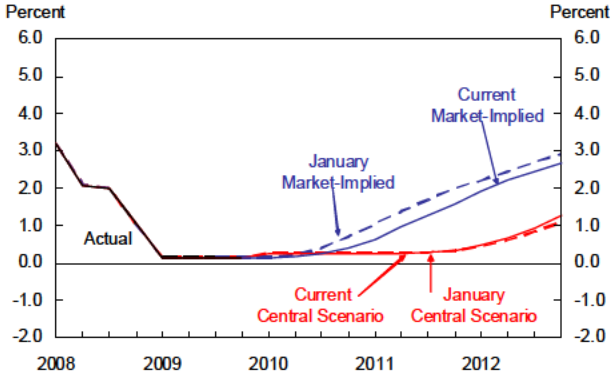
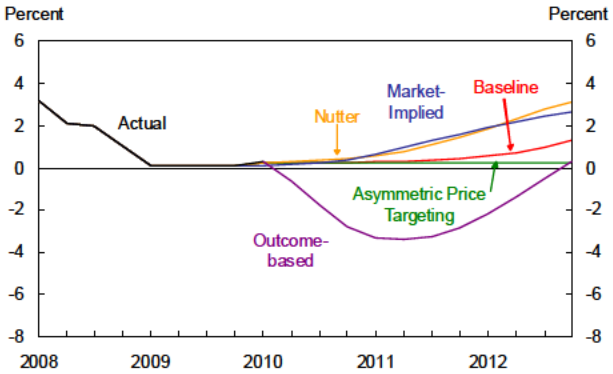


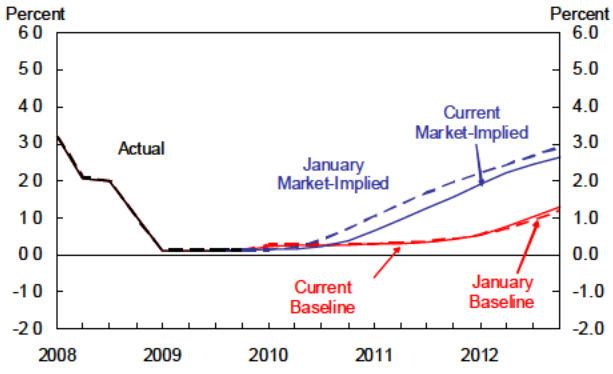
Exhibit D-2: Alternative Policy Rules under
Expected Value of Forecast Distribution

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

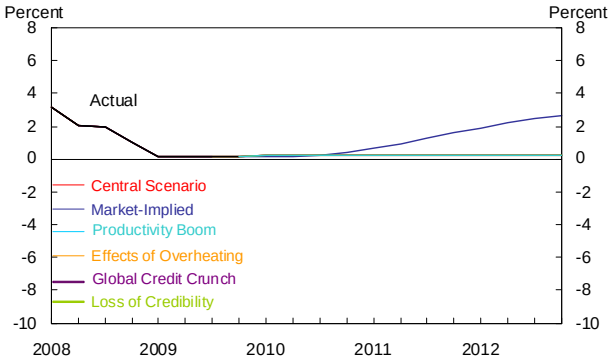
Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

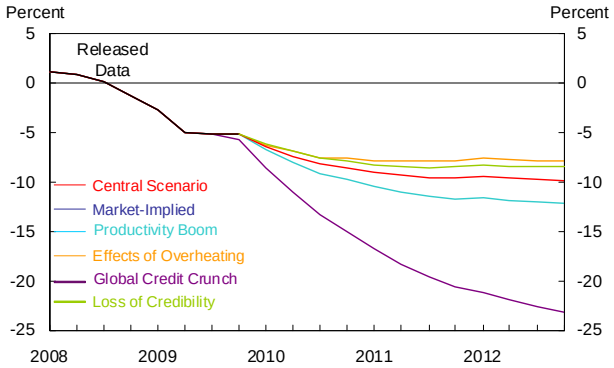
Exhibit D-3: Alternative Policy Rule Analysis

Policy Rule: *Asymmetric Price Targeting*

Nominal FFR under Alternative Scenarios

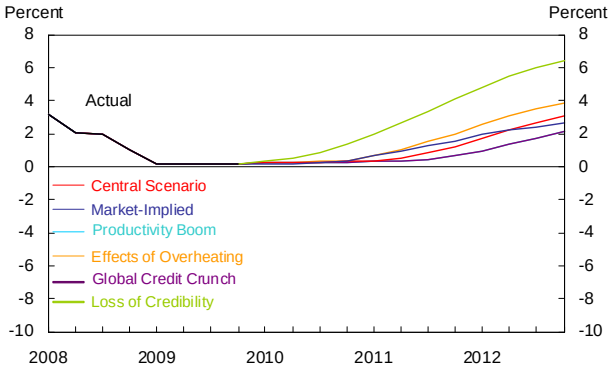


Real FFR under Alternative Scenarios

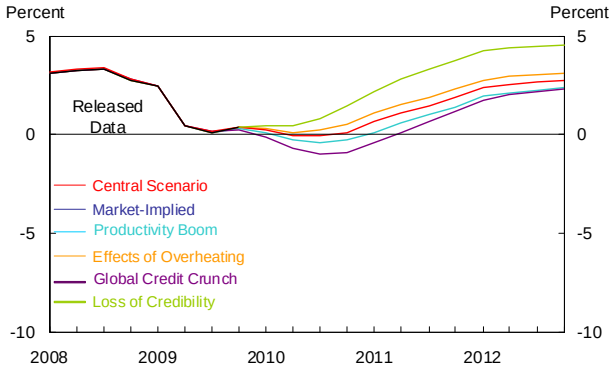


Policy Rule: *Nutter*

Nominal FFR under Alternative Scenarios

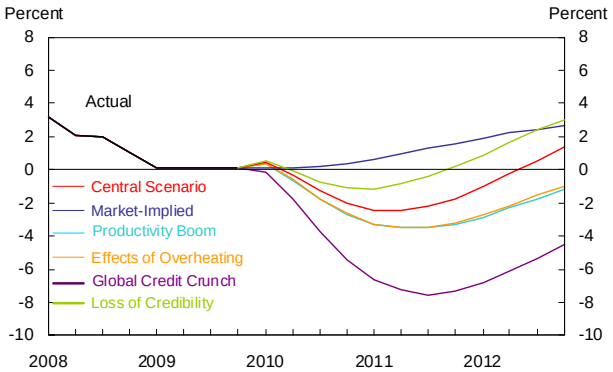


Real FFR under Alternative Scenarios

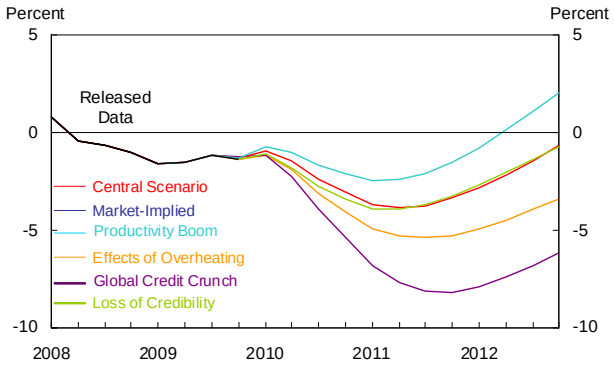


Policy Rule: *Outcome-based*

Nominal FFR under Alternative Scenarios



Real FFR under Alternative Scenarios



Source: MMS Function (FRBNY)

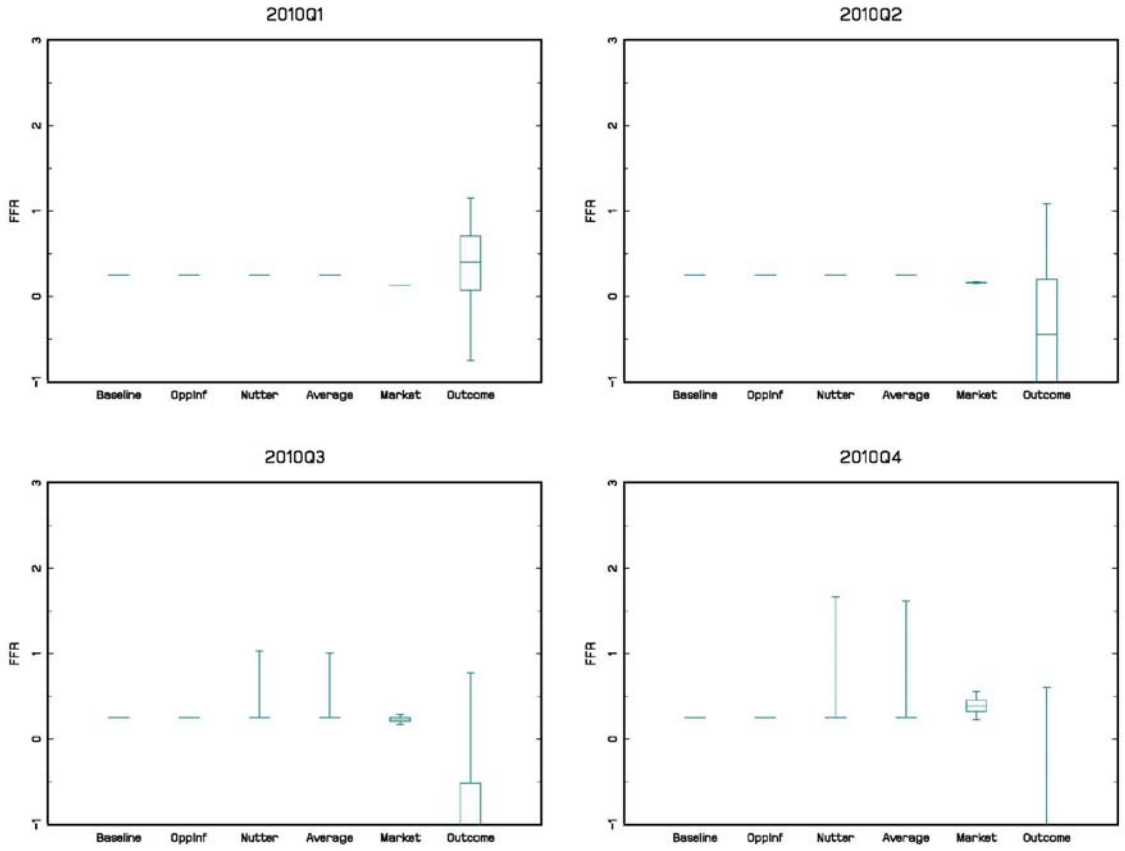
D. FRBNY Fed Funds Rate Projections

Exhibit D-4: Comparison between Market and Policy Rule FFR Expectations: 2010Q1

"Average" Weights:

Rule	Current	Jan Blackbook
Baseline	0.01	**0.01**
Asymmetric Price Targeting	0.01	**0.01**
Nutter	0.98	**0.98**

Exhibit D-5: FFR Distributions



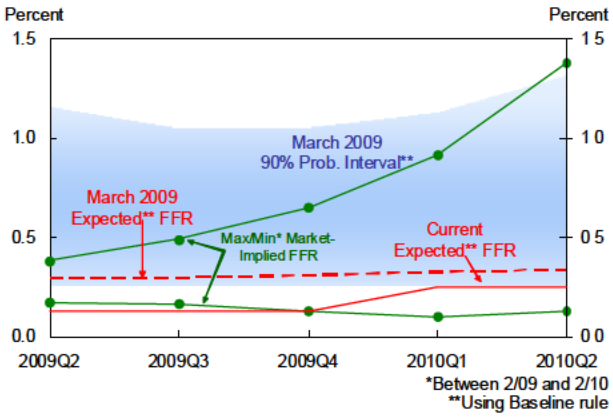
Note: The box represents the 50% probability interval, the line in the box the median, and the tails the 90% probability interval.

Source: MMS Function (FRBNY)

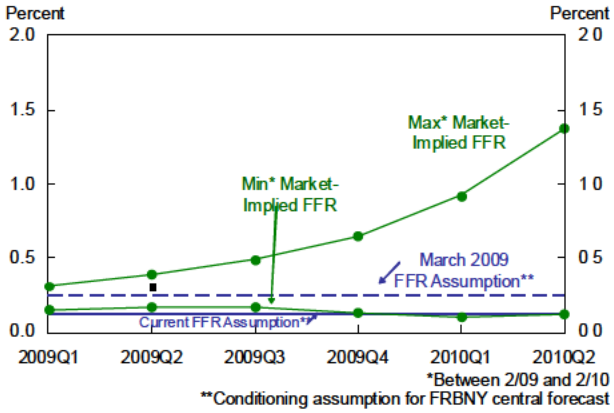
D. FRBNY Fed Funds Rate Projections

Exhibit D-6: Evolution of FFR Expectations and Assumption

FFR Forecast Distribution and Market-Implied FFR



FFR Conditioning Assumption and Market-Implied FFR



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:

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

$\rho = 0.8$ (interest rate smoothing parameter)
$i^* = 2.00 - 3.00$ 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: $i_t = 1.20*i_{t-1} - 0.39*it\text{-}2 + 0.19*(1.17 + 1.73*\pi_t + 3.66*x_t - 2.72*x_{t-1})$