FRBNY Blackbook

RESEARCH AND STATISTICS GROUP

FOMC Background Material

June 2008

CONFIDENTIAL(FR) Class II FOMC

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EXHIBITS

EXHIBIT OVERVIEW

1. Policy Recommendation and Rationale

Our policy recommendation is to maintain the FFR (federal funds rate) target at 2.00% at the June FOMC meeting. After that, we anticipate that the FFR will remain at that level until the latter part of 2008 at which time (assuming that more solid real growth is established and market conditions are less fragile) we expect the policy renormalization process to begin. In this renormalization process, we expect the FFR to rise to 4.25% by mid-2010. Over the near term, the FOMC should give a flat signal; i.e., communicate that there are roughly equal probabilities of downward and upward deviations from this path. This path is modestly higher than the path assumed in the April Blackbook. In addition, given our outlook and risk assessment, this pace of renormalization would be somewhat quicker than the prescription of our *Baseline* policy rule; such a pace would enable the FOMC to reaffirm its price stability goal. Financial market expectations for the FFR appear to be roughly in line with our policy path. Therefore, the FOMC statement should aim to be market neutral.

The recent data indicate that core inflation and alternative measures of underlying inflation generally remained consistent with our forecast of a gradual moderation in underlying inflation. Labor compensation growth remained moderate as the soft labor market exerted downward pressure; moreover, solid productivity growth implied that labor cost pressures remained subdued. Furthermore, long-horizon inflation expectations appeared to be fairly well-contained, especially for financial market measures, and the trade-weighted foreign exchange value of the dollar was fairly stable on net during the inter-meeting period, even though there was greater commentary about its depreciation over recent years.

Nevertheless, there are some upside risks to our inflation outlook. In particular, the persistent increases in energy and commodity prices have kept overall inflation well above core inflation. One interpretation for the energy and commodity price increases is that they reflect stronger global demand. Accordingly, we have increased the probability of the *High Global Demand* scenario. Moreover, high overall inflation might lead to an unmooring of long-term inflation expectations (arguably, the Michigan inflation expectations measure has displayed some of this effect) that would make containing inflation more difficult for the FOMC. Consequently, these developments have led the inflation risks to be skewed modestly to the upside.

Over the inter-meeting period, the real activity indicators have led us to revise upward our near-term real growth forecast. Overall, the data are consistent with sluggish real growth in 2008Q2—but not with the downturn we had been expecting—and indicate a lesser probability that the economy has entered a recession. Aggregate spending indicators displayed unexpected resilience. Labor market conditions remained soft but did not deteriorate to the extent consistent with a significant recession. Taken together, these developments suggest a reduced probability that an adverse financial feedback loop will be established, therefore reducing some of the extreme downside risk to real activity. Consequently, we have decreased the probability of the *Credit Crunch* scenario, although its weight still remains high. In addition, the recent data on labor productivity and labor force participation are consistent with our outlook for potential output and also have led us to raise the probability of the *Productivity Boom* scenario. Our central forecast continues to show a relatively modest rebound in 2008H2 and 2009, such that our anticipated output gap will not be fully closed over the forecast horizon.

Despite the recent rise in Treasury yields and policy expectations, reflecting the reduction in extreme downside risk to growth and the FOMC commentary on inflation risks, financial market conditions remain fragile and susceptible to negative shocks. Credit spreads are still high and real yields remain fairly low. Furthermore, equity markets have experienced significant volatility, particularly for financial institution equities, partly reflecting developments at Lehman Brothers and partly reflecting an anticipation of tighter monetary conditions in response to inflationary pressures. Unsecured funding markets still displayed stresses, although not to the degree seen in the previous two quarter-ends, while secured funding markets operated closer to "normal" in the inter-meeting period. In all, financial markets still appeared susceptible to negative shocks that could initiate an adverse feedback loop.

Under our central forecast, with the FFR maintained at 2.00%, the combination of previous monetary easing and fiscal stimulus already in the pipeline enables real growth to rebound in the second half of the year. As the rebound becomes established and financial market functioning returns closer to normal by the end of this year, we anticipate the FOMC should begin the process of renormalizing the FFR**,** raising it to 3.75% by the end of 2009 and to 4.25% by mid-2010. Near term, our recommendation for the FFR is reasonably close to that of the *Baseline* rule under our central scenario. However, over the medium term, our policy recommendation is above the prescription of the *Baseline* rule, reflecting our view that the FFR should be renormalized relatively quickly, in part to re-affirm the FOMC's price stability objective.

Our policy recommendation is roughly consistent with the market-implied expected FFR path. Markets currently expect the FFR to be raised a little earlier than in our recommended path, with increases beginning in 2008Q3. However, the endpoints of the renormalization are similar in the two paths, with the expected FFR near 4.25% in mid-2010 in the market-implied path. Given the uncertainty around the market-implied path, any differences appear to be relatively minor. In contrast, the FFR path from the primary dealer survey is somewhat below our recommended path. The difference may reflect the beliefs of some primary dealer economists that the FOMC will follow a more cautious path of renormalization because of financial market fragility.

More interesting has been the shift in market expectations of the policy path over the inter-meeting period: the mid-2010 market-expected FFR has shifted upward about 75 basis points, more than the shift in either our or the primary dealers' paths. At the same time, negative skewness has decreased markedly, suggesting that market participants see a lower probability of large interest rate cuts in the near future. This change in expectations partly reflects the reduction in extreme downside risks to real activity and the increase in upside inflation risks incorporated in their risk assessment. However, it also appears to reflect a rather large and abrupt response to FOMC communications about headline inflation risks and the commitment to price stability. There also has been a notable increase in policy rate uncertainty. Given that the uncertainty around the outlook has diminished, the increase in policy rate uncertainty may reflect greater uncertainty about FOMC policy reactions. In such a case, FOMC communication should clarify the approach to achieve its goals.

Even though our recommended path of the FFR and the market-implied path are roughly consistent, the recent shifts in market expectations and uncertainty probably put some greater communication burden on the FOMC statement. In the statement, the FOMC probably should begin to communicate its strategy to renormalize the FFR. At the same time, given the greater focus of market participants on inflation risks, the FOMC probably should re-iterate its commitment to price stability without prompting expectations of FFR increases before the risks to real activity and financial stability have sufficiently receded.

One important element in this communication strategy thus is a focus on core inflation rather than overall inflation. We view core inflation as a useful indicator of future movements in overall inflation. Core inflation has been relatively stable recently and lies within or just above our comfort zone, suggesting that underlying inflation pressures remain contained. It is therefore important to state that the recommended flat path for the near-term FFR does not represent less vigilance toward controlling inflation, but rather reflects the still-elevated risks to real economic activity. The FOMC should communicate its readiness to begin to renormalize the FFR with signs of rebounding real growth and greater stability in financial market conditions. However, if core inflation begins to display an increase toward overall inflation and/or inflation expectations appear to be becoming unmoored, the FOMC should be prepared to revise the near-term policy stance towards greater tightening.

In this environment, substantial uncertainty about our projected policy path remains, both on the downside and on the upside. On the downside, additional reductions in the FFR would be required if there were renewed signs of significant spillovers from financial market turbulence, tighter credit conditions, and the housing downturn to the broader economy, particularly if they indicate an establishment of an adverse feedback loop. On the upside, the main source of uncertainty for our projected policy path is the possibility that the recent stability in core inflation proves transitory and inflation expectations begin to rise substantially. In regard to high oil prices, policy should respond to the extent that oil price increases represent rising aggregate demand pressures and/or become embedded into inflation expectations; if they instead represent changes in relative prices (i.e., reflect greater scarcity of the resource for U.S. consumers), then policy should enable such a relative price shift to occur with minimal resource cost.

2. Significant Developments

2.1 Economic Developments

The economic indicators released during the inter-meeting period affected notably our outlook and risk assessment. The real activity and labor market indicators generally suggested that real activity was sluggish but not recessionary in 2008Q2, despite a sharp rise in the unemployment rate in May. Consequently, we have reduced the current probability of a recession as well as raised our near-term outlook for real GDP growth. We also reduced the downside risks to real activity, although they remained skewed to the downside. The inflation data were generally consistent with our forecast, and suggest little change in the outlook. Because the data indicate a reduction of downside real risks, they also suggest that the inflation risks have shifted modestly to the upside.

Inflation. Core inflation measures remained within the narrow ranges the have prevailed over the past year, indicating little change in underlying inflation pressures. The 12-month change in the core PCE deflator in March and April was just above the top of the "mandate-consistent range" of 1.5-2.0% [Exhibit A-1]. Changes in the PCE deflator at other horizons similarly were near or slightly above the top of this range. The 12-month change in the core CPI was slightly lower in April and May than it was in March, putting it more solidly below 2.5%, which we interpret as the top of its objective range. Changes in the core CPI at other horizons were slightly below the 12-month change, indicating that underlying inflation by this measure was fairly well contained.

The relative stability of core inflation also was evident in both goods and services. Core goods inflation remained slightly positive at the 12-month horizon, although it has turned modestly negative at shorter horizons. The recent decline in these prices probably reflected the impact of sluggish demand growth. Core services inflation was little changed at the 12-month horizon at levels below that of 2006 and early 2007. In part, the relatively moderate increases in core services reflect the continued moderation of tenant rent and owners' equivalent rent inflation. In addition, medical care inflation remained more moderate than it had been over the previous five years.

Much like core inflation, alternative measures of underlying inflation generally have remained within narrow ranges over recent months, providing further signals of little change in underlying inflation [Exhibit A-1]. Nevertheless, most metrics remained above their respective core measures, indicating that core measures may be underestimating underlying inflation. The one exception to this pattern is the FRBNY underlying inflation gauge (UIG), which has declined over the past two years and is somewhat below core inflation. The differing behavior of the UIG reflects the influence of weak real activity indicators (that typically have signaled reduced inflation pressures) within the measure that more than offset the effect of high food, energy, and commodity prices. The divergence across these measures suggests that considerable uncertainty about the inflation outlook remains in the current environment.

Energy and food prices continued to produce upward pressure on overall inflation measures. Consequently, the 12-month changes in overall CPI (through May) and the PCE deflator (through April) were well above their corresponding core measures. However, the behavior of the alternative underlying inflation measures that take into account these prices suggest that they are not yet having much impact on underlying inflation. Therefore, we have not materially changed our medium-term outlook for inflation on account of developments in food and energy (although we have raised our near-term outlook modestly). Nevertheless, continued increases in energy prices and prospects of continued tight supplies in food and energy are risk factors for the inflation outlook.

Financial market inflation compensation measures displayed differing patterns over the inter-meeting period. They were generally consistent with inflation expectations remaining contained, although they were fairly elevated [Exhibits A-2 and A-3]. Based on Board staff measures, medium-term (4-5 year) inflation compensation increased about 30 basis points (bps) over the inter-meeting period, and are near their March peaks. Inflation compensation at the 5-10 year horizon rose only about 5 bps on net over the period, increasing during the first half of the period as the dollar was depreciating and many commodity prices were rising, but then declining in the second half in response to FOMC communications re-iterating its price stability commitment. The FRBNY Markets and Barclay's measures displayed similar patterns with net increases of 5-10 bps. Inflation compensation at the 9-10 year horizon declined on net about 10 bps. All of the longer-term measures still remain elevated relative to their levels of the past two years. FRBNY analysis still suggests some of the increase in recent months reflects rising inflation risk premia (the portion of inflation compensation that historically is not related to future price changes); uncertainty about the policy response could conceivably exacerbate such effects. Nevertheless, the continued elevated level of compensation suggests some increase in inflation expectations over the past year, although they still appeared to be contained, which is one reason why the recent increases in oil and commodity prices have raised upside inflation risks only modestly.

In contrast, household inflation expectations measures rose to multi-year highs during the inter-meeting period. According to the Michigan survey, median one-year inflation expectations rose to above 5% in May and early June, reflecting the impact of rising gasoline and food prices. These developments also affected long-term (5-10 year) household expectations in the Michigan survey, which rose to a 13-year high of 3.4%. While this development is of concern, so far it does not appear that these changes in measured expectations have been reflected in household behavior: wage growth remains subdued and spending patterns do not yet reflect hoarding behavior (to avoid price increases). The data will have to be monitored carefully to see if such evidence becomes apparent.

Commodity prices and import prices also remained sources of concern for the inflation outlook. Commodity price indices fluctuated throughout the period and a number rose over the period; in each of these cases, they remain quite high. Spot oil prices again achieved new highs during the period, exceeding $130 over recent weeks. Futures prices indicate that market participants expect oil prices to remain near this level over the foreseeable future. As in recent periods, the recent increases largely reflect perceived changes in the real fundamentals in these markets; however, there continued to be some indications that market participants perceived commodities as a hedge against inflation and dollar depreciation. Import price inflation continued to increase, reflecting the rise of commodity prices, higher cost pressures in some countries, and the effect of dollar depreciation over the past year. The effects of dollar depreciation (as well as rising cost pressures) were particularly evident in the further rises in import price inflation for Chinese goods. In addition, import price inflation for motor vehicles, capital goods, and consumer goods reached decade highs. Although we expect import price inflation to subside, reducing domestic inflation pressures from this source, it is an upside risk factor for the outlook.

Real Activity. Real GDP growth was 0.9% (annual rate) in 2008Q1, roughly consistent with the outlook in the April Blackbook. Despite sluggish growth in the quarter, labor productivity growth was 2.6% in 2008Q1, and its four-quarter change was 3.3%, as productivity growth continued its rebound of the past year. The recent developments in productivity suggest that trend productivity growth has not declined, raising our confidence about our trend productivity growth estimate of 1.8% (nonfarm business sector basis). In addition, the probability of the high-trend productivity growth state in the Kahn-Rich model increased, and is now about 70%.

The more recent monthly real activity indicators suggest sluggish but positive growth in 2008Q2, which is somewhat better than we expected in the April Blackbook. Consequently, these indicators have prompted us to reduce the probability that the economy has entered a recession to under 50% [Exhibit C3].

One factor that has contributed to the still-sluggish but somewhat firmer near-term outlook is consumer spending. Real PCE increased only 1.0% (annual rate) in 2008Q1; monthly indicators point to real PCE growth in 2008Q2 that is modestly firmer than that in 2008Q1 as well as being above our projection in the April Blackbook. Real PCE was virtually unchanged in April as goods expenditures declined and services expenditures rose modestly; however, revisions to retail sales indicate that goods expenditures may be revised upward. Retail sales excluding motor vehicles rose solidly in May, even accounting for the sharp increases in gasoline prices. This increase, as well as the aforementioned upward revisions, suggests that consumer spending may have a more solid base than we previously anticipated. The rise in May retail sales also could reflect some impact from the federal stimulus checks, much of which were distributed in late April and May. In contrast, motor vehicle sales were very weak in April and May; the average of 14.3 million units (annual rate) was the lowest of the past decade. The weakness in motor vehicle sales probably reflects expenditure adjustments in light of higher gasoline prices that make SUVs and light trucks less desirable. The effect of higher energy prices also continued to affect consumer confidence measures, which continued to fall and are at levels that historically have been associated with relatively severe recessions. Overall, although the outlook is modestly brighter, consumer spending indicators still pointed to sluggish expenditures growth and also continued to suggest potential spillover from the weak housing market and tight credit conditions. This possibility is a factor contributing to the maintained downside risks to real activity.

The spillovers from housing continue to be relevant as the housing market remained very weak. Some indicators suggest that activity may have begun to stabilize at a low level, although these signs remain tentative; such signs previously seen during the housing downturn have proved to be false signals. Single-family housing starts fell in April and May, putting them at their lowest level since 1991 (the cumulative decline since early 2006 is over 60%), but the pace of the decline has slowed from that in the second half of 2007 and early 2008. In addition, single-family building permits were relatively unchanged in the two months. Still, in a sign that the stabilization in homebuilding is tentative, the homebuilders’ index fell in May and June back to its historic low, indicating that homebuilders remained pessimistic. Sales activity also appeared to stabilize, as new and existing home sales were essentially unchanged at low levels in April; a rise in pending home sales in April also provided a somewhat hopeful sign. Nevertheless, inventories-sales ratios for new and existing homes remained high, indicating that building activity will remain weak. Consequently, we still expect the slump in residential construction to continue through 2008 before a modest recovery in 2009 (see Section 3.1).

Even with tentative signs of stabilizing housing activity, measures of home price appreciation were negative and the declines intensified in 2008Q1 and into April. The four-quarter change in the OFHEO purchase-only index fell further into negative territory, and is the lowest in the history of the series (the four-quarter change in the overall OFHEO index also is at a historic low). The monthly OFHEO index displayed similar signals. The four-quarter change in the national S&P/Case-Shiller index also declined further into negative territory as did the 12-month changes in its composite metropolitan indices: all indicated declines of near 15% over the past year. The year-over-year change in the Radar Logic 25-metropolitan-area composite index indicated that the price declines continued to intensify through mid-April. Forward prices based on this index indicate that market participants expect home prices to fall about 25% over the next two years though March 2010; these expectations are somewhat worse than they were at the time of the April FOMC meeting. If such expectations (or worse) become embedded in home purchasing decisions, they could impede any potential recovery in the housing market. The declines in home prices also point to the continued downside real risks from spillovers from the housing market to the broader economy.

Mortgage markets generally continued to display stresses over the inter-meeting period [Exhibit A-11]. Delinquency and foreclosure rates on subprime and prime mortgages continued to rise and exceeded previous highs. The latest earnings reports from financial institutions indicated further write-downs and losses from mortgage-related assets, suggesting that the fallout from the housing market downturn may still take some time to complete. Another indication of further weakness in mortgage-related assets was further declines in all tranches of the ABX; in most cases, these indices are below their depressed mid-March levels. Mortgage rates rose along with long-term Treasury rates during the period, so that the spreads between conforming mortgages and Treasuries were little changed at elevated levels. Spreads for agency-backed MBS increased modestly and remained elevated, but well below the extreme levels in early- to mid-March. The spread between prime jumbo mortgage rates and conforming mortgage rates declined modestly, but remain wide relative to the spread prior to August 2007. In addition, the Senior Loan Officers Survey indicated that banks continued to tighten standards for mortgages. The spread between repo rates collateralized by agency securities and MBS to those collateralized by Treasuries generally remained near "normal" levels, suggesting that the Term Securities Lending Facility (TSLF), the Primary Dealer Credit Facility (PDCF), and other liquidity initiatives have helped to maintain the liquidity of better-quality MBS [Exhibit A-12]. Nevertheless, the continued stresses in the mortgage market could have further negative impacts on home sales, construction, and prices with the potential to affect the real economy more broadly.

The business activity indicators released during the inter-meeting period indicated that conditions continued to be sluggish but did not deteriorate further. Manufacturing production fell in April and was flat in May. With sales weak, motor vehicle production fell sharply again in April with only a modest rebound in May (strike activity also contributed to the weakness). Production fell in both months in other sectors excluding high-tech industries. In contrast, production in high-tech industries remained fairly robust, which is consistent with the signals from the FRBNY Tech Pulse index. Inventories, which contributed positively to real GDP growth in 2008Q1, rose moderately in April. Inventories-sales ratios still fell in the month and are at low levels, indicating that any cutbacks in inventories probably will be limited unless there are signs of greater reductions in future final demand.

Business survey indicators generally signaled sluggish conditions. The ISM manufacturing index was little changed in May at a level consistent with sluggish manufacturing conditions. Regional indicators were similar: both the Empire State and

Philadelphia Fed indices declined in June, but both remain within their recent ranges. The ISM non-manufacturing index also was little changed in May at a level consistent with modest growth in the services sector.

Indicators of capital spending, which fell slightly in 2008Q1, point to modest growth in 2008Q2, an improvement from the near-term outlook in the April Blackbook. Capital goods shipments and orders increased in April. Fairly robust high-tech production growth in April and May as well as a solid Tech Pulse index reading suggest that high-tech equipment spending has been firm so far in 2008Q2. Nonresidential construction rose fairly robustly in March and April, reducing some concern about the near-term outlook for this sector engendered by declines earlier in the year.

Labor market. Labor market conditions generally remained soft but did not deteriorate much further over the inter-meeting period. This pattern was somewhat better than we had anticipated in the April Blackbook, providing another reason for our somewhat-improved near-term real outlook and risk assessment. Payroll employment fell in April and May (it has declined for five consecutive months), but the declines were somewhat smaller than those in 2008Q1. The relatively modest decline in employment so far indicates that the economy is on the edge between sluggish growth and recession and is consistent with the reduction in our probability that the economy has entered a recession.

The softness in employment remained widespread among cyclical industries. Employment fell in goods-producing industries at a rate similar to that in 2008Q1, with significant declines in manufacturing and construction. In contrast, employment at private service-producing industries rose modestly on net in the past two months, a slight improvement on the declines in 2008Q1; however, continued declines in temporary help services is a worrisome sign for future employment growth. With the widespread softness, the one-month diffusion index for May was under 50 for the seventh consecutive month; this index also was under 50 over the three-, six-, and twelve-month horizons.

The most worrisome sign in the May labor market report was a 0.5 percentage point rise in the unemployment rate to 5.5%. However, a significant portion of the rise appeared to be the result of some seasonal quirks related to younger (16-24) workers, whose unemployment rate and labor force participation rate rose unusually sharply in the month. Nevertheless, the unemployment rate for prime-age workers also increased, suggesting that a good portion of the 0.5 percentage point rise reflects softness and portends further weakness in labor market conditions. The overall labor force participation rate rose with the sharp rise in younger worker participation, but its behavior remains consistent with our outlook of little change in this rate over the medium term. The employment-population ratio continued its gradual downward trend of the past year in another indication of labor market softness. The 12-month change in household employment on a payroll-comparable basis continued to fall in a manner consistent with payroll employment.

The four-week moving average of initial claims for unemployment insurance fluctuated within a narrow range over the period. Initial claims remain at elevated levels, indicating once again soft labor market conditions, but their relative stability also indicates that conditions are not deteriorating further. Continuing claims generally continued to rise during the period, and now exceed 3 million. This pattern suggests that the decline in employment so far is associated more with slower hiring than with greater layoffs. The JOLTS data for April appear to be consistent with this hypothesis: the job openings rate remained on a downward trend. In this regard, especially with the recent rise in the younger worker unemployment rate, the job finding rate of new entrants into the labor market will be important to monitor.

As the labor market remained soft, labor cost data indicated that labor cost pressures continued to decrease slightly. The 12-month change in average hourly earnings was 3.5% in May, the lowest it has been since January 2006. The Employment Cost Index (ECI) had similar implications, as its four-quarter change in 2008Q1 was about the same as the previous two quarters. Compensation growth also slowed some in 2008Q1. With productivity growth strong, the four-quarter change in unit labor costs in 2008Q1 was only 0.7%, the lowest it has been since 2004.

Trade. The net export contribution to real GDP growth in 2008Q1 was 0.8 percentage points, the fourth consecutive quarter with a substantial positive net export contribution. Initial indications are that net exports will continue to contribute positively to real GDP growth in 2008Q2.

The trade deficit was $60.9 billion in April, up from $56.5 billion in March. Both imports and exports rose solidly in the month. Much of the rise in imports reflected higher petroleum prices, but there were increases in most other import categories in another sign that domestic demand has held up fairly well in the first part of the year. A good deal of the export growth in the month was in capital goods. The resilience of exports in April indicated less concern about a collapse of foreign demand for U.S. goods. Even though the nominal trade deficit increased in April, the real non-petroleum deficit continued to narrow because of robust exports and flat imports, continuing the pattern of the past year.

Foreign economies. Global growth was higher than expected in 2008Q1, but the higher growth probably reflected transitory factors, and thus suggests a significant payback in 2008Q2. In the euro area, business confidence stabilized in recent months, while both production and exports staged strong rebounds in April. Nevertheless, the expectation is for weak 2008Q2 real GDP growth as unusually warm weather caused a jump in construction spending in 2008Q1 that will have to be unwound. Japanese real GDP growth at the beginning of the year was above underlying fundamentals, as consumer spending increased at an unsustainable rate. Indicators remained soft, so the payback for 2008Q1 strength is expected to lead to a drop in 2008Q2 real GDP. China continued to grow rapidly, as export growth accelerated in May. Consumer price inflation displayed tentative indications of stabilization as food inflation appeared to have peaked.

2.2 Financial Markets

Perceived decreases in downside real risks, increases in upside inflation risks, and official commentary from the FOMC and other central banks about the possible need for tighter policy to contain inflation risks led to increases in Treasury yields and policy rate expectations since the last FOMC meeting. Although conditions improved in some areas, financial market conditions remained tenuous, as the levels of many spreads, interest rates, and asset prices indicated that financial and credit conditions are still rather tight.

U.S. Markets. The expected FFR path rose over the inter-meeting period as market participants priced in an earlier and larger tightening of policy rates than they had at the time of the April FOMC meeting [Exhibit A-5]. The higher path reflected the further apparent reduction of market participants' implied probabilities of the more extreme "tail risks" for real activity and an increase in perceived upside inflation risks from rising commodity prices as well as previous dollar depreciation. In addition, market participants shifted their policy path expectations as FOMC communications about the need to respond to upside inflation risks appeared to have led market participants to adjust their view of the policy reaction function. Accordingly, the market-implied path now does not feature any further reductions in the FFR and does feature some increases this year: the December 2008 expected FFR is about 2.50%. The market-expected FFR continues to rise in 2009 and 2010, reaching about 4.10% in August 2010, which is about 75 bps above its level before the April FOMC meeting. Because the market-implied path has risen more than our recommended path, the two paths now have similar paces of renormalization.

Over the near term, market participants place a fairly high probability that the FFR will be unchanged after the June and August FOMC meetings [Exhibit A-5]. The probability of a target rate of 2.00% after the June meeting is over 80%, down modestly from that of a couple of weeks ago but above that from a week ago. Most of the remaining probability is on an increase of 25 bps. The outcome for the August meeting is a little more uncertain, but participants see little chance of a reduction in the FFR: the probability of a target rate of 2.00% is about 60% with most of the remaining probability on either 2.25% or 2.50%.

Policy uncertainty measures indicated a mixed picture about market participants' uncertainty about future policy [Exhibit A-6]. These measures were little changed at very short (0-3 months) and long (4-5) horizons according to FRBNY calculations. The former probably reflects market participants' assessment that with some decline in near-term risks, the policy path probably will not change much over the next two meetings. The latter probably reflects market participants' belief that there has been little change in long-term policy goals. In contrast, intermediate-term uncertainty rose considerably: the FRBNY measure of the 90% LIBOR confidence interval at the 1-2 year horizon increased 55 bps to 3.84% while Board staff measures increased 35-65 bps at the 6-month and 12-month horizons. In large part, the rise of uncertainty at these horizons appears to reflect market participant uncertainty about the intermediate-term policy reaction function following the recent FOMC communications concerning the possible need for tighter policy to address upside inflation risks. This development suggests that future communications may need to attempt to resolve some of the uncertainty about the policy response so that misunderstandings do not develop. Despite this rising uncertainty, the decrease in perceived downside real tail risks led market participants to display less concern about a large policy rate reduction: implied skewness became considerably less negative during the period at around -1.2%.

The reduction in perceived downside risks, the increase in upside inflation risks, and the shift in monetary policy expectations led to increases in long- and short-term nominal Treasury rates over the inter-meeting period [Exhibit A-4]. The 10-year on-the-run nominal Treasury rate increased almost 40 bps to 4.21%; the recent rise put this rate above 4% for the first time this year. The 2-year Treasury rate, which is more sensitive to monetary policy expectations, increased more than the 10-year rate, rising almost 60 bps to 2.94%. This pattern also implied that short- and medium-term nominal forward rates increased considerably over the period while long-term forward rates were mostly unchanged.

Short-term Treasury bill rates increased during the inter-meeting period, reflecting further reduction in risk aversion among market participants as well as rising short-term policy rate expectations [Exhibit A-4]. Nevertheless, these rates remained fairly low and declined over the past week as expectations of a short-term policy rate increase were tempered. The 3-month T-bill rate increased over 40 bps over the inter-meeting period to 1.90%, and the 6-month rate rose about 55 bps to 2.29%. In both cases, the rates are near levels seen earlier in the year (after the January 22 inter-meeting FFR reduction), indicating some stress remains in financial markets. The 10-year/3-month term spread narrowed modestly, but remained quite positive.

Consistent with the reduction in downside real risks, real interest rates increased, although they are still fairly low [Exhibit A-4]. The carry-adjusted 5-year yield increased about 15 bps to 1.25%, and the carry-adjusted 10-year yield also increased about 15 bps to 1.86%. Both real yields were near their levels at the end of 2007 and remained below estimates of the equilibrium long-term real rate, indicating that market participants still see the risks skewed to the downside. The real 4-5 year forward rate increased 17 bps to 1.97%; it remains below its levels from last summer in another display of downside risks to the real outlook. The real 9-10 year forward rate rose 12 bps to 2.77%; it is roughly similar to its levels from last summer, possibly reflecting lesser concern about the longer-term real outlook.

Corporate credit spreads for investment- and speculative-grade bonds generally declined modestly over the inter-meeting period [Exhibit A-7]. Nevertheless, these spreads remained elevated and comparable to the levels seen during the onset of the 2001 recession. CDS spreads for nonfinancial firms in the U.S. and Europe increased modestly: these also remained elevated but below the more extreme levels seen in March. CDS spreads for financial institutions increased notably, although they remain well below the peaks seen during mid-March. The increases reflected the reported and prospective losses on mortgage-related securities as well as concerns about the prospects for some of these firms (despite the continued demonstrated ability to secure additional capital), with particular attention placed on Lehman, whose CDS spread increased the most among the major investment banks. CDS spreads also rose sharply for financial guarantors, as some of the major guarantors had ratings downgraded, further putting into question their viability in their current condition.

Short-term funding markets did not display the increase in stresses as quarter-end approached as they had in the previous two quarter-ends. Secured funding markets operated closer to "normal" as overnight general collateral Treasury repo rates were close to normal [Exhibit A-12]. Term repo markets collateralized by MBS remained less liquid. Even so, most TSLF auctions were under-subscribed and stop-out rates were at the minimum. In the unsecured funding market, term dollar LIBOR-OIS spreads declined over the period even with the upcoming quarter-end [Exhibit A-11]. Despite this development, these spreads remained well above the levels seen in the first half of 2007. The minimal increase in pressures at quarter-end may reflect the influence of the greater size of Term Auction Facility (TAF) auctions during the period. The TAF auction during the period had solid participation, but stop-out rates were not particularly elevated, indicating that demand for unsecured funding from banks was solid but not extremely large. High bid-offer ratios for ECB and SNB dollar funding operations at the end of the period may indicate that there were greater demands from European institutions. The continued elevated levels of the LIBOR-OIS spreads still indicates that banks remain wary of lending to unsecured markets, possibly because of concerns about counterparty risk.

Even though downside real risks appeared to decrease over the inter-meeting period, U.S. equity market indices generally declined [Exhibit A-7]. The broad stock market indices declined 2-6%. One exception was the NASDAQ, which rose about 1.5%. Financial institution equity prices underperformed the broader market, reflecting concerns about the impact of further mortgage-related losses as well as the impact of dilution of current equity holders from capital-raising attempts. Sizable daily fluctuations indicated that market participants remained wary about economic and financial conditions as well as the policy response to the conditions. Equity index implied volatilities were little changed on net over the inter-meeting period. They are well below previous peaks during the financial turbulence period, but somewhat above more normal levels.

Foreign Markets. Global funding conditions remained fragile during the inter-meeting period. Euro and sterling LIBOR-OIS spreads remained persistently high, with 3-month spreads just below the 80 basis point mark. Continued tension in European and Japanese FX funding markets has caused especially strong movements in longer dated FX funding products, which most likely reflects expectations that tight funding conditions will persist longer than previously expected.

European stocks lost ground, shedding between 5 and 8 percent since the last FOMC meeting, led by shares of financial institutions on account of ongoing announcements of write-downs related to losses in structured credit products and tight credit conditions (UBS warned of the possibility of further write-downs on mortgage related assets, while U. K. mortgage lender Bradford & Bingley announced a significant loss due to deteriorating performance of buy-to-let mortgages). Elsewhere, Japanese stocks increased around 4 percent over the inter-meeting period, but other Asian indexes were mostly down, including the Shanghai composite, which lost 10 percent.

Energy prices reached new highs during the inter-meeting period, with spot oil prices increasing around 20% and oil price futures for July delivery breaking the $138/barrel mark on June 6. Reports about supply side disruptions and continued strong demand from emerging economies fed these developments. On the positive side, a number of emerging Asian economies, including China very recently, have decreased fuel price subsidies, which could possibly lower oil demand in those countries. Also, speculative positions that hedge against dollar weakness might unwind in line with the recently observed dollar strengthening. Nonetheless, the continuing growing demand from China, the Middle East and Latin American economies is widely perceived to be keeping oil prices high.

Long-term interest rates rose nearly 50 basis points in the euro area and the United Kingdom, and 20 basis points in Japan. These moves largely reflected renewed inflationary concerns, as data on break-even inflation rates from inflation-linked bonds for the euro area, the United Kingdom and Japan reveal that inflation expectations increased about 15, 55 and 22 basis points respectively. In emerging Asia, stronger than expected real GDP growth combined with the continued rise of inflation led to significant increases in long term interest rates.

The dollar was broadly unchanged *vis-à-vis* the euro during the period, reflecting stronger expectations of policy tightening in both the United States and the euro area. By contrast, the expectation that policy in Japan will not change in the near term resulted in an appreciation of almost 4% of the dollar relative to the yen. In trade-weighted terms the dollar was broadly stable over the inter-meeting period although, in recent days, comments by Federal Reserve officials regarding dollar weakness and its effect on inflation appear to have supported the dollar. Since the last FOMC meeting, the Chinese yuan appreciated against the dollar at a more gradual pace than in previous periods, while the expected gain over the next year priced in NDFs also decreased to about six percent.

2.3 Global Economic Policy

Although the ECB, the Bank of England and the Bank of Japan remained on hold during the inter-meeting period—with official commentary in Europe continuing to emphasize the uneasy conjunction of inflationary pressures, financial market weakness and, in the United Kingdom, slowing growth—recent data releases point to an incipient turn in the global monetary cycle towards tighter policy conditions. In particular, consumer and producer price inflation for the euro zone and the United Kingdom point to accelerating inflation and increasing risk of spillover from higher oil prices. Recent statements by both ECB and Bank of England officials reinforce the perception that these central banks are starting to put more weight on inflation risk. Markets now expect a 25 basis point policy rate increase in both the euro area and in the United Kingdom by end 2008, with a high probability priced in for a rate increase at the ECB's next policy meeting. The Bank of Japan is not expected to steer away from its current policy stance before year-end.

A tendency towards tighter monetary conditions is apparent also in the emerging world. The central banks of India, Indonesia and the Philippines all increased policy rates, citing inflation concerns, while the PBOC announced a new, larger-than-expected, increase in reserve requirements on June 7. Meanwhile, the central banks of Korea, Malaysia and Taiwan all reportedly intervened in currency markets to support their currencies, in part aiming to contain the pass-through of imported inflation. Swap interest rates now reveal market expectations of a broad wave of policy rate increases in emerging Asia by end 2008.

3. Evolution of Outlook and Risks

3.1 Central Forecast

Conditioning assumptions. Inter-meeting developments in the real economy have been generally stronger than expected, leading us to boost our modal forecast for growth of real GDP in 2008 while reducing the downside risks to that projection. At the same time, total inflation has been higher than expected, due to further sharp increases in energy prices, and shorter-dated inflation expectations have moved higher. Thus, we have raised our assumed path for the FFR somewhat, bringing forward to 2008Q4, from early- to mid-2009, the first increase while raising the path thereafter by 25 basis points. Under this path, the FFR rises to 3.75% by the end of 2009 and 4.50% by the end of 2010.

Our assumed path for the FFR is somewhat below the path currently implied by prices in futures markets, which moved up significantly over the inter-meeting period. Our assumed path for the FFR remains above that of the Greenbook, although it should be noted that the Board staff has raised their assumed level of the FFR at the end of 2009 by 100 basis points to 2.75%.

We continue to believe that over the medium term the neutral funds rate lies somewhere in the 3.75% to 4.75% range. However, we suspect that the recent tightening of credit conditions has temporarily lowered the neutral rate for the very near term, perhaps as low as 2.75% to 3.75%. Our forecast presumes that the significant easing of monetary policy, combined with aggressive fiscal stimulus, will result in the economy regaining forward momentum while financial markets gradually return to more normal functioning. In that case, policy needs to move back relatively quickly toward neutral so as to avoid a serious unmooring of inflation expectations.

The assumed path of oil prices over the forecast horizon has been raised once again. Oil prices are now expected to average nearly $130/barrel in 2008Q4, $24 higher than in the April Blackbook. With slower growth in the US, somewhat slower growth in the rest of the world, and the assumption of demand and supply responses to higher prices, markets continue to anticipate that oil prices will edge lower over the forecast horizon. However, we now expect oil prices to average about $125/barrel in 2009Q4, $23.75 per barrel above the level assumed in the April Blackbook. Our assumed oil price is $5/barrel and $10/barrel below that of the Greenbook forecast for 2008Q4 and 2009Q4, respectively.

Compared to the April Blackbook, there are relatively few changes in the remaining key conditioning assumptions underlying our central forecast. The foreign outlook is essentially unchanged since the last FOMC meeting. We project foreign growth will slow from 3.3% in 2007 to 2.3% in 2008 (GDP-weighted). There were some modest, offsetting changes in the outlooks for individual countries. Projected 2008 growth for Japan has been increased modestly (to 1.3% from 1.2%) while that of Canada has been reduced (to 0.6% from 1.1%).

As is our usual practice, our assumptions for equity prices and home prices are similar to those of the Greenbook. In this cycle, the Board staff has again lowered their assumed path for the OFHEO purchase-only home price index such that this index declines about 12% from its 2007Q2 peak by the end of 2009 rather than the 11% decline assumed in the April Greenbook. Note that the corresponding decline of the Case-Shiller index is likely to be 2 to 3 times larger. As in the Greenbook, we expect the real-exchange value of the dollar to depreciate over the forecast horizon. However, given our higher path for the FFR, our assumed depreciation is somewhat less than that in the Greenbook. Our assumptions regarding the stance of fiscal policy are very similar to those incorporated in the Greenbook.

We maintain our estimate of potential GDP growth at 2.7%: 1.2% trend hours growth (although we assume it will begin to decline in 2009-2010) and 1.5% trend productivity growth (GDP basis, which is equivalent to 1.8% on a nonfarm business sector basis). Given our estimate of potential, we expect an output gap of about 1% of GDP to emerge over the course of 2008. About one-third to one-half of that output gap would then be closed over 2009. As always, there is substantial uncertainty around our estimate of potential GDP growth and estimates of output gaps. It should be noted that the Board staff has raised their estimate of potential to 2.5% from 2.3 for 2008 and 2.2 for 2009. This reflects a combination of somewhat stronger structural productivity growth and a somewhat higher labor force participation rate.

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. Financial market inflation compensation at shorter horizons increased over the inter-meeting period, although inflation expectations at longer-term horizons were essentially unchanged. In our central scenario, inflation expectations decline as overall inflation slows. This return of inflation expectations to the mandate-consistent range plays an important role in the gradual moderation of inflation toward the midpoint of the FOMC's objective for core PCE inflation of 1.5% to 2%. Finally, we expect the term premia to remain relatively low. As measured by the Board staff's three-factor model, term premia rose modestly relative to the increase in long-term rates and remained at fairly low levels.

Inflation. Risks to inflation have become somewhat skewed to the upside over the inter-meeting period as oil and other commodity prices continued to move upward. The rate of increase of non-petroleum import prices also increased, reaching a year-over-year rate of 6.6% in April and May. The year-over-year increase of the total CPI, which was under 2.5% in 2007Q3, was over 4% in 2007Q4 and 2008Q1 and looks to be on track to be over

4% in 2008Q2 as well. There is some risk of an even sharper increase in headline inflation in the third quarter. Due to softening demand for many refined products, refining margins have steadily compressed over the past year. If oil prices stay at recent levels, and if refining margins were to be restored to more normal levels, prices of refined products such as gasoline would soar. As discussed in Greenbook Part 2, this is the logic behind the Greenbook forecast of a 62% (annual rate) increase in consumer energy prices in 2008Q3. In our forecast we have softened that increase somewhat, assuming instead that refining margins will not be fully restored to normal given the continued decline in demand for gasoline and jet fuel. In addition, and as discussed above, we assume a somewhat lower level of crude oil prices than does the Board.

Despite the more rapid pace of headline inflation, core inflation over the first half of 2008 has turned out to be slightly less than we anticipated in April. We now expect the core PCE deflator to rise 1.9% in 2008Q2, down from 2.1% in the April Blackbook. Core goods prices are now declining, while the rate of increase of core services prices continues to slow, both evidence of the weakened state of demand. Other than airfares, there is not any direct evidence of pass through of higher commodity and import prices into core.

Given that we have raised projected growth for 2008 by about ½ percentage point and lowered the path of the unemployment rate, we have modestly raised the projected increase in the core PCE deflator for all of 2008, from 1.9% to 2.0%. However, for 2009 it is unchanged at 1.8%. Even with the marking up of growth in 2008, the economy is likely to be operating somewhat below potential in 2009.

Real activity. The risks to growth remain skewed to the downside, and there is still a significant probability that we either already have or will enter recession. Nonetheless, the downside risks to growth appear to have diminished over the inter-meeting period. Growth of real GDP in 2008Q1 has been revised up to 0.9% (annual rate) from the advance estimate of 0.6%. Moreover, the estimated composition of Q1 growth has been revised in a manner more supportive of growth in 2008Q2—much less inventory investment offset by a considerably larger growth contribution from net exports. Incoming data on aggregate expenditures during the second quarter have tended to surprise to the upside. Expectations for growth in 2008Q2--which we thought would be negative as recently as late April--have moved into the 1% to 2% range.

A key factor in the upgrading of second quarter growth prospects has been a steady movement upward in estimates of growth of real personal consumption expenditures (PCE) for 2008Q2. This has been surprising given the significant headwinds faced by the US consumer. The labor market has deteriorated, energy and food prices have increased sharply, home prices are falling in several parts of the country, and credit has become more costly and more difficult to obtain. Sales of light-weight vehicles plunged to the low 14 million unit pace in both April and May. Nonetheless, growth of non-auto retail sales in May was surprisingly strong, while the April level was revised upward substantially.

A likely source of this recent strength of retails sales is the rebate checks being distributed by the US Department of the Treasury. Through the end of May about $50 billion, roughly half the ultimate total, has been sent out. It is impossible to say with any precision how much this injection of disposable income is contributing to the recent strength of retail sales. To do so requires knowing what those sales would have been absent the rebate checks. However, under the assumption that retail sales would have been unchanged in 2008Q2 from the first quarter, then the level suggests that consumers are spending about 12% of the rebate checks in the month received.

Another contributor to the improved near term outlook for growth is business investment in equipment and software and nonresidential structures, both of which look somewhat firmer now than just a few months ago. In addition, the rate of growth of exports is well maintained while nonpetroleum imports continue to decline on a year-over-year basis.

Housing sales and construction continue to exhibit tentative signs of stabilization. However, the rate of decline of national home price indices has increased, while year-over-year price declines have spread to more states. Anecdotal reports suggest that a high and rising share of transactions are properties that have been taken back by lenders through foreclosure. In many cases these lenders are discounting prices aggressively. What is encouraging is that, based on anecdotal reports, homes sales in some markets that have experienced steep price declines are up on a year-over-year basis. This suggests that prospective buyers find the current lower prices attractive and are not absolutely convinced that they will fall much further.

Unlike the Greenbook, we continue to expect that growth in the second half of 2008 will be stronger than in the first half. The rebate checks will continue to provide a boost to consumer spending in 2008Q3 while the drag from residential investment subsides, export growth remains strong, and the pace of inventory accumulation firms. However, we have reduced projected second half growth somewhat in light of the further sharp rise of energy prices. [Exhibits B-1, B-2, and B-3].

Our projected growth for 2009 is unchanged at a slightly above potential 3% with a gradual edging down of the unemployment rate. The primary basis for this projection is the assumption that monetary policy will remain accommodative while financial market functioning continues to normalize and consumer and business confidence are restored. While energy prices are expected to remain high, they are not expected to rise any further, removing a substantial drag on the growth of real disposable income. The protracted correction in housing production and sales is expected to be over, with residential investment becoming essentially neutral for overall growth. Households are likely to move their saving rate upward, but we do not anticipate a steep rise of the personal saving rate as is foreseen by strong adherents to wealth effects. Lastly, the growth contribution from net exports is expected to decline but remain positive.

3.2 Alternative Scenarios and Risks

The changes in our risk assessment since the last Blackbook have been considerable [Exhibit C-1]. The probability of ever entering the *Credit Crunch* scenario now stands at roughly 30%, compared to about 45% in April; for much of this year, this probability had been close to 50%. The reduction in the probability of the *Credit Crunch* reflects the relative resilience of real activity in 2008Q1 and 2008Q2 (at least in the data available at this point), some improvement in the function of the financial system compared to the beginning of the year, and no additional large shocks from the financial sector. Nevertheless, financial markets remain fragile with still-evident stresses and the possibility of an adverse feedback loop, with financial market turmoil having a substantial negative effect on real growth, remains relevant; consequently, the *Credit Crunch* scenario continues to be the most likely scenario.

The probabilities of the *Productivity Boom* and the *Effects of Overheating* alternative scenarios have increased in the inter-meeting period. The robust productivity data for 2008Q1 and the increase in the probability of the high-trend-productivity-growth state in the Kahn-Rich model led us to raise the weight on the *Productivity Boom*. The generally sluggish consumption data for 2008 are consistent with the hypothesis that consumption was "too high" earlier in the decade because of overly accommodative policy, and thus contributed to raising the weight on the *Effects of Overheating*. In addition, there is more evidence that monetary policy outside the U.S. earlier in the decade (especially in many emerging markets) was more accommodative than assessed at the time, suggesting that U.S. policy earlier in the decade may have been more accommodative than previously thought. This possibility also contributed to the higher weight on the *Effects of Overheating*. Finally, the rise in petroleum prices and some other commodity prices reflects, at least in part, sustained demand outside of the U.S.; therefore, we have also increased the likelihood of the *Global High Demand* scenario (not pictured).

Not only have the probabilities attached to scenarios changed, but so have the inflation and output growth paths associated with each scenario [Exhibit C-2]. For example, in the April Blackbook the trough in the four-quarter change in real GDP under the *Credit Crunch* scenario was -1%, compared to 0% now. The restraining impact of this scenario on core PCE inflation has also declined somewhat. These changes reflect some reduction in the extent and probability of extreme downside risks in the *Credit Crunch* scenario as well as the increase in the central scenario forecast for output.

The effect of these changes on the FRBNY forecast distribution is twofold [Exhibit C-3]. In terms of real GDP growth, the negative skewness in our forecast is less pronounced than in March or April: the trough of the 5^{th} percentile has increased from -4% to roughly -2%. The less pessimistic assessment of growth prospects for the real economy is reflected in a diminished probability of recession, which currently stands just below 50%, down from 80% in April, as well as a greater probability that a recession would be mild. In terms of core PCE inflation, the downside risks also have receded as a consequence of the lower weight on the *Credit Crunch* scenario. Thus, we now have the expected inflation rate modestly above the central scenario point forecast. The upside risks to inflation as measured by the 95^{th} percentile are slightly lower in the near term. This outcome is the consequence of two factors: first, the higher weights on the *Productivity Boom* and the *Effects of Overheating* scenario counterbalance each other. Second, the core PCE forecast associated with the *Effects of Overheating* scenario, while higher than the central scenario projection, is not particularly worrisome as we continue to expect it to remain below 2.5 %. In contrast, the 95^{th} percentile has changed little at medium-term horizons, reflecting the impact of the increased weight on the *Global High Demand* scenario. Overall, these changes imply that the probability that core inflation will remain below 2% decreased slightly since April.

The evolution of the forecasts relative to a year ago shows the substantial change in real GDP forecasts, both in terms of the central scenario and expected value [Exhibit C-4]. The probability that we placed on observing the currently projected levels of GDP growth forecast was quite small one year ago. In contrast, the change in core PCE inflation forecasts relative to a year ago is very small.

4. Forecast Comparison

4.1 Greenbook Comparison

As in April, the comparison between our central forecast and the Greenbook reveals some differences in the outlook for real activity. In addition, there are more substantial differences in the outlook for inflation – both core and total. Despite having lowered its assessment of 2008Q2 core PCE inflation from 2.3% (annual rate) to 2%, the Board staff views this change as largely transitory, and has increased its forecast for core PCE inflation for every quarter through 2009Q4, reflecting their view of the feed-through of energy price shocks into core inflation. In their outlook, core PCE inflation increases to 2.6% (annual rate) in 2008Q4, before declining to 2.1% in 2009Q4. In contrast, we made only small adjustments to our central forecast for core PCE inflation relative to the previous Blackbook, and we now expect it to fall from 2.0% (annual rate) in 2008Q3 to 1.7% in 2009Q4. Taken together, the differences imply a 40 bps gap between our central forecast for core PCE inflation in 2009 (1.8%) and the Board staff's (2.2%). This is similar to the difference between our forecast and the Greenbook forecast of total PCE inflation in 2009, which are essentially the same as those for core PCE inflation. In contrast, for 2008H2 the Greenbook forecasts significantly higher total PCE inflation due to large additional energy price increases. This results in a full percentage point difference between their forecast for total PCE inflation in 2008 (4.2%) and our central forecast (3.2%).

With respect to real activity, the Board staff continues to forecast real GDP growth to be lower than in our central forecast. Relative to April, the Greenbook forecasts for real GDP growth were lowered for every quarter from 2008Q3 to 2009Q4 – the reductions range from 0.2 percentage points to 0.5. While we also lowered our central forecast for real GDP growth in 2008H2, the adjustments we made to the path of real GDP during 2009 left the forecast for growth for that year unchanged at 3%, which is now 0.6 percentage points higher than the Greenbook forecast.

Conditioning assumptions. Under the Board staff's assumptions for the Greenbook, the FFR will be kept at 2% through the end of 2008, a little longer than under our assumptions. However, the assumed paths for the FFR during 2009 then differ in several ways. The Board staff assumes that the FFR will increase to 2.75% in the first half of 2009, and then remain constant during the second half of the year. In contrast, we assume that the FFR will increase steadily during the course of 2009 to reach 3.75% in 2009Q4. Recently, market-implied policy expectations have been similar to our recommendation, although market participants expect policy renormalization process to begin as early as the August FOMC, somewhat earlier than our assumption.

Importantly, the Board staff has increased the growth of potential GDP from that in the April Greenbook by 0.2 percentage point per year. Their new estimate – of 2.5% potential annual growth – is justified on the basis of recent data suggesting that the trends is labor force participation and labor productivity are above their previous assumptions – and is now closer to the assumptions that underlie our central forecast.

In terms of fiscal policy and the fiscal stimulus package, the assumptions underlying both the Greenbook and our central forecast are essentially unchanged since April. The effects of the stimulus package, which in both cases is assumed to exert its largest impact on PCE around 2008Q3, now appear less visible in the current forecasts for consumption growth in 2008Q3. This is mostly due to the reassessment of the level of consumption expenditures in 2008H1.

Regarding asset prices and financial market conditions, the Board staff assumes yet again a slightly faster pace of decline in house prices than in the previous Greenbook. House prices are now assumed to decline 7% this year and an additional 5% in 2009. Combined with revisions to historical data, this implies a level of house prices at the end of 2009 that is around 2% below that assumed in the April Greenbook. Equity prices are still assumed to increase at a 7% annual rate through year end, and to rise by 12% over 2009 (versus 11.5% in the April Greenbook). Interest rate spreads for fixed-rate mortgages and corporate bonds are assumed to narrow through the end of 2009, in response to the improvement in economic activity. Finally, credit conditions for households and businesses are expected to improve over the forecast period.

The Board staff projects slightly higher foreign GDP growth in 2008 than we do. Our forecast is for foreign growth to slow from 3.3% (Q4/Q4) in 2007 to 2.3% in 2008 (unchanged since April), while the Board has 2.4% growth for 2008 using our GDP weights. In April, the Board projected 2008 growth at 2.1% with weaker outlooks for Japan, Canada, and China. There are now only modest differences between the two forecasts, with the Board expecting somewhat faster growth for Japan, Canada, and Korea and slower growth for the United Kingdom.

Inflation. The Board staff revised down their assessment of total and core PCE inflation in 2008H1. In contrast, the Greenbook forecasts for both total and core PCE inflation in 2008Q3 and 2008Q4 were raised. Core PCE inflation is forecast to reach 2.6% (annual rate) in 2008Q4, up from 2.5% in 2008Q3. At the same time, further large increases in energy prices are forecast to bring total PCE inflation to 5.9% (annual rate) in 2008Q3 and 3.1% in 2008Q4. Relative to the April Greenbook, this represents an increase of 2.7 and 0.9 percentage points, respectively. Over the course of 2009, core PCE inflation is forecast to fall slowly, reaching 2.1% (annual rate) in 2009Q4. In parallel, total PCE inflation is forecast to fall faster during the course of 2009, and to end the year at a similar level as core inflation (2% annual rate in 2009Q4). Our central forecasts for core PCE inflation are lower than those in the Greenbook, and we also expect a smaller gap between total and core measures. For 2009, the difference between our central forecast for core PCE inflation and the Board staff's is almost half a percentage point. The higher Greenbook forecast for core inflation is predicated on a higher pass-through from energy prices as well as an uptick in inflation expectations.

Real activity. The Board staff's assessment of real GDP growth in 2008Q1 and 2008Q2 was revised up from, respectively, 0.4% (annual rate) to 1.1%, and from -1.4% to 1.7%. The change for 2008Q1 is comparable to the one we made to our central forecast. Our change in the assessment of real GDP growth in 2008Q2 was smaller – from growth of -

1.2% (annual rate) in the previous Blackbook, to the current forecast of 1.2%. In contrast, we made more substantial reductions in our forecasts of real GDP growth in 2008Q3 and 2008Q4 than the Board staff. In particular, we trimmed our forecasts of real GDP growth in 2008Q3 by 0.8 percentage point to 2.6% (annual rate), and in 2008Q4 by 0.7 percentage point to 1.7%. The Greenbook forecasts for real GDP growth in 2008Q3 and 2008Q4 were reduced by, respectively, 0.3 and 0.2 percentage points, to 0.9% (annual rate) and 0.5%. For 2009, the Board staff also trimmed their forecast for real GDP growth in every quarter by 0.3 - 0.5 percentage points. In contrast, the changes we made to the forecast path of real GDP for 2009 left the growth rate unchanged at 3%. Thus, although the changes in forecasts for 2008H2 brought our assessment and the Board staff's closer, our central forecast for real GDP growth in 2009 is now 0.6 percentage points higher than the Greenbook's – up from a difference of 0.2 percentage points in April. The changes in the Greenbook forecast for GDP growth result from a combination of higher oil prices and tighter monetary policy, along with a weaker rebound from a milder slowdown, and are expected to more than offset the effects of higher potential GDP growth.

In terms of the labor market, the Board staff increased the assumed labor force participation rate during the forecast period, bringing it closer to the assumption that underlies our central forecast. Nevertheless, the Greenbook forecast for the unemployment rate remains similar to our central forecast due to the anticipation of a significantly smaller drop in nonfarm payroll employment in 2008.

The FRBNY forecast has net exports adding 0.8 percentage point to GDP growth in 2008, while the Board has a 1.1 percentage points contribution. The difference is almost entirely due to the forecasts for imports, particularly in Q2. The Board has imports falling at a 7 percent annual rate, while we have imports unchanged. The sources of the disparity are the Board's weaker domestic demand assumption and the Board's much steeper projected fall in oil import volumes. The April data had a rebound in imports, so the Board's forecast requires a collapse in the demand for imported goods in May and June. The FRBNY and Board have similar forecast for the second half of 2008. In 2009, the Board has somewhat more of a contribution to growth based on an assumed weaker path for domestic demand.

Uncertainty around forecasts. Table 1 reports 70% probability intervals around the forecasts for real GDP growth and core PCE inflation, with April values in parentheses.

In terms of uncertainty around the forecasts for real GDP growth in 2008, the changes in the Greenbook relative to April are qualitatively similar to our changes. Moreover, in both cases there was a substantial reduction of extreme downside risk, as measured by the lower end of the 70% probability intervals. In addition, the width of the intervals around our forecast and the Greenbook forecast shrank relative to April, indicating less uncertainty. For 2009, however, note that while we reduced the uncertainty around the forecast for real GDP growth, uncertainty increased around the Greenbook forecast. In the case of our forecast, we raised the lower limit of the interval with no corresponding change to the upper limit. For the Greenbook, both interval limits were lowered, but more so in the case of the lower limit. As a result, the uncertainty intervals surrounding our forecast and the Greenbook forecast are now more similar than they were in April. However, our overall uncertainty remains higher than in the Greenbook.

In terms of uncertainty around the forecasts for core PCE inflation in 2008, we now perceive lower overall uncertainty, essentially due to reduced downside risks. In contrast, the Board staff reduced uncertainty more symmetrically. For 2009, however, there was essentially no change in our assessment of uncertainty around our central forecast, while the Board staff actually reduced uncertainty slightly around their higher forecast for core PCE inflation.

To assess the importance of the differences between our outlook and the Greenbook forecasts, we calculate the percentile of the Greenbook forecasts for core PCE inflation and real GDP growth in our forecast distribution. The results are shown in Table 2, with the April values in parentheses.

Relative to April, the noticeable changes are as follows. The Greenbook forecast for real GDP growth in 2009 now roughly equals the median of our distribution, rather than the 59th percentile as in the April Blackbook. This reflects both the Board staff's lower forecast, and the reduction in downside risks in our distribution. In contrast, the Greenbook forecast for core PCE inflation in 2009 and 2010 moved up significantly in our distributions, and now matches, respectively, the 70th and 58th percentiles, compared with the 62nd and 47th percentiles in the April Blackbook. This essentially reflects the increase in the Board staff's forecasts for core inflation. For 2008, the Board staff's projections of real GDP growth and core PCE inflation continue to match, roughly, our median and 70th percentile, respectively, as in the April Blackbook.

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

	Core PCE Inflation		Real GDP Growth	
	FRBNY	*Board*	*FRBNY*	*Board*
2008	1.5-2.5 (1.1-2.6)	1.9-2.7 (1.8-2.8)	-0.6-2.6 (-1.8-2.1)	-0.1-2.2 (-1.2-2.6)
2009	1.1-2.5 (1.0-2.5)	1.5-3.0 (1.1-2.8)	0.6-4.3 (0.3-4.3)	0.9-4.0 (1.4-4.2)
2010	1.3-2.5 (1.2-2.5)	N/A (N/A)	0.4-4.1 (0.4-4.0)	N/A (N/A)

Table 2: Percentile of Greenbook Forecast in FRBNY Forecast Distribution

	Core PCE Inflation	Real GDP Growth
2008	69 (70)	50 (49)
2009	70 (62)	49 (59)
2010	58 (47)	68 (69)

Alternative Greenbook forecasting scenarios. The Greenbook presents six alternative scenarios. The first scenario explores upside risks to the growth outlook. The next two scenarios explore downside risks, one in the form of a relatively standard recession and the other associated with a longer period of sub-par growth. Scenarios four and five consider the case of higher inflation resulting from higher inflation expectations, and then alternatively through a combination of further commodity price increases and higher pass-through. Finally, the last scenario considers the effects of weaker real wage demands on the part of workers.

In the Upside risk scenario, the auxiliary assumptions used to capture the effects of the financial/credit crisis are removed from the baseline scenario. Starting in 2008H2, consumption and investment depart firmly from the baseline scenario, and real GDP grows at around 2.7-2.8% through 2009. Core inflation is 10-20 basis points higher than in the Board staff's forecast, and only falls to 2% by 2011-12. The FFR increases to 4.2% in 2009, and oscillates between that level and 3.8% until 2011-12.

The Recession scenario pictures a relatively standard recession: the recent surge in oil prices, further declines in consumer sentiment, and problems in housing and financial markets trigger a recession starting in 2008H2. Unemployment mimics the pattern of the previous two recessions, reaching 6.25% in mid-2009. Real GDP falls by 0.8% (annual rate) in 2008H2, and is 1.25% below the level in the baseline scenario in 2009Q4. Policy responds by cutting the FFR to less than 1.5% immediately, and then keeping this rate through the end of 2009. With a long lag, core inflation falls and reaches 1.8% in 2010, and then 1.6% in 2011-12. In contrast, the Delayed credit recovery scenario contemplates a longer period of sub-par growth. The housing market continues to deteriorate and credit conditions remain restrictive for longer than that in the baseline case. Real GDP barely grows in 2008H2, and continues to grow below potential in 2009. The rebound in 2010-2012 is, accordingly, milder. Inflation is little changed relative to the baseline, and policy responds by keeping the FFR low (below 2.5%) through the end of 2010.

The Higher inflation expectations scenario assumes that the persistently high headline inflation numbers lead to higher inflation expectations, which increase 75 bps by year end. Price- and wage-setting behavior change accordingly. Core inflation goes up to 2.6% in 2009, and growth is little changed from the baseline scenario. Policy responds gradually, bringing the FFR to only 4% by 2010, and 4.6% beyond that. Core inflation remains above 2.4% through 2010, and falls only to 2.2% in 2011-12. Under the Ongoing commodity price pressures scenario, additional increases in energy and food prices raise inflation above 5.5% in 2008H2, and core inflation to about 2.5% in 2009. The direct effect from commodity prices is assumed to fade after that year. Relative to the previous inflationary scenario, growth is slightly lower in 2008H2 and 2009, but equal or higher beyond that. Inflation matches the previous scenario until 2010, and is 0.4 percentage point lower in 2011-12. The FFR increases less in 2009, but reaches 3.9% in 2010. Beyond that, however, it only increases to 4.1%

Finally, the Less worker bargaining power scenario results in firms finding room to manage the effects of higher costs of crude oil and other imported commodities by containing labor compensation. Wage and price growth falls relative to the baseline case, resulting in lower real wages. This reduces GDP growth slightly in the near term, relative to the baseline forecast. Core inflation, however, falls more substantially to 2% in 2009, and 1.5-1.6% in 2010-12. Along with the benign inflation outcomes, the FFR remains below the baseline values through 2010.

4.2 Comparison with Private Forecasters[1]

In contrast with April, our real GDP growth forecasts are currently above the range of private forecasts for 2008Q3 and 2008 (Q4/Q4) as a whole [Exhibit B-8]. For 2009 (Q4/Q4), we remain at the high end of the private forecasts. For core inflation, our forecast basically coincides with private forecasters' projections for 2008Q3 and 2008 (Q4/Q4). However, we project somewhat lower core PCE inflation for 2009, as private

[1] Release dates of the private forecasts discussed in this section are in parentheses: Blue Chip consensus (6/10), SPF (5/13), and Macro Advisors (6/17).

forecasters' projections are more similar to the Greenbook. For total CPI inflation, private forecasters have raised their projections for 2008Q3 and 2008 (Q4/Q4) in light of rising energy and commodity prices, and we are now in the middle of the range for those periods. For 2009 (Q4/Q4), we have a lower estimate than private forecasters, although the largest deviation from our forecast is only 30 basis points. The range of estimates for core CPI inflation in 2009 is similar to that for total CPI inflation.

Real GDP Growth. While we increased our forecast for real GDP growth in 2008 (Q4/Q4) from that in the April Blackbook, all of the private forecasts were revised down. As a result, we currently have the highest forecast for growth in 2008 at 1.6%, and the lowest forecast continues to be Blue Chip's at 1.0%. It is worth noting that the PSI model has the lowest real GDP growth forecasts for 2008Q2 and Q3, which stems from the surveys incorporated into the model that have historically low real GDP estimates. For 2009, our forecast of 3.0% (the same as the projection in the April Blackbook) is only lower than Macro Advisers' (3.4%, up from 3.2% in April). The lowest forecast for growth in 2009 is now by the SPF at 2.2%, down from 2.8% in April; note, however, that differences in release dates may play a role in the deviation of the SPF's projection from other forecasts. Qualitatively, in terms of the pattern of slowdown in 2008 and rebound in 2009, our forecast seems to be similar to Macro Advisers'. In contrast, SPF and Blue Chip seem to involve a longer period of lower growth into early 2009, and/or a milder rebound in the later quarters of next year.

Core PCE Inflation. The differences between our forecasts for core PCE inflation in 2008Q2, 2008Q3 and 2008 (Q4/Q4) and those of SPF are relatively small, with a maximum gap of 20 basis points (annual rate) for 2008Q2. For 2009, however, the difference increases to 40 basis points, as our forecast declines to 1.8%, while SPF's remains equal to that of 2008 at 2.1%. The changes relative to April were also different: we decreased our forecast for 2009 by 10 basis points, while SPF increased their projection by the same amount. Both the SPF forecast for 2009 and the direction of its change essentially match those of the Greenbook.

CPI Inflation. In terms of total CPI inflation, there were substantial upward revisions in all of the 2008Q3 and 2008 (Q4/Q4) forecasts, reflecting recent developments in food and energy markets. The largest changes were from Macro Advisers, who now forecast significantly higher total CPI inflation for both 2008Q3 (5.4%, annual rate) and 2008 as a whole (4.2%). We now have the second highest forecasts, at 3.6% (annual rate) for both of these periods. The pattern of Macro Advisers' forecasts seem to match those of the Board staff's for total PCE inflation, and as such are likely predicated on the assumption of further increases in energy and commodity prices. For 2009 there were only minor changes to forecasts; we currently have the lowest figure (2.2%), whereas Blue Chip has the highest forecast at 2.5%.

Core CPI Inflation. In terms of core CPI inflation, there have been large decreases in the forecasts for 2008Q2 in response to the data releases for the last two months (the exception is SPF, due to its early survey date). Macro Advisers also adjusted their 2008Q3 and 2008 (Q4/Q4) forecasts significantly, reducing their estimates by 60 basis points (annual rate) and 40 basis points, respectively. As a result, forecasts for 2008 as a whole are now more aligned, with ours being the lowest at 2.1% and Macro Advisers' being the highest at 2.4%. For 2009, both the level and the ordering of forecasts are essentially the same as for 2008. Our forecast is the lowest at 2%, and Macro Advisers' is the highest at 2.4%.

5. Robustness of Policy Recommendation

5.1 Sensitivity to Alternative Scenarios and Policy Rules

The bottom line of this section is that there is a notable discrepancy between the FFR path implied by our rules, including the *Baseline*, and our policy recommendation, especially in the medium term. The FFR path implied by all of the policy rules is a gradual increase, and implies a FFR still below 4% by the end of 2010. According to our policy recommendation, the nominal FFR should increase relatively rapidly starting in 2008Q4 and rise to 4.25% (the midpoint of our assumed range for the neutral policy rate) by 2010Q2. In the very short run, however, the path implied by most rules involves a 25 bps increase in the FFR, and is therefore somewhat more aggressive than our policy recommendation. All of the paths in this analysis assume a FFR of 2% in 2008Q2 (i.e., the terminal FFR in the quarter rather than its average).

The very near-term difference between the policy rules and our recommendation occurs because the rules do not account directly for financial conditions. Despite some recent improvement, we still see financial conditions as stressed; accordingly, with inflation expectations and core inflation arguably contained, we believe that the FFR should be maintained at current levels to ensure against a recurrence of financial instability and the possible establishment of an adverse feedback loop. Over the medium term, we recommend a relatively fast renormalization process to re-affirm the FOMC price stability goal and to attempt to prevent imbalances resulting from holding the real FFR at low levels, neither of which is explicitly incorporated in the various rules.

The *Baseline* rule under the central scenario implies that the nominal FFR should increase from 2 to 2.25% by the end of 2008Q3, and rise gradually thereafter, reaching 3.5% by the end of 2010 [Exhibit D-1]. This FFR path is higher than it was in April, when the projected nominal FFR was still below 3% by the end of 2010. The *Baseline* rule paths under most of the other scenarios are similar to that under the central scenario. Two exceptions are the *Credit Crunch* scenario, where the nominal FFR stays at 2% over the forecast horizon as a consequence of the weak output growth and lower inflation, and the *Loss of Credibility* scenario, where the rise in inflation leads to a more rapid increase in the FFR (3% by 2009Q1 and 4.5% by the beginning of 2010).

For the *Baseline* rule, the real FFR is expected to increase gradually from the current level of zero under most scenarios, consistent with some renormalization of policy rates. Under the central scenario the real FFR rises above 1% by mid-2009, while in April it was expected to stay below 1% all through the forecast horizon. The *Credit Crunch* and the *Effects of Overheating* scenarios are exceptions: Under both scenarios slow growth keeps the real rate at a low level over the entire forecast horizon; in the case of the *Effects of Overheating*, higher inflation also keeps the real FFR relatively low. Conversely, under the *Productivity Boom* scenario the real FFR increases rapidly, reaching 2.5% by the end of 2010.

Next, we discuss the FFR implied by the different policy rules under consideration (which remain the same as those of recent Blackbooks) under the expected value of the forecast distribution [Exhibit D-2]. In this exercise the parameters of the various rules are mostly unchanged from the April Blackbook, except for the *Opportunistic Disinflation* rule which has been made more aggressive to capture a policymaker response if inflation remains elevated, similar to the response suggested by some interpretations of recent FOMC commentary. Since the expected path for real GDP growth is below the central scenario forecast and is roughly the same for core PCE inflation, the expected nominal FFR path under the *Baseline* rule is below that computed using the central scenario. The expected FFR path still implies an increase of 25 bps by the end of 2008Q3 but it suggests a more moderate increase thereafter, with the FFR reaching 3% by the end of 2010. By and large, the path implied by all other rules is not dramatically different. The *Outcome-based* rule implies a nominal FFR at or below 2% until the end of the year as a consequence of the effect of past FFR cuts, but it has a similar medium-term prescription. The *Opportunistic Disinflation* rule implies a slightly more aggressive path, similar to the one obtained under the central scenario for the *Baseline* rule. The *Dove* rule implies a near flat nominal FFR all through the forecast horizon. Because all of these rules have a strong built-in gradualism, their prescribed increases in the FFR are more gradual than the fairly steep increase over the medium run implied by our policy recommendation.

Exhibit D-3 shows the predicted real and nominal FFR path for the *Opportunistic Disinflation*, *Dove*, and *Outcome Based* rules under the different scenarios. This exercise demonstrates that it is fairly difficult to obtain a nominal FFR path rising as aggressively as our recommended path. For the *Dove* rule no scenario justifies such a rapid rate hike. For the *Opportunistic Disinflation* rule the nominal and real FFR rises more quickly than in our recommendation only under the *Loss of Credibility* scenario; it rises more slowly otherwise. The *Outcome Based* rule is the only rule that comes close to the policy recommendation under the central scenario, and it actually prescribes more aggressive increases than our recommended path under both the *Loss of Credibility* and *Productivity Boom* scenarios.

Finally, we use the counterfactual experiment under DSGE-VAR to assess the current policy stance. This counterfactual experiment amounts to computing the FFR implied by an estimated policy rule (using post-1987 data) after removing deviations from said rule for the previous four quarters. We find that under the central scenario, the counterfactual path is almost 1.5 percentage points above our policy recommendation. This figure is twice as high as in April, as a consequence of the fact that 2008Q1 real GDP growth was above our projection at the time and the 2008Q2 projection has been raised in response to incoming data. The figure indicates that if one looks at macroeconomic conditions only, e.g. output and inflation, policy currently appears very accommodative.

5.2 Comparison to Market Expectations

The FFR path priced into financial markets has moved up further since the April Blackbook, although the market's medium-term uncertainty around that path also has increased. The market path is now substantially similar to our policy recommendation, as the market response to economic and financial developments as well as to FOMC communications have led market participants to expect a relatively rapid renormalization of the FFR over the medium term. Any remaining discrepancies appear to be minor, reflecting differing views of short-term rate change expectations. In contrast (but similar to the situation in April), the average forecast for the FFR from the Primary Dealer Survey is below our policy recommendation and the market-implied path; this pattern may reflect survey participant views that the FOMC may follow a more cautious path similar to that expected at the beginning of the previous tightening cycle.

The FFR path implied by most of our rules, including the *Baseline*, agrees with the market-implied path over the near term (i.e., until the end of the year). However, the differences are more substantial thereafter. In particular, since all rules have a strong built-in gradualism, they all are at odds with the fairly steep increase over the medium term suggested by the market-implied path.

Exhibit D-4 and D-5 point out that up until the end of the year there is no large discrepancy between the nominal FFR path implied by the other alternative rules and the markets. In terms of expectations, the *Opportunistic Disinflation* rule is a bit more hawkish, while the *Dove* and *Outcome Based* rules are more dovish, but on average for the next three quarters (i.e., up to 2009Q1) the market-implied and rule-implied paths are very similar.

Some differences begin to emerge in 2009Q2. Indeed, Exhibit D-1 shows that the markets forecast the FFR to increase rapidly starting in the first half of 2009 and reaching the steady-state level of 4.25% by 2010Q2. The FFR path implied by all the rules rises more gradually, and is still below 4% by the end of 2010. Exhibit D-1 also shows that this medium-run discrepancy is partly due to the fact that the market-implied path for late 2009 and 2010 has increased substantially in the inter-meeting period. The rule-implied path also has increased, but by a lesser magnitude.

As noted earlier, market uncertainty about the FFR path has increased at intermediate horizons. Consequently, although the uncertainty around the market-implied path is less than that for our rules in 2008Q3, it is considerably greater in 2009Q1 and 2009Q2 (with the exception of the *Outcome Based* rule), as measured by inter-quartile ranges [Exhibit D-5]. The difference in these later quarters probably is an indication of greater uncertainty about the FOMC reaction function, possibly induced in part by recent FOMC communication.

6. Key Upcoming Issues

In this Blackbook, we recommend that the FOMC maintains the FFR (federal funds rate) at 2.00% at the June FOMC meeting and then signal that it expects to maintain the rate at that level until the latter part of 2008. At that time, with more solid growth and less fragility in financial markets, the policy renormalization process should begin. The suggested path is modestly higher than the path assumed in April, reflecting a reduction in extreme downside risk to our GDP forecast and a slight increase in upside risk to our inflation forecast. We expect a slowdown in 2008H1, followed by a rebound in 2008H2 and 2009. Nevertheless, we remain concerned that the economic slowdown may turn out to be more protracted and severe than is reflected in our central forecast, and therefore continue to attach a large weight to the *Credit Crunch* scenario. Since April, the persistent increases in energy and commodity prices suggest stronger global demand than we were expecting, leading us to increase the weight attached to the *Global High Demand* scenario.

The recommended policy path is roughly consistent with the market-implied expected FFR path: the market-expected FFR has experienced a significant upward shift since April. This partly reflects the reduction in extreme downside risk to real activity and the increase in upside risk to inflation. It also appears to reflect a response to FOMC communication about inflation risks and the commitment to price stability. In contrast, the Greenbook's FFR path is still lower than our path as well as the markets' paths, despite a significant upward adjustment in the Greenbook's FFR path since the April FOMC. The difference might reflect alternative views about the level of the neutral rate.

In recent months, the FOMC has communicated that the immediate risk for policy is a severe slowdown in real activity coming from the deterioration in financial and housing markets, and has acted accordingly. Since March, we have seen signs of slowly abating stresses in financial markets, while the economic data generally have been consistent with our outlook. This has led us to gradually reduce some of the extreme downside risk to economic activity. Furthermore, there have been persistent increases in energy and commodity prices, rising production costs as indicated in business surveys, along with a sharp increase in short-term inflation expectations. Taken together, these considerations have led us to increase the upside risk to inflation.

If there is continued evidence that risks to real activity subside and inflationary pressures persist, then we should be ready to raise the policy rate to avoid over-accommodation. Properly conveying this intent will be the key communication challenge for the Committee during the coming cycles. In light of this, we anticipate that, during the coming cycle, the monetary policy discussion will also focus on the following issues.

The recent shift in market expectations and policy uncertainty has placed greater communication burden on the FOMC statement. The increase can be viewed as beneficial in that it exerts some restraint on inflation expectations. However, it may also lead to an increase in real interest rates that could have adverse effects on a still sluggish economy. Moreover, if communications lead financial markets to expect an increase in the FFR that is not realized, long-term inflation expectations then might rise, further complicating future policy. In our view the FOMC should re-iterate its commitment to price stability without prompting expectations of FFR increases before the risks to real activity and financial stability have sufficiently subsided. To that end the FOMC should communicate that although downside real risks have decreased somewhat, the risks to real activity remain considerable.

The housing market has shown the first tentative signs sign of stabilization. However, there still exists a significant amount of downside risk. First, a significant increase in mortgage rates could further weaken demand for housing, leading to further reductions in home sales and house prices. Second, recent evidence of financial distress in commercial lending seems to indicate that instability in housing markets may spread to builders. As we consider the stabilization of the housing market as an important factor in the renormalization process, we should monitor carefully these developments during the next few months.

Labor market conditions remain soft but do not show further deterioration, with smaller declines in employment in the last two months. However, the unemployment rate rose sharply in May. Even taking into account seasonal factors, the job-finding rate and the job-opening-rate are consistent with job searchers having greater difficulty finding jobs. The success of new labor entrants in finding employment will be important to monitor the state of the labor market.

On the inflation front, core inflation appears to be moderating, partly because of weak aggregate demand and a slow rate of growth in labor costs. But some short-run survey inflation expectations are at exceptionally high levels and long-term expectations have ticked up. Despite some doubts about the reliability of such survey measures, if upcoming data prove to be consistent with the surveys, it could complicate policy decisions. In such a case, the FOMC would have to counteract rising expectations, even if economic growth was sluggish.

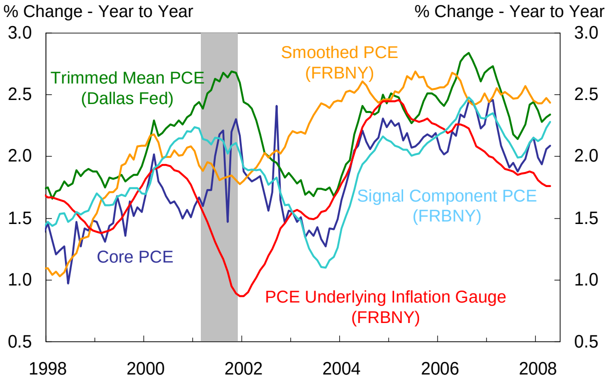
Another issue concerns core inflation and overall inflation. Overall inflation has experienced large and persistent increase in the past months, while core inflation and alternative measures of underlying inflation remain contained. An important element of our communication strategy is the focus on core inflation rather than overall inflation, as we view core inflation as a useful indicator of future movements in overall inflation. If we observe this gap closing by core rising toward overall inflation, then the FOMC will have to tighten policy.

Finally, there is the ongoing concern about the foreign exchange value of the dollar. Although it appreciated modestly on net during the inter-meeting period, it has depreciated significantly over the past five years. However, with many other central banks contemplating a tightening of policy, the dollar conceivably could come under further pressures of depreciation. Under this circumstance, there could be further U.S. inflationary pressures from import prices as well as commodity prices. These additional sources of inflationary pressures may prompt U.S. policy to be tighter than it would otherwise be.

A. Significant Developments

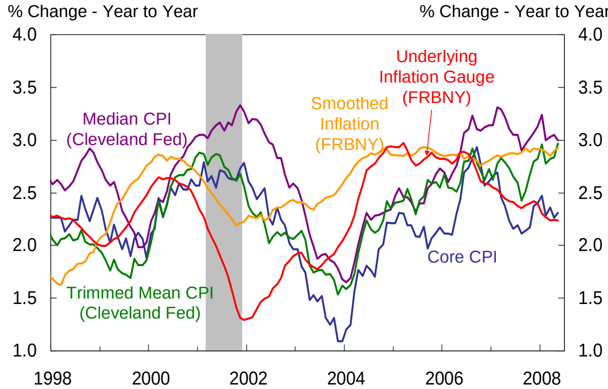
Exhibit A-1:
Measures of Trend Inflation

Alternative Measures of PCE Inflation



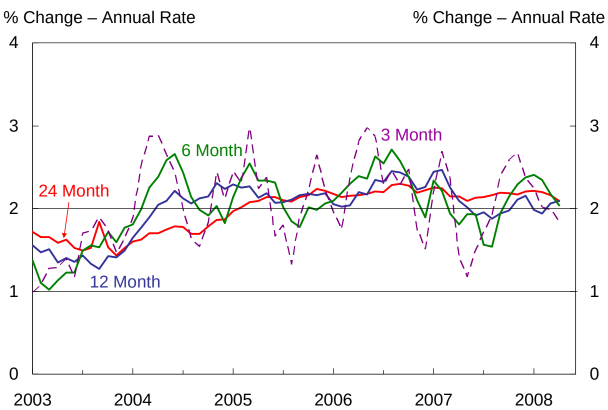
Source: Bureau of Economic Analysis, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Alternative Measures of CPI Inflation



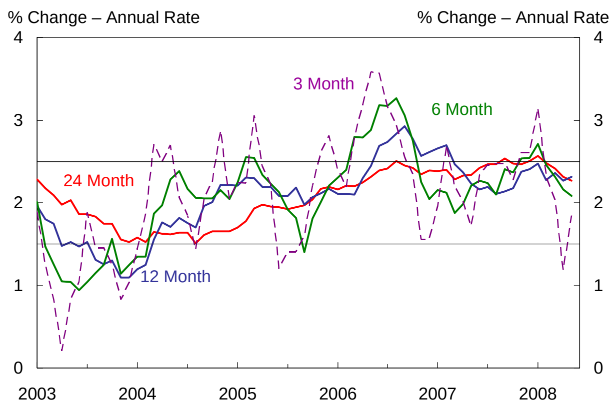
Source: Bureau of Labor Statistics, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Core PCE over Various Horizons



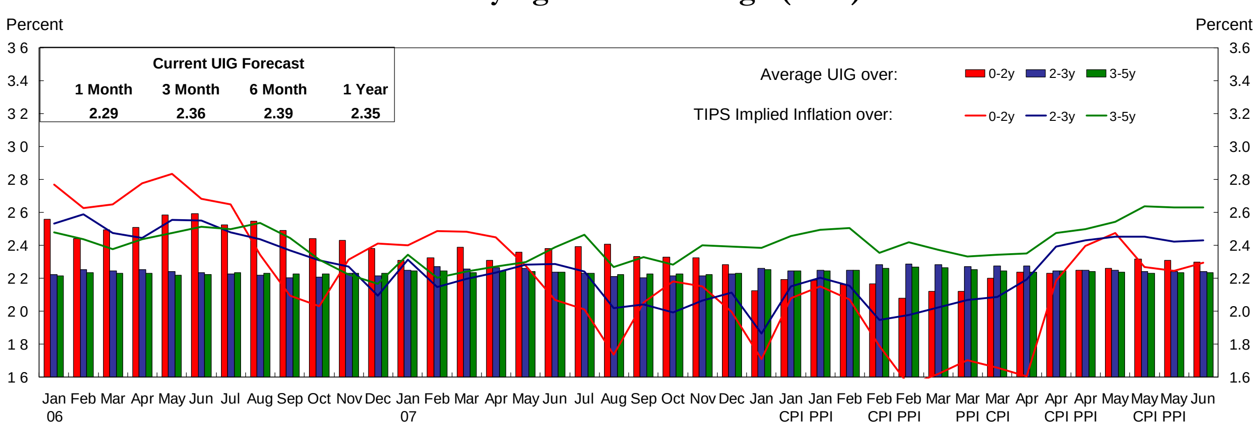
Source: Bureau of Economic Analysis

Core CPI over Various Horizons



Source: Bureau of Labor Statistics

Exhibit A-2:
Underlying Inflation Gauge (UIG)

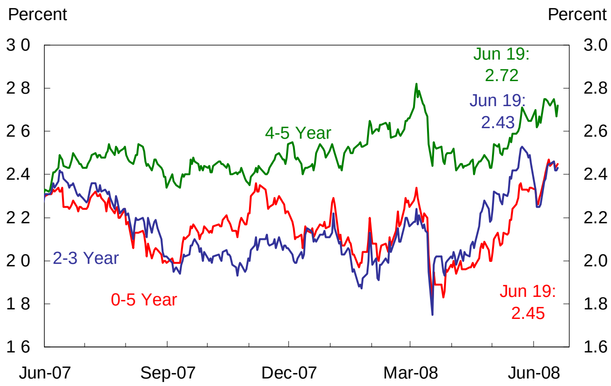


Source: MMS Function (FRBNY), Federal Reserve Board, and Swiss National Bank

A. Significant Developments

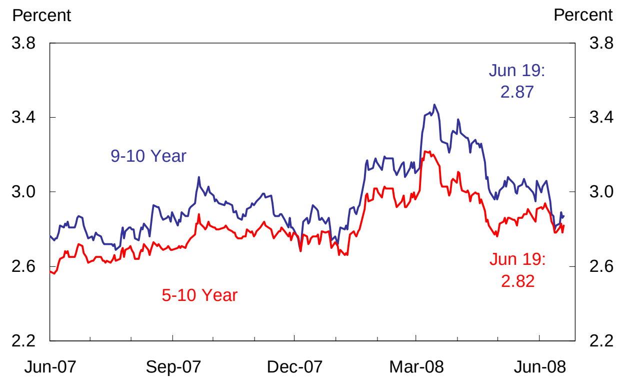
Exhibit A-3:
Implied Inflation Compensation

TIPS Implied Inflation Compensation: 0-5, 2-3, 4-5 Year Horizons



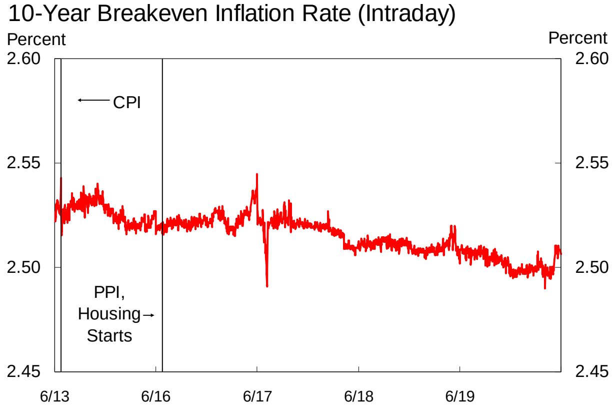
Source: Federal Reserve Board Note: Carry-adjusted

TIPS Implied Inflation Compensation: 5-10, 9-10 Year Horizons



Source: Federal Reserve Board Note: Carry-adjusted

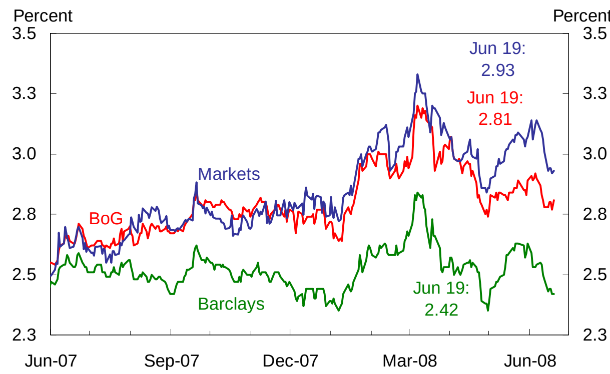
10-Year Breakeven Inflation Rate (Intraday)



Source: Bloomberg

Note: Calculated as difference between on-the-run 10-year Treasury and 10-year TIPS yield, 8 am to 4 pm.

Alternative Measures of 5-10 Year Implied Inflation Compensation



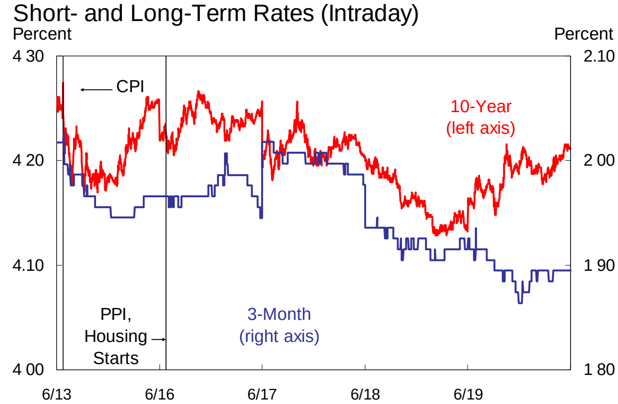
Source: Board of Governors, FRBNY, and Barclays calculations

A. Significant Developments

Exhibit A-4:
Treasury Yields

Short- and Long-Term Rates

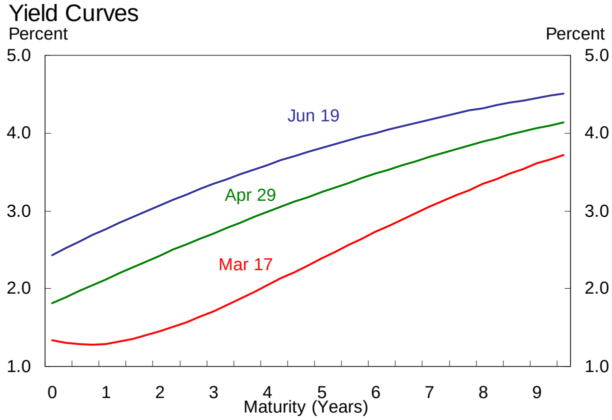
Short- and Long-Term Rates (Intraday)



Source: Bloomberg

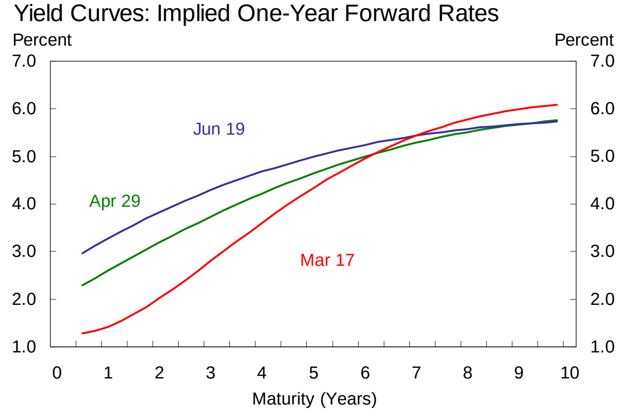
Note: On-the-run 3-month and 10-year yield, 8 am to 4 pm

Yield Curves



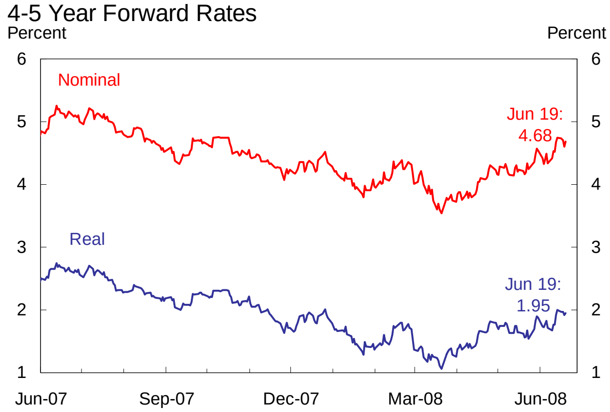
Source: Federal Reserve Board

Yield Curves: Implied One-Year Forward Rates



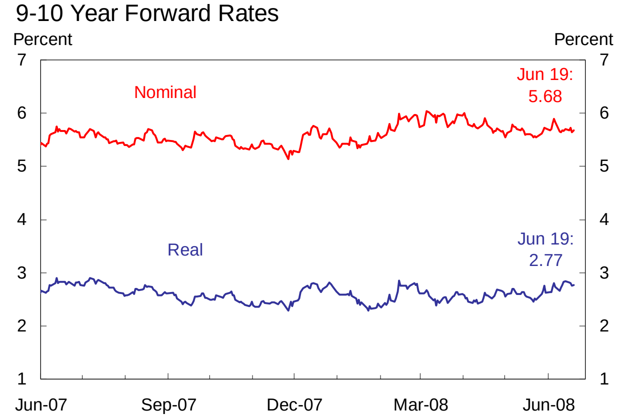
Source: Federal Reserve Board

4-5 Year Forward Rates



Source: Federal Reserve Board

9-10 Year Forward Rates

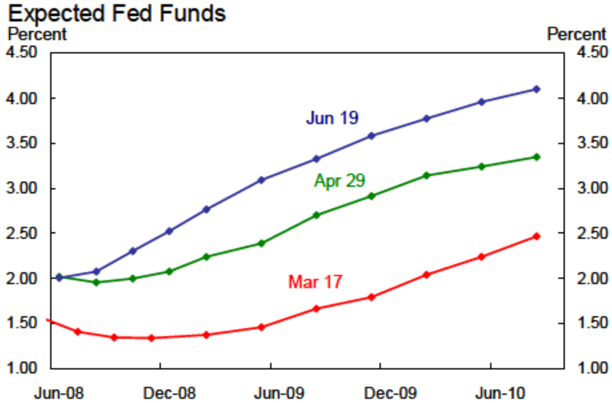


Source: Federal Reserve Board

A. Significant Developments

Exhibit A-5: Policy Expectations

Expected Fed Funds



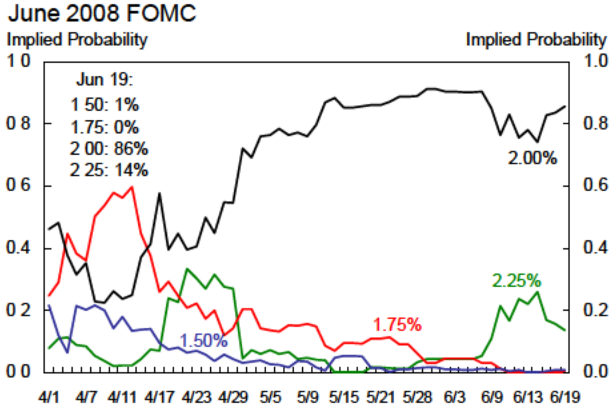
Source: Federal Reserve

Note: Estimated using fed funds and Eurodollar futures.

Implied Fed Funds and Eurodollar Rates (Intraday)

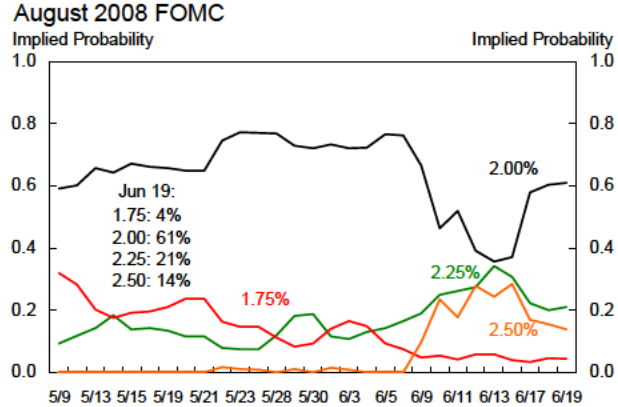
Source: Bloomberg

June 2008 FOMC



Source: Cleveland FRB Note: Estimated using options on fed funds futures.

August 2008 FOMC

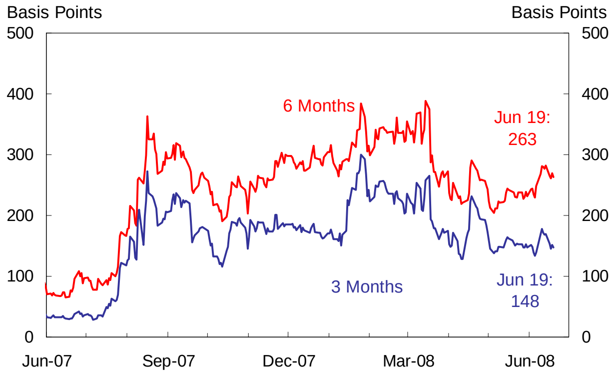


Source: Cleveland FRB Note: Estimated using options on fed funds futures.

A. Significant Developments

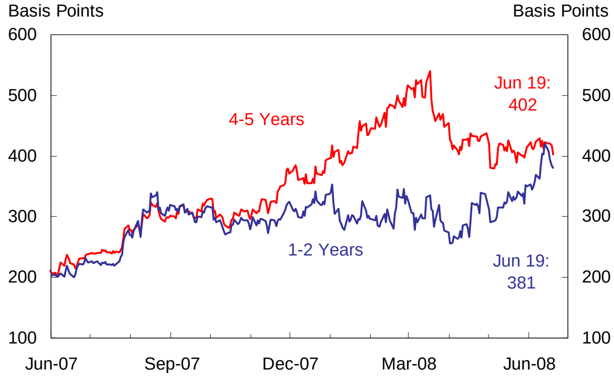
Exhibit A-6:
Policy Uncertainty

Short-Term Interest Rate Expectations
Width of 90% Confidence Interval Implied by Eurodollar Options



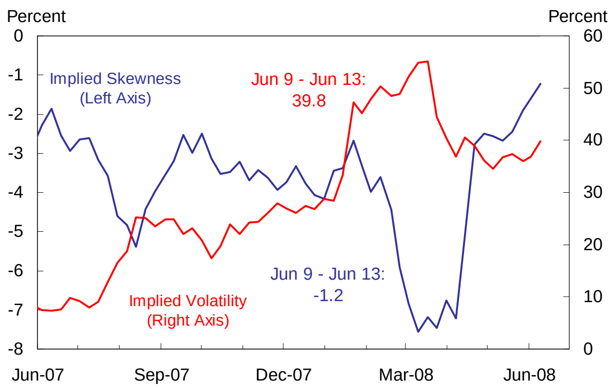
Source: Datastream, FRBNY calculations

Long-Term Interest Rate Expectations
Width of 90% Confidence Interval Implied by Swaptions



Source: Datastream, FRBNY calculations

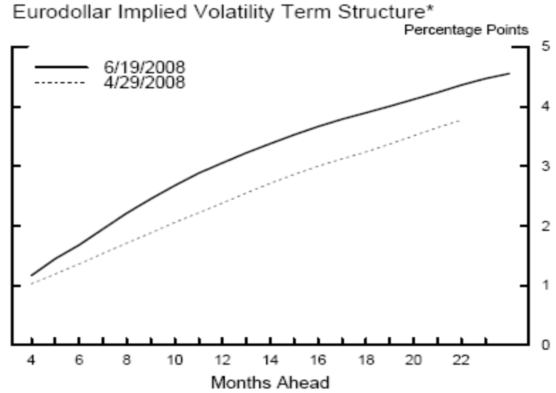
Implied Skewness and Volatility



Source: CME and FRBNY calculations

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

Eurodollar Implied Volatility Term Structure*

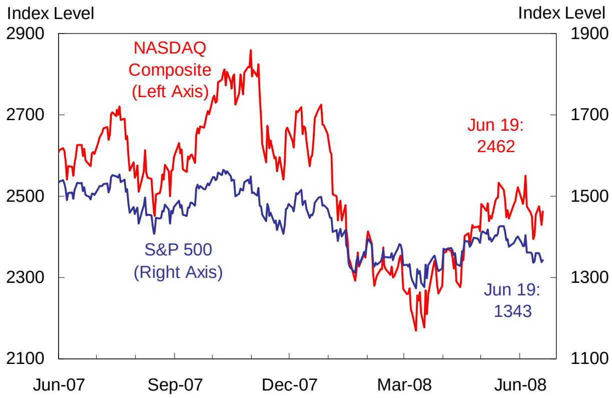


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

A. Significant Developments

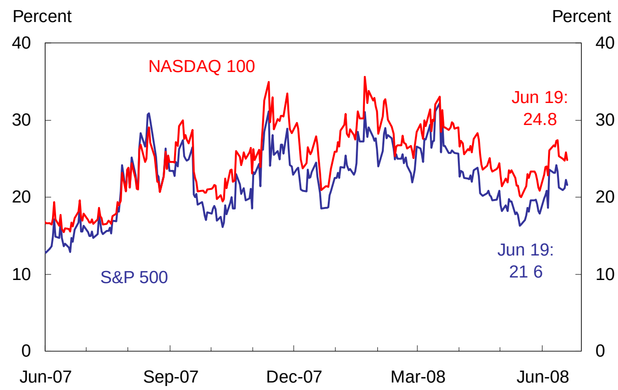
Exhibit A-7: Equity Markets and Corporate Credit Risk

Performance



Source: Bloomberg

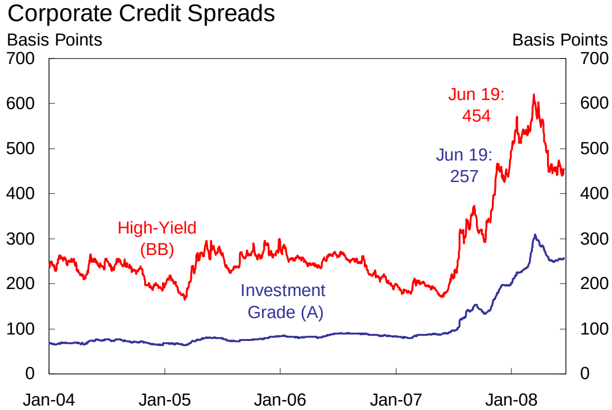
Implied Volatility: 1-Month



Source: CBOE

Note: Annualized

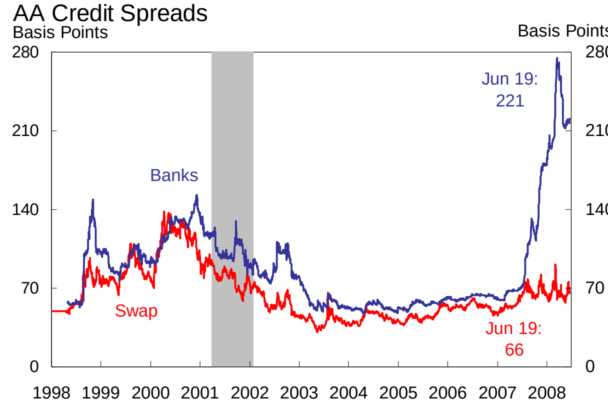
Corporate Credit Spreads



Source: Merrill Lynch

Note: Option-adjusted spreads

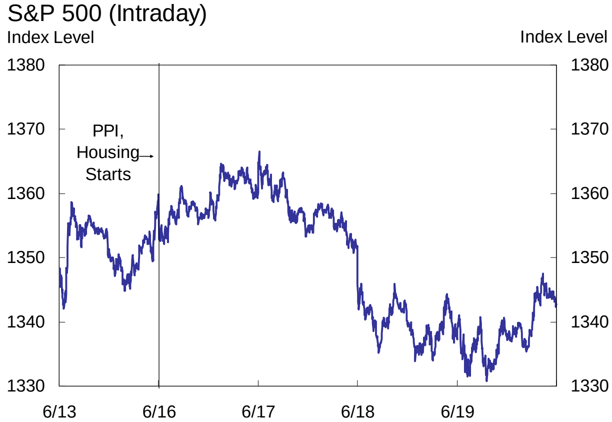
AA Credit Spreads



Note: Swap spread is 10-year swap rate minus 10-year Treasury yield and spread for banks is option-adjusted.

Source: Bloomberg & Merrill Lynch

S&P 500 (Intraday)



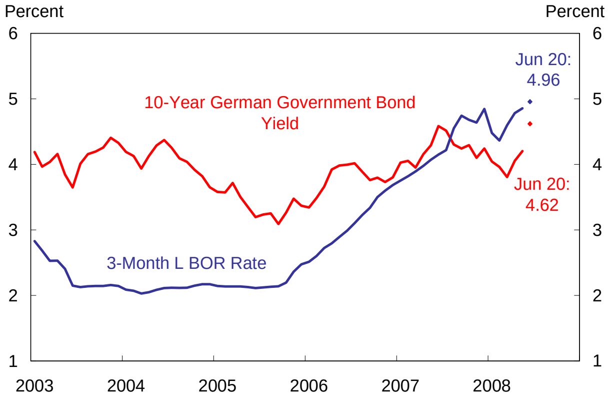
Source: Bloomberg

Note: Data between 9:30 am and 4:00 pm

A. Significant Developments

Exhibit A-8: Global Interest Rates and Equity Markets

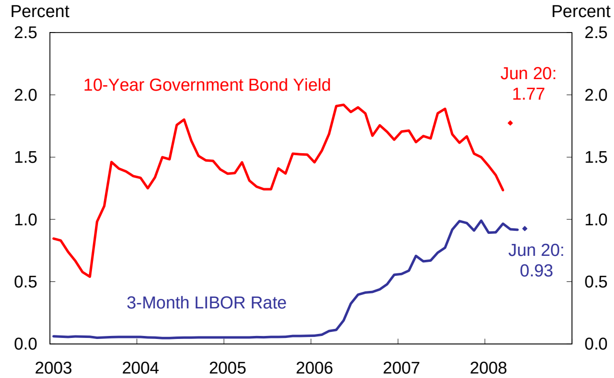
Euro Area Short- and Long-Term Interest Rates



Source: Bloomberg

Note: Data are monthly averages.

Japan Short- and Long-Term Interest Rates

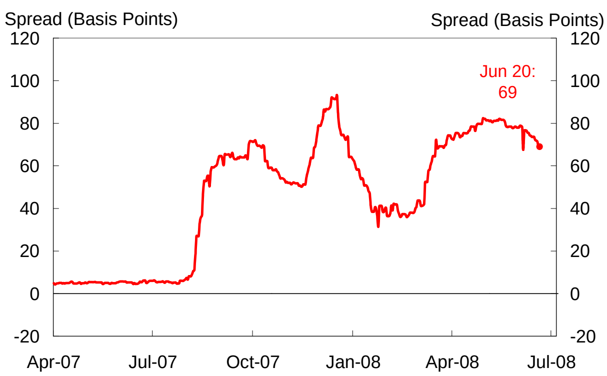


Source: Bloomberg and Federal Reserve Board

Note: Data are monthly averages.

Euro Area

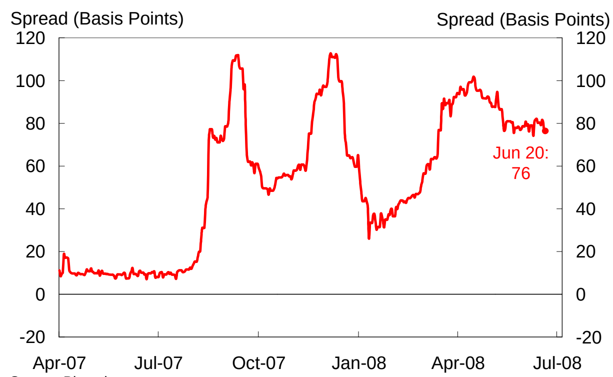
LIBOR Rate - OIS Swap Rate (3-month)



Source: Bloomberg

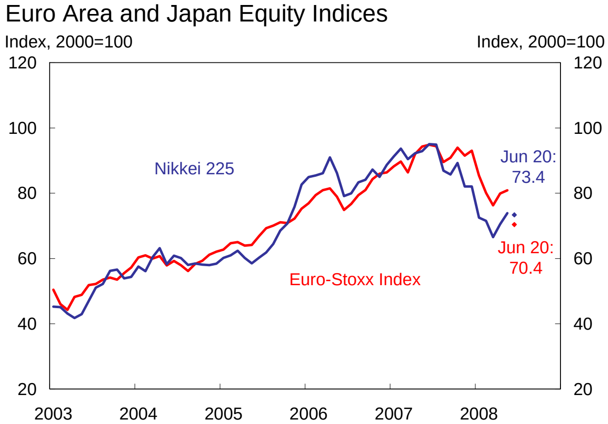
United Kingdom

LIBOR Rate - OIS Swap Rate (3-month)



Source: Bloomberg

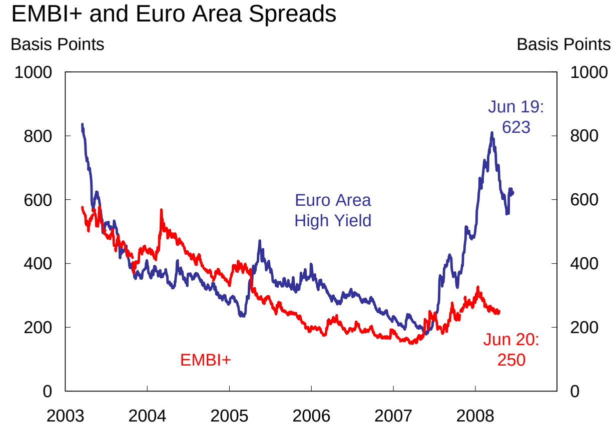
Euro Area and Japan Equity Indices



Source: BIS and Bloomberg

Note: Data are monthly averages.

EMBI+ and Euro Area Spreads



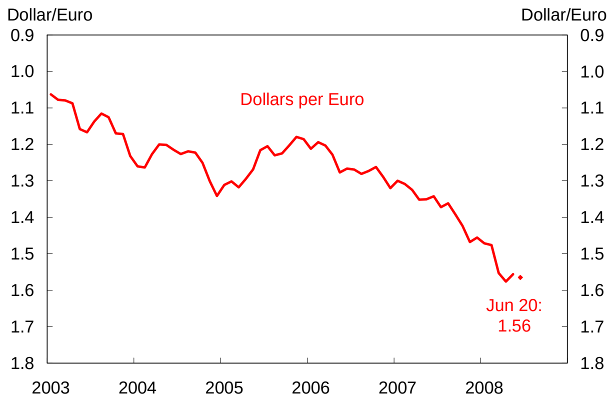
Source: Bloomberg

Note: Data are daily observations.

A. Significant Developments

Exhibit A-9:
Exchange Rates

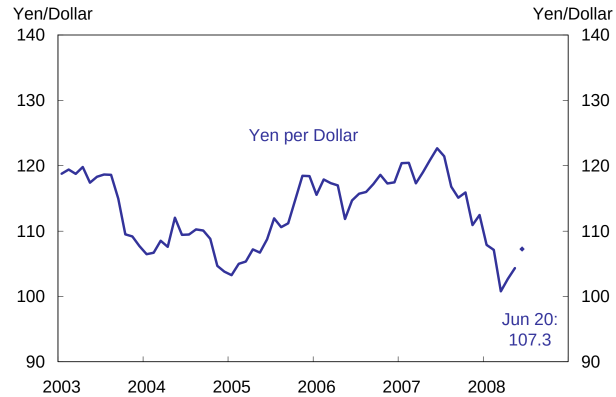
Dollar-Euro Exchange Rate



Source: Bloomberg

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

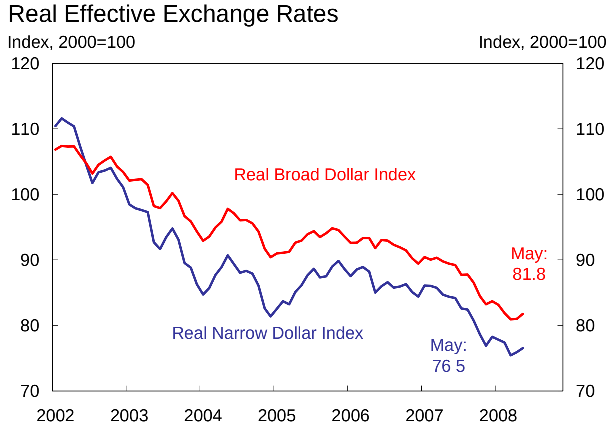
Yen-Dollar Exchange Rate



Source: Bloomberg

Note: Data are monthly averages.

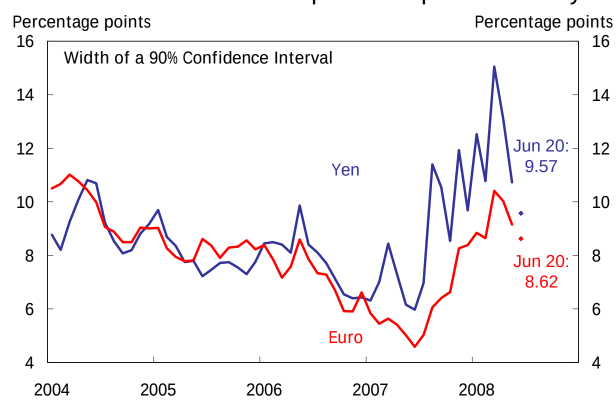
Real Effective Exchange Rates



Source: Federal Reserve Board

Note: Data are monthly averages.

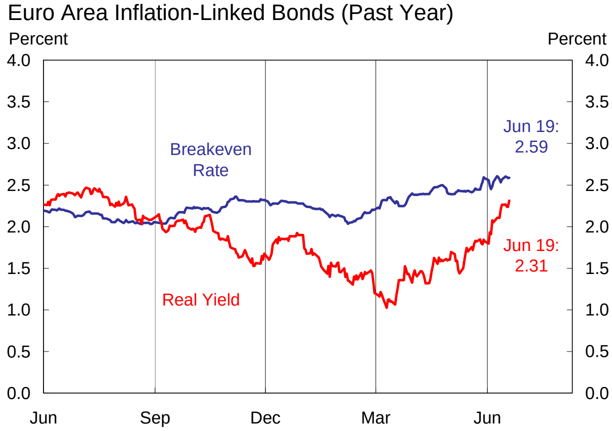
Euro and Yen One-Month Implied FX Option Volatility



Source: Reuters

Note: Data are monthly averages.

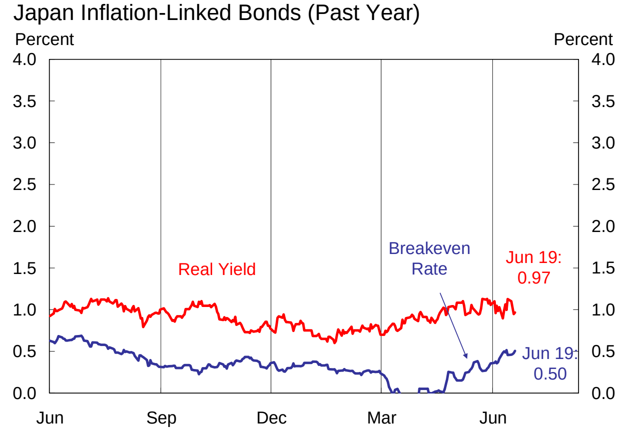
Euro Area Inflation-Linked Bonds (Past Year)



Source: Barclays, Daily Data

Note: OAT July 2012

Japan Inflation-Linked Bonds (Past Year)



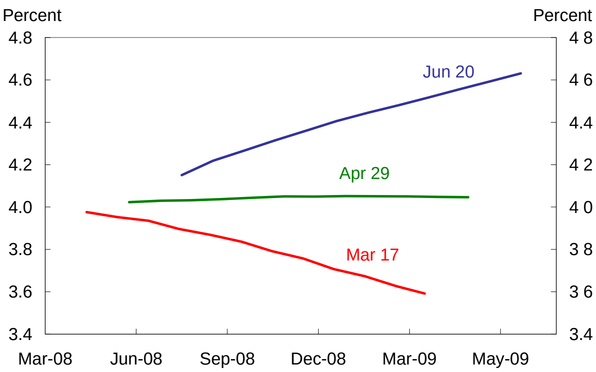
Source: Barclays, Daily Data

Note: JGB March 2014

A. Significant Developments

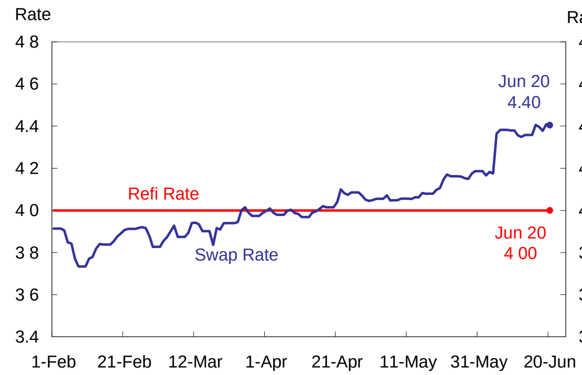
Exhibit A-10: Euro Area and Japan Swap Curves

Euro Area Swap Curve
Expected Average Overnight Rate Months Ahead



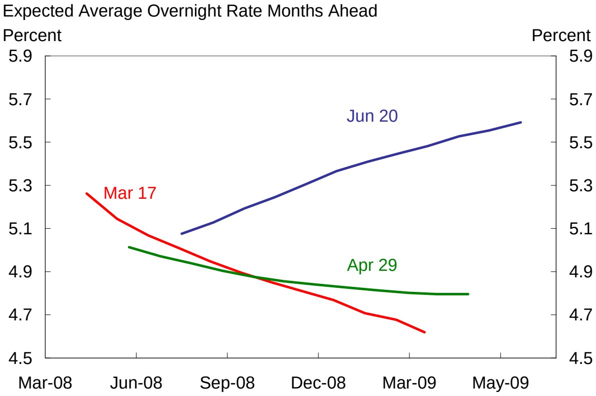
Source: Bloomberg

Euro Area: Expected Average Overnight Rate Over the Next Six Months (Swap Rate)



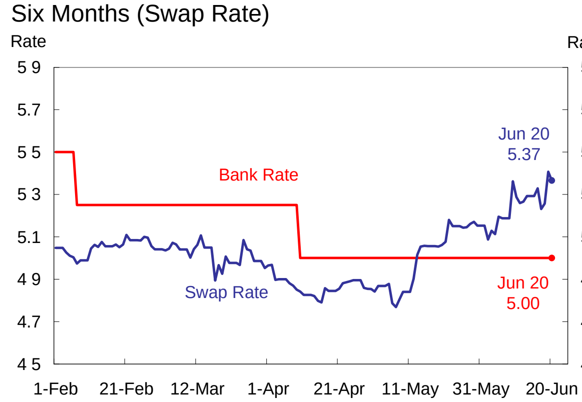
Source: Bloomberg

UK Swap Curve
Expected Average Overnight Rate Months Ahead



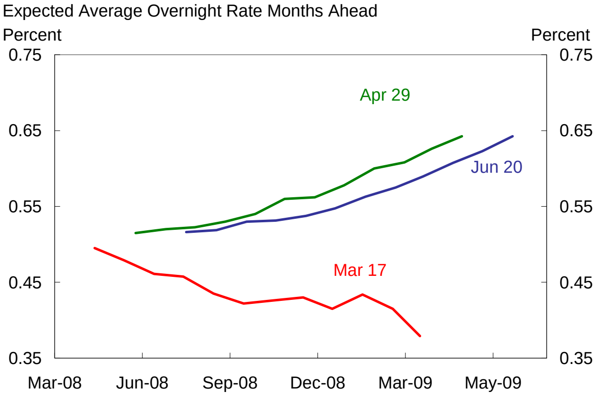
Source: Bloomberg

UK: Expected Average Overnight Rate Over the Next Six Months (Swap Rate)



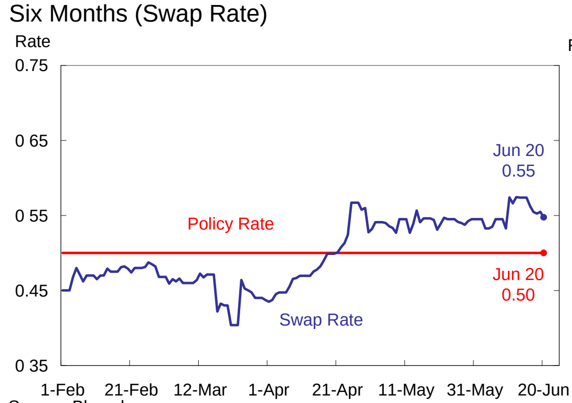
Source: Bloomberg

Japan Swap Curve
Expected Average Overnight Rate Months Ahead



Source: Bloomberg

Japan: Expected Average Overnight Rate Over the Next Six Months (Swap Rate)

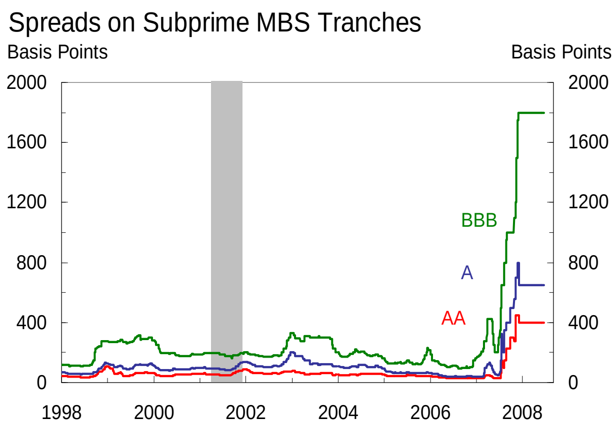


Source: Bloomberg

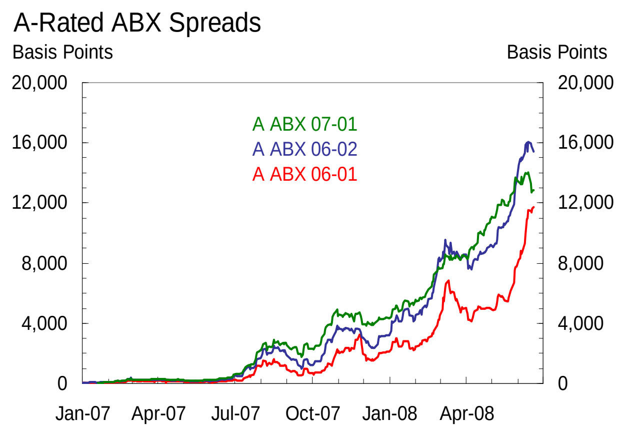
Note: Shading represents NBER recessions.

A. Significant Developments

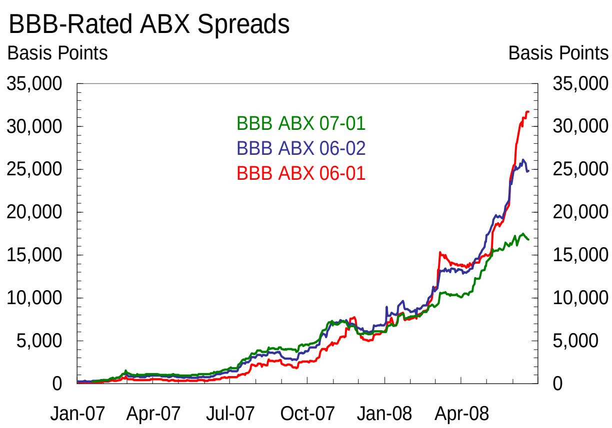
Exhibit A-11: Financial Market Indicators of Subprime Spillovers



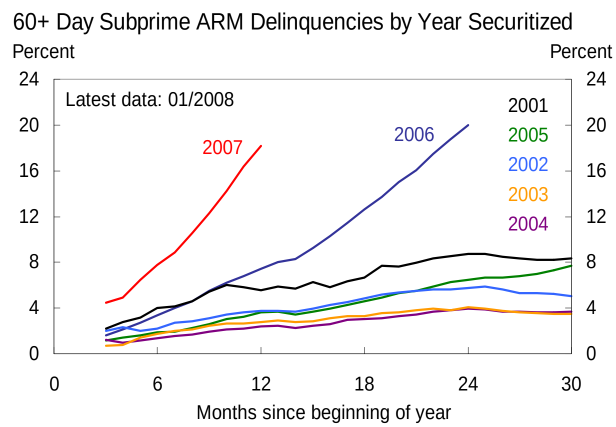
Source: JPMorgan



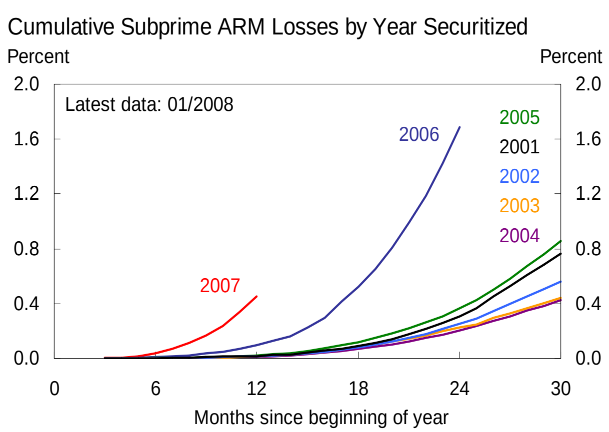
Source: JPMorgan



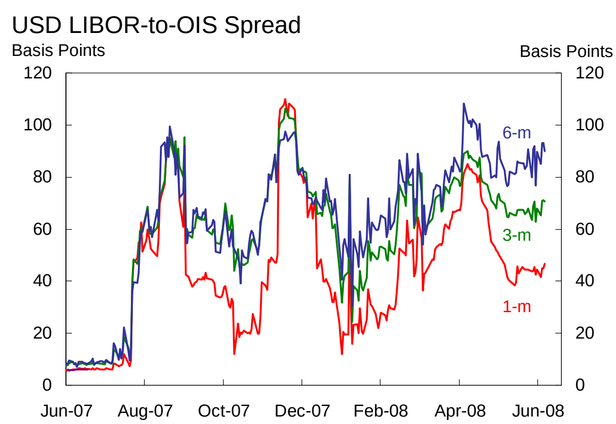
Source: JPMorgan



Source: Moody's Investors Service Note: Percent of original balance.



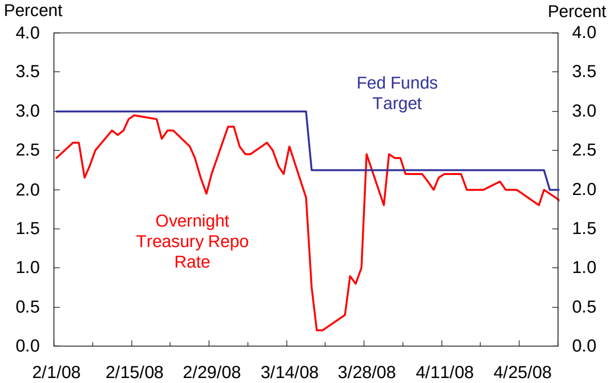
Source: Moody's Investors Service Note: Percent of original balance.



A. Significant Developments

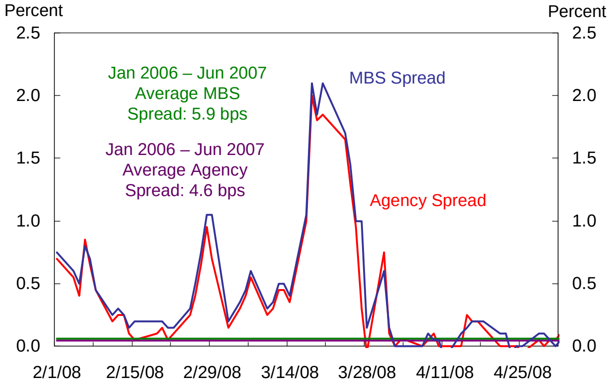
Exhibit A-12: Conditions in Repo Markets

Overnight Treasury Repo Rate



Source: Bloomberg, FRBNY

Overnight Agency and MBS to Treasury Spreads



Source: Bloomberg

B. FRBNY Forecast Details

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

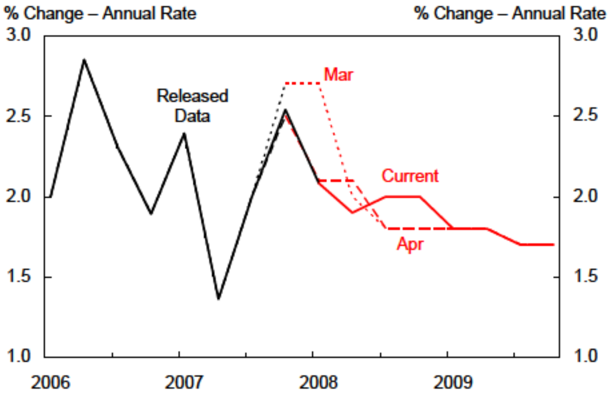
	Core PCE Inflation			Real GDP Growth			Unemployment Rate*			Fed Funds Rate**		
	Mar	Apr	Jun	Mar	Apr	Jun	Mar	Apr	Jun	Mar	Apr	Jun
2007												
Q1	*2.4*	*2.4*	*2.4*	*0.6*	*0.6*	*0.6*	*4.5*	*4.5*	*4.5*	*5.3*	*5.3*	*5.3*
Q2	*1.4*	*1.4*	*1.4*	*3.8*	*3.8*	*3.8*	*4.5*	*4.5*	*4.5*	*5.3*	*5.3*	*5.3*
Q3	*2.0*	*2.0*	*2.0*	*4.9*	*4.9*	*4.9*	*4.7*	*4.7*	*4.7*	*4.8*	*4.8*	*4.8*
Q4	*2.7*	*2.5*	*2.5*	*0.6*	*0.6*	*0.6*	*4.8*	*4.8*	*4.8*	*4.3*	*4.3*	*4.3*
2008												
Q1	2.7	2.1	*2.1*	-0.4	0.2	*0.9*	5.1	*4.9*	*4.9*	2.3	*2.3*	*2.3*
Q2	2.0	2.1	1.9	-0.9	-1.2	1.2	5.6	5.6	5.3	2.0	2.0	2.0
Q3	1.8	1.8	2.0	4.3	3.4	2.6	5.8	5.8	5.5	2.0	2.0	2.0
Q4	1.8	1.8	2.0	2.2	2.4	1.7	5.8	5.8	5.6	2.0	2.0	2.3
2009												
Q1	1.8	1.8	1.8	2.7	2.9	3.1	5.7	5.7	5.6	2.3	2.3	2.5
Q2	1.8	1.8	1.8	3.4	3.8	3.0	5.7	5.6	5.5	2.5	2.5	3.0
Q3	1.7	1.7	1.7	3.0	2.9	3.0	5.6	5.5	5.5	3.0	3.0	3.5
Q4	1.7	1.7	1.7	2.8	2.5	3.0	5.5	5.5	5.4	3.5	3.5	3.8
Q4/Q4												
2006	*2.3*	*2.3*	*2.3*	*2.6*	*2.6*	*2.6*	*-0.5*	*-0.5*	*-0.5*	*1.0*	*1.0*	*1.0*
2007	*2.1*	*2.1*	*2.1*	*2.5*	*2.5*	*2.5*	*0.4*	*0.4*	*0.4*	*-1.0*	*-1.0*	*-1.0*
2008	2.1	1.9	2.0	1.3	1.2	1.6	1.0	1.0	0.8	-2.3	-2.3	-2.0
2009	1.7	1.8	1.7	3.0	3.0	3.0	-0.3	-0.3	-0.2	1.5	1.5	1.5

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

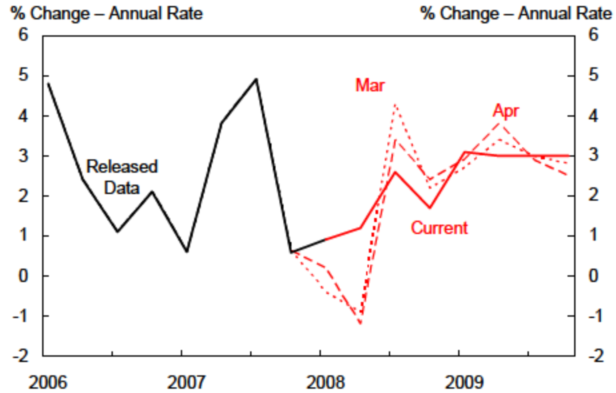
B. FRBNY Forecast Details

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

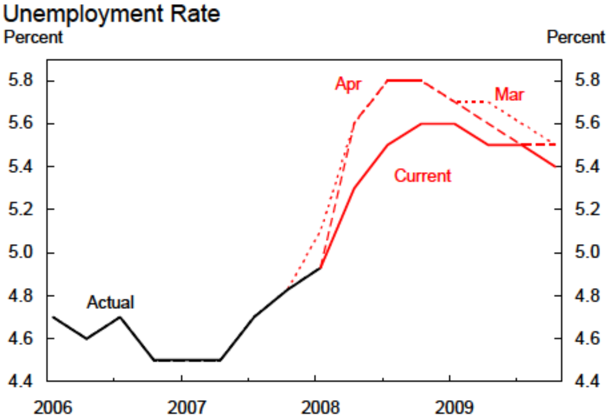
Core PCE Inflation



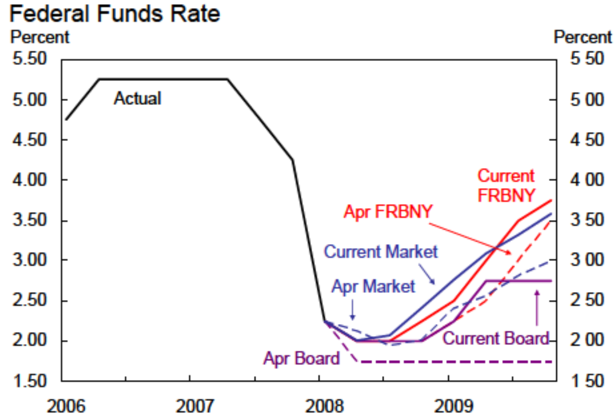
Real GDP Growth



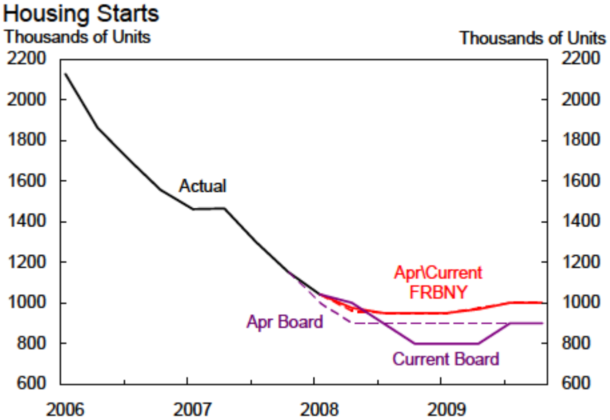
Unemployment Rate



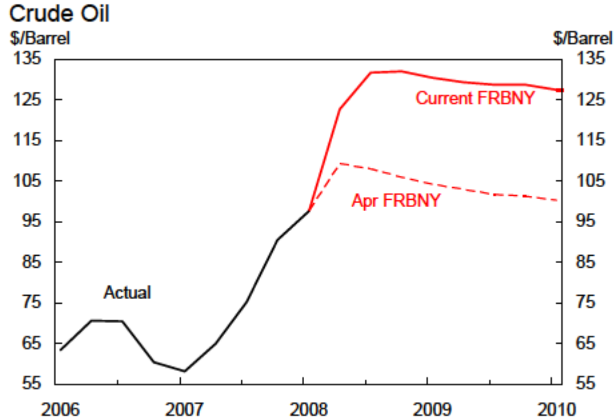
Federal Funds Rate



Housing Starts



Crude Oil



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

B. FRBNY Forecast Details

Exhibit B-3: Near-Term Projections

	Quarterly Growth Rates (AR)		Quarterly Growth Contributions (AR)	
	2008Q2	2008Q3	2008Q2	2008Q3
OUTPUT				
Real GDP	1.2	2.6	1.2	2.6
	(-1.2)	(3.4)	(-1.2)	(3.4)
Final Sales to Domestic Purchasers	1.3	1.0	1.4	1.0
	(-0.4)	(1.8)	(-0.4)	(2.0)
Consumption	2.0	2.2	1.4	1.6
	(1.3)	(3.5)	(0.9)	(2.5)
BFI: Equipment and Software	1.0	-2.5	0.1	-0.2
	(-5.0)	(-2.5)	(-0.4)	(-0.2)
BFI: Nonresidential Structures	3.0	3.0	0.1	0.1
	(3.0)	(3.0)	(0.1)	(0.1)
Residential Investment	-20.0	-20.0	-0.8	-0.8
	(-30.0)	(-20.0)	(-1.3)	(-0.8)
Government: Federal	4.0	1.0	0.3	0.1
	(1.0)	(1.5)	(0.1)	(0.1)
Government: State and Local	2.5	1.5	0.3	0.2
	(2.0)	(1.5)	(0.3)	(0.2)
Inventory Investment	--	--	-1.1	0.8
	--	--	(-1.7)	(0.6)
Net Exports	--	--	0.9	0.8
	--	--	(1.0)	(0.8)
INFLATION				
Total PCE Deflator	3.8	4.5		
	(3.8)	(2.9)		
Core PCE Deflator	1.9	2.0		
	(2.1)	(1.8)		
PRODUCTIVITY AND LABOR COSTS*				
Output per Hour	2.0	2.8		
	(1.0)	(3.3)		
Compensation per Hour	2.0	3.8		
	(3.8)	(3.8)		
Unit Labor Costs	0.0	1.0		
	(2.8)	(0.5)		

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

B. FRBNY Forecast Details

Exhibit B-4: Real GDP and Inflation Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2007	2008	2009	2007	2008	2009
OUTPUT						
Real GDP	2.5	1.6	3.0	2.5	1.6	3.0
	(2.5)	(1.2)	(3.0)	(2.5)	(1.2)	(3.0)
Final Sales to Domestic Purchasers	1.9	0.8	2.4	2.0	0.8	2.5
	(1.9)	(0.7)	(2.4)	(2.0)	(0.7)	(2.5)
Consumption	2.6	1.4	2.5	1.8	1.0	1.8
	(2.6)	(1.6)	(2.4)	(1.8)	(1.1)	(1.7)
BFI: Equipment and Software	3.6	1.8	3.5	0.3	0.1	0.2
	(3.6)	(0.7)	(3.5)	(0.3)	(0.1)	(0.2)
BFI: Nonresidential Structures	15.1	2.5	3.0	0.5	0.1	0.1
	(15.1)	(2.5)	(3.0)	(0.5)	(0.1)	(0.1)
Residential Investment	-18.6	-19.6	2.5	-1.0	-0.8	0.1
	(-18.6)	(-20.9)	(2.5)	(-1.0)	(-0.9)	(0.1)
Government: Federal	1.7	2.7	1.5	0.1	0.2	0.1
	(1.7)	(0.5)	(1.5)	(0.1)	(0.0)	(0.1)
Government: State and Local	2.7	1.5	1.7	0.3	0.2	0.2
	(2.7)	(1.7)	(1.7)	(0.3)	(0.2)	(0.2)
Inventory Investment	--	--	--	-0.3	0.0	0.2
	--	--	--	(-0.3)	(-0.1)	(0.3)
Net Exports	--	--	--	0.8	0.8	0.3
	--	--	--	(0.8)	(0.6)	(0.3)
INFLATION						
Total PCE Deflator	3.4	3.4	1.7			
	(3.4)	(3.0)	(1.7)			
Core PCE Deflator	2.1	2.0	1.7			
	(2.1)	(1.9)	(1.8)			
Total CPI Inflation	4.0	3.6	2.2			
	(4.0)	(3.4)	(2.2)			
Core CPI Inflation	2.3	2.1	2.0			
	(2.3)	(2.2)	(2.0)			
GDP Deflator	2.6	2.5	2.1			
	(2.6)	(2.0)	(2.1)			

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		
	2007	2008	2009
INTEREST RATE ASSUMPTIONS			
Federal Funds Rate (End-of-Year)	4.25	2.25	3.75
	(4.25)	(2.00)	(3.50)
10-Year Treasury Yield (Avg. Q4 Level)	4.3	3.8	3.8
	(4.3)	(3.8)	(3.8)
PRODUCTIVITY AND LABOR COSTS*			
Output	2.6	1.7	3.3
	(2.6)	(1.5)	(3.3)
Hours	-0.4	-0.6	1.5
	(-0.3)	(-0.6)	(1.5)
Output per Hour	2.9	2.3	1.8
	(2.9)	(2.0)	(1.8)
Compensation per Hour	4.4	3.7	3.9
	(3.9)	(4.0)	(4.2)
Unit Labor Costs	1.4	1.3	2.1
	(0.9)	(1.9)	(2.4)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	4.8	5.6	5.4
	(4.8)	(5.8)	(5.5)
Participation Rate (Avg. Q4 Level)	66.0	66.0	66.0
	(66.0)	(66.0)	(66.0)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	104	-28	153
	(104)	(-41)	(151)
INCOME			
Personal Income	6.1	4.5	4.7
	(5.9)	(4.8)	(5.4)
Real Disposable Personal Income	2.4	1.1	2.9
	(2.2)	(1.6)	(3.7)
Corporate Profits Before Taxes	2.5	3.7	2.7
	(2.5)	(-1.3)	(0.0)

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

B. FRBNY Forecast Details

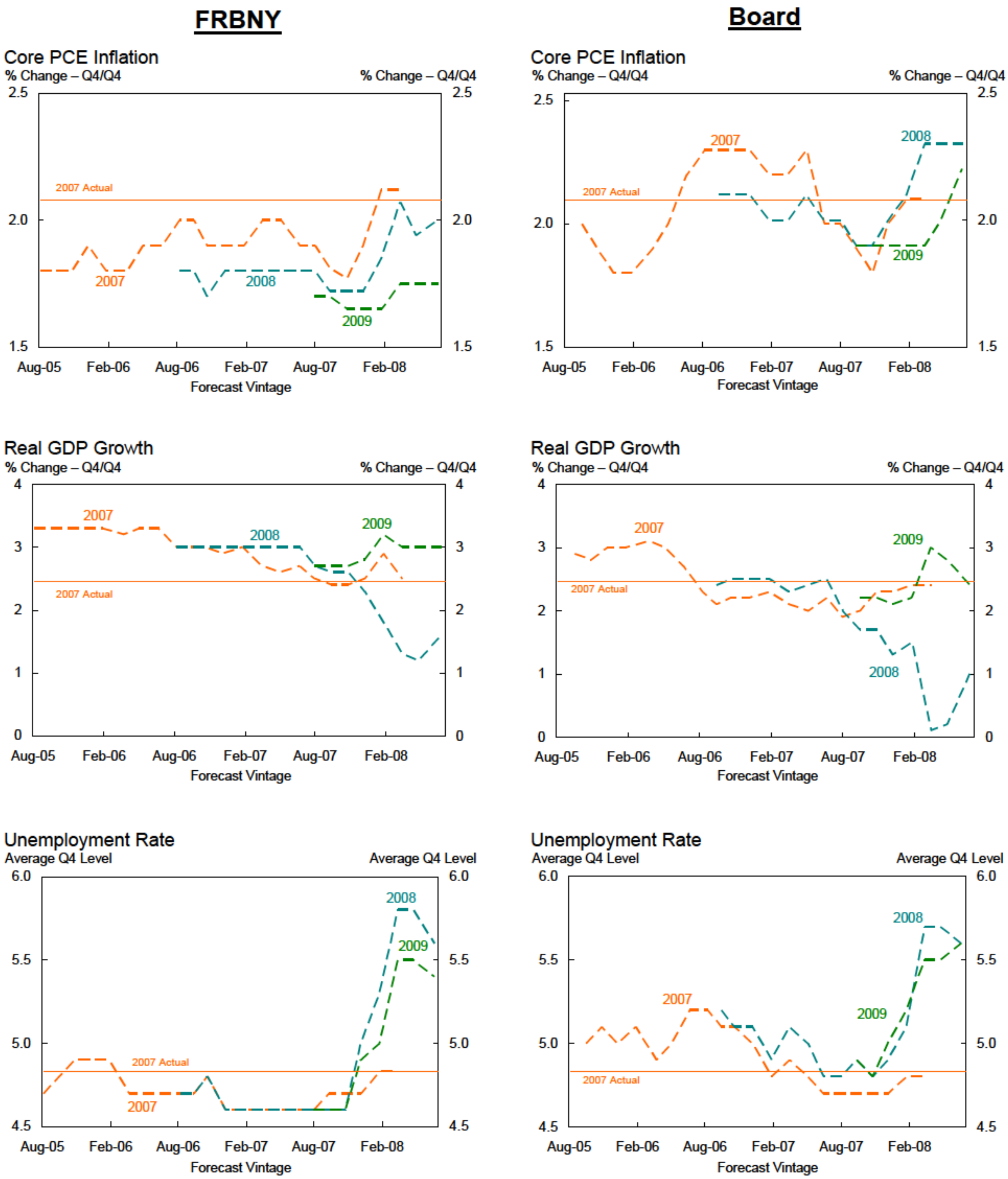
Exhibit B-6: FRBNY and Greenbook Forecast Comparison

	FRBNY			Board		
	2007	2008	2009	2007	2008	2009
OUTPUT						
Real GDP	2.5	1.6	3.0	2.5	1.0	2.4
	(2.5)	(1.2)	(3.0)	(2.5)	(0.2)	(2.8)
GDP Growth Contributions						
Final Sales to Domestic Purchasers	2.0	0.8	2.5	1.9	-0.3	1.4
	(2.0)	(0.7)	(2.5)	(1.9)	(-1.1)	(1.7)
Consumption	1.8	1.0	1.8	1.8	0.4	1.1
	(1.8)	(1.1)	(1.7)	(1.8)	(0.0)	(1.4)
BFI	0.7	0.2	0.4	0.7	-0.1	0.2
	(0.7)	(0.1)	(0.4)	(0.7)	(-0.4)	(0.1)
Residential Investment	-1.0	-0.8	0.1	-1.0	-1.0	-0.2
	(-1.0)	(-0.9)	(0.1)	(-1.0)	(-1.1)	(-0.1)
Government	0.5	0.4	0.3	0.4	0.4	0.3
	(0.5)	(0.3)	(0.3)	(0.4)	(0.4)	(0.3)
Inventory Investment	-0.3	0.0	0.2	-0.3	0.3	0.5
	(-0.3)	(-0.1)	(0.3)	(-0.3)	(0.2)	(0.7)
Net Exports	0.8	0.8	0.3	0.8	1.1	0.5
	(0.8)	(0.6)	(0.3)	(0.8)	(1.2)	(0.4)
INFLATION						
Total PCE Deflator	3.4	3.4	1.7	3.4	4.2	2.1
	(3.4)	(3.0)	(1.7)	(3.4)	(3.3)	(1.8)
Core PCE Deflator	2.1	2.0	1.7	2.1	2.3	2.2
	(2.1)	(1.9)	(1.8)	(2.1)	(2.3)	(2.0)
INTREST RATE ASSUMPTION						
Fed Funds Rate (End-of-Year)	4.25	2.25	3.75	4.25	2.00	2.75
	(4.25)	(2.00)	(3.50)	(4.25)	(1.75)	(1.75)
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	2.9	2.3	1.8	2.9	1.8	2.1
	(2.9)	(2.0)	(1.8)	(2.9)	(1.0)	(2.7)
Compensation per Hour	4.4	3.7	3.9	4.4	4.1	4.1
	(3.9)	(4.0)	(4.2)	(3.9)	(4.0)	(3.8)
Unit Labor Costs	1.4	1.3	2.1	1.4	2.3	2.0
	(0.9)	(1.9)	(2.4)	(0.9)	(2.9)	(1.0)
LABOR MARKET						
Unemployment Rate (Avg. Q4 Level)	4.8	5.6	5.4	4.8	5.6	5.6
	(4.8)	(5.8)	(5.5)	(4.8)	(5.7)	(5.5)
Participation Rate (Avg. Q4 Level)	66.0	66.0	66.0	66.0	65.8	65.6
	(66.0)	(66.0)	(66.0)	(66.0)	(65.6)	(65.4)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	104	-28	153	100	-42	100
	(104)	(-41)	(151)	(100)	(-75)	(108)
HOUSING						
Housing Starts (Avg. Q4 Level, Thous.)	1151	950	1000	1200	800	900
	(1151)	(950)	(1000)	(1200)	(900)	(900)

Note: All values are Q4/Q4 percent change, unless indicated otherwise. Numbers in parentheses are from the previous Blackbook or Greenbook.
*Nonfarm business sector

B. FRBNY Forecast Details

Exhibit B-7: Evolution of FRBNY and Board Forecasts since Mid-2005



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	2008Q2	2008Q3	2008 Q4/Q4	2009 Q4/Q4
FRBNY	6/20/2008	1.2	2.6	1.6	3.0
		(-1.2)	(3.4)	(1.2)	(3.0)
PSI Model	6/16/2008	-0.5	1.0	--	--
		(-0.4)	--	--	--
Blue Chip	6/10/2008	0.4	1.5	1.0	2.5
		(0.1)	(2.1)	(1.1)	(2.6)
Median SPF	5/13/2008	0.2	1.7	1.5	2.2
		(1.3)	(2.8)	(1.8)	(2.8)
Macro Advisers	6/17/2008	2.0	2.4	1.3	3.4
		(2.3)	(4.1)	(2.1)	(3.2)

Core PCE Inflation

	Release Date	2008Q2	2008Q3	2008 Q4/Q4	2009 Q4/Q4
FRBNY	6/20/2008	1.9	2.0	2.0	1.7
		(2.1)	(1.8)	(1.9)	(1.8)
Median SPF	5/13/2008	2.1	2.1	2.1	2.1
		(2.1)	(2.0)	(2.0)	(2.0)

CPI Inflation

	Release Date	2008Q2	2008Q3	2008 Q4/Q4	2009 Q4/Q4
FRBNY	6/20/2008	4.2	3.6	3.6	2.2
		(4.0)	(2.7)	(3.4)	(2.2)
Blue Chip	6/10/2008	3.6	3.5	3.5	2.5
		(2.5)	(2.6)	(2.8)	(2.4)
Median SPF	5/13/2008	3.5	3.2	3.3	2.4
		(2.4)	(2.5)	(2.5)	(2.3)
Macro Advisers	6/17/2008	4.0	5.4	4.2	2.3
		(1.8)	(2.7)	(2.9)	(2.2)

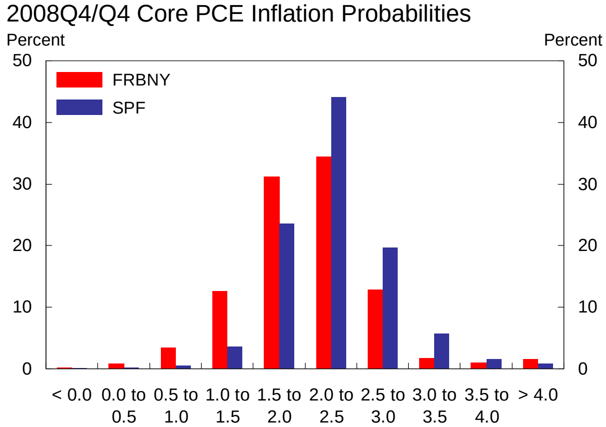
Core CPI Inflation

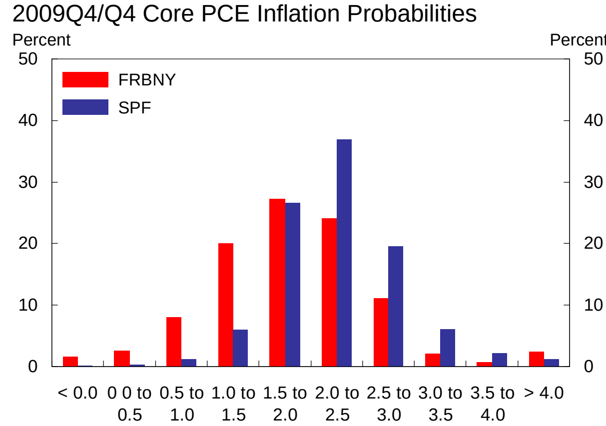
	Release Date	2008Q2	2008Q3	2008 Q4/Q4	2009 Q4/Q4
FRBNY	6/20/2008	1.7	2.1	2.1	2.0
		(2.1)	(2.1)	(2.2)	(2.0)
Median SPF	5/13/2008	2.3	2.3	2.3	2.3
		(2.2)	(2.2)	(2.2)	(2.1)
Macro Advisers	6/17/2008	1.7	2.4	2.4	2.4
		(2.3)	(3.0)	(2.8)	(2.4)

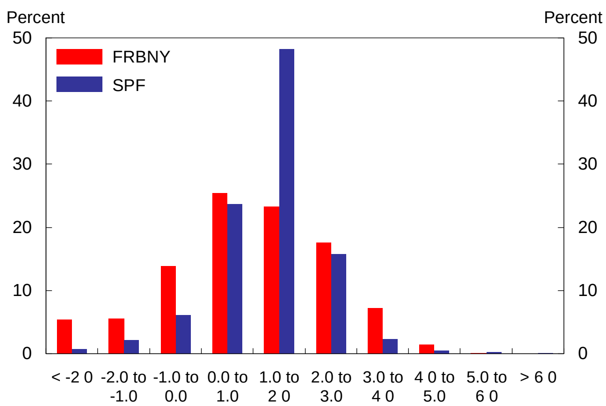
Note: Numbers in parentheses are from the February release for SPF and the April release for all other forecasts. All values are quarterly percent changes at an annual rate.

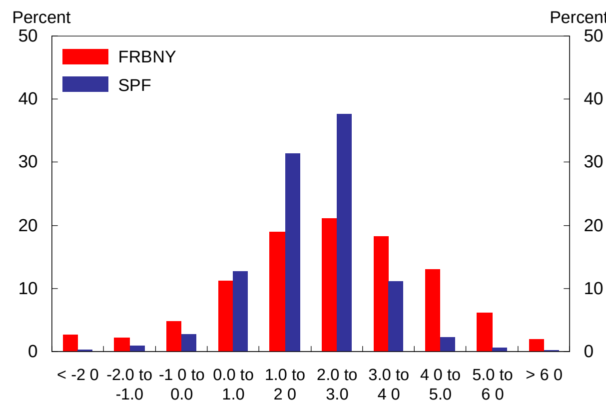
B. FRBNY Forecast Details

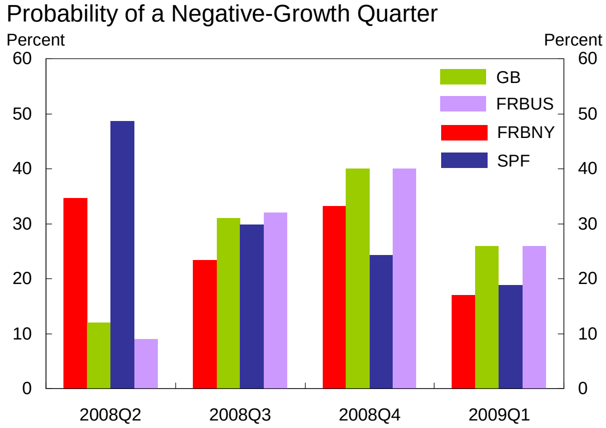
Exhibit B-9: FRBNY, SPF, and Board Forecast Comparison









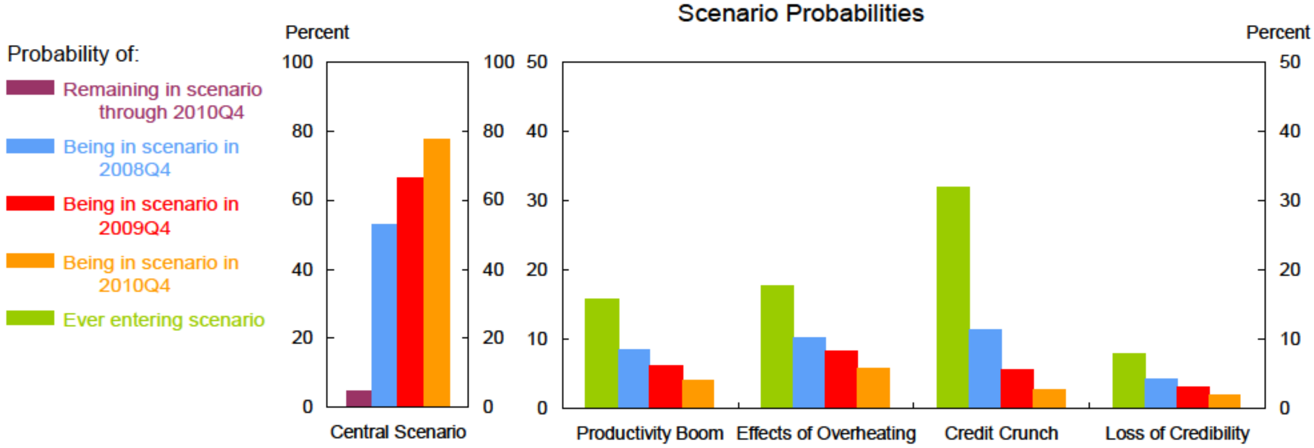


Source: MMS Function (FRBNY), FRB Philadelphia Survey of Professional Forecasters, and Federal Reserve Board
Note: SPF forecast was released March 13, 2008. Board forecasts are from the June Greenbook.

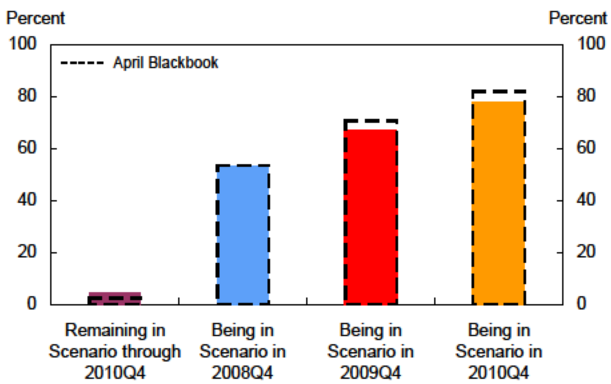
C. FRBNY Forecast Distributions

Exhibit C-1:
Risks

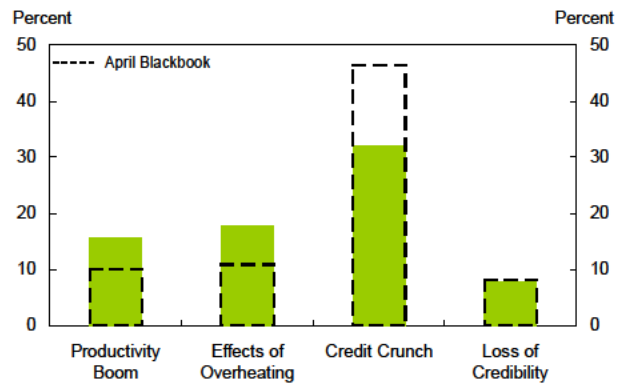
Scenario Probabilities



Change in Central Scenario Probabilities



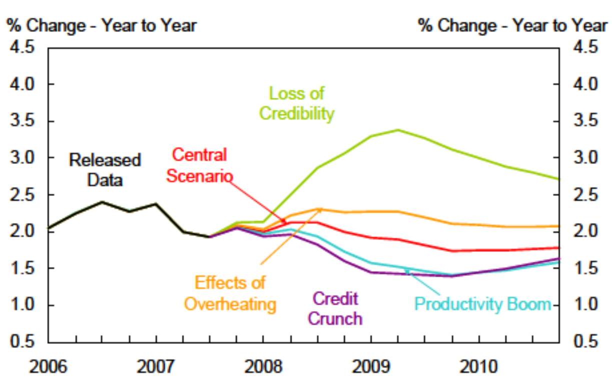
Change in Alternative Scenario Probabilities*



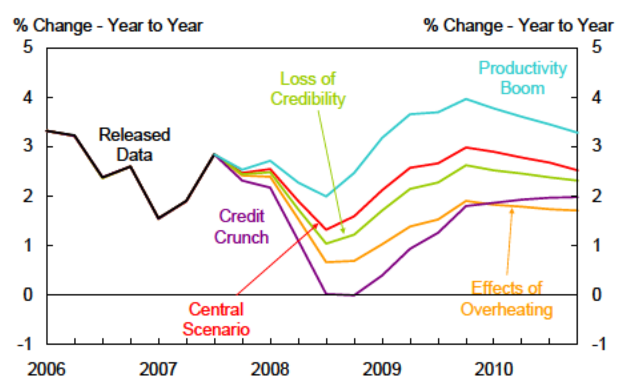
*Probability of ever reaching scenario

Exhibit C-2: Projections under Alternative Scenarios

Core PCE Inflation under Alternative Scenarios



Real GDP Growth under Alternative Scenarios

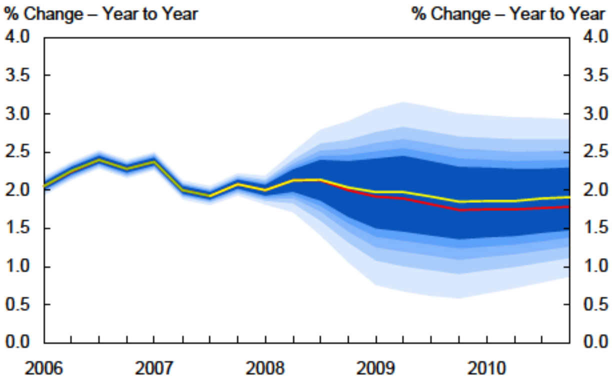


Source: MMS Function (FRBNY)

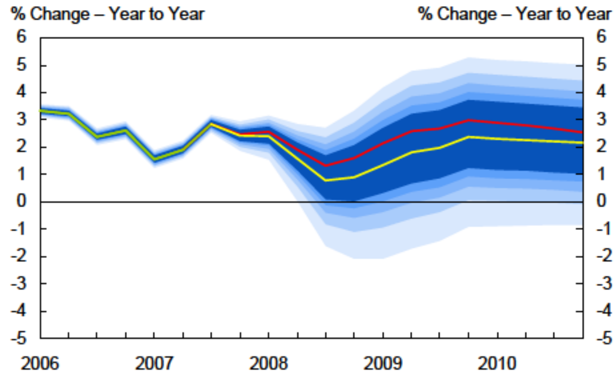
C. FRBNY Forecast Distributions

Exhibit C-3: Inflation and Output Forecast Distributions

Core PCE Inflation Forecast Distribution

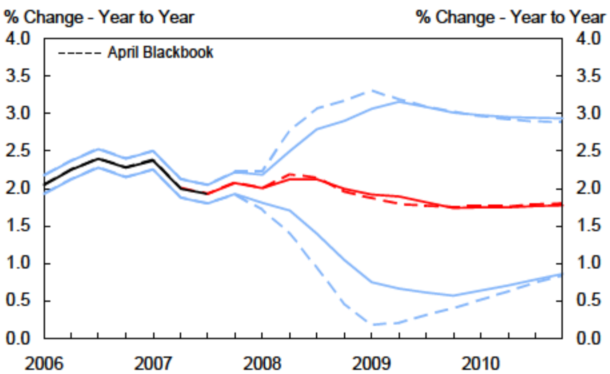


Real GDP Growth Forecast Distribution

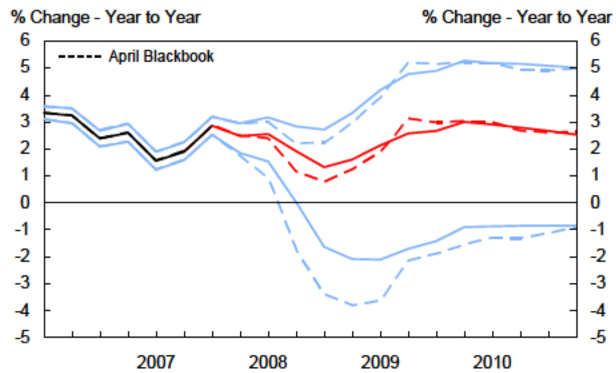


The yellow line is the expected value of the forecast distribution, the red line is the central scenario projection, and the green line is released data. The shading represents the 50, 60, 70, 80, and 90 percent chance that the four-quarter change will be within the respective range.

Change in Core PCE Inflation Forecast Distribution

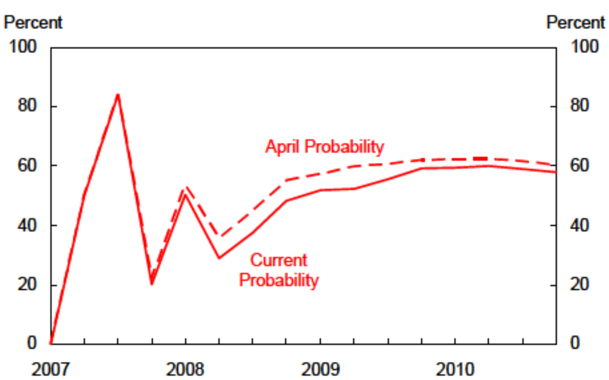


Change in Real GDP Growth Forecast Distribution

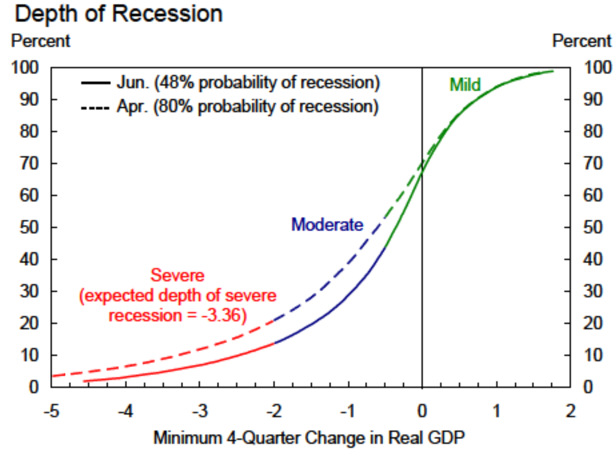


The blue lines are the 90% chance the four-quarter change will be within the lines, the red line is the central scenario projection, and the black line is released data. Dashed lines represent forecasts from previous Blackbook.

Probability of Four-Quarter Core PCE Inflation below 2%



Depth of Recession

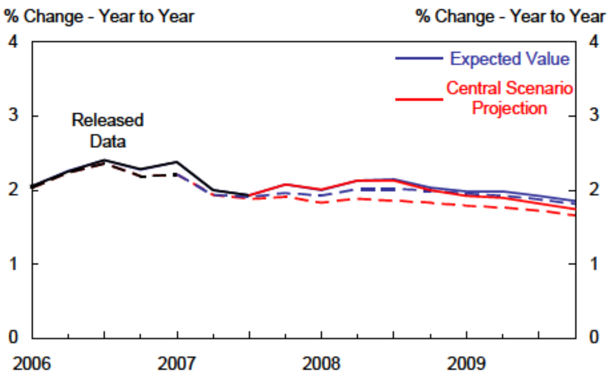


Source: MMS Function (FRBNY)

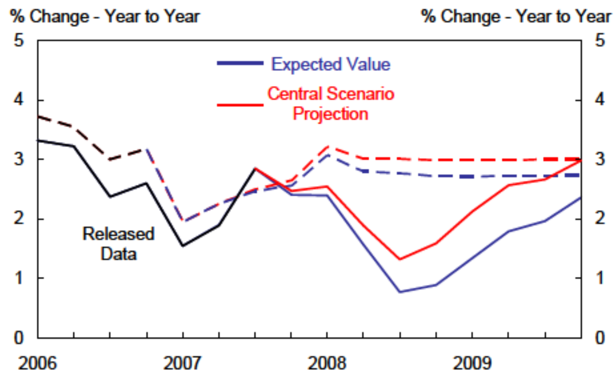
C. FRBNY Forecast Distributions

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

One-Year Comparison of Core PCE Inflation Forecast

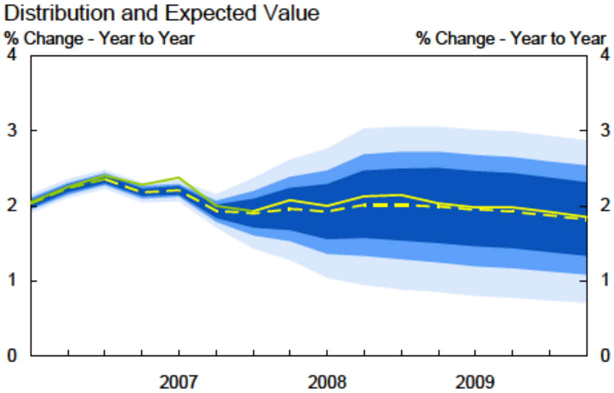


One-Year Comparison of Real GDP Growth Forecast

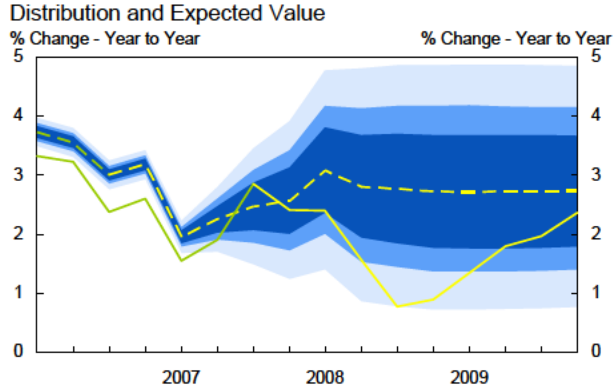


The solid lines are the **current** central scenario projection (red) and expected value of the forecast distribution, while the dotted lines are the same from the **June 2007** forecast.

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



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



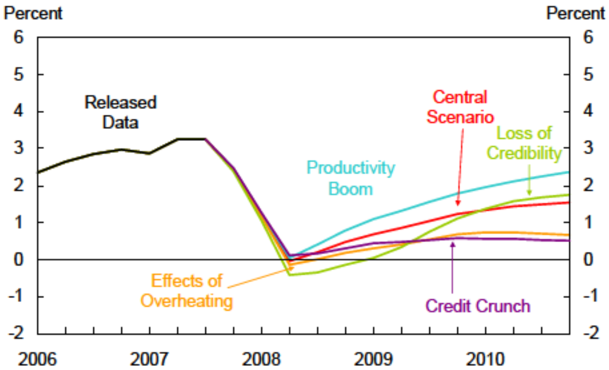
The solid yellow line is the **current** expected value of the forecast distribution, while the dashed yellow line is the **June 2007** expected value. The shading represents the 50, 70 and 90 percent probability intervals from the **June 2007** forecast. The green lines are released data.

Source: MMS Function (FRBNY)

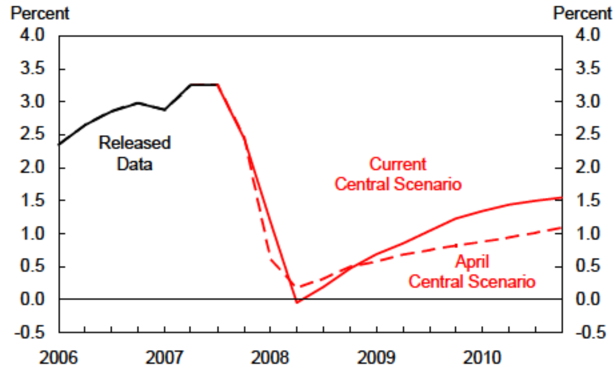
D. FRBNY Fed Funds Rate Projections

Exhibit D-1: *Baseline*
Policy Rule Analysis

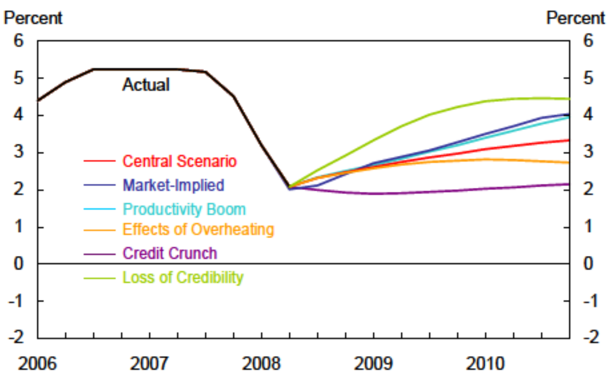
Real FFR under Alternative Scenarios



Change in Central Scenario Real FFR



Nominal FFR under Alternative Scenarios



Change in Central Scenario and Market-Implied Nominal FFR

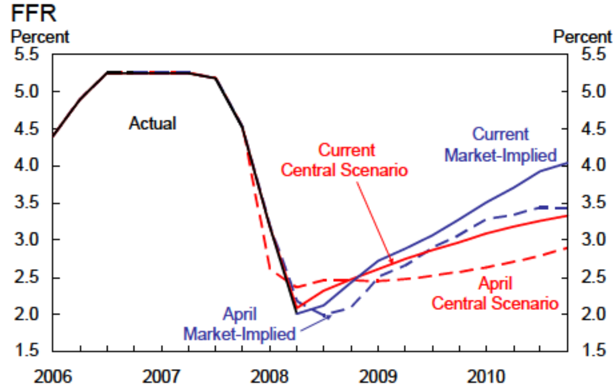
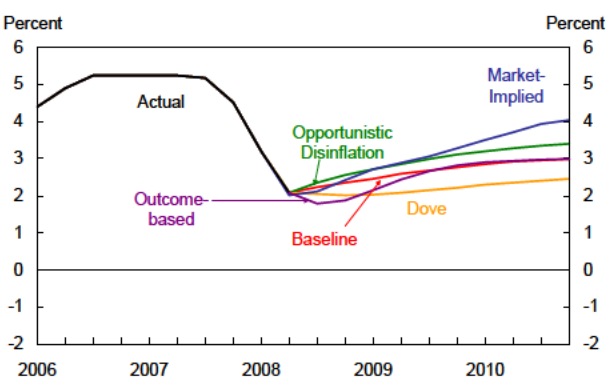


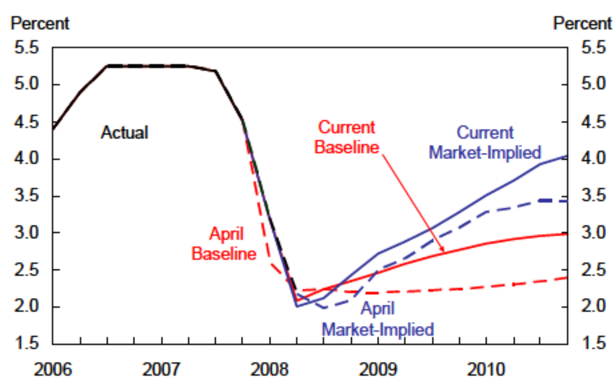
Exhibit D-2: Alternative Policy Rules under
Expected Value of Forecast Distribution

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

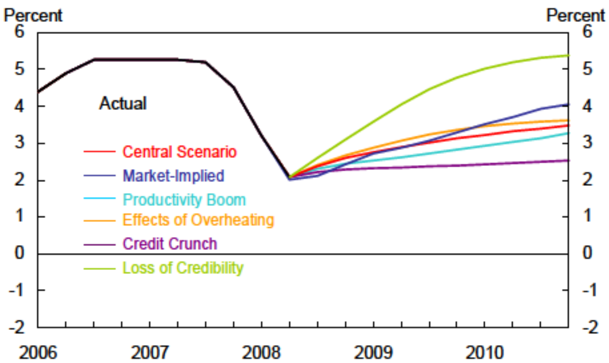
Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

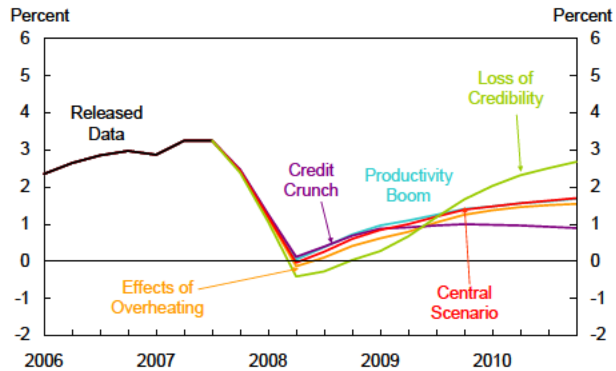
Exhibit D-3: Alternative Policy Rule Analysis

Policy Rule: *Opportunistic Disinflation*

Nominal FFR under Alternative Scenarios

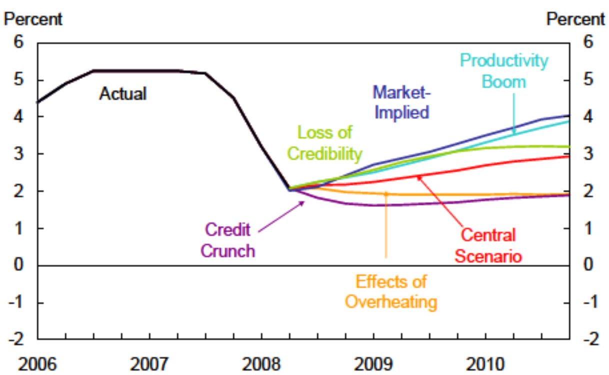


Real FFR under Alternative Scenarios

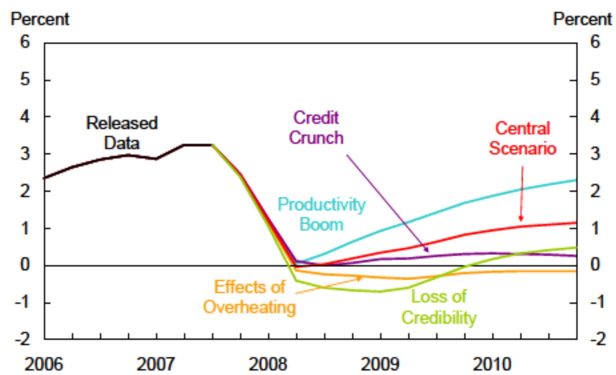


Policy Rule: *Dove*

Nominal FFR under Alternative Scenarios

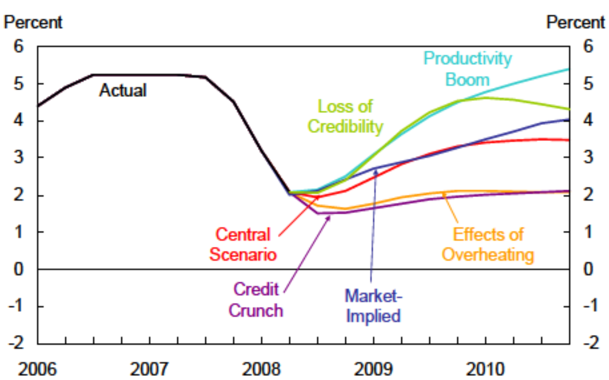


Real FFR under Alternative Scenarios

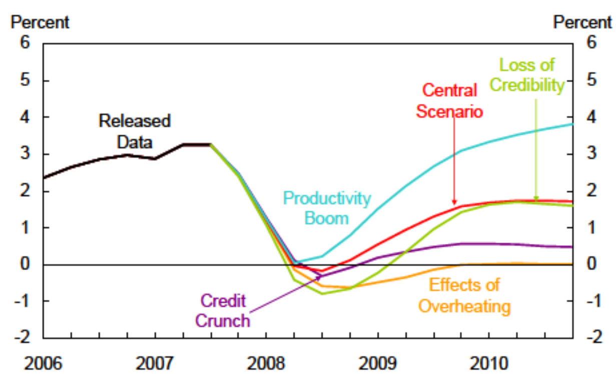


Policy Rule: *Outcome-based*

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: 2008Q4

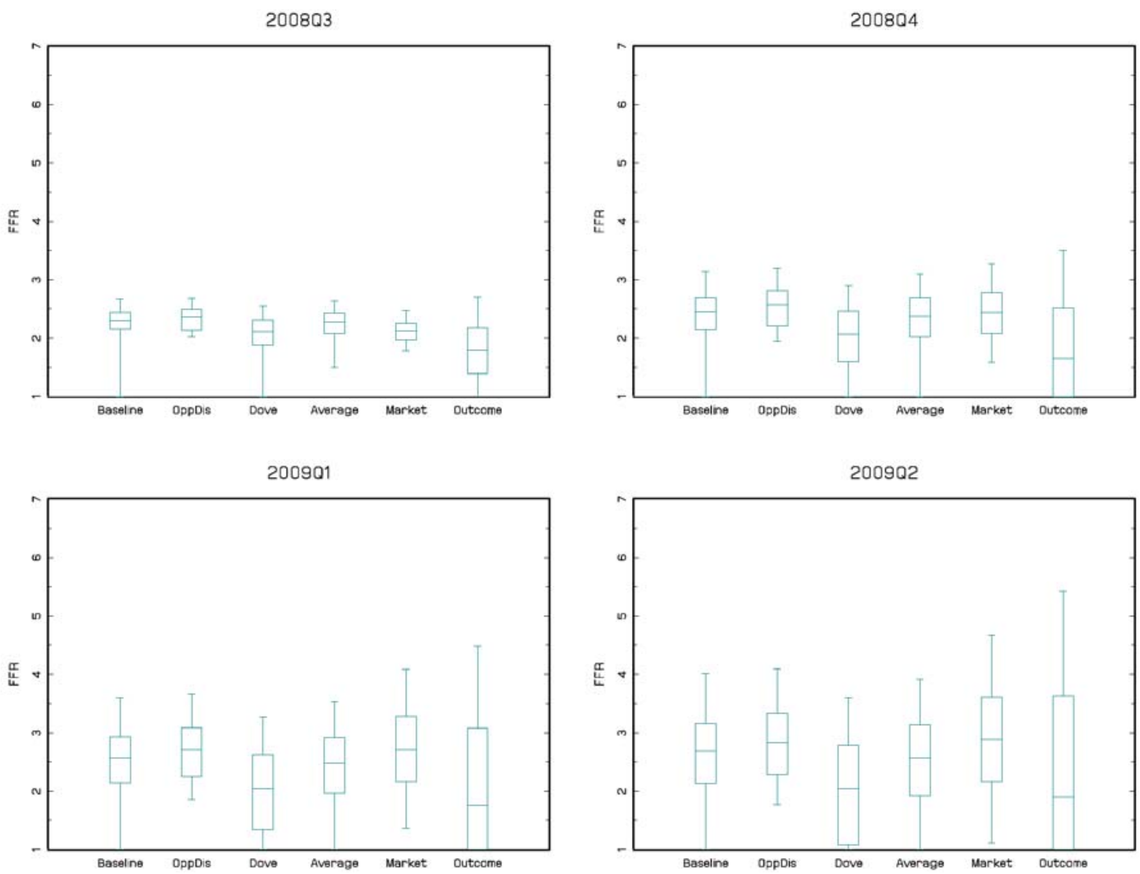
	Percentile of Rule Expectation in Market Distribution	Percentile of Market Expectation in Rule Distribution
Baseline	43 (58)	49 (35)
Opportunistic Disinflation	59 (59)	39 (29)
Dove	21 (28)	73 (67)
Outcome-based	14 (15)	73 (80)
Average	40 (48)	54 (43)

Note: Numbers in parentheses are from the previous Blackbook.

"Average" Weights:

Rule	Current	April Blackbook
Baseline	0.33	0.33
Opportunistic Disinflation	0.33	0.33
Dove	0.33	0.33

Exhibit D-5: FFR Distributions



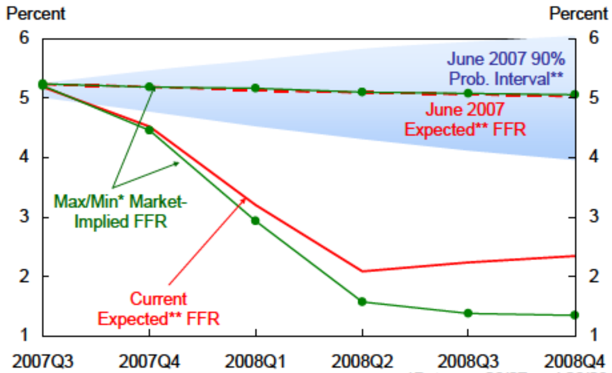
Note: The box represents the 50% probability interval, the line in the box the median, and the tails the 90% probability interval.

Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

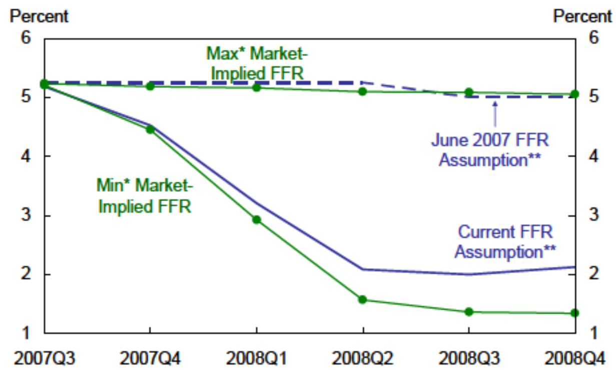
Exhibit D-6: Evolution of FFR Expectations and Assumption

FFR Forecast Distribution and Market-Implied FFR



*Between 06/07 and 06/08
**Using Baseline rule

FFR Conditioning Assumption and Market-Implied FFR



*Between 06/07 and 06/08
**Conditioning assumption for FRBNY central forecast

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*

The recent decline in productivity growth might prove to be a temporary, cyclical one. In this case, it is possible we will return to the strong productivity growth 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 18th 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. Strong productivity growth would also limit labor cost pressures and thereby help to subdue inflation.

Alternative 2: *Productivity Slump*

It is possible that the upswing in productivity that began in the mid-1990s has ended as the IT-driven surge has run it course. This would mean a period of productivity growth below the trend in our central forecast. Furthermore, the increase in the level and volatility of energy and commodity prices could continue and cause 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 three additional scenarios, two related to the impact of past monetary policy and possible misperceptions of its past and current stances, and one 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 in 2004-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; 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, which were aimed at strengthening the dollar 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: *Credit Crunch*

The financial turmoil that started in the summer of 2007 put a significant strain on the availability of credit. New issuances of commercial paper (CP) – in particular, asset-backed commercial paper (ABCP) – dropped sharply, and spreads between ABCP and AA-rated CP rose notably. Spreads on other credit products, including corporate bonds and CDS, also rose significantly. In addition, mortgage rates moved up, while credit standards began to tighten, making mortgages more difficult to attain. This combination of factors suggests the neutral rate is lower than before the financial turmoil began (we now estimate it to be between 3.5 and 4.0 in the near-term). The current FFR, which appears high relative to neutral, combined with the apparent lack of available credit creates 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. Statements of the FOMC about the immediate growth risks as well as prospects of further reductions in the FFR further fuel such concerns. It is possible that these statements and actions of the FOMC may lead to further increases in inflation and inflation expectations, and lead firms and households 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: *High Global Demand*

Recent global growth, most notably in China and other emerging markets, has been robust; at the same time, low unemployment rates and relatively high capacity utilization rates in advanced economies outside the U.S. indicate there is little slack in the global economy. If these developments continue, there is a risk that high demand for U.S.

exports will raise output growth above the level in the central forecast. At the same time, the strength in global demand could cause it to outpace supply, further pushing up commodity prices (and especially energy prices) and beginning to push up the price of imported manufactured goods. These increases would likely cause above-forecast inflation in the U.S.

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 above central forecast, output slightly below central forecast.
4. *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. *High Global Demand*: inflation above central forecast, output above 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)
$i^* = 3.75$ in short-term, moving to 4.25 (neutral FFR)
$\pi^* = 1.5$ (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
i_{t-1} : interest rate in previous quarter[2]

Because we know that, if the FFR target moves at the next meeting, its move will usually be in increments of 25 basis points, we round the first forecasted FFR value from the *Baseline* and alternative policy rule prescriptions.[3] This serves to both capture some of the discreteness in FFR movements and to smooth the FFR paths from the current to the

[2] For 2008Q1, we used a value of 4.25 instead of the interest rate in 2007Q4.

[3] For this Blackbook, we did not use this rounding rule. Instead, for each rule, we used the first forecasted FFR value exactly as given by the rule.

upcoming quarter. We currently perform this exercise according to the following table, where r* is the actual output from the policy rule:

Policy Rule Prescription	Average FFR in 2007Q4
r* < 3.00	r*
3.00 < r* < 4.00	4.50
4.00 < r* < 5.25	4.54
5.25 < r* < 6.00	4.75
r* > 6.00	r*

We then feed these modified values into the policy rules to calculate the remaining FFR values.

The two variants of the *Baseline* rule that we use this cycle are the *Opportunistic Disinflation* and *Dove* rules. The *Opportunistic Disinflation* rule reacts more strongly than the *Baseline* rule to deviations of inflation from target when inflation is above the upper bound of the implicit target range (taken to be 2%) and falling. In such circumstances, it tends to raise the policy rate higher, then lower it more slowly than the *Baseline* rule. Specifically, in each quarter over the forecast horizon, if the four-quarter average of core PCE inflation in the prior quarter is above 2% and higher than the current quarter value, we substitute the prior quarter's core PCE inflation value for the current quarter's value in the *Baseline* policy rule specification (i.e. set $\pi_t = \pi_{t-1}$). In all other cases we follow the *Baseline* rule prescription. Thus, if the four-quarter average of inflation in the last quarter is below the value for the current quarter or simply below 2%, the *Opportunistic Disinflation* rule offers the same prescription as the *Baseline* rule.

The *Dove* rule reacts more strongly than the *Baseline* rule to a negative output gap. When the output gap is negative, the *Dove* rule increases the weight on deviations of output from potential ($\varphi_x = 1$ instead of 0.5). When the output gap is positive, however, the *Dove* rule offers the same prescription as the *Baseline* rule ($\varphi_x = 0.5$, as usual).

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 previous quarters using parameters estimated from real-time historical data (1988-2006)[4].

We also want to compare the policy paths and distributions calculated using these rules with the market-implied path and distribution. In these charts, we use the standard path of market policy expectations derived from fed funds and Eurodollar futures contracts that is pictured in Exhibit A-5. For Exhibit D-6, 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)

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