FRBNY Blackbook

RESEARCH AND STATISTICS GROUP

FOMC Background Material

August 2008

CONFIDENTIAL(FR) Class II FOMC

FRBNY BLACKBOOK

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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 August FOMC meeting. After that, we anticipate that the FFR will remain at that level until the latter part of 2008 at which time (assuming the risk of recession has receded sufficiently and market conditions have stabilized) we expect the policy renormalization process to begin. In this renormalization process, we expect the FFR to rise to 3.25% by August 2009, and then to reach 4.25% by mid-2010, a path unchanged from the assumed policy path in the June Blackbook. Over the near term, we continue to recommend that the FOMC give a flat signal; i.e., communicate that there are roughly equal probabilities of downward and upward deviations from this path. Given our outlook and risk assessment, our recommendation for the FFR in the current quarter lies below the rate implied by our *Baseline* policy rule; however, the pace of renormalization starting in late 2008 would be somewhat quicker than that implied by the *Baseline* rule. Furthermore, relative to financial market expectations, we anticipate a steeper renormalization path for the FFR, which should enable the FOMC to reaffirm its price stability goal.

The recent data on core inflation and some alternative measures of underlying inflation as well as the June CPI report suggest a modest increase in near-term inflation pressures, although we continue to expect an eventual moderation in underlying inflation. Labor compensation growth remained moderate, likely due to downward pressure from the ongoing softness in the labor market. Moreover, continued strength in productivity growth has provided an additional restraint on labor cost pressures. The trade-weighted foreign exchange value of the dollar depreciated modestly during the inter-meeting period, but remained within the fairly narrow range that has prevailed since March, suggesting no further inflationary pressure from this source.

Nevertheless, there continue to be some upside risks to our inflation outlook. Long-term financial market inflation compensation increased modestly and remained elevated. Measures of short-term household inflation expectations remained near multi-year highs, while firms continued to report heightened price pressures. Although energy and commodity prices have declined recently from their record highs, they have kept overall inflation well above core inflation. Moreover, we have only seen limited pass-through from the run-up of energy prices, commodity prices and import prices to underlying inflation, suggesting that these factors potentially could still exacerbate inflation pressures. These developments along with financial market expectations for a flat FFR over the near-term have raised concerns about the FOMC commitment to price stability. We believe that these concerns have some legitimacy; thus, we have incorporated them into our forecast by raising the probability of the *Loss of Credibility* scenario to account for a possible unmooring of long-term inflation expectations that would make containing inflation more difficult for the FOMC. Consequently, inflation risks remain skewed to the upside, and modestly more so than in the June Blackbook.

While the indicators of real economic activity for 2008Q2 came out stronger than anticipated in the June Blackbook, they also suggest that there is little momentum entering the second half of the year. Therefore, we now expect lower GDP growth in 2008H2 and 2009H1 than we did in the June Blackbook. The main reason for the downward revision in the real GDP growth forecast is a lower outlook for consumption: the fiscal stimulus effect appears to have been muted and already appears to be fading; and high energy prices, tight credit conditions, and falling home prices are expected to continue to impact negatively on consumption. Another factor is the housing sector, which remained weak with prior signs of stabilization in activity now becoming more uncertain. Moreover, mortgage market conditions tightened during the inter-meeting period, adding to the existing concerns about the elevated inventory-sales ratio and the high vacancy rate. Labor market conditions remained fairly weak, with the recent behavior of payroll employment data indicating a significant likelihood that the economy has entered a recession, an impression reinforced by the July labor market report. The recent sharp rise of unemployment claims (although they may be exacerbated by the introduction of temporary extended benefits) raises the risk of a more severe weakening in the labor market. While manufacturing generally remains sluggish, net exports are expected to remain a major contributor to GDP growth. On balance, these developments do not change our overall assessment for growth in 2008 (Q4/Q4) but have led us to mark down our forecast for GDP growth for 2009 from 3.0% to 2.5%.

Economic and financial developments have indicated greater downside risks to real activity. The inter-meeting period witnessed renewed stress in credit and financial markets. The major negative news included the failure of IndyMac Bank as well as concerns about the solvency of Fannie Mae and Freddie Mac stemming from the continued rise in both subprime and prime mortgage delinquency rates. While there was a positive response to the plans announced to support the GSEs, it appears that these institutions will be less active in the mortgage market over the near term, which may tighten the mortgage market further. Beyond these institutions, there were concerns about the health of large regional banks and other loan markets, including commercial real estate and construction loans, reflecting worries about the general health of the financial system. In concert with these concerns, equity prices fell, a number of credit spreads increased, and credit growth slowed. The July Survey of Senior Loan Officers also indicated a further tightening of credit conditions. Given these forces, the announcement of enhancements to the Fed liquidity facilities had little effect on financial market prices, although they may eventually provide some improvement to funding market function. Taken together, the weakened outlook for real activity and the heightened concerns about the health of the financial sector suggest an increased probability that an adverse financial feedback loop will be established. Accordingly, we have increased the weight on the *Credit Crunch* scenario, resulting in the risks to real activity being skewed somewhat further to the downside compared to the June Blackbook.

The developments in our outlook and risk assessment imply that the tension for policy presented by upside risks to inflation, particularly the possibility of a loss of FOMC credibility, and downside risks to real activity were exacerbated somewhat over the inter-meeting period. We see these developments as somewhat offsetting, and thus we have not changed our recommended policy path. Under our central forecast, with the FFR maintained at 2.00% in 2008Q3, we expect GDP growth to be slow but positive in 2008H2 before it begins to rebound moderately in 2009. At the same time, core inflation is expected to be slightly above the upper bound of the mandate-consistent range in 2008Q3 before moderating slowly over the rest of the forecast horizon. In the absence of significant deviations from our central forecast, we still maintain the view that the FOMC should begin the process of renormalizing the FFR by the end of this year**,** raising it to 3.75% by the end of 2009, and to 4.25% by mid-2010. Our recommendation for the FFR is slightly below that of the *Baseline* rule under our central scenario in 2008Q3, reflecting the incorporation of continued financial fragility. However, the pace of policy renormalization in our recommendation beginning in 2008Q4 is faster than the prescription of the *Baseline* rule, reflecting our view that the FFR should be renormalized relatively quickly, in part to re-affirm the FOMC price stability objective and thus maintain credibility.

Relative to the June Blackbook, market expectations of the FFR moved down during the inter-meeting period. The change in market expectations probably reflects changes in the outlook and risk assessment of market participants as well as some reassessment of the FOMC reaction function in response to the negative economic data releases and financial market events. Short term, financial markets essentially anticipate no change in the FFR at the August meeting and the probability of no change in September also has increased. As a result, an increase in the FFR is not fully priced into market expectations until 2009Q1. Our policy recommendation thus is now 25-75 bps above the market-implied path over most of the forecast horizon. Interestingly, policy uncertainty priced in financial markets decreased since the last FOMC meeting; in contrast, with uncertainty around our outlook somewhat larger, the probability intervals around the paths under our policy rules have increased somewhat. Our policy recommendation also remains above that expected in the primary dealer survey, which was little changed from that in June, as a number of primary dealer economists apparently still expect the FOMC to follow a more cautious path because of financial market fragility.

With reference to inflation, it will be important to communicate the continued focus on core rather than headline measures. We view core inflation as a useful indicator of future movements in overall inflation. Even with the rise in June core CPI, core inflation has been relatively stable recently and lies within or just above our comfort zone, suggesting that underlying inflation pressures remain fairly well 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. In the current environment, this is an admittedly difficult communications issue. In part to address this difficulty as well as to reaffirm its price stability goal, the FOMC should communicate its readiness to begin the renormalization of the FFR with signs of rebounding economic activity and an improvement in financial market conditions. However, if core inflation begins to display an increase toward overall inflation and/or if inflation expectations show signs of becoming unmoored, the FOMC should be prepared to revise the near-term policy stance towards faster tightening.

Relative to the June Blackbook, the uncertainty about our projected policy path, both on the downside and on the upside, has increased; again, in contrast to policy uncertainty priced into financial markets. On the downside, additional reductions in the FFR may be required if there were renewed signs of the broader economy being impacted by significant spillovers from financial market turbulence, tighter credit conditions, and the housing downturn, particularly if these signs 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, threatening the credibility of the FOMC.

2. Significant Developments

2.1 Economic Developments

Inter-meeting developments regarding inflation were mixed while prospects for growth in the second half of 2008 and 2009 were downgraded.

Inflation. Inter-meeting developments regarding inflation were mixed. Both total and core CPI inflation in June were higher than expected, with several measures of underlying inflation moving upward. The rate of increase of non-petroleum import prices moved higher. In contrast, oil and many other commodity prices declined significantly. Moreover, productivity appears to have increased to around 2.5% (annual rate) in 2008Q2 while increases in labor compensation slowed, producing a marked slowing in the rate of increase of unit labor costs.

After rising 0.7% (monthly rate) in May, the total CPI rose 1.1% in June, bringing the twelve-month change up to 4.9%, the highest since May 1991. As was the case in May, the large increase in total inflation was led by energy prices, which rose 6.6% (monthly rate) and were up 24.4% since June 2007. Food prices also rose sharply in June, up 0.8% (monthly rate), which brought the year-over-year increase to 5.3%, again the fastest increase since the early 1990s.

The monthly pattern of increases of the total CPI in 2008Q2 makes a further increase in total inflation in 2008Q3 highly likely, even if the average monthly change in the quarter moderates somewhat. The increases in the total CPI in April, May, and June were 0.2%, 0.7%, and 1.1%, respectively. As a result, the June level of the price index, the jumping off point for the third quarter, was well above the second quarter average level.

Data on spot energy prices for July suggest that the rate of increase of the CPI energy component in July will be considerably slower than in May and June. However, due to the phenomenon discussed above, the quarterly rate of increase for 2008Q3 will still likely exceed that of 2008Q2.
The 0.32% (monthly rate) increase of the core CPI in June, the largest monthly increase since June 2001, was also an upside surprise. The core CPI had increased just 0.1% in April and 0.2% in May. Measured on a year-over-year basis, core CPI inflation increased from 2.3% in April and May to 2.4% in June. As with total inflation, the monthly pattern of increases in the core CPI in the second quarter make an increase in the quarterly increase in core inflation in 2008Q3 highly likely for just arithmetic reasons.

Both core goods and core services prices increased at a faster rate in June. Some of this was likely just a bad draw. For example, prices of tobacco products and telephone services both rose sharply in June. Prices for apparel and new vehicles, which have been declining on average, also both increased in June. Moreover, second round effects of rising energy prices were evident in the sharp increase in prices for public transportation. That being said, the June price data were disconcerting given that price increases in so many categories were relatively elevated. For example, the median CPI rose 0.38% in June, the largest monthly increase since January 1991, and 12-month change in the trimmed-mean CPI was above its recent ranges.

The core PCE deflator rose 2.1% (annual rate) in 2008Q2, somewhat faster than we were anticipating. We do not have sufficient detail at this time to determine what specific categories had higher-than-expected price increases.

The rate of increase of nonpetroleum import prices continued to move higher in June, reaching 7.3% on a year-over-year basis, the fastest rate of increase since the mid 1980s. This faster rate of import price increase was broad based. While the correlation between the rate of increase of nonpetroleum import prices and the rate of increase of core goods prices is quite weak, given the recent magnitude of those import price increases it would not be surprising that some pass-through into domestic prices has occurred.

As recently as July 14 the spot price of West Texas Intermediate closed above $145/barrel. Over the last four trading days it has averaged about $124.45/barrel, a decline of 14%. The one-year futures contract price has seen a comparable percentage decline over the same period, suggesting that market participants believe this is more than a blip. Thus far, the DOE weekly average retail price for gasoline has fallen by only about 4%. However, four-month gasoline futures prices are down 15% from their peak in early to mid-July. Spot prices for natural gas have declined about 25% since early July, while the six-month futures contract price has declined about 30%. Some grain prices, particularly corn, soybeans, and wheat, have also declined significantly over the inter-meeting period whereas industrial metals prices have declined modestly. The primary explanation for this general weakening of commodity prices is the downgrading of global growth prospects, particularly for the U.S. and other developed economies.

Shorter-term inflation compensation declined sharply over the inter-meeting period with the decline in oil prices, with 0-5 year compensation declining 40 bps to 2.04%. However, longer-term inflation compensation increased modestly, with the Board's 5-10 year measure rising 18 bps to 2.89%.

Real Activity. Projections of growth of real GDP in 2008Q2 continued to move higher over the inter-meeting period. The advance estimate was 1.9%, somewhat below our final estimate of 2.5% but above the 1.2% projected in the June Blackbook. But despite the fact that first half growth turned out to be somewhat stronger than expected, growth prospects for the second half of 2008 and 2009 weakened significantly.

Expectations of the future strength of consumer spending were significantly downgraded over the inter-meeting period. Growth of retail sales ex autos was weaker than expected in June, particularly in light of the higher-than-expected increase in gasoline prices. Based on the advance estimate, growth of real PCE rose at just 1.5% (annual rate) in 2008Q2, up only modestly from the 1% average growth of the preceding two months. Real consumption of gasoline continued to decline while aggregate energy consumption was essentially unchanged (household energy consumption is allocated roughly as follows: 58% gasoline, 26% electricity, 12% natural gas, 4% other: fuel oil, coal, propane). Real spending on furniture and apparel did grow considerably faster in 2008Q2, consistent with the expected impact of the rebate checks. Indeed, a very recent academic paper finds evidence that the rebate checks have provided a significant boost to spending. However, the relatively tepid overall growth of consumer even with the rebate checks suggests very weak underlying fundamentals.

The ongoing housing correction continues to exert a substantial drag on the US economy. After appearing to stabilize in late winter and early spring, more recent data suggest that housing production and sales were moving lower as we entered the third quarter. Sales of new single-family homes were essentially unchanged in June, and while still elevated, inventories of unsold new homes moved substantially lower. Nonetheless, the National Association of Home Builders' Housing Market Index moved lower in July. Single-family housing starts fell 5.3% in June and single-family permits have resumed their decline. Prospective buyer traffic at new home subdivisions has fallen off considerably, and builders report increasing difficulty in obtaining mortgage credit even for customers with high credit scores who are in a position to make a substantial down payment.

Both the OHFEO and Case-Shiller monthly home price indices for May were released over the inter-meeting period. While year-over-year price declines continued to grow larger, both indices show a pattern of some-what less steep month-to-month declines. Some analysts have cited this development as evidence that the worst of the price declines are behind us. We believe it is too soon to draw such a conclusion. Home prices still appear to be well above equilibrium levels. The number of vacant homes for sale is still very high, with foreclosures still rising. Finally, anecdotal reports suggest that a further tightening of mortgage credit availability is underway.

While a modest increase was expected, business investment in equipment and software declined somewhat in 2008Q2. Transportation equipment, which has been the center of weakness in business investment, fell at nearly a 50% annual rate in the second quarter. In contrast, business investment in IT equipment continued to grow at a solid pace and investment in industrial equipment grew 6.2% following a protracted period of weakness. Manufacturing output increased a modest 0.2% (monthly rate) in June, as auto output increased following strike-related declines in April and May; however, manufacturing output declined 3.7% (annual rate) in 2008Q2. The ISM manufacturing index was essentially unchanged in July at around 50, a level associated with little or no growth of output in the sector.

The drag from inventory investment was 1.9 percentage points in 2008Q2, much larger than expected. There was a particularly large decline in manufacturers' inventories over the quarter. The ratio of nonfarm inventories over final sales of goods and structures fell sharply in Q2. Even if firms want to further trim inventories over the second half of 2008, it is very unlikely that they would be reduced at the pace that occurred in the second quarter. Therefore, we expect inventories to be a plus for growth in the 2008H2.

Labor market. Labor market conditions weakened substantially over the inter-meeting period. Nonfarm payroll employment declined by 51,000 in July while the unemployment rate rose to 5.7% from 5.5% in June. Initial claims for unemployment insurance, while quite volatile, have moved notably higher over the past few weeks, reaching 448,000 for the week ending July 26. Based on the Employment Cost Index for 2008Q2, the rate of increase of labor compensation costs is stable to somewhat lower. Hours worked fell sharply in July, suggesting that nominal wage and salary income declined for the month.

Trade. The net exports contribution to real GDP growth in 2008Q2 was 2.4 percentage points, well above our projection prior to the GDP release. Real exports increased solidly in the quarter, with much of the strength in goods, possibly reflecting the impact of the previous depreciation of the dollar. Real imports fell sharply, with significant declines in both goods and services.

Foreign economies. Indicators suggest the global economy is experiencing a slowdown. In the euro area, the May data on production and orders were much weaker than expected and confidence indicators declined sharply in both June and July after being stable in previous months. While data on unemployment and exports are somewhat more favorable, there is a significant risk that output fell in 2008Q2. Japanese exports and production faltered in June and the Tankan survey show much less business optimism, raising recession fears. The four-quarter change of China GDP was 10.1% in 2008Q2; in each quarter of 2007, growth was at or above 11%. Credit growth and retail sales remain strong, but export sales are slowing, particularly to the United States and Asia.

Special Topic

The Annual Revisions of the NIPA

Bart Hobijn Redacted *and Charles Steindel* Redacted

The annual revisions to the GDP accounts were not particularly large and thus do not materially affect our assessment of recent developments.

In addition to the new data for 2008Q2, the July 31st GDP release also incorporated annual revisions of the National Income and Product Accounts going back to 2005Q1. By historical standards these revisions were not particularly large, and thus they do not materially affect our assessment of the economic developments over the past three years.

The revisions mainly affected estimates of current dollar data on the expenditures and income sides of the account. Most deflators were little changed. One relevant exception was core PCE inflation, which was revised upward modestly in 2007 and is now between 2.1% and 2.3% for all years between 2004 and 2007 (Q4/Q4).

On the expenditure side, services personal consumption expenditures were revised downward over the last three years, largely offset by upward revisions in other components. The result is that year-over-year real GDP growth was revised down modestly (0.2 percentage points or less) in 2005-2007.

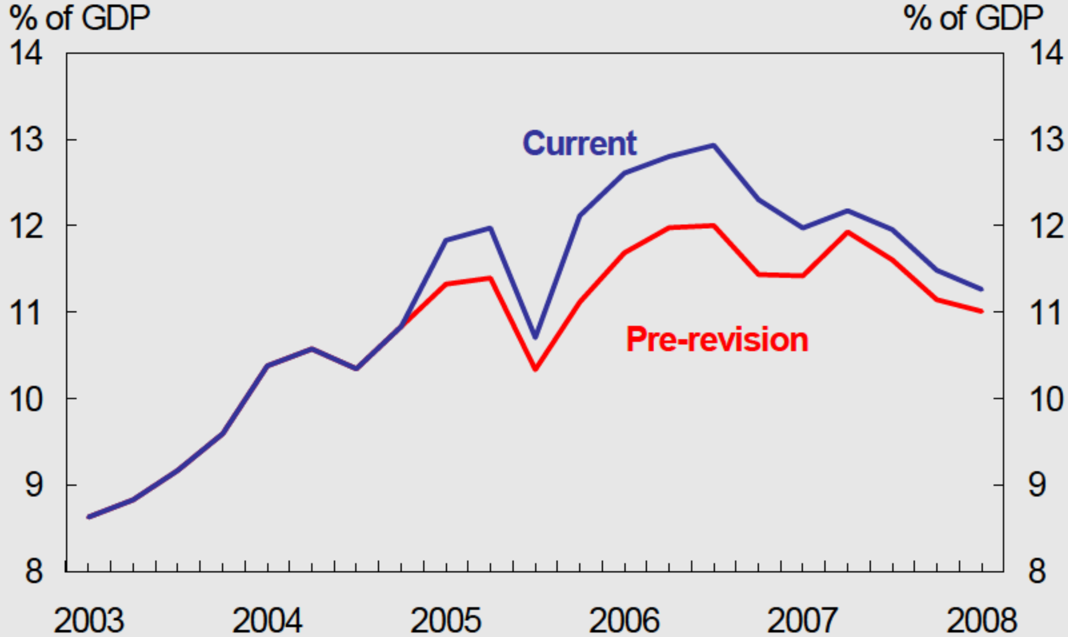
The most notable revision of the quarterly data was 2007Q4, which now shows a 0.2% (annual rate) decline rather than a 0.6% increase. This suggests modestly more weakness in the economy at the end of last year.

On the income side, the most substantial revision was to corporate profits, which were revised upward for all three years. Corporate profits, especially for domestic industries, declined markedly starting in 2007H2. With the upward revisions, the profit share of GDP in 2006Q3 was the highest since the end of 1950 (Figure).

While profits were revised upward, compensation was marked down. The downward revision of compensation growth and virtually unrevised output growth imply a lower growth rate of unit labor costs, which suggests that labor cost pressures probably were less than previously thought.

With little change in real growth and inflation, estimates of the potential growth rate probably are little changed by the revisions. The slight markup of 2007 core inflation could conceivably lend some credence to those concerned about an erosion of the Fed's credibility. However, given the small revisions, and the noise in the quarterly numbers, such judgment appears to be highly tentative.

Figure 1: Revision of Corporate Profits



Note: Corporate Profits (with IVA and CCAdj) as a share of GDP

Source: Bureau of Economic Analysis

2.2 Financial Markets

Concerns about the health of the financial sector led to greater downside growth risks being priced into many markets. Consequently, policy rate expectations and equity prices fell, while a number of credit spreads rose since the last FOMC meeting.

U.S. Markets. Financial sector concerns intensified over much of the inter-meeting period with the failure of IndyMac Bank and increased concerns about the solvency of Fannie Mae and Freddie Mac. Concerns mitigated somewhat after the Federal Reserve and Treasury announced steps to support the GSEs, supporting legislation became more likely and eventually became law, and after several banks reported better-than-expected earnings. The financial sector ETF is down 0.5% since the June FOMC meeting, after declining 21.0% between June 24 and July 15, and then rising 26.0% between July 15 and July 31.

Policy expectations declined over the inter-meeting period with the increased financial sector concerns and with official commentary suggesting a more moderate pace of policy tightening. Rate expectations roughly one year ahead declined 60 bps to 2.64%.

In the near-term, an unchanged 2% policy rate is expected at the August FOMC meeting with 90% probability. At the September meeting, no change is also seen as most likely, with much of the remaining probability on an increase rather than a decrease. Roughly 15-20 bps of tightening is priced in over the rest of 2008.

Policy rate uncertainty generally declined over the inter-meeting period, reflecting decreased uncertainty about the pace of policy tightening. 0-6 month implied volatility declined 39 bps to 237 bps and 1-2 year uncertainty declined 50 bps to 333 bps.

The 2-year note yield declined 33 bps to 2.51% since the June FOMC meeting, reflecting the more moderate expected pace of policy tightening. The 10-year note yield declined a more modest 14 bps to 3.95%. Treasury bill yields declined on flight-to-quality flows, with the 3-month yield down 17 bps to 1.67%.

After dropping early in the period, real yields rebounded in the last three weeks (as some of the more extreme downside risks associated with the financial sector receded) to end the period little changed. Nevertheless, real rates remained fairly low: the 5-year real yield was 1.09% on July 31 and the 10-year real yield was 1.64%.

Shorter-term inflation compensation declined sharply over the inter-meeting period with the decline in oil prices, with 0-5 year compensation declining 40 bps to 2.04%. Longer-term inflation compensation increased modestly, with the Board's 5-10 year measure rising 18 bps to 2.89%.

Credit spreads generally widened over the inter-meeting period on the increased financial sector concerns. The single A corporate credit spread widened 50 bps to 314 bps and the BB spread widened 71 bps to 551 bps. The 10-year swap spread was unchanged at 71 bps. These spreads are at recession levels.

Despite the turbulence in financial markets, conditions in the funding markets were fairly stable over the inter-meeting period. PDCF borrowings declined to zero and most TSLF auctions continued to be undersubscribed. Term LIBOR-OIS spreads were little changed at elevated levels.

Broad equity indices declined since the June FOMC meeting, with the Wilshire index 3.5% lower. Equity implied volatilities rose sharply during the inter-meeting period, but recently declined: the VIX rose from 22.4% on June 24 to 28.5% on July 15, before declining to 22.9% on July 31.

Foreign Markets. Global funding conditions remained fragile during the inter-meeting period although euro and sterling LIBOR-OIS spreads declined slightly over the inter-meeting period. These spreads remain persistently high, with 3-month spreads on or just below the 70 basis point mark. The ECB's allotment of €25 billion ($39 billion) in their second 6-month supplementary long-term refinancing operation on July 9 hardly moved the euro LIBOR rate. In addition, there is continued demand for dollar funding from

European institutions, as exemplified by the results from the ECB's dollar TAF auction on July 28 and widening euro-dollar FX swap spreads

European and Japanese equities declined, shedding between 3 and 4 percent since the last FOMC meeting. Continued negative sentiment towards financial stocks and fragile credit conditions was one of the drivers in these declines (e.g., news that a large Spanish property developer has sought bankruptcy protection and reports that Japan's three largest banks hold approximately $45 billion in Fannie Mae/Freddie Mac debt). Also, concerns about economic growth prospects played a major role, as recent data releases and surveys point to mounting evidence of a significant growth slowdown in Europe and Japan for the year ahead.

Energy prices decreased on net over the inter-meeting period, with spot oil prices declining about 9 percent after reaching record highs in early July. Concerns about a slowdown of the world economy as well as higher-than-expected energy inventory data in the U.S. appears to be responsible for these declines. The unwinding of speculative positions in the oil futures market exacerbated the moves. Nonetheless, the continuing growth of demand from China, the Middle East, and Latin American economies is widely perceived to keep oil prices at high levels.

Long-term interest rates declined between about 17 and 40 basis points in Europe and Japan. A comparison with data from inflation-linked bonds reveals that these declines mainly coincided with decreasing breakeven inflation rates. These developments reflect the recent decrease in energy prices, which was the main driver of accelerating headline inflation, as well as an increased risk of a significant growth slowdown in these parts of the world. The continued rise of inflation in emerging markets due to high commodities and food prices led to significant increases in long term interest rates across these economies.

The dollar remained broadly unchanged over the inter-meeting period, with the dollar gaining about 15 basis points in trade-weighted terms. In the earlier part of the period, dollar movements were mainly driven by fears that the slowdown of the U.S. economy is deepening further. Later in the period, the dollar was supported by Bernanke's comments on FX intervention as well as more solid signs that the economic prospects for the euro area and Japan are deteriorating significantly. Some of this dollar strengthening, however, reversed after the publication on July 31 of the lower-than-expected Q2 number for U.S. GDP growth. The dollar depreciated more gradually *vis-à-vis* the Chinese yuan than in previous periods, as Chinese authorities are becoming increasingly concerned about the impact of slowing external demand and less so about inflation risks.

2.3 Global Economic Policy

Since the last FOMC meeting, the ECB increased its policy rate with 25 basis points to 4.25 percent on July 3, whereas the Bank of England and the Bank of Japan remained on hold. Consumer price inflation reached new highs in the euro area and the United Kingdom, with some tentative signs of increasing risk of a spillover to inflation expectations and wages. However, real activity data as well as surveys provide mounting evidence of a significant near-term economic slow down for all three regions. Official commentary in the U.K. stressed the temporary nature of recent high inflation levels due to the global surge in commodity prices and the high risk of slowing growth. In a similar vein, the Bank of Japan substantially lowered its official growth forecast for 2009 with officials publicly emphasizing negative growth risks for the near-term. And although the ECB rate hike was fully anticipated by market participants, official commentary was less hawkish than expected as it emphasized weak growth prospects for the euro area. These statements and the recent data reinforced the perception that over the inter-meeting period these central banks have started to put more weight on growth risks. Therefore, markets now expect broadly unchanged policy rates in Europe and Japan over the next 12 months, with a low probability of a 25 basis point rate hike in the euro area and the U.K. in early 2009.

Central banks in the emerging world also are confronted with accelerating inflation and an increasingly more risky outlook for growth. The central banks of Brazil, India, Mexico Poland, and South Africa all increased policy rates—citing inflation concerns—while the central bank of Korea continued to intervene in currency markets to support its currency, in part aiming to contain the pass-through of imported inflation. However, the PBOC is expected to pursue a more accommodative stance, as Chinese consumer price inflation is moderating and export growth is slowing. In general, central banks in emerging Asia are likely to pursue a more modest policy tightening, with real domestic spending growth being constrained by higher food and energy prices and a gloomier global economic outlook. Swap interest rates for these economies indicate that since the last FOMC meeting, markets expect a much less aggressive tightening over the remainder of the year.

3. Evolution of Outlook and Risks

3.1 Central Forecast

Conditioning assumptions. Although the advance estimate of real GDP growth in 2008Q2 was somewhat above our projection in the June Blackbook, the inter-meeting developments have led us to reduce our central forecast for real GDP growth in 2008H2 and 2009H1 and to raise the downside risks to the real outlook. At the same time, even though commodity prices and short-term inflation compensation have dropped recently, many measures of underlying inflation and long-term inflation compensation increased modestly and remain elevated. These developments have led us to raise modestly our inflation forecast and upside inflation risks. In terms of policy, these developments roughly offset, and thus we have not changed our assumed path for the FFR. We still assume the first increase in the FFR will occur in 2008Q4, after which the FFR rises to 3.75% by the end of 2009 and 4.25% in mid-2010 [Exhibit B-2].

Our assumed path for the FFR is above the path currently implied by prices in futures markets, which moved down over the inter-meeting period. Our assumed path also remains above the assumed policy path in the Greenbook, which is unchanged from the June FOMC. Given the small differences in the inflation forecast, our path also implies a real FFR above that in the Greenbook.

We continue to believe that over the medium term the neutral FFR lies between 3.75% and 4.75%. However, we suspect that the recent and continuing tightening of credit conditions has lowered temporarily the neutral FFR over the near term, perhaps between 2.75% and 3.75%. Our forecast presumes that the significant easing of monetary policy in 2008H1, a gradual leveling of the housing market downturn, and a gradual return of more normal financial market functioning eventually will enable the economy to gain more sustainable forward momentum. In that case, policy rates will need to be renormalized relatively quickly to avoid a serious unmooring of inflation expectations.

After providing signs of possible housing activity stabilization for few months, housing indicators for June suggest that a bottom has not yet been reached. Single-family starts and permits as well as sales declined further in the month. Although inventories of new homes declined further in the month, inventories-sales ratios and homeowner vacancy rates remained elevated, indicating that a significant overhang of homes remains that will continue to retard construction in the coming months. In addition, the problems of the GSEs as well as the continued poor functioning of mortgage-related financial markets have led to an apparent further tightening of mortgage credit, in part evidenced by the decline in mortgage applications over the inter-meeting period. Consequently, we expect the housing market to be somewhat weaker than we previously assumed, and we have reduced our assumption for the path of housing starts by 50,000-75,000 units (annual rate) over the forecast horizon [Exhibit B-2].

The economic indicators for the euro area, the U.K., and Japan generally were weaker than expected during the inter-meeting period. We now project slower growth in those areas in 2008, particularly in the U.K. Therefore, we have lowered our forecast of real GDP growth in these advanced economies for 2008. We have not made much change to the forecast for emerging market economies. Our projection for foreign real GDP growth in 2008 thus has been reduced from 2.3% to 2.1% (GDP-weighted). For 2009, outside of a small reduction in the Japanese GDP growth projection, we have made little change in foreign growth forecast: it thus remains at 2.7%.

Spot and future oil prices have been volatile during the inter-meeting period, with prices reaching record levels in early July and then dropping sharply. Based on our standard practices, our assumption for future oil prices is based on the average of futures prices in the previous two weeks. We thus assume that the average price of West Texas Intermediate oil will be $130.25 in 2008Q4 and $132.50 in 2009Q4, which is about $10 above current futures and modestly above our assumption in the June Blackbook.

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 made little change in their home price assumption: they assume that the OFHEO purchase-only index falls another 7% in 2008 and drops at a similar rate in 2009H1. The decline then is assumed to taper off in 2009H2. Based on historical relationships, the corresponding decline of the S&P/Case-Shiller index would 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 similar to those incorporated in the Greenbook, as both forecasts do not assume an additional stimulus package at this time. We are also a little more cautious about the impact of the temporary extension of unemployment benefits than the Board staff.

The “annual” revisions (from 2005 on) to the NIPA were relatively minor, and at the moment do not appear to suggest any substantial change in trend growth. We thus maintain our estimate of potential GDP growth at 2.7%. We assume 1.2% trend hours growth (although we expect that 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). However, given the adjustment process associated with financial stresses and higher energy prices, there is some risk that potential growth may be temporarily below our estimate. Given our estimate of potential, we expect an output gap of about 1% of GDP to emerge over the course of 2008. Little of that output gap would then be closed in 2009. As always, there is substantial uncertainty around our estimate of potential GDP growth and estimates of output gaps.

We expect the lower degree of inflation persistence evident, as seen since the early 1990s, to continue; our assumed persistence is less than that assumed in recent Board staff forecasts. Financial market inflation compensation at shorter horizons dropped over the inter-meeting period with the decline in oil and commodity prices, while inflation expectations at longer-term horizons increased but remained within recent prevailing ranges. In our central scenario, longer-term inflation expectations decline as overall inflation moderates. The 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 inflation of 1.5% to 2%. Finally, we expect term premia to remain relatively low. As measured by the Board staff's three-factor model, term premia changed little over the inter-meeting period and remained at fairly low levels.

Inflation. Even though oil and commodity prices declined in the second half of the inter-meeting period and were down on net, the risks to inflation have become modestly more skewed to the upside. Consumer energy prices outside of gasoline probably will continue to experience some upside pressure, as previous crude oil and natural gas price increases filter through to regulated utility costs. Refining margins also may absorb some of the recent decrease in crude oil prices. The exchange value of the dollar has remained within narrow ranges in the last couple of months, but the depreciation of recent years continues to impact import prices: the 12-month change in non-petroleum import prices reached 7.3% in June, the highest since the late 1980s, and increases in consumer goods, capital goods, and automobiles all remain elevated. Consequently, we see overall PCE inflation, which was 4.2% (annual rate) in 2008Q2, remaining above 4% in the current quarter.

Core PCE inflation in 2008Q2, at 2.1% (annual rate), was a little above our projection in the June Blackbook. In addition, core PCE inflation over the past year was revised upward. The June core CPI also indicated slightly higher underlying inflation and some alternative measures, such as the trimmed mean CPI, increased somewhat. Because of these indications of higher current underlying inflation, we have raised our near-term profile of core PCE inflation so that our projections for 2008 and 2009 (Q4/Q4) are 0.1 percentage point higher than in the June Blackbook.

Despite these developments, we continue to project that core inflation will moderate over the forecast horizon. The upward revisions in core PCE inflation appeared concentrated in the non-market based components of PCE; market-based core PCE inflation remained within the mandate-consistent range, mitigating some of the concern engendered by the revisions to core PCE inflation. Furthermore, with the reduction in projected output growth in 2008H2 and 2009H1, it appears that the economy will likely operate below potential in 2009, and that situation may persist for a longer period than we thought in the June Blackbook. The impact of this projected output gap, along with our assumption about the persistence of inflation, drives our expectation for the moderation of inflation.

Real activity. Even though real GDP growth in 2008Q2 was modestly above our projection in the June Blackbook (although below our projection just prior to the GDP release), it appears that the economy entered the second half with less momentum than previously expected. Consequently, we expect that real growth in 2008H2 and 2009H1 will be less than we expected in the June Blackbook. We then also expect a higher unemployment rate than we did in June.

A major factor behind our lower real GDP growth forecast is changes in our outlook for real PCE. Real PCE growth in 2008Q2 was disappointing, especially given the expected impact of the fiscal stimulus. It appears that much of the stimulus was spent to pay for higher energy prices, and thus the impact of the stimulus may fade quickly. Furthermore, weakness in discretionary spending categories does not bode well for the sector. We expect continued high energy and food prices, weaker income growth (as the labor market remains relatively weak), declining home prices, and tight credit markets to hold down consumer spending in the next few quarters.

The other major factor behind the lower forecast is residential investment. As discussed above, the recent housing data suggest that the bottom of housing market activity has not yet been reached. In addition, evidence of tightening conditions in the mortgage market raises the possibility that demand in the market could fall further. Consequently, we have lowered our assumption for housing starts, which results in residential investment declining into 2009, a longer downturn in this sector than we previously expected.

In the second half of 2009 and 2010, with financial market functioning closer to normal, conditions in credit markets should improve, helping to support growth. In those circumstances, the conditions for a moderate rebound in housing and consumption should be in place, and thus real GDP growth will rebound to near our estimate of potential or slightly above it.

With growth expected to be below potential over the next year, we assume that the unemployment rate to rise further, and it may exceed 6% for some month over the next year. Employment growth probably will fall further in 2008H2 before it rebounds modestly in 2009. We believe that the labor force participation rate will remain near 66%.

3.2 Alternative Scenarios and Risks

There have been a number of changes in our risk assessment since the last Blackbook [Exhibit C-1]. Some of the changes are technical in the sense that some of our uncertainty concerning the past state of the economy was reduced with the release of the advanced estimate of 2008Q2 GDP and the three-year revisions to the National Income and Product Accounts. Taking these releases in account, we have increased slightly the probability of ever entering the *Credit Crunch* scenario to 32% from 30% in June; it is important to recall that for much of the first half of the year, this probability had been close to 50%. The modest increase in the probability of the *Credit Crunch* reflects the increased strains in financial markets in the inter-meeting period partly offset by the continued resilience of real activity, rather than the generation of some of the more dire predictions of the effects of a credit crunch. Nevertheless, financial markets remain very fragile with still-evident stresses and the ongoing possibility of an adverse feedback loop, whereby financial market turmoil has a substantial negative effect on real growth. Consequently, the *Credit Crunch* scenario continues to be the most likely alternative scenario.

The other major changes were a decrease in the *Global High Demand* scenario (not pictured) and an increase in the probability of the *Loss of Credibility* scenario. Although U.S. export growth remained robust in 2008Q2, soft indicators of real activity in a number of countries and the recent fall in oil and other commodity prices are consistent with lowering the weight on the *Global High Demand* scenario. Meanwhile, the higher expected reading on core PCE inflation for June, the rather high June CPI report, and the widespread nature of the increases in prices are consistent with the higher inflation paths contained in the *Loss of Credibility* scenario. In particular, although most measures of inflation expectations were stable or somewhat lower over the inter-meeting period, they nevertheless remain close to the top of the contained region and further upside surprises in inflation could move them beyond this upper bound.

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 similar to June but its maximum occurs later in the forecast period. The relatively constant assessment of the scale of downside risk is reflected in an approximately constant probability of recession and similar probabilities for the depth of the recession. Even with the relatively constant assessment of downside risk, the probability that four-quarter growth (excluding recession episodes) will remain above 1.5% is lower and there is more weight on a growth recession. In terms of core PCE inflation, the downside risks are similar to June but the increased weight on the *Loss of Credibility* scenario has produced a sizable increase in the 95th percentile of the distribution, which is the highest it has been since March. Overall, these changes imply that the probability that core inflation will remain below 2% has decreased since June.

4. Forecast Comparison

4.1 Greenbook Comparison

The July 31 release of the 2008Q2 GDP report has been factored into our forecast, but not that of the Greenbook. Conditional on that caveat, when compared to June, the differences between our central forecast and the Greenbook for the vast majority of economic indicators diminished somewhat [Exhibits B-6 and B-7]. In terms of real GDP, our central forecast and the Board staff's forecast now imply lower growth in 2008H2 and 2009. However, we reduced our growth outlook more significantly than did the Board staff.

With respect to inflation, there also has been some convergence in our forecasts. In terms of total PCE inflation, relative to the June Greenbook the Board staff reduced their forecast for 2008H2 while our forecast remained unchanged so that the forecasts converged. For 2009, the Board staff increased their forecast while ours is unchanged, so there is some divergence in that regard. In terms of core PCE inflation, we increased our forecast modestly over the next six quarters while the Board staff forecast is essentially unchanged, although it is still above ours. In contrast to the changes in the growth outlook, these changes indicate a smaller convergence in the assessments of the inflation outlook presented by the Blackbook and the Greenbook.

Conditioning assumptions. There have been no changes in the path for the FFR assumed in the Blackbook and the Greenbook relative to those in June. Under the Board staff's assumptions for the Greenbook, the FFR will be kept at 2% through the end of 2008, increase to 2.75% in the first half of 2009, and then remain constant during the second half of the year. In contrast, we recommend that the FFR increase steadily during the course of 2009 to reach 3.75% in 2009Q4. Market-implied policy expectations through the end of 2008 are similar to our recommendation. However, we envision a faster pace of normalization for the FFR over the course of 2009, which puts our expected path for the FFR above the market's and the Board staff's.

The outlooks for potential growth are also unchanged for both the Blackbook and the Greenbook. We continue to assume potential GDP growth of 2.7% (annual rate), whereas the Board staff assumes a rate of 2.5%. As before, the difference stems from alternative assumptions regarding structural productivity growth and labor force participation.

With regard to fiscal policy, the Board staff now expects it to be slightly more expansionary in the near term (at the federal level) due to the temporary extension of unemployment compensation (TEUC). In contrast, we have made no changes to our assumptions regarding the stance of fiscal policy.

As for asset prices and financial market conditions, the Board staff now expects stresses in financial markets to persist a while longer than in the June Greenbook. As usual, the assumed paths for various interest rates and asset prices have been adjusted to account for recent conditions in the various markets. House prices are now assumed to decline 7% this year and to maintain this annual rate of decline in the first half of 2009, after which some stabilization is expected. Equity prices are still assumed to increase at a 7% annual rate through year end, and then to rise by 12% over 2009. Interest rate spreads for fixed-rate mortgages and corporate bonds are still assumed to narrow through the end of 2009 in response to the improvement in economic activity.

The Board staff projects slightly higher foreign GDP growth in 2008 than we do. Our forecast is for foreign growth to slow from 3.4% (Q4/Q4) in 2007 to 2.1% in 2008 (down from 2.3% in June), while the Board has 2.2% growth for 2008 using our GDP weights. In June, the Board projected 2008 growth at 2.4%. Both forecasts lowered outlooks for Japan and Europe in response to a recent wave of weak data. The outlooks for emerging economies were relatively unchanged. The modest difference between the two forecasts is due to the Board being somewhat more optimistic for Japan and the rest of Asia and more pessimistic about the United Kingdom.

Inflation. The Board staff revised down significantly their assessment of total PCE inflation in 2008H2. The main factor behind this change is the expectation of lower energy price inflation, which more than offsets higher expected food price inflation. For 2009, the Board staff raised their total PCE inflation forecast, predicated on slightly higher energy price inflation coupled with higher food price inflation. In contrast, we have not changed our forecast for total PCE inflation. For core PCE inflation, there were fairly small changes to the paths in the Blackbook and the Greenbook and most of the changes were to the upside.

Real activity. As in the June Blackbook, we made more substantial reductions in our near-term forecasts of real GDP growth than the Board staff. In particular, we lowered our forecasts of real GDP growth in 2008H2. The Board staff also reduced their already low forecast for this period, but less so than we did. For 2009, both forecasts were reduced, but again we reduced our forecast more than the Board staff did. Because the Greenbook forecast was below ours in June, the difference between the two forecasts has narrowed a fair amount: from 0.6 percentage points in June to 0.3 percentage points in this cycle.

In terms of the labor market, the Board staff increased the assumed labor force participation rate for 2008 (Q4 level) by 0.1 percentage point, but they continue to expect a drop in labor force participation in 2009. They have also factored in a larger drop in nonfarm payroll employment for 2008, as we did. The resulting expectations for the unemployment rate at the end of 2008 in both the Blackbook and the Greenbook have risen in tandem from 5.6% to 5.9%. For 2009, the Board staff expects a somewhat weaker labor market than we do, with a somewhat smaller increase in nonfarm payroll employment over the year and a modestly higher unemployment rate at the end of the year.

Our projection of the net export contribution to 2008 real GDP growth is now very close to the Board staff's (1.1 versus 1.2 percentage points). Some differences remain with respect to import growth for 2008H2: the Board staff expects import growth to be virtually zero, while we expect import growth to be slightly above 1%. This disparity reflects differences in the forecasted path of U.S. domestic demand. There are significant differences concerning the forecast of the current account at the end of 2008. These partially arise from differences in forecasted import growth in 2008H2 as well as from different forecasted paths for oil prices (the Board staff forecast is somewhat below ours). There are no significant differences in the forecast for the net export contribution to 2009 real GDP growth.

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

In terms of uncertainty around the forecasts for real GDP growth in 2008, we have narrowed our probability interval somewhat. It is worth noting that our assessment continues to factor in more risk than the Board staff's, despite the fact our assessment incorporates the release of the 2008Q2 GDP report while the Greenbook does not. For 2009, both our probability intervals and the Board staff's have shifted towards lower growth outcomes as a result of lower central forecasts. However, there have been only minor changes in the assessment of overall uncertainty, as the width of both probability intervals remained essentially unchanged relative to June. For 2010, Table 1 now includes the probability interval for the Board staff's forecast. Relative to our probability interval, it features a slightly higher upper bound (4.5% versus 4.1%), combined with a significantly higher value for the lower bound (1.7% versus 0.6% in our interval).

In terms of uncertainty around the forecasts for core PCE inflation in 2008, the changes relative to June were relatively small. In both our assessment and that of the Board staff, core PCE inflation is seen as less likely to be below 2%. However, we still perceive that event as more likely than the Board staff. For 2009, the changes in risk assessment were also quite small. The lower and upper limits of the Board staff's probability interval are exactly 30 basis points higher than the limits of our interval, implying the same degree of uncertainty around different central forecasts. For 2010, Table 1 also includes the probability interval for the Board staff's forecast. Relative to our probability interval, it features both a smaller value for the lower bound (0.9% versus 1.3% in our interval), and a higher value for the upper bound (3.1% versus 2.5% in our interval), resulting in significantly higher overall uncertainty.

To assess the importance of the differences between our outlook and the Greenbook forecasts, we can 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 June values in parentheses.

Relative to June, the Greenbook forecasts for real GDP growth in 2008 and 2009 moved up in our distribution. While some of the movement likely reflects the fact that we factored 2008Q2 GDP report into our assessment, part of the movement can be attributed to the lowering of our central forecast for real GDP growth prior to the release of the report. For 2010, there was only a minor decrease in the percentile of our distribution in which the Board staff's forecast falls. In terms of core PCE inflation, the Greenbook forecast for 2008 and 2009 now lies in lower percentiles of our distribution, mainly as a result of our having increased the upside risks to our inflation outlook. Finally, the assessment for 2010 is unchanged relative to the June Blackbook.

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

	Core PCE Inflation		**Real GDP Growth**	
	FRBNY	*Board*	*FRBNY*	*Board*
2008	1.7-2.6 (1.5-2.5)	2.0-2.7 (1.9-2.7)	-0.1-2.4 (-0.6-2.6)	0.4-1.9 (-0.1-2.2)
2009	1.2-2.6 (1.1-2.5)	1.5-2.9 (1.5-3.0)	0.1-3.7 (0.6-4.3)	0.6-3.8 (0.9-4.0)
2010	1.3-2.5 (1.3-2.5)	0.9-3.1 (N/A)	0.6-4.1 (0.4-4.1)	1.7-4.5 (N/A)

Table 2: Percentile of Greenbook Forecast in FRBNY Forecast Distribution

	Core PCE Inflation	Real GDP Growth
2008	64 (69)	53 (50)
2009	65 (70)	57 (49)
2010	58(58)	66 (68)

Alternative Greenbook forecasting scenarios. The Greenbook presents six alternative scenarios. The first two scenarios explore downside risks to the growth outlook; one in the form of a prolonged slump due to severe stresses in financial markets, and the other associated with a typical recession. The next scenario explores upside risks to the growth outlook in face of unexpected resilience in private sector spending. The fourth scenario entertains the possibility of somewhat higher productivity growth relative to the baseline case. In the fifth scenario, costly sectoral reallocation of resources lowers the productive capacity of the economy for a while. The last scenario considers the effects of an increase in both short- and long-term inflation expectations.

In the *Severe Financial Stress* scenario, financial market strains intensify in the form of further credit losses and solvency concerns. Credit conditions tighten, risk premiums rise, and the housing market deteriorates further. Real GDP suffers a small contraction in 2008H2, and barely grows in 2009. The recovery is slow until 2011-12, when the economy finally grows faster than in the baseline scenario. Unemployment is substantially higher than in the baseline forecast, but core inflation only falls significantly below baseline in 2011-12. Policy responds by lowering the FFR to less than 1% in 2009, and maintains it around 1% during 2010. In contrast, the *Typical Recession* scenario depicts a sharp downturn in economic activity driven by cautious behavior on the part of households and businesses. The assumed shortfall in spending relative to fundamentals equals the average of the last six recessionary episodes. Real GDP falls at a 1.1% annual rate in 2008H2, and growth remains low in 2009 at 1.5%, before rebounding strongly in 2010-12. Unemployment increases to 6.5% in 2009, but core inflation does not fall significantly below baseline until 2011-12. Policy responds by lowering the FFR and keeping it just above 1% through the end of 2009.

In the *Resilient Spending* scenario, the auxiliary assumptions used to capture the effects of the financial/credit crisis are removed from the baseline scenario. Consumption and investment depart firmly from baseline in 2008H2, and real GDP growth is above its potential rate. After this, growth moderates in 2009, and then increases gradually in subsequent years. Core inflation is modestly higher than in the Board staff's forecast, and only falls to 2% by 2011-12. The FFR increases to 3% in 2008Q4, and then oscillates between 3.5% and 4% in 2009-12.

The *Stronger Productivity* scenario entertains the possibility that the higher levels of productivity growth observed recently reflect higher structural productivity. Accordingly, the scenario assumes that structural productivity growth is 0.5 percentage points above the baseline case. Stronger trend growth leads to higher consumption and investment. After reaching 2.7% in 2009, real GDP growth increases to around 3.75% in 2010-12. Unemployment falls continuously to reach 4.5% in 2011-12, and core inflation moderates to 1.5% in 2011-12. The combination of higher growth and lower inflation leads to only minor differences in the path for the FFR relative to the baseline case until 2010.

In the *Costly Sectoral Reallocation* scenario, the housing crisis, energy price shocks, and a decline in the dollar lead to sectoral shifts in factors of production that are costly. As a result, the labor market becomes less efficient temporarily, leading to an increase in the NAIRU and a reduction in productive capacity. Real GDP contracts mildly in 2008H2, growth remains below 2% in 2009 and GDP only grows faster than in the baseline case in 2010-12. Except for 2008H2, unemployment does not depart much from the baseline scenario, and thus the higher NAIRU implies less slack in resource utilization, and higher core inflation relative to the baseline case. Policy begins to tighten in 2009, as inflation remains higher than in the baseline case.

The *Inflationary Spiral* scenario explores the possibility that the persistently high readings on headline inflation lead to higher inflation expectations. Both short- and long-term inflation expectations increase initially by 0.5 percentage points, and thereafter the scenario assumes more malign inflation dynamics. GDP growth is slightly lower than in the baseline forecast, but core inflation is significantly higher. However, by implication of its assumed inertial nature, monetary policy tightens somewhat slowly. As a result, the ex-post real interest rate in 2009 is actually lower than in the baseline case. Policy becomes slightly more restrictive in 2010-12, but not enough to prevent core inflation from rising further in 2010-12.

4.2 Comparison with Private Forecasters[1]

Due to the timing of the 2008Q2 GDP release, this report was not factored into any of the private forecasts; also of note is that the last release of the Survey of Professional Forecasters occurred in mid-May and thus does not incorporate any economic information since May 13. Subject to these caveats, our real GDP growth forecasts fall in the upper end of the range of private forecasts for each forecast period, similar to the June Blackbook [Exhibit B-8]. In terms of core inflation, the forecasts for every period now display less dispersion than in June. With the exception of core PCE inflation in 2008Q3, our forecasts are the lowest for each period. Our projections for CPI inflation in 2008Q3 and 2008 (Q4/Q4) are towards the upper end of the range of private forecasts, but for 2008Q4 and 2009 (Q4/Q4) we again seem to be more optimistic about the prospects of a moderation in inflation.

Real GDP Growth. Relative to the June Blackbook, almost all of the forecasts for real GDP growth were reduced. Downward revisions ranged from 0.2% (annual rate) to 1.3%. The two exceptions are for 2008 where the Blue Chip and Macro Advisers forecasts are unchanged. We currently have the highest forecasts for 2008Q3 and 2008 (Q4/Q4). Our forecast for 2008Q4 is second only to the SPF forecast. In 2009, our forecast is below

[1] Release dates of the private forecasts discussed in this section are in parentheses: Blue Chip consensus (7/10), SPF (5/13), and Macro Advisors (7/25), PSI Model (7/30).

only that of Macro Advisers. The PSI model has the lowest GDP growth forecast for 2008Q3, as it predicts a contraction of 0.3% (annual rate). This pessimistic assessment of the growth outlook is a consequence of the extremely low readings of the various sentiment and confidence surveys incorporated into the model. In addition, Macro Advisers also foresee a contraction of GDP in 2008Q4.

Core PCE Inflation. For core PCE inflation, we have the lowest forecasts for 2008Q4, 2008 (Q4/Q4) and 2009. There is relatively little dispersion in the forecasts for the latter two periods, with a maximum difference of 0.30%, down from 0.50% in the June Blackbook. For 2008Q3, our forecast falls within the range of the SPF's and Macro Advisers' projections. Overall, the pattern of upward and downward revisions relative to the June Blackbook is somewhat mixed.

CPI Inflation. In terms of CPI inflation, our forecasts for 2008Q3 and 2008 are towards the upper end of the range of private forecasts, and in both cases are only exceeded by Macro Advisers'. In contrast, our outlook for CPI inflation in 2008Q4 and 2009 is on the optimistic side. Relative to the June Blackbook, most forecasters made upward revisions to their inflation outlook, most likely in response to unexpected sharp increases in energy prices and the June CPI release.

Core CPI Inflation. In terms of core CPI inflation, we have the lowest forecasts for all periods. The largest forecast dispersion occurs in 2008Q4. For 2009, we forecast 2% core CPI inflation, which is 0.30% less than the highest forecast (SPF). In turn, the range of forecasts for 2008Q3 and 2008 is extremely small, with a maximum difference of 0.10%.

5. Robustness of Policy Recommendation

5.1 Sensitivity to Alternative Scenarios and Policy Rules

As in June, there is a notable discrepancy between the FFR path implied by our rules, including the *Baseline*, and our policy recommendation. This discrepancy is especially evident in the medium term. The FFR path implied by all of the policy rules involves 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 2008Q4/2009Q1 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.

The very near-term difference between the policy rules and our recommendation occurs because the rules do not account directly for financial conditions. We still see financial conditions as stressed; accordingly, with inflation expectations and core inflation still apparently 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 then rise gradually thereafter, reaching 3.5% by the end of 2010 [Exhibit D-1]. This FFR path is similar to that in June, and again the *Baseline* rule paths under most of the other scenarios shown are similar to that under the central scenario. The exceptions are the *Credit Crunch* scenario, where the nominal FFR stays at 2% over the forecast horizon as a consequence of weak output growth and lower inflation, and the *Loss of Credibility* and *Global High Demand* (not shown) scenarios, where the rise in inflation leads to a more rapid increase in the FFR.

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 as in June. 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, the real FFR increases rapidly under the *Productivity Boom* scenario, reaching 2.5% by the end of 2010.

5.2 Comparison to Market Expectations

The FFR path priced into financial markets has moved down since the June Blackbook, and the market's medium-term uncertainty around that path also has decreased. The market path is now below our policy recommendation, as the responses of financial markets to economic and financial developments as well as to FOMC communications have led market participants to expect a slower renormalization of the FFR over the medium term. As in June 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. Exhibit D-1 shows that the market-implied path of the FFR rises more quickly in 2009 and reaches 3.75% by the end of 2010. The FFR path implied by all the rules rises more gradually, and is still below 3%

by the end of 2010 with the exception of the *Opportunistic Disinflation* rule which closely tracks the market-implied path after 2009. Exhibit D-1 also shows that this medium-run discrepancy still occurs even though the market-implied path for late 2009 and 2010 has decreased substantially in the inter-meeting period. The rule-implied path decreased by a lesser magnitude.

As noted earlier, market uncertainty about the FFR path has decreased at intermediate horizons. Consequently, the uncertainty around the market-implied path is again less than that for our rules as measured by inter-quartile ranges with the exception of the *Opportunistic Disinflation* rule [Exhibit D-5]. The difference probably is an indication of less 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 August meeting and then signal that it expects to maintain the rate at that level until the latter part of 2008. At that time, in the absence of significant deviations from our central forecast or instability in financial markets, the policy renormalization process should begin. The suggested path is the same as the path assumed in June, reflecting the need to strike a balance between renewed concerns about downside risks to our GDP forecast and an increase in upside risks to our inflation forecast. We now expect weaker GDP growth through the first half of 2009. Moreover, we are concerned that the economic slowdown may turn out to be more severe than is reflected in our central forecast, leading us to increase the probability associated with the *Credit Crunch* scenario. In addition, the ongoing elevated level of long-term financial market inflation compensation along with the possibility of further high readings of headline inflation raise concerns about an unmooring of long-term inflation expectations. Consequently, we have increased the weight attached to the *Loss of Credibility* scenario.

The recommended policy path is similar to the market-implied path over the near term. The paths begin to differ toward the end of 2008, as our assumed renormalization process begins somewhat earlier and progresses more quickly than that in the market-implied path. As a consequence, the difference between the paths is about 50 bps in August 2009 and up to 75 bps in mid-2010. The market path has shifted back down since the last FOMC meeting, with this movement likely reflecting renewed concerns about downside risk to real activity and stress in credit markets. The Greenbook's FFR path is unchanged since the June FOMC, and therefore remains lower than our path as well as the market's path. This difference appears to reflect a more pessimistic view about growth and financial market stress, as well as the possibility of an alternative view about the level of the neutral rate.

The tension between downside risk to real economic activity and upside risk to inflation probably will remain a prominent feature influencing the policy process over the upcoming meetings. Besides making the decision on policy rates possibly more contentious, this tension will continue to pose important communication challenges to the FOMC. In light of these challenges, we see the following issues as important in determining any changes in the policy path over the next few meetings.

Over this inter-meeting period, there were renewed worries about the general health of the financial system, principally stemming from concerns about the solvency of the Government Sponsored Enterprises (GSE) as well as failures of some banks. There were a number of policy actions taken to address the issue of the GSEs. In addition, the FOMC announced a number of enhancements to its liquidity facilities. It will be important to assess the effect of these actions on various spreads and on market functioning over the coming inter-meeting period. Furthermore, there has been evidence of rising delinquencies in prime mortgages (as well as continued high subprime delinquencies) that have spread to other consumer loans such as credit cards and auto loans. Further increases of delinquencies in these latter areas would indicate more strains on household finances that could negatively impact the consumer outlook. It also could be a factor leading to the establishment of an adverse feedback loop between financial markets and the economy. Developments along those lines thus will need to be monitored closely and may require some policy action.

Net exports, and in particular strong export growth, have been a significant contributor to U.S. real GDP growth in recent quarters. U.S. export demand has been supported by fairly robust global growth. However, global demand appears to be weakening, with data releases from the euro area and Japan suggesting that growth in those areas may be slowing substantially. A significant slowdown in global demand poses an important risk to our outlook for U.S. real activity.

Recent housing data releases have led us to be somewhat more pessimistic about the sector than we were in the June Blackbook, which is one factor behind the reduction in our real GDP growth forecast for 2008H2 and 2009H1. Perhaps more importantly, we have also lowered our outlook for consumption in light of our assessment about the size and duration of the fiscal stimulus effects and the impact of continued high energy prices, tight credit conditions, low sentiment, and falling home prices. The possibility of stronger spillovers from housing and financial markets into consumption remains an important downside risk to our outlook for real activity. The upcoming data on auto sales, retail sales, and real PCE will be important in assessing this risk.

The July labor market report indicates that labor market conditions remained soft, but did not appear to be worsening to any great extent. In contrast, the recent sharp increases in initial unemployment insurance claims and continuing claims indicate weaker conditions, although some of the increase in claims appears to be linked to a government extension of unemployment benefits. Nevertheless, further significant increases in claims and other indicators of a marked deterioration in the employment picture would further undermine the outlook for consumption spending as well as the overall real outlook, and thus also represents an important risk factor.

On the inflation front, the distinction between core and headline inflation continues to be crucial. Core CPI inflation is still within its comfort zone, while core PCE inflation remains somewhat above the mandate-consistent range. Alternative underlying inflation measures provide a mixed picture, but a number have risen to more elevated levels; in particular, the trimmed mean CPI. This increase suggests some broadening of higher price inflation. Headline inflation and, to a lesser extent, inflation expectations remain elevated. In all, this suggests some risks to inflation credibility of the FOMC. If core inflation shows signs of increasing towards overall inflation and/or inflation expectations appear to become unmoored, the FOMC should be prepared to revise the near-term policy stance towards faster tightening to maintain its credibility.

Although the dollar has appreciated and commodity prices have fallen recently, the foreign exchange value of the dollar as well as energy and commodity prices remain risks to the inflation outlook. As such, it will be important to understand better the forces behind the recent fluctuations in the dollar and commodity prices as well as the possible signals they may be providing about the stance of monetary policy. Furthermore, more analysis of their impact on underlying inflation is important: while the pass-through to underlying inflation apparently has been limited so far, any evidence of a “catch up” adjustment from these sources could lead to increases in underlying inflation and inflation expectations that would be undesirable.

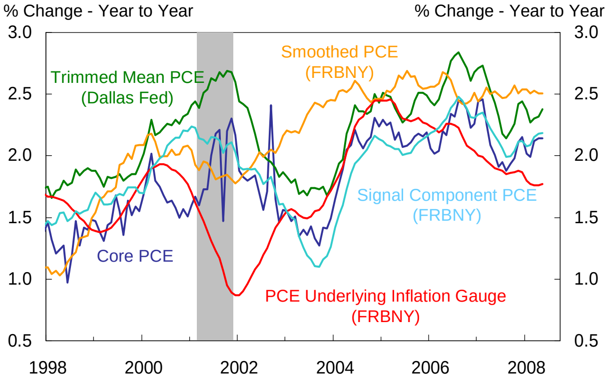
As previously mentioned, the tension between downside risk to real economic activity and upside risk to inflation will most likely influence the policy process over the upcoming meetings. It is unlikely that this tension will be fully resolved before our recommended date for the start to the policy renormalization process, which will likely make the policy decision difficult. Consequently, the data and market responses to the data and FOMC communications may be even more important than usual in determining the appropriate policy path. In addition, it is very important that the FOMC is clear in its communication of strategy to ensure its effectiveness.

A. Significant Developments

Exhibit A-1: Measures of Trend Inflation

Alternative Measures of PCE Inflation

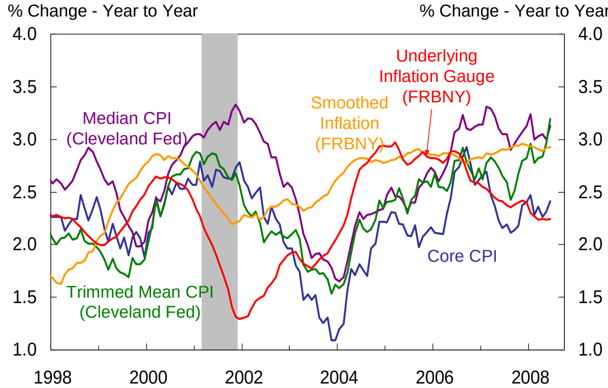
% Change - Year to Year



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

Alternative Measures of CPI Inflation

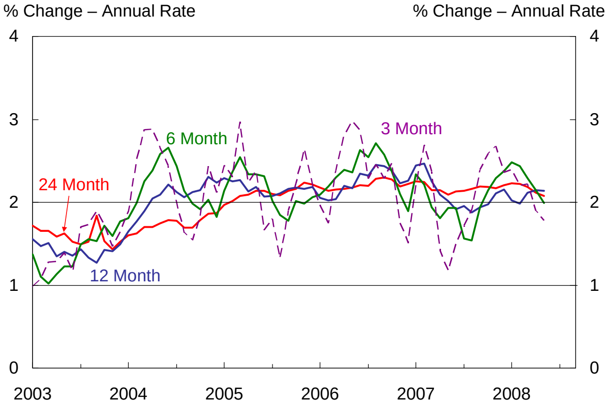
% Change - Year to Year



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

Core PCE over Various Horizons

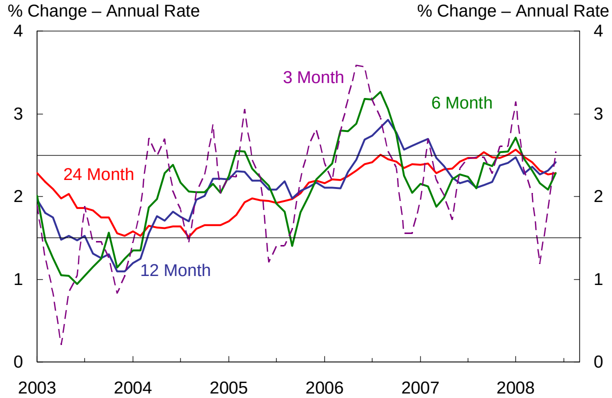
% Change – Annual Rate



Source: Bureau of Economic Analysis

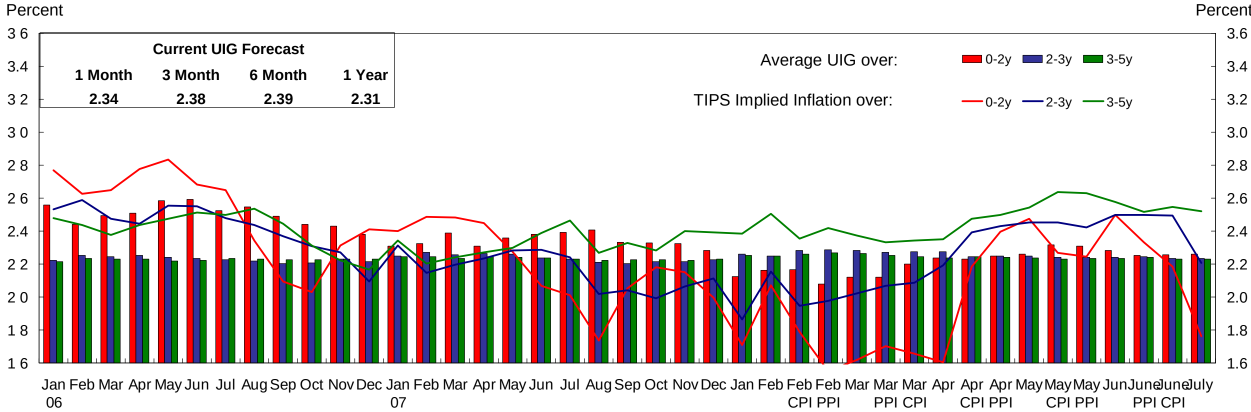
Core CPI over Various Horizons

% Change – Annual Rate



Source: Bureau of Labor Statistics

Exhibit A-2: Underlying Inflation Gauge (UIG)

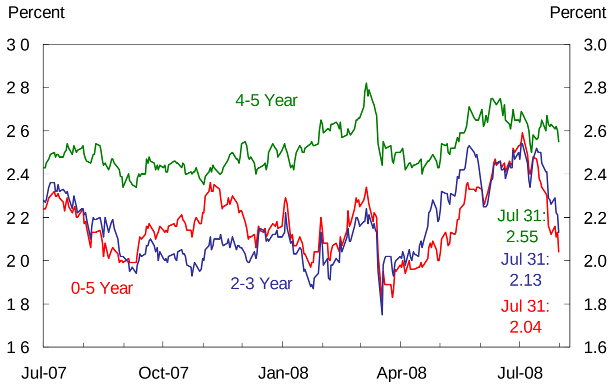


Source: MMS Function (FRBNY), Federal Reserve Board, and Swiss National Bank

A. Significant Developments

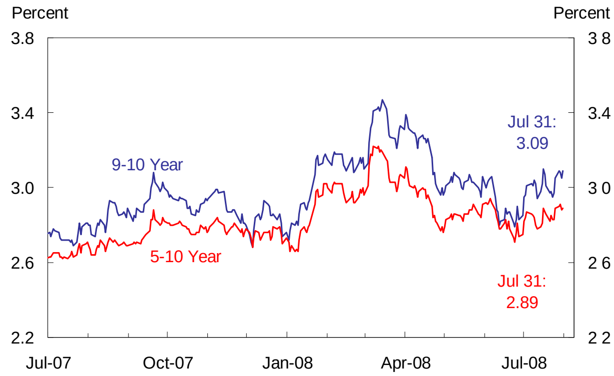
Exhibit A-3:
Implied Inflation Compensation

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



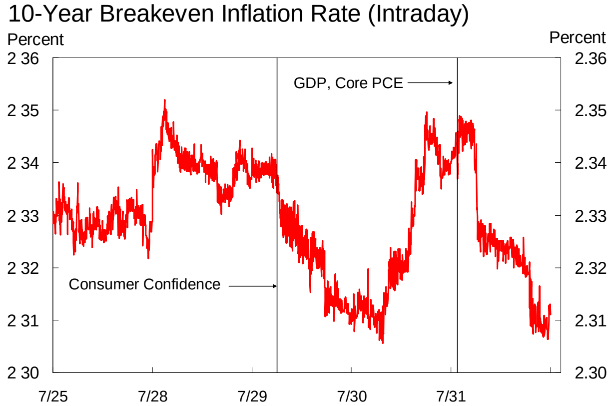
Source: Federal Reserve Board
Note: Carry-adjusted

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



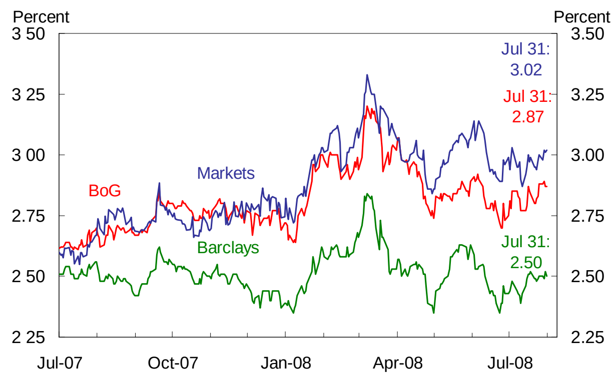
Source: Federal Reserve Board
Note: Carry-adjusted

10-Year Breakeven Inflation Rate (Intraday)



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

Alternative Measures of 5-10 Year Implied Inflation Compensation



Source: Board of Governors, FRBNY, and Barclays calculations

A. Significant Developments

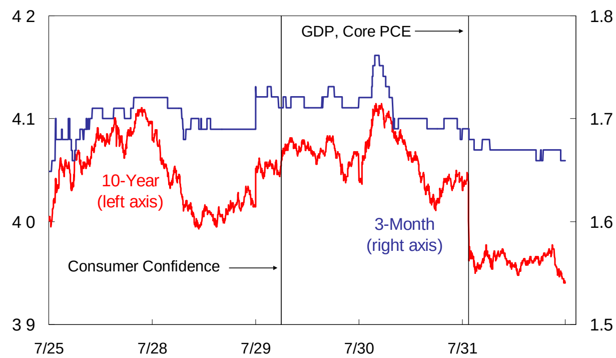
Exhibit A-4:
Treasury Yields

Short- and Long-Term Rates

Source: Bloomberg

Note: Yields of on-the-run securities

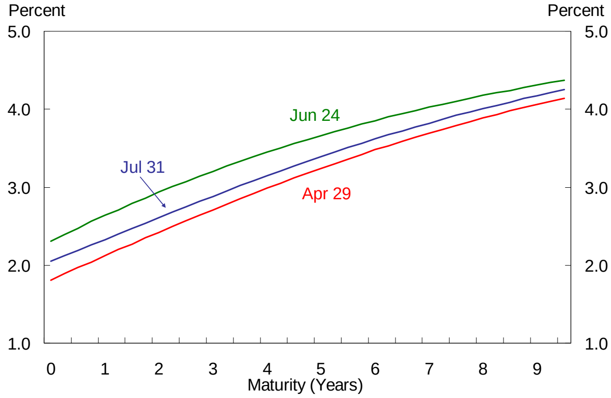
Short- and Long-Term Rates (Intraday)



Source: Bloomberg

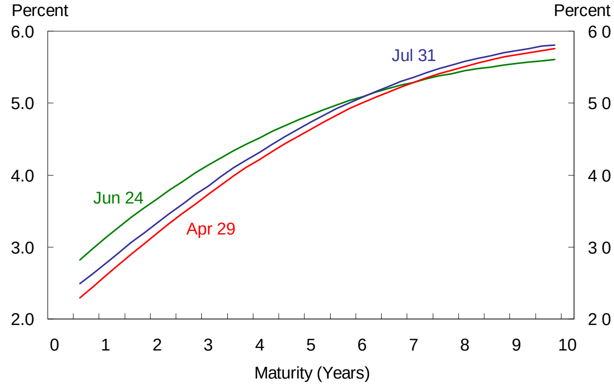
Note: On-the-run 3-month and 10-year yield, 8 am to 4 pm

Yield Curves



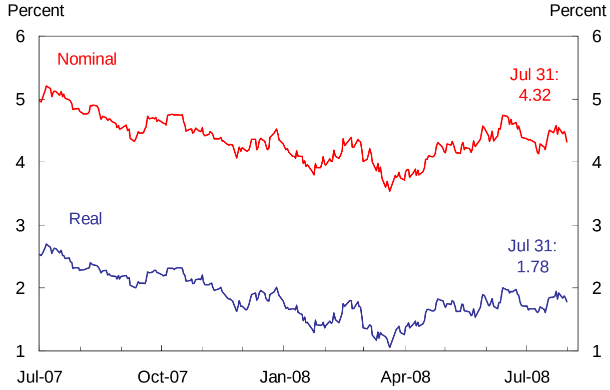
Source: Federal Reserve Board

Yield Curves: Implied One-Year Forward Rates



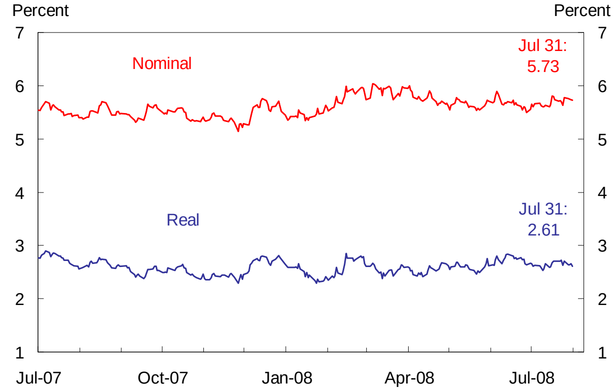
Source: Federal Reserve Board

4-5 Year Forward Rates



Source: Federal Reserve Board

9-10 Year Forward Rates

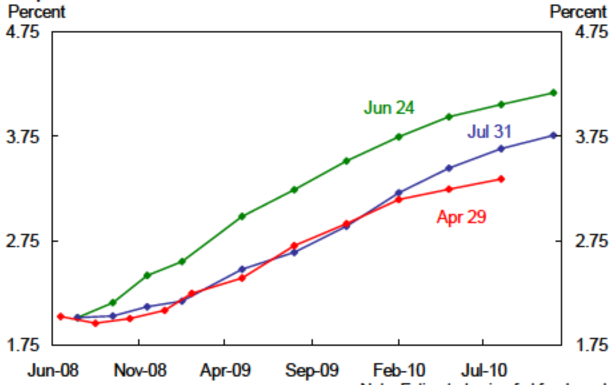


Source: Federal Reserve Board

A. Significant Developments

Exhibit A-5: Policy Expectations

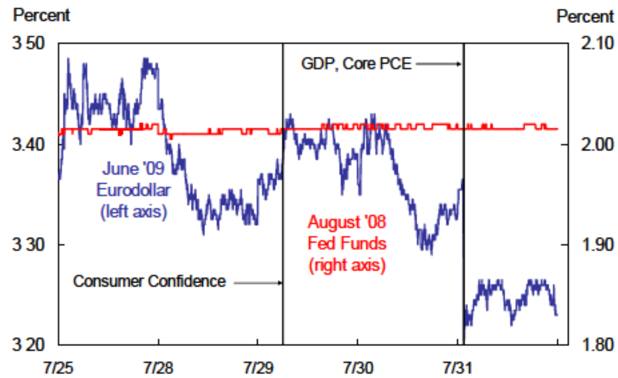
Expected Fed Funds



Source: Federal Reserve Board

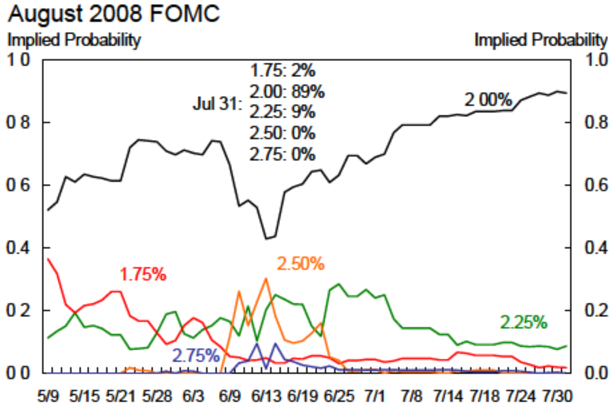
Note: Estimated using fed funds and Eurodollar futures.

Implied Fed Funds and Eurodollar Rates (Intraday)



Source: Bloomberg

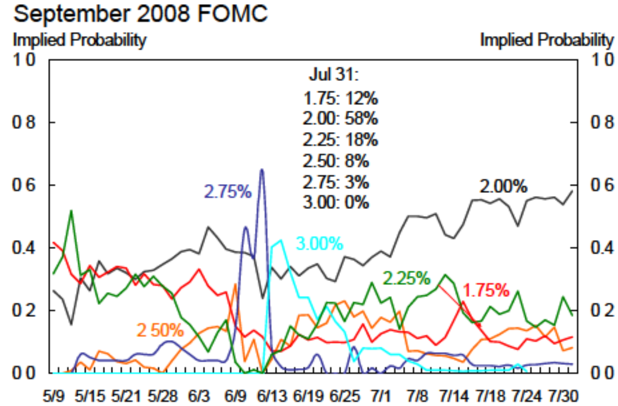
August 2008 FOMC



Source: Cleveland FRB

Note: Estimated using options on fed funds futures.

September 2008 FOMC



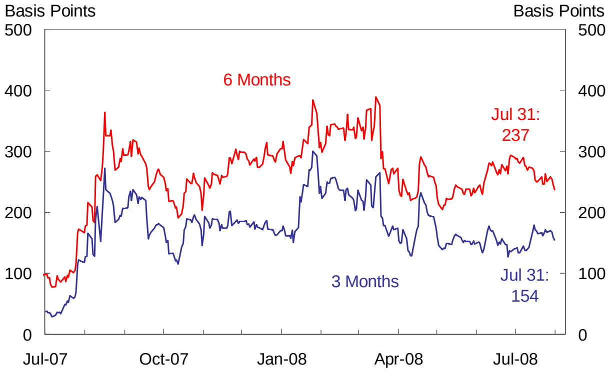
Source: Cleveland FRB

Note: Estimated using options on fed funds futures.

A. Significant Developments

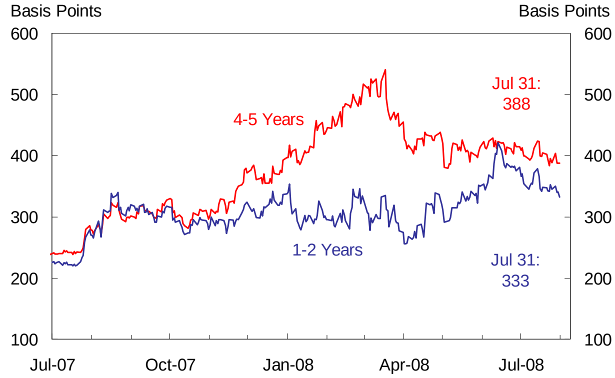
Exhibit A-6:
Policy Uncertainty

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



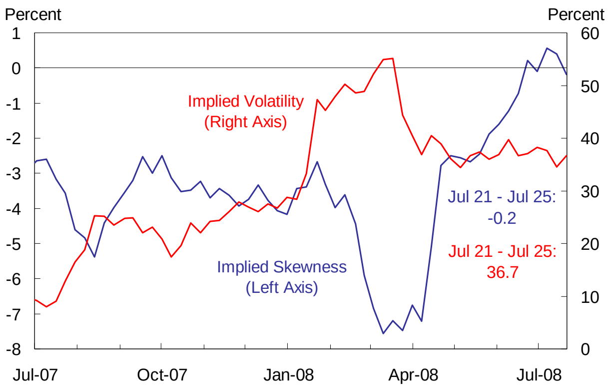
Source: Datastream, FRBNY calculations

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



Source: Datastream, FRBNY calculations

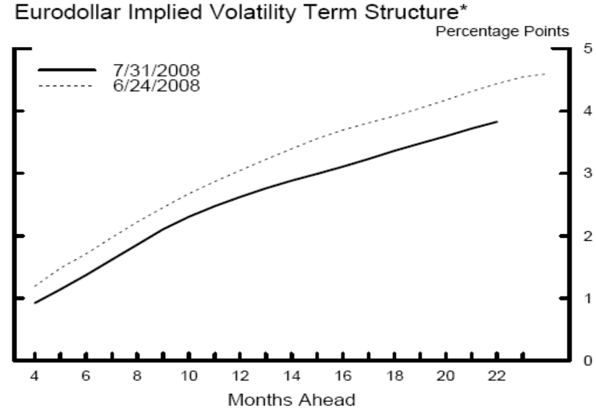
Implied Skewness and Volatility



Source: CME and FRBNY calculations

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

Eurodollar Implied Volatility Term Structure*

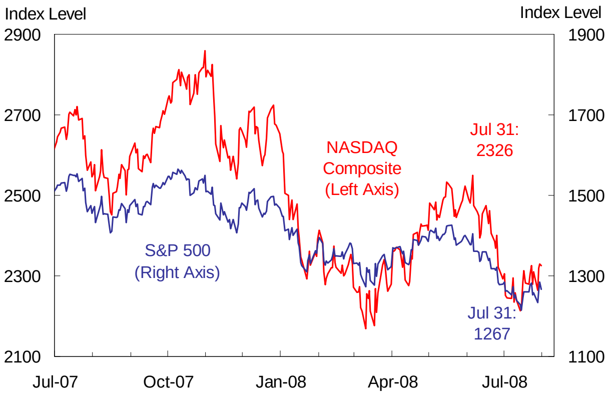


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

A. Significant Developments

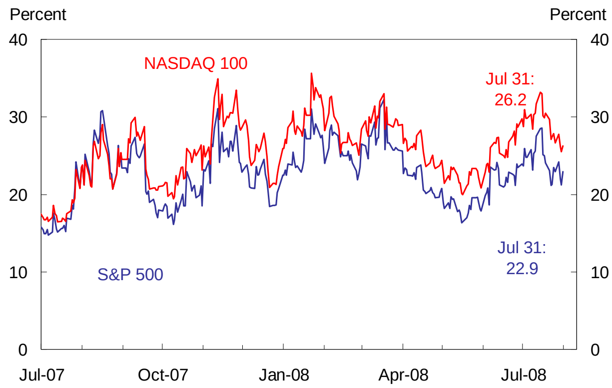
Exhibit A-7: Equity Markets and Corporate Credit Risk

Performance



Source: Bloomberg

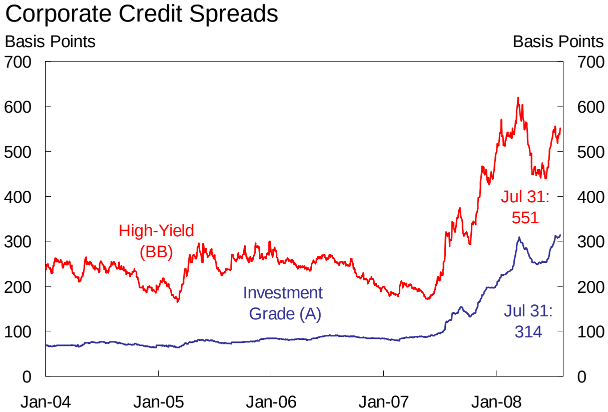
Implied Volatility: 1-Month



Source: CBOE

Note: Annualized

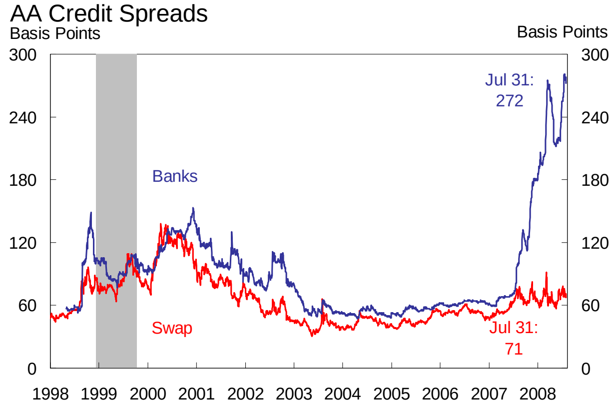
Corporate Credit Spreads



Source: Merrill Lynch

Note: Option-adjusted spreads

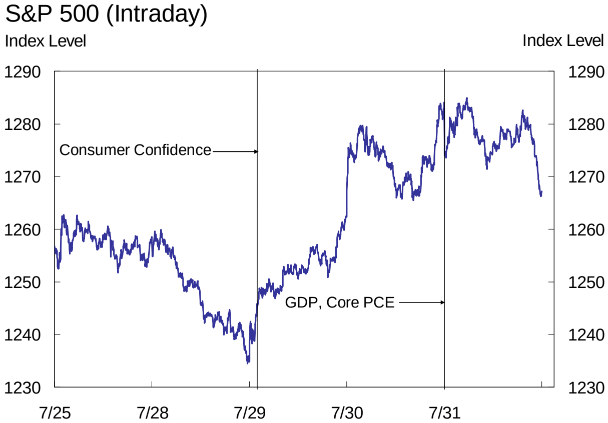
AA Credit Spreads



Source: Bloomberg & Merrill Lynch

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

S&P 500 (Intraday)



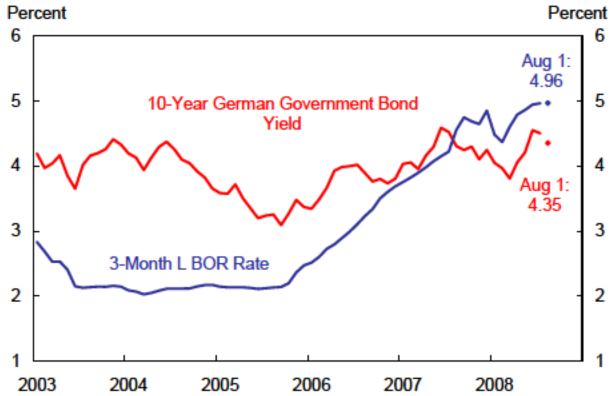
Source: Bloomberg

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

A. Significant Developments

Exhibit A-8: Global Interest Rates and Equity Markets

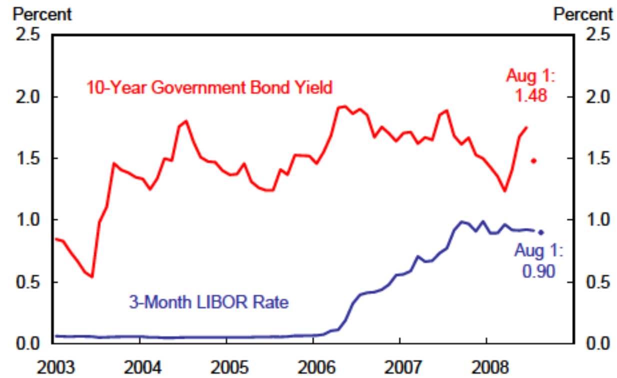
Euro Area Short- and Long-Term Interest Rates



Source: Bloomberg

Note: Data are monthly averages.

Japan Short- and Long-Term Interest Rates

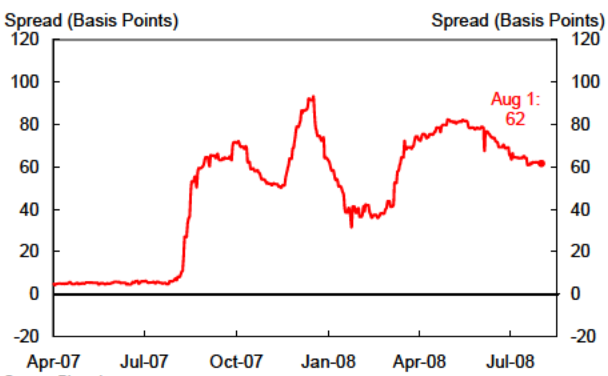


Source: Bloomberg and Federal Reserve Board

Note: Data are monthly averages.

Euro Area

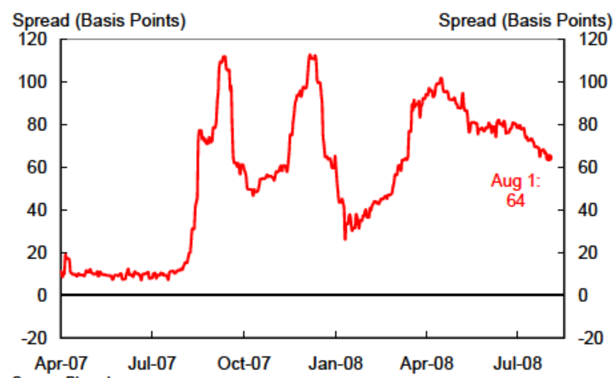
LIBOR Rate - OIS Swap Rate (3-month)



Source: Bloomberg

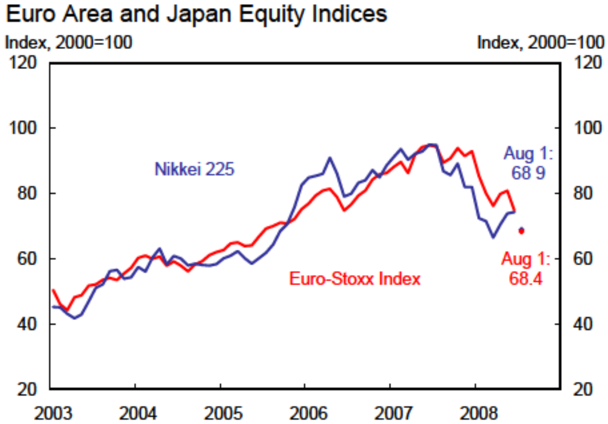
United Kingdom

LIBOR Rate - OIS Swap Rate (3-month)



Source: Bloomberg

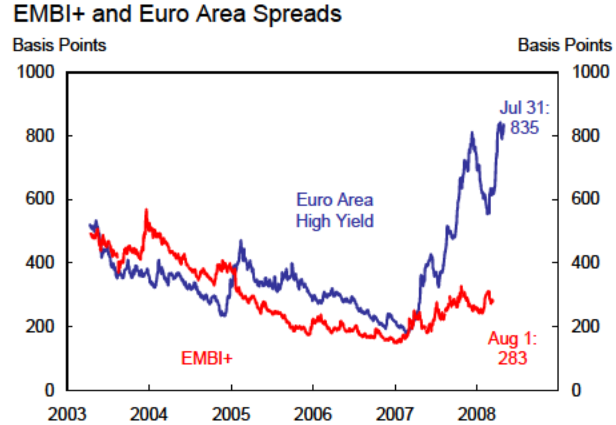
Euro Area and Japan Equity Indices



Source: BIS and Bloomberg

Note: Data are monthly averages.

EMBI+ and Euro Area Spreads



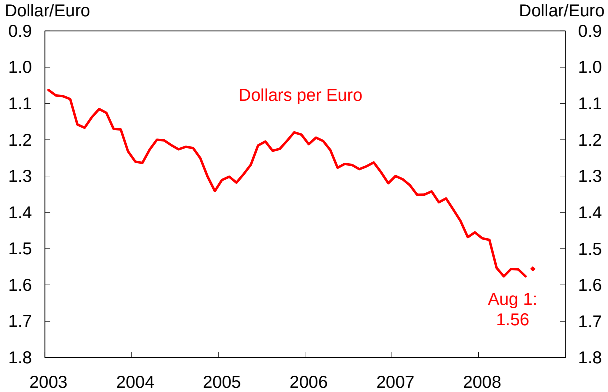
Source: Bloomberg

Note: Data are daily observations.

A. Significant Developments

Exhibit A-9:
Exchange Rates

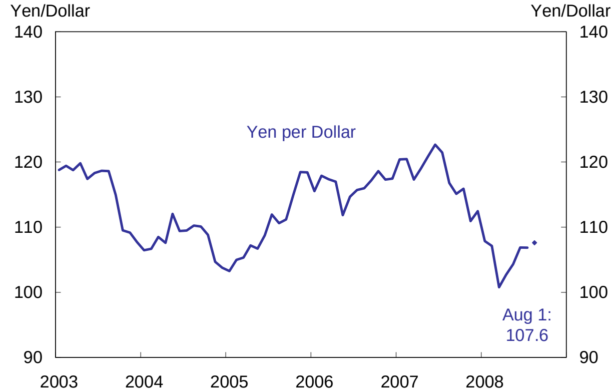
Dollar-Euro Exchange Rate



Source: Bloomberg

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

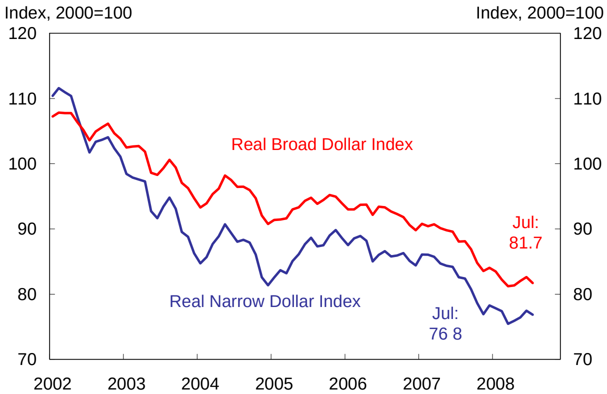
Yen-Dollar Exchange Rate



Source: Bloomberg

Note: Data are monthly averages.

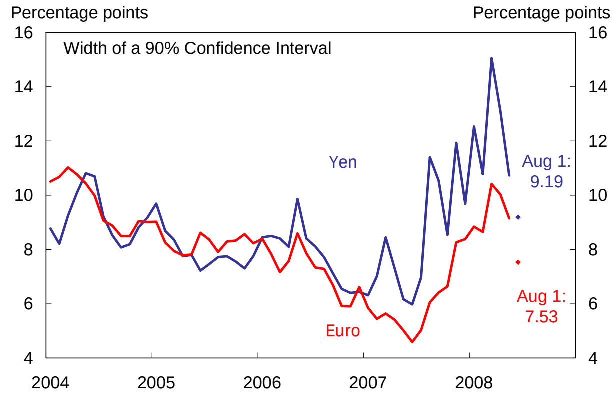
Real Effective Exchange Rates



Source: Federal Reserve Board

Note: Data are monthly averages.

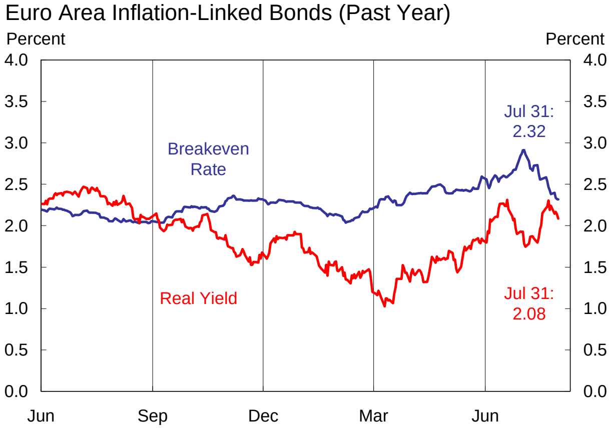
Euro and Yen One-Month Implied FX Option Volatility



Source: Reuters

Note: Data are monthly averages.

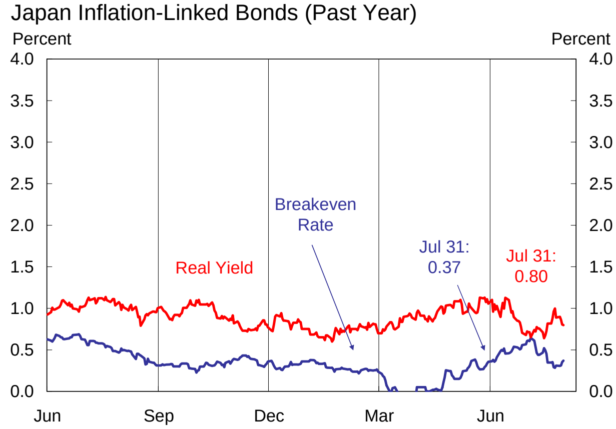
Euro Area Inflation-Linked Bonds (Past Year)



Source: Barclays, Daily Data

Note: OAT July 2012

Japan Inflation-Linked Bonds (Past Year)



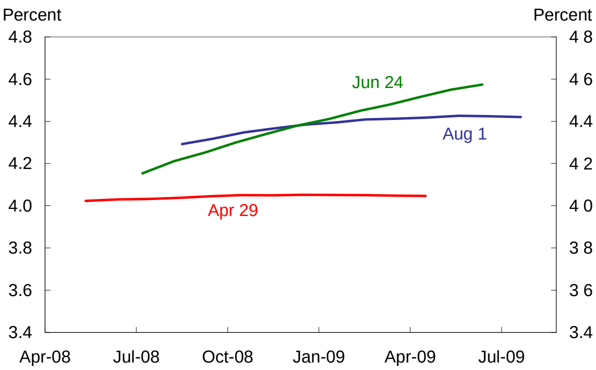
Source: Barclays, Daily Data

Note: JGB March 2014

A. Significant Developments

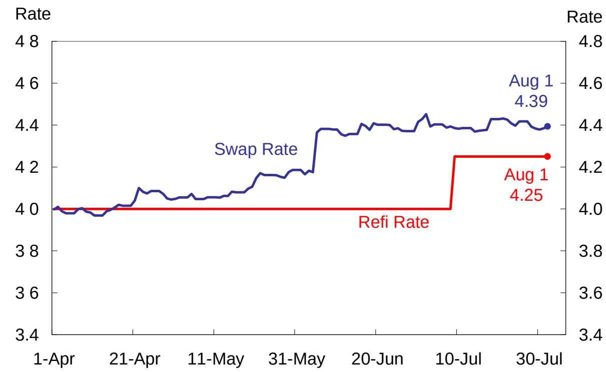
Exhibit A-10: Euro Area and Japan Swap Curves

Euro Area Swap Curve
Expected Average Overnight Rate Months Ahead



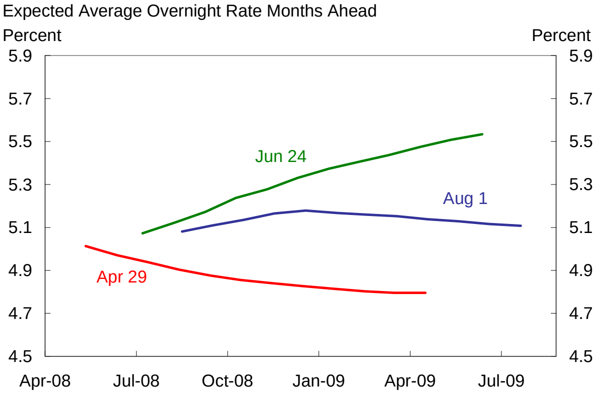
Source: Bloomberg

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



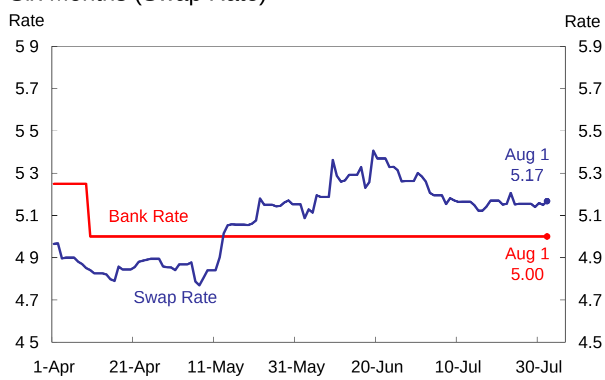
Source: Bloomberg

UK Swap Curve
Expected Average Overnight Rate Months Ahead



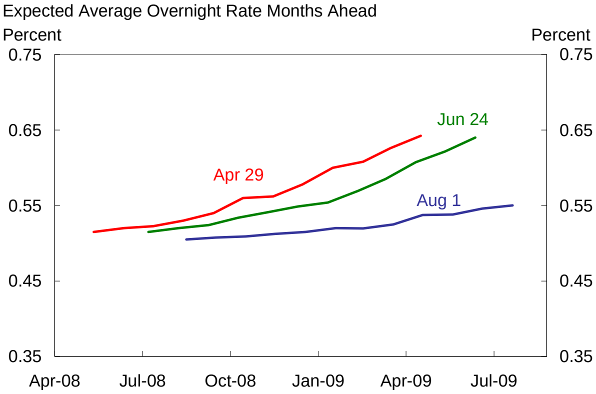
Source: Bloomberg

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



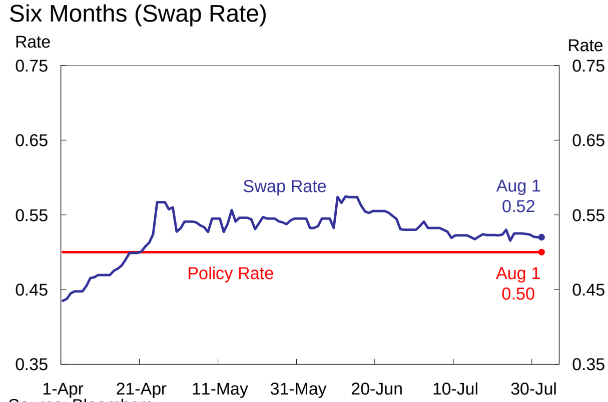
Source: Bloomberg

Japan Swap Curve
Expected Average Overnight Rate Months Ahead



Source: Bloomberg

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



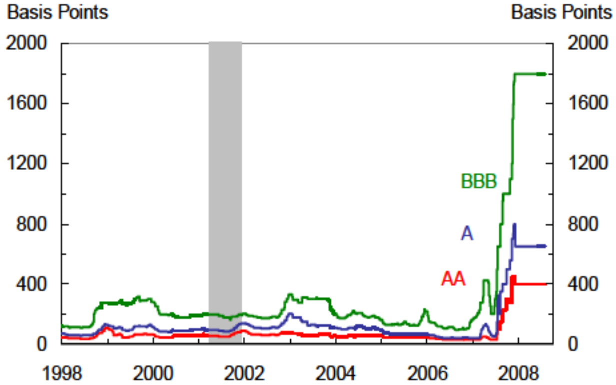
Source: Bloomberg

Note: Shading represents NBER recessions.

A. Significant Developments

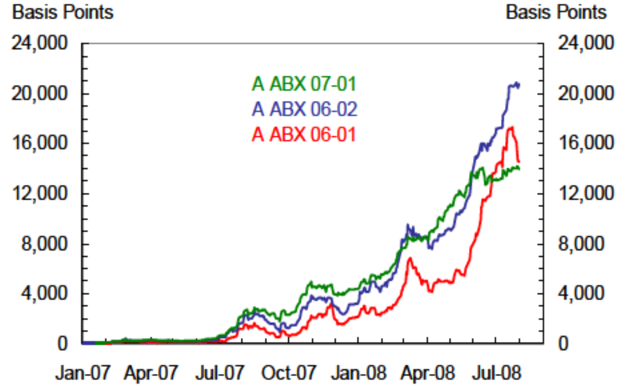
Exhibit A-11: Financial Market Indicators of Subprime Spillovers

Spreads on Subprime MBS Tranches



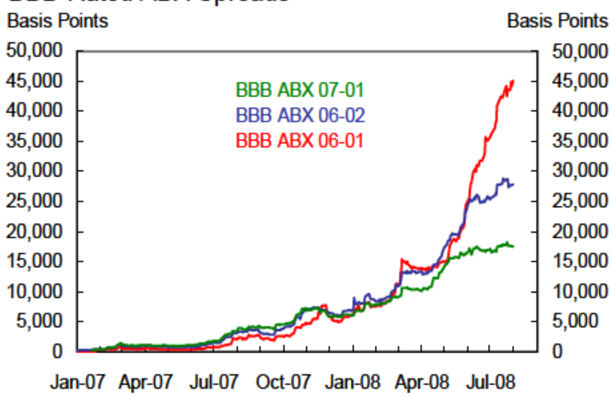
Source: JPMorgan

A-Rated ABX Spreads



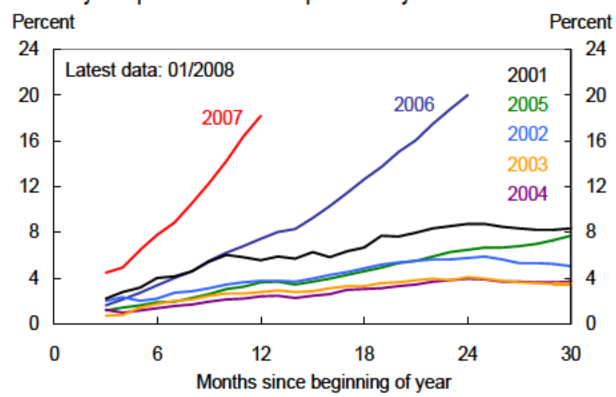
Source: JPMorgan

BBB-Rated ABX Spreads



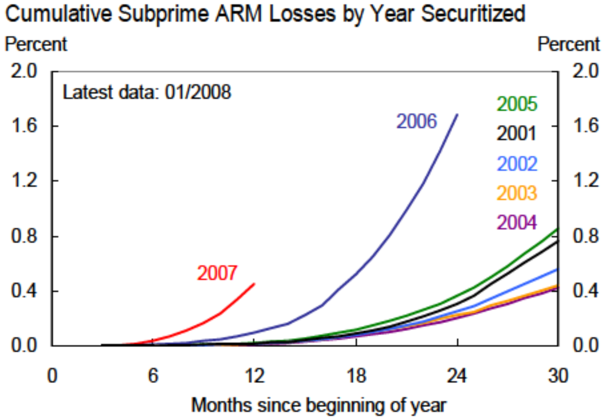
Source: JPMorgan

60+ Day Subprime ARM Delinquencies by Year Securitized



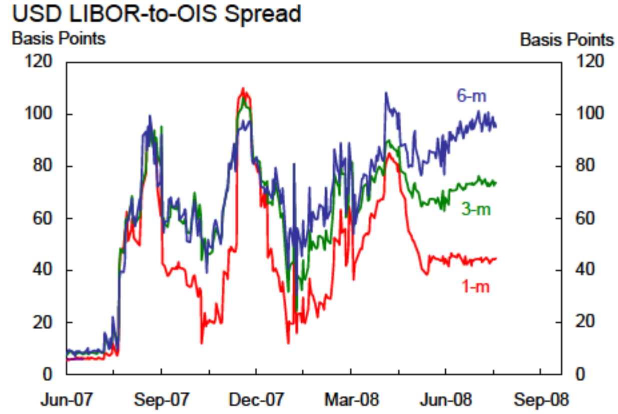
Source: Moody's Investors Service Note: Percent of original balance.

Cumulative Subprime ARM Losses by Year Securitized



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

USD LIBOR-to-OIS Spread



Source: Bloomberg

B. FRBNY Forecast Details

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

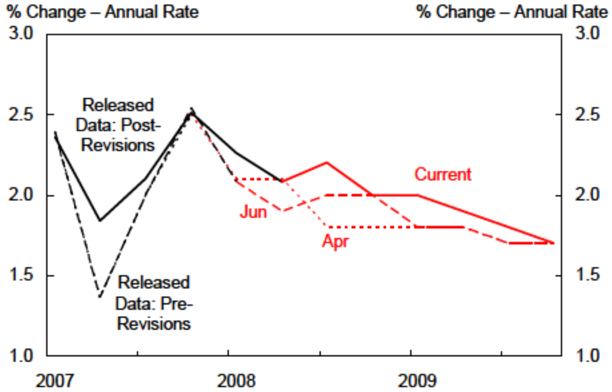
	Core PCE Inflation			Real GDP Growth			Unemployment Rate*			Fed Funds Rate**		
	Apr	Jun	Aug	Apr	Jun	Aug	Apr	Jun	Aug	Apr	Jun	Aug
2007												
Q1	*2.4*	*2.4*	*2.3*	*0.6*	*0.6*	*0.0*	*4.5*	*4.5*	*4.5*	*5.3*	*5.3*	*5.3*
Q2	*1.4*	*1.4*	*1.8*	*3.8*	*3.8*	*1.9*	*4.5*	*4.5*	*4.5*	*5.3*	*5.3*	*5.3*
Q3	*2.0*	*2.0*	*2.1*	*4.9*	*4.9*	*4.8*	*4.7*	*4.7*	*4.7*	*4.8*	*4.8*	*4.8*
Q4	*2.5*	*2.5*	*2.5*	*0.6*	*0.6*	*-0.2*	*4.8*	*4.8*	*4.8*	*4.3*	*4.3*	*4.3*
2008												
Q1	2.1	*2.1*	*2.2*	0.2	*0.9*	*0.9*	4.9	*4.9*	*4.9*	2.3	*2.3*	*2.3*
Q2	2.1	1.9	*2.1*	-1.2	1.2	*1.9*	5.6	5.3	*5.3*	2.0	2.0	*2.0*
Q3	1.8	2.0	2.2	3.4	2.6	2.2	5.8	5.5	5.7	2.0	2.0	2.0
Q4	1.8	2.0	2.0	2.4	1.7	1.0	5.8	5.6	5.9	2.0	2.3	2.3
2009												
Q1	1.8	1.8	2.0	2.9	3.1	2.0	5.7	5.6	5.9	2.3	2.5	2.5
Q2	1.8	1.8	1.9	3.8	3.0	2.4	5.6	5.5	5.9	2.5	3.0	3.0
Q3	1.7	1.7	1.8	2.9	3.0	3.0	5.5	5.5	5.8	3.0	3.5	3.5
Q4	1.7	1.7	1.7	2.5	3.0	2.5	5.5	5.4	5.8	3.5	3.8	3.8
Q4/Q4												
2006	*2.3*	*2.3*	*2.3*	*2.6*	*2.6*	*2.4*	*-0.5*	*-0.5*	*-0.5*	*1.0*	*1.0*	*1.0*
2007	*2.1*	*2.1*	*2.2*	*2.5*	*2.5*	*2.3*	*0.4*	*0.4*	*0.4*	*-1.0*	*-1.0*	*-1.0*
2008	1.9	2.0	2.1	1.2	1.6	1.5	1.0	0.8	1.1	-2.3	-2.0	-2.0
2009	1.8	1.7	1.8	3.0	3.0	2.5	-0.3	-0.2	-0.1	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.

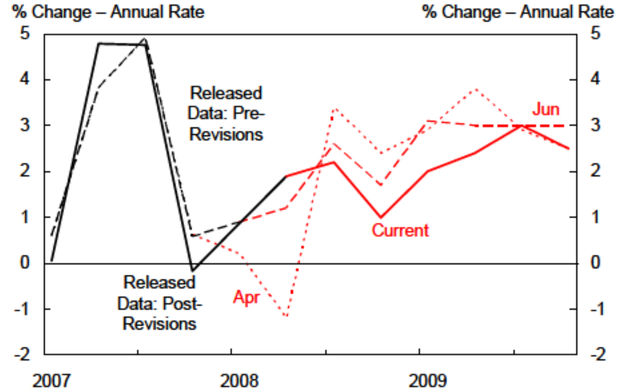
B. FRBNY Forecast Details

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

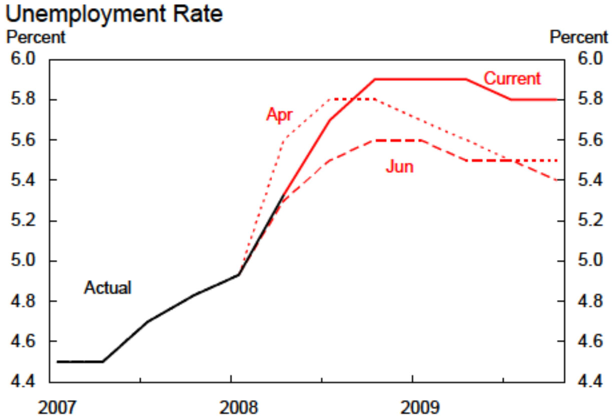
Core PCE Inflation



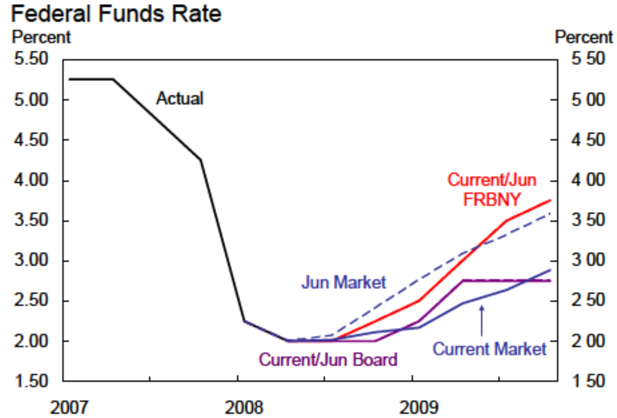
Real GDP Growth



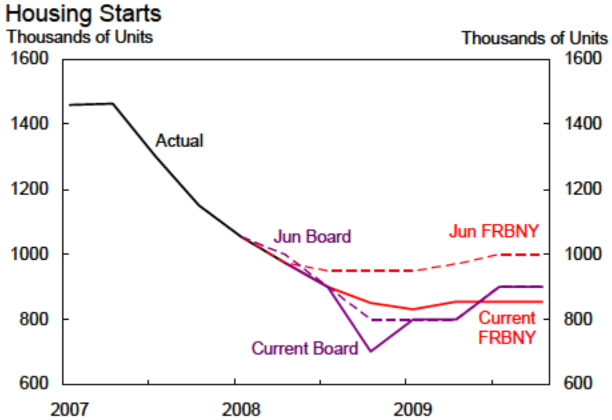
Unemployment Rate



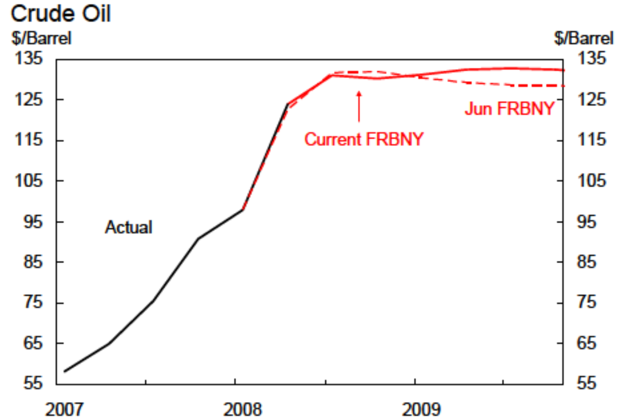
Federal Funds Rate



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)	
	2008Q3	2008Q4	2008Q3	2008Q4
OUTPUT				
Real GDP	2.2	1.0	2.2	1.0
	(2.4)	(1.7)	(2.4)	(1.7)
Final Sales to Domestic Purchasers	0.3	0.1	0.3	0.1
	(0.8)	(1.0)	(0.9)	(1.0)
Consumption	1.3	0.5	0.9	0.4
	(2.2)	(0.5)	(1.6)	(0.4)
BFI: Equipment and Software	-2.5	5.0	-0.2	0.3
	(-2.5)	(10.0)	(-0.2)	(0.7)
BFI: Nonresidential Structures	8.0	-5.0	0.3	-0.2
	(0.0)	(3.0)	(0.0)	(0.1)
Residential Investment	-25.0	-20.0	-1.0	-0.7
	(-20.0)	(-12.5)	(-0.8)	(-0.4)
Government: Federal	1.0	1.5	0.1	0.1
	(1.0)	(1.5)	(0.1)	(0.1)
Government: State and Local	1.5	1.5	0.2	0.2
	(1.5)	(1.5)	(0.2)	(0.2)
Inventory Investment	--	--	1.4	0.3
	--	--	(0.7)	(0.3)
Net Exports	--	--	0.5	0.5
	--	--	(0.8)	(0.4)
INFLATION				
Total PCE Deflator	4.6	1.9		
	(4.5)	(1.9)		
Core PCE Deflator	2.2	2.0		
	(2.0)	(2.0)		
PRODUCTIVITY AND LABOR COSTS*				
Output per Hour	3.6	1.8		
	(2.8)	(2.0)		
Compensation per Hour	3.8	4.0		
	(3.8)	(4.0)		
Unit Labor Costs	0.2	2.2		
	(1.0)	(2.0)		

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	2.3	1.5	2.5	2.3	1.5	2.5
	(2.5)	(1.6)	(3.0)	(2.5)	(1.6)	(3.0)
Final Sales to Domestic Purchasers	1.6	0.4	1.7	1.7	0.5	1.7
	(1.9)	(0.8)	(2.4)	(2.0)	(0.8)	(2.5)
Consumption	2.2	1.0	1.6	1.5	0.7	1.2
	(2.6)	(1.4)	(2.5)	(1.8)	(1.0)	(1.8)
BFI: Equipment and Software	2.8	-0.4	3.5	0.2	0.0	0.2
	(3.6)	(1.8)	(3.5)	(0.3)	(0.1)	(0.2)
BFI: Nonresidential Structures	14.5	6.2	2.2	0.5	0.2	0.1
	(15.1)	(2.5)	(3.0)	(0.5)	(0.1)	(0.1)
Residential Investment	-19.0	-21.5	-2.4	-1.0	-0.9	-0.1
	(-18.6)	(-19.6)	(2.5)	(-1.0)	(-0.8)	(0.1)
Government: Federal	2.3	3.7	1.5	0.2	0.3	0.1
	(1.7)	(2.7)	(1.5)	(0.1)	(0.2)	(0.1)
Government: State and Local	2.4	1.1	1.7	0.3	0.1	0.2
	(2.7)	(1.5)	(1.7)	(0.3)	(0.2)	(0.2)
Inventory Investment	--	--	--	-0.2	-0.1	0.0
	--	--	--	(-0.3)	(0.0)	(0.2)
Net Exports	--	--	--	0.8	1.1	0.8
	--	--	--	(0.8)	(0.8)	(0.3)
INFLATION						
Total PCE Deflator	3.5	3.6	1.7			
	(3.4)	(3.4)	(1.7)			
Core PCE Deflator	2.2	2.1	1.8			
	(2.1)	(2.0)	(1.7)			
Total CPI Inflation	4.0	4.5	2.2			
	(4.0)	(3.6)	(2.2)			
Core CPI Inflation	2.3	2.2	2.0			
	(2.3)	(2.1)	(2.0)			
GDP Deflator	2.6	1.9	1.8			
	(2.6)	(2.5)	(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)	(2.25)	(3.75)
10-Year Treasury Yield (Avg. Q4 Level)	4.3	3.8	4.5
	(4.3)	(3.8)	(4.5)
PRODUCTIVITY AND LABOR COSTS*			
Output	2.6	1.4	2.8
	(2.6)	(1.7)	(3.3)
Hours	-0.4	-1.2	1.0
	(-0.4)	(-0.6)	(1.5)
Output per Hour	2.9	2.6	1.8
	(2.9)	(2.3)	(1.8)
Compensation per Hour	4.4	4.0	3.9
	(4.4)	(3.7)	(3.9)
Unit Labor Costs	1.4	1.4	2.1
	(1.4)	(1.3)	(2.1)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	4.8	5.9	5.8
	(4.8)	(5.6)	(5.4)
Participation Rate (Avg. Q4 Level)	66.0	66.0	66.0
	(66.0)	(66.0)	(66.0)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	104	-22	99
	(104)	(-28)	(153)
INCOME			
Personal Income	5.8	3.6	4.0
	(6.1)	(4.5)	(4.7)
Real Disposable Personal Income	1.8	0.0	2.3
	(2.4)	(1.1)	(2.9)
Corporate Profits Before Taxes	-2.0	-0.4	2.8
	(2.5)	(3.7)	(2.7)

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	2.3	1.5	2.5	2.5	1.2	2.2
	(2.5)	(1.6)	(3.0)	(2.5)	(1.0)	(2.4)
GDP Growth Contributions						
Final Sales to Domestic Purchasers	1.7	0.5	1.7	1.9	-0.2	0.9
	(2.0)	(0.8)	(2.5)	(1.9)	(-0.3)	(1.4)
Consumption	1.5	0.7	1.2	1.8	0.3	0.9
	(1.8)	(1.0)	(1.8)	(1.8)	(0.4)	(1.1)
BFI	0.7	0.2	0.3	0.7	0.0	-0.1
	(0.7)	(0.2)	(0.4)	(0.7)	(-0.1)	(0.2)
Residential Investment	-1.0	-0.9	-0.1	-1.0	-1.0	-0.2
	(-1.0)	(-0.8)	(0.1)	(-1.0)	(-1.0)	(-0.2)
Government	0.5	0.4	0.3	0.4	0.5	0.3
	(0.5)	(0.4)	(0.3)	(0.4)	(0.4)	(0.3)
Inventory Investment	-0.2	-0.1	0.0	-0.3	0.2	0.7
	(-0.3)	(0.0)	(0.2)	(-0.3)	(0.3)	(0.5)
Net Exports	0.8	1.1	0.8	0.8	1.2	0.6
	(0.8)	(0.8)	(0.3)	(0.8)	(1.1)	(0.5)
INFLATION						
Total PCE Deflator	3.5	3.6	1.7	3.4	3.7	2.4
	(3.4)	(3.4)	(1.7)	(3.4)	(4.2)	(2.1)
Core PCE Deflator	2.2	2.1	1.8	2.1	2.3	2.2
	(2.1)	(2.0)	(1.7)	(2.1)	(2.3)	(2.2)
INTREST RATE ASSUMPTION						
Fed Funds Rate (End-of-Year)	4.25	2.25	3.75	4.25	2.00	2.75
	(4.25)	(2.25)	(3.75)	(4.25)	(2.00)	(2.75)
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	2.9	2.6	1.8	2.9	2.1	1.8
	(2.9)	(2.3)	(1.8)	(2.9)	(1.8)	(2.1)
Compensation per Hour	4.4	4.0	3.9	4.4	4.2	4.1
	(4.4)	(3.7)	(3.9)	(4.4)	(4.1)	(4.1)
Unit Labor Costs	1.4	1.4	2.1	1.4	2.1	2.2
	(1.4)	(1.3)	(2.1)	(1.4)	(2.3)	(2.0)
LABOR MARKET						
Unemployment Rate (Avg. Q4 Level)	4.8	5.9	5.8	4.8	5.9	5.9
	(4.8)	(5.6)	(5.4)	(4.8)	(5.6)	(5.6)
Participation Rate (Avg. Q4 Level)	66.0	66.0	66.0	66.0	65.9	65.6
	(66.0)	(66.0)	(66.0)	(66.0)	(65.8)	(65.6)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	104	-22	99	100	-58	83
	(104)	(-28)	(153)	(100)	(-42)	(100)
HOUSING						
Housing Starts (Avg. Q4 Level, Thous.)	1151	850	855	1200	700	900
	(1151)	(950)	(1000)	(1200)	(800)	(900)

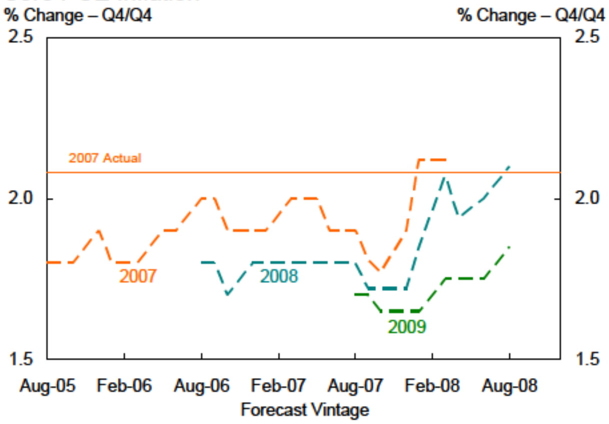
Note: All values are Q4/Q4 percent change, unless indicated otherwise. Numbers in parentheses are from the previous Blackbook or Greenbook.
*Nonfarm business sector

B. FRBNY Forecast Details

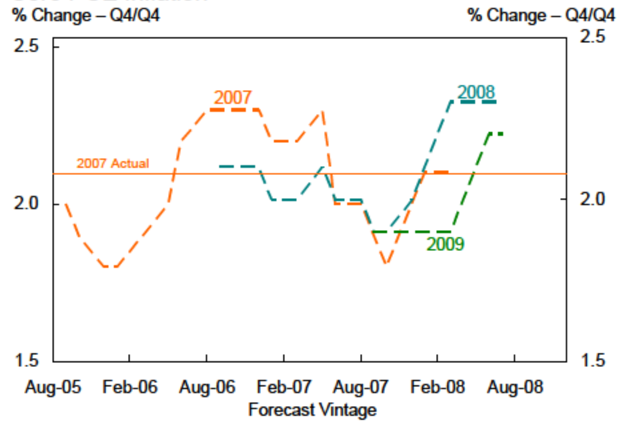
Exhibit B-7: Evolution of FRBNY and Board Forecasts since Mid-2005

FRBNY | **Board**

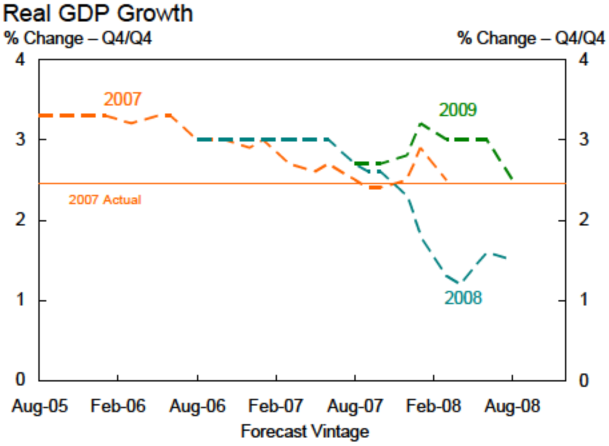
Core PCE Inflation



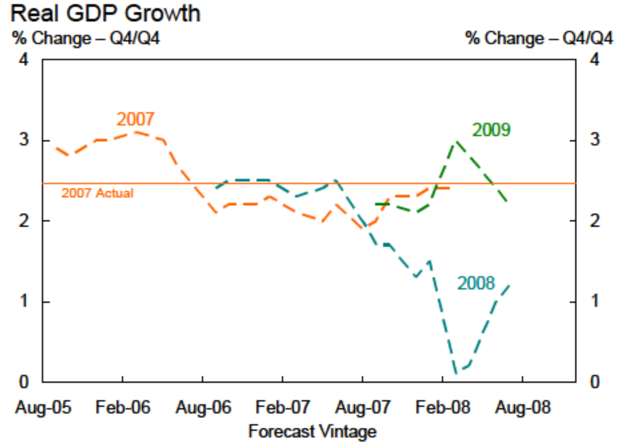
Core PCE Inflation



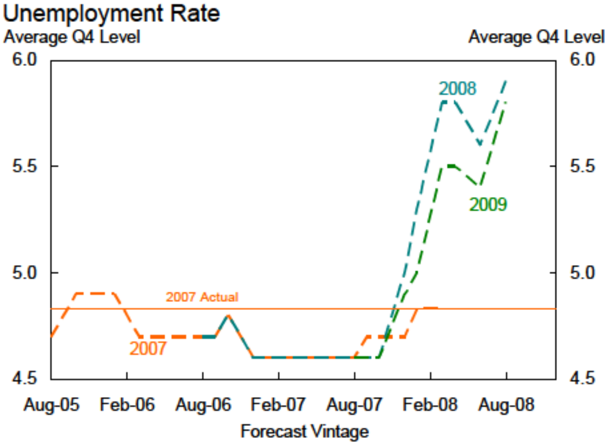
Real GDP Growth



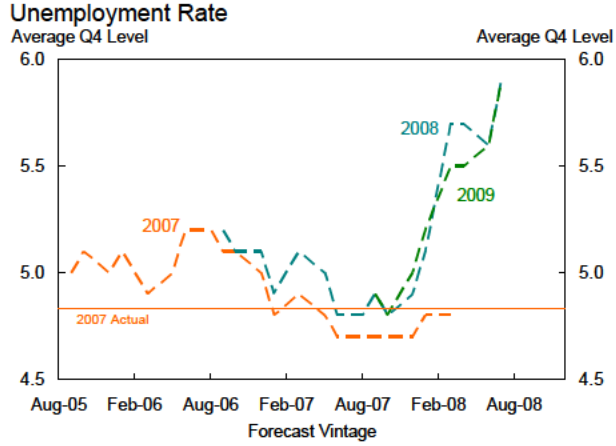
Real GDP Growth



Unemployment Rate



Unemployment Rate



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

B. FRBNY Forecast Details

Exhibit B-8: Alternative GDP and Inflation Forecasts

Real GDP Growth

	Release Date	2008Q3	2008Q4	2008 Q4/Q4	2009 Q4/Q4
FRBNY	8/1/2008	2.2	1.0	1.5	2.5
		(2.4)	(1.7)	(1.6)	(3.0)
PSI Model	7/30/2008	-0.3	--	--	--
		(1.0)	--	--	--
Blue Chip	7/10/2008	1.3	0.6	1.0	2.3
		(1.5)	(1.2)	(1.0)	(2.5)
Median SPF	5/13/2008	1.7	1.8	1.5	2.2
		(2.8)	(2.8)	(1.8)	(2.8)
Macro Advisers	7/25/2008	1.5	-0.5	1.3	3.1
		(2.4)	(0.1)	(1.3)	(3.4)

Core PCE Inflation

	Release Date	2008Q3	2008Q4	2008 Q4/Q4	2009 Q4/Q4
FRBNY	8/1/2008	2.2	2.0	2.1	1.8
		(2.0)	(2.0)	(2.0)	(1.7)
Median SPF	5/13/2008	2.1	2.1	2.1	2.1
		(2.0)	(2.0)	(2.0)	(2.0)
Macro Advisers	7/25/2008	2.4	2.4	2.2	1.9
		(2.6)	(2.4)	(2.3)	(2.2)

CPI Inflation

	Release Date	2008Q3	2008Q4	2008 Q4/Q4	2009 Q4/Q4
FRBNY	8/1/2008	6.1	2.5	4.5	2.2
		(3.6)	(2.5)	(3.6)	(2.2)
Blue Chip	7/10/2008	4.9	2.9	4.1	2.5
		(3.5)	(2.4)	(3.5)	(2.5)
Median SPF	5/13/2008	3.2	2.5	3.3	2.4
		(2.5)	(2.2)	(2.5)	(2.3)
Macro Advisers	7/25/2008	6.5	3.3	4.6	2.1
		(5.4)	(3.2)	(4.2)	(2.3)

Core CPI Inflation

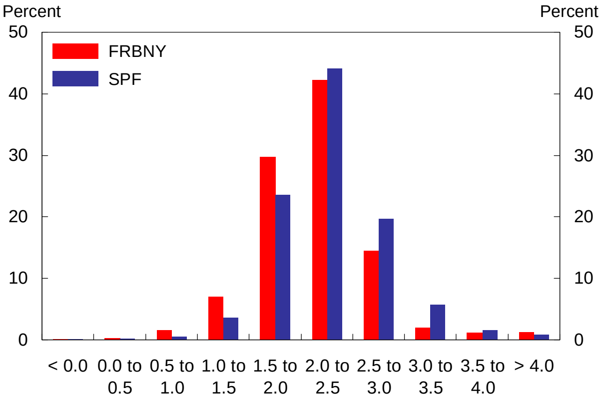
	Release Date	2008Q3	2008Q4	2008 Q4/Q4	2009 Q4/Q4
FRBNY	8/1/2008	2.3	2.2	2.2	2.0
		(2.1)	(2.2)	(2.1)	(2.0)
Median SPF	5/13/2008	2.3	2.3	2.3	2.3
		(2.2)	(2.1)	(2.2)	(2.1)
Macro Advisers	7/25/2008	2.4	2.6	2.3	2.2
		(2.4)	(2.9)	(2.4)	(2.4)

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

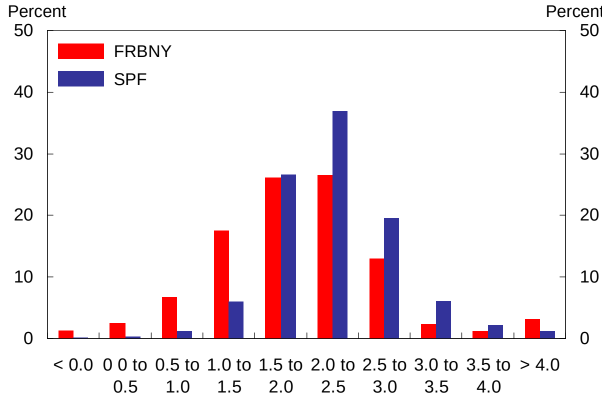
B. FRBNY Forecast Details

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

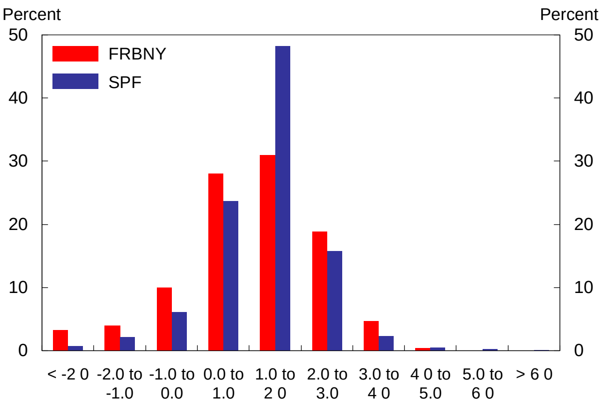
2008Q4/Q4 Core PCE Inflation Probabilities



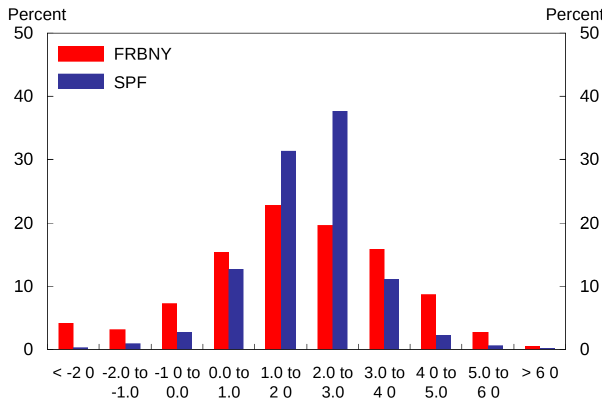
2009Q4/Q4 Core PCE Inflation Probabilities



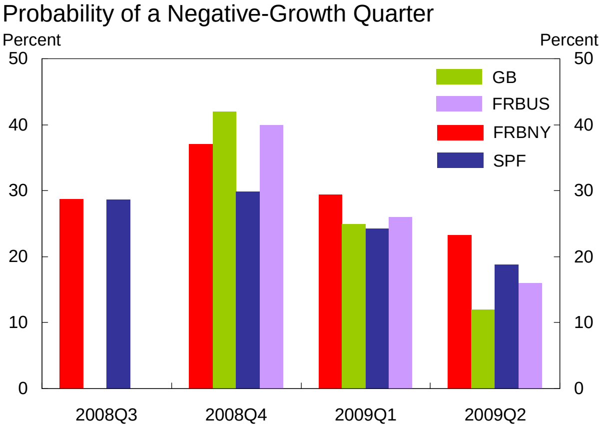
2008/2007 Real GDP Growth Probabilities



2009/2008 Real GDP Growth Probabilities



Probability of a Negative-Growth Quarter

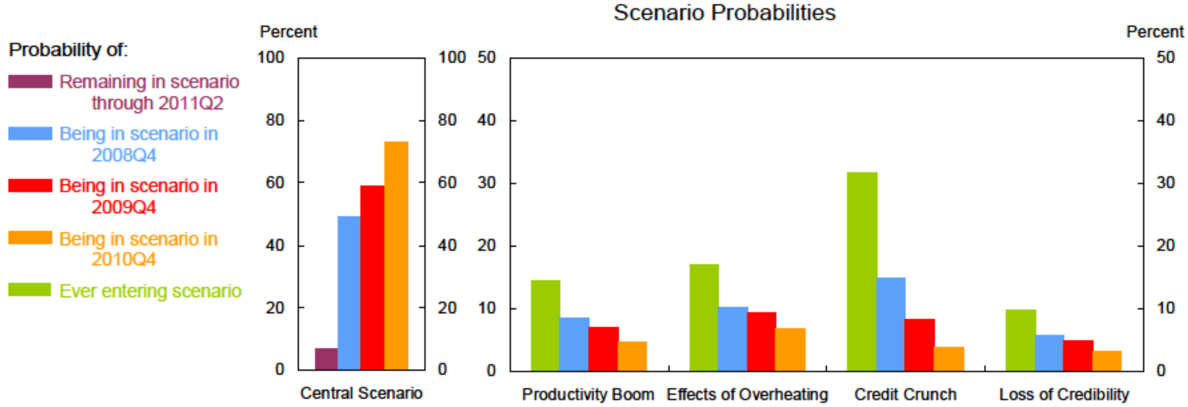


Source: MMS Function (FRBNY), FRB Philadelphia Survey of Professional Forecasters, and Federal Reserve Board
Note: SPF forecast was released May 13, 2008. Board forecasts are from the July Greenbook.

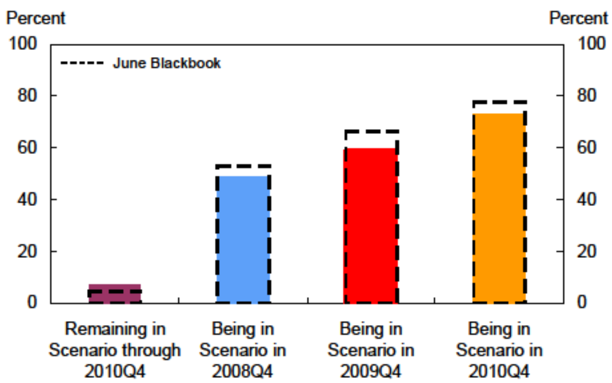
C. FRBNY Forecast Distributions

Exhibit C-1: Risks

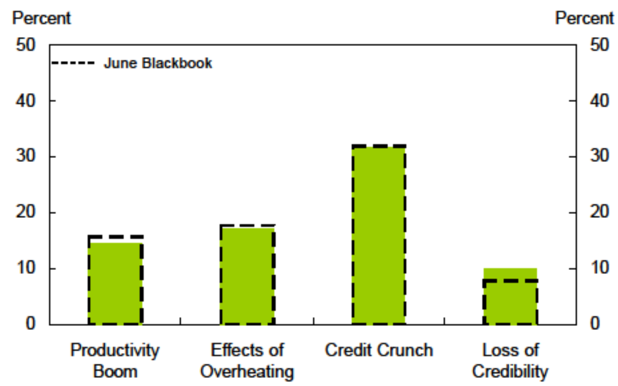
Scenario Probabilities



Change in Central Scenario Probabilities



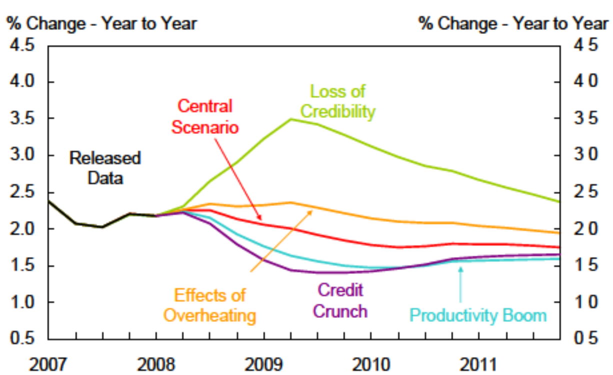
Change in Alternative Scenario Probabilities*



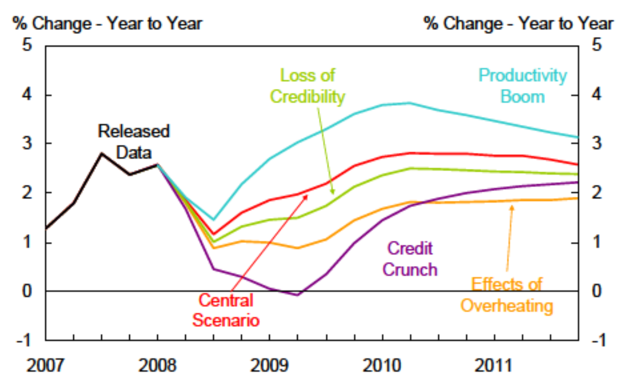
*Probability of ever reaching scenario

Exhibit C-2: Projections under Alternative Scenarios

Core PCE Inflation under Alternative Scenarios



Real GDP Growth under Alternative Scenarios

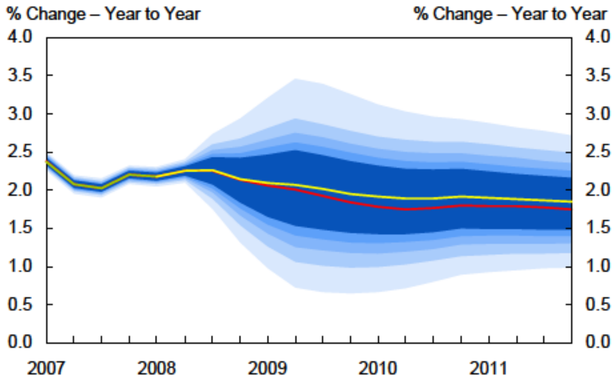


Source: MMS Function (FRBNY)

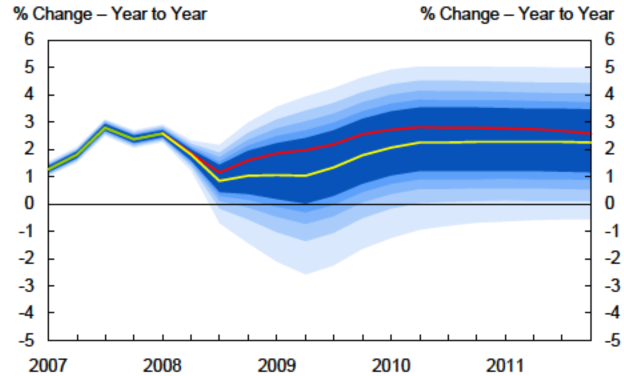
C. FRBNY Forecast Distributions

Exhibit C-3: Inflation and Output Forecast Distributions

Core PCE Inflation Forecast Distribution

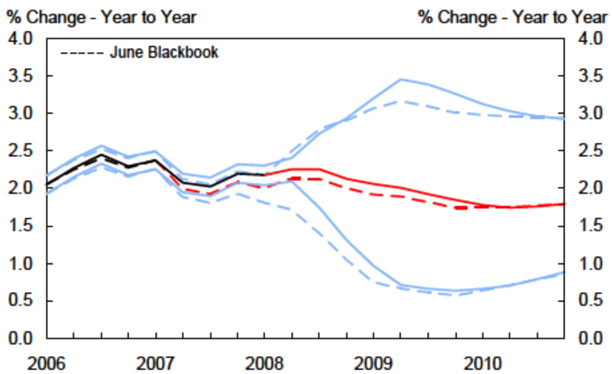


Real GDP Growth Forecast Distribution

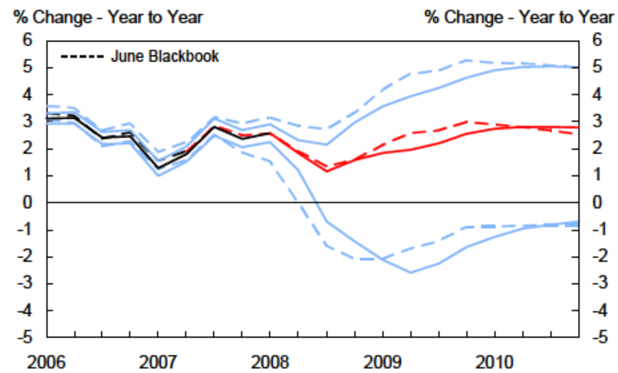


The yellow line is the expected value of the forecast distribution, the red line is the central scenario projection, and the green line is released data. The shading represents the 50, 60, 70, 80, and 90 percent chance that the four-quarter change will be within the respective range.

Change in Core PCE Inflation Forecast Distribution

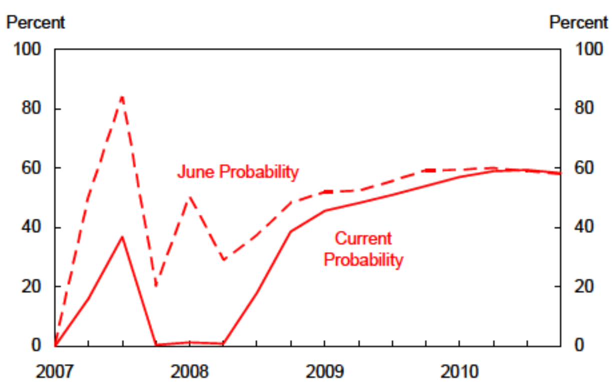


Change in Real GDP Growth Forecast Distribution

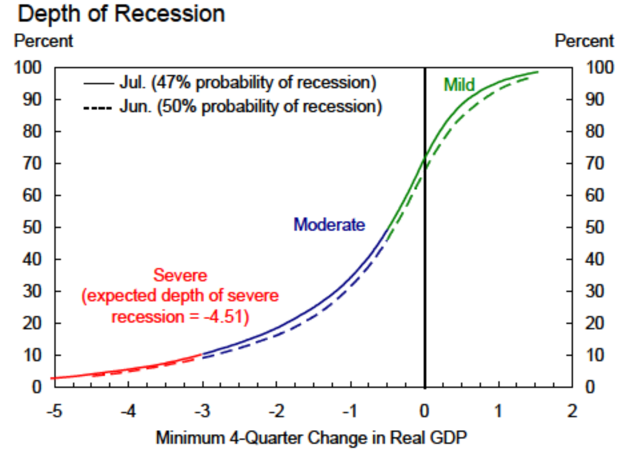


The blue lines are the 90% chance the four-quarter change will be within the lines, the red line is the central scenario projection, and the black line is released data. Dashed lines represent forecasts from previous Blackbook.

Probability of Four-Quarter Core PCE Inflation below 2%



Depth of Recession

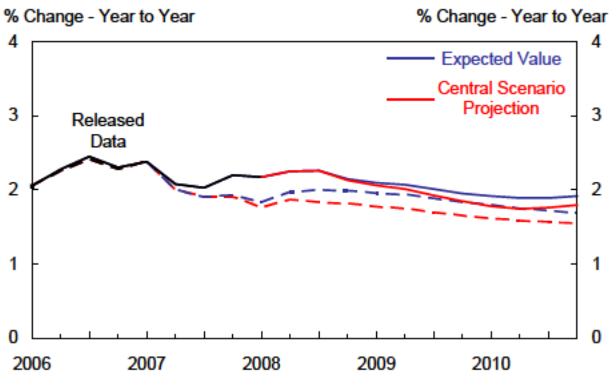


Source: MMS Function (FRBNY)

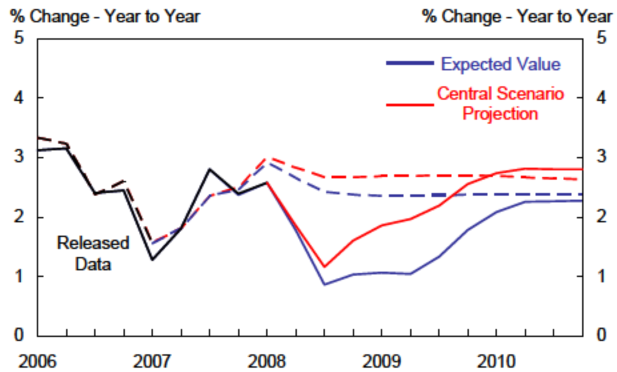
C. FRBNY Forecast Distributions

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

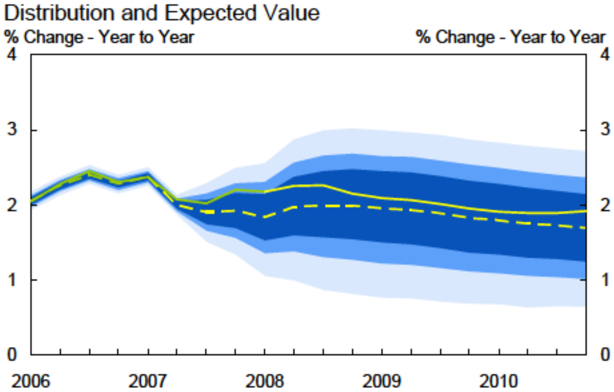
One-Year Comparison of Core PCE Inflation Forecast



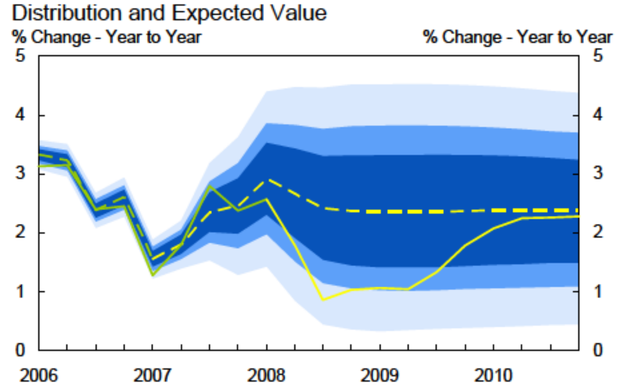
One-Year Comparison of Real GDP Growth Forecast



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



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



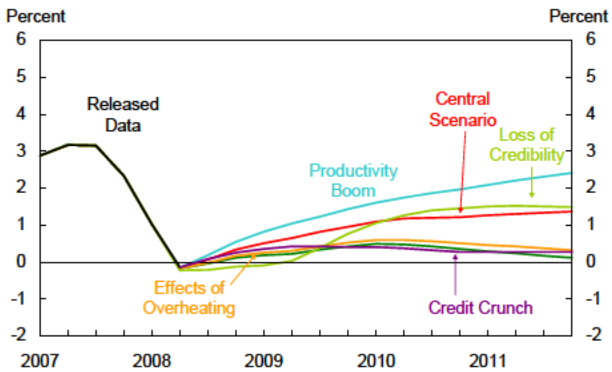
The solid yellow line is the **current** expected value of the forecast distribution, while the dashed yellow line is the **August 2007** expected value. The shading represents the 50, 70 and 90 percent probability intervals from the **August 2007** forecast. The green lines are released data.

Source: MMS Function (FRBNY)

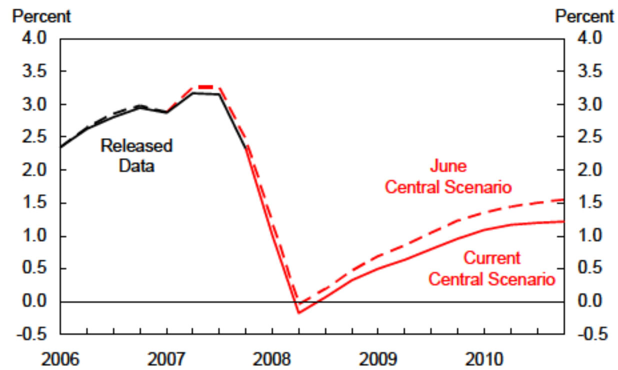
D. FRBNY Fed Funds Rate Projections

Exhibit D-1: *Baseline* Policy Rule Analysis

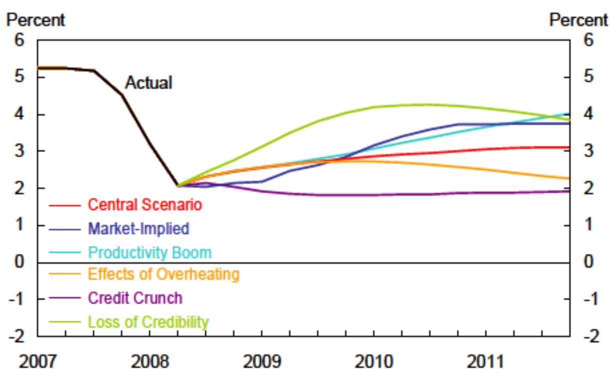
Real FFR under Alternative Scenarios



Change in Central Scenario Real FFR



Nominal FFR under Alternative Scenarios



Change in Central Scenario and Market-Implied Nominal FFR

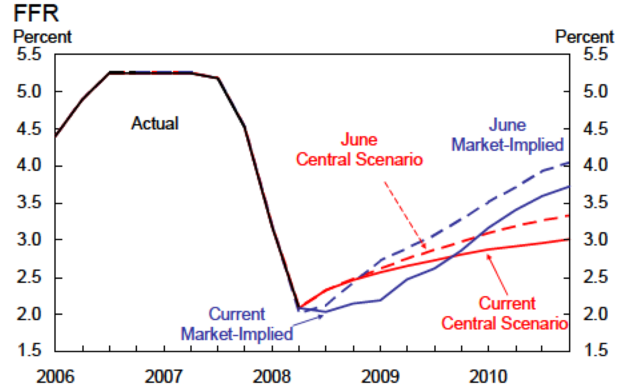
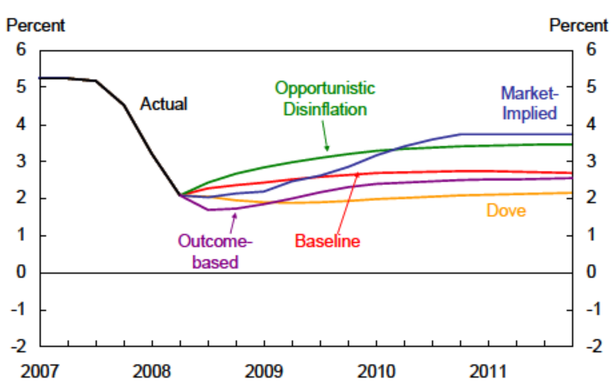


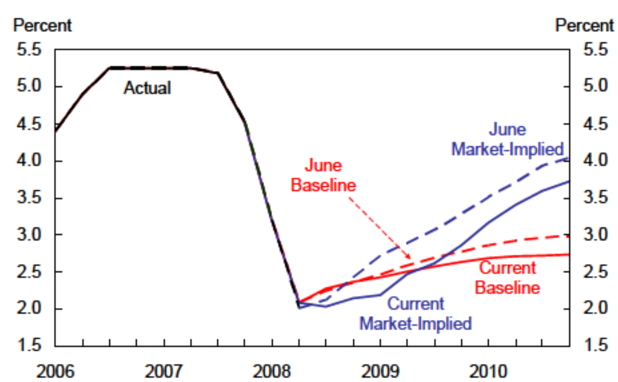
Exhibit D-2: Alternative Policy Rules under Expected Value of Forecast Distribution

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

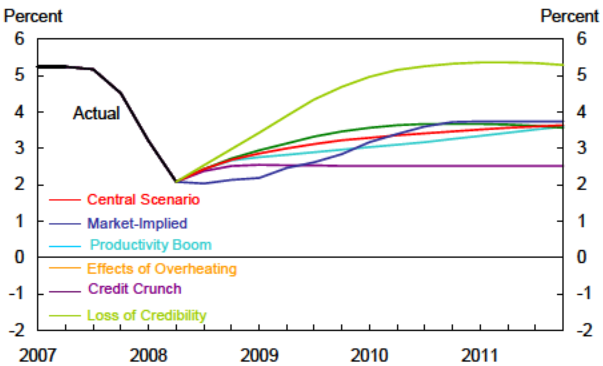
Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

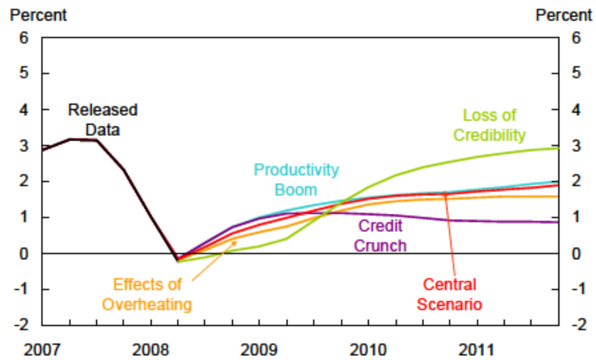
Exhibit D-3: Alternative Policy Rule Analysis

Policy Rule: *Opportunistic Disinflation*

Nominal FFR under Alternative Scenarios

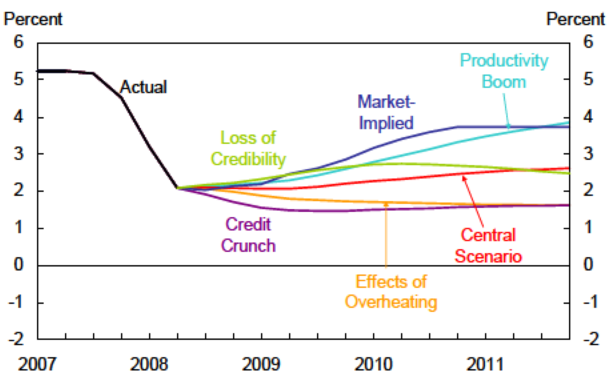


Real FFR under Alternative Scenarios

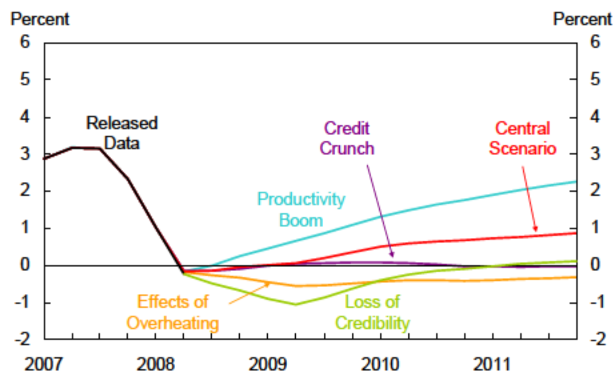


Policy Rule: *Dove*

Nominal FFR under Alternative Scenarios

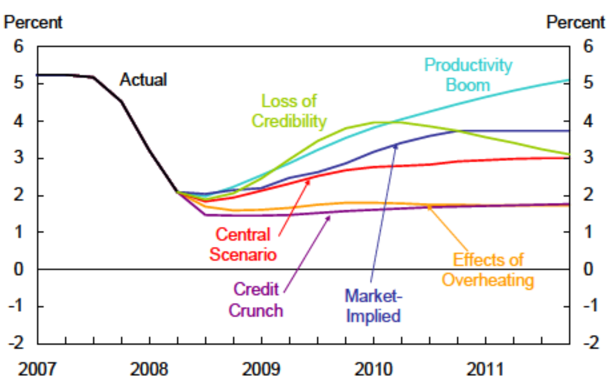


Real FFR under Alternative Scenarios

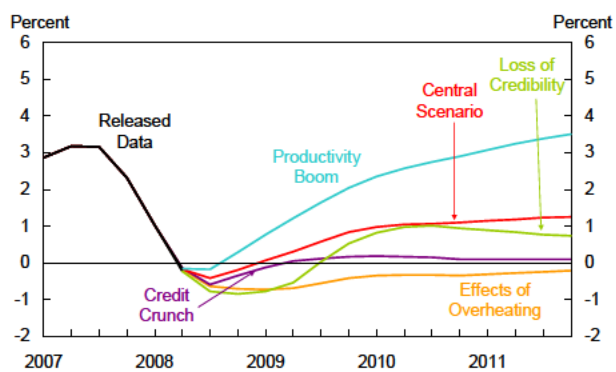


Policy Rule: *Outcome-based*

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: 2009Q1

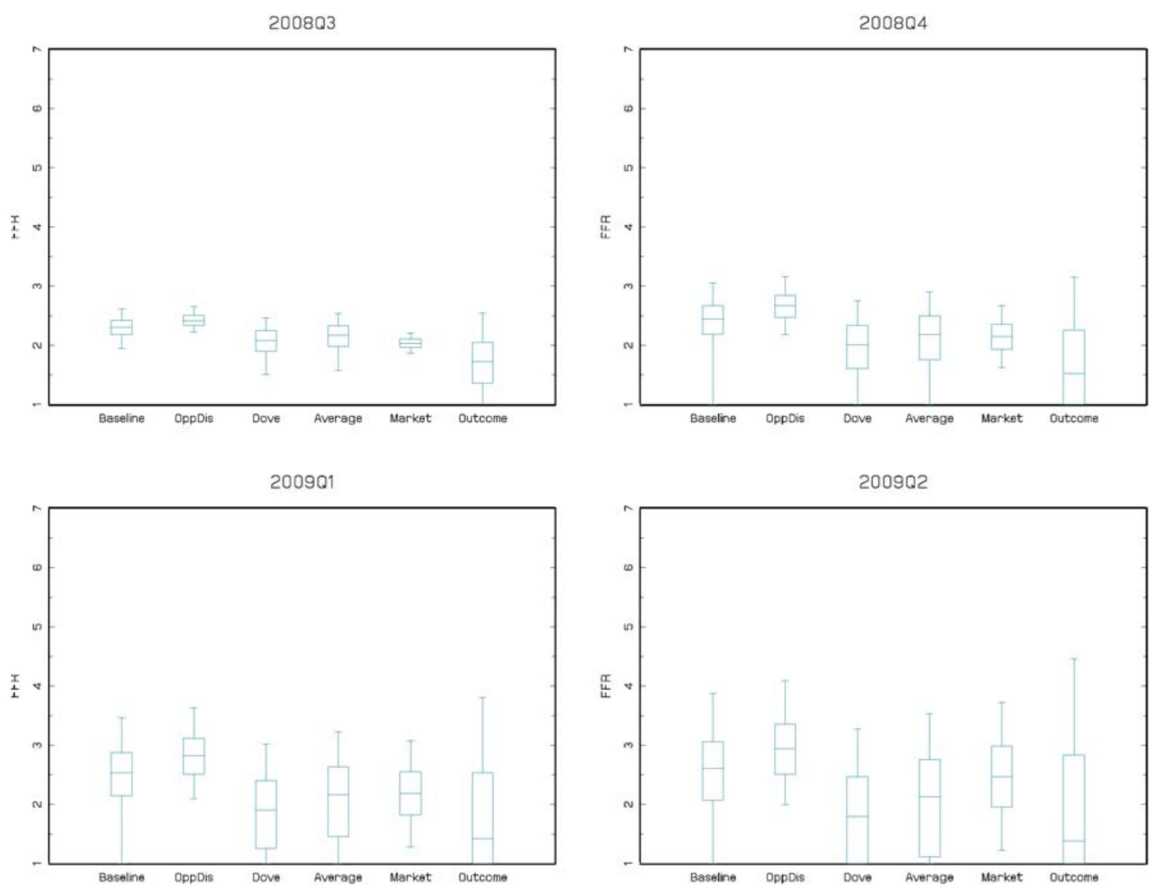
	Percentile of Rule Expectation in Market Distribution	Percentile of Market Expectation in Rule Distribution
Baseline	68 (74)	27 (20)
Opportunistic Disinflation	89 (88)	8 (11)
Dove	30 (44)	64 (50)
Outcome-based	27 (24)	68 (66)
Average	43 (71)	51 (27)

Note: Numbers in parentheses are from the previous Blackbook.

"Average" Weights:

Rule	Current	June Blackbook
Baseline	0.32	0.33
Opportunistic Disinflation	0.02	0.33
Dove	0.66	0.33

Exhibit D-5: FFR Distributions



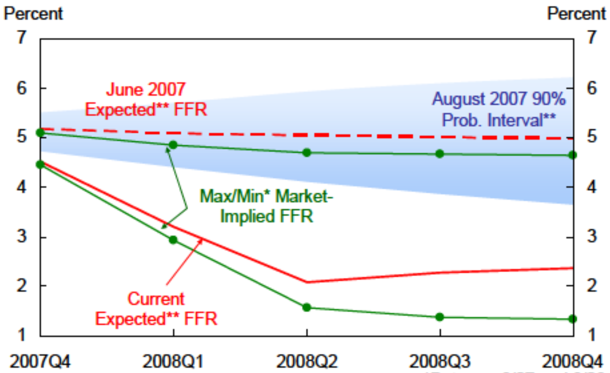
Note: The box represents the 50% probability interval, the line in the box the median, and the tails the 90% probability interval.

Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

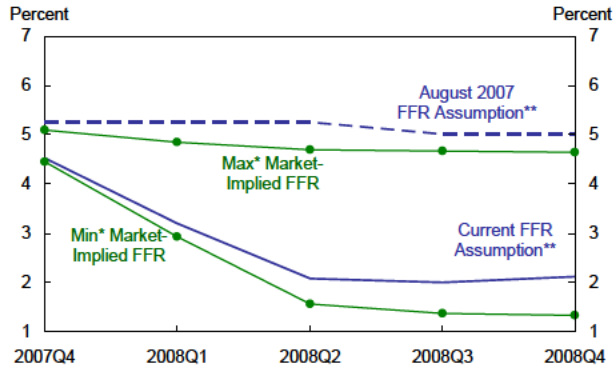
Exhibit D-6: Evolution of FFR Expectations and Assumption

FFR Forecast Distribution and Market-Implied FFR



*Between 8/07 and 8/08
**Using Baseline rule

FFR Conditioning Assumption and Market-Implied FFR



*Between 8/07 and 8/08
**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*

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

Alternative 2: *Productivity Slump*

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

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

Alternative 3: *Effects of Overheating*

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

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

Alternative 4: *Credit Crunch*

The financial turmoil that started in the summer of 2007 has put a significant strain on the availability of credit. New issuances of commercial paper (CP) – in particular, asset-backed commercial paper (ABCP) – dropped sharply in the second half of 2007, and spreads between ABCP and AA-rated CP rose notably and remain unusually high. Spreads on other credit products, including corporate bonds and CDS, also rose significantly and remain at levels comparable to those of previous recessions. The Survey of Senior Loan Officers also indicates that standards for business loans and consumer loans have tightened considerably. In addition, mortgage rates have risen, while credit standards have tightened, making mortgages more difficult to attain; trends that may be exacerbated by the recent turmoil surrounding the GSEs. This combination of factors suggests the neutral rate is lower than before the financial turmoil began (we estimate it to be between 3.00% and 3.75% over the near-term). Even though the current FFR is below our lower estimate of the neutral rate, tighter credit conditions and continued stresses in financial markets create a risk that output growth will slow significantly below the level projected in the central forecast; this would likely be accompanied by inflation below the level in the central forecast.

Alternative 5: *Loss of Credibility*

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

Alternative 6: *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 (including 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[1]

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.[2] This serves to both capture some of

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

[2] 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.

the discreteness in FFR movements and to smooth the FFR paths from the current to the 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 the previous quarter using parameters estimated from real-time historical data (1988-2006)[3].

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

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