FRBNY Blackbook

RESEARCH AND STATISTICS GROUP

FOMC Background Material

October 2007

CONFIDENTIAL(FR) Class II FOMC

FRBNY BLACKBOOK

October 2007

CONTENTS

EXHIBITS

EXHIBIT OVERVIEW

1. Policy Recommendation and Rationale

In the September Blackbook, we modified our risk assessment considerably due to the economic and financial developments over the preceding month. In particular, we increased significantly the downside risk to real activity and reduced the upside risk to inflation. Consequently, we recommended a 50bp (basis point) cut in the nominal federal funds rate (FFR) as an appropriate response to the combination of the change in our risk assessment, as well as moderation in underlying inflation. Consistent with our recommendation, the committee lowered the target FFR by 50bp on September 18.

The economic releases over the inter-meeting period have been broadly consistent with our central forecast. As a result, in this Blackbook, we have decreased somewhat the downside risk to the output forecast, while leaving the risks to the inflation forecast approximately balanced. This adjustment mainly reflects a reduction in the probabilities of the *Effects of Overheating* and *Over-Tightening* scenarios and an increase in the probability of the *High Global Demand* scenario. As a result, we now place slightly more weight on the central scenario. There is still substantial downside risk to our output forecast, because housing is at least as bad as it was in our September projection, the mortgage market remains impaired, and overall financial market functioning has not returned to normalcy.

Our central projection has the U.S. economy growing slightly below its potential rate until the middle of 2008, as the housing correction continues, and then slightly above its potential rate for the rest of 2008. For 2009 and onwards, we project growth at its potential rate. Housing production and sales have continued to surprise to the downside. Relative to sales, inventories of unsold new homes remain quite elevated. Absent a significant rebound in sales, housing starts and prices will remain under downward pressure. At the same time, the growth contribution from net exports has surprised to the upside and offset much of the drag from residential investment. In particular, import growth has slowed more than previously expected, likely reflecting in part sharp declines in imports of products and materials used in homebuilding.

We project a continued gradual moderation in core inflation, with total inflation running marginally above core in 2008 due to higher food and energy prices but then moving in line with the core projection. This path for inflation is based on inflation expectations remaining well contained, our assessment of the FOMC objective, and growth remaining at or below potential.

Our output growth and inflation projections are well aligned with those of the Greenbook for 2007 (Q4/Q4): both forecasts project core PCE inflation of 1.8%, and the real GDP growth projections differ by only 0.1 percentage points (2.4% FRBNY, 2.3% Greenbook). In contrast, the discrepancy between our projections and the Greenbook's is still evident for 2008 and 2009 (Q4/Q4). The Greenbook continues to project lower output growth and higher inflation. In particular, the Greenbook projects a real GDP growth rate of 1.7% for 2008 (Q4/Q4), while our projection is 2.6%. In 2009, the Greenbook forecast is 2.2%, while ours is 2.7%. In part, these differences reflect differing views of the potential GDP growth rate; assessments of the output gap are not significantly different. The Greenbook projection has core PCE inflation flat at 1.9% through 2008 and 2009 (Q4/Q4), while we expect some additional moderation to 1.7% in 2008 and 1.6% in 2009 (Q4/Q4).

Over much of the inter-meeting period, developments in financial markets were generally consistent with the reduction of downside risk to growth. The financial market turbulence seen in the previous inter-meeting period continued to slowly subside. Furthermore, some financial indicators provided signals of less downside risk. The expected FFR curve moved up after the September FOMC meeting, as market participants began to see less need for policy easing. Equity prices rose following the September FOMC meeting and reached new highs in early October. Credit spreads declined to levels closer to normal risk assessments. Increases in oil prices also indicated that global demand appeared to remain robust.

However, developments in the housing and subprime mortgage markets, the ground zero of the financial market turmoil of the summer, were not so encouraging. Housing market activity continued to decline, and subprime mortgage delinquency rates continued to rise sharply. There were also further rating downgrades of MBS. These developments contributed to declines in the ABX indices to below their levels from the previous inter-meeting period. With indications that these problems will probably persist longer, as well as some very tentative indications of spillover into manufacturing and investment activity, market participants appeared to reassess their reduction of downside risks. Over the past two weeks, there has been a reversal of many financial market patterns, with a lowering of the FFR curve, declines of equity prices, and rising credit spreads.

In the September Blackbook, we changed our assessment of the neutral policy rate to reflect the dramatic re-pricing of risk that had occurred. Relative to the September Blackbook, we have not changed our assessment of the neutral policy rate, which remains centered at 4.25%. Since money and credit markets remain stressed, with only fairly modest improvement over the inter-meeting period, our assessment of the neutral policy rate range also remains unchanged at 3.75% to 4.75%.

We continue to assume that there will be an additional 50bp reduction in the policy rate over the next year to bring the FFR into the center of our estimated neutral range by September 2008. The specific timing of this renormalization depends on the evolution of the outlook. Given the relatively firm expenditure data for 2007Q3 and lack of recession signals from the labor market, our outlook does not suggest the need for a cut at the October meeting. This is contrary to the current expectations priced into markets for the October meeting, and thus our path is currently slightly above the market path in 2008.

Some of the financial market reaction to the 50bp cut in September indicated possible concerns over FOMC credibility going forward. Prior to the September meeting, markets were expecting 50bp of easing by November; there was, however, uncertainty as to the timing of the cuts. The decision resolved this uncertainty. While equity markets in the U.S. and worldwide rallied strongly following the early resolution of uncertainty, long-term treasuries, the exchange value of the dollar, and the prices of gold and oil all behaved in a manner inconsistent with perfect FOMC credibility.

Ceteris paribus, these credibility-related reactions argue for a resolution of uncertainty on the timing of the additional cuts that is later rather than sooner. Such a later resolution, in addition to allowing more information on the state of the real economy to come in, also allows further confirmation of the inflation situation. Although we view the risks to the inflation forecast as approximately balanced over the whole forecast horizon, they are tilted to the upside at further horizons. There are two main sources of this upside risk: slower productivity growth going forward and higher import prices (including oil).

The latter upside risk is related to the required adjustment in the U.S. trade balance. Some recent developments in the trade balance are examined in the special topic, *The Recent External Adjustment Process*, which attributes the narrowing of the U.S. trade deficit over the past year to a combination of the effects from the U.S. housing downturn, real growth differentials between the U.S. and its trading partners, and the dollar depreciation.

Of course, one of the conditions held constant in this recommendation of late resolution of uncertainty on the timing of rate cuts is the market path for 2008. Thus, there is a risk that no change in the target rate at the October meeting might lead to a financial market reaction that effectively tightens financial conditions further. The effect of such tightening could amplify the current shock coming from financial markets in a situation of high downside risks to growth. For example, the depression in the housing sector is a potential source of spillovers (perhaps that have not yet occurred or not fully materialized) to consumption and investment. The moderation of manufacturing activity in the last couple of months may indicate some tentative signs of an initial spillover into investment, but the continued robustness of the high-tech sector (as signaled by out Tech Pulse index) and fairly solid numbers from the September business surveys argued against this hypothesis. Still, the recent downward move in the market's path might reflect an early warning signal of such deterioration.

The weakness of this argument remains the relative stability of the labor market. In the special topic, *A Tale of Two Labor Markets*, we look at the predictions from the McConnell and Tracy temp model. These predictions suggest that significant weakness in the labor market might be realized in the next few months. Moreover, as discussed in the special topic, *Are We There Yet? Looking for Confirmation of the Yield Curve Signal from 2006*, we are only now approaching the period when the data may move in a manner consistent with an impending recession.

This all suggests that the FOMC has a difficult communication problem in writing the October statement, regardless of whether or not the target rate is cut. First, the continued correction in housing is unprecedented outside of recessions. At the same time, however, there is little evidence of any major spillovers in current expenditure, labor market or survey data. Second, although recent inflation data indicate a sustained moderation to acceptable levels, long-term forces, such as the slowdown in productivity growth, the need for external adjustment, and long-run fiscal imbalances, raise the cost of any diminution of FOMC credibility on price stability.

Under our recommendation of no change in the target at the October meeting it is important that the FOMC retain the flexibility it created in its future behavior at the September meeting. In September, the difficulty was how to prevent markets pricing in an additional series of cuts relative to the path before the statement. This difficulty was alleviated by the fog created by switching from the previous more explicit forward-looking guidance to the "continue to assess…" formulation. As outlined above, the problem under no change in the target FFR is that markets might over-react in their assessment of policy in 2008.

In October, a similar formulation could be used for the "balance of risks" section if the rationale section of the statement reflects the range of contingencies discussed in the minutes. An alternative would be to provide a more explicit acknowledgement of the downside risks to growth in the short-run.

2. Significant Developments

2.1 Economic Developments

The economic indicators released during the inter-meeting period had modest impact on the near-term outlook, little impact on our medium-term outlook, but considerable impact on our risk assessment. For the outlook, they have prompted a small reduction to our near-term inflation forecast and an increase to our 2007Q3 real GDP growth projection (advance estimate to be released on October 31). For our risk assessment, the data have led us to reduce some of the sizable downside risks to real activity that we had as of the September Blackbook; nevertheless, these risks are still skewed to the downside. The data had less impact on the inflation risks, which we still see as roughly balanced.

The behavior of core inflation measures remained generally consistent with our outlook of a slow moderation of underlying inflation [Exhibit A-1]. The changes in the core PCE deflator (through August) and core CPI (through September) continued to be moderate, suggesting that core PCE inflation in 2007Q3 may be around 1.5%, which would be the second consecutive quarter where it has been at that level or below. Changes in both core measures at most horizons between three and 24 months remained within their respective "comfort zones," with the 12-month changes well within the zones.

After declining through the summer, consumer energy prices rose in September, as they began to reflect the recent rises in spot petroleum prices (see below). Food prices also continued to show relatively large increases. These factors began to pressure overall inflation measures in September: the 12-month change in overall CPI was well above that of core CPI in September, after being close to it during the summer.

Our alternative inflation measures based on the CPI, many of which take into account energy and food prices, began to show some effects from these developments in September. After declining moderately since early 2007, these measures, including our underlying inflation gauge (UIG), appeared to have flattened in the past two months. These developments suggest some slowing in the pace of moderation in core CPI compared to what has been seen since early 2007. The measures based on core PCE inflation have not yet displayed such flattening, although they do not yet incorporate September PCE inflation data (to be released on November 1). Nevertheless, the declines in these alternative measures over the past six months confirm that much of the decline in core inflation during this period was not a result of transitory factors.

Inflation expectations measures remained fairly well contained [Exhibits A-2 and A-3]. Shorter-term financial market expectations, which had declined considerably during the summer, possibly reflecting the increase in downside risks to real activity, increased somewhat after the September FOMC meeting and are moderately higher on net over the inter-meeting period. Nevertheless, they remain below their observed levels from the first half of the year. Longer-term financial market expectations rose sharply after the September FOMC meeting, perhaps because market participants reassessed their view of the FOMC inflation objective in light of the 50bp (basis points) policy rate cut. These expectations since have declined to slightly below their levels immediately prior to the September FOMC meeting. However, their levels remain elevated relative to levels observed over the past year, which may reflect some concern about the long-run inflation outlook and FOMC credibility. In contrast, long-term (5-year) household expectations, as measured by the Michigan survey, fell modestly in the first half of October to a two-year low.

One source of concern for the inflation outlook is the effect of import prices. The depreciation of the dollar (see below) appears to have begun to have some effects on import prices. In particular, import prices from some countries that previously had mitigated inflation pressures (most prominently, China) have begun to rise and could portend some greater inflationary pressures from the external sector. Thus far, however, import price inflation of autos, capital goods, and consumer goods remain subdued. Overall, the inflation data have largely been consistent with our outlook and continue to suggest that the risks around that outlook are roughly balanced.

Real GDP growth in 2007Q2 was revised downward slightly to 3.8% (annual rate). However, there was a more significant downward revision to nonfarm business GDP, which would suggest a downward revision to nonfarm business productivity growth in 2007Q2. The extent of the productivity revision will not be known until Q3 productivity is released in early November (we expect that productivity growth may be revised from around 2½% to about 2%), but it does indicate the continued risk of slower productivity growth for the outlook.

The two primary factors that contributed to the reduction in downside real risks are consumer spending and the labor market. Despite concerns about the possibility of spillovers from the weak housing market and tighter credit conditions (engendered from the subprime crisis), consumer spending indicators during the inter-meeting period have been fairly robust, and indicate that real PCE growth in 2007Q3 could be around 3¾% (annual rate). In particular, August real discretionary services expenditures, September motor vehicle sales, and September retail sales were generally stronger than expected and show little signs of spillover effects. Consumer confidence measures remain near the lower end of recent prevailing ranges; consequently, they do not yet suggest a significant deterioration of consumer attitudes that could affect future spending, although further declines would signal some concern.

In the labor market, payroll employment increased solidly in September, and the originally reported decline in August (one factor that had prompted us to increase downside real risks during the last inter-meeting period) was revised to show a fairly solid increase. It is still true that even with these recent changes, payroll growth has declined in recent months: the three-month average change in payroll employment has declined from 126,000 in June to 97,000 in September. However, we had been expecting some moderation in the pace of payroll growth closer to the long-term trend after strong growth in 2006 and the first half of 2007. As such, the more recent data are consistent with our outlook, contributing to our reduction of downside real risks.

The slowdown of payroll growth appears concentrated in housing- and mortgage-related industries, with declines in residential construction and financial activities in the last three months. In addition, the fall in temporary help services may also reflect, in part, the weakness in housing markets, as many of these workers are hired by construction firms. Nevertheless, the sharp decline in temp payrolls is still somewhat worrisome for future payroll growth. (The special topic, *A Tale of Two Labor Markets*, discusses this issue further in the context of the McConnell-Tracy temp employment model.) In contrast, the four-week moving average of initial unemployment insurance claims remained within narrow ranges, indicating little deterioration in the labor market conditions.

The unemployment rate ticked up to 4.7% in September, but many other facets of the household survey also indicated a reduction in downside real risks; the labor force participation rate and the employment-population ratio rebounded in September. Much of the rebound was for younger workers, which is consistent with the hypothesis that much of the decline in August reflected transitory technical factors related to students returning to school. Nevertheless, both the labor force participation rate and the employment-population ratio remain below their levels in the beginning of the year. In addition, employment growth in the household survey (on a basis comparable to that of payroll employment) has slowed noticeably from its pace in 2006; in fact, it is now below the pace of payroll employment growth. These factors indicate that, although the downside risks from the labor market have subsided, they remain prevalent.

The 12-month change in average hourly earnings was 4.1% in September, a little above that from the summer but comparable to that in late 2006. These data suggest a modest change, at most, in labor cost pressures, although the 2007Q3 ECI data (to be released on October 31) will provide additional information on this issue.

Of course, a sector that indicates substantial downside risks to our real activity outlook is the housing market. Housing starts and permits fell in August and September and are now at their lowest levels since 1993. In addition, the homebuilders index is now at a historic low, indicating continued pessimism from homebuilders about the housing market. Sales of new and existing homes displayed further weakness in August and September, and both are at levels not seen since 1997-98. The most recent weakness in sales probably, in part, reflects the effects of tightening mortgage conditions (and possibly expectations of future home price declines, something also suggested by responses to a question on expected home values in the Michigan survey). The combination of continued weak sales, high inventories-sales ratios of new and existing homes, and elevated vacancy rates (as indicated by the 2007Q3 data) suggest that there will be continued weakness in the market. Consequently, we continue to see the slump in housing activity as protracted, with residential investment falling over the rest of this year and into 2008.

Because of the weakness in sales activity, nominal home price appreciation is negative by some measures. The four-quarter change in the Census constant-quality index for new homes sold was -0.8%, the lowest it has been since 1964 (the beginning of the history of this series). The 12-month change in the composite-10 metro area Case-Shiller home price index was -4.5%, the lowest it has been since 1991. Also, responses to a question in the Michigan survey indicate that more households expect their home values may decline over the next year. Moreover, with nominal appreciation near zero or negative, real home price appreciation clearly has turned negative. Because of their impact on real household wealth, these declines indicate continued downside risks from spillovers from the housing market into consumption.

Although they have improved somewhat over the inter-meeting period, conditions in mortgage markets remain quite stressed and tight [Exhibit A-11]. Delinquency and foreclosure rates continued to rise. This development remains most evident in subprime mortgages, although delinquencies and foreclosures have also risen somewhat for prime mortgages. In addition, there have been further downgrades in the ratings of mortgage-backed securities (MBS), including some previously AAA-rated MBS, as well as write-downs of subprime MBS and CDOs by financial institutions. Consequently, investors have continued to avoid holding non-agency MBS and their related derivatives; in part, such reluctance was reflected by drops in the ABX indices to below their August lows at all ratings levels. Thus, there appears to have been little securitization and origination of subprime mortgages. For prime jumbo mortgages, the spread between these rates and conforming mortgages has narrowed somewhat but remains unusually wide, in part because securitizations remain low. With these stresses, mortgage applications slipped somewhat over the inter-meeting period and are rather low given that posted interest rates remain low. These developments increase the possibility of further negative impact from tighter credit conditions (which is also indicated from the latest senior loan officer survey) on home sales, construction, and prices (increasing the potential of spillovers), which are factors contributing to the still considerable downside risks to real activity.

Most business activity measures released over the inter-meeting period were a little soft, probably reflecting the impact of greater uncertainty and tighter financial conditions after the financial market events in late July and August. Manufacturing activity was flat over August and September, representing a lull after some fairly robust increases in the first part of the summer. Inventory investment was tepid in July and August, as this greater uncertainty probably raised firms' caution, indicating that inventory investment probably will be a drag on GDP growth in 2007Q3. However, inventories-sales ratios remain low, suggesting that firms may not see the need to shed many inventories, which is an encouraging sign for future production. Consistent with this interpretation, business survey measures continued to be at levels consistent with moderate growth. Our Empire State survey was even stronger than that.

Capital equipment spending indicators suggest rather moderate growth over the near term. Capital goods shipments and orders rose moderately in 2007Q3, and high-tech production growth slowed somewhat in August and September. A concern is that this slowdown may reflect some spillover to investment from the housing downturn. In addition, the latest senior loan officer survey indicated tighter credit conditions for firms, which raises further concerns about the investment outlook. However, our Tech Pulse remained robust, suggesting that the high-tech sector is not slowing significantly. Non-residential construction rebounded and rose strongly in August, indicating that the structures portion of capital spending remains robust.

The trade deficit narrowed in August, continuing a recent trend and indicating a higher net export GDP growth contribution in 2007Q3 and 2007H2 than we had previously expected. Export growth has been robust over the past year, with particular strength in our exports to Europe and China. Non-oil imports have been flat over the year, with the most significant declines in categories associated with housing. In addition, the quantity of oil imports is down 7% over the year, possibly the beginning of a response to high prices over the past year.

The narrowing of the trade deficit probably is a result of a combination of a widening in the growth differentials between the U.S. and its major trading partners as well as the dollar's depreciation. The latter appears to have begun to spur export growth, while the former slowed import growth by increasing import prices and causing domestic firms to switch to domestic suppliers to reduce input costs. The special topic, *The Recent External Adjustment Process*, further discusses these developments.

The outlook for foreign economies is largely unchanged from the last Blackbook, as the recent data suggest reasonably strong growth. In the euro area, confidence indicators fell in September (the German Ifo index also fell slightly in October) but remain at high levels. Production and employment data were solid through August, while exports continued to grow at a 10% rate despite the strong euro. The Japanese outlook appears solid, with encouraging responses in the September Tankan business survey and a pickup in August production after a prolonged period of stagnation. However, mild deflation continues to persist in Japan. The four-quarter change of Chinese GDP in 2007Q3 was 11.5%, which was only a slight slowdown from that in 2007Q2. The inflation rate in China remained elevated at 6.2%, largely because of food prices. Real GDP growth in Korea and Singapore was robust in 2007Q3.

Special Topic

A Tale of Two Labor Markets

Joseph Tracy Redacted *nd Meg McConnell* Redacted

The recent decline in employment services payrolls indicate some downside risks for the labor market.

The September labor market report dispelled many worries about the U.S. labor market running out of steam. The prior August report had indicated a small contraction of employment in August and a substantial downward revision to the earlier reported employment gains in June and July. This report raised the concern that rather than slowly cooling, the employment situation was deteriorating more rapidly. The consequences would be a rising unemployment rate, tepid growth in real disposable income, and a stronger precautionary demand for savings by households. In addition, this situation would likely exacerbate the problems in the housing market. We reflected these concerns by adding substantial downside risk to our growth outlook.

On October 5, however, the Labor Department reported that employers added on net 110,000 jobs in September. In addition, the initial report of a loss of jobs in August was revised to a gain of 89,000. This report corroborated the signals that we were receiving from weekly initial unemployment insurance claims reports, which did not indicate any significant rise in layoffs for the weeks spanning the August and September labor market reports.

However, it may be premature to sound the "all clear" signal. What is important for the outlook is the forecast for employment growth over the near-term. Meg McConnell maintains a model that forecasts employment growth over a 6-month horizon. There are two versions of this model. Both versions include the lagged 6-month change in employment, the change in overtime hours, the ISM index and the change in the S&P 500 index. The second model adds the 6-month change in employment in the employment services sector (which includes temporary help services). The argument for including changes in temporary employment is that it appears to be increasingly used as a margin of adjustment by firms.

The output of these two specified models is presented in Figure 1, using data through the September labor market report. The green line is the forecast for the specification that excludes employment services, while the red line is the forecast for the specification that includes employment services. The blue line shows actual 6-month employment changes.

The two different specifications paint contrasting pictures of the current state of the labor market. The specification without employment services forecasts that the labor market will add 647,000 jobs over the coming six months – an average pace of around108,000 per month. This is slightly above the average of 97,000 observed for the last three months, and close to our central outlook. In contrast, the specification with employment services is forecasting that the labor market will add only 76,000 jobs over the coming six months – an average pace of less than 13,000 jobs per month. This forecast suggests a sharp slowing of employment gains in the coming months. This forecast was only slightly better than the one implied following the September report, which suggested a 6-month decline of 4,000 jobs.

What is driving this sharp contrast in forecasts is that the employment services sector has been declining throughout 2007, with the most recent 6-month decline reaching almost 10%. As shown in Figure 2, the last time the 6-month change in employment services payrolls had a decline of this magnitude was in early 2001.

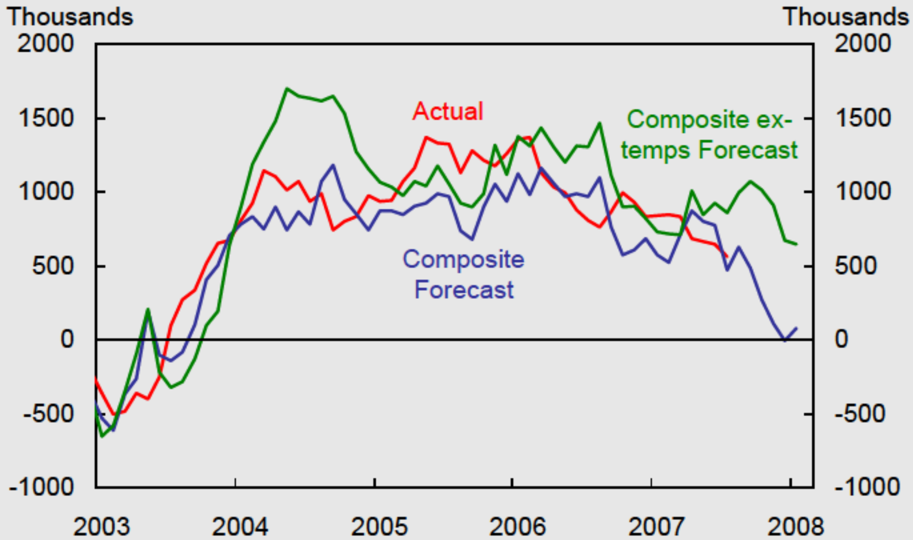
As you can see from Figure 1, the model including employment services has generally had a better forecasting record since 2003. The most recent 6-month change in employment (564,000) is close to the forecast from the model including employment services (473,000), while the model excluding employment services was overly optimistic (860,000).

These two 6-month forecasts convey a tale of two labor markets. Ignoring the signal from the employment services sector, the forecast is consistent with a mid-cycle slowdown in the labor market. Incorporating the signal from the employment services sector, the forecast indicates a near-term recession risk.

How much weight should be put on the recession warning from the employment forecast incorporating the signal from the employment services sector? We will try to corroborate this signal by looking at micro data on workers in this sector from the monthly CPS surveys. This data will help inform us as to which industries are shedding temporary workers and the degree to which these workers are becoming unemployed.

Figure 1: Private Nonfarm Payroll Employment Forecast

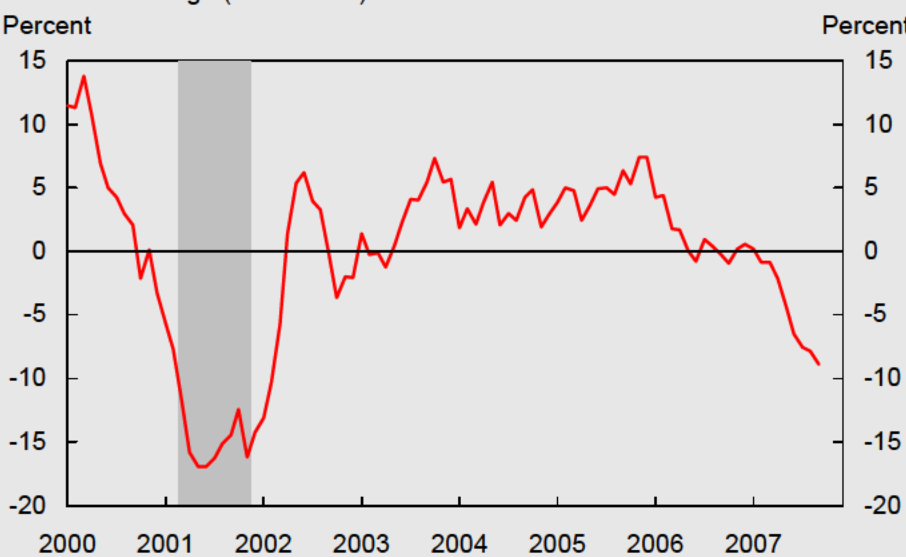
Six-Month Change



Source: Bureau of Labor Statistics, FRBNY

Figure 2: Employment Services

Six-Month Change (Annualized)



Note: Shading represents NBER recessions.

Source: Bureau of Labor Statistics

Special Topic

The Recent Adjustment in the External Imbalance

Rebecca Hellerstein Redacted *Andrea Ferrero* Redacted *and Ayşegül Şahin* Redacted

The weak U.S. housing market and the depreciation of the dollar have contributed to U.S. external adjustment.

As stated in the developments section of this Blackbook, the trade deficit narrowed again in August, continuing its trend from the last two quarters. Thus far, the adjustment is the product of strong exports coupled with flat imports. This special topic discusses the drivers of these two trends.

Since late 2006, weak import growth has been led by a decline in industrial supplies, particularly in inputs typically associated with residential construction. In recent months, imports of housing-related capital goods also have softened. These developments are consistent with the view that the U.S. housing slump has affected investment more than consumption.

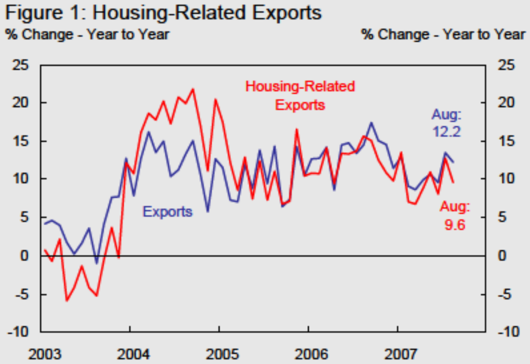
An analysis of the industry detail of U.S. imports confirms that some of their recent softness likely results from the correction in residential investment: housing-related import growth has slowed to a greater extent than has overall import growth (Figures 2 and 4). In contrast, recent export performance appears less tied to the housing cycle in the U.S. or abroad: Recent year-over-year growth in housing-related exports has matched overall export growth (Figures 1 and 3).

Another factor in the recent external adjustment is the depreciation of the dollar. Over the year ending in August, the dollar was down 6% against the euro, 5% against the remnimbi-yuan, and 5% against the Canadian dollar. Since the last Blackbook, the dollar has continued to depreciate against most currencies, with the exception of the yen and the remnimbi-yuan.

A related development is that an increasing number of countries that previously maintained regimes of limited exchange-rate flexibility with respect to the dollar may now be moving towards more flexible arrangements. To the extent that these countries have played an important role in financing the U.S. current account deficit (some of these countries are oil producers that have been accumulating large dollar reserves), the global trend towards more flexible exchange rates could be a harbinger of further external rebalancing going forward.

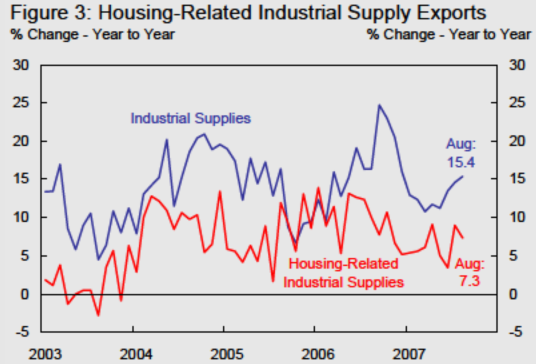
Although widening real growth differentials (given the generally robust growth outside of the U.S.) have been the most important factor in the narrowing of the U.S. trade deficit over the past few quarters, the depreciation of the dollar may take on a more prominent role in the future. As exchange-rate movements generally take about a year to pass through into import prices, we should expect to see further adjustment from the exchange-rate channel going forward, especially if more countries abandon their pegs to the dollar.

Figure 1: Housing-Related Exports



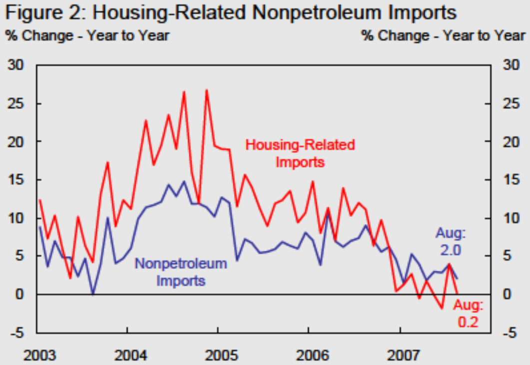
Source: Haver and FRBNY Calculations

Figure 3: Housing-Related Industrial Supply Exports



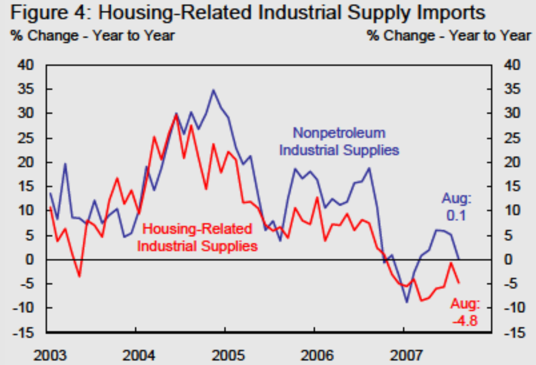
Source: Haver and FRBNY Calculations

Figure 2: Housing-Related Nonpetroleum Imports



Source: Haver and FRBNY Calculations

Figure 4: Housing-Related Industrial Supply Imports



Source: Haver and FRBNY Calculations

Note: We identify imports used by the housing sector by using input-output tables for this industry from the Bureau of Economic Analysis. These tables give the value of other industries' output used on average by the residential construction industry each year. We include only industries with significant implied shares of the total imports by the residential construction industry (5 percent or more). These include forestry products, plastic and rubber products, nonmetallic mineral products, wood products, and general purpose and electrical machinery.

2.2 Financial Markets

Some of the turbulence in financial markets appeared to have subsided, and some of the financial indicators provided more encouraging signals over the inter-meeting period. Both developments are consistent with a reduction in downside real risks. However, longer-term asset-backed security markets, including MBS and related derivatives, and commercial paper markets, especially the asset-backed sector, continued to show signs of significant stress. Concerns about these stresses and their possible effects on broader financial markets and the economy influenced financial markets toward the end of the inter-meeting period, renewing some of the turbulence and partially reversing some of the financial market indicators' encouraging signs.

After rising over most of the inter-meeting period, consistent with signs of lower downside risks, the expected FFR curve has fallen considerably over the past two weeks and is now well below the curve prior to the last FOMC meeting [Exhibit A-5]. Over the near term, market participants again place a very high probability of at least one 25bp cut in the FFR by the end of the year; however, market participants still display considerable uncertainty about the near-term FFR path. Over the medium term, market participants appear to expect a series of cuts in the FFR to about 3.75% in late 2008/early 2009. The recent shift down in the curve appears to reflect a renewal of concerns about the potential impact of subprime losses on financial markets and real economic activity, as well as possibly the belief that the FOMC will continue to act aggressively against such possibilities.

Both implied volatility and negative skewness for the FFR declined somewhat over the inter-meeting period [Exhibit A-6]. Skewness has returned to levels comparable to those of May, suggesting that market participants, with one "large" cut in the FFR executed, have become somewhat less concerned about another unexpected large cut in the FFR. In contrast, despite the declines over the inter-meeting period, short- and long-term implied volatility remains elevated relative to the levels observed over the first half of the year. This development indicates that market participants remain quite uncertain about the extent of a possible series of cuts in the FFR, as well as the level of the neutral policy rate.

After increasing through much of the inter-meeting period, long-term nominal interest rates declined sharply over the past two weeks, leaving them somewhat lower on net for the inter-meeting period [Exhibit A-4]. Short-term nominal rates fell with the cut in the FFR at the September FOMC but increased over most of the rest of the inter-meeting period, as conditions improved some in money markets. However, they have again declined sharply recently, as concerns related to effects of subprime mortgage losses on other short-term credit markets resurfaced. Overall, these developments have led to the yield curve being modestly positively sloped; however, the volatility at the short end may mean that the signals from the curve are more uncertain than would be under more normal market conditions.

Much like nominal rates, longer-term real interest rates increased somewhat over much of the inter-meeting period. However, again, these rates have dropped significantly over the past two weeks so that on net they have declined about 15 basis points. Longer-term real forward rates about unchanged on net over the inter-meeting period [Exhibit A-4]. This pattern suggests that market participants' concern about the real activity risks appear to be more about the nearer-term outlook than the longer term.

Credit spreads on corporate securities, in general, have declined since the last FOMC [Exhibit A-7]. Again, these spreads have risen over the past two weeks, particularly for speculative-grade corporate bonds, keeping them well above their levels from the first half of the year. Although those earlier levels may have not accurately reflected risks at the time, the recent rise probably reflects market participants' concerns that the effects of the housing downturn and subprime mortgage market turmoil could turn out to be more widespread and protracted than expected.

Spreads on high-grade asset-backed securities, such as AAA-rated consumer ABS tranches, also have declined slightly on net over the inter-meeting period. However, for lower-rated instruments and the broader MBS market, any narrowing of spreads since the September FOMC meeting was reversed over the past two weeks. Consequently, the spreads on much of the ABX increased to new highs as concerns about more significant losses mounted [Exhibit A-11].

The volume of commercial paper issuance remained weak, certainly for asset-backed commercial paper but also for domestic and foreign nonfinancial issuers [Exhibit A-7]. Most of the recovery in volume is accounted for by the financial sector. At this point, it is unclear whether the recently announced Master Liquidity Enhancement Conduit will lead to greater confidence in ABCP and SIVs from market participants. This will depend upon whether the weakness in these markets primarily reflects liquidity issues more than credit-quality issues. The continued weakness in these markets may suggest the latter and may therefore account for some of the initial skepticism about this program.

Interbank lending markets have improved some over the inter-meeting period, as the LIBOR shifted downward over the inter-meeting period (although part of the shift may reflect expectations of lower policy rates) [Exhibit A-11]. Nevertheless, term dollar LIBOR at the 3-month horizon remained elevated and spread between it and 3-month deposit rates were still somewhat elevated (but lower than in the last period). In addition, liquidity in the market has not fully returned to normal.

Equity markets rose to new historical highs in early October but have dropped on net since [Exhibit A-7]. The earlier development appeared to be consistent with a reduction in downside real risks as well as a reduction in the interest rate path (lowering the discount rate on future profits). The decline over the past two weeks occurred as a number of financial firms reported earnings and indicated further problems related to subprime mortgages. Furthermore, some nonfinancial firms reported weaker earnings and indicated lower future guidance, suggesting the possibility of greater spillovers from the housing downturn. Implied volatilities had declined over most of the inter-meeting period, however, with the recent market declines, they have risen over the past two weeks. They are still substantially below their August highs but are well above the levels from the first half of 2007.

Financing conditions improved somewhat in global markets since the FOMC meeting, with reports of more liquid ABCP markets and efforts by financial institutions to address the causes of the turmoil. However, spreads between term and overnight LIBOR rates remain elevated, falling marginally for British pound contracts from their August highs and failing to sustain any visible decline for euro contracts [Exhibit A-8]. Additionally, negative earning reports by financial corporations and adverse news on U.S. housing and growth prospects have spurred another bout of negative sentiment since mid-October, stomping a recovery in asset prices and spurring new flight-to-quality flows. Institutions that have begun writing down losses from leveraged loans, MBS, and other structured investment assets also have been reluctant to lend in term markets, reflecting the deterioration in their balance sheets. Probably further unwinding in mortgage-related products in coming quarters is likely to contribute to keeping term spreads elevated.

Through mid-October, the impact of the September FOMC rate cut and efforts to tackle the effects of the mortgage crisis by financial institutions sustained a recovery in main industrial equity indices [Exhibit A-8]. During this period, European and Japanese indices followed U.S. indices and rose sharply, erasing much of their August losses. Over the past ten days, however, foreign indices have followed U.S. indices down, and now stand only 3-4 percent above their level at the time of the last FOMC meeting. Emerging market indices, which were little affected by the summer turmoil, generally continued their robust performance, benefiting from the expectation that interest rates in industrial areas, especially Japan, will not rise in the near future. (An exception is the Indian market, which fell sharply after the October 17 announcement of measures to curb capital inflows, but it has recovered by October 26.)

Currency markets witnessed further dollar depreciation, especially against the euro and emerging market currencies [Exhibit A-9]. The dollar-euro rate crossed the historical high of 1.43 on October 18 and has remained near that level over the rest of the period.

Emerging market currencies have faced especially strong pressure toward appreciation, prompting a number of regional central banks to intensify intervention activities. By contrast, the yen cycled during the period from around 115 per dollar in September to 117 per dollar in early October, and back to 114 per dollar in recent days, as investors appeared to pare back some of their exposure to global exchange rate risk. Altogether, the dollar has depreciated 3% in effective terms since the last FOMC meeting. Option-implied volatility remains moderate for the dollar-euro rate and has fallen to more moderate levels for the yen-dollar rate, after reaching multi-year highs in the previous FOMC period.

Investor confidence that the impact of the financial market turmoil on real growth may be contained lifted up real and nominal long-term interest rates in main industrial countries through mid-October. This pattern was reversed in the past two weeks, however, as concern with global growth reemerged [Exhibits A-8 and A-9]. With long-term rates changing relatively little, the euro area yield curve remains inverted. Break-even rates from inflation-linked bonds have remained within their recent ranges, despite the sharp rise in energy prices.

Spot oil prices rose sharply over most of the inter-meeting period, hovering above $87 per barrel over the past two weeks and closing above $90 on October 25. The recent rise in spot prices reflects a combination of a supply-driven decline in inventories, geopolitical tensions in some oil-producing areas, and indications of continued strong oil demand. Confirming the expected persistence of firm oil prices and robust demand, long-dated futures prices rose during the period in tandem with spot prices.

2.3 Global Monetary Policy

As expected, major central banks remained on hold during the inter-meeting period. The exceptions were another increase in reserve requirements in China on October 15 and an increase in the policy rate in Mexico on October 26. In its recent press report, the ECB increased its policy flexibility by highlighting downside risks to its growth forecasts and omitting its previous assessment that its policy stance remains accommodative. Swap curves indicate that neither the ECB nor the Bank of Japan are expected to hike rates through year-end, although they may move later, if current developments in financial markets do not spill over to growth [Exhibit A-10].

A developing tendency in emerging markets is a move toward more flexible exchange-rate arrangements. Most recently, Vietnam announced its intention to abandon its link to the dollar. Recent reports about potential policy changes in Saudi Arabia and Qatar also highlight the possibility of slower reserve accumulation ahead in emerging markets. However, in the meantime, actual intervention by many other emerging market central banks has continued apace, with the central banks of India, Korea, Taiwan, and Indonesia, among others, reportedly intervening to buy U.S. dollars in recent weeks.

3. Evolution of Outlook and Risks

3.1 Central Forecast

Conditioning assumptions. The key conditioning assumptions underlying our point forecast for growth and inflation are little changed since the September Blackbook. In particular, the 50 basis point reduction of the FFR target was as assumed in September. Going forward, we continue to assume that the FFR will decline to 4.25% in late 2008Q3 or early 2008Q4. The FFR then remains at 4.25% over the remainder of the forecast horizon. We continue to believe that the neutral funds rate lies somewhere in the 3.75% to 4.75% range. The recent tightening of credit conditions may have effectively lowered the neutral rate somewhat, but precise measurement of such an effect is not possible. Overall, it appears that our assumed stance of policy over the next year is slightly restrictive. Our assumed path for the FFR is above the path implied by prices in futures markets. That market-expected path has been declining since mid-October.

The FFR assumption underlying this forecast has been the subject of considerable debate over the past few weeks, but in the end the collective decision was to leave it unchanged. Perhaps the most important factor in this decision is that, despite additional weakness in the housing sector, overall it appears that the economy entered 2007Q4 with a fair amount of forward momentum. Retail sales in September surprised to the upside, as did manufacturers' shipments of nondefense capital goods. Moreover, while certainly not back to normal, it does appear that the functioning of financial markets has improved over the inter-meeting period. The downside risks to growth thus appear to be somewhat reduced from those in September. Finally, with the unemployment rate still relatively low, the dollar falling in value, oil prices reaching new highs, and food price inflation relatively high, there is still meaningful upside risk to inflation over the forecast horizon.

The remaining conditioning assumptions behind our central forecast are also similar to those of the September Blackbook. We maintain our estimate of potential GDP growth at 2.7%: 1.2% trend hours growth (although we assume it will begin to decline in 2009-2010) and 1.5% trend productivity growth (GDP basis, which is equivalent to 1.8% on a nonfarm business sector basis). A key implication of these assumptions is that the current output gap is near zero. The future trend growth of hours worked remains the subject of debate. However, the rebound of the labor force participation rate to 66.0% in September is consistent with our assumption. There is also significant uncertainty regarding trend productivity growth. Successive downward revisions of real GDP along with the increase in the probability of the low-trend-productivity-growth state according to the Kahn-Rich model raise the possibility that our assumed trend is too high. However, it does appear that the steep plunge in residential investment has resulted in a pronounced cyclical slowing of productivity growth over the past year or so that is consistent with our view of the productivity growth trends.

We expect that the lower inflation persistence evident since the early 1990s to continue; this assumption is in contrast to the greater inflation persistence assumed in recent Board staff forecasts. The moderation of core inflation this year along with the more recent moderation in alternative underlying inflation measures are consistent with our assumption.

We also assume that long-run inflation expectations remain contained at or below current levels. This assumption is supported by the recent decline in the inflation expectations of households, as measured by the Michigan survey. However, increases in longer-dated inflation expectations derived from prices of financial instruments are a source of concern. On balance, however, we expect that inflation will gradually moderate toward our assumed FOMC objective for core PCE inflation of 1.5%.

We expect that term premia will remain relatively low although slightly higher than assumed in the September Blackbook. As measured by the Board staff's three-factor model, term premia changed little over the inter-meeting period. As is our usual practice, our assumptions for equity prices, home prices, and the real exchange value of the dollar are similar to those of the Greenbook. For nominal home prices, this means a cumulative decline of about 6% from their peak by the end of 2009. The real exchange value of the dollar is assumed to depreciate gradually. Fiscal policy provides a small impetus to real GDP growth in 2008-09, again similar to the last Blackbook and to the Greenbook.

Because of short-term net supply concerns, inventory draw-downs, and signs of continued high demand, spot oil prices have risen to over $90 in the past week; futures prices, although they remain lower than spot, have risen considerably over the inter-meeting period. Therefore, based on average futures prices during the inter-meeting period, we raised our assumed path of oil prices. We expect the spot price of West Texas intermediate crude oil to be $83.75 in 2007Q4 ($73.00 in the last Blackbook), $77.75 in 2008Q4 ($69.75 in the last Blackbook), and $76.25 in 2009Q2 ($69.25 in the last Blackbook).

The 2007 foreign GDP outlook has changed little. Recent data suggest that soft Q2 output growth for Japan and the euro area were temporary lulls. Forecasts for growth in these areas in the second half of 2007 are little changed from those of the August Blackbook. Projected growth rates for Asian emerging economies were either left unchanged (China) or marked up (Korea and Singapore). A risk to the foreign GDP outlook is the possible effects from a slowdown of growth of domestic demand in the US as well as from the ongoing disruptions in financial markets.

Inflation. Core inflation, as measured by the core CPI, increased sharply from late 2003 through the third quarter of 2006, rising from just over 1 percent to nearly 3 percent. Over the past year it has moderated to just over 2 percent. Core inflation as measured by the PCE deflator also increased from 2003 through 2006, but not as much as the core CPI. This divergence is due largely to the fact that a main source of the increase in core inflation over that period was shelter prices, which have a considerably higher weight in the CPI. Over the past year core PCE inflation has moderated somewhat more than has been the case with the CPI, due largely to the relative performance of medical care services prices in those two indices. Medical care services in the PCE deflator covers all medical care services consumed, including that paid for by third parties. That price index has been slowing this year after a sudden spike in January and February. In contrast, medical care services in the CPI covers only services which consumers pay for out of pocket. That price index has been rising sharply over the past year. These two phenomena—the higher weight of shelter in the CPI and the divergence in the behavior of the respective medical care services price indices—are the main factors behind the increased gap between core CPI inflation and core PCE inflation over the past year and a half.

There have been three prime candidates for explaining the behavior of core inflation over the past few years—overall resource utilization (as represented by the prime age male unemployment rate), pass-through of higher energy prices, and the decline of the exchange value of the dollar. Our analysis suggests that overall resource utilization is the dominant explanation. Moreover, recent work finds an important role for inflation expectations in the inflation process. Thus, with the economy expected to remain at or near potential and inflation expectations well contained, we continue to expect that inflation will gradually moderate toward the FOMC's assumed target of 1.5% for the PCE deflator.

The three-month change of the core PCE deflator was 1.5% (annual rate) in August, close to our expectations as of the last Blackbook. Although we doubt that underlying inflation is quite that low, the declines in alternative underlying inflation measures over the past few months suggest that a greater proportion of the recent decline in core inflation reflects more persistent factors rather than transitory factors. As such, we think that the current true trend of core inflation remains close to 1.8% [Exhibits B-1, B-2, and B-3]. Near term, our projection for core PCE inflation for the second half of 2007 is 1.8% (annual rate). From this lower starting point, we continue to expect a gradual moderation to 1.7% in 2008 and 1.6% in 2009 [Exhibit B-4].

We see the risks around our inflation forecast as roughly balanced. Core services inflation has continued to moderate. Given the relatively high housing vacancy rates, it is likely we will continue to see moderation in OER and rent inflation. However, we should note that our efforts to model OER inflation have thus far not yielded very much. Core goods prices also continue to fall on a 12-month basis. The evident caution in inventory practices shown in July and August may persist, keeping demand for goods low and core goods prices relatively weak. Nevertheless, higher import prices, recent rises in spot oil prices and some other commodity prices, and the possibility that global demand growth may accelerate as the effects of the recent financial market events wane still pose upside risks. In regard to import prices, the 12-month change in import prices excluding petroleum has firmed in recent months, lending some note of caution.

Real activity. Much of the expenditure and production data released during the inter-meeting period has been consistent with the moderate, near-potential growth in the second half of 2007 projected in the September Blackbook. In fact, the stronger-than-expected consumption data over the period has prompted us to raise our Q3 projection of consumption growth to 3.8% (annual rate). Stronger net export data offset the greater weakness in housing and inventories. Consequently, we have raised our 2007H2 real GDP growth forecast from 2.6% (annual rate) in the September Blackbook to near 3% (about the projection in the August Blackbook) [Exhibits B-1, B-2, and B-3].

Looking beyond the second half of 2007, our point forecast for top line GDP growth is essentially unchanged. [Exhibit B-4]. Growth remains somewhat below potential through mid-2008, and then returns to potential during 2008H2 and through 2009. The continued imbalances between inventories and sales, combined with the increases in nonconforming mortgage rates and tighter underwriting standards, suggest that the slump in the housing market will be deeper and persist longer than previously expected. Once again we have lowered our projected path of single-family housing starts, to 850,000 units in 2007Q4 and 2008Q1 followed by a slow recovery [Exhibit B-2]. With this path, we see residential investment continuing to fall significantly through the rest of this year and into the first half of 2008. At the same time, however, we have raised our projected growth contribution from net exports over the forecast horizon. Thus for all of 2008, projected growth is unchanged at 2.6% (Q4/Q4).

A key to our growth projection is our long-held view that any spillovers from housing and mortgage markets into consumer spending will be relatively small. This assumption reflects our view that a wealth effect and /or a home equity withdrawal effect from housing was not a major factor behind the robust growth of consumer spending over recent years. The recent consumption data appear to be consistent with our view, as it has held up despite the recent events in mortgage and credit markets. However, the continued weakness in housing and mortgage markets would suggest that some spillover may be inevitable.

The most important source of downside risk for growth is that our long-held view is wrong. This is particularly concerning given that, due at least in part to contraction in the supply of mortgage credit, housing demand continues to weaken while the performance of existing mortgage debt has deteriorated further. National home price indices are now recording year-over-year declines in nominal terms, and further declines look nearly certain. These events raise the possibility of self-reinforcing downward spiral in home prices which could reach such as magnitude as to cause consumers to sharply increase their saving out of current cash flow. Another downside risk emanating from recent events in credit markets is broader-based contraction of credit. Indeed, the most recent senior loan officer survey points to a significant tightening of lending standards of late.

Upside risks to growth are less apparent, but have not completely disappeared. If foreign growth remains strong in the aftermath of the financial market events, US export performance may continue to surprise on the upside. Were that process to be strong enough, it could be that the current stance of policy is too accommodative and growth could surpass potential for an extended period.

3.2 Alternative Scenarios and Risks

The most significant changes we made to the alternative scenario probabilities were decreasing the weight on the *Over-Tightening* and *Effects of Overheating* scenarios and raising the weight on the *High Global Demand* scenario. While we did not change the weights on the productivity scenarios, decreasing the weight on the *Over-Tightening* and *Effects of Overheating* scenarios slightly increased the probability of reaching the productivity scenarios and decreased the probability of being in the central scenario in 2009Q4 and 2010Q4. This is due to the more transitory nature of the *Over-Tightening* and *Effects of Overheating* scenarios [Exhibit C-1]. In addition to changing the probabilities attached to alternative scenarios, we also decreased the scale of the downside shocks in the scenarios that produce deviations below our central scenario. Our assessment of the set of risks to the outlook and their relative importance is very similar to the risk assessment given by the primary dealers on a new set of questions in the Desk's Primary Dealer survey.

We lowered the probability of the *Over-Tightening* scenario to reflect the fact that incoming expenditure data have been consistent with our central scenario and that some financial market indicators, such as the stock market, suggest a low risk of recession. Furthermore, high-frequency indicators of real activity (e.g. new claims for unemployment insurance and business and consumer surveys), while exhibiting some softness, do not display patterns typical of an imminent recession. At the same time, however, market functioning has not returned to normal, and the mortgage market outside of conforming loans is going through a major restructuring. In addition, the residential housing outlook is at least as weak as it was in our bleak September forecast. Finally, as discussed in the special topic, *Are We There Yet?,* the next few months represent the highest risk for a recession based on previous relationships with inverted yield curves. Thus, we continue to place substantial weight on the possibility that the recent policy stance has been, and possibly continues to be, too restrictive.

We decreased the probability of the *Effects of Overheating* scenario to reflect the fact that there has yet to be evidence of significant spillovers to other sectors of the economy from the continued housing correction. Most importantly, consumption rebounded in Q3 in a manner consistent with our central scenario explanation of an energy-price-induced slowdown in the spring. In contrast to these indicators, much of the recent financial market turmoil appears to be related to an over-extension of credit in the past, supporting the view that the economy overheated in 2004 to mid-2006. Therefore, we still place a relatively high probability on the *Effects of Overheating* scenario.

The increased probabilities of the productivity scenarios are mainly a result of the decreased weight on the *Over-Tightening* and *Effects of Overheating* scenarios. We decided not to decrease the weight on the two productivity scenarios, because the downward revision to nonfarm business output relative to GDP in 2007Q2 added more downside uncertainty around productivity growth going forward, while the strong performance of the tech sector in 2007 increased upside uncertainty.

We have increased the weight on the *High Global Demand* scenario to reflect signs of continued global strength, especially in emerging countries. There is little evidence that the financial turmoil is adversely affecting foreign economies (e.g. China continues to exhibit strong growth), suggesting we may experience strong global demand in the future. In addition, the increase in oil prices and the maintained upward movement in Chinese inflation raise the risk of strong inflationary pressures from abroad. Both of these factors prompted us to increase the weight on this scenario and also slightly increase its persistence (i.e. the probability that the economy stays in the scenario once it enters it).

All of the above changes imply a slightly higher probability of remaining in the central scenario over the forecast horizon [Exhibit C-1], which decreases the overall uncertainty around our inflation and output projections, particularly in 2008 [Exhibit C-3]. As in the September Blackbook, the risks to inflation are balanced, on average, over the forecast horizon; however, we now perceive a slight downside risk at shorter horizons and a slight upside risk at longer horizons. These changes can be seen in the change in the 5^{th} and 95^{th} percentiles from the previous to the current Blackbook. The changes in the alternative scenario probabilities and the decreased scale of downside risks have somewhat attenuated the large downside risks to output, as indicated by the decrease from September to now in the difference between our central scenario projection and the expected value of our forecast distribution. In addition, the change in the 5^{th} and 95^{th} percentiles from the previous to the current Blackbook indicate that the risk of low output outcomes has decreased.

The effects of the changes in our risk assessment can be also be seen in the probability of core PCE inflation below 2% and probability of a continuing expansion [Exhibit C-3]. In particular, the probability of two consecutive negative quarters of growth in 2008 has dropped but is still relatively high. Most of the change in these "recession" probabilities is attributable to the reduced weight on the *Over-Tightening* scenario. In contrast, the change in the probability of inflation below 2% is smaller and is mainly driven by the downward revision to our central scenario projection for 2007Q3 core PCE.

Exhibit C-4 depicts the evolution of our forecast over the past year and its performance relative to released data. Both output and inflation surprised us on the downside. Neither surprise was large, however, given the uncertainty we assessed last October. This is evident in the fact that recent released data are within last October's 50% probability intervals. One explanation for the faster-than-expected decline in inflation is the unwinding of transitory factors that increased inflation in 2006H1. Given the uncertainty around the central scenario inflation forecast, such a quick unwinding was not unexpected. Last October, we believed there to be upside risks to the inflation forecast, as can be seen in the difference between the expected value of the forecast distribution and the central scenario projection, but we now assess them to be balanced, on average.

Special Topic

Are We There Yet? Looking for Confirmation of the Yield Curve Signal from 2006[1]

Arturo Estrella Redacted *nd Jonathan McCarthy* Redacted

This analysis suggests that the data over the next 3-4 months will be important in confirming or refuting the recession signal from the yield curve inversion of 2006-07.

The 10-year Treasury yield has dropped below the 3-month Treasury rate before every recession since the 1960s. Besides the pre-recession periods, this spread has been negative only two other times over this period: before the credit crunch of 1966-67 and in 2006-07. The predictive horizon of the term spread is quite long, typically one year or longer, and thus it takes time for other indicators to confirm or refute (as in 1967) the recession signal.

This special topic compares the behavior of some real and financial variables in episodes of yield curve inversions. Besides the recent inversion in 2006-07, the cases include the credit crunch of 1966-67 and the recessions of 1969, 1973, 1990 and 2001.[2]

In comparing these episodes, the benchmark or signal month is taken to be the third straight month of a negative spread between 10-year and 3-month Treasury rates. Figure 1 shows the term spread from 1954 to the present, with vertical lines corresponding to the third month of inversions (the benchmark periods in subsequent figures) and shading representing NBER recessions.

Before looking at other indicators, we consider the stance of monetary policy during these episodes using the real FFR, where the nominal FFR is deflated by core PCE inflation over the previous 12 months (Figure 2). By this measure, policy appears somewhat tighter in the current episode (orange) than in 1966 (black) and appears similarly tight compared to the recession episodes.

Looking at real activity measures, a clear distinction between the recession and non-recession patterns typically has started to emerge about 11 months after the benchmark month (the second vertical line), which is the present point of the current episode. We illustrate this pattern using nonfarm employment (Figure 3), but it is apparent for many other labor market and real activity indicators. In the figure, we see that employment soon fell at this stage of the cycle in the recession episodes but continued to rise in the 1966 episode. Also note that the 2001 recession (light blue) is exception in that weakness started to emerge much sooner than in other recessionary cases.

Not surprisingly, the current episode fairs poorly with regard to housing market indicators; for example, the recent pattern of housing starts accords fairly closely to previous recession episodes (except for 2001) and already diverges from the 1966 episode (Figure 4). Interestingly, the housing market tends to deteriorate faster than other real variables, as housing starts generally show a divergence between recessions and the credit crunch only a few months after a yield curve signal.

Although financial indicators tend to be more volatile than real economic indicators, similar patterns across yield curve inversion episodes are apparent. For the Baa-Aaa corporate bond spread, we see a clear divergence between the recession episodes and the 1966 episode starting after the 11-month mark, with a sharp rise in credit spreads occurring in recession episodes (Figure 5). A similar pattern is evident for equity prices (Figure 6). By this measure, the current episode appears benign in that it is similar so far to the 1966 episode, but a sharp correction in stock prices from its current level would leave it consistent with patterns associated with the recession episodes.

Most of the evidence presented suggests that differences between a full-fledged recession and a non-recession credit crunch start to emerge shortly after the 11th month following a term spread signal, which is roughly where we are now in the present cycle. Thus, we should follow the economic and financial market indicators very carefully over the next three to four months for clues of an impending recession.

[1] A more extensive version of this analysis has been written by Arturo Estrella and is available from him.

[2] The 1980 and 1981-82 recessions are excluded because, although the patterns are qualitatively similar to the other recession episodes, the greater volatility during these periods obscures the graphical analysis.

Figure 1: Term Spread

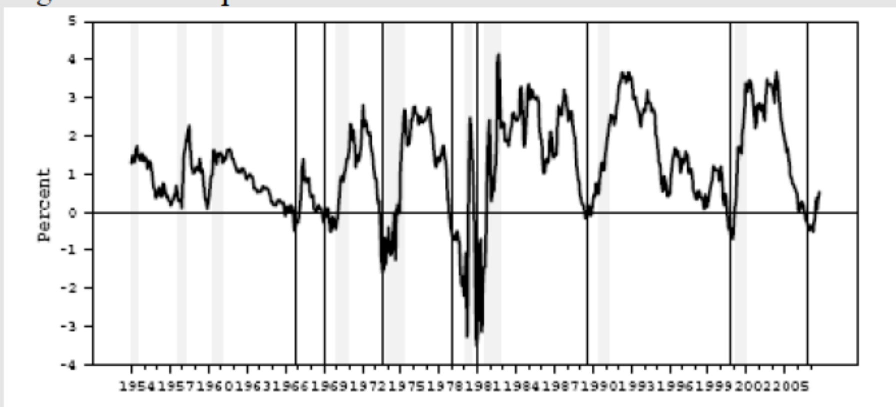


Figure 2: Real Fed Funds (Core PCE)

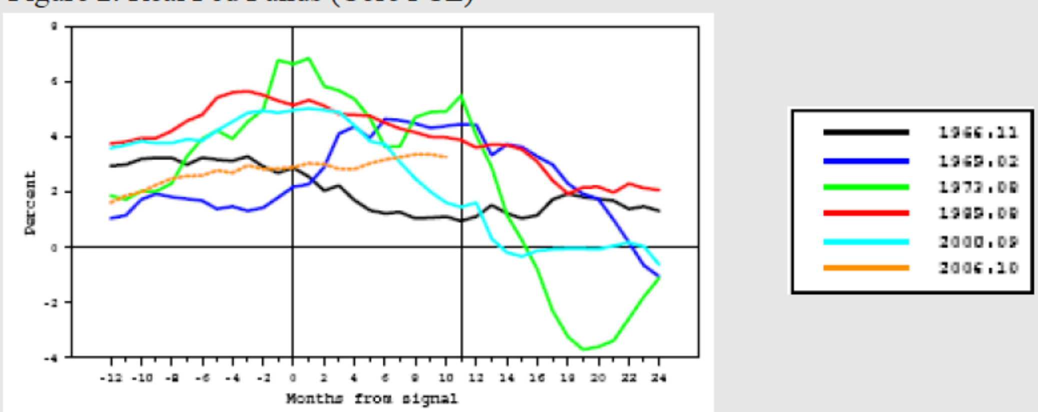


Figure 3: Nonfarm Employment, Establishment

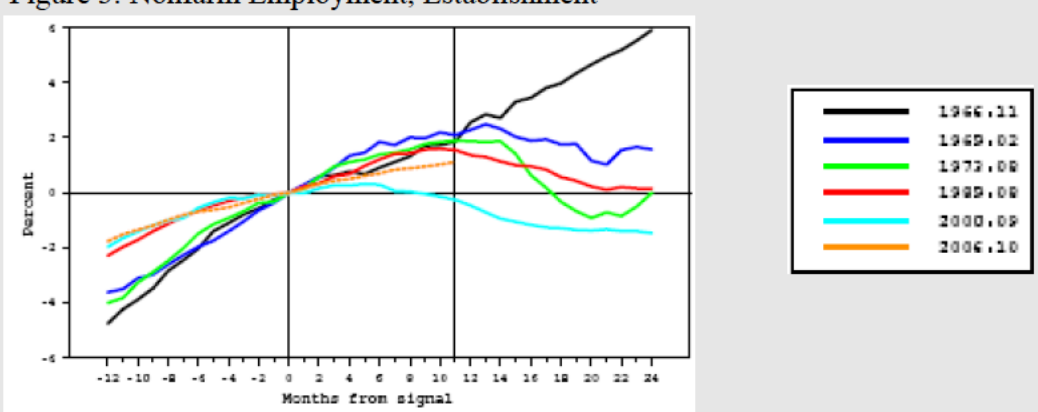


Figure 4: Housing Starts

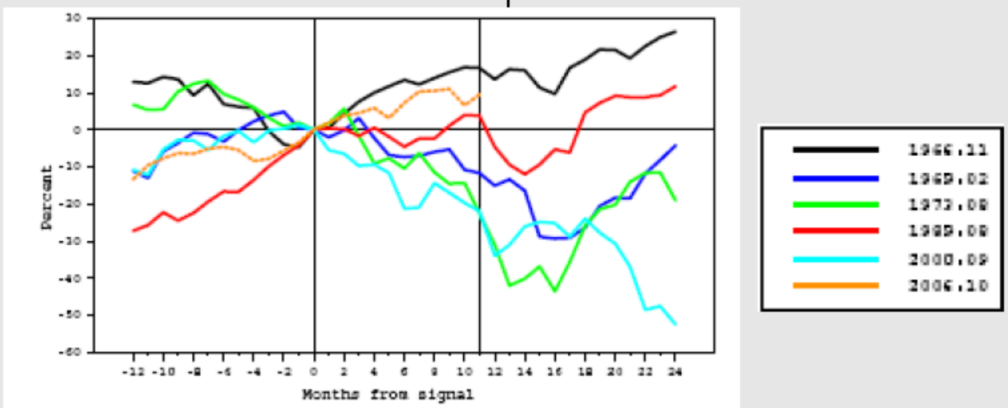


Figure 5: Bond Spread (BAA-AAA)

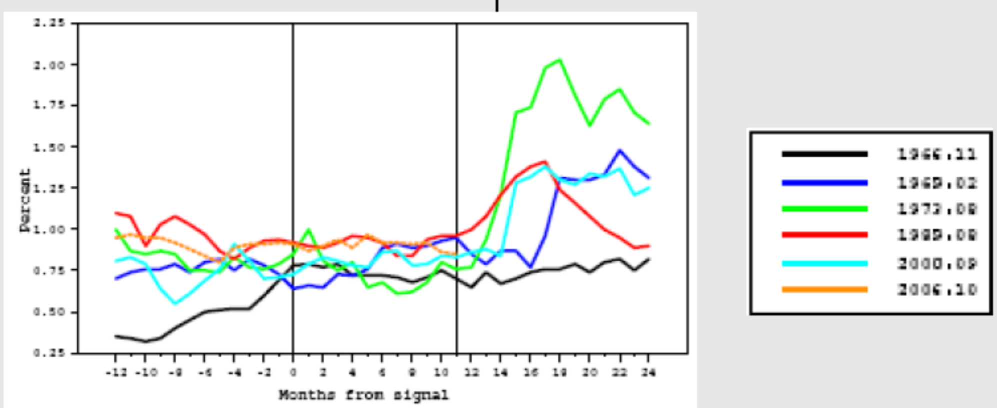
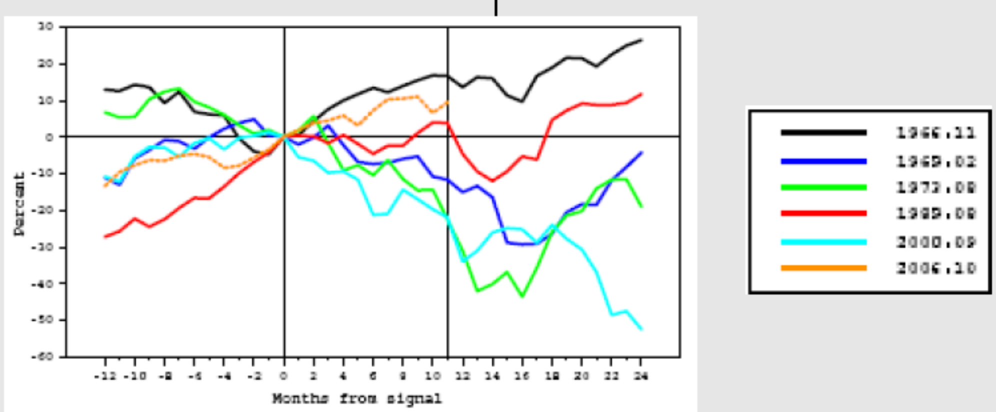


Figure 6: S&P 500



4. Forecast Comparison

4.1 Greenbook Comparison

The output growth and inflation projections of the Greenbook are well aligned with ours for 2007 (Q4/Q4). On the other hand, the discrepancy between the Greenbook projections and ours is still evident for 2008 and 2009 (Q4/Q4). The Greenbook continues to project lower output growth and higher inflation than we do for 2008 and 2009 (Q4/Q4). In particular, the Greenbook projects a real GDP growth rate of 1.7% for 2008 (Q4/Q4), while our projection is 2.6%. The Greenbook projection has core PCE inflation flat at 1.9% through 2008 and 2009 while we expect some additional moderation to 1.7% in 2008 and 1.6% in 2009 [Exhibit B-6].

Conditioning assumptions. The Board staff assumes that the FFR will be flat at 4.75% through 2009. This path is above the market-implied path and the one assumed in this Blackbook; our assumption is that the FOMC will cut rates by 50 basis points to 4.25% over the next year and keep it unchanged through 2009.

The Board staff continues to assume that the labor force participation rate declines gradually to 65.6% through 2009, while we assume a stable participation rate of 66.0%, as we do not expect the demographic patterns to have a significant effect on the participation rate until 2010. Related to the participation assumption, the Greenbook assumes the potential real GDP growth rate is 2.2% for 2007 and 2008, and 2.1% for 2009. Our assumption for the potential growth rate is considerably higher at 2.7% through 2009. Because their estimate of structural productivity growth is close to our estimate of trend productivity growth, the difference between the two assumptions of the potential growth rate implicitly reflects differences in trend hours growth.

The Board staff's foreign growth outlook for 2007, however, is similar to ours. We expect foreign growth to slow down to 3.2% this year (unchanged from the September Blackbook), the same as the Board's outlook (using our weights). However, the forecasts diverge in 2008, with the Board forecasting 2.9% growth, while we expect 3.1% growth.

The difference is due to the Board's less favorable outlook for Canada and Mexico, which is in line with the discrepancy between the Board's U.S. growth forecast and ours. With the rise in oil prices, both forecasts have raised their assumed path for the price of oil; these paths are consistent with one another.

Inflation. Relative to the September Greenbook, the Board staff revised down their 2007 (Q4/Q4) projection for core PCE inflation from 1.9% to 1.8%, while leaving unchanged their forecasts for 2008 and 2009 (Q4/Q4) at 1.9%. The downward revision for 2007 was mainly motivated by the recent data releases on the non-market components of the PCE deflator. While part of the favorable news was carried forward in the forecast, it is offset by higher oil prices and higher rates of capacity utilization for 2008 and 2009. The Board staff's forecast now coincides with our projection for 2007, but it is 0.2 and 0.3 percentage points above our forecasts for 2008 and 2009, respectively, mostly due to the Board's view that there is little slack to push down underlying inflation further.

Our 2007 total PCE inflation forecast remains 0.1 percentage point lower than the Board staff projection of 3.0%. However, going forward, our 2008 total PCE inflation forecast is 0.1 percentage point higher than the Board staff's 1.8% projection, while the two forecasts converge in 2009 to 1.7%. The differences between these forecasts largely reflect different assumptions about future moderation in food and energy prices.

Real activity. Relative to the September Greenbook, the Board staff now forecasts a higher 2007 (Q4/Q4) real GDP growth rate of 2.3%, just 0.1 percentage point below our unchanged projection. Substantial differences, nevertheless, remain for the next two years; the Board staff left their forecasts unchanged at 1.7% for 2008 (Q4/Q4) and 2.2% for 2009 (Q4/Q4). Our projections are 0.9 percentage points higher for 2008 and 0.5 percentage points higher for 2009. The bulk of the difference is explained by the lower growth contribution of consumption spending, reflecting the Board staff's assumption of higher wealth effects from declining real home prices and tighter credit conditions.
The Board staff's estimate of the 2007Q4 unemployment rate (4.7%) is unchanged since the last Greenbook and coincides with our projection. Going forward, the Board staff

revised down its projection for 2008 and 2009 by 0.1 percentage point to 4.8%. This estimate is still above our forecast of 4.6% for the next two years. As in the last Blackbook, this discrepancy is consistent with their forecast of a somewhat deeper cyclical slowing in real activity than our outlook predicts for late 2007 and 2008.

The Board staff revised up its total employment figures by 200,000 for 2007, left unchanged the projection for 2008, and increased the 2009 forecast by 100,000. While its 2007 forecast is now about 250,000 jobs higher than our projections, the Board staff still sees employment weaker than our forecast in the next two years by 700,000 and 500,000, respectively. The Board staff's more sluggish employment outlook, in part, reflects its slower aggregate growth forecast and its assumption of a declining labor force participation rate over the next two years.

Despite differences in the timing of how contributions to real growth will be assigned in 2007Q3 and 2007Q4, the Board staff 2007 (Q4/Q4) net exports growth contribution estimate of 0.5 percentage points is exactly in line with our forecast. For 2008, we forecast a positive growth contribution from net exports of 0.3 percentage points, which is essentially in line the Greenbook's projection. Finally, while the Board staff's estimates suggest no contribution to GDP growth from net export in 2009, we still expect a 0.1 percentage point positive contribution.

Uncertainty around forecasts. The uncertainty around both the Board and FRBNY forecasts decreased notably for output, while it remained essentially unchanged for the inflation.

The 70% probability intervals for inflation in 2007, 2008, and 2009 are shown in Table 1, with the September values in parentheses. For core PCE inflation, the probability intervals around the two forecasts have about the same width in 2007 and 2008. For 2009, however, the Board's forecast has substantially higher uncertainty; the width of our 70% probability interval is 1.4 percentage points compared to 1.9 in the Greenbook. In part, this discrepancy reflects the greater persistence in the inflation process underlying the Greenbook forecast.

For output, the probability intervals for both the Board's and FRBNY forecasts have narrowed notably for 2007, reflecting the reduction of downside real risks and uncertainty from the generally outlook-consistent data released over the inter-meeting period. For 2008, the probability intervals around both forecasts narrowed slightly as a result of an upward shift in the lower bound of the intervals. Our probability interval for real GDP growth in 2009 is unchanged compared to the September Blackbook, while the Greenbook interval narrowed from 3.5 percentage points to 2.8.

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

	Core PCE Inflation		**Real GDP Growth**	
	FRBNY	*Board*	*FRBNY*	*Board*
2007	1.5-2.0 (1.4-2.1)	1.6-2.1 (1.6-2.2)	1.7-3.0 (1.3-3.1)	1.8-2.8 (1.2-2.7)
2008	1.0-2.4 (1.0-2.5)	1.2-2.6 (1.2-2.6)	0.5-3.7 (0.1-3.5)	0.2-3.3 (0.1-3.3)
2009	1.0-2.4 (1.0-2.4)	1.0-2.9 (0.8-3.0)	0.6-3.8 (0.6-3.8)	0.8-3.6 (0.4-3.9)

To gauge the importance of the differences between our outlook and the Greenbook forecasts, we calculate the percentile of the Greenbook forecasts for inflation and output in our forecast distributions. The results are shown in Table 2, with September values in parentheses. As in September, our forecasts of core inflation are fairly close when we account for our risk assessment, with the exception of 2010, where the gap remains quite wide. The increase in the gap at this horizon largely reflects our different inflation objective assumptions.

Table 2: Percentile of Greenbook Forecast in FRBNY Forecast Distribution

	Core PCE Inflation	Real GDP Growth
2007	52 (59)	47 (41)
2008	55 (54)	42 (47)
2009	58 (59)	49 (50)
2010	72 (69)	45 (47)

The discrepancy between our outlooks for output growth has narrowed for 2007 but widened somewhat for 2008 since September. The discrepancy in 2008 reflects the considerable difference between the Q4/Q4 point forecasts (2.6% for the FRBNY and 1.7% for the Board). As in September, our forecasts for 2009 and 2010 are fairly close, reflecting smaller difference (0.5 percentage points) in point forecasts going forward.

Alternative Greenbook forecasting scenarios. The first Greenbook alternative simulation assumes a sharper decline in the housing sector than in the baseline forecast. In this alternative scenario (*Greater housing correction, or GHC*), residential investment is 5% below the baseline projection by the end of 2009, house prices are assumed to drop by 20% over the forecast horizon, and the wealth effect of housing on household spending is double their baseline assumption. GDP growth under this scenario is less than 1.5% in 2008 and less than 2% in 2009, about 50 basis points less than in the baseline. The unemployment rate is basically unchanged for 2008 but increases by 0.3 percentage points to 5.1% in 2009. The FFR drops to 4% by 2009, but there is no significant effect on inflation.

The second alternative scenario (*GHC with larger fallout from financial stress*) adds to the first one and additionally assumes flat capital spending in 2008 and 2009, possibly due to tighter credit markets conditions. The result is a drop in output growth to 1% in 2008H1 and a slow recovery to 1.4% by 2009. The unemployment rate rises to 5.0% by the end of 2008 and to 5.3% by the end of 2009. In response to the weaker real outlook, the FFR drops to 3.6% by the end of 2009. Also under this scenario, there is no change in inflation over the forecast horizon.

In the *Greater momentum in aggregate demand* scenario, the underlying strength in employment, business investment, and household consumption are carried through the long-term horizon. In other words, the stronger-than-expected aggregate demand that we have observed in the recent data is assumed to continue through the forecast horizon. In this scenario, consumption and business fixed investment continue to increase at their 2007 paces. As a result, GDP growth increases to 3%, the unemployment rate declines to 4%, and FFR increases to 6.6% by 2009.

In the *Faster growth in potential output* scenario, the Board assumes a higher estimate of potential output growth of 2.75% rather than 2.2% in the baseline. This scenario features faster growth in permanent income and corporate profits. As a result, both the outlook for consumption and investment improves over the baseline forecast. Due to increased productivity, unit labor costs are depressed, lowering inflation by 0.2 percentage points by 2009. In this scenario, the Taylor rule implies little change in the FFR over this forecast horizon.

The baseline forecast has little pass-through from oil prices to core inflation. This assumption is relaxed in the *Greater energy cost pass-through* scenario, which also assumes that long-run inflation expectations are not well anchored. The effects on real activity are negligible. Inflation increases modestly in 2008 and 2009 by 0.2 and 0.1 percentage points, respectively, reaching the upper bound of the comfort zone. In response, the FFR increases by 15 basis points in 2008 and reaches 5% by the end of 2009.

The last scenario, *Market-based federal funds rate,* assumes that monetary policy follows a path implied by the futures market. The market-based federal funds rate is 4.5% in 2007H2, 4.1% in 2008H1, and 3.9% in 2008H2 and 2009. As a result, output growth is higher than the central scenario and reaches 2.9% in 2009, compared to 2.2% in the baseline case. Inflation increases to 2.1%, while unemployment declines to 4.5% in 2009.

4.2 Comparison with Private Forecasters

In general, our near-term forecast for real GDP growth remains higher than most of the projections of private forecasters. However, there is substantially more agreement in the near-term inflation outlook.

For 2007Q3, our real GDP growth forecast is 3.3% (annual rate), equal to the highest private forecast (Macro Advisers). The PSI model gives the most pessimistic growth outlook at 2.4%, with Blue Chip and the median SPF (August release) forecasts sitting somewhat in the middle at 2.6% and 2.5%, respectively. The difference between our forecast and these lower estimates reflects our higher forecast for consumption and a slightly smaller projected drag from residential investment.

Our 2007Q4 forecast for real GDP growth has been revised down to 2.0% since the last Blackbook. This number is in line with the PSI model (2.1%) and slightly higher than Macro Advisers and Blue Chip (1.7% and 1.8%, respectively). The discrepancy between our estimate and these latter projections reflect higher estimated growth contributions from inventory investment and net exports. The median SPF forecast is well above all other projections at 2.7%, though this estimate was last updated in mid-August.

While we have kept our forecast at 2.4% for 2007 (Q4/Q4), Blue Chip and Macro Advisers have revised slightly downward their projections and now expect real GDP growth at 2.2%. These numbers reflect the differences in 2007Q3 and 2007Q4 discussed in the previous two paragraphs.

We have maintained our 2008 (Q4/Q4) real GDP growth projection at 2.6%. Our forecast is in line with the Macro Advisers (2.6%) and Blue Chip (2.5%) estimates, but is slightly lower than the August Median SPF (2.8%). All forecasts return close to their respective estimates of potential over this forecasted horizon.

Our forecast for 2007Q3 core PCE inflation has decreased from 1.7% to 1.5% since the last Blackbook. The median SPF forecast is higher at 1.9%. However, because the median SPF forecast dates back to mid-August, it fails to incorporate the inflation data observed over the past couple of months.

As for CPI inflation, our 1.9% forecast is basically unchanged relative to the September Blackbook and is in line with Blue Chip (1.9%) and Macro Advisers (1.8%) estimates. For 2007Q4, we expect 2.3% CPI inflation, in line with Macro Advisers (2.4%) but somewhat higher than the Blue Chip (2.0%) and median SPF (2.0%) forecasts (the latter two have not incorporated the recent rise in oil prices into their forecasts). The Q4/Q4 projections of other private forecasters also are consistent with our forecast of 3.5% for 2007 and 2.2% for 2008.

Finally, we now expect core CPI inflation for 2007Q3 to be 2.5%, up from the 2.3% estimate in the previous Blackbook. This forecast is in line with Macro Advisers (2.6%, also up from 2.3%) and slightly higher than the median SPF projection. Going forward, the differences are only marginal for 2007Q4 and the Q4/Q4 projections. Most notably, our 2008 (Q4/Q4) forecast of 2.0% is only 20 basis points below both the Macro Advisers and median SPF estimates.

5. Robustness of Policy Recommendation

5.1 Sensitivity to Alternative Scenarios and Policy Rules

Our policy recommendation is unchanged from the September Blackbook and is slightly below the policy prescription of the *Baseline* rule under the central scenario and three of the five alternative scenarios in the medium-term [Exhibit D-1]. Under these three scenarios and our central scenario, the *Baseline* rule is consistent with one 25 basis point rate cut over the next year. However, the recommendation is still well above the prescription of the *Baseline* rule if the *Over-Tightening* scenario is correct and below the prescription if the *High Global Demand* scenario is correct.

The real FFR paths using the *Baseline* rule differ more significantly than the nominal paths across the five alternative scenarios, reflecting the differences in inflation outcomes in the alternative scenarios and the resulting policy stances [Exhibit D-1]. Notably, the *Over-Tightening* scenario implies the largest drop in real interest rates.

The FFR distribution using the *Baseline* rule still indicates at least a 5% probability of very sharp drops in the FFR (as indicated by the probability of a FFR at 1.00%), even with the reduced weight on the *Over-Tightening* scenario in this Blackbook. The near-term probability of such drops, however, is lower than it was in September [Exhibit D-5].

We consider the same three alternative policy rules that we considered in recent Blackbooks: the *Dove* rule, the *Opportunistic Disinflation* rule, and the *Outcome-based* rule. The *Outcome-based* rule, combined with our downside risk to output growth and our relatively benign inflation outlook, continues to prescribe cuts in the FFR [Exhibit D-2] under all scenarios except *High Global Demand* and *Productivity Boom* [Exhibit D-3]. As in past Blackbooks, this rule implies considerably more uncertainty about the FFR going forward [Exhibit D-5].

The prescription of the *Opportunistic Disinflation* rule, which keeps the FFR above 4.50% over the next two years under the central scenario and all of the alternative scenarios except *Over-Tightening*, is above our policy recommendation over the forecast horizon [Exhibit D-3]. Following this rule would better preserve Fed credibility if ex post it appeared that either the *Productivity Slump* or the *Effects of Overheating* scenarios explained recent developments well or if evidence mounts in favor of the *High Global Demand* scenario (i.e. if our high-inflation scenarios appeared to be true). However, the behavior of the FFR under this rule depends on the assumption that the financial market turmoil does not spill over into the real economy and lead to sharper declines in real growth and inflation. This rule implies very little uncertainty about the future FFR [Exhibit D-5].

The *Dove* rule is designed to be very sensitive to drops in output below potential. Thus, with the large downside risk to real activity, it prescribes cuts in the FFR in 2007Q4 and 2008 under all of our scenarios [Exhibits D-2 and D-3]. As can be seen in Exhibit D-5, it places very little probability on a FFR above 5.00% over the next few quarters and considerable probability on a FFR below 4.00%.

The policy prescriptions of our two estimated structural models are little changed from September. One of the models, known as the DSGE-VAR, gives a very similar prescription to our recommendation. The other model, the FRBNY-DSGE, gives a prescription closer to the *Opportunistic Disinflation* rule.

5.2 Comparison to Market Expectations

The FFR path priced into financial markets has moved down since the September Blackbook, but the market's uncertainty around that path has changed little and is still relatively high. The expected FFR for May 2008 is around 4.0%, compared with an expectation of more than 5.0% before the June FOMC meeting. In the last year, discrepancies between the market path and our prescriptions have mainly been at horizons of six months or more. Starting in August, however, there has been more near-term disagreement over policy. Even with our substantial downside risk to real activity and benign near-term inflation outlook, only the recommendation prescribed by the *Outcome-based* rule has moved down as much as the market-implied path in the near-term (that is, at horizons up to six months).

There are, however, two important caveats to this market assessment. First, due to the continuing tensions in short-term money markets, interbank interest rates have been trading away from the FFR target. Second, there has been a large re-pricing of risk by financial markets. Therefore, the translation of market prices on fed funds and Eurodollar derivatives into market expectations of future policy is more fragile than usual. If we consider the Desk's primary dealer survey as an alternative measure of market expectations, there is much more agreement between our policy recommendation and that of market participants.

The near-term changes in the prescription using our *Baseline* rule under the central scenario and under the mean of our forecast distribution are similar; both have shifted down as a consequence of imposing the lower 2007Q3 target FFR as the rule's initial condition. The market-implied path remains below both of these paths [Exhibits D-1 and D-2]. Aside from the change in the initial FFR target, the change in the *Baseline* rule prescription under the central scenario mainly reflects changes in our short-term forecast. For the *Baseline* rule evaluated under the expected value of the forecast distribution (i.e. evaluated using our full risk assessment), the prescription moved down in the near-term, as did the market path, but shifted up in the medium-term (in contrast to the market path, which shifted down at most horizons).

The path prescribed by the *Opportunistic Disinflation* rule under the expected value of the forecast distribution remains well above the market path. This pattern is the opposite of the situation in June, when the *Opportunistic Disinflation* path almost exactly matched the market path over most of the forecast horizon [Exhibit D-2]. The path prescribed by the *Dove* rule does not fall as quickly as the market path initially but gives a similar FFR value for the end of 2008. Our *Average* rule, which weights the *Baseline* rule and the two variants to match the market path as closely as possible, places 0% of the weight on the *Opportunistic Disinflation* rule, 10% of the weight on the *Baseline* rule, and 90% of the weight on the *Dove* rule. These weights are unchanged from the September Blackbook [Exhibit D-4].

The recent movement of the market path relative to the prescriptions of our *Baseline* rule and the two variants, *Opportunistic Disinflation* and *Dove*, suggests that the shift in the market path reflects market participants' continued reassessment of the FOMC's reaction function. It is interesting that the market path is now consistent with the prescription of the *Outcome-based* rule – the Board's rule that sets the FFR based on a statistical description of the FOMC's behavior from 1988-2006 – evaluated under the expected value of our forecast distribution (i.e. under our risk assessment). With inflation falling solidly into the perceived comfort zone and the FOMC's history of lowering rates in periods of financial turmoil (e.g. 1987 and 1998), markets appear to believe the FOMC has become more sensitive to low-probability events that may lead output to fall well below potential. This belief has been supported by the 50bp cut in September, as well as official commentary and speeches during the inter-meeting period.

The implied volatility around the market-implied path is similar to its level in the September Blackbook and is comparable to the uncertainty around the *Dove* rule and the near-term uncertainty around the *Baseline* rule [Exhibit D-5]. Furthermore, the implied distributions of most of the rules capture most of the negative skewness priced into markets in 2008. Notably, the negative skewness implied by our *Baseline* rule in the medium- and long-term horizons appears larger than what is currently priced into markets [Exhibit A-6].

Overall, our analysis suggests that the market continues to perceive the FOMC's reaction function to be more sensitive to downside risk in the short-run than implied by the combination of our risk assessment and any of our rules, including the *Dove* rule, which is designed to reflect greater sensitivity to a negative output gap.

6. Key Upcoming Issues

In the September Blackbook, our central outlook featured a large amount of downside risks to real activity. However, during the inter-meeting period, the economic and financial market developments were generally consistent with a reduction in these downside risks. Thus, we have decreased the probabilities attached to the *Effects of Overheating* and *Over-Tightening* alternative scenarios. Even so, the continued downturn in the housing market, the ongoing problems in the mortgage markets, and their apparent effects on broader financial markets indicate that significant downside real risks remain. Otherwise, the inter-meeting developments led to only small changes in our medium-term outlook and the risks to the inflation outlook.

In this environment, we have not changed our policy path from that of the September Blackbook. For the October FOMC meeting, we recommend maintaining the FFR target at 4.75%, as the recent developments in real activity, inflation, and financial markets argue for being a little more cautious over the near term in reducing the FFR target toward our neutral rate assumption (our central estimate is 4.25%). However, given that there continues to be substantial downside real risk, the FOMC should signal a readiness to act quickly if these downside risks begin to emerge. Beyond the upcoming meeting, the conditions in financial markets still appear to indicate that policy is somewhat tight, and thus we expect that the target FFR will be near its neutral level within a year.

When thinking about policy in upcoming meetings, the FOMC probably will have to confront a number of issues. One issue is the evolution of the housing market, and its impact on the rest of the economy and financial markets. The most recent data were somewhat weaker than even our downgraded housing profile (in response, we have further lowered our projected path for housing starts in the next two quarters). Nevertheless, as in the September Blackbook, we have seen little evidence yet of significant spillovers from the housing market into other sectors. However, we have observed real home price depreciation in some indices, and as we have argued in previous Blackbooks, the decline in real home prices may lead to negative wealth effects on consumer spending (a feature of the *Effects of Overheating* alternative scenario). A greater contraction in the housing market may also make spillovers effects more likely. In addition, the tighter credit conditions induced by the subprime mortgage crisis could have deleterious effects on consumption and investment. Therefore, monitoring and analyzing the housing market downturn and its potential areas for spillover remain an important factor in our outlook and determination of the appropriate future path of policy.

One factor that has mitigated the potential housing market spillover effects on consumption has been the solid labor market through most of this year. The employment report for September showed solid job creation and implied that the labor market conditions are not rapidly deteriorating. Still, a concern is that the aggregate labor market may not be as strong as suggested by standard indictors. One reason for this concern is the weakness in temporary help services employments, as discussed in the special topic, *A Tale of Two Labor Markets*. A second reason is that construction employment may be weaker than indicated due to the nature of the construction sector, i.e. a high concentration of immigrants and self-employed individuals in construction-related activities. Therefore, we will be monitoring alternative measures of labor market activity, as they may provide more information than usual about labor market conditions. In this regard, the recent decline in hiring rates is not an encouraging sign. This development, albeit inconclusive, as the data are lagged two months, might be an indication that income growth and consumer spending could weaken in upcoming quarters.

The recent developments regarding inflation also pose some interesting issues for future policy decisions. Although the risks around our inflation outlook are roughly balanced, over the medium-term, we see slight upside risks. These risks are exemplified by the possible impact of dollar depreciation and rising oil prices on the inflation outlook, developments that are fairly consistent with our *High Global Demand* alternative scenario. In addition, the somewhat elevated level of long-term financial market inflation expectations, at least as measured by the Board staff, indicates that financial market participants also are concerned about possible long-term inflation risks. Analyzing these developments and their possible impact on inflation is important in assessing the potential for rising upside risks to the inflation outlook, which could potentially lead to a difficult future policy decisions if the economy is slowing at that time.

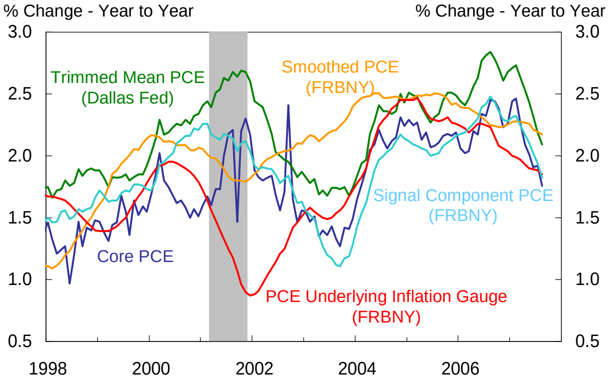
The possibility of renewed upside inflation risks also is important with regard to the credibility of the FOMC. In part, the 50bp reduction in the target FFR at the September FOMC meeting, as well as our recommendation of additional policy rate cuts toward neutral over the next year, were to insure against potential negative shocks to real activity from the financial market turmoil, the associated tightening of credit conditions, and the serious downturn in housing and mortgage markets. Nevertheless, the FOMC must also conduct policy to insure against bad inflation outcomes if it is to retain its credibility. The responses of long-term inflation expectations, the exchange value of the dollar, and some commodity prices (including oil) would suggest some possible concern by market participants about FOMC inflation credibility. Consequently, determining the balance between insuring against bad real activity and inflation outcomes in the current environment will be an important monetary policy issue.

In determining that balance, it will be important to assess accurately the stance of policy. This assessment in turn will require the ability to distinguish the *Effects of Overheating* and *Productivity Slump* scenarios from the unfolding of the *Over-Tightening* scenario. In the first case, policymakers would face a difficult tradeoff between growth and inflation. Still, the current stance of policy probably would not be considered to be excessively tight in that case, and thus would lead to a slower pace of target rate reductions to maintain the inflation credibility of the FOMC. In the case of *Over-Tightening*, however, current policy would be considered quite tight, and the policy recommendation more clearly would be a rapid sequence of rate cuts. To differentiate between these two cases requires examining the evolution of real activity and inflation jointly. For this reason, news on real developments should be considered jointly with those on inflation to update our assessment of the relevant risks and the appropriate policy response in the coming months.

A. Significant Developments

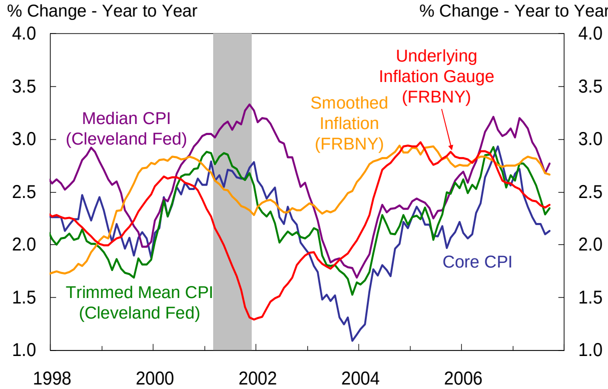
Exhibit A-1:
Measures of Trend Inflation

Alternative Measures of PCE Inflation



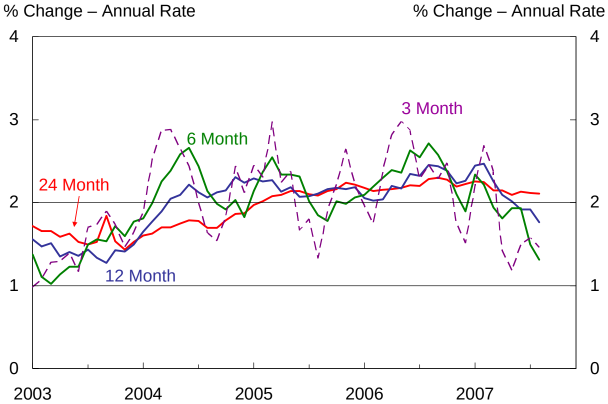
Source: Bureau of Economic Analysis, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Alternative Measures of CPI Inflation



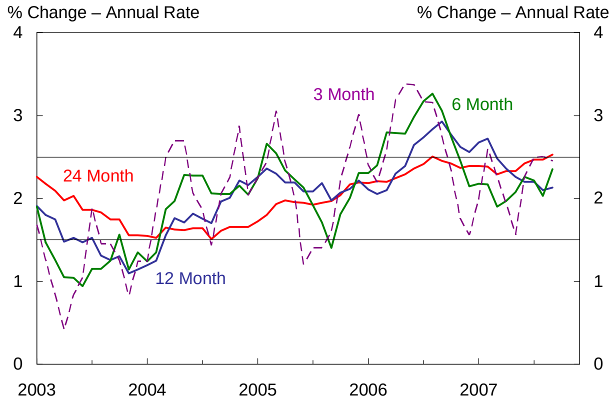
Source: Bureau of Labor Statistics, Cleveland Fed, MMS Function (FRBNY), and Swiss National Bank

Core PCE over Various Horizons



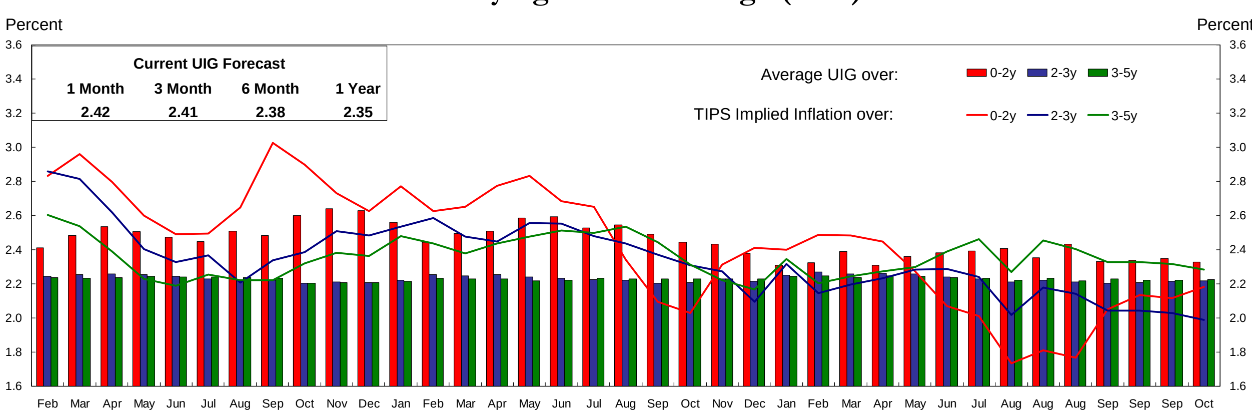
Source: Bureau of Economic Analysis

Core CPI over Various Horizons



Source: Bureau of Labor Statistics

Exhibit A-2:
Underlying Inflation Gauge (UIG)

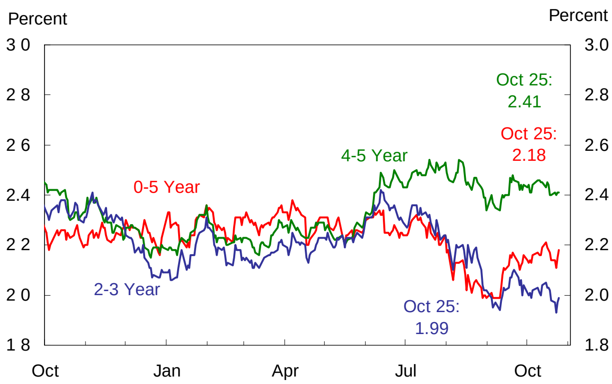


Source: MMS Function (FRBNY), Federal Reserve Board, and Swiss National Bank

A. Significant Developments

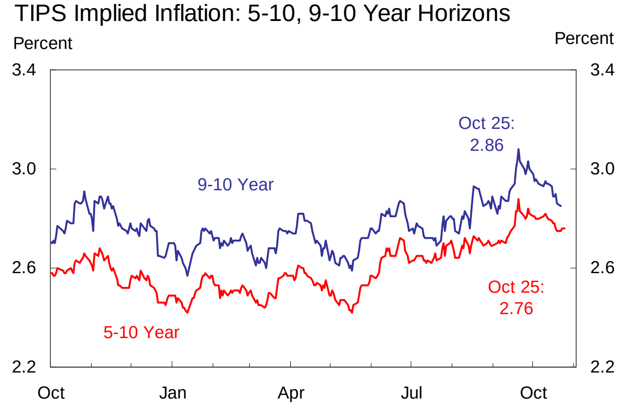
Exhibit A-3:
Implied Inflation

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



Source: Federal Reserve Board
Note: Carry-adjusted

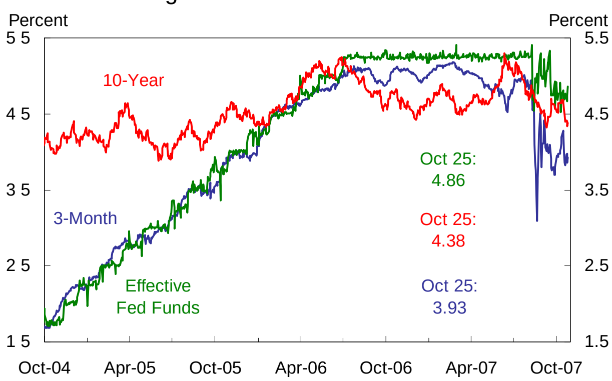
TIPS Implied Inflation: 5-10, 9-10 Year Horizons



Source: Federal Reserve
Note: Carry-adjusted

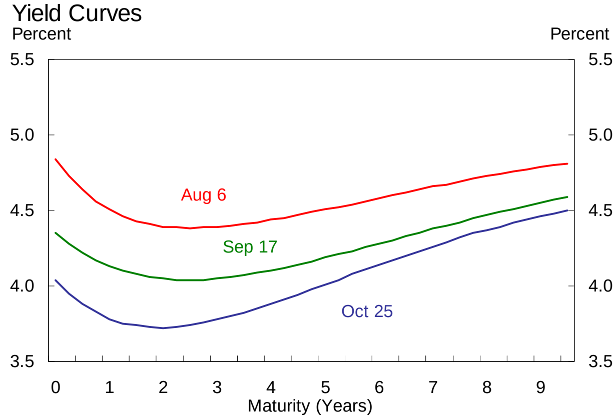
Exhibit A-4:
Treasury Yields

Short- and Long-Term Rates



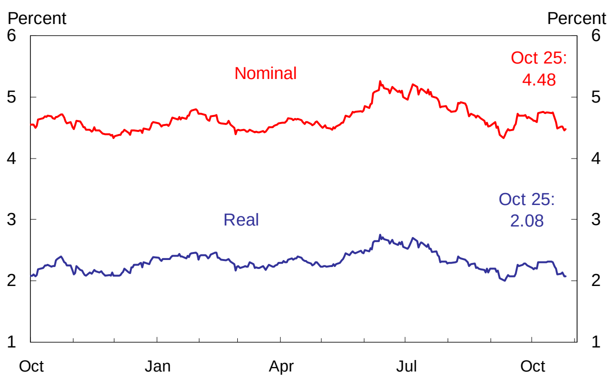
Source: Bloomberg
Note: Yields of on-the-run securities

Yield Curves



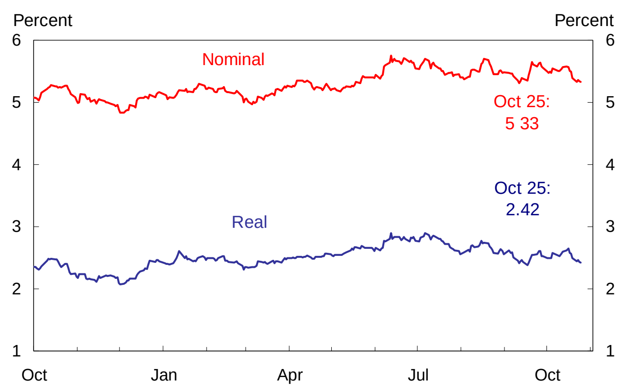
Source: Federal Reserve Board

4-5 Year Forward Rates



Source: Federal Reserve Board

9-10 Year Forward Rates

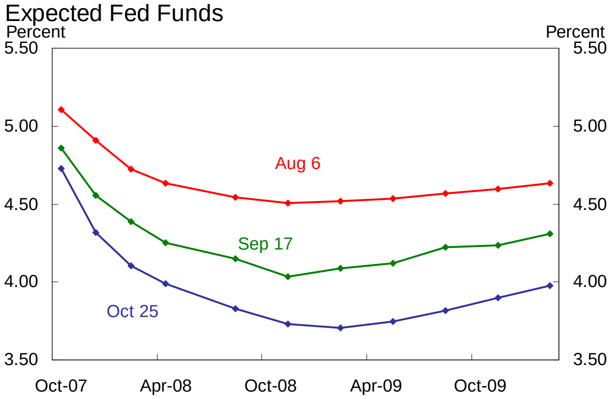


Source: Federal Reserve Board

A. Significant Developments

Exhibit A-5:
Policy Expectations

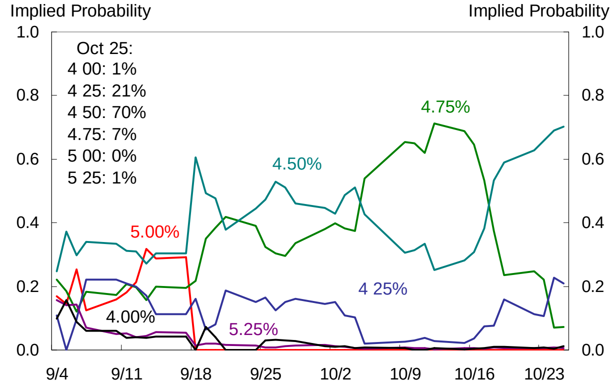
Expected Fed Funds



Note: Estimated using fed funds and Eurodollar futures.

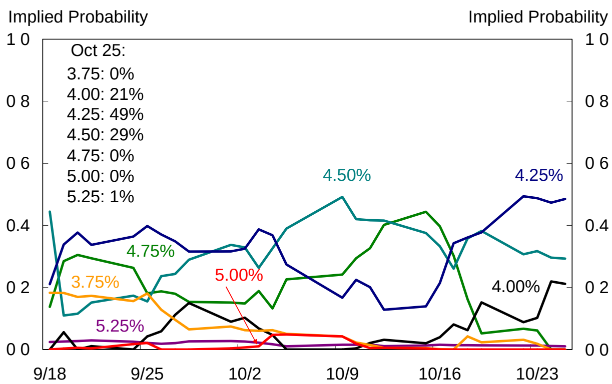
Source: Federal Reserve Board

October 2007 FOMC



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

December 2007 FOMC

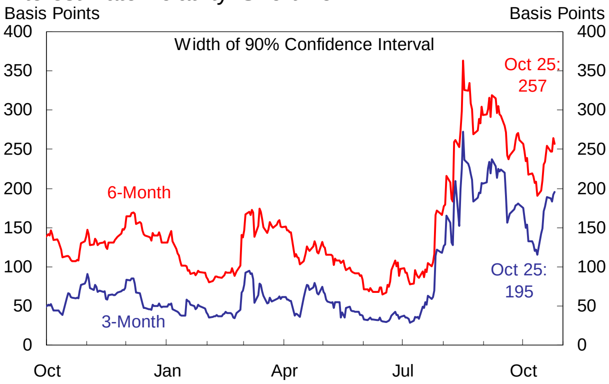


Source: Cleveland FRB Note: Estimated using options on fed funds futures.

A. Significant Developments

Exhibit A-6:
Policy Uncertainty

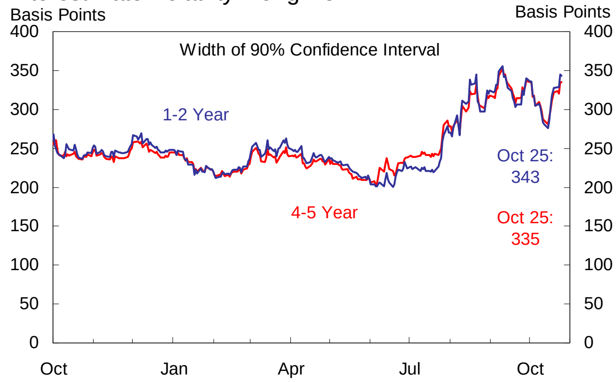
Interest Rate Volatility: Short-Term



Source: Datastream and FRBNY calculations

Note: Implied volatilities estimated from Eurodollar futures options.

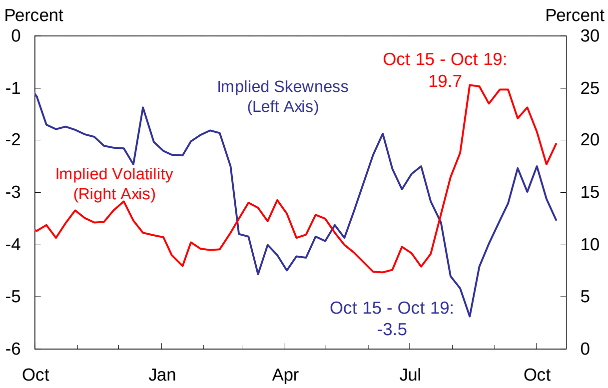
Interest Rate Volatility: Long-Term



Source: FRBNY calculations

Note: Implied volatilities estimated from swaptions.

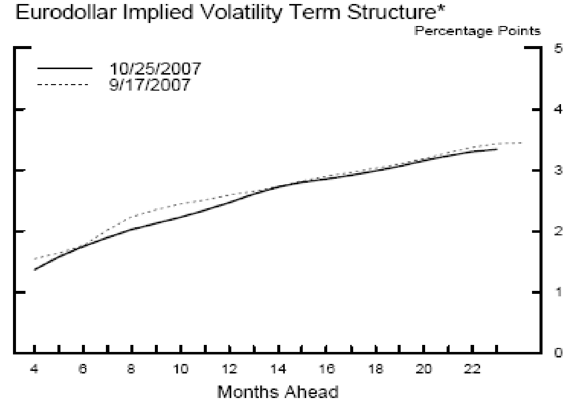
Implied Skewness and Volatility



Source: CME and FRBNY calculations

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

Eurodollar Implied Volatility Term Structure*

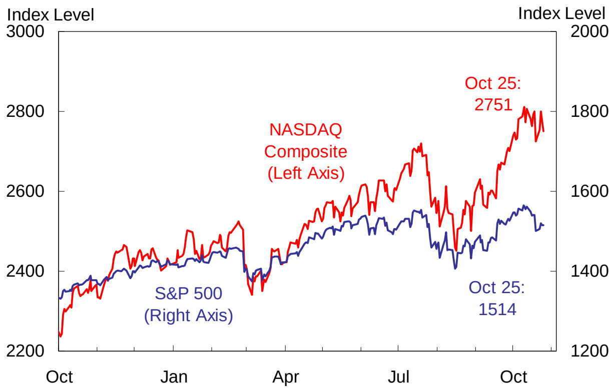


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

A. Significant Developments

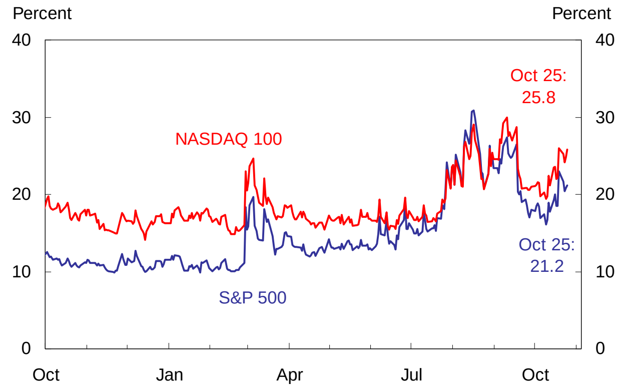
Exhibit A-7: Equity Markets and Corporate Credit Risk

Equity Market Performance



Source: Bloomberg

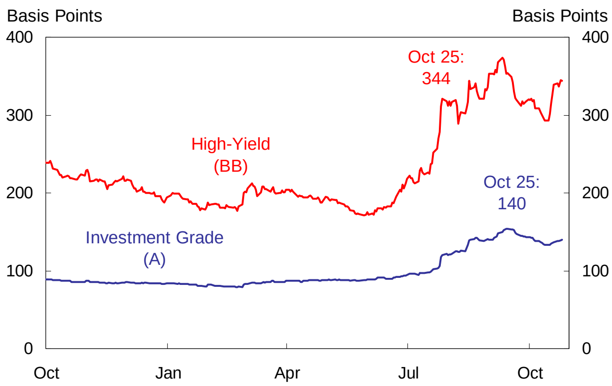
Implied Volatility: 1-Month



Source: CBOE

Note: Annualized

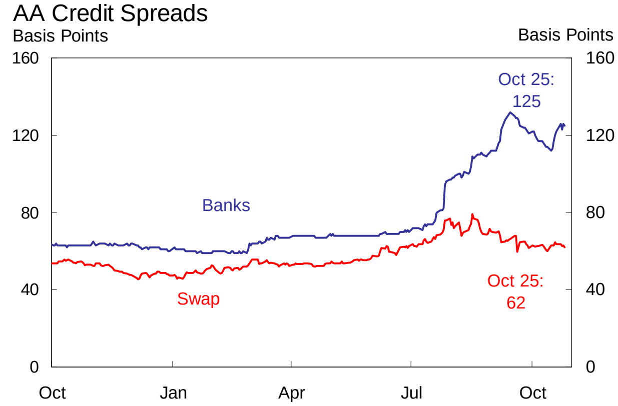
Corporate Credit Spreads



Source: Merrill Lynch

Note: Option-adjusted spreads

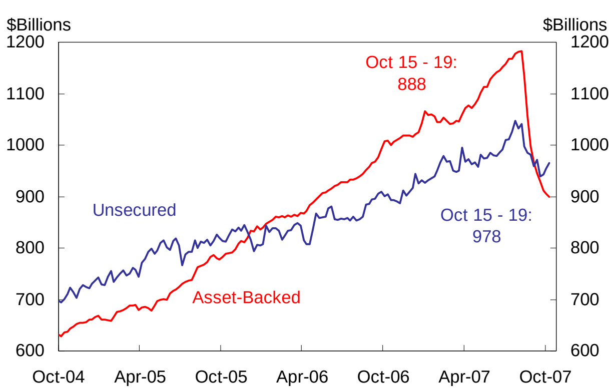
AA Credit Spreads



Source: ICAP and Merrill Lynch

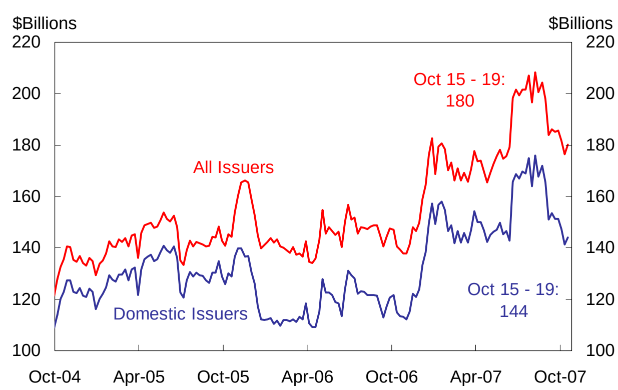
Note: Swap spread is 10-year swap rate minus 10-year Treasury yield and spread for banks is option-adjusted.

Commercial Paper Outstanding



Source: Federal Reserve Board

Commercial Paper Outstanding, Nonfinancial Firms

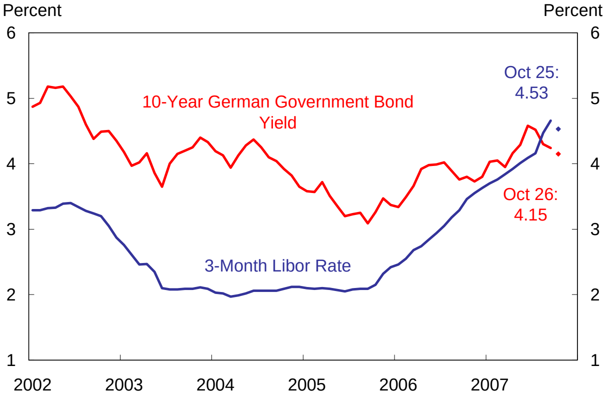


Source: Federal Reserve Board

A. Significant Developments

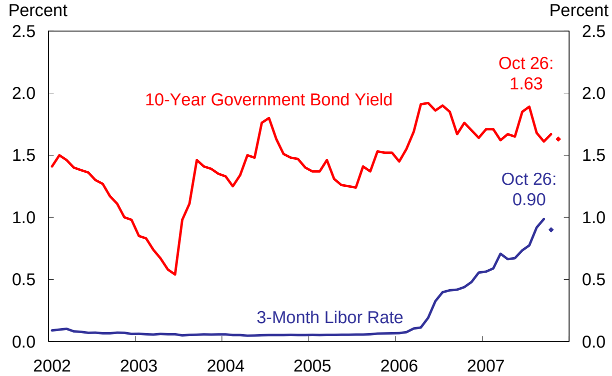
Exhibit A-8: Global Interest Rates and Equity Markets

Euro Area Short- and Long-Term Interest Rates



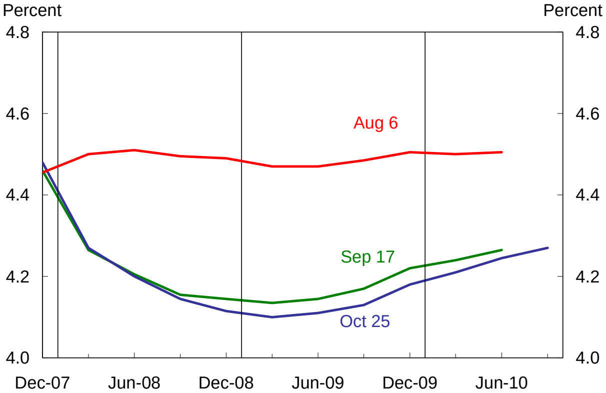
Source: BIS and Federal Reserve Board Note: Data are monthly averages.

Japan Short- and Long-Term Interest Rates



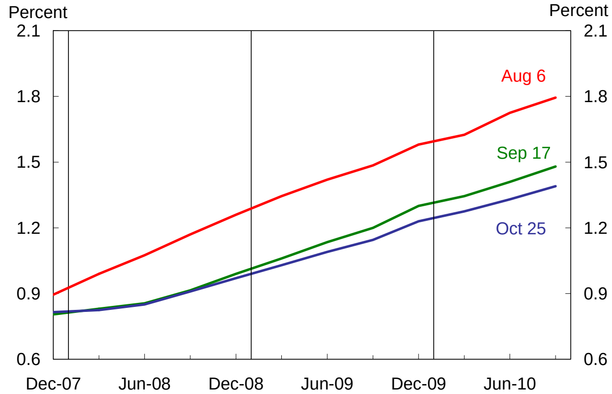
Source: Bloomberg and Federal Reserve Board Note: Data are monthly averages.

Three-Month Eurocurrency Futures Rates: Euro



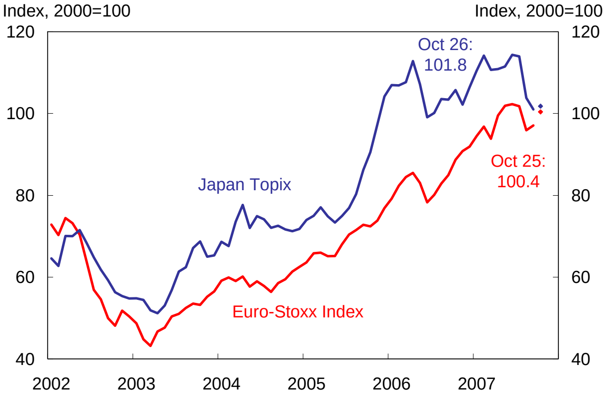
Source: Datastream

Three-Month Eurocurrency Futures Rates: Yen



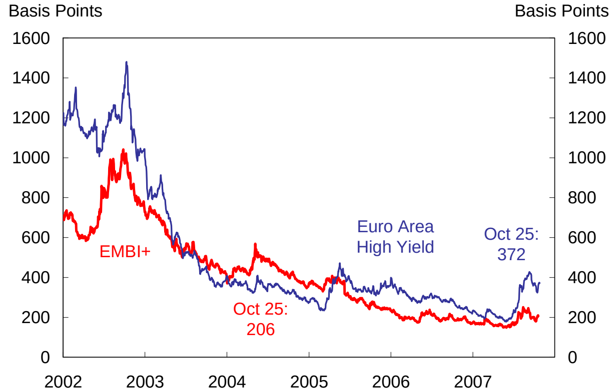
Source: Datastream

Euro Area and Japan Equity Indices



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

EMBI+ and Euro Area Spreads

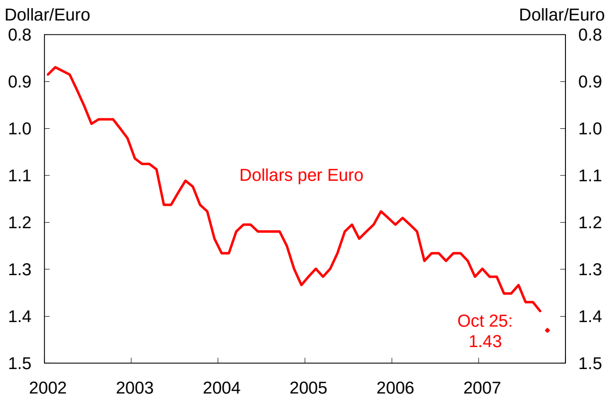


Source: Bloomberg Note: Data are daily observations.

A. Significant Developments

Exhibit A-9:
Exchange Rates

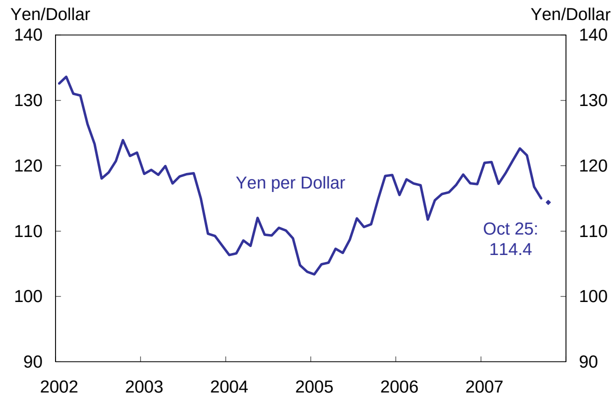
Dollar-Euro Exchange Rate



Source: BIS

Note: Data are monthly averages.

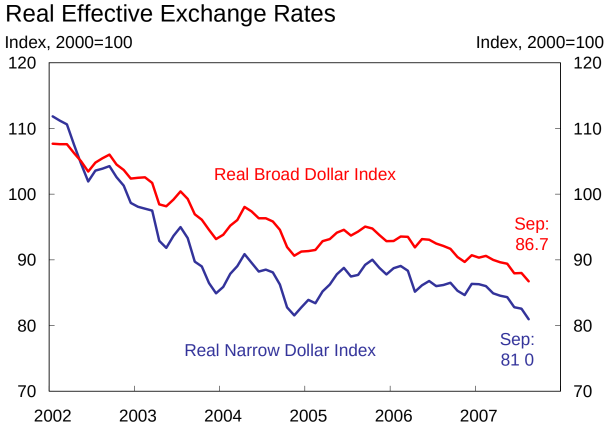
Yen-Dollar Exchange Rate



Source: BIS

Note: Data are monthly averages.

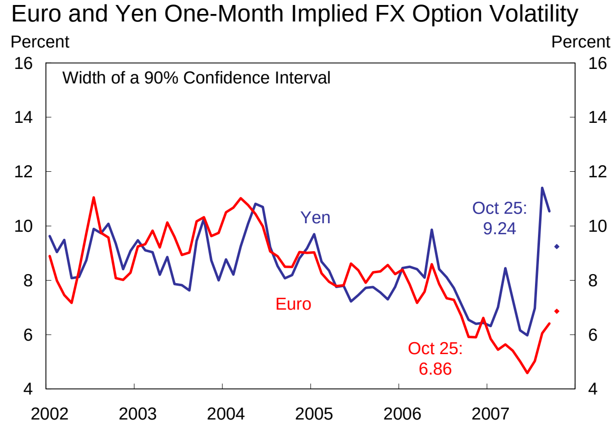
Real Effective Exchange Rates



Source: Federal Reserve Board

Note: Data are monthly averages.

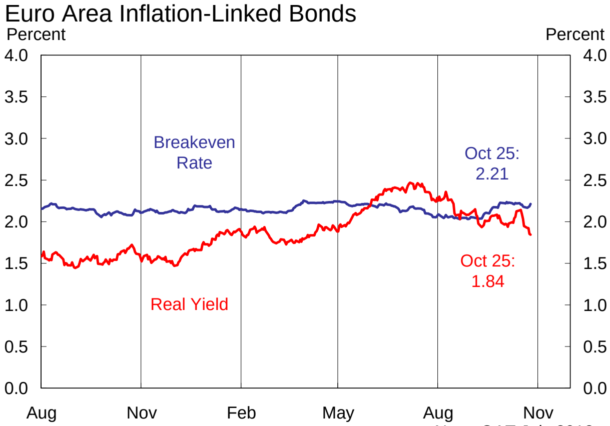
Euro and Yen One-Month Implied FX Option Volatility



Source: Reuters

Note: Data are monthly averages.

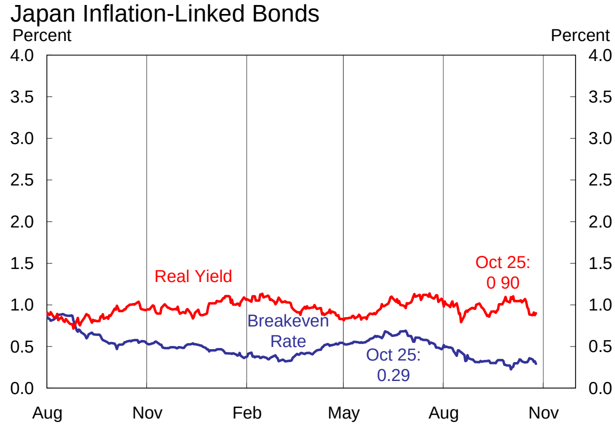
Euro Area Inflation-Linked Bonds



Source: Barclays

Note: OAT July 2012.

Japan Inflation-Linked Bonds



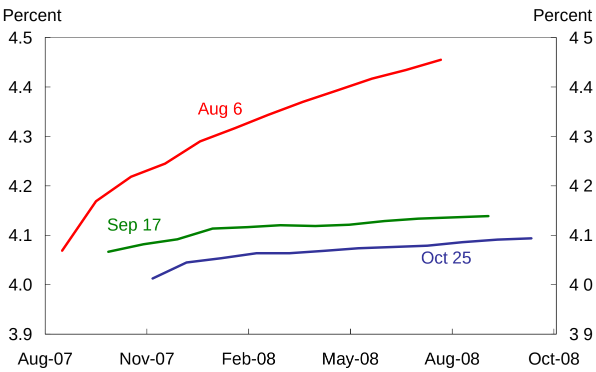
Source: Barclays

Note: JGB March 2014.

A. Significant Developments

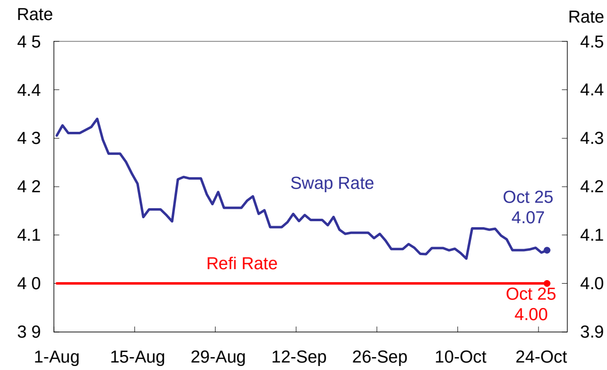
Exhibit A-10: Euro Area and Japan Swap Curves

Euro Area Swap Rates
Expected Average Overnight Rate Months Ahead



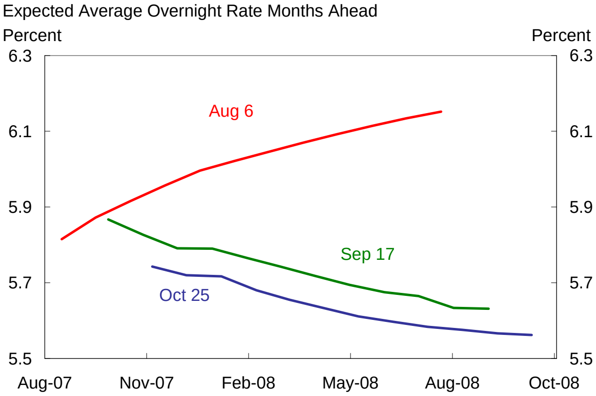
Source: Bloomberg

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



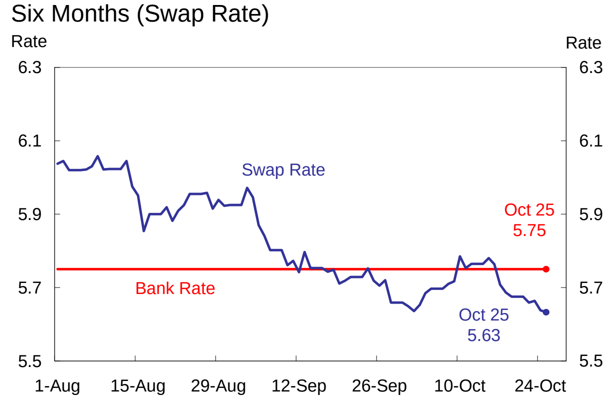
Source: Bloomberg

UK Swap Curve
Expected Average Overnight Rate Months Ahead



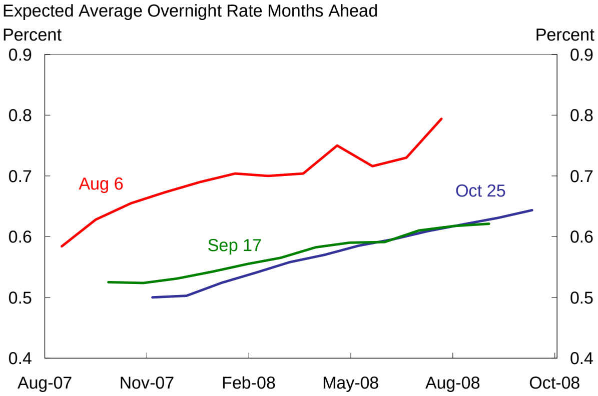
Source: Bloomberg

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



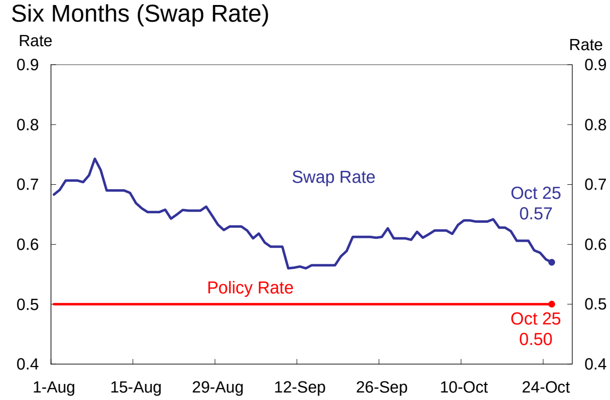
Source: Bloomberg

Japan Swap Curve
Expected Average Overnight Rate Months Ahead



Source: Bloomberg

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



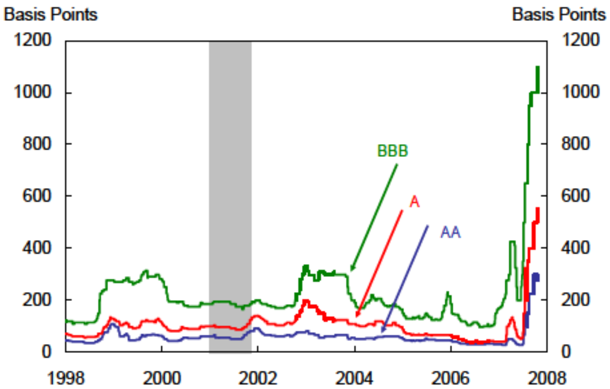
Source: Bloomberg

Note: Shading represents NBER recessions.

A. Significant Developments

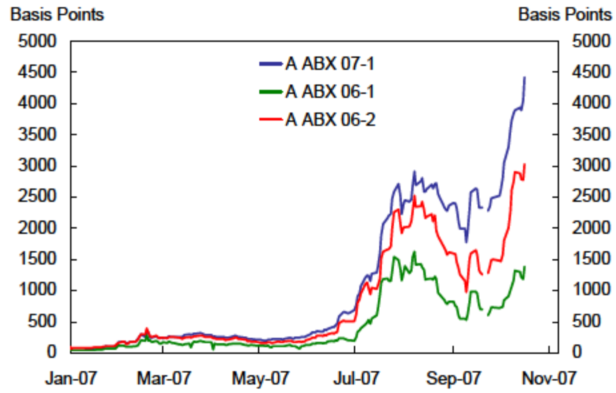
Exhibit A-11: Financial Market Indicators of Subprime Spillovers

Spreads on Subprime MBS Tranches



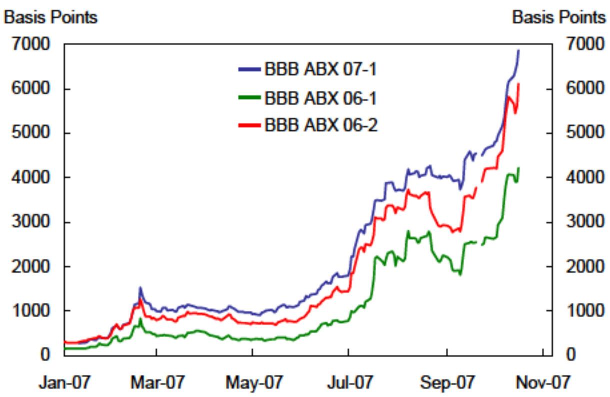
Source: JPMorgan and FRBNY (Markets Group)

A-Rated ABX Spreads



Source: JPMorgan and FRBNY (Markets Group)

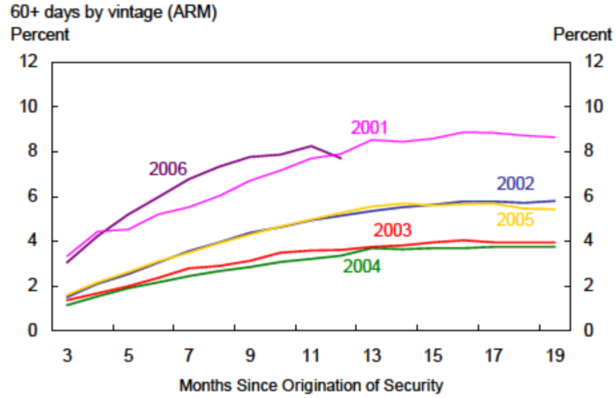
BBB-Rated ABX Spreads



Source: JPMorgan and FRBNY (Markets Group)

Subprime Delinquencies

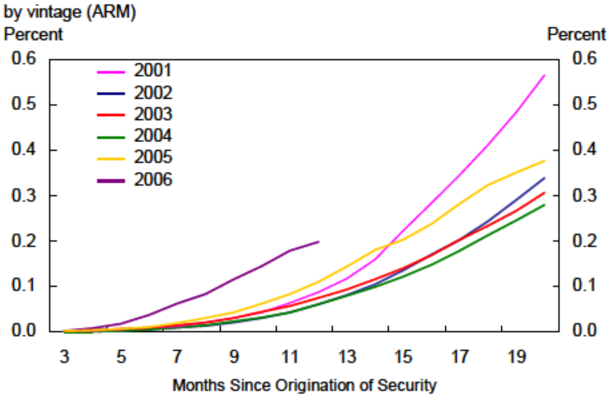
60+ days by vintage (ARM)



Source: Moody's and FRBNY (Bank Supervision)

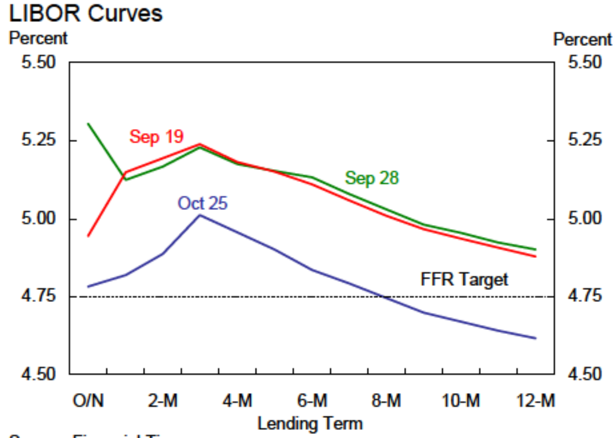
Cumulative Subprime Losses

by vintage (ARM)



Source: Moody's and FRBNY (Bank Supervision)

LIBOR Curves



Source: Financial Times

B. FRBNY Forecast Details

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

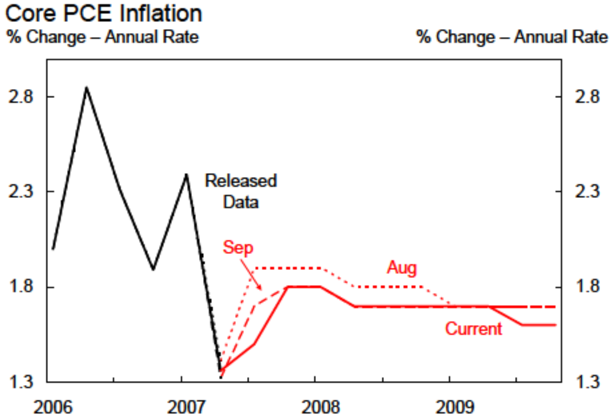
	Core PCE Inflation			Real GDP Growth			Unemployment Rate*			Fed Funds Rate**		
	Aug	Sep	Oct	Aug	Sep	Oct	Aug	Sep	Oct	Aug	Sep	Oct
2007												
Q1	*2.4*	*2.4*	*2.4*	*0.6*	*0.6*	*0.6*	*4.5*	*4.5*	*4.5*	*5.3*	*5.3*	*5.3*
Q2	*1.4*	*1.3*	*1.4*	*3.4*	*3.8*	*3.8*	*4.5*	*4.5*	*4.5*	*5.3*	*5.3*	*5.3*
Q3	1.9	1.7	1.5	3.3	2.9	3.3	4.6	4.6	*4.6*	5.3	4.8	*4.8*
Q4	1.9	1.8	1.8	2.7	2.4	2.0	4.6	4.7	4.7	5.3	4.8	4.8
2008												
Q1	1.9	1.8	1.8	2.7	2.4	2.0	4.6	4.7	4.7	5.3	4.8	4.8
Q2	1.8	1.7	1.7	2.7	2.6	2.8	4.6	4.7	4.7	5.3	4.5	4.8
Q3	1.8	1.7	1.7	2.7	2.7	2.8	4.6	4.7	4.7	5.0	4.3	4.5
Q4	1.8	1.7	1.7	2.7	2.8	3.0	4.6	4.6	4.6	5.0	4.3	4.3
2009												
Q1	1.7	1.7	1.7	2.7	2.8	2.8	4.6	4.6	4.6	5.0	4.3	4.3
Q2	1.7	1.7	1.7	2.7	2.7	2.7	4.6	4.6	4.6	5.0	4.3	4.3
Q3	1.7	1.7	1.6	2.7	2.8	2.8	4.6	4.6	4.6	4.8	4.3	4.3
Q4	1.7	1.7	1.6	2.7	2.7	2.6	4.6	4.6	4.6	4.8	4.3	4.3
Q4/Q4												
2006	*2.3*	*2.3*	*2.3*	*2.6*	*2.6*	*2.6*	*-0.5*	*-0.5*	*-0.5*	*1.0*	*1.0*	*1.0*
2007	1.9	1.8	1.8	2.5	2.4	2.4	0.1	0.2	0.2	0.0	-0.5	-0.5
2008	1.8	1.7	1.7	2.7	2.6	2.6	0.0	-0.1	-0.1	-0.3	-0.5	-0.5
2009	1.7	1.7	1.6	2.7	2.7	2.7	0.0	0.0	0.0	-0.3	0.0	0.0

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

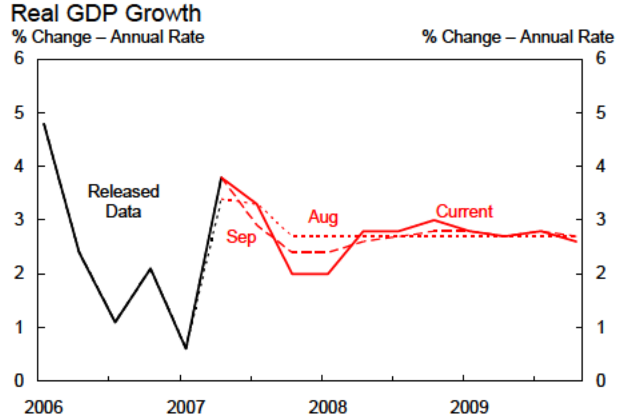
B. FRBNY Forecast Details

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

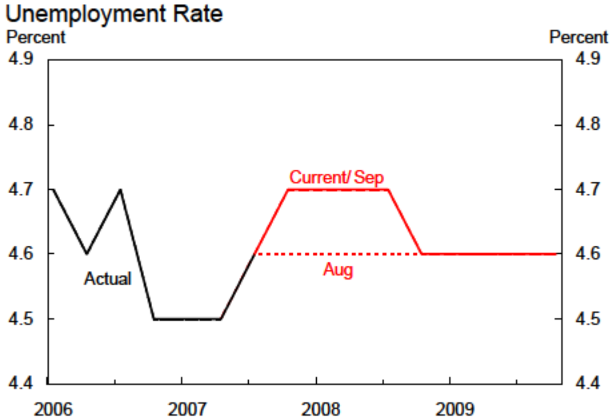
Core PCE Inflation



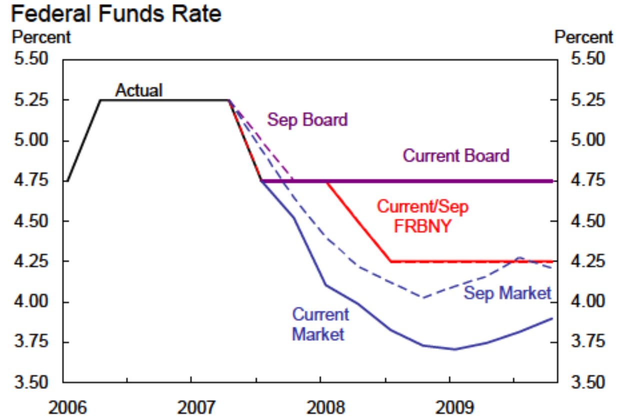
Real GDP Growth



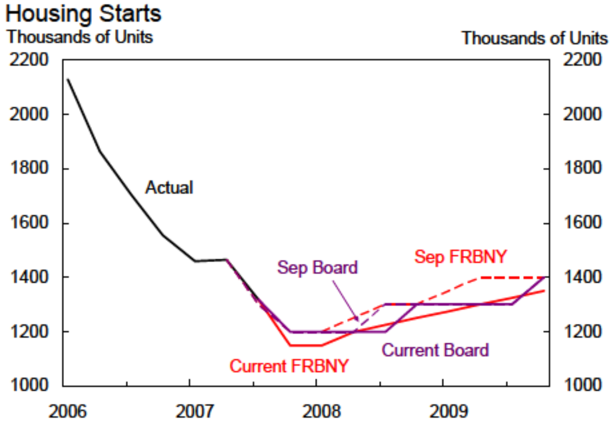
Unemployment Rate



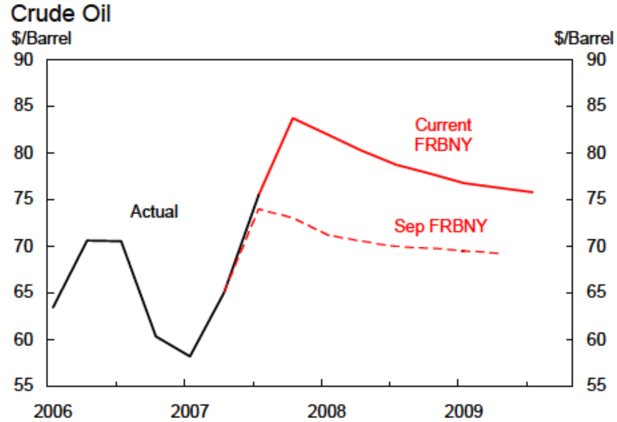
Federal Funds Rate



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)	
	2007Q3	2007Q4	2007Q3	2007Q4
OUTPUT				
Real GDP	3.3	2.0	3.3	2.0
	(2.9)	(2.4)	(2.9)	(2.4)
Final Sales to Domestic Purchasers	2.8	1.2	2.9	1.2
	(2.3)	(1.7)	(2.4)	(1.8)
Consumption	3.8	2.4	2.7	1.7
	(3.0)	(2.5)	(2.1)	(1.7)
BFI: Equipment and Software	3.0	4.0	0.2	0.3
	(2.0)	(4.0)	(0.1)	(0.3)
BFI: Nonresidential Structures	9.0	7.0	0.3	0.2
	(9.0)	(7.0)	(0.3)	(0.2)
Residential Investment	-16.0	-28.8	-0.8	-1.5
	(-15.0)	(-20.0)	(-0.8)	(-1.0)
Government: Federal	3.3	3.0	0.2	0.2
	(5.5)	(3.0)	(0.4)	(0.2)
Government: State and Local	2.8	2.5	0.3	0.3
	(2.0)	(2.5)	(0.2)	(0.3)
Inventory Investment	--	--	-0.4	0.4
	--	--	(0.0)	(0.3)
Net Exports	--	--	0.8	0.4
	--	--	(0.5)	(0.3)
INFLATION				
Total PCE Deflator	1.5	2.5		
	(1.6)	(2.1)		
Core PCE Deflator	1.5	1.8		
	(1.7)	(1.8)		
PRODUCTIVITY AND LABOR COSTS*				
Output per Hour	3.9	1.8		
	(3.2)	(1.7)		
Compensation per Hour	4.8	7.0		
	(4.0)	(7.0)		
Unit Labor Costs	0.9	5.2		
	(0.8)	(5.3)		

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	2.4	2.6	2.7	2.4	2.6	2.7
	(2.4)	(2.6)	(2.7)	(2.4)	(2.6)	(2.7)
Final Sales to Domestic Purchasers	1.9	2.2	2.5	2.0	2.3	2.6
	(2.0)	(2.4)	(2.6)	(2.1)	(2.5)	(2.7)
Consumption	2.8	2.7	2.6	2.0	1.9	1.8
	(2.7)	(2.7)	(2.7)	(1.9)	(1.9)	(1.9)
BFI: Equipment and Software	3.0	3.7	3.0	0.2	0.3	0.2
	(2.6)	(3.7)	(3.0)	(0.2)	(0.3)	(0.2)
BFI: Nonresidential Structures	11.8	4.0	3.0	0.4	0.1	0.1
	(12.2)	(4.0)	(3.0)	(0.4)	(0.1)	(0.1)
Residential Investment	-18.5	-10.2	3.0	-1.0	-0.4	0.1
	(-15.8)	(-4.5)	(3.0)	(-0.8)	(-0.2)	(0.1)
Government: Federal	1.4	2.0	1.5	0.1	0.1	0.1
	(1.9)	(2.0)	(1.5)	(0.1)	(0.1)	(0.1)
Government: State and Local	2.8	2.1	2.0	0.3	0.3	0.2
	(2.6)	(2.3)	(2.2)	(0.3)	(0.3)	(0.3)
Inventory Investment	--	--	--	-0.1	0.0	0.0
	--	--	--	(-0.0)	(-0.0)	(0.0)
Net Exports	--	--	--	0.5	0.3	0.1
	--	--	--	(0.4)	(0.1)	(0.0)
INFLATION						
Total PCE Deflator	2.9	1.9	1.7			
	(2.8)	(1.9)	(1.7)			
Core PCE Deflator	1.8	1.7	1.6			
	(1.8)	(1.7)	(1.7)			
Total CPI Inflation	3.5	2.2	1.9			
	(3.5)	(2.2)	(1.9)			
Core CPI Inflation	2.2	2.0	1.9			
	(2.2)	(2.0)	(1.9)			
GDP Deflator	2.4	2.3	1.9			
	(2.4)	(2.2)	(1.9)			

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)	4.75	4.25	4.25
	(4.75)	(4.25)	(4.25)
10-Year Treasury Yield (Avg. Q4 Level)	4.4	4.6	4.6
	(4.5)	(4.8)	(4.8)
PRODUCTIVITY AND LABOR COSTS*			
Output	2.6	2.9	3.0
	(2.7)	(2.9)	(3.0)
Hours	0.6	1.1	1.2
	(0.7)	(1.1)	(1.2)
Output per Hour	2.2	1.8	1.8
	(2.0)	(1.8)	(1.8)
Compensation per Hour	5.4	4.7	4.7
	(5.2)	(4.7)	(4.7)
Unit Labor Costs	3.3	2.9	2.9
	(3.1)	(2.9)	(2.9)
LABOR MARKET			
Unemployment Rate (Avg. Q4 Level)	4.7	4.6	4.6
	(4.7)	(4.6)	(4.6)
Participation Rate (Avg. Q4 Level)	66.0	66.0	66.0
	(66.0)	(66.0)	(66.0)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	104	123	137
	(103)	(126)	(139)
INCOME			
Personal Income	6.4	5.5	5.1
	(6.3)	(5.4)	(5.1)
Real Disposable Personal Income	3.1	3.5	3.5
	(3.0)	(3.4)	(3.4)
Corporate Profits Before Taxes	9.1	1.4	0.9
	(8.5)	(1.1)	(0.5)

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	2.4	2.6	2.7	2.3	1.7	2.2
	(2.4)	(2.6)	(2.7)	(2.0)	(1.7)	(2.2)
GDP Growth Contributions						
Final Sales to Domestic Purchasers	2.0	2.3	2.6	1.9	1.4	2.1
	(2.1)	(2.5)	(2.7)	(1.7)	(1.4)	(2.1)
Consumption	2.0	1.9	1.8	1.9	1.2	1.5
	(1.9)	(1.9)	(1.9)	(1.7)	(1.2)	(1.5)
BFI	0.6	0.4	0.3	0.6	0.2	0.3
	(0.6)	(0.4)	(0.3)	(0.5)	(0.2)	(0.3)
Residential Investment	-1.0	-0.4	0.1	-1.1	-0.3	0.1
	(-0.8)	(-0.2)	(0.1)	(-1.0)	(-0.3)	(0.1)
Government	0.4	0.4	0.4	0.5	0.3	0.2
	(0.5)	(0.4)	(0.4)	(0.5)	(0.3)	(0.2)
Inventory Investment	-0.1	0.0	0.0	0.0	-0.1	0.1
	(-0.0)	(-0.0)	(0.0)	(0.1)	(0.0)	(0.1)
Net Exports	0.5	0.3	0.1	0.5	0.4	0.0
	(0.4)	(0.1)	(0.0)	(0.4)	(0.2)	(0.0)
INFLATION						
Total PCE Deflator	2.9	1.9	1.7	3.0	1.8	1.7
	(2.8)	(1.9)	(1.7)	(2.9)	(1.7)	(1.8)
Core PCE Deflator	1.8	1.7	1.6	1.8	1.9	1.9
	(1.8)	(1.7)	(1.7)	(1.9)	(1.9)	(1.9)
INTREST RATE ASSUMPTION						
Fed Funds Rate (End-of-Year)	4.75	4.25	4.25	4.75	4.75	4.75
	(4.75)	(4.25)	(4.3)	(4.75)	(4.75)	(4.75)
PRODUCTIVITY AND LABOR COSTS*						
Output per Hour	2.2	1.8	1.8	2.0	1.8	1.9
	(2.0)	(1.8)	(1.8)	(1.9)	(1.7)	(1.9)
Compensation per Hour	5.4	4.7	4.7	4.7	4.5	4.3
	(5.2)	(4.7)	(4.7)	(4.7)	(4.4)	(4.2)
Unit Labor Costs	3.3	2.9	2.9	2.7	2.6	2.4
	(3.1)	(2.9)	(2.9)	(2.7)	(2.6)	(2.3)
LABOR MARKET						
Unemployment Rate (Avg. Q4 Level)	4.7	4.6	4.6	4.7	4.8	4.8
	(4.7)	(4.6)	(4.6)	(4.7)	(4.9)	(4.9)
Participation Rate (Avg. Q4 Level)	66.0	66.0	66.0	66.0	65.8	65.6
	(66.0)	(66.0)	(66.0)	(66.0)	(65.8)	(65.6)
Avg. Monthly Nonfarm Payroll Growth (Thous.)	104	123	137	92	42	67
	(103)	(126)	(139)	(108)	(67)	(83)
HOUSING						
Housing Starts (Avg. Q4 Level, Thous.)	1150	1250	1350	1400	1200	1300
	(1200)	(1300)	(1400)	(1200)	(1300)	(1400)

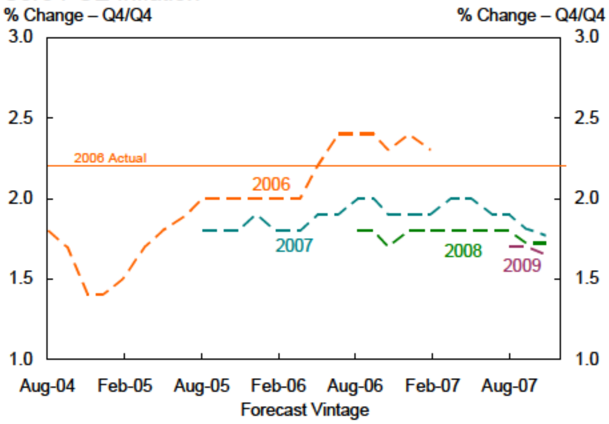
Note: All values are Q4/Q4 percent change, unless indicated otherwise. Numbers in parentheses are from the previous Blackbook or Greenbook.
*Nonfarm business sector

B. FRBNY Forecast Details

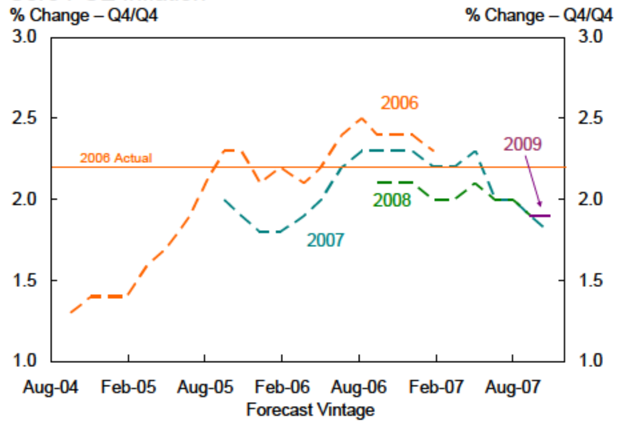
Exhibit B-7: Evolution of FRBNY and Board Forecasts since Mid-2004

FRBNY | **Board**

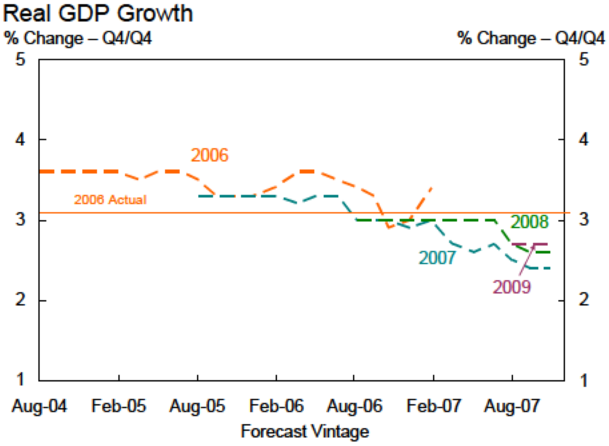
Core PCE Inflation (FRBNY)



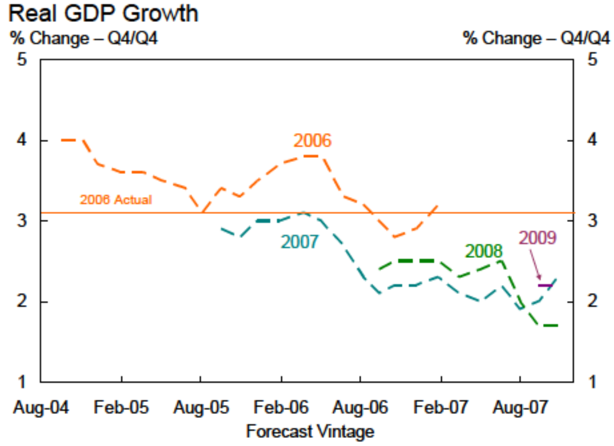
Core PCE Inflation (Board)



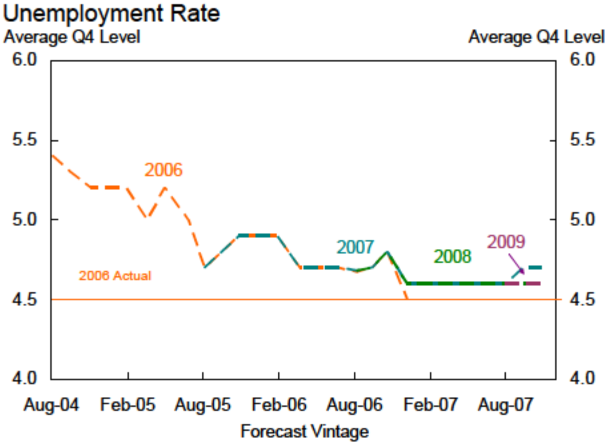
Real GDP Growth (FRBNY)



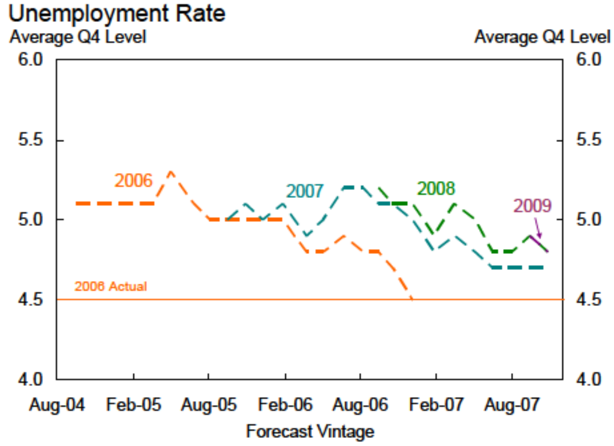
Real GDP Growth (Board)



Unemployment Rate (FRBNY)



Unemployment Rate (Board)



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	2007Q3	2007Q4	2007 Q4/Q4	2008 Q4/Q4
FRBNY	10/26/2007	3.3	2.0	2.4	2.6
		(2.9)	(2.4)	(2.4)	(2.6)
PSI Model	10/24/2007	2.4	2.1	--	--
		(1.8)	(2.5)	--	--
Blue Chip	10/10/2007	2.6	1.8	2.2	2.5
		(2.4)	(2.1)	(2.3)	(2.7)
Median SPF	8/14/2007	2.5	2.7	1.9	2.8
		(2.6)	(2.9)	(2.1)	(2.9)
Macro Advisers	10/25/2007	3.3	1.7	2.2	2.6
		(2.6)	(2.0)	(2.3)	(2.5)

Core PCE Inflation

	Release Date	2007Q3	2007Q4	2007 Q4/Q4	2008 Q4/Q4
FRBNY	10/26/2007	1.5	1.8	1.8	1.7
		(1.7)	(1.8)	(1.8)	(1.7)
Median SPF	8/14/2007	1.9	1.9	1.9	2.0
		(2.1)	(2.1)	(2.1)	(2.1)

CPI Inflation

	Release Date	2007Q3	2007Q4	2007 Q4/Q4	2008 Q4/Q4
FRBNY	10/26/2007	1.9	2.3	3.5	2.2
		(1.8)	(2.3)	(3.5)	(2.2)
Blue Chip	10/10/2007	1.9	2.0	3.3	2.3
		(2.3)	(2.1)	(3.4)	(2.4)
Median SPF	8/14/2007	2.6	2.0	3.6	2.2
		(2.5)	(2.3)	(3.2)	(2.4)
Macro Advisers	10/25/2007	1.8	2.4	3.5	2.2
		(2.1)	(2.2)	(3.5)	(2.1)

Core CPI Inflation

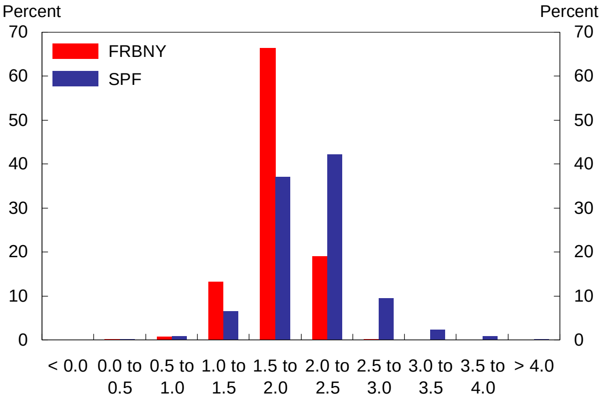
	Release Date	2007Q3	2007Q4	2007 Q4/Q4	2008 Q4/Q4
FRBNY	10/26/2007	2.5	2.1	2.2	2.0
		(2.3)	(2.1)	(2.2)	(2.0)
Median SPF	8/14/2007	2.3	2.2	2.2	2.2
		(2.3)	(2.2)	(2.2)	(2.2)
Macro Advisers	10/25/2007	2.6	2.3	2.3	2.2

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

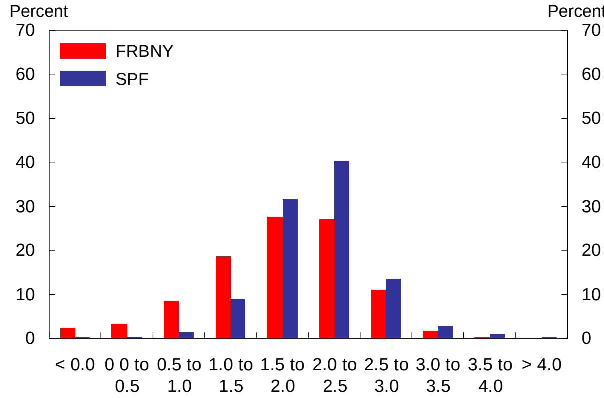
B. FRBNY Forecast Details

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

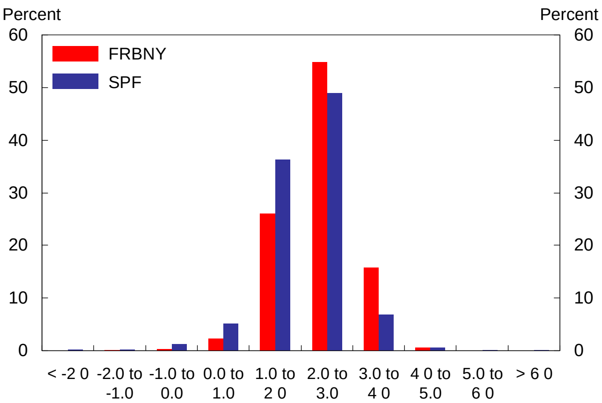
2007Q4/Q4 Core PCE Inflation Probabilities



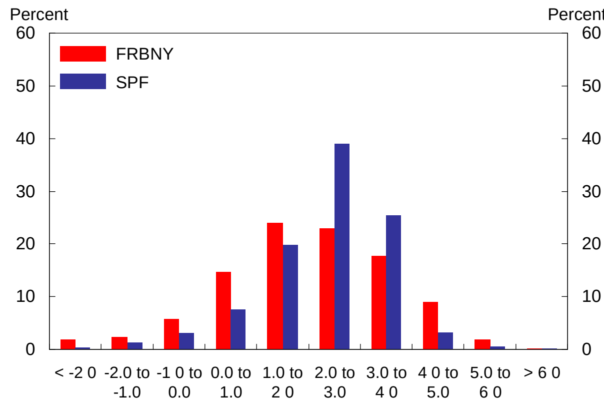
2008Q4/Q4 Core PCE Inflation Probabilities



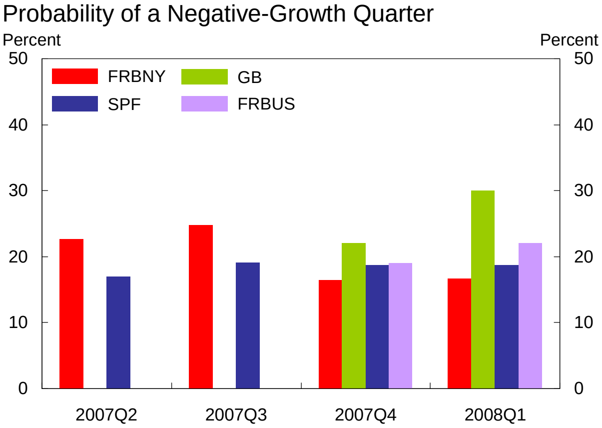
2007/2006 Real GDP Growth Probabilities



2008/2007 Real GDP Growth Probabilities



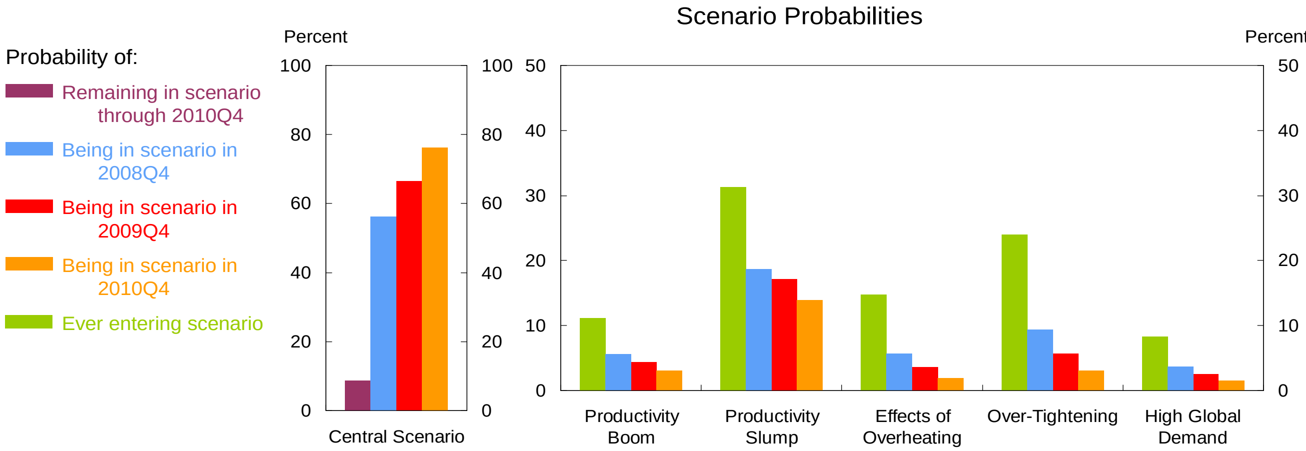
Probability of a Negative-Growth Quarter

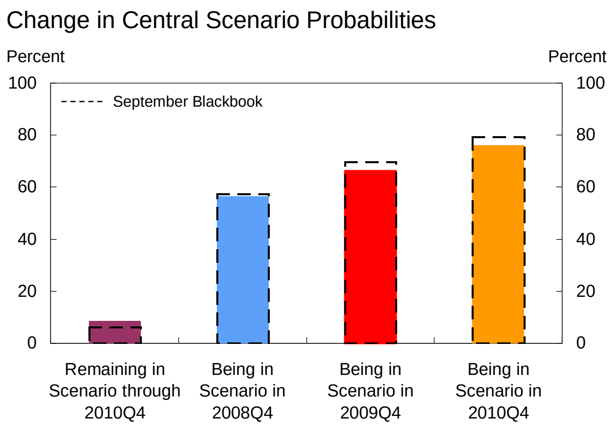


Source: MMS Function (FRBNY), FRB Philadelphia Survey of Professional Forecasters, and Federal Reserve Board
Note: SPF forecast was released August 14, 2007. Board forecasts are from the October Greenbook.

C. FRBNY Forecast Distributions

Exhibit C-1: Risks





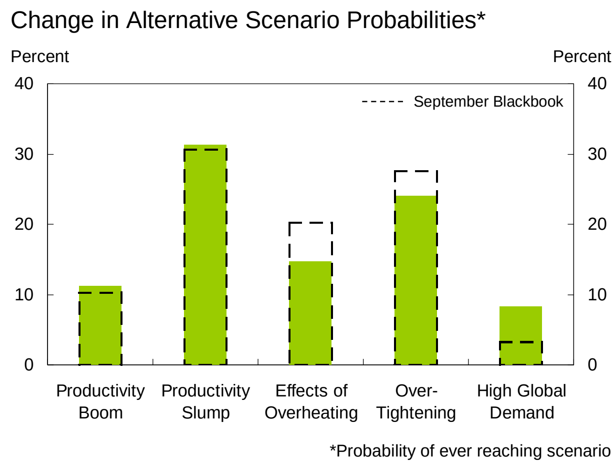
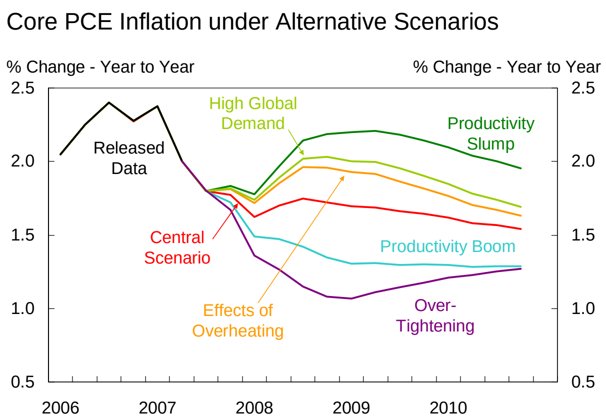
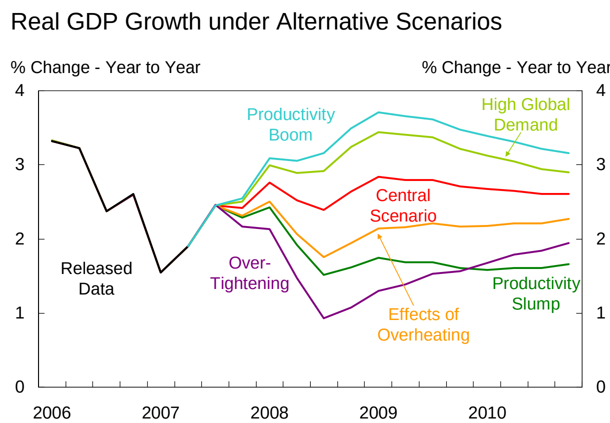


Exhibit C-2: Projections under Alternative Scenarios



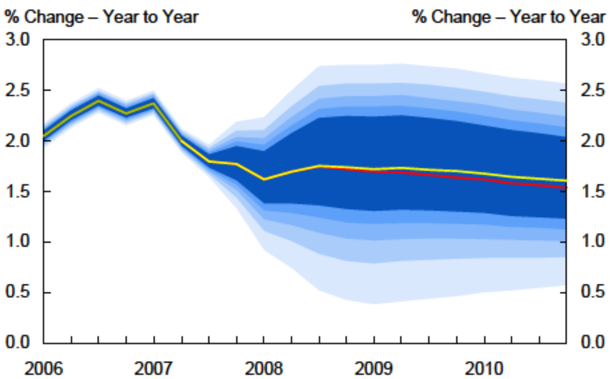


Source: MMS Function (FRBNY)

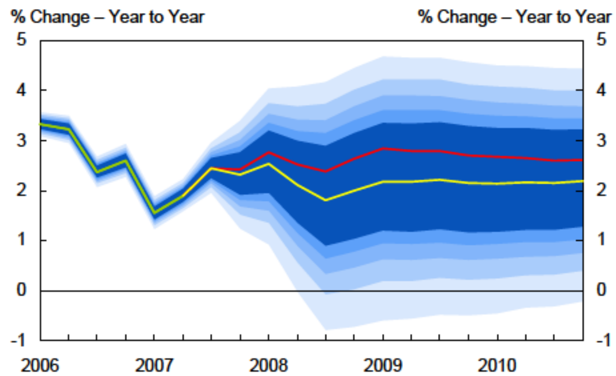
C. FRBNY Forecast Distributions

Exhibit C-3: Inflation and Output Forecast Distributions

Core PCE Inflation Forecast Distribution

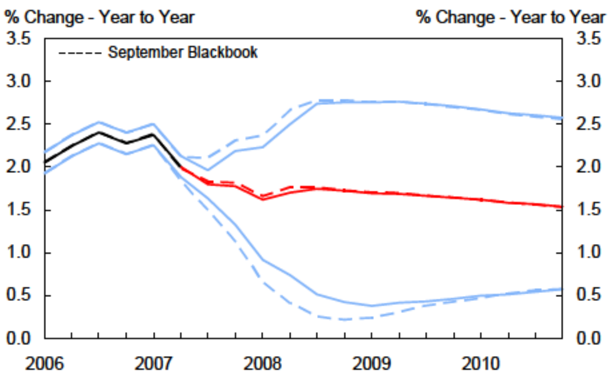


Real GDP Growth Forecast Distribution

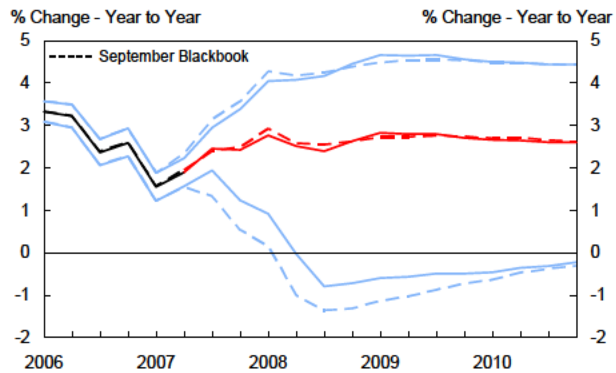


The yellow line is the expected value of the forecast distribution, the red line is the central scenario projection, and the green line is released data. The shading represents the 50, 60, 70, 80, and 90 percent chance that the four-quarter change will be within the respective range.

Change in Core PCE Inflation Forecast Distribution

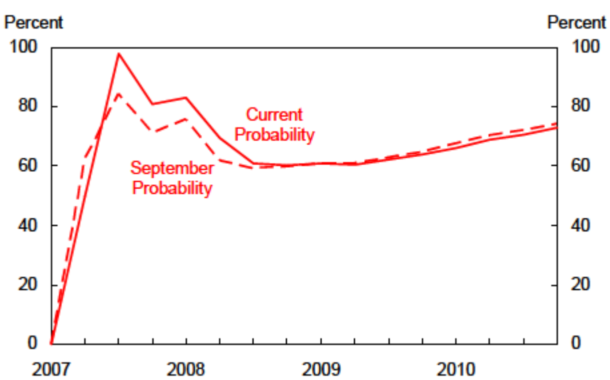


Change in Real GDP Growth Forecast Distribution

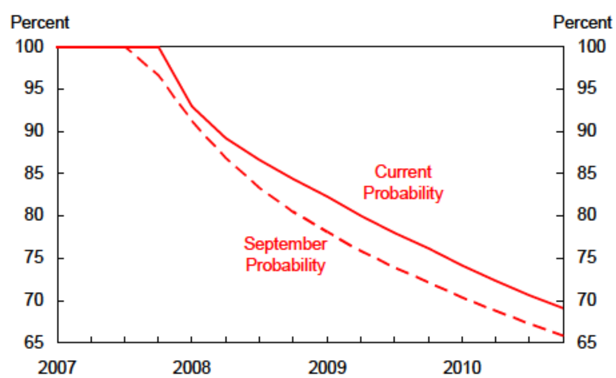


The blue lines are the 90% chance the four-quarter change will be within the lines, the red line is the central scenario projection, and the black line is released data. Dashed lines represent forecasts from previous Blackbook.

Probability of Four-Quarter Core PCE Inflation below 2%



Probability of Continuing Expansion*



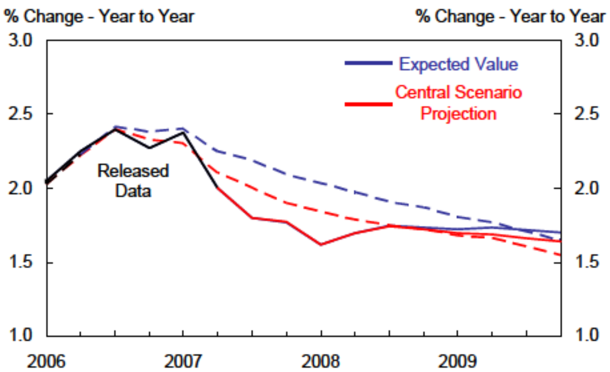
*No two consecutive quarters of negative growth

Source: MMS Function (FRBNY)

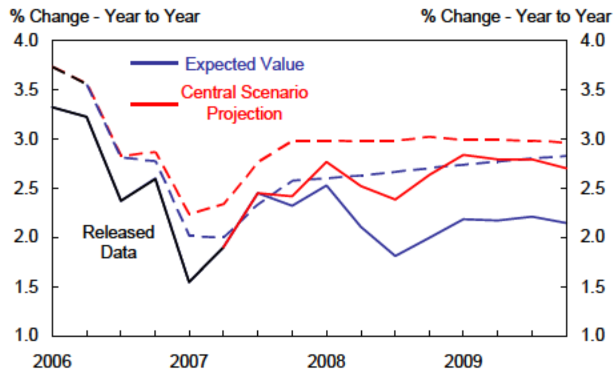
C. FRBNY Forecast Distributions

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

One-Year Comparison of Core PCE Inflation Forecast

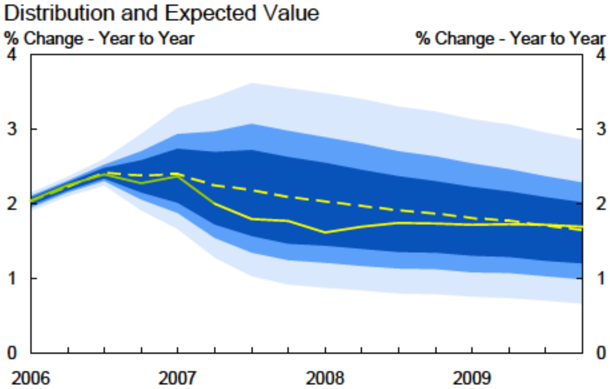


One-Year Comparison of Real GDP Growth Forecast

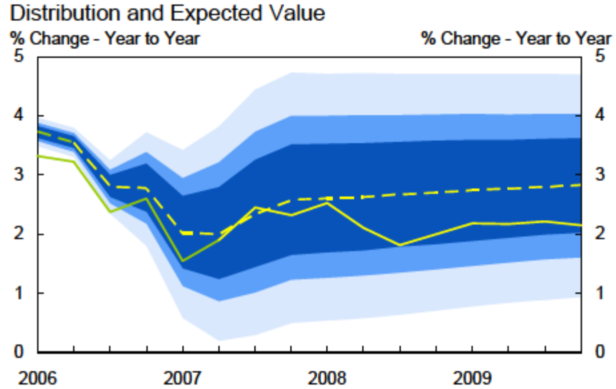


The solid lines are the **current** central scenario projection (red) and expected value of the forecast distribution, while the dotted lines are the same from the **October 2006** forecast.

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



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



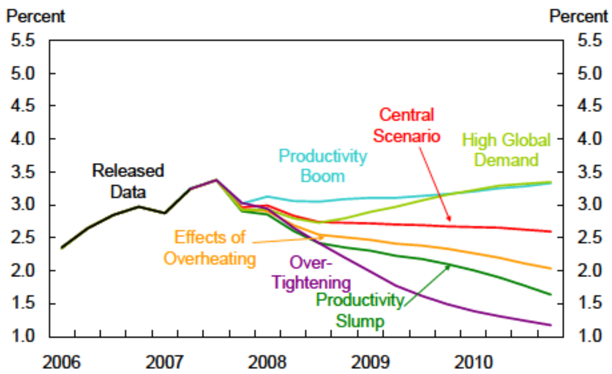
The solid yellow line is the **current** expected value of the forecast distribution, while the dashed yellow line is the **October 2006** expected value. The shading represents the 50, 75 and 90 percent probability intervals from the **October 2006** forecast. The green lines are released data.

Source: MMS Function (FRBNY)

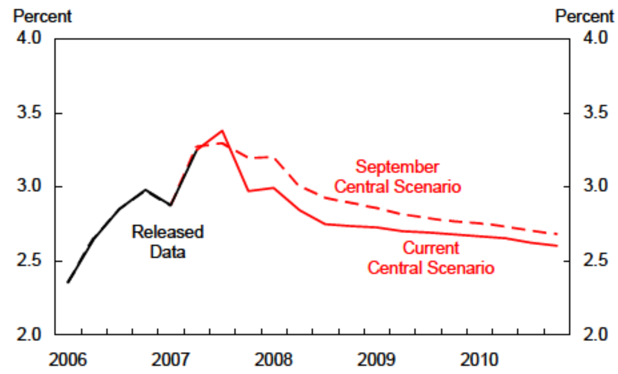
D. FRBNY Fed Funds Rate Projections

Exhibit D-1: *Baseline*
Policy Rule Analysis

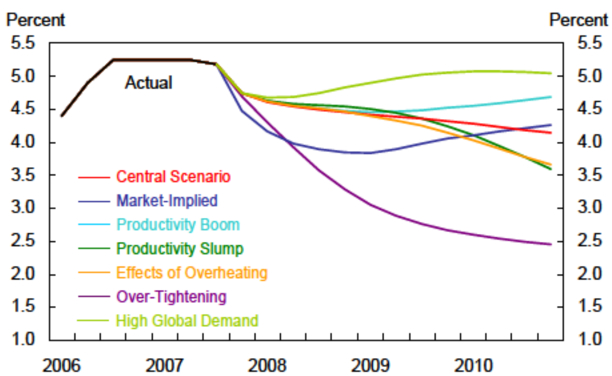
Real FFR under Alternative Scenarios



Change in Central Scenario Real FFR



Nominal FFR under Alternative Scenarios



Change in Central Scenario and Market-Implied Nominal FFR

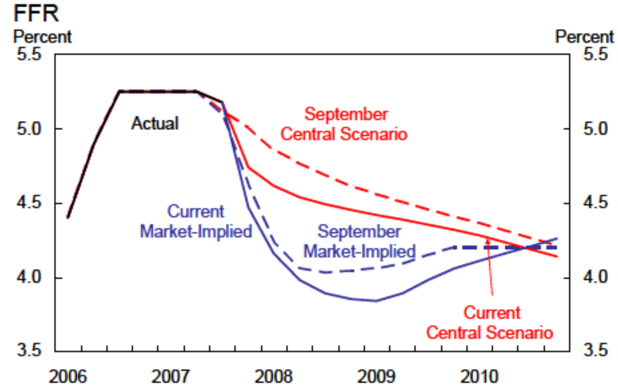
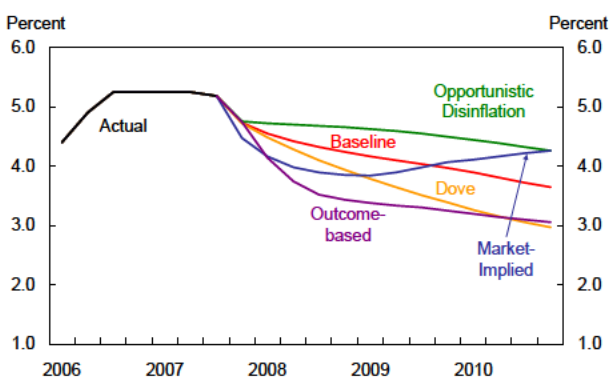


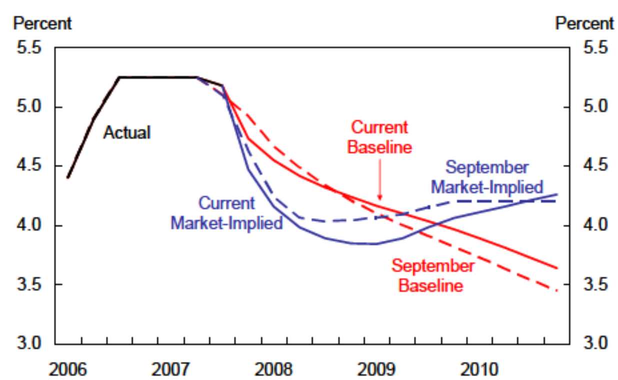
Exhibit D-2: Alternative Policy Rules under Expected Value of Forecast Distribution

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

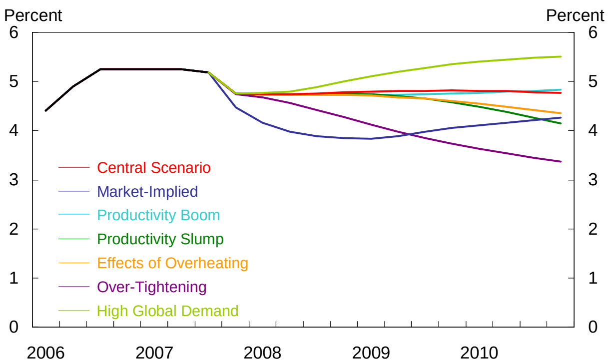
Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

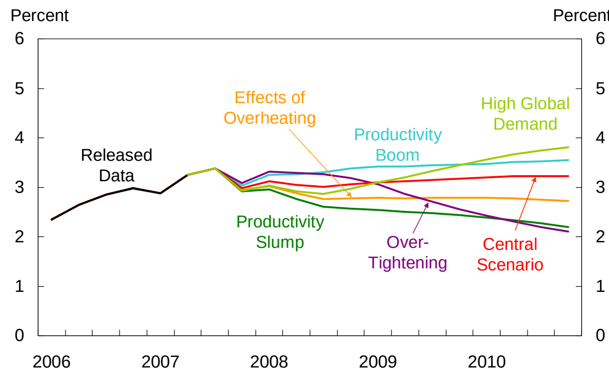
Exhibit D-3: Alternative Policy Rule Analysis

Policy Rule: *Opportunistic Disinflation*

Nominal FFR under Alternative Scenarios

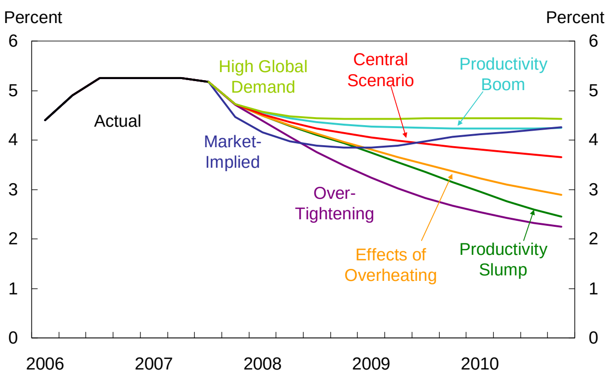


Real FFR under Alternative Scenarios

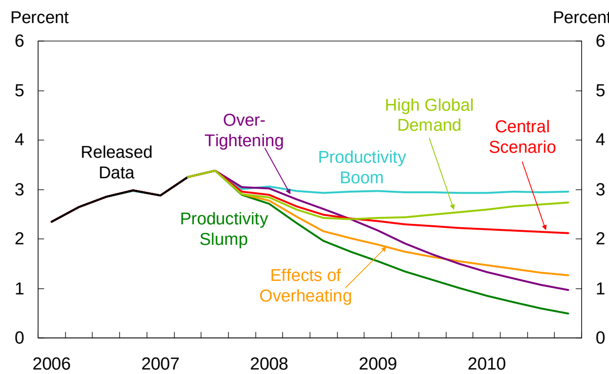


Policy Rule: *Dove*

Nominal FFR under Alternative Scenarios

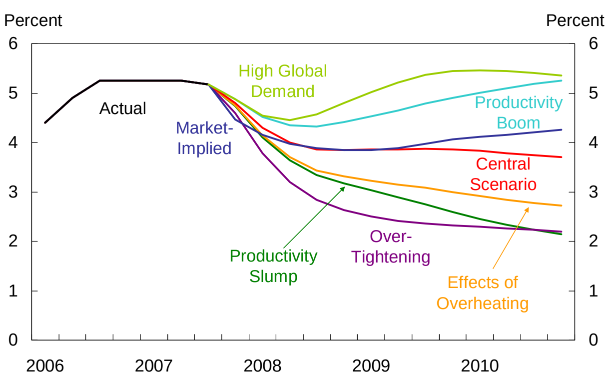


Real FFR under Alternative Scenarios

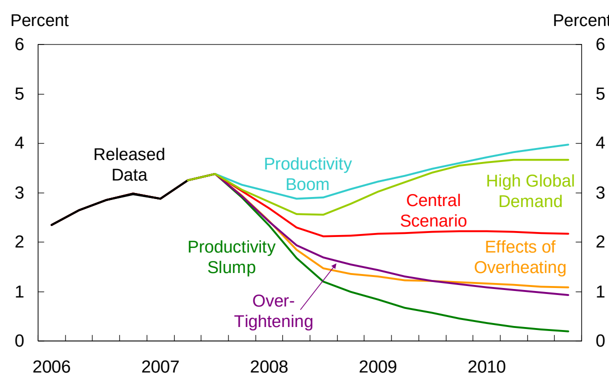


Policy Rule: *Outcome-based*

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: 2008Q3

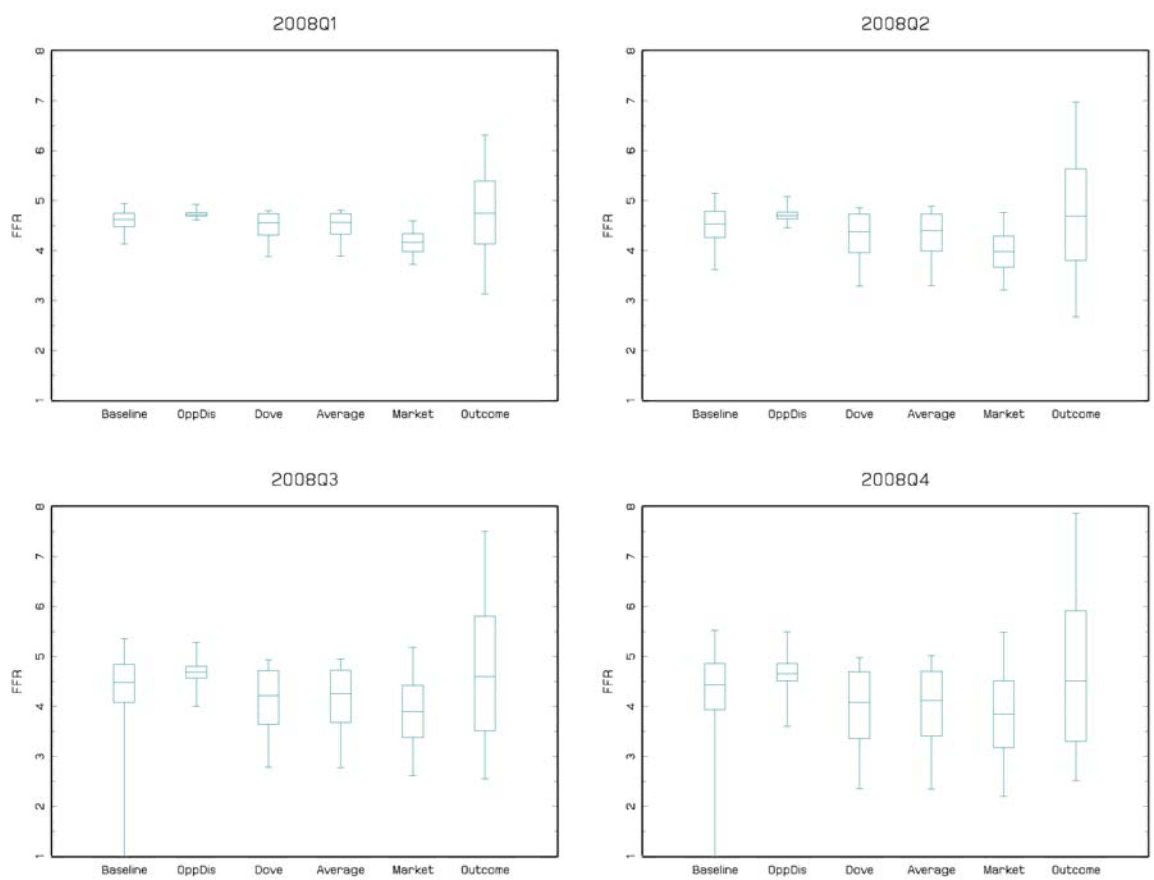
	Percentile of Rule Expectation in Market Distribution	Percentile of Market Expectation in Rule Distribution
Baseline	71 (70)	17 (17)
Opportunistic Disinflation	84 (88)	4 (4)
Dove	60 (63)	35 (34)
Outcome-based	86 (80)	33 (36)
Average	61 (63)	33 (32)

Note: Numbers in parentheses are from the previous Blackbook.

"Average" Weights:

Rule	Current	Sep. Blackbook
Baseline	0.10	0.10
Opportunistic Disinflation	0.00	0.00
Dove	0.90	0.90

Exhibit D-5: FFR Distributions



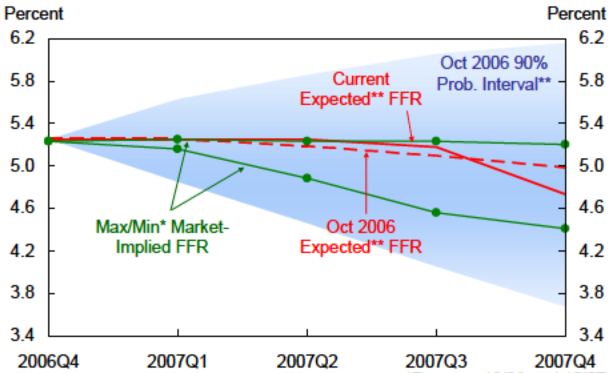
Note: The box represents the 50% probability interval, the line in the box the median, and the tails the 90% probability interval.

Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

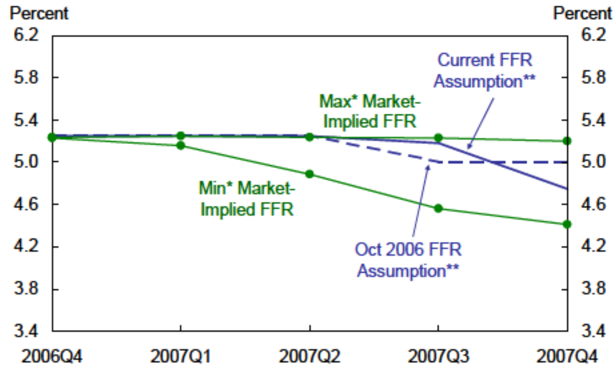
Exhibit D-6: Evolution of FFR Expectations and Assumption

FFR Forecast Distribution and Market-Implied FFR



*Between 10/06 and 10/07
**Using Baseline rule

FFR Conditioning Assumption and Market-Implied FFR



*Between 10/06 and 10/07
**Conditioning assumption for FRBNY central forecast

Source: MMS Function (FRBNY)

Alternative Scenario Descriptions

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

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

Alternative 1: *Productivity Boom*

The recent decline in productivity growth might prove to be a temporary, cyclical one. In this case, it is possible we will return to the strong productivity growth of the High II epoch, with some mixture of IT-driven production and applications leading the way. Support for this view comes from Moore's law on the doubling of computing power every 18th months. As such, we could see persistent productivity growth above our assumed trend, implying a higher potential growth rate and thus expected real growth that is higher than our current estimate. Strong productivity growth would also limit labor cost pressures and thereby help to subdue inflation.

Alternative 2: *Productivity Slump*

It is possible that the upswing in productivity that began in the mid-1990s has ended as the IT-driven surge has run it course. This would mean a period of productivity growth below the trend in our central forecast. Furthermore, the increase in the level and volatility of energy and commodity prices could continue and cause lower productivity growth, as occurred in the 1970s. Below-trend growth would not only imply a lower estimate of potential growth, but would also push inflation above the level projected in our central forecast.

We also consider three additional scenarios, two related to the impact of past monetary policy and possible misperceptions of its past and current stances, and one related to the impact of developments in the global economy.

Alternative 3: *Effects of Overheating*

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

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

Alternative 4: *Over-Tightening*

We currently base our outlook on the assumption that the neutral policy rate is between 3.75% and 4.75%, with an implicit core PCE inflation target of 1.5%. Previously, however, we viewed the lower range of the neutral policy rate as at or above 4%. In addition, for the past few years, core PCE inflation was running above 2%. This combination of factors was consistent with recent fed funds rate levels of above 5%. We see some risk, however, that those inflation levels were a lagging indicator of demand pressures that had already subsided. We also see some risk that the neutral rate was actually lower than we had assumed. If either of these were true, it would imply that recent policy has been more restrictive than necessary, which would cause the economy to slow significantly below potential over the forecast horizon.

Alternative 5: *High Global Demand*

Recent global growth, most notably in China and other emerging markets, has been robust; at the same time, low unemployment rates and relatively high capacity utilization rates in advanced economies outside the U.S. indicate there is little slack in the global economy. If these developments continue, there is a risk that high demand for U.S. exports will raise output growth above the level in the central forecast. At the same time, the strength in global demand could cause it to outpace supply, further pushing up commodity prices (and especially energy prices) and beginning to push up the price of imported manufactured goods. These increases would likely cause above-forecast inflation in the U.S.

The implications for inflation and output of the various scenarios can be summarized as follows:

1. *Productivity Boom*: inflation below central forecast, output above central forecast.
2. *Productivity Slump*: inflation above central forecast, output below central forecast.
3. *Effects of Overheating*: inflation above central forecast, output slightly below central forecast.

4. *Over-Tightening*: inflation below central forecast, output far below central forecast.
5. *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)
$i^* = 4.25$ (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

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. This serves to both capture some of 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 Upcoming Quarter
r* < 3.00	r*
3.00 < r* < 4.00	4.50
4.00 < r* < 4.75	4.58
4.75 < r* < 6.00	4.75
r* > 6.00	r*

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

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

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

In addition to the *Baseline* rule and the two variants, we also consider the FFR paths generated by the Board staff's *Outcome-based* rule. The most significant difference between the three FRBNY rules and the *Outcome-based* rule is that the FRBNY rules offer a prescription for future behavior based on policymaker preferences and views of the economy, whereas the *Outcome-based* rule is a statistical description of the average of past FOMC behavior. Specifically, the *Outcome-based* rule calculates an FFR for a given quarter as a function of the FFR in the previous two quarters, the current quarter's four-quarter core PCE inflation, and the output gap for the current and previous quarters using parameters estimated from real-time historical data (1988-2006)[1].

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

Using a weighting scheme, it is possible to combine the *Baseline* and the two variants into an *Average* rule that may better reflect market beliefs about FOMC preferences and views of the structure of the economy than does any individual rule. (That is, we can think of the market-implied path as reflecting an amalgam of different perceived FOMC preferences, etc.) Each cycle we construct the *Average* rule by taking the weighted average of the *Baseline* rule and two FRBNY-derived variants that matches the market-implied path as closely as possible. The weights from the current and previous cycles are provided in the note to Exhibit D-4. Examining the change in the weights used to construct the *Average* rule from one cycle to the next can provide insight into the reasons behind shifts in the market path not explained by changes in the outlook.

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