

FRBNY Blackbook

RESEARCH AND STATISTICS GROUP

FOMC Background Material

March 2007

CONFIDENTIAL(FR) Class II FOMC

FRBNY BLACKBOOK**March 2007****CONTENTS**

1. Policy Recommendation and Rationale	2
2. Significant Developments	10
3. Evolution of Outlook and Risks	16
3.1 Central Forecast	16
3.2 Alternative Scenarios and Risks	20
4. Forecast Comparison	21
4.1 Greenbook Comparison	21
4.2 Comparison with Private Forecasters	25
5. Robustness of Policy Recommendation	26
5.1 Sensitivity to Alternative Scenarios and Policy Rules	26
5.2 Comparison to Market Expectations	27
6. Key Upcoming Issues	28

EXHIBITS

A. Forecast Details	30
B. Financial Markets	41
C. FRBNY Forecast Distributions	51
D. FRBNY Fed Funds Rate Projections	54

EXHIBIT OVERVIEW

*Also describes significant changes to the exhibits

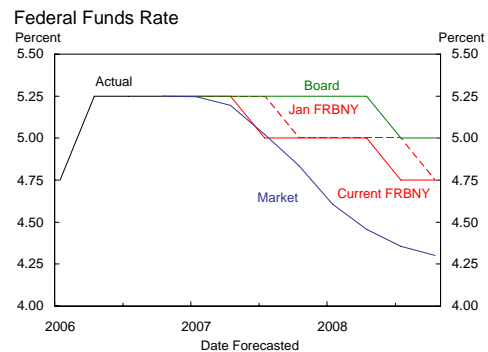
Exhibit C Documentation	57
Exhibit D Documentation	63

1. Policy Recommendation and Rationale

Our overall outlook and risk assessment is consistent with the recommendation that the FOMC hold the FFR target at 5.25% at the March meeting. While this recommendation for March's policy action is in line with what we would have expected to recommend as of the January Blackbook, the signal accompanying this recommendation has shifted toward easing. Specifically, our assessment of the outlook and risks now implies that the likelihood of a near-term FFR decrease exceeds the likelihood of an increase.

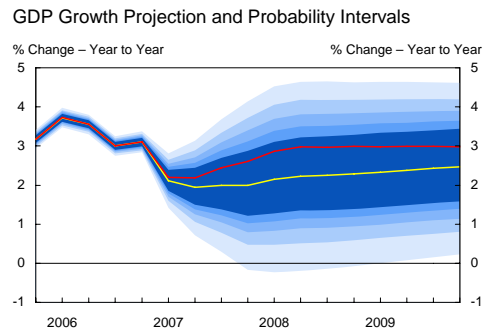
Developments in the real economy and in financial markets have led us to markedly reduce our near-term projection for real growth, as well as increase the downside risks to the growth outlook at longer horizons. Despite these changes to the outlook and risks on the real side, we have left our inflation outlook and risk assessment substantively unchanged.

In view of these inter-meeting shifts in the outlook and balance of risks, our policy path recommendation now indicates the committee should pull forward the timing of the initial rate cut into 2007Q3 from 2007Q4, though the recommended policy rate at the end of 2008 remains 4.75%. The change in our recommended policy path is the only significant change in the assumptions underlying our central projections for output and inflation. As is evident in the chart to the right, our recommended path for the FFR is above what is currently implied by financial market data and slightly below what is built into the Greenbook forecast.

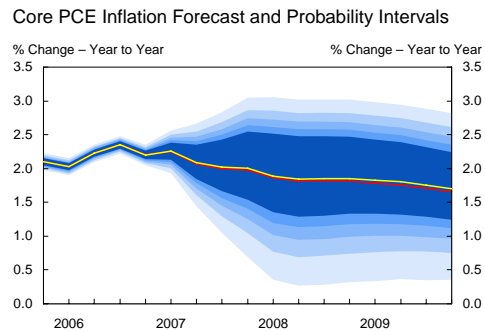


The principal changes to our outlook over the inter-meeting period concern real growth in 2007 and the medium-term risks to growth. Specifically, we have marked down real GDP growth in 2007 (Q4/Q4) by a substantial 0.3 percentage points, from 3.0% to 2.7%. In addition, 2006Q4 was considerably weaker than our January Blackbook projection (3.5%) and the January 31st advance release (also 3.5%). While we maintain our

assumption that the economy will grow at its potential rate of 3.0% in 2008, we have built in substantially more downside risk over the forecast horizon. Our current real side outlook and risk assessment are summarized in the top chart on right-hand side of the page, which shows (through 2009) our central forecast in red, the expected value of that forecast in yellow, and 90% probability bands in lightest blue shade. The downside risk to our forecast is evident in the significant gap between the yellow expected value line and the red central forecast line, with the yellow line below the red, as well as in the reemergence of probability placed on negative growth in 2007-08. Our assessment of the chance of a recession is lower than implied by past Greenbook forecast errors but higher than that implied by simulation of FRBUS.



Our inflation outlook is only slightly changed since the last Blackbook. We have increased our projection for 2007 (Q4/Q4) PCE inflation from 1.9% to 2.0%, and we again see upside risk to the inflation forecast. The lower chart on the right shows our current forecast and risk assessment for core PCE inflation.



In this case, the yellow expected value line lies slightly above our central forecast, indicating modest upside risk. We assess a slightly higher probability to core PCE inflation above 2.5% in 2007 than that obtained from simulating FRBUS, and our probability has increased over the inter-meeting period. Estimates of the probability based on Greenbook forecast errors suggest a much higher probability of core PCE above 2.5% in 2007.

Two recent developments in particular have influenced our assessment of the level of real weakness in the near term. First, the unexpected weakness in housing activity and home price appreciation has led us to build in a lower profile for both housing starts and residential investment going forward. While it is unclear exactly how events in the

subprime market will impact the larger housing market, our analysis of developments in this segment of the market reinforced our decision to mark down the trajectory for residential investment.

The second factor pushing down our near-term growth projection is the recent widespread weakness in capital goods orders, which has led us to lower our overall profile for equipment and software spending in 2007. This change reflects our belief that the recent weakness in equipment and software investment reflects more than purely transitory factors and is likely to persist somewhat beyond the first quarter.

When considering the medium- to long-term risks to the real outlook, we find this latter change to be in some sense more disquieting than the downward revision to the residential investment profile. Since 2005, we have been expecting a housing correction, but our projection for the depth and speed of the correction was always subject to significant uncertainty, as the gap between the peak levels of activity and the level consistent with fundamentals was never precisely clear. Also, the likely extent of spillovers to consumption and other sectors was an uncertainty, though the downside risks associated with the housing slowdown were expected to manifest principally in weakness in consumption spending.

While recent events in the housing and subprime mortgage markets likely raise the probability that a larger, or more rapid, increase in the saving rate could dampen consumption spending relative to our forecast, we still see little in the economy currently that causes us to see this as a significant risk. First, we have found little evidence of a tight empirical relationship between the conditions of consumers' balance sheets and future spending. We also see few signs that consumers are using debt to sustain spending well beyond plausible estimates of permanent income.

Finally, even as we have been surprised by the abruptness in the decline in residential investment, the labor market and consumer spending are behaving in a manner consistent with our central forecast. Instead, it is investment spending that has been unexpectedly

weak. Since early in 2006, we have consistently lowered our projections for equipment and software spending, and incoming data has nonetheless generally surprised us on the downside. The proximate source of this sluggishness is not obvious. On the surface at least, neither pessimism nor tight financing conditions are likely explanations given generally robust profit growth in recent quarters as well as anecdotal reports about the easy availability of financing.

For some time our central forecast has expected solid capital spending to emerge as the basis for sustaining aggregate growth in the face of an inevitable and gradual increase in the household saving rate over time. Consistent with this expectation, we have not pulled back on our forecast for equipment and software spending in 2008. However, the difficulty of explaining the relatively weak performance of this sector, coupled with the fact that this weakness is increasingly hard to reconcile with a fundamentally positive view of the prospects for U.S. growth, represents a significant downside risk to our forecast for growth at potential through 2008.

It is also difficult to separate meaningfully our uncertainty about 2008 growth from our uncertainty about potential growth itself. Productivity growth over the past ten quarters has averaged 1.5%, close to estimates of the trend rate for the 1973-1995 period. Our central forecast is based on the assumption that the 2006 weakness in productivity growth was transitory, but the probability that trend productivity growth is below our estimate is increasing. The Kahn-Rich model currently estimates around a 40% chance of a return to a low productivity regime.

Incoming data on inflation over the inter-meeting period caused us to edge up both our central projection and assessment of upside risk to the inflation outlook. This upward revision in the central projection is effectively balanced out by the downward revisions to core PCE inflation in 2006Q4, which is now slightly lower than we had expected. We also have slightly raised our central forecast for PCE inflation at longer horizons. This change is based on the results of the new SPF questions on 10-year-ahead PCE inflation, which suggest that inflation expectations may be anchored somewhat higher than we had

thought. It also reflects a change in our exchange rate assumption; we are now using that assumed by the Board staff in the Greenbook forecast. This shift puts some upward pressure on inflation at longer horizons from the gradual real depreciation of the dollar.

Our central forecast and risk assessment are consistent with the signals we are getting from our internal measures of smoothed underlying inflation, which have been flat to falling in recent months. The two-year FRBNY UIG expected inflation measure has risen a bit in recent weeks, though the longer-horizon UIG expected inflation measure, as well as financial market and household survey measures, have been relatively stable. The new primary dealer survey question on 5-year-ahead CPI inflation uncertainty supports our assessment that long-run inflation expectations remain well contained.

We are maintaining upside risk to our inflation outlook principally because we need confirmation that the moderation of inflation in 2006H2 will be sustained. In particular, while owners' equivalent rent inflation has moderated from its levels in 2006H1, medical services inflation accelerated in the first two months of 2007. Part of the moderation in core PCE inflation in 2006H2 (both the 3-month and 6-month growth rates dipped below 2% at the end of 2006) reflected downward revisions to medical services inflation that might reflect technical factors rather than a sustained moderation.

With developments in the subprime mortgage sector, the signs of weakness in real activity, and the sharp declines in foreign equity prices, pockets of volatility opened up in U.S. financial markets over the inter-meeting period. This increase in equity volatility appears to have induced a widening of corporate bond credit spreads over concerns about corporate credit default, though there is little indication at this stage that the widening of credit spreads was disproportionate to the volatility in equity markets.

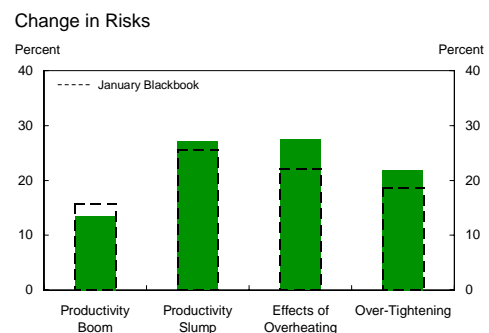
With the exception of the direct effects on our assumed housing trajectory discussed above, recent market volatility has not induced a change in our overall outlook or risk assessment. Nonetheless, the recent episode serves as a reminder that we have little ability to predict the duration or magnitude of future episodes.

The behavior of long-term Treasury yields continues to present a puzzle. The Treasury yield curve shifted down further at the long end over the inter-meeting period, and is now approximately back to where it had been at the time of the December Blackbook. This return renders the inversion that began in August 2006, as well as our uncertainty over how to interpret this inversion, even more pronounced.

For instance, Kim and Wright's decomposition of forward rates into the expected future short rate and the term premium suggest that a sizable portion of the declines in long forward rates are attributable to a decline in the term premium, though expected future short rates declined somewhat as well. This makes it difficult to distinguish a scenario in which the inter-meeting worsening of the yield curve inversion reflects a flight to quality phenomenon from one in which it constitutes a stronger recession signal.

The net effect of developments over the inter-meeting period—the weak productivity growth, the lackluster growth in capital spending, the further deterioration in the housing market—has been to decrease our confidence in our central scenario rather markedly and to raise the weight on all our alternative scenarios except the productivity boom. The chart to the right summarizes how the weights attached to the alternative scenarios underlying our forecast changed over the inter-meeting period.

We increased the weight on the *Effects of Overheating* scenario most significantly, reflecting our view that incoming data, which suggests that a previously overextended housing market is undergoing a significant correct, is most consistent with the dynamics of this scenario. We also increased the weight on the *Productivity Slump* scenario, reflecting both the weakness in productivity growth that, with recent revisions, now extends from 2004 to the present, as well as the weakness in business fixed investment. Nonetheless, we still place substantial weight on the *Productivity Boom* scenario, in part because we see a possibility that



the current discrepancy between income and output in the national accounts will be resolved in favor of the more robust income growth.

In terms of what these changes mean for policy, it is critical to note that the *Effects of Overheating* and *Productivity Slump* scenarios each introduce both upside risk to the inflation forecast and downside risk to the real growth forecast. Thus, both these scenarios are less benign than our central scenario or our other alternatives with regard their implications for future policy. We also increased the weight on the *Over-tightening* scenario, though the policy implications of this scenario are less problematic as it implies both weaker growth and lower inflation.

In determining our policy recommendation, we consider the implications of our central scenario and each of our alternative scenarios under the *Baseline* rule. We also consider what these scenarios imply for a set of alternative policy rules. With this Blackbook, this set of rules now includes an *Outcome-based* rule like the one used by the Board staff to capture the average behavior of the FOMC over past twenty years. The *Robustness of Policy Recommendation* section provides the results of this set of exercises and a discussion of how these results led to our recommendation.

In broad terms, our analysis prompts us to recommend a path for the nominal FFR target that is close to the policy prescribed under the *Baseline* rule for all but the *Over-tightening* scenario. This latter scenario, which has both output and inflation declining markedly over the forecast period, leads the *Baseline* rule to prescribe much more rapid and substantial cuts in the target rate than we're recommending. The strength of the *Baseline* rule's reaction to the *Over-tightening* scenario turns out to be a feature of all our alternative policy rules, and is most pronounced in the *Dove* and *Outcome-based* rules.

The *Opportunistic Disinflation* rule, which under our central scenario prescribes the highest path for the FFR target of all the rules we consider, is closest to our recommendation, but even this rule reacts fairly aggressively to the *Over-tightening* scenario. Finally, the decline in the market's implied path is nearly identical to the

decline in the policy path prescribed by the *Baseline* rule under our central forecast and risk assessment. Reflecting the element of judgment that enters our recommendation, however, we are not recommending as sharp a decline in the FFR target rate as markets are currently pricing in over the forecast horizon.

The rationale for this recommendation is as follows. As discussed above, we see incoming data as conforming more closely to either the *Effects of Overheating* or the *Productivity Slump* scenarios than with *Over-tightening*. For example, the behavior of long-term interest rates, credit spreads and risk premiums over the course of this expansion seem less consistent with a story in which the recent unexpected weakness in housing stems from overly tight policy than it does with a story in which the after-effects of overly easy policy are the principal disturbance. Also, it seems harder to reconcile the weakness in equipment and software investment, as well as in realized productivity growth over the past few years, with overly tight monetary policy than with a reduction in trend productivity growth.

Thus, while the downside risks to the real outlook have increased significantly over the inter-meeting period, the precise implications of this risk for appropriate policy differ fairly markedly depending on the true underlying scenario. In particular, if the world is unfolding according to the *Effects of Overheating* or the *Productivity Slump* scenarios, policy does not have the same ability to ease to address the weakness in real growth because to do so would further worsen the inflation outlook. In contrast, if the world is unfolding according to *Over-tightening* scenario, monetary policy not only has the luxury of easing, it must do so aggressively in order to prevent a return to the sort of deflationary scare that occurred in the early part of this decade.

Thus, the change in the balance of risks over the inter-meeting period toward the less benign mix of greater upside risk to inflation and greater downside risk to output prompts us to recommend a path for the FFR target that is above what is currently priced into markets. However, we also recommend that the committee stand ready to reduce rates

more quickly than is shown in our recommended path in the event that incoming inflation data surprises on the downside.

2. Significant Developments

Economic developments. The domestic economic developments during the inter-meeting period had three notable effects on our central outlook: (1) a reduction in our forecast for real GDP growth in 2007, (2) a fairly substantial increase in the downside risks to the real activity outlook, and (3) a modest rise in the expected inflation path and a reintroduction of slight upside risk to the inflation outlook.

The changes in our outlook and risk assessment were more substantive for the real activity outlook than for inflation. The developments in the housing market, manufacturing, and capital spending have been instrumental in these changes.

One of the assumptions underlying our outlook in recent Blackbooks was that the housing market was near a bottom following the fall in activity that began in late 2005-early 2006. The sharp declines in housing starts and new home sales in January, the rise in inventories-sales ratios, and the continued slowing of price appreciation (at least, as measured in the OFHEO and Case-Shiller indices) provide evidence against this assumption.

Developments in the subprime mortgage market also suggest that the housing market will continue to fall. Spreads on subprime mortgage securities rose sharply during the inter-meeting period, with the largest increases occurring in the lowest-rated tranches. A number of failures and contractions among subprime mortgage lenders, mostly among the less-capitalized firms, also became evident. These developments reflect rising delinquencies and foreclosures of subprime mortgages through 2006Q4. Much of this increase has been the result of economic weakness in the Midwest and Hurricane Katrina-affected areas, but recent increases in California may reflect effects related to “over-lending.” There have been some increases in delinquencies of prime mortgages, but these changes do not yet suggest much spreading of subprime problems. At this time,

we see the subprime problems as a correction in pricing and practices as the market reassesses the risk in the sector as housing demand declines; consequently, we do not expect these problems to spread to other sectors. Our best estimate is that this correction process is about half-completed, but this assessment is very tentative.

These developments in the housing market have had two effects on our real activity outlook. First, indications of weaker demand and tighter credit supply have led us to reduce our projected profile of residential investment in 2007, contributing to our lower real GDP growth forecast for the year. Second, the more severe and protracted drop in the housing market raises the probability of spillovers from housing into consumption. The weak February retail sales are consistent with the emergence of this type of weakness in consumption, but it remains an outlier among consumption indicators; thus we currently attribute its slowing to more transitory factors. At the same time, the sharp decline in housing also increases the probability that the economy had been overheating in previous years; therefore, it has contributed to the rise in the downside risk to the real activity outlook.

In manufacturing, production has been flat since mid-2006, and the recent data (including a drop in orders in January) indicate that this sector remains in the doldrums. The ISM manufacturing survey improved somewhat in February, but the levels of survey indices (including the March Empire State index) generally remain consistent with sluggish growth at best. Although much of the weakness is still in housing- and auto-related sectors, there are some indications of spreading weakness into other manufacturing sectors, raising somewhat the downside risk to the real activity outlook.

Besides the drop in overall manufacturing orders, there were sharp drops in orders and shipments of nondefense capital goods excluding aircraft in January. In addition, equipment and software expenditures fell in 2006Q4. These indicators point to equipment spending, which was expected to support overall growth in the face of a weaker housing market, being less robust than we previously expected; thus we have reduced our

projection for this component of investment significantly for 2007Q1 and reduced it slightly over the rest of 2007.

The sluggish behavior of these expenditures since spring 2006 exemplifies some of the medium-term downside risks to real activity. Slower growth in investment spending may indicate that firms see a greater risk of more tepid final demand, which could result from overly tight policy or the aftereffects of a previously overheated economy. It could also indicate that firms expect slower productivity growth; the downward revisions in productivity growth would be consistent with that view. Nevertheless, equipment and software expenditures have been subject to rather large revisions in recent years; therefore, we have made only relatively small changes to our 2007-2008 outlook for real activity at this time.

We have made only modest changes to our inflation outlook and risk assessment. Core CPI inflation in January and February, as well as core PCE inflation in January, were slightly higher than expected [Exhibit A-11]. A major factor behind the stronger-than-anticipated January inflation numbers was a large increase in medical care prices. More generally, core goods prices have firmed modestly after declining in the latter part of 2006, consistent with fading effects from the inventory correction during late-2006. Core services inflation remained near recent levels; tenant rent inflation continued to rise, but OER inflation has moderated. The behavior of alternative measures of underlying inflation, including the FRBNY underlying inflation gauge (UIG) and smoothed inflation, suggest that inflation pressures have not increased substantially [Exhibit A-12].

Moreover, although the two-year FRBNY UIG expected inflation measure has risen some, the longer-horizon UIG expected inflation measures, as well as financial market and household inflation expectations, have been fairly stable [Exhibit A-13]. Therefore, we have added only a very modest amount of upside inflation risk at this time; however, higher future numbers would raise the upside risk more substantially or perhaps push up our overall profile.

Another development with potential implications for our inflation and real activity outlook in the future was the revisions to the productivity data. Productivity growth was revised downward for 2005 and 2006; whereas the pre-revision data indicated that productivity growth in 2005 and 2006 was near our estimate of its trend (2½%), the post-revision data indicate it was notably below our trend estimate in both of those years. As a result, productivity growth over the past three years has averaged below 2%. In addition, because of these revisions to productivity and compensation, the Kahn-Rich productivity model now places a relatively high probability (about 40%) that the economy is in a lower-trend productivity growth state. We thus see a greater risk that productivity growth over the medium term will be below our expectation.

Although a number of pieces of data have led to changes in our outlook and risk assessment, most of the data in two large areas—the labor market and consumer spending (notwithstanding February retail sales)—remain consistent with our outlook.

Economic data from foreign countries has been somewhat more robust than the U.S. data, suggesting sustained growth, although at a somewhat more moderate pace than that in 2006. Euro area confidence remained at a high level and the unemployment rate has fallen one percentage point over the past year. In Japan, weak consumption and employment data were offset by solid investment spending data. Finally, Chinese growth remained very strong as export and credit growth increased.

Financial market developments. During the inter-meeting period, financial markets responded strongly to the perception of greater downside real risk, particularly from some U.S. data releases and the troubles in the subprime mortgage sector. Market expectations of the policy path shifted downward as market participants expect the FOMC to cut policy rates earlier and to a greater extent than previously anticipated.

Since the last FOMC meeting, the yield curve has shifted down significantly and become more negatively sloped, with the closely watched 10-year to 3-month spread now around -50 basis points. These changes reflected responses to economic news suggesting the

possibility of slower real economic growth, which raised the probability of contraction as well as market participants' expectation of faster and more significant easing by the FOMC. The nominal 5-10 year forward rate fell 21 basis points with about half of the decline coming from a drop in real rates; the drop in real rates also indicates market participants' concerns about the real outlook [Exhibit B-1].

Short-term and longer-term inflation expectations declined, indicating that inflation expectations of market participants remain contained. Two-to-three year implied inflation (carry-adjusted) fell 17 basis points, while the corresponding five-to-ten-year implied inflation rate fell 12 basis points [Exhibit B-2].

With indications of greater downside real risk, the expected Fed Funds rate path shifted downward, reflecting expectations of faster and more substantial easing. The expected Fed Funds rate for September 2007 fell 20 basis points to 4.94%, while the expected Fed Funds rate for August 2008 fell 48 basis points to 4.36% [Exhibit B-4]. Also reflecting concerns about the real outlook, implied interest rate skewness became more negative, indicating heightened concern about an unexpected policy rate cut [Exhibit B-5]. With less confidence about the near- and medium-term economic outlook, uncertainty about the near-term policy outlook has also risen; the 6-month LIBOR confidence interval increased substantially [Exhibit B-6].

Near-term policy expectations have shifted less. Fed Funds rate expectations for the March meeting, based on Fed Funds futures prices, indicate market participants retain a high probability that the target rate will not be changed. The probability of rate cuts in May and June have risen since the January FOMC meeting, although they remain fairly low and below their levels from early March [Exhibit B-4].

Equity prices fell during the inter-meeting period in another reflection of concern about the outlook for real growth and corporate profits [Exhibit B-7]. Declines were especially notable on February 27 (Chinese stock market decline, weaker-than-expected advance durable goods) and March 13 (weaker-than-expected retail sales). The troubles in the

subprime mortgage market also affected equity prices, reflecting concerns that these troubles could have broader implications for financial firms and markets as well as the overall economy. Consistent with these developments, implied volatility rose sharply and remains high relative to recent levels.

In contrast to the sharp rises to the spreads on subprime mortgage backed securities, corporate credit spreads for both investment-grade and speculative-grade securities rose only moderately during the inter-meeting period [Exhibit B-8]. Furthermore, the increases in these spreads were consistent with the developments in other financial markets. Consequently, their behavior suggests that market participants do not yet see the troubles in the subprime mortgage markets as spreading into these financial markets.

In concert with U.S. markets, global financial markets experienced some turbulence over the inter-meeting period. Concern with the U.S. outlook and the impact of developments in subprime mortgage markets, along with uncertain prospects for carry trades and stretched valuations of Asian stocks, apparently led to a reassessment of global risk at the end of February. Long-term rates fell, mostly reflecting lower real rates spurred by a more negative medium-term outlook [Exhibit B-10]. Equity indices ended up little changed over the period but experienced wide trading ranges [Exhibit B-9]. Currency markets were generally relatively tranquil. The yen appreciated, apparently reflecting the unwinding of carry positions, and is expected to remain volatile in the near term. Overall, the dollar depreciated moderately [Exhibit B-9].

Foreign monetary policy. Policy moves during the inter-meeting period were as expected, with 25 basis point increases in the euro area and Japan. Both the ECB and the Bank of Japan view their current stance as accommodative but are likely to slow the pace of further tightening and await signs of stability in financial markets and the U.S. outlook. Current expectations are that both institutions will hike rates only once more before year-end. Elsewhere, the Bank of China continued its effort to restrain liquidity growth, while tightening cycles have mostly ended elsewhere in Asia. One concern is

that the recent tightening in major areas may impact regional economies at a time when the global cycle is about to turn down.

3. Evolution of Outlook and Risks

3.1 Central Forecast

Conditioning assumptions. The only significant change in our conditioning assumptions is a shift forward of the initial rate cut relative to the last Blackbook [Exhibit A-2]. Our central forecast is consistent with a Fed funds target rate of 5.25% through 2007Q2, after which it declines to 5.00% by the end of 2007Q3, and to 4.75% by the end of 2008Q3. We previously expected an initial rate cut in 2007Q4 and a second rate cut in 2008Q4. This path is somewhat lower than that underlying the Greenbook forecast, as it has been for some time. In contrast, our assumed path remains above the expected path implied by futures markets, with the gap particularly wide in 2008. This gap widened considerably during the inter-meeting period as the market-implied path has shifted downward.

The change in our recommended path for the Fed funds rate reflects the marking down of expected growth of real GDP in 2007 with little change in our inflation forecast. Under standard monetary policy rules, this combination suggests a lower path for the policy rate; we accomplish this by moving forward the date of the initial easing. The larger decline in the market-implied path reflects the increased downside risk to real activity perceived by market participants over the inter-meeting period.

Our assumptions concerning inflation dynamics are unchanged. Long-run inflation expectations are assumed to remain contained near current levels. The small declines in those expectations during the inter-meeting period are consistent with this assumption. We also expect the lower persistence of inflation evident since the early 1990s to continue; this assumption is in contrast to the greater inflation persistence assumed in the Greenbook forecast. Consequently, we expect that, in the absence of large shocks, inflation will gradually move toward the implicit target of 1½%.

Our assumptions concerning the economy's potential growth rate and the output gap are unchanged, although we are less confident about them than we were at the time of the last Blackbook. We continue to assume that the potential real GDP growth rate is 3%—2% trend productivity growth (GDP basis, equivalent to 2½% on a nonfarm business basis) and 1% trend hours growth, which assumes the labor force participation rate remains near recent levels. We also assume that, in the absence of large shocks and with the expected paths of monetary and fiscal policy, medium-term growth will be near this potential rate. We assume that the output gap is currently close to zero. However, the relatively slow real GDP growth in the last three quarters, downward revisions to productivity growth, and declines in labor force participation and capacity utilization make us more uncertain about both the potential growth rate and the output gap than in January.

Our assumptions concerning financial markets and fiscal policy are similar to those in the last Blackbook, although we have raised the assumed path of oil prices. We continue to expect the term premium to remain low. The decline in the term premium during the inter-meeting period, as measured by Kim and Wright, is consistent with this assumption. Fiscal policy is assumed to provide a small impetus to real GDP growth in 2007 and 2008, similar to that in the last Blackbook. As is our standard practice, paths of equity prices, home prices, and exchange rates are assumed not to differ significantly from those in the Greenbook. Based on average futures prices in the two-week period ending March 9, the spot price of West Texas intermediate crude oil is assumed to rise to \$66.00 in 2007Q4 (\$59.00 in last Blackbook) and to \$67.50 in 2008Q4 (\$60.75 in last Blackbook).

Foreign real GDP growth (weighted by U.S. export shares) is expected to increase 3.1% in 2007 (Q4/Q4), 0.2 percentage point above its forecast from the last Blackbook. We now expect less of a slowdown in China following robust data at the beginning of the year.

Inflation outlook. Although the January and February inflation data were somewhat elevated compared to our expectations, we see this as a temporary bump along our expected moderation path. The behavior of our UIG and smoothed inflation measures as

well as financial market and household inflation expectations are consistent with this interpretation. In view of the higher-than-expected inflation data for 2007Q1, we have boosted slightly our projection for core PCE inflation in 2007 (Q4/Q4) to 2.0% from 1.9%. However, our projection for core PCE inflation rate in 2008 is unchanged at 1.8% [Exhibits A-2 and A-3].

As the recent data suggest, however, we see some near-term risk to this relatively benign forecast. Some of the recent softness in goods prices may be related to an ongoing inventory correction. The ending of this correction, expected by the end of 2007Q1, could result in some firming of goods prices before there is a noticeable slowing of service-price inflation. Indeed, the rate of increase of prices of core finished consumer goods, as reported in the Producer Price Index, has increased in recent months. But our concern has been mitigated by the slowing in recent months of OER inflation, which had been a major factor in the increase in core inflation in 2006. This slowing is consistent with theory, which suggests that the rising inventory of vacant homes for sale and for rent should begin depress the rate of increase of housing costs.

Real activity outlook. While the pace of real consumer spending appears to be well maintained, the recent data on housing, equipment expenditures, and manufacturing activity have been weaker than we expected at the time of the last Blackbook. As a consequence, we have reduced our near-term real GDP growth forecast substantially; our current quarter projection for real growth is now 2% (annual rate) [Exhibit A-4].

The recent data on housing starts, new home sales, and mortgage delinquencies, as well as the problems in the subprime mortgage market (suggesting more restrictive access to credit in at least part of the mortgage market), indicate a more severe and prolonged housing correction than we had expected previously. Therefore, we have reduced our assumed profile for housing starts by 100,000 units over the forecast horizon [Exhibit A-2]. These changes have led us to reduce our forecast for residential investment over 2007. The continued weakness in capital goods orders and shipments, combined with the sluggish behavior of equipment and software spending in the latter part of 2006, have led

us to reduce our projection for equipment and software expenditures over 2007.

Consequently, we have lowered our forecast of real GDP growth in 2007 (Q4/Q4) from 3.0% in the last Blackbook to 2.7% [Exhibit A-5].

While some recent data have been weaker than expected, conditions in labor markets remain relatively firm and supportive of well-maintained consumer spending. We expect that these conditions will persist and help to contain the slowdown of growth over the near term and to support a rebound in the second half of 2007 that will enable growth to return to near its potential rate and remain there through 2008 [Exhibit A-5]. Also supporting growth in the forecast is the expectation that exports will continue to rise at a healthy rate (reflecting fairly robust foreign real growth) while demand for non-oil imports remains moderate. Consequently, we expect net exports to have an essentially neutral contribution to real GDP growth in 2007, a further slight improvement relative to the last Blackbook.

We continue to assume that any spillover effects from the housing and mortgage markets into consumer spending will be relatively small. This assumption reflects our view that a wealth effect from housing did not inordinately raise consumption growth during the period since 2002. In general, the recent consumption data has been solid, which is consistent with this assumption. We also assume that the correction in domestic motor vehicle production is substantially completed. The recent levels of motor vehicle inventories-sales ratios support this assumption. In addition, motor vehicle output increased in February, and further increases have been announced for 2007Q2.

In addition to reducing our central forecast for real GDP growth in 2007, we have increased the downside risk to growth as well. The main source of the near-term risk remains the housing sector, and the nature of that risk became more apparent over the inter-meeting period. Available data suggest that the subprime mortgage market has been an important source of financing for the housing market over the past few years. While we expect that subprime financing will remain available, the underwriting standards in that market have clearly been tightened. This shift likely has contributed to the downside

surprises in new home sales and housing starts in recent months. Though we have responded to this development by reducing our profile for housing starts and residential investment over 2007 [Exhibit A-2], we still see the housing market as a substantial source of risk. We could see a more pervasive tightening of lending standards, not just in mortgages but in other forms of consumer credit as well, that could prompt additional declines in housing or a fall in consumption growth.

3.2 Alternative Scenarios and Risks

The decrease in our confidence in the central forecast scenario has resulted in an increase in the uncertainty around inflation and output outcomes over the forecast horizon [Exhibit C-3]. We now see slight upside risk to our inflation forecast and an increase in the downside risk to the output forecast. Our current probability of continued expansion through 2008 is 85%, down from 87% in January. We have increased the uncertainty around the inflation forecast less than that around the output forecast. Even so, the probability of core PCE inflation below 2% at the end of 2007 has declined to 45% from 51% in January. The increase in the point forecast for 2007 from 1.9% to 2.0% can explain most of this fall, and the change in the point forecast partially reflects the arithmetic effects of the lower-than-expected inflation of 2006H2, rather than a significant change in our inflation outlook [Exhibits C-3 and C-4].

This risk assessment is significantly less benign than it was in January [Exhibit C-1]. Our decreased confidence in the central forecast scenario for output largely reflects recent weak productivity growth, lackluster equipment and software expenditure growth, and the further deterioration in the housing market. These developments have increased the weight we place on the *Effects of Overheating* and *Productivity Slump* scenarios. We have increased the weight of the *Effects of Overheating* scenario most significantly, as the recent evidence pointing to a housing market “bubble” in 2005-06 is most consistent with the dynamics of this scenario.

The increase in the weight on the *Productivity Slump* scenario, meanwhile, largely reflects weakness in productivity growth that (with recent revisions) now extends from

2004 to the present, as well as the weakness in business investment. At the same time, we have changed the dynamics of the *Productivity Slump* scenario to make it longer lasting (if it occurs); this shift captures the decline in our confidence in our 2.5% trend productivity growth forecast. Both the *Effects of Overheating* and *Productivity Slump* scenarios introduce some upside risk to the inflation forecast.

We have also increased the weight on the *Over-tightening* scenario, which has similar growth implications to the scenarios above but the opposite impact on the inflation forecast. The housing market slump could at least partially reflect the influence of high short rates, which is consistent with the tighter-than-anticipated monetary policy implicit in this scenario. In addition, the very strong growth impact of the *Over-tightening* scenario is more consistent with recent movements in financial markets, where other financial indicators, including the stock market and credit spreads, have become less inconsistent with the yield curve's recession signal over the inter-meeting period.

We have reduced the weight on the *Productivity Boom* scenario but still attach some probability to it. While the above-mentioned indicators make this scenario appear less likely, labor market and consumption indicators remain solid; we know that 2006Q4 consumption expenditures were robust, and our projection for consumption growth in 2007Q1 is above 3%. Fundamentally, we expect most of the projected weakness in 2007H1 to be transitory and have not changed our growth forecast for 2007H2.

4. Forecast Comparison

4.1 Greenbook Comparison

The Greenbook continues to project weaker real growth and higher inflation than in our forecast. The Board staff lowered their output growth forecast by 0.2 percentage point for both 2007 and 2008, to 2.1% and 2.3% respectively. In large part, the differences between us and the Greenbook on the real GDP growth forecast reflect differences in our estimates of potential growth. The Greenbook estimate of the potential growth rate remained at 2.6% for 2007 and 2.5% in 2008, below our estimate of 3%. As has been the

case for the past several cycles, the lower Greenbook projection for potential output is driven by a lower trajectory for labor force participation; we both expect trend nonfarm business sector productivity growth of about 2.5%.

Because of these differences in potential growth estimates, the projected output gap in 2008 is virtually the same in the two forecasts, despite our higher growth profile.

Nevertheless, we would expect that there would be notable differences in the evolution of the economy depending upon how potential growth evolves. If potential growth is closer to the Board's view but GDP growth runs near our central forecast, we would expect to see more evidence of tight resource constraints (e.g., higher wage growth). In contrast, if potential growth is closer to our view but GDP growth runs near the Greenbook forecast, a more significant output gap would arise.

Over the near term, the Board staff projects significant weakness in equipment and software investment and in housing; they project residential investment to shave more than 1 percentage point from real GDP growth in each of the first two quarters of this year. Over the medium term, they project that the effects of higher oil prices and a lower stock market reduce consumption growth (through disposable income and wealth effects), which more than offset a potential stimulus to demand coming from slightly lower long-term interest rates.

The Board staff's expected trajectory for core inflation is unchanged from the January Greenbook: core PCE inflation is expected to be 2.2% in 2007 and 2.0% in 2008. The moderation in their story reflects a fading of energy price pass-through to core inflation and easing pressure on resource utilization. Because of a higher trajectory for energy prices from their rise over the inter-meeting period, the Greenbook 2007 projection for total PCE inflation is 2.5%, 0.3 percentage point higher than in January.

Their core inflation trajectory remains somewhat above ours. This pattern reflects two factors. First, the Board staff assumes more persistence in inflation dynamics than we do. Second, they assume that inflation expectations are currently anchored above the implicit

target and that tighter policy would be needed to reduce expectations and inflation toward the target. In contrast, we assume that FOMC credibility is sufficient for inflation to move toward the implicit target in the absence of additional large shocks.

After raising their FFR path in January, the Board staff has shifted the path down to that assumed in the December Greenbook. This path assumes a 25 basis point rate cut in mid-2008, in contrast to the path in from the January Greenbook, which held the policy rate at 5.25% through the end of 2008. This path is still above our path in both the short and medium run and well above the expected path implied by futures markets.

The Board staff's forecast for global growth in 2007 is essentially identical to ours. Although we forecast foreign growth to slow to 3.1% in 2007 (down from 3.8% in 2006) and the Board staff projects 3.5% growth, this difference reflects differences in weights, rather than substantial differences in growth expectations. We tend to project stronger growth in emerging countries, most notably China, while the Board staff is more optimistic on Japan and Canada.

We find no substantial differences between our trade forecast and the Greenbook trade forecast for this cycle.

Turning to the uncertainty around each of our forecasts of inflation and real growth, we find that we have less confidence about developments in 2007 than does the Board staff and a little more confidence than they do in 2008. For core PCE inflation the width of the Greenbook's 70% probability interval is 0.8 percentage point in 2007 (1.0 in January), while the width of our 70% interval is 1.5 percentage points (1.5 in January). Our wider probability interval and lower point forecast imply that the 85th percentiles of the two forecast distributions for 2007 are the same. This situation has prevailed over the past few cycles.

The source of the discrepancy of the probability interval widths, as we have stated in the past, is the difference between the levels of inflation persistence assumed in the two

forecasts. Because the Board staff assumes more persistence in inflation dynamics, the probability intervals around their shorter-horizon forecasts are narrower than those for our forecast; however, the intervals around their longer-horizon forecasts are wider.

To gauge the importance of the differences between our outlook and the Greenbook forecast we calculate the percentile of the baseline Greenbook forecasts for output and inflation within our forecast distributions. The results are shown in the table below, with January values appearing in parentheses. Using this metric our real GDP growth outlook remains fairly similar to that of the Board staff, even though the Greenbook forecast for 2007 now is in the upper half of our distribution rather than the lower half. This movement reflects the greater downside risk now in our forecast distribution. For inflation, this metric indicates some convergence of the two forecasts. This convergence has occurred because we have raised our inflation forecast slightly and reintroduced upside inflation risks while the Greenbook forecast was unchanged.

Table: Percentile of Greenbook Forecast in FRBNY Forecast Distribution

	Core PCE	Output
<i>2007</i>	55 (62)	55 (47)
<i>2008</i>	52 (60)	52 (51)

Alternative Greenbook forecasting scenarios. The Greenbook's alternative scenarios again tend to have a larger impact (relative to the baseline) on output and unemployment and a lesser impact on inflation over the two-year horizon of the simulations.

The most adverse inflation scenario is *Slower Productivity Growth with Stable Participation*, which has little effect on output and unemployment, but pushes core PCE inflation well above the baseline, despite a simultaneous tightening of monetary policy. The driving force behind the deterioration in inflation under this scenario is more rapid growth in unit labor costs. Though potential output is essentially unchanged because

labor force participation is held flat instead of falling, lower productivity growth translates into faster growth of trend unit labor costs; in FRBUS, this more rapid growth significantly increases inflationary pressures. This scenario is reasonably similar to our *Productivity Slump* scenario in its effects. Our version similarly implies an increase in core PCE inflation to about 2.4% and a fall in output growth to below 2% in 2008; the FFR target remains above 5% for all of 2008.

The one scenario with a sizable favorable impact on inflation is *Lower NAIRU*. In this scenario, a decrease in the assumed NAIRU from 5% to 4¼% implies more slack in the labor market than in the baseline, lowering core PCE inflation to 1¾% by 2008H2 and implying a lower overall trajectory for the FFR.

A significant downside risk to real activity can be seen in the *Business Pessimism* scenarios, especially in the version that couples weakness in business investment with spillovers, including slower job growth and a fall in corporate equity prices. GDP growth slows to about 1¼% over 2007-08 in the latter scenario, implying an FFR of 3.6% by the end of 2008, far below the baseline. The *Stronger Aggregate Demand* scenario generates a sizable deviation of FFR from the baseline path in the opposite direction. This scenario pushes the FFR to 6.5% by the end of 2008; while that does little to prevent a significant increase in real growth or a decline in the unemployment rate, it keeps inflation near the baseline.

4.2 Comparison with Private Forecasters

Our near-term outlook for real growth and inflation is in rough accord with the projections of private forecasters, with the exception of our 2007Q1 forecasts [Exhibit A-9]. For this quarter we expect somewhat lower GDP growth and higher total and core inflation. Much of this divergence likely reflects the differing forecast dates, rather than substantial disagreement in the 2007Q1 outlook. Our projections closely resemble all other forecasters in 2007Q2 and 2007Q3.

5. Robustness of Policy Recommendation

5.1 Sensitivity to Alternative Scenarios and Policy Rules

Our policy recommendation, which includes a 25 basis point rate cut in 2007H2, is similar to the policy prescribed by the *Baseline* rule in three of the four alternative scenarios. The exception is the *Over-tightening* scenario, for which the *Baseline* rule prescribes aggressive cuts in the FFR, pushing it below 4% by the end of 2007 [Exhibit D-1]. Even though the nominal FFR paths are similar, the real FFR paths are quite different from the central policy recommendation, reflecting differences in inflation outcomes in the alternative scenarios and policy stances.

We also consider three alternative policy rules. In addition to the *Dove* and *Opportunistic Disinflation* rules from the last few Blackbooks, we have added the *Outcome-Based* rule used by the Board staff that captures the average behavior of the FOMC in the last twenty years. As can be seen in Exhibit D-2, the *Outcome-Based* rule, combined with our downside risk to output growth, recommends very aggressive cuts in the FFR. The main reason for the aggressive easing under this rule is its greater sensitivity to output gap fluctuations relative to our standard policy rules [Exhibit D-5]. A secondary reason is that our implementation of this rule does not adjust for changes in potential growth associated with some of the alternative scenarios. Thus the rule incorrectly interprets some of the low output growth under the *Effects of Overheating* and *Productivity Slump* scenarios as below-potential growth.

All of the alternative rules as well as the *Baseline* react substantially to the *Over-tightening* scenario, prescribing significant rate cuts over the forecast horizon [Exhibit D-3]. Both the *Dove* and *Outcome-Based* rules, in particular, produce very aggressive easing. It is this effect of the *Over-tightening* scenario on the *Baseline* rule that pushes the expected value of the FFR down substantially. Therefore, much of the difference between overall prescription of the *Baseline* rule [Exhibit D-2] and our policy recommendation stems from the large impact of a low probability recession-type with low inflation event in the *Baseline* prescription. The effects of such an event can be seen

in the extreme negative skewness of the FFR distribution under the *Baseline* rule for 2008Q1 [Exhibit D-5].

The prescription of the *Opportunistic Disinflation* rule, which keeps the FFR above 5% over much of the forecast horizon in most scenarios, is closest to our policy recommendation [Exhibit D-3]. However, the behavior of the nominal FFR under this rule in the *Over-tightening* scenario suggests the importance of a policymaker having the option of a significant FFR adjustment if economic evidence suggested that this scenario were occurring.

5.2 Comparison to Market Expectations

Since January the implied path for the FFR priced into financial markets has fallen back to its December 2006 level. With the changes to our real activity outlook, including our increase in downside risk, and weak growth in 2006H2, all of our policy rules also indicate that the future path of policy should be lower than the implied path at the time of the January Blackbook.

The decline in market expectations is almost exactly matched by the decline in the recommendation of our *Baseline* rule [Exhibit D-2]. A similar parallel shift can be seen when the path prescribed by the *Baseline* rule evaluated at our central forecast scenario is considered [Exhibit D-1]. Here again, the prescription of the rule remains significantly above the market-implied path, even as both paths have shifted down since January. The *Opportunistic Disinflation* rule is still well above the market path over most of the forecast horizon [Exhibit D-2]. Moreover, the gap between the two has increased since the last meeting; the market-implied rule is now in the 11th percentile of the *Opportunistic Disinflation* rule distribution (19th percentile in January) [Exhibit D-4]. The *Dove* and *Outcome-Based* rule are well below the market path, reflecting their stronger response to below-potential output growth [Exhibit D-2].

The shifts in the paths prescribed by our policy rules, then, largely mirror those in the market. Movements in the distributions of most rules also appear to be similar to changes

in the market distribution. The FRBNY measure of skewness became more negative over the period, suggesting greater negative skewness in the market distribution, and implied volatilities jumped from their historically low levels in January [Exhibit B-5]. At the same time, the increased weight we have placed on the *Over-tightening* scenario produces considerable negative skew in the *Baseline* and *Dove* rule distributions [Exhibit D-5]. In addition, these distributions also show an increase in volatility. The distribution for *Opportunistic Disinflation* rule's paths, in contrast, produces low volatility and little negative skew.

We also can compare the skew and volatility of the Board's *Outcome-Based* rule to that of the market. To allow for a clearer comparison, we center the recommendation of the *Outcome-Based* rule at the Greenbook baseline path for the FFR. The Greenbook's baseline path falls in a very high percentile (81st) in the market distribution [Exhibit D-4]. The market expectation, however, is not as far from the center of the *Outcome-Based* rule's distribution, principally because of the very large volatility produced by this rule. This volatility is substantially larger than that currently priced into markets or produced by any of our policy rules, as indicated by its long tails in the box plot [Exhibit D-5]. The source of this large range of outcomes is its significant sensitivity to output fluctuations.

Overall, our analysis suggests that the fall in market expectations is essentially in line with our increase in downside risk over the inter-meeting period. We attribute the increase in the size of the gap between our policy recommendation and the market-implied expectations largely to an increase in negative skewness prompted by developments in the outlook, rather than any new fundamental divergence between our view and that in markets.

6. Key Upcoming Issues

The economic developments in this inter-meeting period have significantly changed our outlook and risk assessment. We have notably reduced our real growth forecast for 2007 and have increased the downside risk to the growth outlook. We have increased our 2007 inflation projection slightly and reintroduced slight upside inflation risk. These changes

in our outlook and risk assessment appear roughly consistent with the view embedded in market expectations of the monetary policy path.

Looking forward, we see a number of key issues that can impact the economic outlook and policy. One is the extent to which the housing market slump results in spillovers into the rest of the economy. We assume that the spillovers into consumption will be relatively modest. To this point, this assumption appears to have held. However, much of the recent evolution of the housing market has been more similar to that expected by the more pessimistic analysts who were also most concerned with the impact on consumption. As such, one cannot dismiss the possibility that further deterioration in the housing market could begin to generate some noticeable negative effects on consumer spending. Developments along these lines could be consistent with either the *Effects of Overheating* scenario or the *Over-tightening* scenario.

Another significant issue is the recent revisions that indicate slower growth of productivity over the past three years. For now, we have characterized this as a cyclical slowdown, with the expectation that productivity growth would soon return to our estimate of trend. However, the prolonged period of slow growth suggests that a *Productivity Slump* scenario may have been realized or that trend productivity growth has slowed below our estimate. Both possibilities have significant policy implications.

A final, but related, issue concerns the recent slow growth in equipment and software expenditures. If this weakness remains evident and persists, it may signal that firms either see future demand as weaker than previously expected or expect that productivity growth (and thus the return on their investment) will be lower than previously expected. Again, either possibility has important policy implications.

A. Forecast Details

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

	Core PCE Inflation			Real GDP Growth			Unemployment Rate*			Fed Funds Rate*		
	Dec	Jan	Mar	Dec	Jan	Mar	Dec	Jan	Mar	Dec	Jan	Mar
2006												
Q1	<i>2.1</i>	<i>2.0</i>	<i>2.0</i>	<i>5.6</i>	<i>5.6</i>	<i>5.6</i>	<i>4.7</i>	<i>4.7</i>	<i>4.7</i>	<i>4.4</i>	<i>4.4</i>	<i>4.4</i>
Q2	<i>2.8</i>	<i>2.7</i>	<i>2.7</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>4.9</i>	<i>4.9</i>	<i>4.9</i>
Q3	<i>2.2</i>	<i>2.1</i>	<i>2.1</i>	<i>2.2</i>	<i>2.0</i>	<i>2.0</i>	<i>4.7</i>	<i>4.7</i>	<i>4.7</i>	<i>5.3</i>	<i>5.3</i>	<i>5.3</i>
Q4	<i>2.5</i>	<i>2.1</i>	<i>1.9</i>	<i>1.5</i>	<i>3.5</i>	<i>2.2</i>	<i>4.5</i>	<i>4.5</i>	<i>4.5</i>	<i>5.3</i>	<i>5.3</i>	<i>5.3</i>
2007												
Q1	<i>2.0</i>	<i>2.2</i>	<i>2.3</i>	<i>2.5</i>	<i>2.5</i>	<i>2.0</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>5.3</i>	<i>5.3</i>	<i>5.3</i>
Q2	<i>1.9</i>	<i>1.9</i>	<i>2.0</i>	<i>3.2</i>	<i>3.0</i>	<i>2.7</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>5.3</i>	<i>5.3</i>	<i>5.3</i>
Q3	<i>1.9</i>	<i>1.8</i>	<i>1.9</i>	<i>3.3</i>	<i>3.3</i>	<i>3.0</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>5.0</i>	<i>5.0</i>	<i>5.0</i>
Q4	<i>1.9</i>	<i>1.8</i>	<i>1.9</i>	<i>2.8</i>	<i>3.2</i>	<i>3.0</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>5.0</i>	<i>5.0</i>	<i>5.0</i>
2008												
Q1	<i>1.9</i>	<i>1.9</i>	<i>1.9</i>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>5.0</i>	<i>5.0</i>	<i>5.0</i>
Q2	<i>1.9</i>	<i>1.9</i>	<i>1.8</i>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>5.0</i>	<i>5.0</i>	<i>5.0</i>
Q3	<i>1.8</i>	<i>1.8</i>	<i>1.8</i>	<i>3.2</i>	<i>3.0</i>	<i>2.9</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>4.8</i>	<i>4.8</i>	<i>4.8</i>
Q4	<i>1.8</i>	<i>1.8</i>	<i>1.8</i>	<i>2.9</i>	<i>3.0</i>	<i>3.0</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>	<i>4.8</i>	<i>4.8</i>	<i>4.8</i>
Q4/Q4												
2005	<i>2.1</i>	<i>2.1</i>	<i>2.1</i>	<i>3.1</i>	<i>3.1</i>	<i>3.1</i>	<i>-0.5</i>	<i>-0.4</i>	<i>-0.4</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>
2006	<i>2.4</i>	<i>2.3</i>	<i>2.2</i>	<i>3.0</i>	<i>3.4</i>	<i>3.1</i>	<i>-0.4</i>	<i>-0.5</i>	<i>-0.5</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>
2007	<i>1.9</i>	<i>1.9</i>	<i>2.0</i>	<i>2.9</i>	<i>3.0</i>	<i>2.7</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>-0.3</i>	<i>-0.3</i>	<i>-0.3</i>
2008	<i>1.8</i>	<i>1.8</i>	<i>1.8</i>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>-0.3</i>	<i>-0.3</i>	<i>-0.3</i>

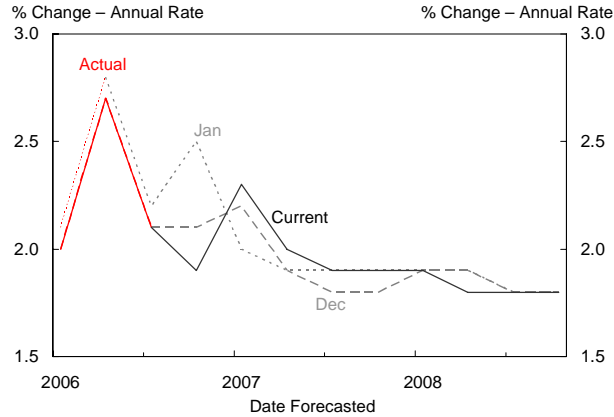
*Quarterly values are the average rate for the quarter. Yearly values are the difference between Q4 of the previous year and Q4 of the listed year.

Note: Columns reflect the forecast dates. Numbers in gray are from the previous Blackbook, and numbers in italics are released data.

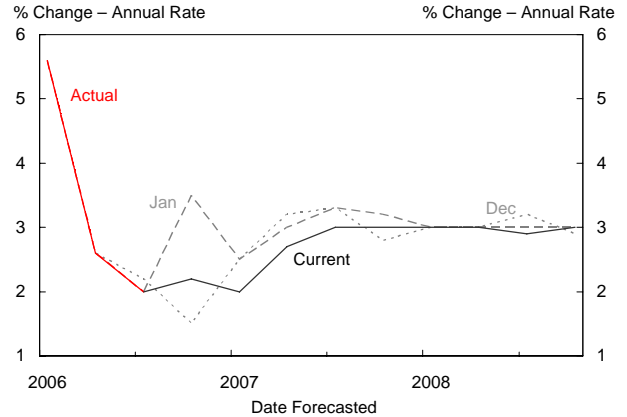
A. Forecast Details

Exhibit A-2: Evolution of Quarterly Projections of Key Indicators

Core PCE Inflation



Real GDP Growth



Unemployment Rate

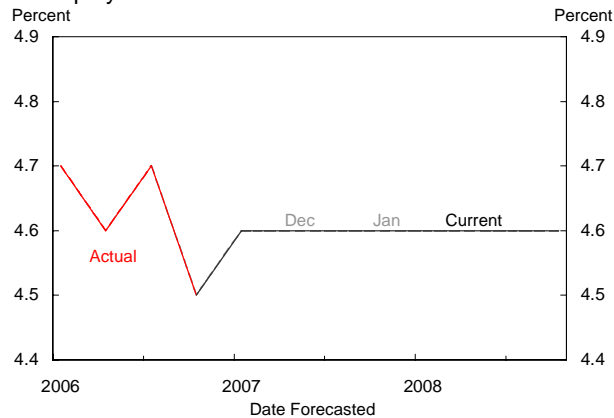
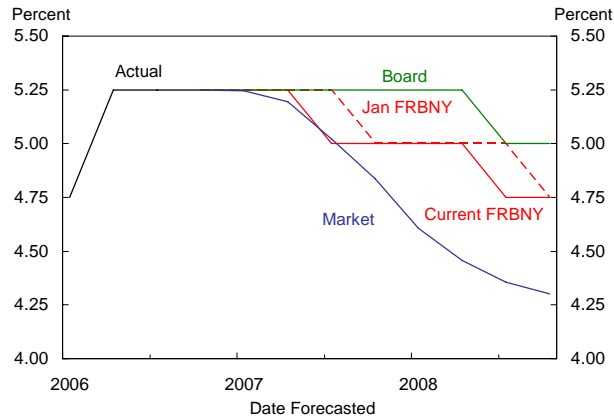
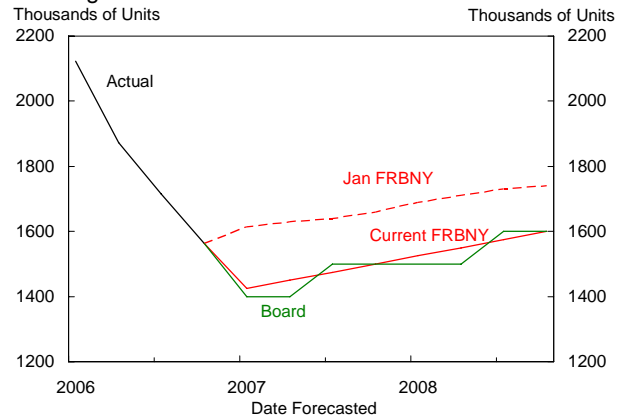


Exhibit A-3: Comparison of Quarterly Projections of Key Forecast Assumptions

Federal Funds Rate



Housing Starts



A. Forecast Details

Exhibit A-4: Near-Term Projections

	Quarterly Growth Rates (AR)		Quarterly Growth Contributions (AR)	
	2007Q1	2007Q2	2007Q1	2007Q2
REAL ACTIVITY				
Real GDP	2.0 (2.5)	2.7 (3.0)	2.0 (2.5)	2.7 (3.0)
Final Sales to Domestic Purchasers	2.4 (2.4)	2.3 (2.9)	2.5 (2.5)	2.4 (3.0)
Consumption	3.5 (3.0)	3.0 (3.0)	2.4 (2.0)	2.1 (2.0)
BFI: Equipment and Software	2.0 (7.0)	6.0 (7.0)	0.1 (0.5)	0.4 (0.5)
BFI: Nonresidential Structures	10.0 (8.0)	8.0 (8.0)	0.3 (0.3)	0.3 (0.3)
Residential Investment	-16.0 (-15.0)	-16.0 (-4.6)	-0.9 (-0.9)	-0.9 (-0.2)
Government: Federal	2.0 (3.0)	1.5 (1.5)	0.1 (0.2)	0.1 (0.1)
Government: State and Local	3.3 (3.0)	3.0 (3.0)	0.4 (0.4)	0.4 (0.4)
Inventory Investment	-- --	-- --	0.0 (0.5)	0.2 (-0.1)
Net Exports	-- --	-- --	-0.5 (-0.5)	0.1 (0.1)
INFLATION				
Total PCE Deflator	3.0 (2.2)	2.5 (2.2)		
Core PCE Deflator	2.3 (2.2)	2.0 (1.9)		
PRODUCTIVITY AND LABOR COSTS*				
Output per Hour	2.4 (2.5)	2.5 (2.5)		
Compensation per Hour	6.3 (6.4)	4.0 (4.1)		
Unit Labor Costs	3.9 (3.9)	1.5 (1.6)		

*Nonfarm business sector

Note: Numbers in parentheses are from the previous Blackbook.

A. Forecast Details

Exhibit A-5: Real GDP and Inflation Projections

	Q4/Q4 Growth Rates			Q4/Q4 Growth Contributions		
	2006	2007	2008	2006	2007	2008
OUTPUT						
Real GDP	<i>3.1</i> (3.4)	<i>2.7</i> (3.0)	<i>3.0</i> (3.0)	<i>3.1</i> (3.4)	<i>2.7</i> (3.0)	<i>3.0</i> (3.0)
Final Sales to Domestic Purchasers	<i>2.7</i> (3.1)	<i>2.6</i> (2.9)	<i>3.1</i> (3.1)	<i>2.9</i> (3.3)	<i>2.7</i> (3.0)	<i>3.3</i> (3.2)
Consumption	<i>3.6</i> (3.7)	<i>3.2</i> (3.0)	<i>3.0</i> (3.0)	<i>2.5</i> (2.6)	<i>2.2</i> (2.1)	<i>2.1</i> (2.1)
BFI: Equipment and Software	<i>4.4</i> (5.5)	<i>5.0</i> (7.0)	<i>5.0</i> (6.0)	<i>0.3</i> (0.4)	<i>0.4</i> (0.5)	<i>0.4</i> (0.4)
BFI: Nonresidential Structures	<i>10.7</i> (13.1)	<i>8.5</i> (7.2)	<i>6.0</i> (4.5)	<i>0.3</i> (0.4)	<i>0.3</i> (0.2)	<i>0.2</i> (0.2)
Residential Investment	<i>-12.6</i> (-12.0)	<i>-11.9</i> (-5.3)	<i>3.0</i> (3.0)	<i>-0.8</i> (-0.8)	<i>-0.6</i> (-0.3)	<i>0.1</i> (0.1)
Government: Federal	<i>2.4</i> (5.0)	<i>1.9</i> (2.1)	<i>2.0</i> (2.0)	<i>0.2</i> (0.3)	<i>0.1</i> (0.2)	<i>0.1</i> (0.1)
Government: State and Local	<i>2.8</i> (2.9)	<i>3.1</i> (3.0)	<i>2.5</i> (2.5)	<i>0.3</i> (0.4)	<i>0.4</i> (0.4)	<i>0.3</i> (0.3)
Inventory Investment	-- --	-- --	-- --	<i>-0.2</i> (-0.2)	<i>0.1</i> (0.2)	<i>-0.1</i> (-0.2)
Net Exports	-- --	-- --	-- --	<i>0.4</i> (0.2)	<i>-0.1</i> (-0.2)	<i>-0.2</i> (-0.1)
INFLATION						
Total PCE Deflator	<i>1.9</i> (1.9)	<i>2.4</i> (2.2)	<i>2.1</i> (2.1)			
Core PCE Deflator	<i>2.2</i> (2.3)	<i>2.0</i> (1.9)	<i>1.8</i> (1.8)			
Total CPI	<i>1.9</i> (2.0)	<i>2.7</i> (2.5)	<i>2.3</i> (2.3)			
Core CPI	<i>2.7</i> (2.7)	<i>2.4</i> (2.4)	<i>2.2</i> (2.2)			
GDP Implicit Deflator	<i>2.5</i> (2.7)	<i>2.4</i> (2.3)	<i>2.2</i> (2.2)			

Note: Numbers in parentheses are from the previous Blackbook, and numbers in italics are released data.

A. Forecast Details

Exhibit A-6: Projections of Other Key Economic Variables

	Q4/Q4 Growth Rates		
	2006	2007	2008
INTEREST RATE ASSUMPTIONS			
Federal Funds Rate Target (Avg. Q4 Level)	5.25 <i>(5.25)</i>	5.00 <i>(5.00)</i>	4.75 <i>(4.75)</i>
10-Year Treasury Yield (Avg. Q4 Level)	4.6 <i>(4.6)</i>	4.9 <i>(5.0)</i>	5.0 <i>(5.0)</i>
PRODUCTIVITY AND LABOR COSTS*			
Output	3.4 <i>(3.8)</i>	3.1 <i>(3.4)</i>	3.4 <i>(3.5)</i>
Hours	2.0 <i>(1.9)</i>	0.6 <i>(1.0)</i>	0.9 <i>(1.0)</i>
Output per Hour	1.4 <i>(1.9)</i>	2.5 <i>(2.5)</i>	2.5 <i>(2.5)</i>
Compensation per Hour	4.9 <i>(4.7)</i>	4.7 <i>(4.7)</i>	4.7 <i>(4.7)</i>
Unit Labor Costs	3.4 <i>(2.8)</i>	2.2 <i>(2.2)</i>	2.2 <i>(2.2)</i>
LABOR MARKET			
Unemployment Rate (Q4 Level)	4.5 <i>(4.5)</i>	4.6 <i>(4.6)</i>	4.6 <i>(4.6)</i>
Participation Rate (Q4 Level)	66.3 <i>(66.3)</i>	66.3 <i>(66.4)</i>	66.3 <i>(66.4)</i>
Monthly Nonfarm Payroll Growth (Thous.)	192 <i>(158)</i>	80 <i>(99)</i>	88 <i>(104)</i>
INCOME			
Personal Income	5.6 <i>(6.4)</i>	5.8 <i>(5.6)</i>	5.6 <i>(5.9)</i>
Real Disposable Personal Income	2.9 <i>(3.6)</i>	3.5 <i>(4.0)</i>	3.7 <i>(3.7)</i>
Corporate Profits Before Taxes	12.7 <i>(18.8)</i>	1.1 <i>(1.6)</i>	-0.1 <i>(0.1)</i>

*Nonfarm business sector

Note: Numbers in parentheses are from the previous Blackbook, and numbers in italics represent actual data.

A. Forecast Details

Exhibit A-7: FRBNY and Greenbook Forecast Comparison

	FRBNY		Board	
	2007	2008	2007	2008
OUTPUT				
Real GDP	2.7 (3.0)	3.0 (3.0)	2.1 (2.3)	2.3 (2.5)
GDP Growth Contributions				
Final Sales to Domestic Purchasers	2.7 (3.0)	3.3 (3.2)	1.9 (2.3)	2.6 (2.9)
Consumption	2.2 (2.1)	2.1 (2.1)	1.8 (1.9)	1.7 (1.9)
BFI	0.6 (0.7)	0.6 (0.6)	0.3 (0.5)	0.4 (0.5)
Residential Investment	-0.6 (-0.3)	0.1 (0.1)	-0.7 (-0.5)	0.1 (0.1)
Government	0.5 (0.5)	0.4 (0.4)	0.5 (0.4)	0.4 (0.4)
Inventory Investment	0.1 (0.2)	-0.1 (-0.2)	0.2 (0.1)	-0.1 (0.0)
Net Exports	-0.1 (-0.2)	-0.2 (-0.1)	-0.1 (-0.2)	-0.2 (-0.3)
INFLATION				
Total PCE Deflator	2.4 (2.2)	2.1 (2.1)	2.5 (2.2)	2.1 (2.1)
Core PCE Deflator	2.0 (1.9)	1.8 (1.8)	2.2 (2.2)	2.0 (2.0)
INTREST RATE ASSUMPTION				
Fed Funds Rate (Avg. Q4 Level)	5.00 (5.00)	4.75 (4.75)	5.25 (5.25)	5.00 (5.25)
PRODUCTIVITY AND LABOR COSTS*				
Output per Hour	2.5 (2.5)	2.5 (2.5)	2.1 (2.4)	2.6 (2.6)
Compensation per Hour	4.7 (4.7)	4.7 (4.7)	4.1 (4.9)	4.8 (4.9)
Unit Labor Costs	2.2 (2.2)	2.2 (2.2)	2.0 (2.4)	2.2 (2.2)
LABOR MARKET				
Unemployment Rate (Q4 Level)	4.6 (4.6)	4.6 (4.6)	4.9 (4.8)	5.1 (4.9)
Participation Rate (Q4 Level)	66.3 (66.4)	66.3 (66.4)	66.0 (66.0)	65.7 (65.7)
Monthly Nonfarm Payroll Growth (Thous.)	80 (99)	88 (104)	92 (83)	50 (58)
HOUSING				
Housing Starts (Q4 Level, Thous.)	1463 (1625)	1563 (1700)	1500 (1500)	1600 (1600)

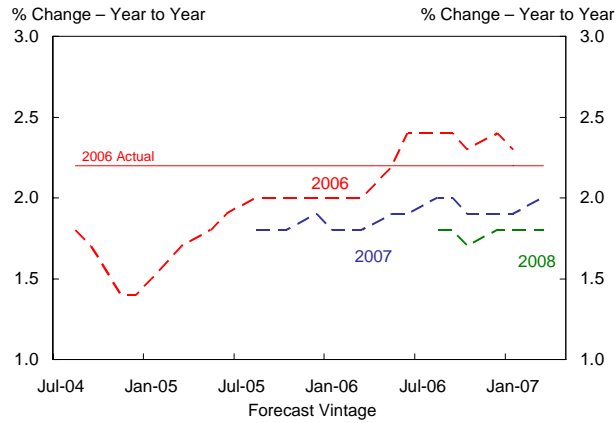
*Nonfarm business sector

Note: All values are values are Q4/Q4 change, unless indicated otherwise.

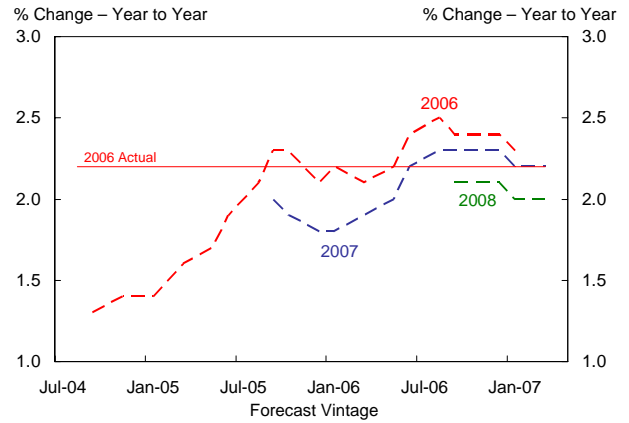
A. Forecast Details

Exhibit A-8: Evolution of FRBNY and Board Forecasts

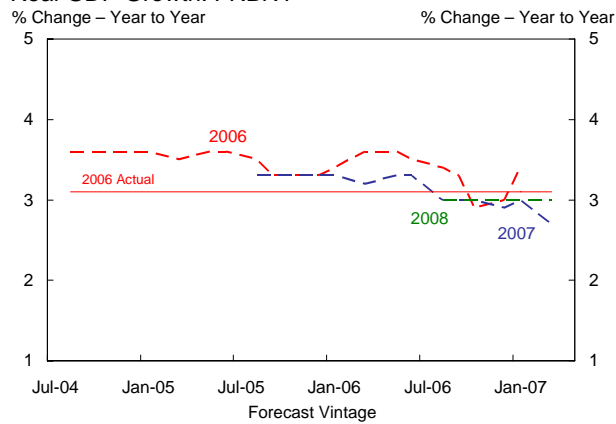
Core PCE Inflation: FRBNY



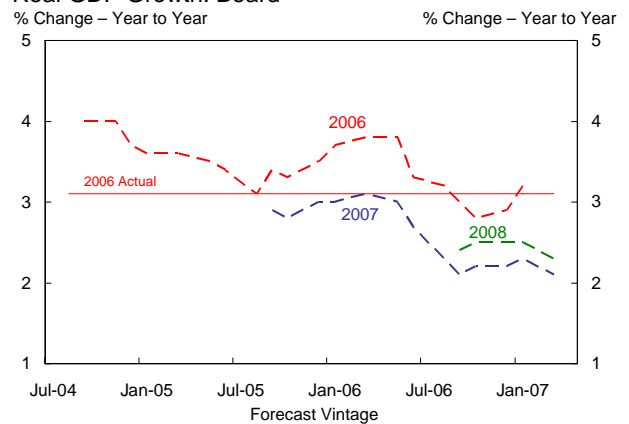
Core PCE Inflation: Board



Real GDP Growth: FRBNY



Real GDP Growth: Board



A. Forecast Details

Exhibit A-9: Alternative GDP and CPI Forecasts

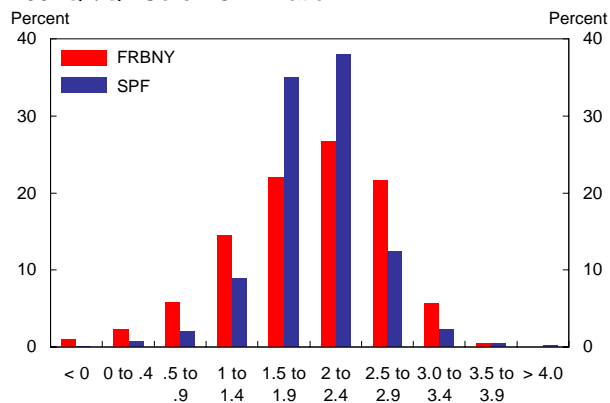
GDP				
	Release Date	2007Q1	2007Q2	2007Q3
FRBNY	3/15/2007	2.0 (2.5)	2.7 (3.0)	3.0 (3.3)
PSI Model	3/15/2007	2.4 (1.8)	2.9 --	-- --
Blue Chip	3/10/2007	2.4 (2.5)	2.6 (2.6)	2.9 (2.9)
Median SPF	2/13/2007	2.6 (2.7)	2.7 (2.9)	3.0 (2.9)
Macro Advisers	3/9/2007	2.2 (2.3)	2.6 (3.1)	3.0 (3.3)
CORE PCE				
	Release Date	2007Q1	2007Q2	2007Q3
FRBNY	3/15/2007	2.3 (2.2)	2.0 (1.9)	1.9 (1.8)
Median SPF	2/13/2007	2.0 --	2.0 --	2.0 --
CPI				
	Release Date	2007Q1	2007Q2	2007Q3
FRBNY	3/15/2007	3.4 (2.6)	2.5 (2.6)	2.4 (2.4)
Blue Chip	3/10/2007	2.8 (2.4)	2.7 (2.6)	2.5 (2.5)
Median SPF	2/13/2007	2.4 (2.8)	2.6 (2.6)	2.5 (2.5)
Macro Advisers	3/9/2007	2.9 (2.2)	3.0 (2.5)	2.6 (2.5)
CORE CPI				
	Release Date	2007Q1	2007Q2	2007Q3
FRBNY	3/15/2007	2.5 (2.3)	2.4 (2.5)	2.4 (2.4)
Macro Advisers	3/9/2007	2.3 (2.0)	2.4 (2.3)	2.3 (2.4)

Note: Numbers in parentheses are from previous releases. Previous release of SPF is November and of all others is January.

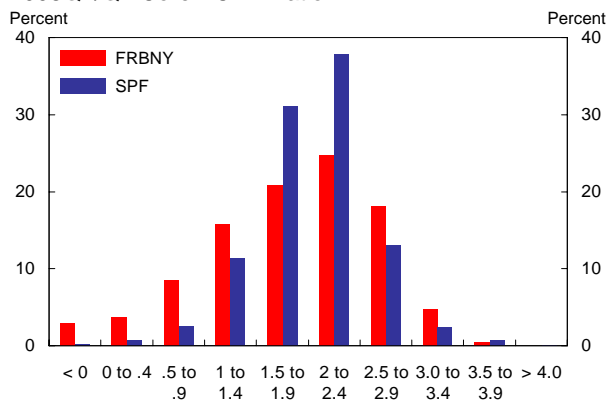
A. Forecast Details

Exhibit A-10: FRBNY, SPF and Board Forecast Comparison

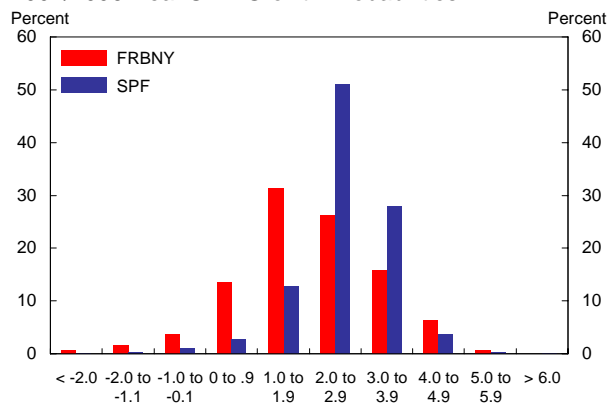
2007Q4/Q4 Core PCE Inflation



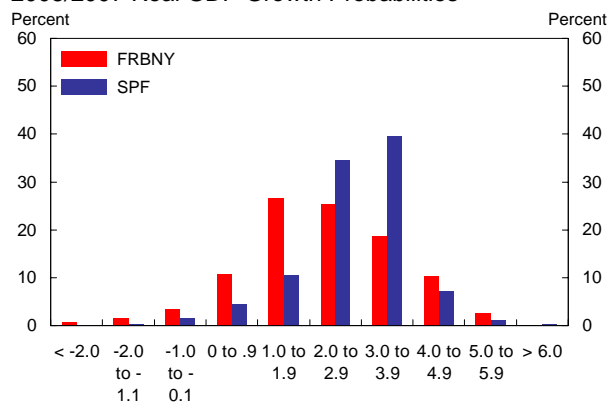
2008Q4/Q4 Core PCE Inflation



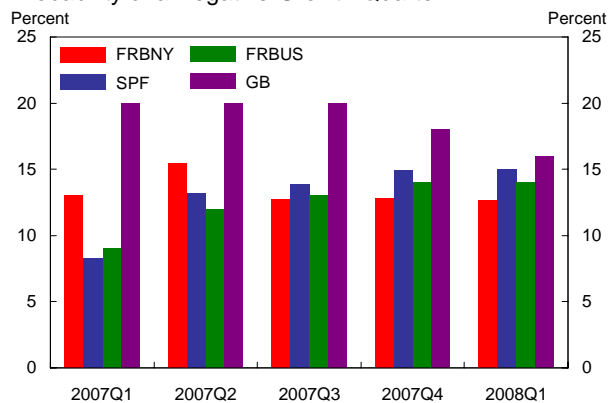
2007/2006 Real GDP Growth Probabilities



2008/2007 Real GDP Growth Probabilities



Probability of a Negative-Growth Quarter



A. Forecast Details

Exhibit A-11: PCE and CPI Data

Consumer Price Data
(percent change at an annual rate)

	24 Month	12 Month	6 Month	3 Month	1 Month
Consumer Price Index	3.0	2.4	0.1	4.0	4.5
Energy	9.0	-1.0	-20.1	14.9	10.8
All Items Ex. Energy	2.5	2.8	2.4	3.1	4.0
Food	2.9	3.1	4.1	6.1	9.8
Food Away From Home (NSA)	3.2	3.4	3.7	4.7	4.4
All Items Ex. Food and Energy	2.4	2.7	2.2	2.6	2.9
Core Chain-Weight CPI (NSA)	2.1	2.4	2.0	2.6	6.3
Core Goods	0.0	0.0	-0.9	0.7	1.0
Apparel	0.2	2.1	1.9	4.1	6.4
Medical Care Commodities	2.7	1.6	0.4	1.0	-3.6
Durable Goods	-1.2	-1.8	-3.4	-2.8	-1.3
New Vehicles	-0.9	-1.4	-2.2	-0.9	-1.4
Used Vehicles	-1.1	-3.5	-10.7	-7.6	-5.7
Core Services	3.3	3.8	3.5	3.5	3.7
Rent of Primary Residence	3.8	4.6	4.9	5.1	5.2
Owners' Equivalent Rent	3.4	4.2	3.7	3.2	3.6
Lodging Away from Home	3.9	4.3	5.1	6.0	1.0
Medical Care Services	4.6	5.1	5.9	7.5	8.9
Transportation Services	2.2	1.5	0.7	2.2	1.3

Note: Data as of February 2007
Source: Bureau of Labor Statistics

PCE Deflator Data
(percent change at an annual rate)

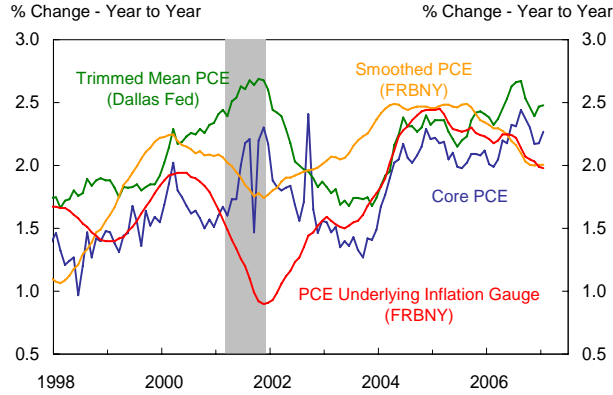
	24 Month	12 Month	6 Month	3 Month	1 Month
PCE Deflator	2.6	2.0	0.6	2.3	2.5
Market-Based	2.4	1.7	0.1	2.2	2.1
Durable Goods	-1.6	-1.8	-2.6	-3.3	-1.4
Motor Vehicles and Parts	-0.2	-0.8	-2.0	-3.3	-0.7
Nondurable Goods	2.8	1.3	-3.3	2.5	2.1
Clothing and Shoes	-0.4	0.7	2.9	0.8	1.9
Services	3.4	3.1	3.2	3.3	3.4
Housing	3.5	4.4	3.9	3.9	3.3
Transportation	3.5	2.3	-0.4	0.1	-1.6
Medical Care	3.0	3.0	3.2	3.2	4.9
PCE Deflator Excluding Food and Energy	2.1	2.3	2.1	1.8	3.1
Market-Based	1.8	2.0	1.8	1.6	2.7
Personal Business Services-MB	2.5	2.4	6.5	2.5	3.1
Personal Business Services-NMB	2.7	2.1	3.4	2.1	2.3

Note: Data as of January 2007
Source: Bureau of Economic Analysis

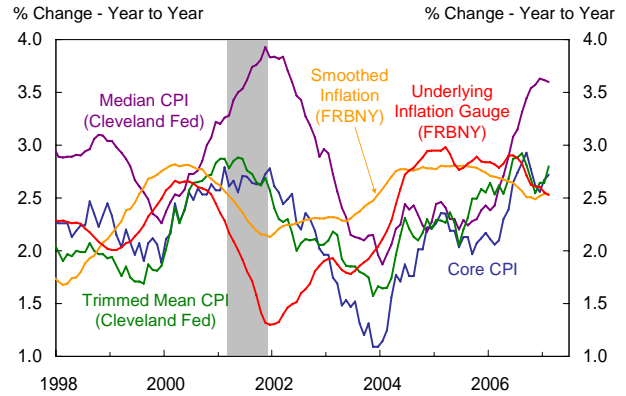
A. Forecast Details

Exhibit A-12: Measures of Trend Inflation

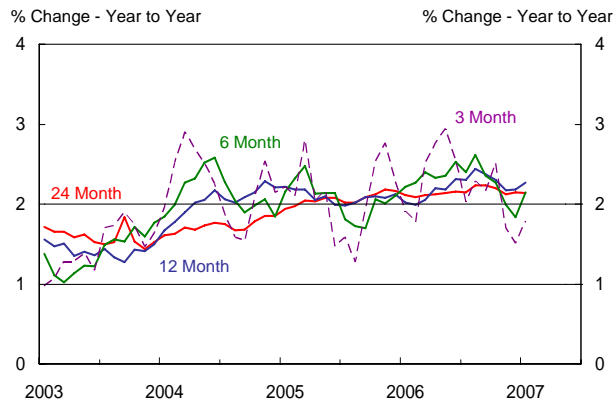
Alternative Measures of PCE Inflation



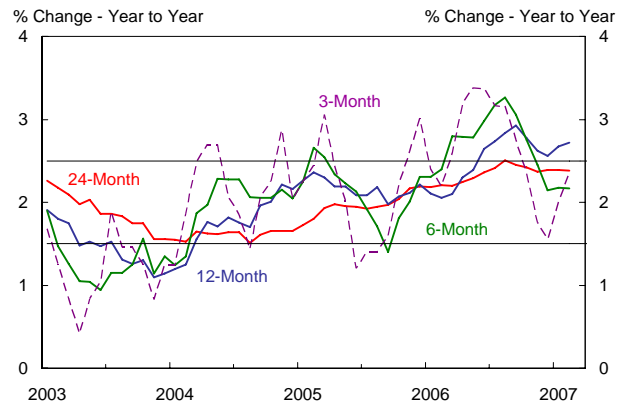
Alternative Measures of CPI Inflation



Core PCE over Various Horizons

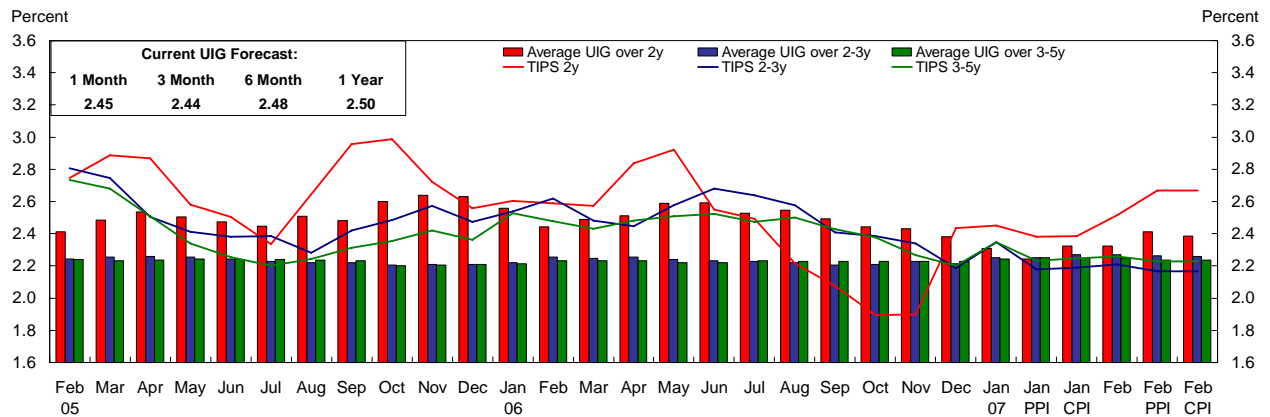


Core CPI over Various Horizons



Source: Bureau of Labor Statistics

Exhibit A-13: Underlying Inflation Gauge (UIG) and TIPS Implied Inflation

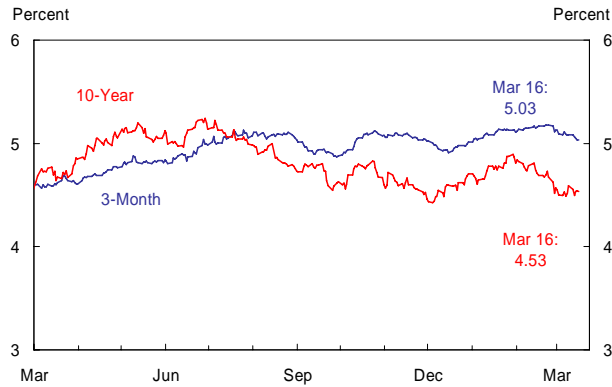


Source: MMS Function (FRBNY), CM Function (FRBNY) and Swiss National Bank

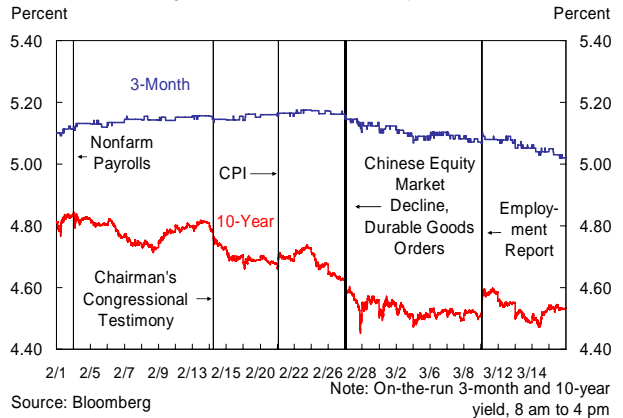
B. Financial Markets

Exhibit B-1: Treasury Yields

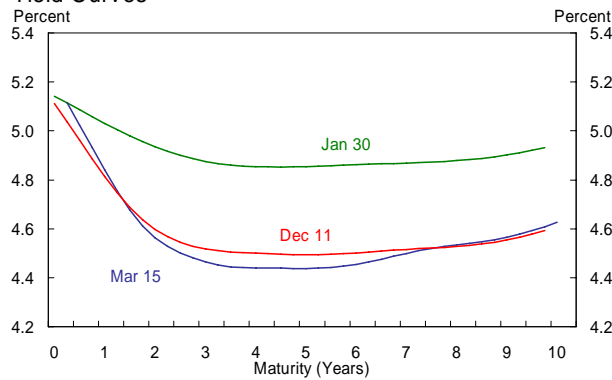
Short- and Long-Term Rates



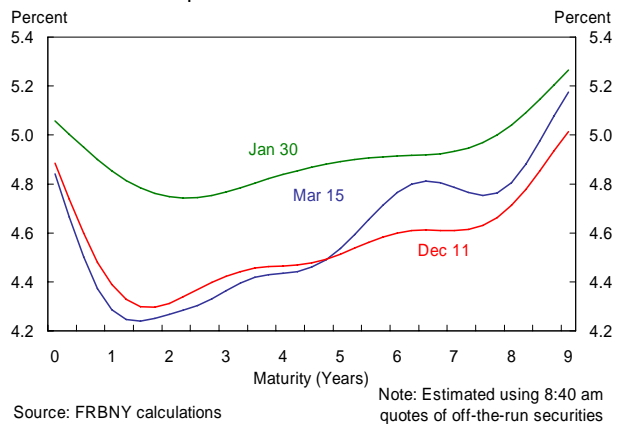
Short- and Long-Term Rates (Intraday)



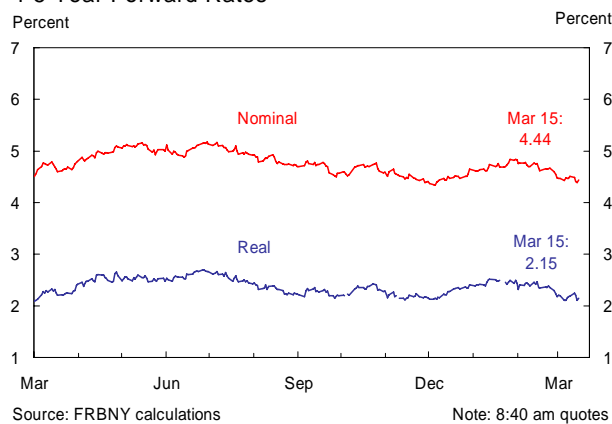
Yield Curves



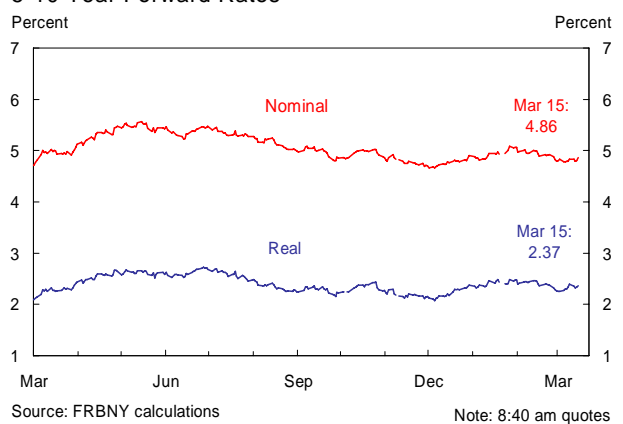
Yield Curves: Implied One-Year Forward Rates



4-5 Year Forward Rates



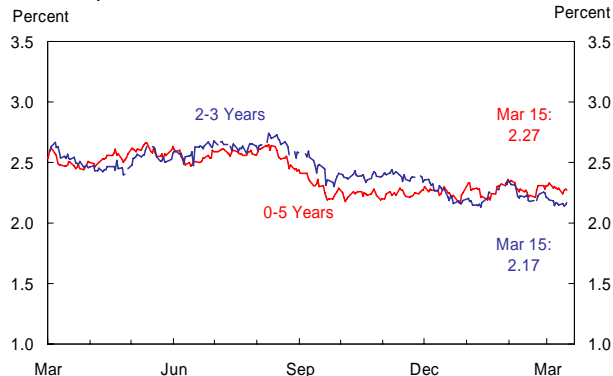
5-10 Year Forward Rates



B. Financial Markets

Exhibit B-2: Implied Inflation

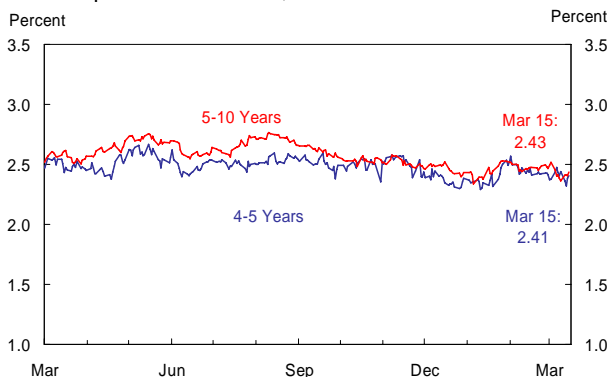
TIPS Implied Inflation: 2-3, 0-5 Year Horizon



Source: Federal Reserve Board and FRBNY calculations

Note: Carry-adjusted

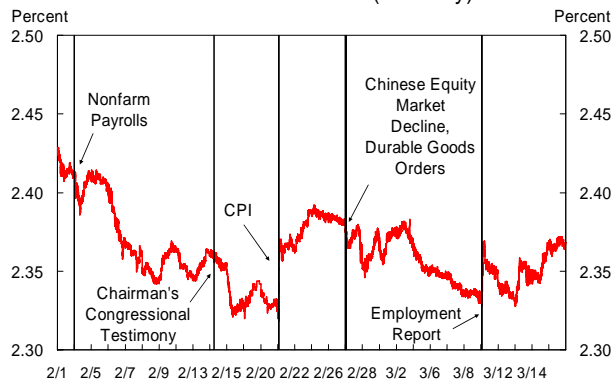
TIPS Implied Inflation: 4-5, 5-10 Year Horizons



Source: FRBNY calculations

Note: 8:40 am quotes, carry-adjusted

10-Year Breakeven Inflation Rate (Intraday)



Source: Bloomberg

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

B. Financial Markets

Exhibit B-3: Economic Releases

Market reaction to macro releases, market expectations using economic derivatives

Release Type	Release Date	Survey Forecast	Actual Release	Market Expectation	Surprise	Surprise (σ 's)	Yield Change (bps)		
							June* FF Futures	Ten Year	Ten Year Breakeven
Core CPI, %	3/16	209.1	209.1	209.1	0	0	0	0	0
Initial Jobless Claims, 1000s	3/15	328	318	332	-14	-1	0	1	0
Advanced Retail Sales ex Autos, %	3/13	0.3	-0.1	0.2	-0.3	-1	1	1	1
Change in Nonfarm Payrolls, 1000s	3/9	95	97	77	20	0.2	3	7	3
Initial Jobless Claims, 1000s	3/8	330	328	333	-5	-0.4	0	1	1
Initial Jobless Claims, 1000s	3/1	325	338	329	9	0.6	0	0	0
Core CPI, %	2/21	208.5	208.7	208.6	0.1	1	1	4	4
Change in Nonfarm Payrolls, 1000s	2/2	150	111	177	-66	-0.7	-2	-1	-1

Source: Bloomberg and FRBNY calculations

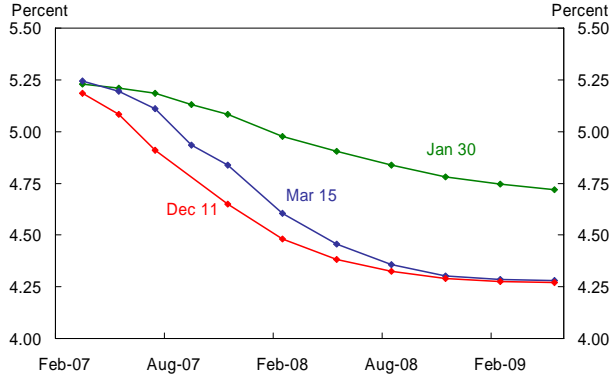
Note: Market expectations are from the forward price from the most recent economic derivatives auction, which concludes 30-60 minutes before the release. Surprise in standard deviations is calculated using the at-the-money implied volatility from the auction. Yield changes are for the interval from 5 minutes before to 30 minutes after the release.

*Releases prior to 3/15 based on March Fed Funds Futures

B. Financial Markets

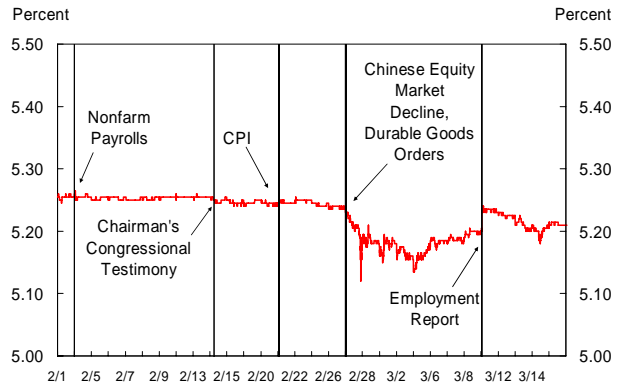
Exhibit B-4: Policy Expectations

Expected Fed Funds



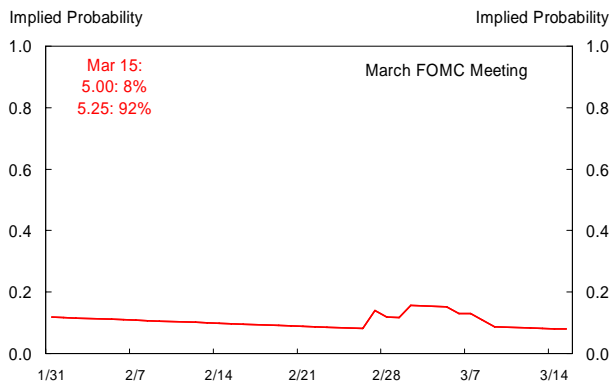
Source: Federal Reserve Board

Implied June Fed Funds Rate (Intraday)



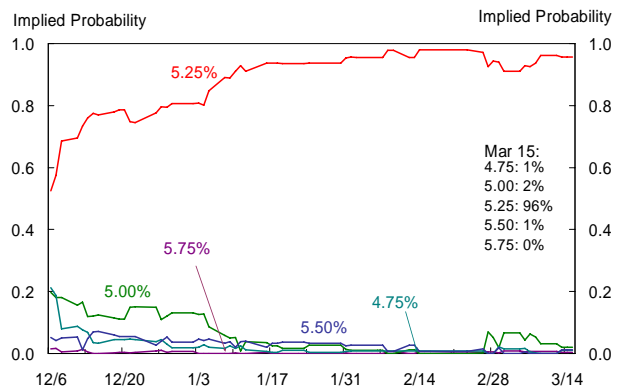
Source: Bloomberg

Probability of 5.00 Target vs. 5.25 Target



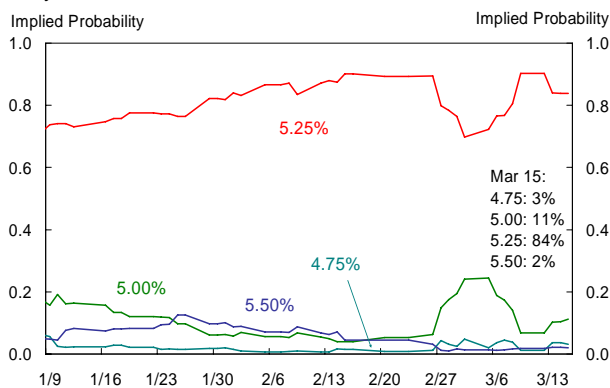
Source: FRBNY calculations

March 2007 FOMC



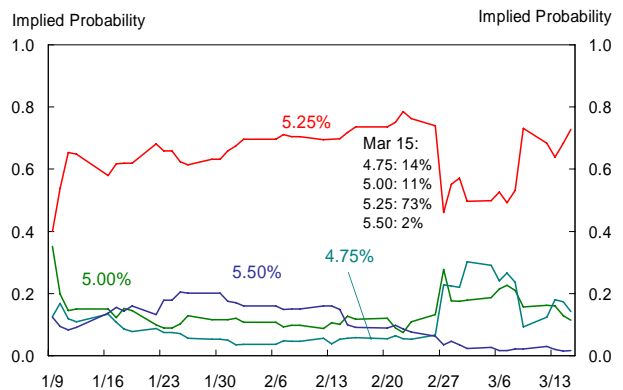
Source: Cleveland FRB

May 2007 FOMC



Source: Cleveland FRB

June 2007 FOMC

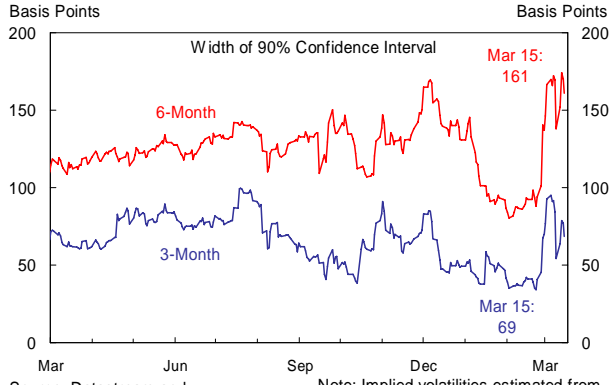


Source: Cleveland FRB

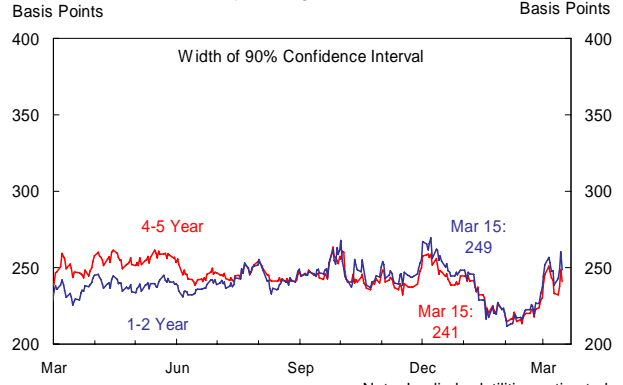
B. Financial Markets

Exhibit B-5: Policy Uncertainty I

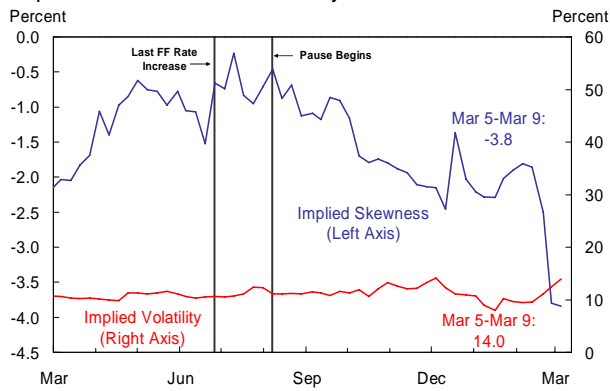
Interest Rate Volatility: Short-Term



Interest-Rate Volatility: Long-Term



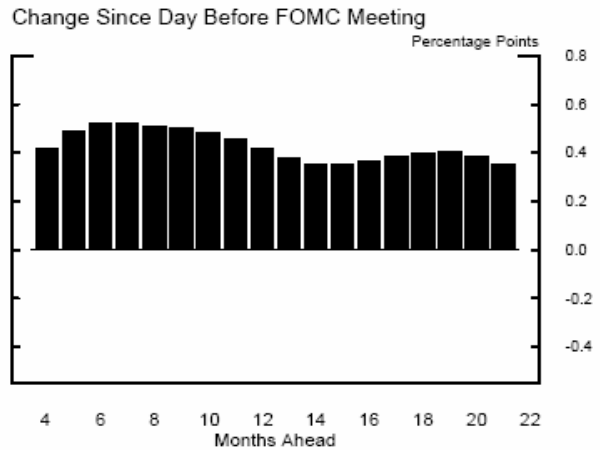
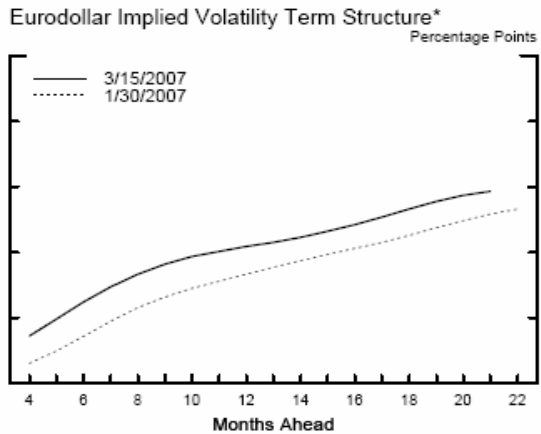
Implied Skewness and Volatility



B. Financial Markets

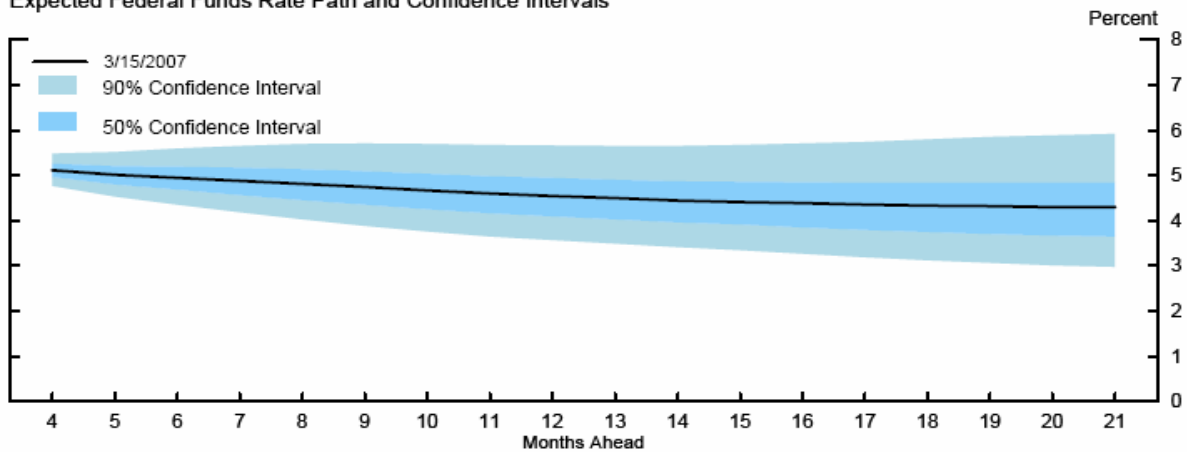
Exhibit B-6: Policy Uncertainty II

Policy Uncertainty

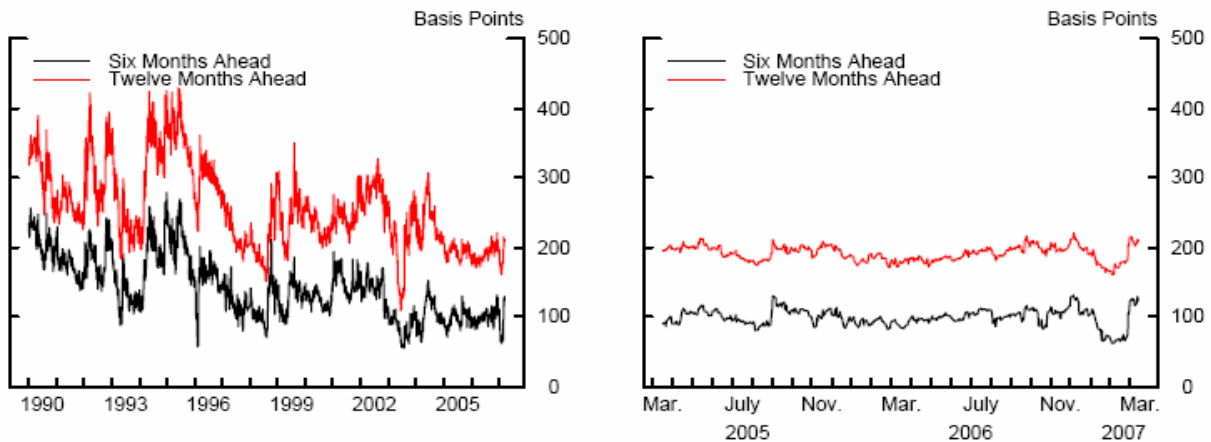


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

Expected Federal Funds Rate Path and Confidence Intervals



Eurodollar Implied Volatility at Selected Maturities*

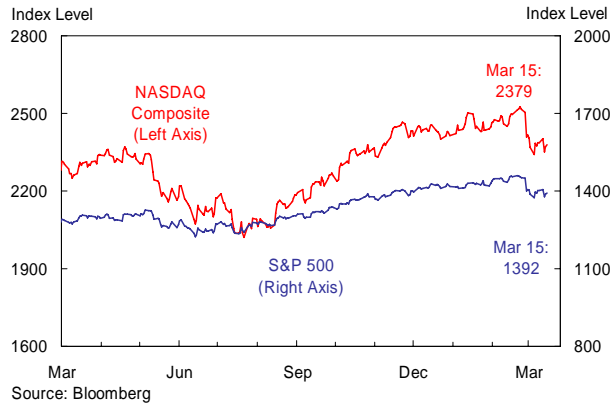


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

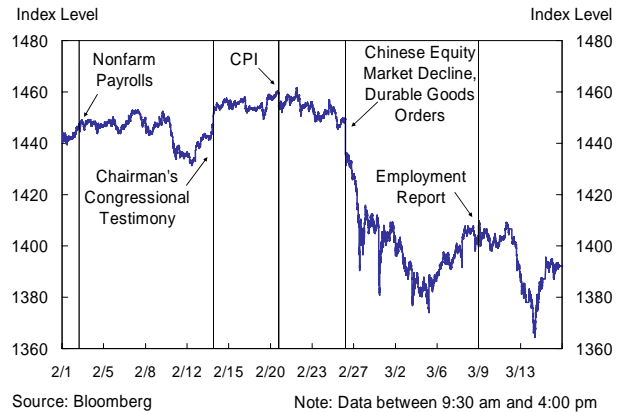
B. Financial Markets

Exhibit B-7: Equity Markets

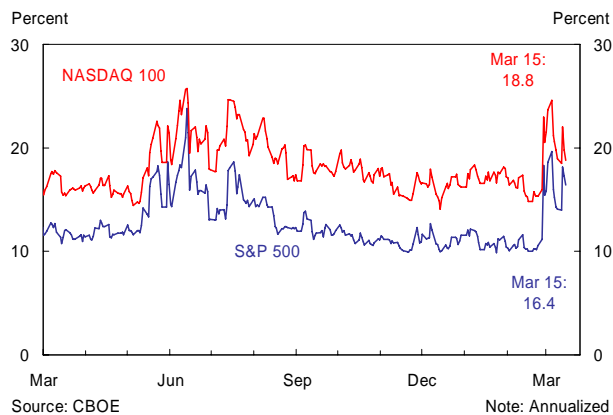
Performance



S&P 500 (Intraday)



Implied Volatility: 1 Month



Implied Volatility: 12 Months

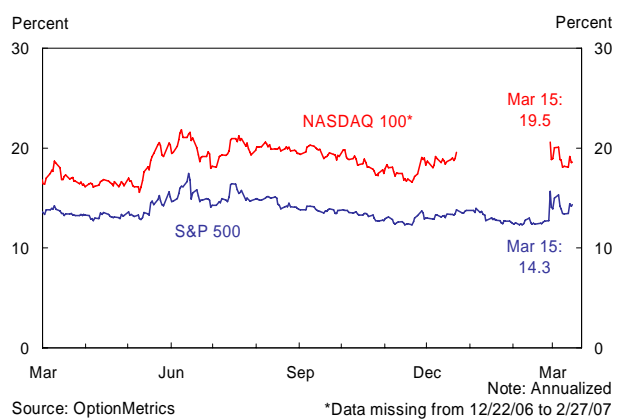
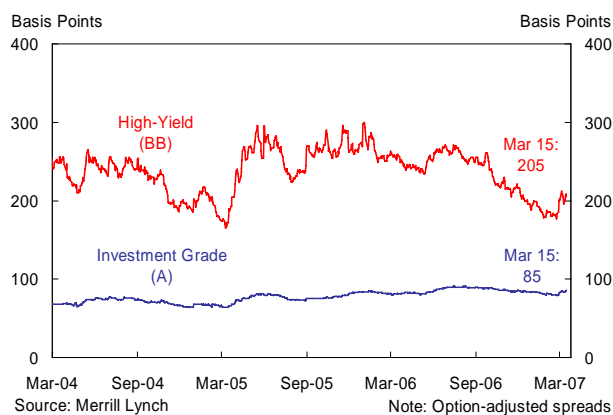
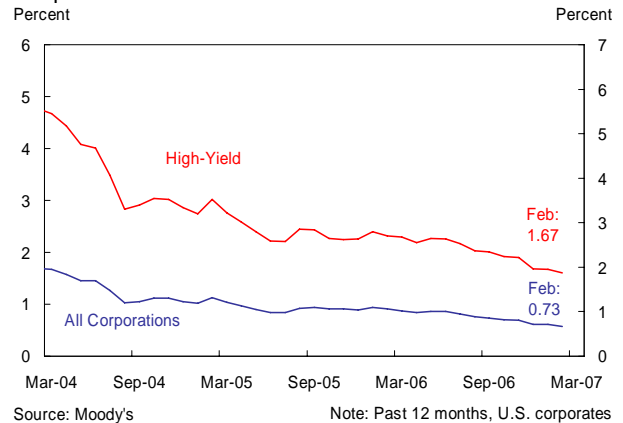


Exhibit B-8: Corporate Credit Risk

Corporate Credit Spreads



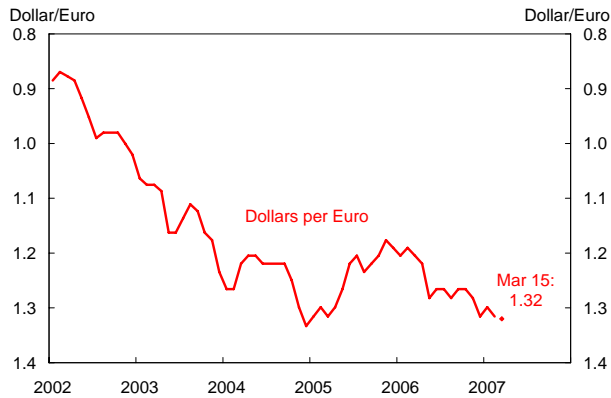
Corporate Bond Default Rates



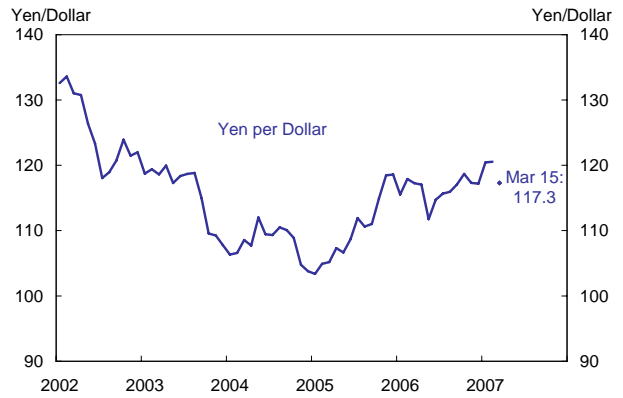
B. Financial Markets

Exhibit B-9: Exchange Rates, Foreign Equity and Bond Spreads

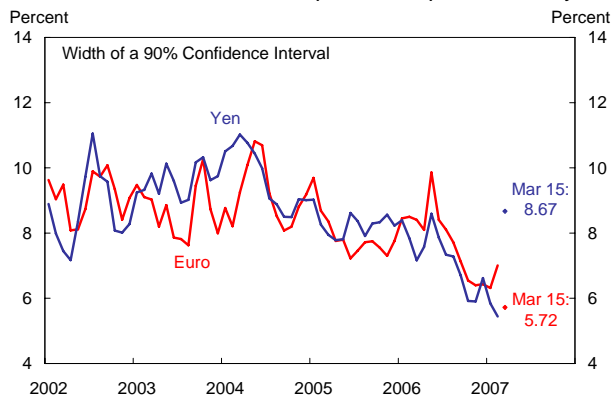
Euro-Dollar Exchange Rate



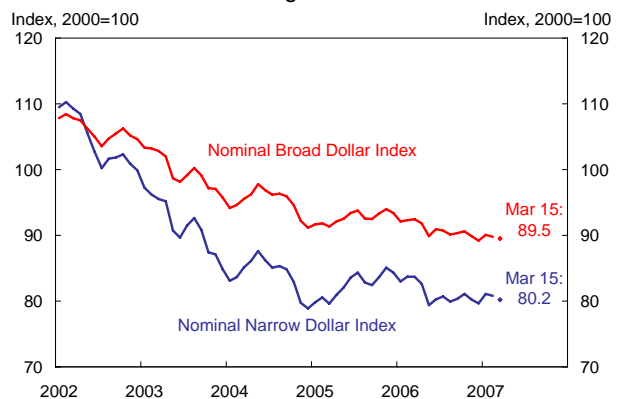
Yen-Dollar Exchange Rate



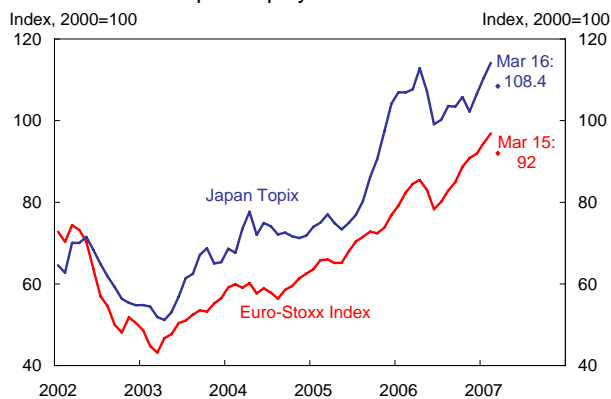
Euro and Yen One-Month Implied FX Option Volatility



Nominal Effective Exchange Rates



Euro Area and Japan Equity Indices



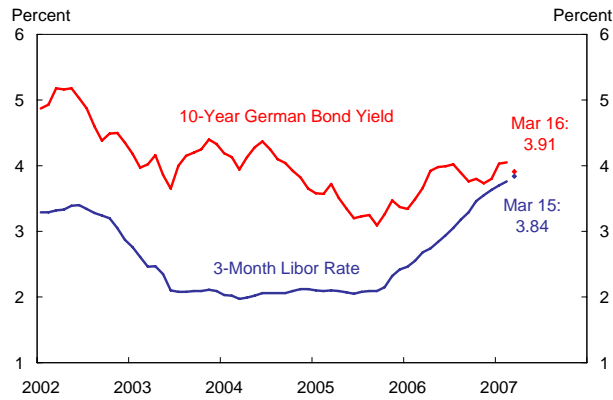
J.P. Morgan EMBI+ Sovereign Spread



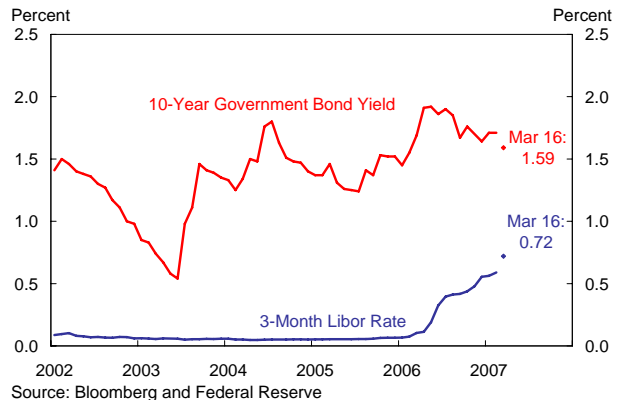
B. Financial Markets

**Exhibit B-10:
Foreign Interest Rates**

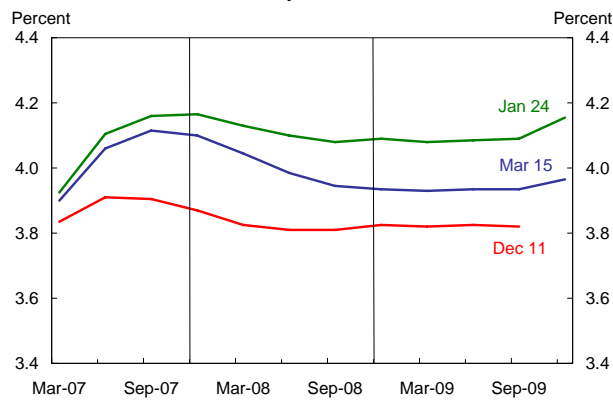
Euro Area Short-Term and Long-Term Interest Rates



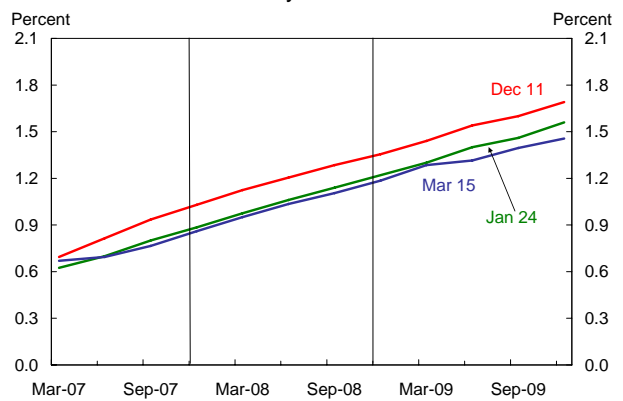
Japan Short-Term and Long-Term Interest Rates



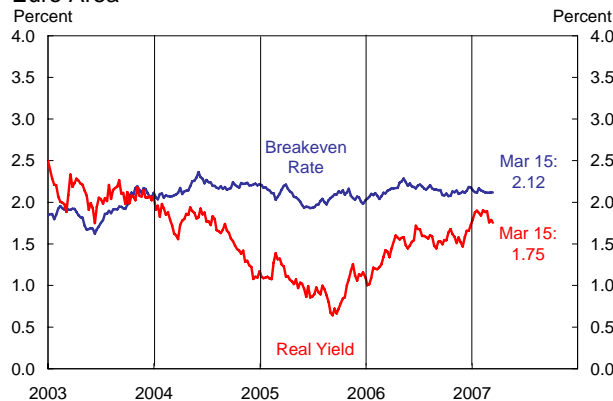
Three-Month Eurocurrency Futures Rates: Euro



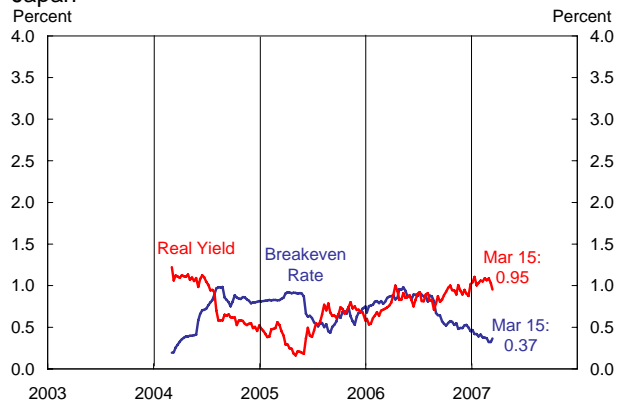
Three-Month Eurocurrency Futures Rates: Yen



Euro Area



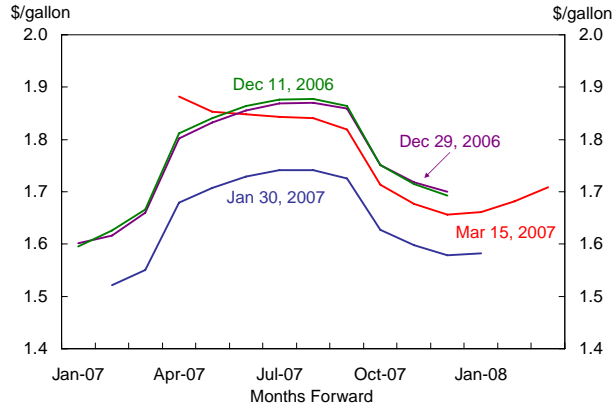
Japan



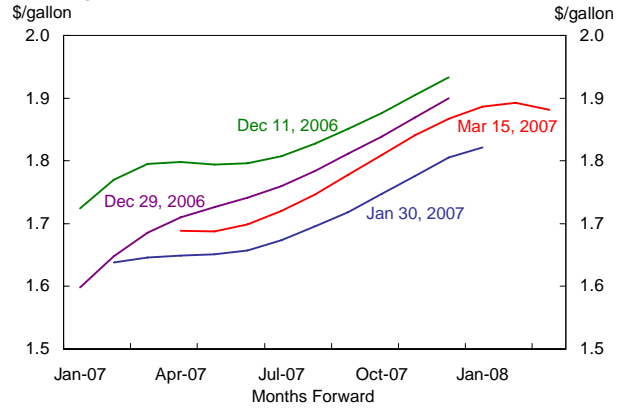
B. Financial Markets

**Exhibit B-11:
Energy Futures**

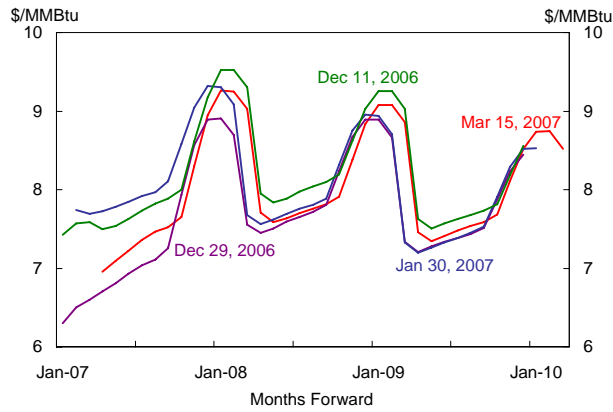
Gasoline Futures



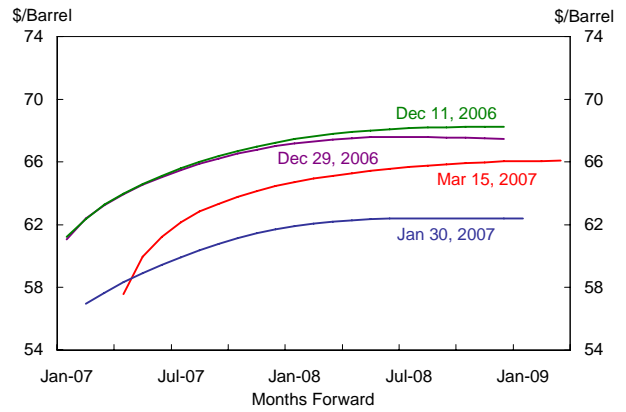
Heating Oil Futures



Natural Gas Futures



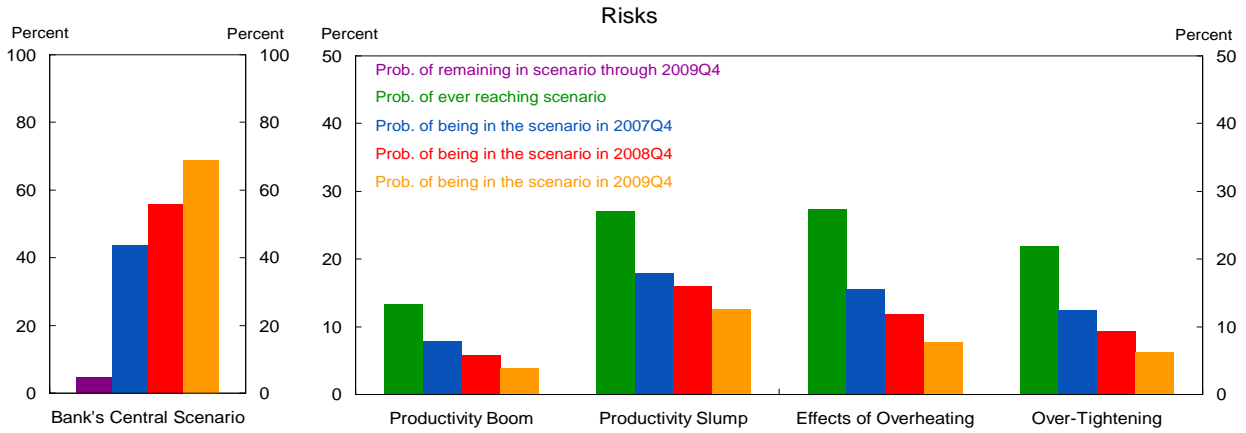
Crude Oil Futures



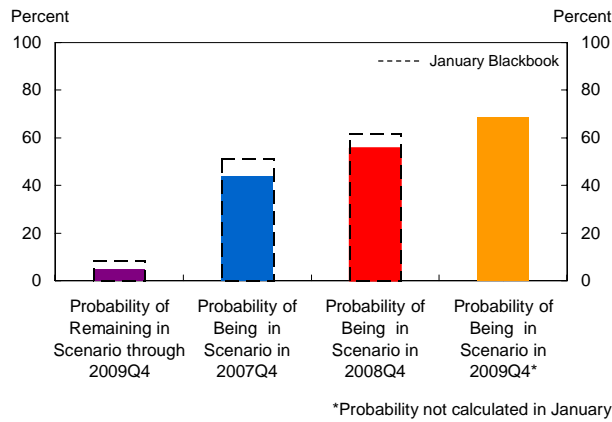
Source: Bloomberg

C. FRBNY Forecast Distributions

Exhibit C-1: Risks



Change in Probability of Bank's Central Scenario



Change in Risks

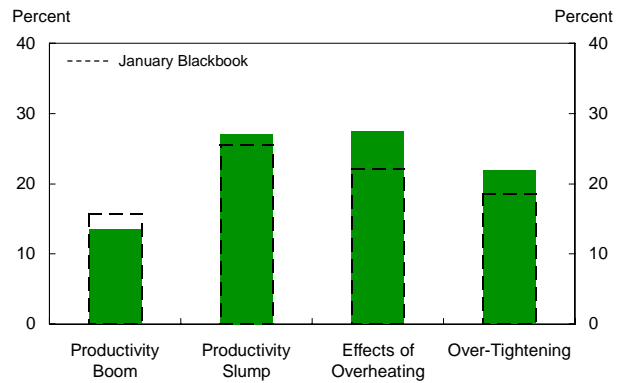
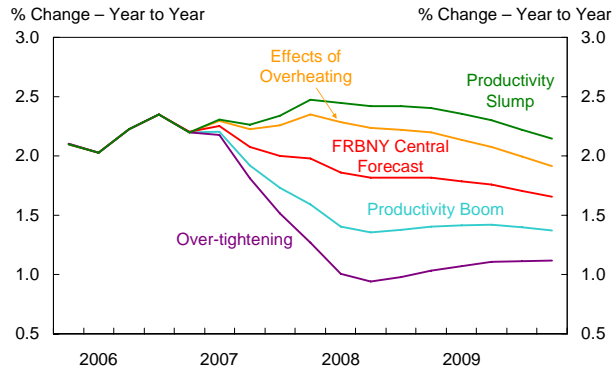
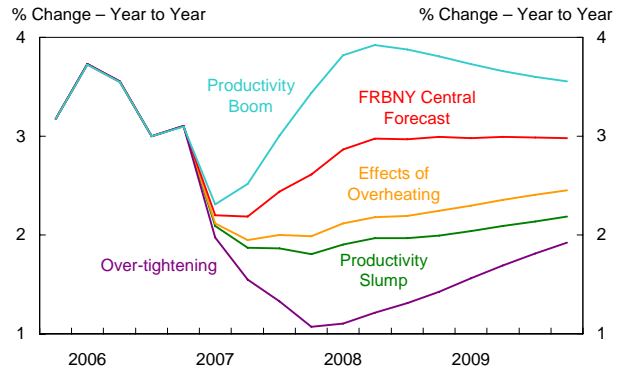


Exhibit C-2: Alternative Scenarios

Core PCE Inflation Forecast



GDP Growth Forecast

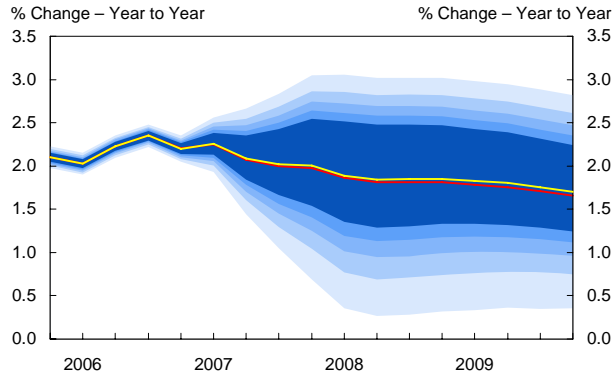


Source: MMS Function (FRBNY)

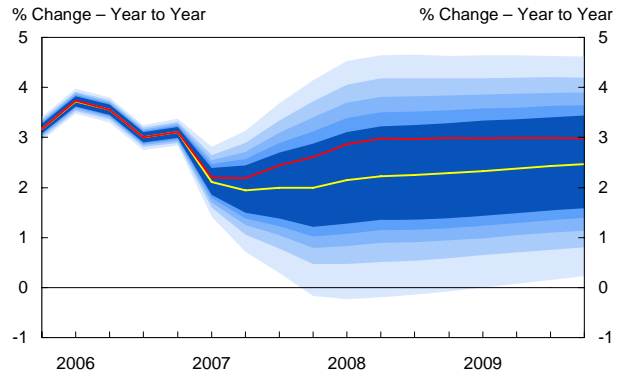
C. FRBNY Forecast Distributions

Exhibit C-3: Core PCE and GDP Growth Forecasts

Core PCE Inflation Forecast and Probability Intervals

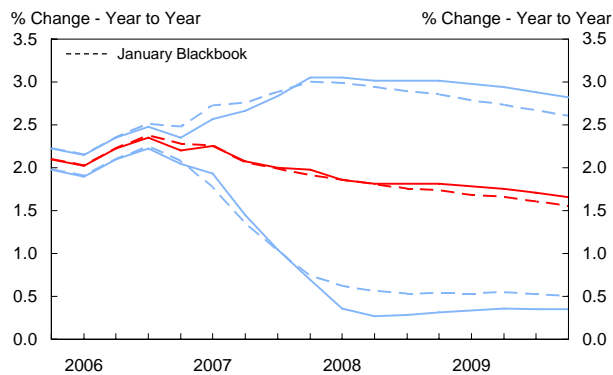


GDP Growth Projection and Probability Intervals

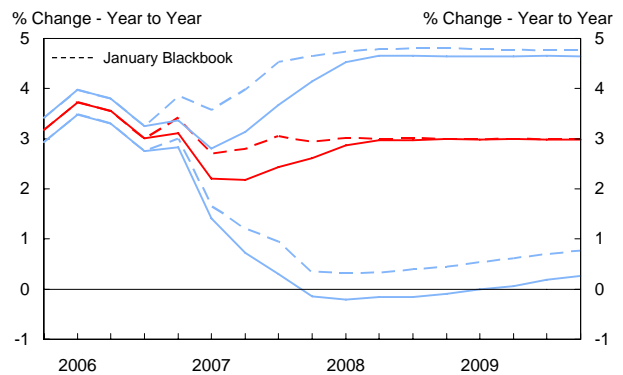


The yellow line represents the expected value of the forecast, while the red line represents the actual FRBNY forecast. The shading represents the 50, 60, 70, 80 and 90 percent chance that the four-quarter change will be within the respective range.

Change in Core PCE Inflation Forecast



Change in GDP Growth Forecast



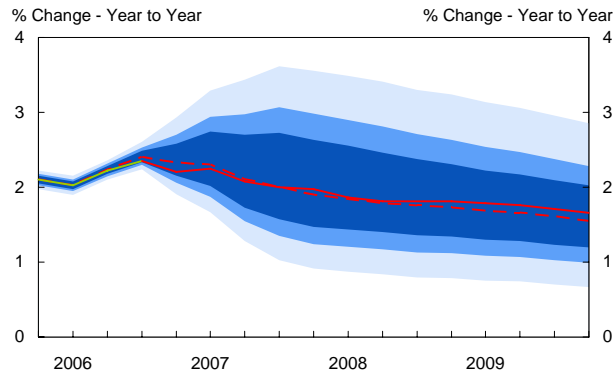
The blue lines represent the 90% chance the four-quarter change will be within the lines, while the red line represents the actual FRBNY forecast. Dashed lines represent the forecast from the January Blackbook.

Source: MMS Function (FRBNY)

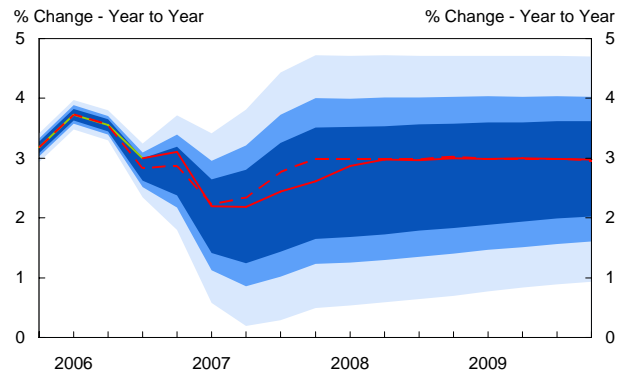
C. FRBNY Forecast Distributions

Exhibit C-5: Evolution and Performance of PCE and GDP Forecasts

Core PCE Inflation Forecast



GDP Growth Forecast



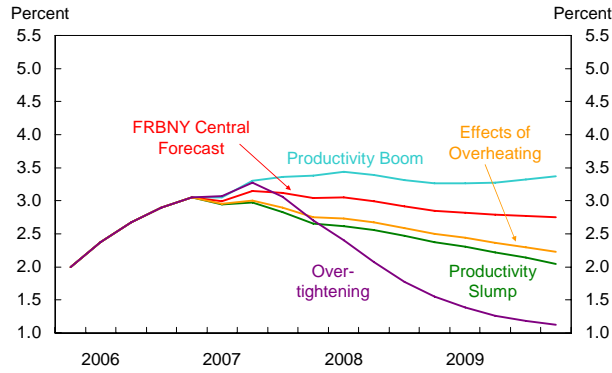
The solid red line represents the **current** forecast, while the dashed red line represents the **October 2006** forecast. The shading represents the 50, 75 and 90 percent probability intervals from the **October 2006** forecast. The green lines represent actual data.

Source: MMS Function (FRBNY)

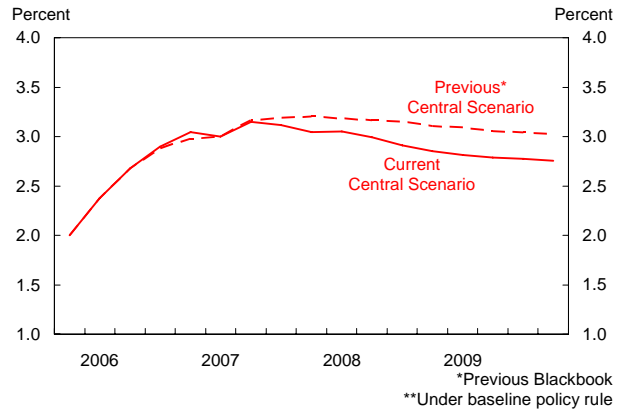
D. FRBNY Fed Funds Rate Projections

Exhibit D-1: Real and Nominal FFR Analysis

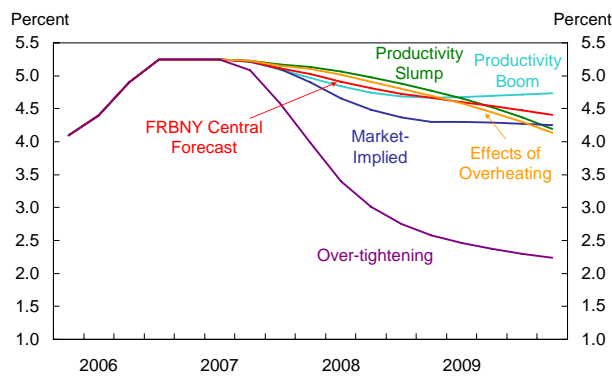
Real FFR under Baseline in Alternative Scenarios



Change in Central Scenario** Real FFR



Nominal FFR under Baseline in Alternative Scenarios



Change in Central Scenario** and Market-Implied Nominal FFR

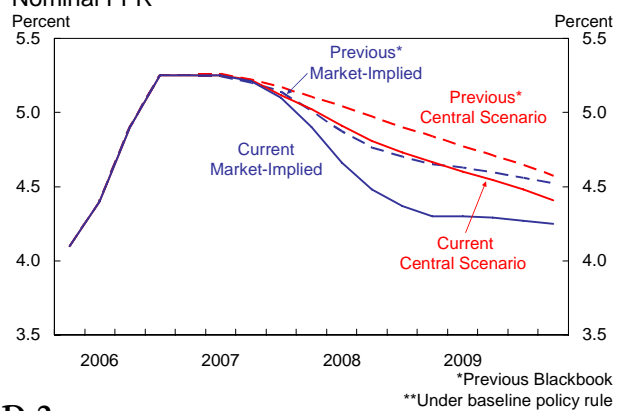
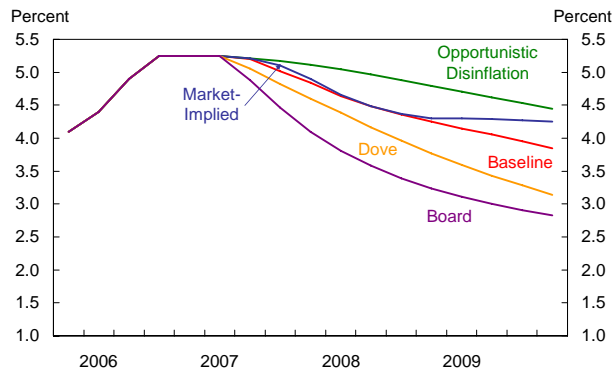
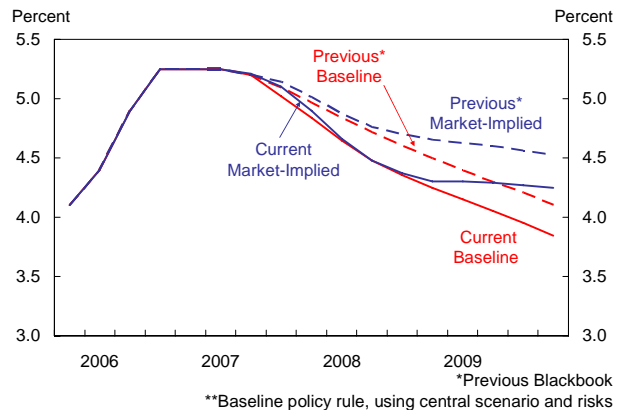


Exhibit D-2: Alternative Policy Rules

Nominal FFR under Different Policy Rules



Change in Baseline** and Market-Implied Nominal FFR

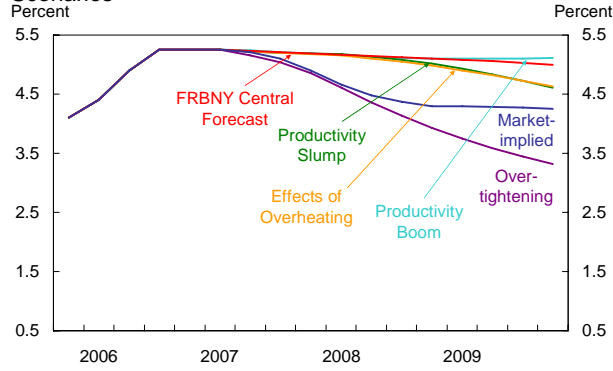


Source: MMS Function (FRBNY)

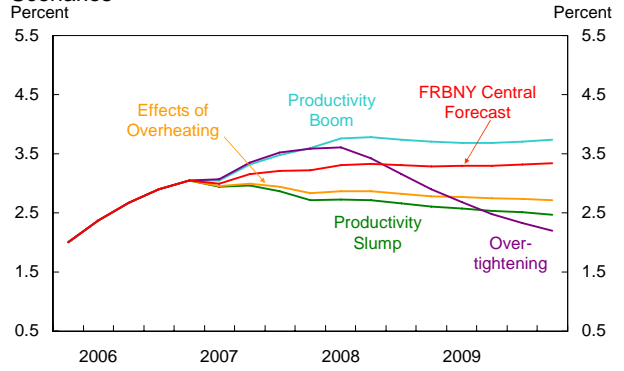
D. FRBNY Fed Funds Rate Projections

Exhibit D-3: Other Policy Alternatives

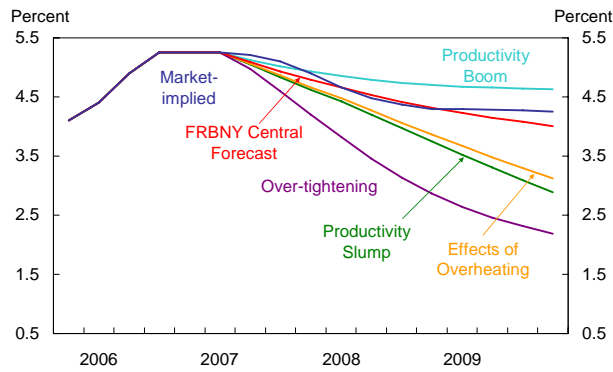
Nominal FFR under Opportunistic Disinflation in Alternative Scenarios



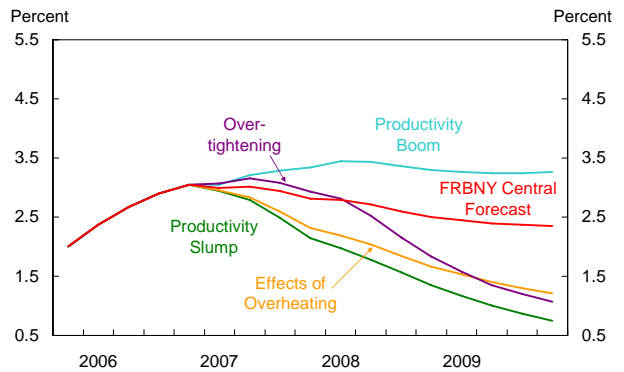
Real FFR under Opportunistic Disinflation in Alternative Scenarios



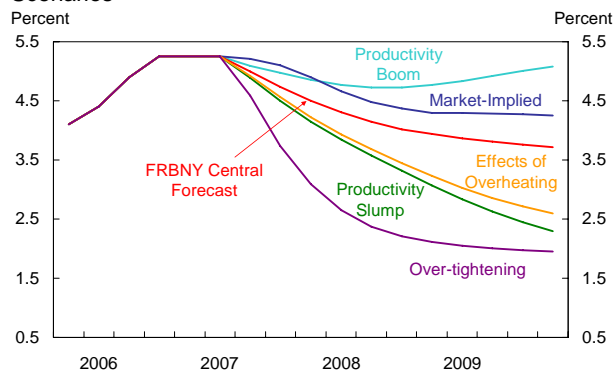
Nominal FFR under Dove in Alternative Scenarios



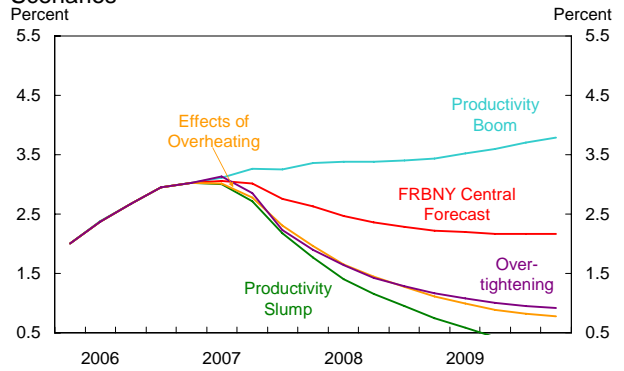
Real FFR under Dove in Alternative Scenarios



Nominal FFR Under Board Outcome Rule in Alternative Scenarios



Real FFR under Board Outcome Rule in Alternative Scenarios



Source: MMS Function (FRBNY)

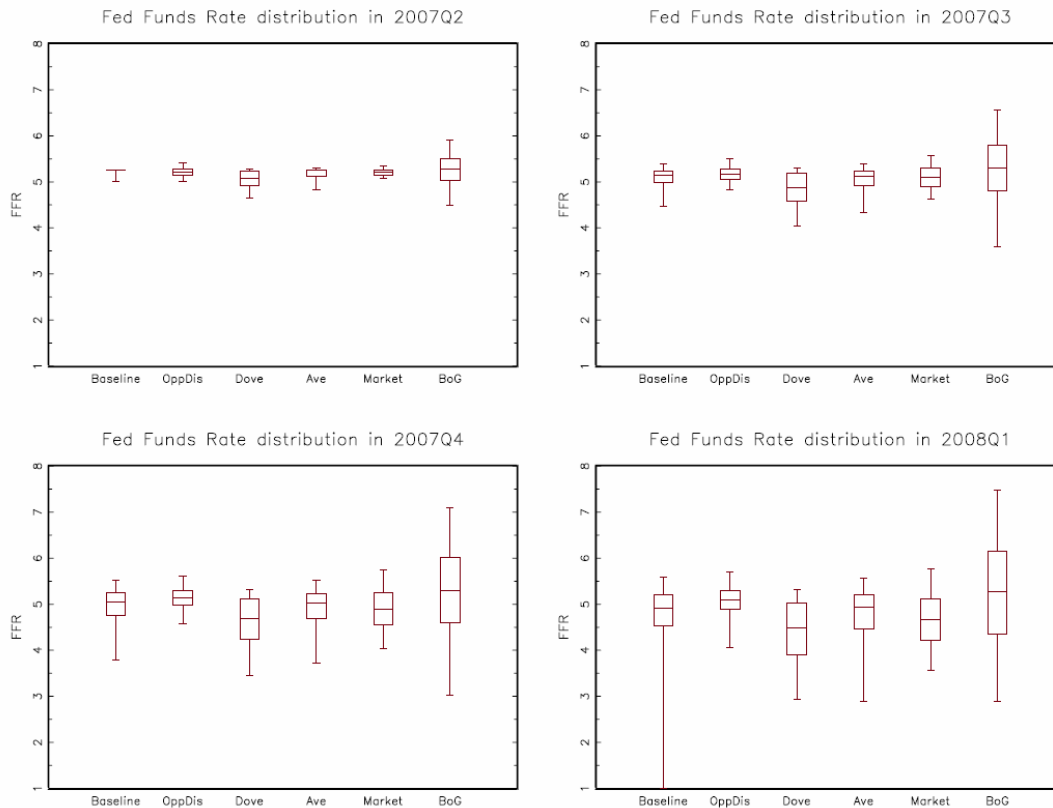
D. FRBNY Fed Funds Rate Projections

Exhibit D-4: Comparison between Market Expectations and FRBNY Expectations of the Federal Funds Rate: 2008Q1

	Percentile of FRBNY Expectation in Market Distribution	Percentile of Market Expectation in FRBNY Distribution
<i>Baseline</i>	49 (48)	32 (43)
<i>Opportunistic Disinflation</i>	71 (68)	11 (19)
<i>Dove</i>	34 (37)	58 (48)
<i>Board*</i>	81	32
<i>Average</i>	50 (56)	33 (36)

Note: "Average" weights baseline at .60, dove at .20, and opportunistic disinflation at .20. Numbers in parentheses represent data from the January Blackbook, with "Average" weighting baseline at .60, dove at .10 and opportunistic disinflation at .30.
*Board percentiles not calculated in January

Exhibit D-5: Fed Funds Rate Distribution



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)

Exhibit C Documentation

Please note that we have significantly expanded our description of the implementation of this analysis. We also include a brief description of the alternative scenarios used in this Blackbook and a description of the changes to the charts in this exhibit since the January Blackbook. Full documentation for Exhibit C is included in the Appendix.

Background

The FRBNY forecast distributions are a generalization of techniques used at the Bank of England and other central banks to present the uncertainties and balance of risks around a forecast. In this approach, we first define a central scenario based on our central forecast for inflation and output shown in Exhibit A. We then define alternative scenarios based on the two classes of shocks that are of interest to central banks: supply shocks and demand shocks. We associate different configurations of shocks with various alternative scenarios that have different implications for monetary policy. This approach to quantifying uncertainty allows us to interpret the forecast distribution for output and inflation, as well as analyze the impact from changing the probabilities on the scenarios.

Given these scenarios (central and alternatives), we begin by generating a large number of series, which each have a value for each quarter in the forecast horizon; for each of these series, the value in each quarter indicates the prevailing scenario in that quarter. Note that at this point, we have not yet defined the precise output and inflation implications of the alternative scenarios (see below); rather, these series indicate only the prevailing scenario in each period. We make three assumptions about each individual scenario indicator series:

- (1) Each begins in the central scenario;
- (2) Once the economy has entered an alternative scenario, it can either remain in that scenario or return to the central scenario;
- (3) Once the economy returns to the central scenario, it remains there over the forecast horizon.

These assumptions imply that no individual series can contain transitions into more than one alternative scenario. Also, given a sufficiently long forecast horizon, all series end up in the central scenario.

To generate these series, we set two parameters: (1) an initial probability for each alternative scenario and (2) the persistence of each alternative scenario once realized.

Once we have constructed these series of scenario indicators, we can generate associated paths for inflation and output for each of the series. In each quarter, these paths reflect draws from the joint distribution of inflation and output; we select the appropriate distribution based on that quarter's indicated scenario. If the series indicates that the economy is in the central scenario in a quarter, values for output and inflation are drawn from a distribution centered at the central forecast. If instead the scenario indicator series indicates that the economy is in an alternative scenario in a quarter, values are drawn from distributions defined relative to the central forecast distribution.

To give a more concrete example, consider the case of a productivity slump scenario, characterized by inflation above the central forecast and output below the central forecast (see below). If the scenario indicator series had the economy in this scenario in a quarter, we would draw an inflation value from a distribution whose inflation values are above the central forecast and whose output values are below the central forecast. The large number of paths for inflation and output generated can then be combined to characterize the distributions for inflation and output that reflect our forecast uncertainty.

Descriptions of Alternative Scenarios

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 onward, High II). The July 2006 NIPA revisions prompted us to reduce the estimate of potential output growth in our central forecast; our current central projection for medium-term productivity growth is a rate slightly lower than that of the pre-1973 epoch.

Alternative 1: Productivity Boom

The developments in the labor market and the sustained strength of labor productivity growth in the first half of this decade suggest that firms are using labor more efficiently. As such, productivity growth above our assumed trend could return and persist, implying a higher potential growth rate 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 will not be sustained as the IT-driven surge runs its course, resulting in a period of productivity growth below the trend in our central forecast. Furthermore, we could also see lower productivity growth from increases in the level and volatility of energy and commodity prices, similar to the 1970s. Below-trend growth would not only imply a lower estimate of potential growth but also push inflation above the level projected in our central forecast.

We also consider two additional scenarios, both related to the impact of past monetary policy and possible misperceptions of its past and current stance.

Alternative 3: Effects of Overheating

We see two potentially connected forms of this alternative. The first is a more standard scenario in which the extremely accommodative policy stance that the U.S. and other countries adopted in response to the global slowdown of 2000-2003 produces a persistent rise in inflation above implicit targets and an abrupt slowdown in real output growth starting in mid-2006. If central banks have consistently underestimated the equilibrium real rate (i.e., overestimated the slack in the global economy), their misperception would have led to excess aggregate demand growth over 2005-06 and, ultimately, to an increase in both inflation and inflation expectations.

The second form of this scenario (described in the special topic *The Free Lunch* in the May 2006 Blackbook) highlights the possibility that the U.S. economy could be

overheating, but that the overheating might not manifest itself immediately in high domestic consumer inflation (i.e., a rate well above the FOMC's implicit target). If the dollar is not freely floating and, moreover, if the dollar is being boosted by capital inflows whose purpose is to keep the dollar strong relative to other currencies, then it is possible that market interest rates could be held below the "true" equilibrium rate (i.e., the rate that would prevail without such inflows) for a significant period of time. The implications for output and inflation in this circumstance are similar to those of the above more standard scenario.

Alternative 4: Over-tightening

We base our outlook on the assumption that the neutral policy rate is between 4% and 4.25%, with an implicit core PCE inflation target of 1.5%. Recent inflation data have core PCE inflation running above 2%. If sustained, this development is consistent with a Fed funds rate above 5%; however, we see some risk that these higher inflation levels are a lagging indicator of demand pressures that have already subsided. This would imply that recent policy has been more restrictive than the central bank thought, causing the economy to slow significantly below potential.

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.

Changes to Exhibit C

We have made a number of changes to Exhibit C this cycle to make clearer the evolution of our outlook and risk assessment over the inter-meeting period.

Exhibit C-1: Risks

While the first half of Exhibit C-1 still presents the probability of being in a particular scenario at specific times over the forecast horizon, we have added two charts that indicate the change in the probabilities of the central and alternative scenarios from the previous to the current Blackbook, with dashed lines representing the previous Blackbook and solid bars representing the current Blackbook. The bottom left chart shows the change in all four of the probabilities associated with the central scenario. The bottom right chart shows the change in the probabilities of ever reaching an alternative scenario over the forecast horizon, indicating the change over the inter-meeting period in our assessment of the overall likelihood of each alternative scenario.

Exhibit C-3: Core PCE and GDP Growth Forecasts

While the top charts still present our fans for core PCE inflation (left chart) and real GDP growth (right chart), as well as the expected value of our forecast (yellow line) and the FRBNY point forecast (red line), the bottom charts now included present the evolution of the fans over the inter-meeting period. They illustrate the change in the 90 percent probability intervals (from the fan charts, blue lines) and FRBNY forecasts (red lines) from the previous to the current Blackbook. Solid lines indicate current values, while dotted lines denote past values.

Exhibit C-4: Evolution and Performance of PCE and GDP Forecasts

This part of Exhibit C is new to this Blackbook. The two charts in this exhibit compare the FRBNY forecast and probability intervals for core PCE inflation (left chart) and real GDP growth (right chart) from the Blackbook of three FOMC cycles earlier to the current FRBNY forecasts as well as to the data released over the past three cycles. This comparison serves three purposes. First, it illustrates the extent of changes in the FRBNY point forecast over the past three cycles. Second, it shows the difference between the

projections for core PCE inflation and real GDP growth and the released data, which is an indicator of FRBNY point forecast performance. Third, it gives an indication of the location of the current forecast and the released data in the prior forecast distribution, which provides a measure of the performance of the FRBNY forecast distribution.

Exhibit D Documentation

Please note that we have expanded our description of the implementation of this analysis. We also include a description of the policy rules used in this Blackbook and a description of the changes to the charts in this exhibit since the January Blackbook. Full documentation for Exhibit D is included in the Appendix.

Background

The exhibits in this section are constructed using the baseline specification of the policy rule detailed below, two modifications of the baseline policy rule, the Bank forecast distribution, and information from Fed funds and Eurodollar futures. The paths for inflation and output growth generated in Exhibit C can easily be converted into FFR values using a standard policy rule. We also can make small adjustments to the parameters of a baseline rule to generate alternative rules reflecting different policymaker preferences. The large number of paths characterizes a distribution for the standard and each of the alternative rules, which enables us to quantify the uncertainty around the policy associated with our outlook and risk assessment under various sets of preferences.

In all policy rule specifications, the policy rate responds to deviations of inflation from target and of output from potential GDP, while incorporating some degree of inertia. We draw the future paths of these deviations from the forecast distributions of inflation and output. In these rules, we specify an implicit inflation target of 1.5% and assume potential output growth is 3.0%. We also amend the prescription of the *Baseline* policy rule to capture some of the discreteness in the movement of the FFR. (A full mathematical description of this change is included in Appendix 2.)

Policy Rule – Baseline Specification:

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

$\rho = 0.8$ (interest rate smoothing parameter)

$i_{2006Q4} = 5.25$ (initial FFR value)

$i^* = 4.125$ (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 3% potential growth rate

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

The *Dove* policy rule reacts much more strongly to output below potential than the *Baseline* rule. If the output gap is negative, the *Dove* rule weights deviations of inflation from target and of output from potential more evenly ($\varphi_\pi = 1.5$ as usual, but $\varphi_x = 1$, instead of 0.5). Thus, the *Dove* rule no longer satisfies the Taylor Principle when output falls below potential.

Changes to Exhibit D

We have made a number of changes to Exhibit D this cycle to make clearer the evolution of our policy projections over the inter-meeting period.

Exhibit D-1: Real and Nominal FFR Analysis

In this exhibit, we still focus on the real FFR and nominal FFR projections from *Baseline* policy rule and look at them under the central forecast and the alternative scenarios.

Now, however, the charts on the right show the change in the real (top chart) and nominal (bottom chart) FFR under the *Baseline* rule from the previous to the current Blackbook.

Note that the top right chart shows only the change in the central scenario FFR prescribed by the *Baseline*, while the lower right chart shows the change in both the central scenario FFR and the market-implied FFR.

Exhibit D-2: Alternative Policy Rules

In this exhibit, we still compare the FFR path under the alternative policy rules and the market-implied path. We now also include the FFR path under the Board's *Outcome-Based* policy rule (described in the Appendix). In addition, we have added a chart on the right depicting the change in the *Baseline* and market-implied FFR path from the previous to the current Blackbook.

Exhibit D-3: Other Policy Alternatives

This part of Exhibit D is new to this Blackbook. Each chart focuses on a specific policy rule—*Opportunistic Disinflation*, *Dove*, or the Board's *Outcome-based* rule—and compares the nominal (left charts) or real (right charts) FFR paths under the central and alternative scenarios.