FRBNY Blackbook

RESEARCH AND STATISTICS GROUP

FOMC Background Material

May 2006

CONFIDENTIAL(FR) Class II FOMC

FRBNY BLACKBOOK

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CONTENTS

Exhibits

1. Overview

Our outlook has real GDP growing around its potential rate in both 2006 and 2007. Core PCE inflation is expected to be around 2% over the same period, but with a slight hump in overall inflation in the near term. We have kept the path of the FFR target implicit in our near-term forecast at 5% and removed the small cut in the FFR target in 2007. This is roughly equivalent to the path currently priced into financial markets.

There is little difference between our central forecast and the Board's Greenbook forecast, and our assessment of the appropriate path for policy would be unchanged if we were to base it on the Greenbook forecast. While there are slight differences in the profiles for productivity growth, compensation, and unit labor cost growth over the forecast horizon, the profiles for core PCE inflation correspond quite closely. We expect employment to grow near its trend, the unemployment rate to level off at 4.7%, and the labor force participation rate to remain near 66%. The behavior of the labor market in the Greenbook differs fairly markedly from ours in 2007: the unemployment rate is substantially higher, with the labor force participation rate and payrolls being substantially lower. While these differences seem unlikely to have a material effect on the current policy decision, they do seem to reflect some differences across our two staffs in the assessment of certain underlying features of the economic landscape.

Though our central forecast has core inflation returning in 2007 to a level within the range viewed as consistent with long-term price stability, we see the preponderance of risks as residing on the upside. Furthermore, we believe these risks embed the possibility that further rises in inflation at or near the top of the implicit range are more costly than similar increases near the implicit target. Under our assessment of the risks, a more hawkish (defined in the *Policy Alternatives* section below) policymaker would want to follow a path higher than the one embedded in our central forecast. It appears that financial markets currently place at least some weight on this more hawkish view of future policy.

We see the risks for near-term real growth as being roughly balanced, with the risks on both sides having increased since March. On the upside, business investment is stronger than expected, world growth continues to improve, and recent exchange rate depreciation may help improve the external balance. On the downside, there are the recent large increases in energy prices and increases in global long-term interest rates, both of which could diminish real household spending. Financial conditions have changed in such a way as to indicate a reduced threat of a yield curve inversion, though it is difficult at this juncture to parse the increases in longer-term forward rates into changes in risks versus changes in expected return. In addition, the sustainability of both the federal budget and current account deficits are ongoing concerns.

Relative to the situation the committee faced a year ago, it is fair to say that the appropriate near-term path of policy is more contingent—in both directions—on the aspects of the economic environment about which we are least certain. One way to see this is to note that in late 2004 and early 2005, it is unlikely that even a 50 to 75 basis point increase in the committee's assessment of the neutral FFR rate would have changed the upcoming policy move, and possibly not even the move following that. A similar statement can be made regarding the committee's assessment of underlying trend productivity growth, potential output growth, and even moves in medium and long-horizon inflation expectations. At this juncture, though, it is precisely these factors that matter the most in determining the appropriate course for monetary policy.

One implication of the committee reaching a point where fundamental factors such as the neutral rate or the trend productivity growth rate matter more for policy is that incoming data will necessarily help them learn more about these factors than might have been the case a year or year and a half ago. Moreover, what they learn will have a more significant effect on their assessment of the appropriate course for monetary policy over the very near term. In contrast, the FOMC has had little occasion up to this point in the tightening cycle to witness a sufficiently large deviation from its current projections for output and inflation to cause them to depart from the near-term guidance they had provided. This is not to say that the committee did not need to update frequently the

markets expectations for policy—there were often times when the committee reassessed the medium-term outlook in such as way as to lead them to alter the trajectory of expectations for future policy with their statement or inter-meeting speeches. It is only to say that these updates rarely had implications for the next policy move. To illustrate, this can help explain that although the expected May 2006 FF rate in August 2005 was nearly 100 basis points below the probable rate for May 2006, financial markets were still not surprised by any given decision regarding the FF target rate.

The message from this discussion is two-fold. First, it now seems less likely that the committee can keep steadily increasing rates as before, with the consequence that markets may need to expect greater (and possibly less uniformly sized) gaps between policy moves going forward. Second, in the event that incoming data departs sufficiently from the committee's central forecast, the moves may need to be larger than the 25 basis point increments that have prevailed during the current tightening cycle.

The policy decisions now being contemplated are a function of the economic landscape confronting the committee, just as the decisions made in 2003 were a function of that landscape. In the same way, the committee's communication should be designed to prepare markets for what are likely to be unavoidable changes in the behavior of policy, just as the communication strategy chosen in 2003 reflected the changes necessary at that time. Most importantly, current communications should not attempt to mimic all of the techniques used to communicate effectively in that period.

2. Recent Developments

U.S.

Summary. Measures of underlying inflation have risen a bit recently, thus indicating greater near-term upside risk to implicit targets. Real GDP growth and productivity growth rebounded in 2006Q1. The early data for 2006Q2 point to some moderation in real activity toward its potential growth rate. The labor market continued to be firm with

robust payroll growth, declining unemployment, and a rising employment-population ratio. Consumer and business survey measures generally remained at levels consistent with solid growth; however, some measures slipped in late April, likely reflecting concerns about recent energy price rises.

Inflation. Core inflation measures remain somewhat elevated compared to desired levels, with readings in April raising some concerns [see Exhibit A-6]. The (annualized) monthly change in the core PCE deflator increased from 1.6% in February to 3.9% in March. While the core PCE deflator is up 2.0% on a 12-month change basis, it is up 2.4% (annual rate) and 2.5% (annual rate) over the 6- and 3-month horizons respectively. As with the PCE deflator, there was a dramatic increase in the monthly change in core CPI from 1.8% (annual rate) in February to 4.2% (annual rate) in March. The pattern of the core CPI over various horizons was also similar to that of the PCE deflator, with 12-, 6-, and 3-month changes (at annual rates) of 2.1%, 2.7%, and 2.8%, respectively.

Overall inflation rates remain elevated, with energy prices being a key factor. The total PCE deflator and the total CPI rose 4.5% and 4.2% (annual rates), respectively, in March. Our underlying inflation gauge (UIG), however, has only shown a slight rise at the short (2-year) horizon [see Exhibit A-7]. Some alternative measures of "core" inflation have turned up recently [see Exhibit A-8], but all are now above the upper end of the acceptable range. Medium- and long-term inflation expectations from TIPS increased, with a fairly pronounced rise at the 2-year horizon. Household survey expectations of inflation, which had been steady recently, rose in late April. The median expected one-year-ahead rate climbed to 3.3% in April from 3.0% in March, while the expected 5-year-ahead rate rose from 2.9% to 3.1% over the same period.

Real activity. Real GDP growth in 2006Q1 was 4.8% (annual rate), a rebound from the slow growth in 2005Q4, and consistent with our outlook. With the rebound in output growth, productivity growth also bounced back in the quarter. The recent monthly real

activity indicators and the extremely limited data for the current quarter suggest that real growth in 2006Q2 (and the rest of 2006) should be near its potential growth rate.

Real personal consumption expenditures (PCE) were strong in 2006Q1. Personal income growth was robust in March, which should support PCE growth in coming months, but the recent rises in energy prices could mitigate this effect. The early data for 2006Q2 appear consistent with moderate growth over the near term: auto sales for April were about equal to their level of the previous two months and preliminary MasterCard data indicate moderate growth in retail sales excluding autos for April.

The recent housing indicators were generally consistent with a moderate slowdown in the market. Housing starts dropped sharply in March in a payback from January and February; nevertheless, housing completions rose. Existing home sales increased slightly in March, while new home sales rose more strongly. Their levels, however, are below the peaks from last summer. Mortgage purchase applications in April remained near the lower levels (comparable to early 2004) of the previous two months. Although the new home inventories-sales ratio fell in March, it remains elevated compared to its levels over the past decade. Housing prices displayed some further moderation.

Business investment spending was robust in 2006Q1, as it rebounded from a weak 2005Q4. Growth in equipment spending returned to near the levels that have prevailed over the past three years. The near-term momentum appears strong as capital goods orders increased in March. Nonresidential construction displayed greater vigor than it has in recent years, even though it was flat in March. Businesses remain cautious in their inventory behavior as inventories-sales ratios remain low. Even so, manufacturing production was robust in 2006Q1 and the capacity utilization rate again exceeded 80% in March, the fourth consecutive month it has done so. Production growth in the IT sector was strong, consistent with the growth in our Tech Pulse index.

Labor market. The labor market continued to be firm. Payroll growth remained strong through March. The growth in aggregate hours in 2006Q1 was about 3% (annual rate), near the prevailing range over the past two years. The unemployment rate fell to 4.7% in March, equal to its low in the current cycle. The labor force participation rate has changed little over recent months, but the employment population ratio has risen slowly to its highest level since 2002. Measures of labor compensation continue to give somewhat conflicting signals. Growth in average hourly earnings has increased over recent months, but that of the employment cost index has remained flat. The growth of compensation per hour rebounded somewhat in 2006Q1, but its four-quarter change remained rather subdued. The four-quarter change in unit labor costs also changed little and do not indicate a substantial increase in labor cost pressures.

Surveys. Readings during March and into early April had suggested consumers were fairly upbeat. Recently, however, there appears to have been a change in consumers' spirits. Readings in late April revealed a decline in both the current and future expectations components. One explanation for the change is that the continued rise on gas prices may have finally impacted on sentiment. Business surveys suggest that US manufacturing remains on a reasonably firm growth path. The ISM manufacturing and non-manufacturing indices as well as the Philadelphia Fed index increased in April. Several other surveys, however, showed a modest pullback in April including the Empire State Index, the Chicago ISM index as well as purchasers' surveys in Milwaukee and Cincinnati. In addition, a look at the prices paid index associated with these surveys has generally indicated some intensification in price pressures.

Global

Global growth is projected to slow to 3.0 percent (Q4/Q4) in 2006, down from 3.4 percent in 2005. The forecast has Asian growth moderating to a more sustainable pace after growing quite strongly in 2005. Growth rates in the euro area, the United Kingdom and Brazil are expected to increase relative to last year. The forecast is essentially

unchanged since the last FOMC, with the exception of an upward revision to the outlook for Mexico based on recent data.

Industrial Countries. Data for the euro area are coming in a bit stronger than expected, causing a slight upward revision to the 2006 growth forecast. Industrial production and orders were both robust in February, while exports were up 13 percent over the year. The industrial confidence index rose again in April to well above the previous peak in mid-2003. It is, though, still significantly below its 1999-2000 highs, when the economy was growing at a 4 percent pace. Credit growth was up 10.8 percent over the year in March, with strong demand for both mortgages and commercial loans. The forecast is for euro area growth to accelerate to 2.2 percent (Q4/Q4) in 2006 from 1.8 percent last year. The region's economy is expected to slow modestly in the second half of the year in response to tighter monetary policy in the euro area and other major economies.

The Japanese economy appears to have eased to a more sustainable pace after a surge in output at the end of 2005. While industrial production was soft in March, it has been steadily expanding since July 2005 and is 3.1 percent above its level of a year ago. The labor market is also improving, with employment up 0.8 percent over the year in March and the unemployment rate at its lowest level since 1998. CPI inflation is making a gradual comeback, with prices up 0.5 percent over the year to March, making that the fifth consecutive month of increasing prices. The economy is projected to expand at just above its potential rate, which would represent a substantial slowdown from last year's impressive performance.

The Canadian economy should continue to grow near 3.0 percent for the rest of the year as the economy benefits, on net, from higher commodity prices. Private consumption in the U.K. remains subdued, but output growth is nevertheless approaching trend growth.

Emerging Economies. Asian data suggest a continuation of recent trends, with robust growth in China and solid growth in the rest of Emerging Asia. Chinese GDP grew 10.2 percent over the year in Q1, close to forecast. The trade surplus for Q1 totaled $24

billion, up 40 percent from a year earlier. New lending growth has been quite rapid while capital expenditure is running ahead of last year's pace. The authorities have responded to these developments by launching a new campaign against over-investment, including new sector-specific controls and a surprise 27 basis point hike in the loan rate. In Q1, Korea recorded a fourth consecutive quarter of annualized growth exceeding 5 percent. Elsewhere in the region, strong production and export data suggest that growth continues at a healthy pace.

Domestic demand in the major Latin American countries is growing robustly and external conditions remain favorable. In Mexico, activity is growing at a much stronger pace than had been expected, with growth in the first half of 2006 expected to be the strongest in several years. Brazilian growth appears to have accelerated in 2006Q1 and the outlook is supported by rising real income and consumer confidence, lower interest rates and strong credit growth. In Argentina, activity is moderating more gradually than originally anticipated. The monthly indicator of economic activity was up 9.5 percent over the year in February.

Trade

The U.S. trade deficit narrowed to $65.7 billion in February from its record $68.6 billion in January. The February decline in imports, reflecting a fall in purchases of computers, autos and other consumer goods, should be seen as a payback for January's high growth rather than as a sign of a fundamental easing in the demand for foreign goods and services. February's $1.1 billion decline in exports was broad based, including all major categories except aircraft.

In the initial GDP release, the drag from net exports on 2006Q1 growth was estimated at a larger-than-expected 0.8 percentage point. The BEA estimate assumes a March surge in imports. For 2006 as a whole, the forecast is for net exports to take 0.5 percentage point off GDP growth (Q4/Q4). This is essentially unchanged since the last Blackbook, with less drag assumed in Q2 to make up for the larger-than-expected drag in Q1.

The current account deficit is projected to be almost $1.0 trillion in 2006, or just under 8 percent of nominal GDP. Higher current and expected oil prices account for most of the increase in the projected deficit relative to the last FOMC outlook.

Financial

Domestic markets

Over the inter-meeting period, short-term and longer-term inflation expectations increased moderately. Zero-to-two year implied inflation (carry-adjusted) rose 31 basis points from 2.58% to 2.89%, while the corresponding five-to-ten year inflation expectations increased 23 basis points to 2.74% [Exhibit B-1].

The yield curve has steepened during the inter-meeting period [Exhibit B-3]. The closely watched 10-year to 3-month spread increased from 8 basis points to 34 basis points: the 3-month yield is currently 4.81% and the 10-year yield is 5.14%. During the same period, the nominal 4-to-5 year forward rate increased 45 basis points from 4.64% to 5.09%. This change reflects a 23 basis point rise in the real 4-to-5 year forward rate (from 2.23% to 2.56%) combined with a similar sized increase in 4-to-5 year inflation compensation.

Fed Funds rate expectations for the May meeting, based on Fed Funds futures prices, indicate virtual certainty (greater than 99% probability) of a 25 basis point increase to 5.00%. Similarly, current expectations inferred from Fed Funds options prices point to a less than 1% chance of rates remaining at 4.75% at the May meeting. There has been a generally steady rise in expectations of a rate increase over the inter-meeting period.

Views about the probability of a further rate increase to 5.25% at the June meeting have fluctuated significantly over the inter-meeting period with a low of 24% and a high of 68%. As of May 3, market participants assign a probability of 47% to a pause (rates remain at 5.00% in June) versus a probability of 50% of a 25 basis point increase. Interestingly, market expectations have been especially sensitive to “Fed talk.” The

FOMC minutes release (4/18) and the Chairman's testimony to the Joint Economic Committee (4/27) increased expectations of a pause in rate hikes at the June meeting. In contrast, expectations about the probability of a move to 5.25% have generally increased in response to economic releases indicating higher inflation or stronger growth such as the CPI (4/19), consumer confidence (4/25), new home Sales (4/26), and ISM manufacturing index (5/1).

The expected Fed Funds rate path has also adjusted to incorporate expectations of a possible lengthy pause in rate increases. In particular, the current Fed Funds curve is fairly flat from September 2006 (implied rate of 5.17%) to February 2007 (implied rate of 5.15%). The Fed Funds rate is expected to decline to 4.95% in May 2008. Since March 27th, the expected rate in September 2006 is up 20 basis points, and the August 2008 expected rate is up 33 basis points [Exhibit B-4].

Corporate credit spreads over Treasuries widened in the inter-meeting period with BBB, BB, and B spreads rising by 31, 18, and 2 basis points respectively. Over the same period, equity market performance was mixed with the S&P500 index up 0.48%, and the NASDAQ down 0.50%. Equity market volatility remains at relatively low levels; S&P500 implied volatility is 11.99%, while NASDAQ implied volatility is 15.79%.

Since the March meeting, implied interest rate skewness has moved from -1.6 to -0.9 [Exhibit B-5], indicating heightened concern about an unexpected policy rate increase. This is consistent with higher expectations of a rate pause. Despite changing views about the likelihood of a rate pause versus a rate increase in June, interest rate implied volatility remains at low levels and has only increased slightly over the inter-meeting period. The 6 month LIBOR confidence interval is 102 basis points, an increase of only 13 basis points since March 27 [Exhibit B-6]. Implied 10-year interest rate volatility rose from 4.28% to 4.41%, while 30-year Treasury volatility declined from 6.84% to 7.18%.

Monetary Policy and Global Bond Markets

As the global expansion appears on solid footing, financial developments during the inter-meeting period were shaped by tightening monetary conditions in the main economic areas. The United States' more advanced position on the tightening cycle relative to its partners, however, caused renewed downward pressure on the dollar, after a relative tranquil period.

In the euro area, encouraging data on growth and heightened inflation risks tied to higher energy prices are sustaining a gradual rise in policy rates. The ECB is expected to raise its policy rate once in early June, and at least once more by year-end. Similarly in Japan, where the central bank has been draining banks' excess reserves after the end of quantitative easing to clear the way for higher overnight rates. The first rate hike is expected near the end of the summer, with a second increase expected by year-end.

A drift towards tighter monetary conditions is also apparent in the rest of the industrial world. The Bank of Canada again raised its policy rate at end-April, although it hinted to an incipient end of its tightening cycle. Policy rates have also been raised in Australia in May, in Switzerland in March, and in Sweden twice since the beginning of the year. After putting on hold its easing cycle last fall, the Bank of England now has become concerned with slowly-building expectations of inflation.

In the emerging world, the key monetary event was the People's Bank of China late April surprise increase of 27 basis points to 5.85 percent in its official loan rate. This increase was aimed at slowing the neck-breaking pace of Chinese domestic investment. Monetary policy also remains on a tightening path in the rest of Emerging Asia, although the pace of rate hikes is likely to remain contained. At the same time, regional central banks continue to build up their stocks of foreign reserves. The pace of reserve purchases appears to have increased after the recent G7 statement, which urged more flexibility in China's exchange rate and ignited pressure towards Asian currencies' appreciation.

In Latin America, Mexico's easing cycle appears about complete after the late-April rate cut, while the pace of easing is slowing in Brazil. Argentina's monetary policy remains accommodative, although it has tightened somewhat in recent months.

Supported by tighter policy conditions, debt yields have risen worldwide since the last FOMC meeting, leading to broadly steeper yield curves. In Japan and in the euro area, long rates have risen by around twenty basis points more than short rates, driven by higher expected real rates. Indeed, break-even rates from inflation-indexed bonds in the main issuing countries were generally stable over the period.

Equity Markets

Continuing strong corporate profit growth offset higher interest rates in Europe, lifting major equity indices. From March 27 to May 2, the DJ Stoxx and FTSE-100 indices rose 1.6 and 2.5 percent respectively. In Japan, equity prices reached new multi-year highs in early April, reflecting both strong buying at the start of the new fiscal year and continued confidence about corporate prospects. These gains, however, were largely lost following a sharp appreciation of the yen after the G7 meeting on April 21st, which heightened investors' concern with exporting firms' earnings. For the period as a whole, both the TOPIX and the Nikkei rose 2.7 percent. Elsewhere, the Brazilian Bovespa and the Mexican Bolsa posted gains of about 10 percent, with commodity-related companies attracting special interest. Equity indices were buoyant throughout the rest of emerging markets.

Exchange Rates and Capital Flows

With the U.S. monetary tightening cycle apparently approaching its end, investors' focus is shifting toward global structural imbalances, thus fostering a resurgence of dollar weakness.

The yen and the euro gained substantially on the dollar since the last FOMC meeting. The yen strengthened from ¥117 to ¥113 per dollar, with acute investor interest after a statement by the G7 in April called for greater flexibility in China's exchange rate. Meanwhile, the euro strengthened from $1.20 to $1.26 per euro. Emerging Asian currencies (except China's) also appreciated against the dollar over the inter-meeting period. In response to this pressure, Emerging Asia's central banks appear to have stepped up their effort to check the pace of currency appreciation by intervening in the foreign exchange market. Elsewhere, Brazil's real appreciated 8 percent during the inter-meeting period, supported by strong balance of payments data and favorable interest rate differentials, while the currencies of commodity-producing countries (notably Canada and Australia) also rose sharply against the dollar. Bucking the trend, the Mexican peso and China's RMB have moved sideways against the dollar over the past few weeks. Altogether, the dollar lost almost 5 percent (in both nominal and real terms) of its trade-weighted value from March 28 to May 2.

Option-implied volatilities of major exchange rates – especially for the yen/dollar pair – have risen sharply during the period, as investors appear to be seeking direction on the future course of exchange rate policies.

U.S.-bound capital flows continued at a smooth pace, with oil-exporting countries increasing their share of global savings. Elsewhere, there was likely some unwinding of carry positions in March out of Iceland's krona and New Zealand's dollar. Other high-yielding currencies, such as the Australian dollar and the Brazilian real, have so far staved off similar unwinding, partly because of the supportive role of rising commodity prices for these currencies.

Oil Market Developments

Supported by strong global growth, oil prices have been on an up-trend since the beginning of the year. WTI prices have hovered around $70-$75 a barrel in recent weeks, up from an average of $62 in March. The fundamentals in the market are not

expected to improve over the rest of 2006: strong oil demand, especially from China and the United States; capacity constraints in the OPEC area; declining productivity in the North Sea; and production shortfalls in Nigeria, Iraq, and elsewhere should continue to combine to keep the market tight. Political tensions with Iran also have contributed to oil price instability, while Bolivia's recent decision to nationalize its natural gas industry has contributed to instability to other energy products. Oil futures contracts point to WTI prices of $75.50 in 2006Q4, falling marginally to $74.25 in 2007Q4, up from $66.50 and $67.00, respectively, at the time of the last FOMC meeting.

Second District

Our Indexes of Coincident Economic Indicators for March indicate robust economic growth in New York State and New York City along with moderate growth in New Jersey; New York City's index recently surpassed its previous cyclical peak, set in early 2001 [Exhibit E-1]. Looking ahead to the next nine months, our leading indexes predict a roughly 2% annualized rate of economic growth for New Jersey, a 4% rate for New York State and a 6% rate for New York City [Exhibit E-2]. Local-area inflation moderated noticeably, on a year-over-year basis, in March, but this largely reflects the reversal of an aberrant spike in imputed out-of-town lodging costs in March 2005. The 12-month change in metropolitan New York City's Consumer Price Index (CPI) was 2.7%, down from 3.6% in February and about a ½ percentage point below the U.S. rate. Similarly, the core CPI decelerated to a 1.7% (12-month) rate, down from 2.6% in February and almost a ½ percentage point below the U.S. rate. [We estimate that out-of-town lodging costs accounted for a third of the drop in the overall 12-month rate and half the decline in the core rate.]

Labor Markets. The region's job market showed signs of strengthening in March. Based on the establishment survey, private-sector employment grew at a 1.1% annual rate in both New York and New Jersey, a bit faster than in February. Between March 2005 and March 2006, private-sector employment increased by about 1.2% in both states and rose

by a robust 1.9% in New York City [Exhibit E-3]. Turning to the labor force data, the unemployment rate held steady at 4.7% in New York State and edged down from 4.7% to 4.5% in New Jersey [Exhibit E-4]. While unemployment rates in the region have hovered near cyclical lows in recent months, labor force participation has climbed steadily, pushing employment-population ratios to near record highs.

Real Estate. Commercial real estate markets were mixed but generally stable in April, while residential markets showed substantial signs of softening in the first quarter. In April, office vacancy rates across the New York City metro area were steady to slightly higher, while rental rates were up modestly overall. There are indications of some tightening in Manhattan's retail market: a recently released report indicates that the average asking rent per square foot rose 4.9% from a year earlier, with prime areas registering much steeper increases. In the residential sector, recently-released data indicate substantial softening during the first quarter: the New York State Association of Realtors reports that the median price for single-family homes, which had been posting double-digit year-over-year gains for a number of years, fell sharply in March and was unchanged from a year earlier. Similarly, prices of Manhattan co-ops and condos, which had been rising by more than 15% through the end of 2005, were up just 6% from a year earlier in the first quarter. Moreover, unit sales of both houses and apartments are down moderately from a year ago, and the inventory of homes on the market has risen sharply.

Surveys and Other Business Activity. Recent surveys indicate moderate and steady growth in the region's manufacturing sector. Preliminary results from the May Empire State Manufacturing Survey suggest that manufacturing activity continues to expand at a steady pace, though respondents are not quite as optimistic about the six-month outlook as in recent months. Manufacturers also report more widespread increases in both input prices and selling prices. Similarly, purchasing managers in both the New York and Buffalo areas indicate steady and strong growth, as well as increased price pressures. The Conference Board's latest survey of regional residents (NY, NJ, PA) shows

consumer confidence retreating marginally in April, after vaulting to a nearly four-year high in March; consumers' assessment of current conditions is the most positive it has been since August 2001.

3. Outlook

FRBNY's Central Forecast

There are three fundamental factors behind our central projection [see Exhibits A-1 to A-5].

1. Inflation expectations are expected to remain contained.
2. There is little if any slack remaining in resource utilization. Therefore, if there are no large shocks, and if fiscal and monetary policies maintain a near-neutral stance, then growth over the medium term will be near its potential rate of approximately 3¼-3½% (2¼-2½% long-run productivity growth [GDP basis] plus 1% labor force growth).
3. The term premium is expected to remain low.

These underlying assumptions for the central forecast have not changed from the last Blackbook. However, some recent developments have led us to be more cautious about these assumptions. Inflation expectations in both financial markets and consumer surveys displayed some increases during the inter-meeting period, especially in late April. There may also be some modest payback from the robust growth in 2006Q1 in the near term. While we do not anticipate that these factors will persist, they raise the uncertainty around our forecast.

In regard to the monetary policy path, our forecast is consistent with the Fed funds target rate remaining at 5% over the forecast horizon. This path is in general agreement with that underlying the Greenbook forecast.

Inflation. Monthly changes in headline and core price indices rose significantly in April. In addition, oil prices rose during the inter-meeting period from already high levels. We expect little net change in oil prices over the forecast horizon, so these developments have led us to raise our inflation forecast only at the short-term horizon. Another reason for the increase to be temporary is that we expect only modest pass-through of energy price increases to other goods and services due to an environment of flexible product and labor markets as well as continued FOMC credibility. Consequently, we expect core PCE inflation to be little over 2% in 2006; with relatively little change in energy prices expected, overall PCE inflation should be slightly higher. In 2007, a slow moderation begins as FOMC credibility and monetary tightening effects take hold, leading core PCE inflation to decline gradually toward its implicit target.

Real Activity. We expect the economy to grow slightly below our estimate of its potential rate (3¼%-3½%) in the current quarter, with a subsequent return to potential growth over the remaining forecast horizon. After the very strong rebound in real GDP growth in 2006Q1, there are some indications of a slight payback. These indications include the recent monthly patterns of construction spending, consumer expenditures, and auto sales. In the second half of 2006, strong business investment should continue to support growth, counteracting a moderating housing market. Beyond this, our forecast remains largely unchanged with growth near its potential rate through 2007. With average real growth close to its potential rate over the forecast horizon, we expect little change in the unemployment rate from its current level.

Comparison with Greenbook Forecasts

GDP and Inflation Forecast. The Greenbook baseline forecast is conditioned on a policy path roughly unchanged from March, except at the very end of the forecasting period: the policy rate is expected to rise to 5% at the May meeting and to stay at that level through the end of 2007. The March Greenbook policy path assumed a cut to 4.75% in 2007H2. There are larger changes in the conditioning assumptions on energy prices, long-term

interest rates and the dollar. There are only very minor changes in the conditioning assumptions for household wealth. For the first two there are relatively large increases from the March Greenbook, thus they dampen real activity. For the dollar, the depreciation in the inter-meeting period adds some small stimulus. Overall these changes in conditioning assumptions produce a more abrupt slowing in real activity in 2006H2 and a small increase in the core inflation forecast.

Other major features of the current Greenbook forecast are the following.

- Core PCE inflation is revised up 0.1 percentage point for 2006, when it is expected to be 2.2%, and revised up 0.1 percentage point in 2007 to 2%.
- Real GDP growth forecast for 2006 is 3.8%, similar to March.
- Potential GDP growth is still projected to rise over the forecast period to 3.3% due to an increase in structural productivity sustained by the pick-up in capital spending of the past few years.
- Relative to the March projections, there is no change in output per hour in NFB sector, maintained at 2.8%.
- Payroll employment is expected to slow substantially over the forecast horizon (slightly more than in the March Greenbook) as labor force participation continues a secular decline. The slowdown in real activity is expected to produce an increase in the unemployment rate in 2007 to return to the assumed NAIRU of 5.0%.

Our staff forecast of real GDP growth shows, as in March, a slightly smoother path than the Greenbook forecast [see Exhibit A-2]. Our projection for 2006 is 0.2 percentage point below the Greenbook forecast for 2006 (3.6% vs. 3.8%) but 0.3 percentage point above the 2007 Greenbook projection (3.3% vs. 3.0%). The slower growth in 2007 appears to be due primarily to the Greenbook forecasting slower growth in equipment and software expenditures and government expenditures than is in our staff forecast.

For inflation, the FRBNY central forecast and the Greenbook forecast are essentially the same. A substantial difference appears, as has been the case for the last few FOMC cycles, in the outlook for productivity and unit labor costs. In 2006, both forecasts have a rebound of compensation per hour from the low growth rate (3.8%) in 2005; however, our forecast of a 4.7% growth is lower than the Board's forecast of 5.2%. The discrepancy persists for 2007: 4.6% vs. 5.4%. Since our forecast for labor productivity is

similar to the Board's, the different projections for compensation growth translate into a much lower unit labor cost in our forecast, 1.8% for both 2006 and 2007, vs. 2.3% in the Greenbook.

To reconcile different projections of unit labor costs with similar inflation projections we must infer that the Board continues to assume some contraction of profit margins.

Alternative Greenbook forecasting scenarios. These simulations are constructed using the FRB-US model (after its residuals have been adjusted to match the Greenbook forecast). Maintaining the innovations introduced in the March Greenbook, these projections are not conditioned on an assumed exogenous path for the federal funds rate: the path of the target rate is instead simultaneously generated by the policy rule incorporated in the model. This rule is the Bluebook "outcome-based" Taylor rule, estimated on real-time data since 1988. The sample period used to compute forecast intervals starts, as in the March GB, from 1986 in order to eliminate the volatility of the 1970s.

Note the simulations are (as in previous Greenbooks) are derived from ad hoc scenarios that take the form of either changes in assumptions about the path of a particular variable or the value of a particular parameter in the model, as opposed to changes in the probability distribution of the shocks. In our opinion, couching the scenarios in terms of the probability distribution of the shocks is more desirable because it maps directly into the thing we care about—specifically, our overall confidence in the central scenario presented in the Greenbook. For example, one of the alternatives presented in this Greenbook is a *domestic boom*. Presumably the decision to present this scenario was implicitly linked to the fact that Q1's GDP growth came more from final sales and less from inventory accumulation than was forecasted in March. But rather than being framed as depicting the increase in upside risk to the central forecast, it is simply presented as an independent alternative that would seem no more or less likely to occur this time than it would have been had it been presented in the March Greenbook.

The alternative scenarios considered in the Greenbook span variations to both the supply-side baseline assumptions and demand-side baseline with an additional focus on energy

price pass-through to core inflation. The lower NAIRU and less room to grow (i.e., slower growth of structural productivity) are similar to the last Greenbook. Perhaps the most interesting new scenario is a domestic boom since as noted above it captures some of the surprising momentum in the US economy. Under this scenario output growth remains above potential in 2007, but the impact on inflation is muted, according to the FRBUS simulations, as the Fed reacts by increasing the FFR past 6% by late 2007 and thus raising the real rate of interest by about 100 basis points. Another scenario that implies a tighter policy than the assumed baseline is the "greater pass-through with unanchored expectations" scenario: in this case the FFR is projected to rise to 5.5% to keep real activity as in the baseline. Despite the nominal tightening, in this scenario core inflation increases outside the comfort zone to about 2.5%, leaving real rates essentially unaffected. Overall, the policy responses that we observe in these scenarios appear to be a consequence of the weights of the outcome based policy rule used. This policy rule in conjunction with the inertial movement of inflation built into FRBUS produces very mild policy responses to inflation compared to other policy rule and economic models.

Foreign Outlook. There is little difference between our forecast and the Board's foreign outlook for 2006. They have slightly faster growth in Japan (2.2 percent vs. 2.4 percent) and slower growth in China (9.0 percent vs. 8.6 percent). The differences between the forecasts have narrowed, as we raised our Mexico forecast closer to the Board's, while the Board raised its forecast for China closer to our number.

U.S. Trade. Our forecast has somewhat more drag from net exports (0.5 percentage point, Q4/Q4) in 2006 then the Board's forecast (0.3 percentage point), with the difference tied to our forecast of more import growth this year. Our forecasts for exports are similar. Of note is that the Board tries to predict large swings in oil imports, while our forecast takes a more cautious approach. One consequence is that their prediction of a steep drop in oil imports in Q2 leads the Board to forecast a small contribution of net exports to GDP growth in Q2, while we forecast a small drag.

Comparison with Private Forecasters

The broad contours of the FRBNY forecast for real GDP growth match those produced by our PSI model as well as those shown in externally produced forecasts. On the inflation front, the FRBNY forecast shows considerably more CPI inflation in Q2 than is indicated in any of the private sector forecasts, but this may reflect the timing of the most recent CPI release relative to the release of the reported forecast values rather than any difference in views about inflation. The FRBNY forecast for core CPI in Q2 is also higher than what Macro Advisors released on April 14th. FRBNY is similar to the other forecasts for 2006Q3.

FRBNY Alternative Scenarios and Risks

In addition to the central projection discussed at the beginning of this section, we also consider a number of alternative scenarios that have different implications for monetary policy. Our approach differs from that in the Greenbook in that we attach probabilities to our alternative scenarios and usually maintain the same scenarios across FOMC cycles. This allows us to interpret more easily the forecast distribution for output and inflation, as well as analyze the impact from the variation of those probabilities over time. Once introduced, we keep an alternative scenario until its probability is assessed to be minimal; for example, we introduced the hurricane-induced sharp slowdown scenario in September 2005 after the landfall of Hurricane Katrina and then removed it in December 2005 when it became clear that such a slowdown was extremely unlikely.

We also can generate (when necessary) other forecast distributions that place a much higher probability on a specific alternative scenario in order to examine its implications for policy. This was done in January 2006 in response to the near inversion of the yield curve and the surprisingly low advance reading on 2005Q4 GDP growth. To capture these developments, we produced a forecast distribution where we doubled the probability of a productivity slowdown.

FRBNY Alternative 1: Overheating. The extremely accommodative policy stance adopted in the US and other countries in response to the global slowdown of 2000-2003 may produce a persistent move in inflation above implicit targets with an abrupt slowdown in real output growth starting in mid-2006. There are two potentially connected channels at work here. The first is a continued underestimate of the equilibrium real rate (i.e., an overestimate of slack in the global economy) and the second is higher energy and commodity prices. Sustaining the real policy rate below the equilibrium rate for a long time will tend to switch the impact of monetary policy from increasing real output to raising inflation due to an eventual increase in inflation expectations. The recent evidence from core consumer inflation reports has been more supportive of this viewpoint. TIPS implied inflation rates give some indication that markets are pricing in an increase in underlying inflation, and many measures of underlying inflation are above the "comfort zones" of policymakers. [For an alternative specification of this alternative scenario, see the Special Topic "The Free Lunch."]

FRBNY Alternative 2: Productivity Shifts. 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). Our current central projection for productivity in the medium-term assumes a growth rate similar to the pre-1973 epoch. There are two alternatives to this projection.

2a. Productivity Boom

The developments in the labor market and the continued strength of labor productivity over the longer-term—despite some recent short-term moderation—suggest that firms have become more efficient in using labor. As such, strong productivity growth could persist, which would imply that the potential growth rate is higher than our current estimate. Strong productivity growth would also limit labor cost pressures, and thereby help to keep inflation subdued. 2005Q4 productivity growth was less supportive of this scenario, but the solid productivity growth in 2006Q1 suggests the recent slowdown in

productivity was temporary. Moreover, this scenario is supported by the continued strength in IT industrial production growth, the FRBNY Tech pulse index, and hi-tech equipment and software expenditure indicators.

2b. Productivity Slump

It is possible that the recent upswing in productivity may not be sustained. Further, the persistent increase in the level and volatility of energy and commodity prices also could result in lower labor productivity growth. The recent slowing in productivity growth is consistent with this scenario as is the signal from the Kahn-Rich productivity model. However, strong economic activity in 2006Q1 has lowered the probability of this scenario.

FRBNY Alternative 3: Global Deflation. This scenario is related to changes in the world economy over the past few years, particularly the growth of the Chinese economy and the stagnation of the economies of Europe and Japan. The growth of the Chinese economy represents a shift in the aggregate supply curve, leading to higher growth and lower inflation in the US. On the other hand, the stagnation of the European and Japanese economies represent a shift in the aggregate demand curve, leading to lower inflation and lower growth in the US. The net effect of these shifts has been unambiguous in terms of lowering inflation and lowering long-term yields. These developments have been supportive of recent growth in the US. However, the downside risk in this scenario comes from an abrupt slowdown in Chinese growth without a compensating increase in Europe or Japan, thereby generating an unfavorable deflationary shock to the world economy. The recent signs of strength in Europe and Japan, continued robust growth in China, continued increases in energy and commodity prices as well as the rise in world interest rates have lowered the probability of this scenario. If these developments continue for the remainder of the second quarter, then this scenario will be dropped from the June Blackbook.

Additional Uncertainties

Foreign Outlook. Solid 2006Q1 data suggesting a healthy global economy are balanced by concerns about tighter monetary policies and high commodity prices.

In the euro area, measures of business optimism have yet to peak, suggesting the economy has noteworthy upside potential. Of particular note is that business surveys find more firms willing to hire, which may lead to more consumption growth than currently projected. Downside concerns include the impact of higher interest rates and the appreciation of the euro since the start of the year, which may have a greater-than-expected impact on output. Increases in crude oil prices are also a concern, although the euro area has done well so far in dealing with last year's increase in oil prices.

A major uncertainty in Japan is the future conduct of monetary policy following the recent announcement of a new monetary framework. There is some concern that a rise in the overnight interest rate could take place too soon, although the economy appears strong enough to weather an early policy tightening. Other risks include the uncertain impact of the recent rise in long-term rates and of the appreciating yen on demand.

In China, more rapid RMB appreciation may be needed to forestall trade tensions with the United States. The U.S. Treasury may still label China a currency manipulator, with unpredictable – but likely – negative market consequences. Investment in China remains unsustainably high as a share of GDP and is still rising. Growth in Emerging Asia outside China remains vulnerable to the global cycle and would be put at risk if a significant slowdown in global growth were to occur. The region is also vulnerable to high oil prices.

In Latin America, notable risks include the reaction of financial market to upcoming elections in Mexico and Brazil. Mexico's July 2nd presidential race has tightened, as the center-left candidate, Andres Manuel Lopez Obrador, has lost his lead in the polls to market-favorite Felipe Calderón. In Brazil, the approaching presidential elections in

October 2006 reenergized government corruption investigations, forcing the replacement of Finance Minister Palocci with less-orthodox Guido Mantega. As a result, fiscal policy has come under greater scrutiny, particularly given election year spending pressures. In Argentina, inflation and the government's heterodox policy response remain key concerns.

U.S. Trade Forecast. The forecast assumes import growth will remain moderate relative to domestic demand growth, as was the case in 2005. One concern is that the pick-up in import volumes in the first quarter of 2006 might be more persistent than currently assumed and lead to higher-than-expected imports for the year as a whole. A countervailing risk is that investment spending might rise more rapidly than assumed in Europe and Japan, causing faster-than-expected growth in U.S. exports.

Quantifying the Risks. The inflation data over the inter-meeting period have been less consistent with our central scenario. Therefore, we are lowering the current likelihood of the central scenario to 66% (it was 69.5% for the March FOMC). We assume that the most likely scenario is overheating at 12% (6% in March) and the productivity surge at 10% (10% in March). These are followed by the productivity slowdown at 8% (10% in March) and the global deflation at 1% (1.5% in March). The remaining 3% (3% in March) is split evenly between upside and downside risks. The implied dynamic balance of risks is shown in Exhibit C-1.

The forecast distributions for core PCE inflation and GDP growth produced by the standard risk assessments are shown in Exhibits C-4 and C-5. The Bank forecast has been extended through the end of 2008 under the assumption that output grows at the potential rate of 3.3% and core PCE inflation is converging back to the implicit inflation target of 1.5%. The probability of core PCE inflation exceeding 2.5% by the end of 2008 is now 65% (55% in March)--this probability is produced by considering the share of inflation paths that exceed 2.5% and cannot be obtained directly from the forecast

distribution presented in Exhibit C-4. The probability that the expansion continues through the end of 2008 is unchanged at 95%.

The FRBNY "confidence intervals" can be compared to those presented in the Greenbook. In general we have a similar level of confidence for 2006 as the Board, but less confidence in 2007 on inflation. For example, the Greenbook has a 70% probability interval of 1.2% to 2.8% for core PCE inflation in 2007, while our interval ranges from 0.8% to 3.6%. The source of the wider interval is the weight we place on our alternative scenarios. These scenarios do not receive the same weight in the historical data since 1986 from which the Greenbook derives its forecast errors.

Special Topic

The Free Lunch

May 4th, 2006

Meg McConnell, Redacted

Given the duration of the accommodative policy, the lack of significant inflationary pressure is often cited as evidence against the sort of "overly" accommodative policy described in our overheating scenario. The Free Lunch scenario highlights the possibility that the U.S. economy could be overheating but that the overheating might not manifest itself in uncomfortably high inflation rates (i.e., where uncomfortably high is defined as a rate well in excess of the FOMC's implicit target). The argument is that if the dollar is not freely floating, and moreover if it is being boosted by capital inflows designed to strengthen it relative to other currencies, it is possible that market interest rates could be held below what could reasonably be viewed as the equilibrium rate for a significant period of time. To see why inflation per se might not be the canary in the mine, consider the extreme case of a fixed exchange rate regime, in which an over-valued currency will imply declines in the price level in order to restore equilibrium interest rates. Since avoiding significant deviations of actual real interest rates from equilibrium real rates (so as to avoid distorting inter-temporal consumption and saving decisions) is the true objective of monetary policy, it seems prudent to consider whether we have other evidence suggesting that the U.S. is over-consuming today at the expense of future consumption.

It is important to consider the fact that the direct costs of supporting the (over-valued) peg are being borne by the economies seeking to keep their currencies weak. Further, if these efforts are large enough to affect world capital markets and interest rates, the U.S. is effectively importing the expansionary monetary policies of these other countries. If the FOMC does not actively offset this policy, but instead passively accepts these lower world interest rates, it is acting as if monetary policy can have real effects (the free lunch). Naturally this situation won't go on forever, but that does not mean that the policy, while it exists, does not do damage to the long-run growth trajectory of both the U.S. and the rest of the world.

The most direct evidence in favor of this is the apparent unsustainability of the U.S. current account deficit in general and its fiscal imbalances in particular—if the exchange rate is moving freely, it is difficult to see why unsustainable conditions would even develop, let alone persist for years. Since we do see these imbalances, however, and can't reconcile them with plausible productivity and population projections, we might be concerned that we're not in the world suggested by our flexible exchange rate open economy models and hence we might want to consider the possibility that hitting a 2% inflation objective won't guarantee that we're getting the real rate right. Corroborating evidence can be found in the degree to which home prices in the U.S. seem to be over-valued.

4. Policy Alternatives

Under our main forecast and risk assessment, the target FFR should be raised by 25 basis points to 5.0% at the upcoming meeting. This rate is higher than the peak FFR level that has been implied by our forecasts and risk assessments for most of the current tightening cycle. The primary factor behind the increase in our recommended policy rate is that our assessment of the neutral policy rate has increased—from a range of 3.75% to 4.25% over the early part of the tightening cycle to our recent assessment of a 4.0% to 4.5% range. The increase in our assessment of the neutral rate was prompted mainly by the continued momentum of the U.S. economy despite the 15 consecutive increases in the FFR, with further corroboration coming from the recent increase in medium-term real forward rates worldwide.

Maintaining the FFR at 5% through the end of 2007 is consistent with our central forecast scenario as discussed in Special Topic 1, "The case for pausing at 5%." However, we have reduced the likelihood of our central forecast scenario from March and have increased the likelihood of the *overheating* scenario. The combined increase in the weight we now place on scenarios entailing short-run upside risk to inflation (*overheating* and *productivity slowdown*) leads us to raise our expectation that the FFR will be between 5% and 5.5% through the end of 2007. For example, under our *Inflation Hawk* policy rule (described in more detail below) we generate an expected FFR of 5.5% in 2006Q4. In this Blackbook, we also have reduced the weight further on the global deflation scenario, a reduction that implies a corresponding decline in the risks of a large policy mistake induced by over-tightening. Special Topic 2, "The Case for Inflation Vigilance," repeats some arguments in favor of increased vigilance on the price stability objective from the March Blackbook.

It is fair to say that our current assessment of the appropriate near-term path of policy is more contingent—in both directions—on the aspects of the economic environment about

which we are least certain. One way to illustrate this point is that in late 2004 and early 2005, it is unlikely that even a 50 to 75 basis point increase in the committee's assessment of the neutral FFR within the inter-meeting period would have changed the upcoming policy move, and possibly not even the move following that one. The same can be said of the committee's assessment of underlying trend productivity growth, or potential output growth, and even moves in medium and long-horizon inflation expectations. At this juncture, though, it is precisely these factors that matter the most in determining the conduct of monetary policy going forward.

For example, we are in a situation in which the future path of the FFR is more dependent on views about the costs of core inflation running close to the top of the implicit range (and its potential harm to credibility) versus the risks to real activity of trying to reduce the core inflation rate. If the FOMC's credibility is not at stake, then we can tolerate temporary upward movements in core inflation due to energy price shocks or other factors. However, once inflation expectations at medium- to long-horizons begin to rise, a loss of credibility could be triggered that would require a more significant tightening in the future. The trade-off between moving now to maintain credibility and moving later so as not to inadvertently over tighten is determined both by policymaker preferences and their assessment of the current situation. Our analysis of the policy alternatives is couched in terms of the assessment of the current situation, but it is possible to re-frame our discussion in terms of two policymakers who possess the same assessment of the current situation but hold different views of the trade-off between inflation and real activity.

Finally, in considering the policy alternatives it is important to keep in mind that the current tightening cycle has been unusual with regard to the behavior of long forward rates. As the FFR has risen, long forward rates declined in such a way that there was little if any increase in long-term rates. In the last six months, however, long forward rates have increased in the US and the off the run 10 year Treasury yield has remained above 5% for the whole inter-meeting period. On the one hand, the increase in long-term rates implied a need for less tightening to slow the economy going forward. On the other hand,

the lack of any restraint from an increase in long-term rates until now might have built considerable momentum into the economy.

To provide a quantitative analysis of the germane policy alternatives, we examine the prescriptions implied by three different policy rules:

1. *Standard Policy Rule (very close to market expectations)*. Increase by 25 basis points in May, and send a mild positive signal regarding future actions.

2. *Pause (slightly below market expectation)*. Increase by 25 basis points in May, and signal short-run flexibility to respond to data that produces large changes in the forecast.

3. *Inflation Hawk (above market expectations).* Increase by 25 basis points in May, and strongly signal a desire to reduce core inflation to the (implicit) target or range on a sustained basis unless incoming data reduces the inflation forecast.

The preamble to the D-Exhibits contains a description of how the various rules react to incoming data.

Exhibit D-1 contains the results of averaging the prescription of these three rules over the Bank forecast distribution. It shows the implied (quarterly average path) of FFR through the end of 2007 compared to that currently priced into markets. The *Inflation Hawk* rule produces a level for the FFR at the end of 2006 about 40 basis points higher than that currently priced into financial markets. The other two rules produce very similar tightening to that currently priced into markets in 2006, and are a little higher than the market in 2007. Exhibit D-6 contains the probabilistic metric for comparing the market implied paths of the FFR with those of our policy rules at the end of 2006. It appears the market is pricing in behavior very close to that represented by our standard rule.

Exhibit D-5 shows there is a high probability that the FFR would be 5% under the Pause rule for the rest of 2006 (probability of 5% in 2006Q3 is 0.98 and in 2006Q4 is 0.65), while the *Standard Policy* is symmetric around 5% in 2006Q3. The distribution implied by the *Inflation Hawk* rule has a bimodal distribution with a 35% probability of the FFR remaining at 5% in 2006Q3, but with a 64% probability of increases in June and August.

Both the standard policy rule and the pause are very close to the market path. We focus on the *Pause* rule because it exhibits some interesting properties across our scenarios. Exhibit D-2 contains the path of the nominal FFR and Exhibit D-3 contains the path of the real FFR for our four main alternative scenarios through the end of 2008.

Exhibit D-2 shows the projected path of the FFR is much higher under the FRBNY overheating scenario in 2007 than under our central projection or the market-implied path, with Exhibit D-3 showing that the real FFR takes longer to catch up in the overheating scenario. The central forecast scenario and the productivity surge both produce expected paths that are effectively equal to 5% through the end of 2007. For the productivity surge scenario, the real rate in Exhibit D-3 increases from below 3% to 3.5% by the end of 2007. This scenario captures an environment similar to 1996-1998 where the nominal FFR was approximately constant, while real rates increased and inflation declined.

Exhibit D-4 shows the result of running our standard gradualist policy rule—setting the initial FFR at its average value of 1.9 in 2004Q4—with a 1.5% inflation target and a 1.75% inflation target (see the preamble to the Exhibit D for more information on the standard policy rules as well as this exercise). The path derived from the 1.5% target closely follows the actual FFR path until the middle of 2005. After this, the slope of actual policy has been considerably steeper than that implied by the standard policy rule. The policy rule with the 1.5% inflation target does reach the level of the FFR currently priced into markets in late 2007. The exhibit also includes the implications of averaging our three policy rules, where the average was chosen to match the market-implied expected path as closely as possible.

Special Topic

The Case for Pausing at 5%

May 4th, 2006

Macroeconomics and Monetary Studies Function

As discussed in the main text, future policy decisions will now depend more on the effects of the incoming data on the forecast than during the previous two years when the FOMC was removing policy accommodation. In this box, we illustrate the extent of the uncertainty about the real activity and inflation outlooks, and then justify why holding (temporarily) the FFR at 5% may be the best way to achieve the committee's objectives.

Uncertainty on the real activity outlook

The data for the first quarter signal a strong economy, with some momentum entering the second quarter. However, these data come after a very weak fourth quarter: if we look at the last two quarters, average growth has been about 3 ¼ %, which is slightly below the average during the past two years. Furthermore, consumer spending is moderating – monthly real PCE growth was 0.2% in February and March: if it were to continue at this pace in the second quarter, real PCE would only increase 2½% (annual rate) in the second quarter.

There are also some forward-looking indicators that are pointing to some moderation in activity. The index of leading indicators has dropped for two consecutive months, and the forward-looking components of consumer surveys have generally moved down over the past year, particularly for the Michigan survey. These events are consistent with more cautious behavior by households as well as a possible increase in their saving propensity.

In addition, we believe there are two key unresolved factors that have the potential to lead to a more significant slowdown: the housing market and energy prices. While the housing market appears to be cooling off in a gradual manner, the March increase in the number of unsold homes and evidence of waning price increases in the resale market suggest that a more substantive downward adjustment in demand could occur. Energy costs, which have increased sharply for over two years, may further reduce households' spending ability and induce a more severe decline in real growth.

Moreover, it is possible that activity is only now beginning to react to the current tightening cycle. An unusual feature of the current cycle is that long-term interest rates, the channel through which much of the effect of monetary policy occurs, had not risen much through most of the cycle. However, this inter-meeting period has seen long-term interest rates increase to their highest level since 2002, suggesting that policy has begun to gain traction. Such increases in long-term rates could exacerbate the slowdown in housing as well as impact consumer durable spending.

Uncertainty on the inflation outlook

Although core measures of inflation have remained fairly stable over the past year, the most recent data point to firmer core inflation in both the CPI and PCE deflator. The key question for the outlook concerns how much weight to place on the recent uptick in the inflation forecast. Inflation is a lagging indicator, and this is especially true after an extended period of removing policy accommodation. Further, the past two years have also witnessed strong price data in March and April, but the resulting inflation scares soon dissipated.

One reason for concern about these inflation signs is that

some of the components displaying the larger price increases are the ones typically showing more persistence. Another reason is the rise in energy costs, which can raise overall production costs. There is, however, a counter-argument to this latter reason. Specifically, wages and labor compensation are a larger component of total costs and remain subdued, particularly as measured by the ECI.

As for demand pressures on prices, these are likely to be moderated by the anticipated slowdown of economic activity, as well as by a combination of delayed effects from past rate increases plus the increase in long-term interest rates. Although measures of inflation expectations have moved up recently, the moves are not large compared to recent experience. Although this rise in expectations is consistent with some further increases in total inflation from recent energy price indices, it does not necessarily signal a rise in the underlying inflation trend.

Our policy projections

Our central forecast for real activity and inflation is consistent with keeping the Fed funds target rate fixed at 5% through the end of 2007, with a subsequent decline toward the range of 4.0-4.5%. A decision to deviate from a 5% target requires evaluating if such a rate strikes the right balance between the risks to inflation and real activity discussed above. If failing to raise rates generates an increase in inflation beyond the desired target, inflation expectations may start to rise, compromising the Fed's commitment to price stability as well as its credibility. If raising rates accelerates the housing market slowdown, and in turn depresses consumer spending and confidence, then the outlook for real activity may deteriorate significantly.

A pause at 5% may be the right choice in June if incoming data before the FOMC meeting has not resolved current uncertainty. It would not rule out the possibility of future rate increases: instead, it would provide the FOMC with additional time to gather more information on the state of the economy and determine whether further tightening is appropriate.

It should be noted that a pause without reversing course has characterized a recent easing episode of monetary policy. Specifically, the dramatic decline from 6% to 1% that started in January 2001 had two long pauses at 1.75% and 1.25%.

Special Topic

The Case for Inflation Vigilance

May 4th, 2006

Simon Potter, Redacted

Our standard assessment of the policy stance is based on using the core PCE deflator as the indicator of inflationary pressures. However, for almost two years both the core PCE and core CPI have been running well below headline inflation. Moreover, they also have been below most alternative measures of underlying inflation (median, trimmed mean, FRBNY UIG and FRBNY smoothed inflation). The only measure of underlying inflation that has been more benign than core PCE inflation is market-based core PCE inflation.

Our forecast has core PCE inflation remaining near or slightly above the top of the implicit range until the end of 2007. Recent core inflation reports have been at or slightly above our expectations; furthermore, core services prices, particularly owners' equivalent rent, have shown signs of acceleration. Because much of services are non-traded, these prices probably are more heavily influenced by domestic monetary conditions. In contrast, core goods prices, which have been a primary factor behind benign core inflation in recent years, are more heavily influenced by global factors outside of the realm of domestic monetary policy. In particular, even though there is some controversy over the magnitude of exchange rate pass-through, a significant depreciation of the dollar certainly would pose an upside risk to goods prices that would probably raise core inflation above the top of the implicit range.

If such events were to occur, causing core inflation to rise significantly above the top of the implicit range, it is likely that inflation expectations may not remain contained. Furthermore, such events probably would have negative consequences for FOMC credibility. To restore credibility and to bring down inflation expectations, monetary policy then may have to be tightened considerably, with greater output costs, to bring inflation back within the implicit range.

These considerations thus suggest that increases in core inflation when it is near or above the top of the implicit range may be more costly than similar increases when core inflation is closer to the center of the range. This in turn implies that policymakers should be more aggressive in raising rates when core inflation is near the top of the implicit range, as it is now, to prevent core inflation from substantially exceeding its target range.

A. Forecast Details

Exhibit A-1. Actual and Projected Percentage Changes in GDP, Prices, and the Unemployment Rate

Summary of the FRBNY forecast for the current FOMC cycle and the previous two cycles. Provides the forecasts of real GDP growth, change in the GDP deflator, change in the PCE deflator, the change in core PCE deflator, and the level of the unemployment rate. Data frequencies are both quarterly and yearly (Q4/Q4) over the forecast horizon.
Source: MMS Function, FRBNY

Exhibit A-2. Detailed Comparison of FRBNY and Greenbook Forecasts

Summary of the baseline FRBNY and Board forecasts for the current FOMC cycle and the previous cycle. Besides variables included in Exhibit A-1, there are forecasts for some broad components of GDP, some measures of productivity and wages, labor force participation, payroll employment growth, and some financial market variables.
Source: MMS Function, FRBNY; Board staff

Exhibit A-3. Judgment Table

History and current predictions of the primary variables in the FRBNY forecast. This includes the detailed judgments—such as those for interest rates, profit growth, productivity, and real activity—that are behind our forecasts for aggregates such as real GDP and inflation.
Source: MMS Function, FRBNY

Exhibit A-4. Real GDP and components (growth contributions)

History and current forecasts of the contributions to real GDP growth of the broad components of expenditures. Growth contributions are in percentage points.
Source: MMS Function, FRBNY

Exhibit A-5. Alternative GDP and Inflation Forecasts

Real GDP growth and CPI inflation forecasts from a number of sources. Besides the FRBNY forecast, the table includes the median forecasts from two surveys of forecasters (Blue Chip and Survey of Professional Forecasters [SPF]), the forecasts from

Macroeconomic Advisers, and the forecast from a small model (PSI model) that uses business activity and sentiment as the primary independent variables.
Source: MMS Function, FRBNY; Blue Chip Economic Indicators; FRB Philadelphia Survey of Professional Forecasters; Macroeconomic Advisers

Exhibit A-6 (1, 2, & 3). Recent Behavior of Inflation

The three tables in this exhibit show the actual changes in inflation as measured by the PCE deflator, CPI, and PPI over 1, 3, 6, 12, and 24 months.
Source: Bureau of Economic Analysis and Bureau of Labor Statistics

Exhibit A-7. Underlying Inflation Gauge (UIG) and Implied Inflation from the TIPS

The chart displays measures of inflation expectations from the UIG, and compares them to the TIPS measure over the same horizon (a non–technical description of the construction of this measure is in Appendix to Exhibit A-7 below. A non–technical description of the construction of inflation expectations from the TIPS is in Appendix to Exhibit B-1).
Source: MMS Function, FRBNY and Swiss National Bank.

Exhibit A-8. Comparison of Alternative Measures of Trend Inflation

These charts display widely used measures of trend inflation. The measures of CPI inflation include the core, the median, the trimmed mean (Cleveland Fed), a smoothed measure (from overall CPI inflation using a time series model estimated at FRBNY) and the UIG measure. The measures of PCE inflation are total, core, the trimmed mean (Dallas Fed), and a smoothed measured (calculated in a manner similar to the smoothed CPI measure). *Source: FRB Cleveland; FRB Dallas; MMS Function, FRBNY; and Swiss National Bank.*

Appendix to Exhibit A-7. Construction of UIG (Underlying Inflation Gauge)

The Underlying Inflation Gauge is a measure of underlying inflation that incorporates information from a very broad set of nominal and real variables. It is constructed using a dynamic factor model to extract a common component from the set of variables, and then removes the high frequency movements (fluctuations whose frequency is up to one year)

from this component. This filtering reflects our view that monetary policy is primarily interested in shocks with a medium-term impact on inflation. In terms of units, the UIG maps into a measure of consumer price index.

A. Forecast Details

Exhibit A-1: Actual and Projected Percentage Changes of GDP, Prices, and the Unemployment Rate

	Real GDP			Chain Type GDP Price Index			PCE Deflator			Core PCE			Unemployment Rate			
	Jan06	Mar06	May06	Jan06	Mar06	May06	Jan06	Mar06	May06	Jan06	Mar06	May06	Jan06	Mar06	May06	
2005 Q1	*3.8*	*3.8*	*3.8*	*3.1*	*3.1*	*3.1*	*2.3*	*2.3*	*2.3*	*2.4*	*2.4*	*2.4*	*5.2*	*5.2*	*5.2*	
2005 Q2	*3.3*	*3.3*	*3.3*	*2.6*	*2.6*	*2.6*	*3.3*	*3.3*	*3.3*	*1.7*	*1.7*	*1.7*	*5.1*	*5.1*	*5.1*	
2005 Q3	*4.1*	*4.1*	*4.1*	*3.3*	*3.3*	*3.3*	*3.7*	*3.7*	*3.7*	*1.3*	*1.3*	*1.3*	*5.0*	*5.0*	*5.0*	
2005 Q4	1.1	*1.6*	*1.7*	3.0	*3.3*	*3.5*	2.6	*2.7*	*2.9*	2.1	*2.1*	*2.4*	*5.0*	*5.0*	*5.0*	
2006 Q1	4.0	4.7	*4.8*	3.2	2.1	*3.3*	2.5	2.0	*2.0*	2.0	2.0	*2.0*	4.9	4.8	*4.8*	
2006 Q2	3.2	3.4	3.1	2.3	2.3	1.9	2.4	2.4	3.8	2.0	2.1	2.4	4.9	4.7	4.7	
2006 Q3	3.4	3.5	3.5	2.3	1.8	1.9	2.2	2.2	2.2	2.0	2.1	2.2	4.9	4.7	4.7	
2006 Q4	2.8	2.9	3.0	2.3	2.1	2.1	2.2	2.2	2.2	2.0	2.0	2.1	4.9	4.7	4.7	
2007 Q1	3.3	3.4	3.2	2.4	2.3	2.4	2.1	2.1	2.1	1.9	1.9	2.0	4.9	4.7	4.7	
2007 Q2	3.4	3.5	3.2	2.1	2.0	2.1	1.9	1.9	1.9	1.8	1.9	2.0	4.9	4.7	4.7	
2007 Q3	3.5	3.2	3.4	2.1	2.3	2.1	2.0	2.0	2.0	1.8	1.8	1.9	4.9	4.7	4.7	
2007 Q4	3.2	2.9	3.4	2.0	1.9	2.1	1.9	1.9	1.9	1.8	1.8	1.8	4.9	4.7	4.7	
2003 Q4 to 2004 Q4	*3.8*	*3.8*	*3.8*	*2.9*	*2.9*	*2.9*	*3.1*	*3.1*	*3.1*	*2.2*	*2.2*	*2.2*	*-0.4*	*-0.4*	*-0.4*	*
2004 Q4 to 2005 Q4	3.1	*3.2*	*3.2*	3.0	*3.1*	*3.1*	3.0	*3.0*	*3.0*	1.9	*1.9*	*2.0*	*-0.5*	*-0.5*	*-0.5*	*
2005 Q4 to 2006 Q4	3.4	3.6	3.6	2.5	2.1	2.3	2.3	2.2	2.5	2.0	2.1	2.2	0.0	-0.2	-0.2	*
2006 Q4 to 2007 Q4	3.3	3.2	3.3	2.1	2.1	2.2	2.0	2.0	2.0	1.8	1.8	1.9	0.0	0.0	0.0	

* Q4 to Q4 absolute change

Notes: Columns reflect the date of a forecast. Italics indicate a data release prior to date of a forecast

A. Forecast Details

Exhibit A-2: Detailed Comparison of FRBNY and Greenbook Forecasts

	FRBNY						Board					
	2005		2006		2007		2005		2006		2007	
	MAR	MAY	MAR	MAY	MAR	MAY	MAR	MAY	MAR	MAY	MAR	MAY
REAL GDP (Q4/Q4)	3.2	3.2	3.6	3.6	3.2	3.3	3.3	3.2	3.8	3.8	3.1	3.0
GROWTH CONTRIBUTIONS(Q4/Q4)												
FINAL SALES TO DOMESTIC PURCHASERS	3.6	3.5	3.9	4.0	3.7	3.8	3.5	3.5	4.1	4.2	3.3	3.2
CONSUMPTION	2.1	2.1	2.7	2.7	2.2	2.2	2.1	2.1	2.7	2.8	2.3	2.2
BFI	0.7	0.7	1.1	1.1	1.1	1.1	0.7	0.7	0.9	1.0	0.7	0.7
STRUCTURES	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.3	0.1	0.2
EQUIPMENT & SOFTWARE	0.7	0.7	1.0	1.0	0.9	0.9	0.7	0.7	0.7	0.7	0.6	0.5
RESIDENTIAL INVESTMENT	0.4	0.4	-0.3	-0.3	-0.1	-0.1	0.4	0.4	0.1	0.0	0.0	0.0
GOVERNMENT	0.3	0.3	0.5	0.6	0.5	0.6	0.3	0.3	0.4	0.4	0.3	0.3
FEDERAL	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
STATE & LOCAL	0.1	0.1	0.3	0.2	0.4	0.4	0.1	0.1	0.2	0.2	0.3	0.3
INVENTORY INVESTMENT	-0.2	-0.1	0.1	0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	0.2	0.1
NET EXPORTS	-0.2	-0.2	-0.5	-0.6	-0.5	-0.5	-0.2	-0.2	-0.3	-0.3	-0.4	-0.3
INFLATION/PRODUCTIVITY/WAGES (Q4/Q4)												
GDP DEFLATOR	3.1	3.1	2.1	2.3	2.1	2.2	3.1	3.1	2.5	2.6	2.1	2.3
PCE	3.0	3.0	2.2	2.5	2.0	2.0	3.0	3.0	2.0	2.5	1.9	2.0
CORE PCE	1.9	2.0	2.1	2.2	1.8	1.9	1.9	2.0	2.1	2.2	1.9	2.0
COMPENSATION PER HOUR	3.8	3.8	4.4	4.7	4.6	4.6	3.8	3.7	5.2	5.2	5.3	5.4
OUTPUT PER HOUR	2.5	2.5	2.9	2.9	3.0	2.8	2.5	2.5	2.8	2.8	3.1	3.1
UNIT LABOR COSTS	1.3	1.3	1.5	1.8	1.6	1.8	1.3	1.2	2.3	2.2	2.1	2.3
EMPLOYMENT VARIABLES												
UNEMPLOYMENT RATE (Q4 LEVEL)	5.0	5.0	4.7	4.7	4.7	4.7	5.0	5.0	4.8	4.8	4.9	5.0
PARTICIPATION RATE (Q4 LEVEL)	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.0	66.0	65.8	65.8
NONFARM PAYROLL EMPLOYMENT (Q4/Q4 CHANGE)												
TOTAL, IN THOUSANDS	1917	1917	2054	1867	1229	1514	1900	1900	2000	1900	1000	900
AVERAGE PER MONTH, IN THOUSANDS	160	160	171	156	102	126	158	158	167	158	83	75
FINANCIAL MARKET VARIABLES												
FED FUNDS RATE (PERCENT)	3.97	3.97	5.00	5.00	4.75	5.00	4.25	4.25	5.00	5.00	4.75	5.00
BAA BOND YIELD (PERCENT)	6.3	6.3	6.6	7.0	6.6	7.0	6.3	6.3	6.5	6.7	6.5	6.7
EFFECTIVE EXCHANGE RATE (Q4/Q4 % CHANGE)	-1.0	-1.4	-3.1	-4.0	-1.5	-1.5	2.6	2.6	-2.4	-4.4	-1.3	-1.9

A. Forecast Details

Exhibit A-3: Judgment Table

	2005:01	2005:02	2005:03	2005:04	2006:01	2006:02	2006:03	2006:04	2007:01	2007:02	2007:03	2007:04	Q4/Q4 % CHANGE/Q4 LEVEL/ANNUAL AVERAGE 2004	2005	2006	2007
REAL GDP AND COMPONENTS (% Change, AR)																
GDP	*3.8*	*3.3*	*4.1*	*1.7*	*4.8*	3.1	3.5	3.0	3.2	3.2	3.4	3.4	*3.8*	*3.2*	3.6	3.3
CHANGE IN INVENTORIES (GROWTH CONTRIBUTION) 1\	*0.3*	*-2.1*	*-0.4*	*1.9*	*-0.5*	0.9	0.2	0.0	0.0	0.0	0.0	0.1	*0.2*	*-0.1*	0.1	0.0
DOMESTIC PRIVATE PURCHASES	*4.0*	*2.1*	*4.0*	*2.9*	*5.4*	3.4	3.7	3.3	3.5	3.5	3.7	3.6	*4.5*	*3.2*	3.9	3.6
CONSUMPTION EXPENDITURES	*3.5*	*3.4*	*4.1*	*0.9*	*5.5*	3.0	3.5	3.3	3.2	3.2	3.2	3.2	*3.8*	*2.9*	3.8	3.2
BUSINESS FIXED INVESTMENT	*5.7*	*8.8*	*8.4*	*4.5*	*14.3*	7.8	9.6	9.9	10.1	10.2	9.4	8.7	*10.9*	*6.8*	10.4	9.6
RESIDENTIAL INVESTMENT	*9.5*	*10.8*	*7.3*	*2.8*	*2.6*	-10.0	-5.0	-6.0	-6.0	-3.0	0.0	2.0	*6.6*	*7.6*	-4.7	-1.8
NET EXPORTS (GROWTH CONTRIBUTION) 1\	*-0.4*	*1.1*	*-0.1*	*-1.4*	*-0.8*	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	*-0.9*	*-0.2*	-0.6	-0.5
EXPORTS	*7.5*	*10.7*	*2.5*	*5.0*	*12.1*	3.0	5.5	5.9	6.5	6.8	6.5	6.5	*6.1*	*6.4*	6.6	6.6
IMPORTS	*7.4*	*-0.2*	*2.4*	*12.1*	*13.0*	4.5	6.2	6.8	7.1	7.2	7.1	7.0	*10.6*	*5.3*	7.6	7.1
FEDERAL GOVERNMENT	*2.3*	*2.4*	*7.5*	*-2.6*	*10.8*	2.0	4.0	2.0	6.0	2.0	4.0	2.0	*4.2*	*2.3*	4.6	3.5
STATE & LOCAL GOVERNMENTS	*1.6*	*2.6*	*0.2*	*0.3*	*0.0*	2.0	3.0	3.0	3.0	3.0	3.0	3.0	*0.9*	*1.2*	2.0	3.0
INTEREST RATE ASSUMPTIONS (%)																
FEDERAL FUNDS RATE (TARGET)	*2.44*	*2.92*	*3.43*	*3.97*	*4.43*	4.89	5.00	5.00	5.00	5.00	5.00	5.00	*1.94*	*3.97*	5.00	5.00
YIELD ON 10-YR GOVERNMENT	*4.3*	*4.2*	*4.2*	*4.5*	*4.6*	5.1	5.3	5.3	5.3	5.3	5.3	5.3	*4.2*	*4.5*	5.3	5.3
BAA BOND YIELD	*6.0*	*6.0*	*6.0*	*6.3*	*6.3*	6.9	7.0	7.0	7.0	7.0	7.0	7.0	*6.2*	*6.3*	7.0	7.0
INCOME (% Change, AR)																
PERSONAL INCOME	*2.0*	*4.5*	*2.6*	*9.4*	*6.2*	6.5	7.3	4.2	6.3	6.6	7.3	4.6	*7.5*	*4.6*	6.0	6.2
REAL PERSONAL DISPOSABLE INCOME	*-3.4*	*0.2*	*-1.4*	*6.7*	*3.2*	2.6	5.2	1.8	4.2	4.7	5.4	2.5	*4.1*	*0.5*	3.2	4.2
PERSONAL SAVING RATE (% OF DPI)	*0.5*	*-0.2*	-1.6	*-0.2*	*-0.7*	-0.7	-0.3	-0.7	-0.5	-0.1	0.4	0.2	*1.7*	*-0.4*	-0.6	0.0
CORPORATE PROFITS BEFORE TAXES	*24.5*	*19.7*	*-15.2*	*71.1*	15.0	-0.9	-1.2	-4.0	-4.1	-2.6	-2.1	-2.9	*9.6*	*21.3*	2.0	-2.9
PRICES & PRODUCTIVITY (% Change, AR)																
GDP IMPLICIT DEFLATOR	*3.1*	*2.6*	*3.3*	*3.5*	*3.3*	1.9	1.9	2.1	2.4	2.1	2.1	2.1	*2.9*	*3.1*	2.3	2.2
PERSONAL CONSUMPTION EXPENDITURES	*2.3*	*3.3*	*3.7*	*2.9*	*2.0*	3.8	2.2	2.2	2.1	1.9	2.0	1.9	*3.1*	*3.0*	2.5	2.0
CORE PERSONAL CONSUMPTION EXPENDITURES	*2.4*	*1.7*	*1.3*	*2.4*	*2.0*	2.4	2.2	2.1	2.0	2.0	1.9	1.8	*2.2*	*2.0*	2.2	1.9
CONSUMER PRICE INDEX	*2.5*	*3.7*	*5.5*	*3.2*	*2.2*	4.8	2.5	2.4	2.4	2.3	2.3	2.2	*3.3*	*3.7*	3.0	2.3
CORE CONSUMER PRICE INDEX	*2.5*	*2.0*	*1.6*	*2.4*	*2.4*	2.7	2.4	2.4	2.3	2.2	2.1	2.1	*2.1*	*2.1*	2.5	2.2
COMPENSATION PER HOUR (NONFARM BUSINESS)	*5.6*	*1.3*	*5.5*	*2.7*	*5.7*	4.1	4.6	4.3	4.6	4.6	4.6	4.6	*5.9*	*3.8*	4.7	4.6
OUTPUT PER HOUR (NONFARM BUSINESS)	*3.8*	*2.4*	*4.2*	*-0.3*	*3.2*	2.8	2.8	2.8	2.8	2.8	2.8	2.8	*2.6*	*2.5*	2.9	2.8
UNIT LABOR COST (NONFARM BUSINESS)	*1.8*	*-1.0*	*1.2*	*3.0*	*2.5*	1.3	1.8	1.6	1.9	1.9	1.9	1.9	*3.3*	*1.3*	1.8	1.8
REAL ACTIVITY																
CAPACITY UTILIZATION (MANUFACTURING, %)	*78.7*	*78.6*	*78.5*	*79.8*	*80.4*	80.8	81.2	81.5	81.9	82.0	82.1	82.1	*77.1*	*78.9*	81.0	82.0
CIVILIAN UNEMP RATE (%) 2\	*5.2*	*5.1*	*5.0*	*5.0*	*4.8*	4.7	4.7	4.7	4.7	4.7	4.7	4.7	*5.4*	*5.0*	4.7	4.7
PRIVATE HOUSING STARTS (THOUS, AR)	*2083*	*2044*	*2101*	*2059*	*2131*	1970	1930	1900	1890	1880	1870	1850	*1950*	*2072*	1983	1873
LIGHT VEHICLE SALES (MIL UNITS, AR) 3\	*16.5*	*17.2*	*17.9*	*15.9*	*16.9*	16.8	16.8	16.9	16.9	16.9	16.9	17.0	*16.9*	*16.9*	16.8	16.9
FEDERAL SURPLUS/DEFICIT (Unified Basis, Bil$, NSA) 4	*-176.6*	*45.2*	*-69.2*	*-119.3*	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	*-412.3*	*-317.7*	-357.2	-298.6

NOTE: All series other than interest rates and the federal deficit are seasonally adjusted. Italics indicate a reported value. 1\ Growth contribution to real GDP 2\ Annual values are end of Q4 levels 3\ Includes domestic and imported auto and light truck sales 4\ Yearly numbers are based on the fiscal year

A. Forecast Details

Exhibit A-4: Real GDP and Components (Growth Contributions)

	2005				2006				2007				Q4/Q4 % CHANGE/Q4 LEVEL			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2004	2005	2006	2007
REAL GDP (Growth, Annual Rate)	***3.8***	***3.3***	***4.1***	***1.7***	***4.8***	**3.1**	**3.5**	**3.0**	**3.2**	**3.2**	**3.4**	**3.4**	***3.8***	***3.2***	**3.6**	**3.3**
Contributions to GDP growth:																
FINAL SALES TO DOMESTIC PURCHASERS	***3.9***	***4.4***	***4.7***	***1.1***	***6.2***	**2.6**	**3.8**	**3.5**	**3.7**	**3.6**	**3.9**	**3.8**	***4.5***	***3.5***	**4.0**	**3.8**
CONSUMPTION EXPENDITURES	*2.4*	*2.4*	*2.9*	*0.6*	*3.8*	2.1	2.4	2.3	2.2	2.2	2.2	2.2	*2.7*	*2.1*	2.7	2 2
BUSINESS FIXED INVESTMENT	*0 6*	*0.9*	*0.9*	*0.5*	*1.5*	0 8	1 0	1.1	1.1	1.1	1.1	1.0	*1.1*	*0.7*	1.1	1.1
RESIDENTIAL INVESTMENT	*0 5*	*0.6*	*0.4*	*0.2*	*0.2*	-0.6	-0.3	-0.4	-0.4	-0 2	0.0	0.1	*0.4*	*0.4*	-0.3	-0.1
FEDERAL GOVERNMENT	*0 2*	*0.2*	*0.5*	*-0.2*	*0.7*	0.1	0 3	0.1	0.4	0.1	0.3	0.1	*0.3*	*0.2*	0.3	0 2
STATE & LOCAL GOVERNMENTS	*0 2*	*0.3*	*0.0*	*0.0*	*0.0*	0 2	0.4	0.4	0.4	0.4	0.4	0.4	*0.1*	*0.1*	0.2	0.4
NET EXPORTS	***-0.4***	***1.1***	***-0.1***	***-1.4***	***-0.8***	**-0.4**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	**-0.5**	***-0.9***	***-0.2***	**-0.6**	**-0.5**
EXPORTS	*0.7*	*1.1*	*0.3*	*0.5*	*1.2*	0 3	0.6	0.6	0.7	0.7	0.7	0.7	*0.6*	*0.6*	0.7	0.7
IMPORTS	*-1.1*	*0.0*	*-0.4*	*-1.9*	*-2.1*	-0.8	-1.1	-1.2	-1 2	-1 2	-1.2	-1.2	*-1.5*	*-0.9*	-1.3	-1.2
CHANGE IN INVENTORIES	***0.3***	***-2.1***	***-0.4***	***1.9***	***-0.5***	**0.9**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	***0.2***	***-0.1***	**0.1**	**0.0**

Note: Contributions may not add up to GDP growth due to rounding.

A. Forecast Details

Exhibit A-5: Alternative GDP and Inflation Forecasts

GDP

		2006-Q1		2006-Q2		2006-Q3	
	Release Date	Prev*	May	Prev*	May	Prev*	May
FRBNY	5/4/2006	4.7	4.8	3.4	3.1	3.5	3.5
PSI Model	5/4/2006	3.5	--	3.0	3.8	--	3.8
Blue Chip	4/10/2006	4.7	4.6	3.3	3.4	3.0	3.0
Median SPF	2/13/2006	3.7	4.4	3.3	3.4	3.2	3.0
Macro Advisers	4/14/2006	5.0	4.9	3.8	3.8	3.3	3.3

CPI

		2006-Q1		2006-Q2		2006-Q3	
	Release Date	Prev*	May	Prev*	May	Prev*	May
FRBNY	5/4/2006	2.3	2.2	2.6	4.8	2.5	2.5
Blue Chip	4/10/2006	2.4	2.3	2.4	2.5	2.4	2.4
Median SPF	2/13/2006	2.4	2.0	2.3	2.5	2.4	2.5
Macro Advisers	4/14/2006	2.0	2.2	2.3	2.4	2.0	2.4

Core CPI

		2006-Q1		2006-Q2		2006-Q3	
	Release Date	Prev*	May	Prev*	May	Prev*	May
FRBNY	5/4/2006	2.2	2.4	2.4	2.7	2.4	2.4
Macro Advisers	4/14/2006	2.3	2.2	2.3	2.2	2.3	2.2

Notes: Previous release of Blue Chip and Macro Adviser is March, SPF is November, and all others is March.

A. Forecast Details

Exhibit A-6: Reference Table 1 - CONSUMER PRICE INDEX DATA AS OF MARCH 2006

	Annualized Percent Change Over Indicated Interval					Weights (December 2005)	
	24 Month	12 Month	6 Month	3 Month	1 Month	Total	Core
Consumer Price Index	3.3	3.4	1.2	4.3	4.3	100.00	
Energy	14.8	17.3	-10.8	21.8	16.1	8.69	
All Items Ex Energy	2.3	2.2	2.7	2.6	3.0		
Food	2.6	2.6	2.5	2.5	0.6	13.94	
Food Away From Home	3.1	3.1	3.1	3.3	2.5	5.95	
All Items Ex Food and Energy	2.2	2.1	2.7	2.8	4.2	77.37	100.00
Core Chain-Weight CPI (NSA)	2.0	2.0	3.5	5.5	7.8		
Core Goods	0.4	0.2	0.6	1.4	3.5	22.32	28.85
Apparel	-0.6	-1.2	-0.3	1.4	12.9	3.79	4.89
Medical Care Commodities	4.2	4.1	4.7	4.2	5.2	1.46	1.88
Durable Goods	0.0	-0.5	-0.7	0.0	0.0	11.58	14.96
New Vehicles	0.3	-0.2	1.8	2.3	-0.9	5.16	6.66
Used Vehicles	3.3	1.7	-2.1	2.3	4.4	1.80	2.33
Core Services	2.9	2.8	3.7	3.4	4.1	55.06	71.16
Rent of Primary Residence	3.1	3.2	3.4	3.5	5.0	5.83	7.54
Owners' Equivalent Rent	2.6	2.8	3.2	3.8	5.3	23.44	30.30
Lodging Away from Home	4.6	1.4	14.4	7.7	10.3	2.61	3.37
Medical Care Services	4.5	4.1	4.7	4.0	5.3	4.76	6.16
Transportation Services	2.1	2.5	0.9	0.9	-1.0	5.71	7.38

A. Forecast Details

Exhibit A-6: Reference Table 2 - PCE DEFLATOR DATA AS OF MARCH 2006

	Annualized Percent Change Over Indicated Interval				
	24 Month	12 Month	6 Month	3 Month	1 Month
PCE Deflator	2.8	2.9	1.4	3.7	4.4
Market Based PCE Deflator	2.6	2.8	1.0	3.6	4.6
Durable Goods	-0.9	-1.4	-1.0	-0.8	-1.8
Motor Vehicles and Parts	1.7	0.8	2.8	2.7	1.9
Nondurable Goods	3.3	3.4	-2.0	6.1	9.0
Clothing and Shoes	-0.9	-1.8	0.1	1.6	15.8
Services	3.2	3.4	3.6	3.4	3.5
Housing	2.8	2.7	3.7	3.9	5.3
Transportation	3.3	4.1	3.3	3.6	2.9
Medical Care	2.9	2.7	2.8	2.6	4.7
PCE Deflator Ex Food and Energy	2.0	2.0	2.4	2.5	3.9
Market Based Core PCE Deflator	1.7	1.6	2.0	2.2	4.0
Personal Business Services-Market Based	2.4	2.0	1.6	-0.4	-1.6
Personal Business Services-Not Market Based	2.6	2.8	2.3	1.9	1.8

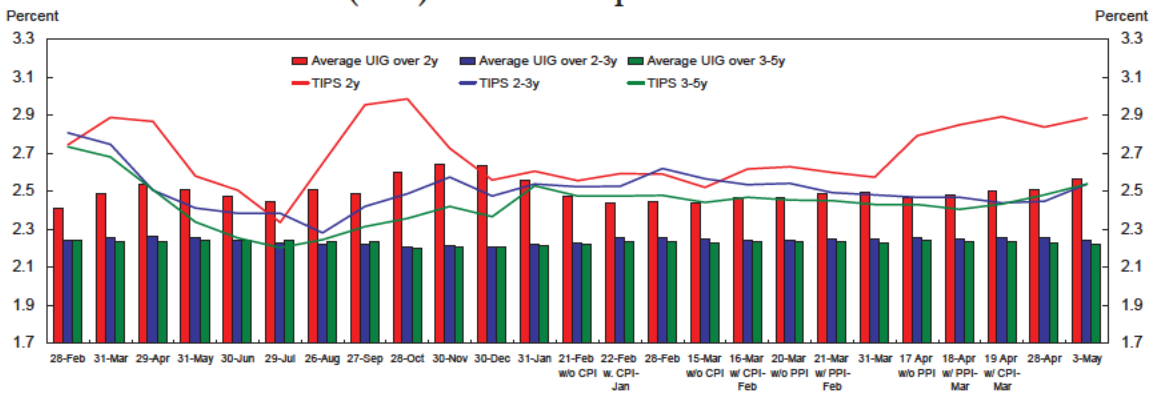
A. Forecast Details

Exhibit A-6: Reference Table 3 - PRODUCER PRICE DATA AS OF MARCH 2006

	Annualized Percent Change Over Indicated Interval				
	24 Month	**12 Month**	**6 Month**	**3 Month**	**1 Month**
Finished Goods	4.3	3.5	0.8	-2.5	6.2
Finished Consumer Goods	5.0	4.2	0.5	-4.0	8.4
Finished Consumer Goods Ex Food	6.5	6.5	1.3	-2.8	9.0
Nondurables Ex Food	8.8	8.9	1.9	-4.5	12.8
Durables	1.1	0.5	0.0	3.0	1.8
Capital Equipment	2.0	1.4	1.1	2.5	1.7
Electronic Computers (NSA)	-20.1	-22.4	-22.4	-27.3	-27.1
Communication and Related Equipment (NSA)	-0.6	-0.5	0.0	-1.2	-2.3
Finished Goods Ex Food and Energy	2.1	1.7	1.5	3.1	1.5
Finished Consumer Goods Ex Food and Energy	2.2	1.9	1.7	3.2	2.2
Intermediate Materials	7.9	7.0	5.0	3.0	-1.5
Intermediate Materials Ex Food and Energy	6.0	4.5	7.5	6.7	1.5
Crude Materials	8.1	4.9	-20.5	-40.3	-28.2
Crude Materials Ex Food and Energy	7.7	13.2	13.3	16.9	9.6

A. Forecast Details

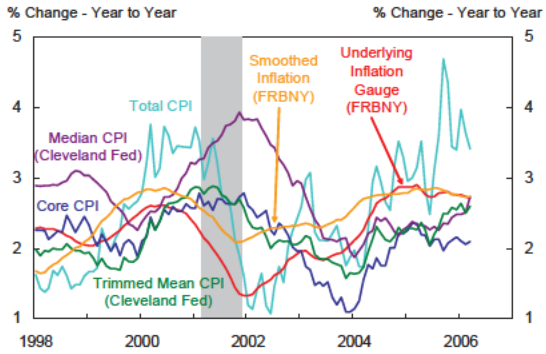
Exhibit A-7: Underlying Inflation Gauge (UIG) and TIPS Implied Inflation



Source: Bloomberg, 8:40AM quotes, MMS Function (FRBNY)

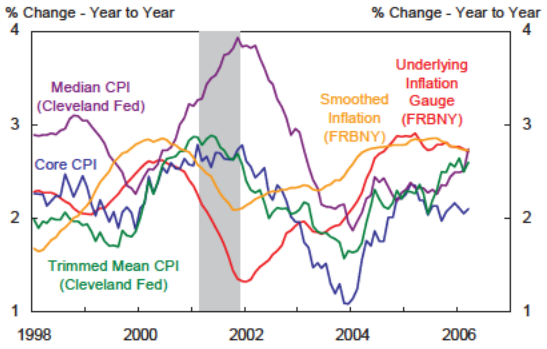
Exhibit A-8: Underlying Measures of Trend Inflation

Measures of CPI Inflation



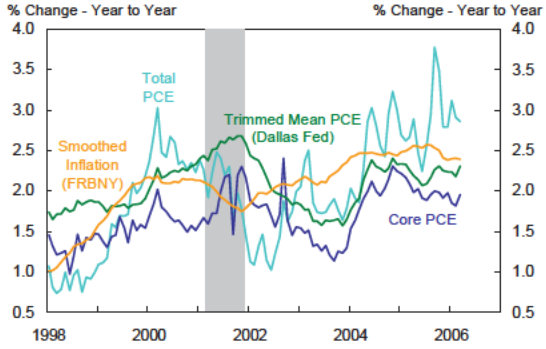
Source: Bureau of Labor Statistics, Cleveland Fed, and FRBNY

Measures of CPI Inflation



Source: Bureau of Labor Statistics, Cleveland Fed, and FRBNY

Measures of PCE Inflation



Source: Bureau of Economic Analysis, Dallas Fed, and FRBNY

B. Financial Markets

Exhibit B-1. TIPS Implied Inflation at Various Horizons

The first chart in this exhibit displays the time series of implied expected CPI inflation from the TIPS market (a non–technical description of the construction of this measure is in Appendix to Exhibit B-1 below). The second chart shows the computed change in carry-adjusted measures from January 30th to March 23rd.
Source: Capital Markets Function, FRBNY

Exhibit B-2. Breakeven Inflation Table

The breakeven inflation table reports yields on the most recently issued five- and ten-year nominal Treasury securities and Treasury inflation indexed securities as well as the spreads between comparable maturities.
Source: Capital Markets Function, FRBNY

Exhibit B-3. Smoothed Treasury Yield Curve and Implied Forward Rate Curve

The five charts in this exhibit are: (1) the path of the 3-month and 10-year Treasury rates since March 2003; (2) the smoothed (off-the-run) Treasury yield curve on December 12 (prior to the December FOMC meeting), January 30 (prior to the January FOMC meeting), and March 24 (current); (3) the implied forward rate curve for the same three dates; (4) the path of the implied 4-5 year nominal and real forward rate since March 2004; and (5) the path of the implied 4-5 nominal forward rate and inflation compensation since March 2004.
Source: Capital Markets Function, FRBNY; Monetary Affairs, BofG

Exhibit B-4. Expected Path of Fed Funds Target Rate Derived from Futures

The chart in this exhibit shows the changes in expected path of the Fed Funds target rate since the last FOMC meeting, derived from Fed Funds and Eurodollar futures. A constant term premium risk adjustment is made in these calculations but there is no allowance for time-varying risk.
Source: MMS Function, FRBNY chart; Monetary Affairs, BofG data

Exhibit B-5. Implied Skewness and Implied Volatility (percentages)

The chart in this exhibit shows the recent behavior of a measure of implied skewness derived from Eurodollar options. Positive (negative) implied skewness means that a tightening (easing) surprise around expected rate is expected to be larger than an easing (tightening) surprise. In addition, implied volatility in percentages is plotted. Both measures are averages of 3-, 6- and 9-month values. No risk adjustment is made.
Source: Capital Markets Function, FRBNY

Exhibit B-6. Implied Volatility on Eurodollar Options (Basis Points)

The charts in this exhibit show the current and historical behavior of the 90% confidence interval (i.e., financial markets expect 90% of the time the actual FFR at the specified date will be within the interval) for the Fed Funds Target implied from financial markets options. The first two charts show how the 90% confidence interval has changed since the last FOMC meeting. The next chart shows the current confidence interval around the expected path. The final two charts show a long history of the behavior of the confidence interval at the 6- and 12-month horizons. No risk adjustment is made.
Source: Monetary Affairs, BofG

Exhibit B-7. Dollar Exchange Rates

This exhibit contains four charts showing the behavior of the dollar in the last five years. All series are defined so that a decline in the index represents a depreciation of the dollar. Effective rates are computed by the Board of Governors using a “narrow” set of weights, for 16 major exchange rates.
Source: BofG; BIS; International Research Function, FRBNY

Exhibit B-8. Implied Volatility on Yen/Dollar and Euro/Dollar Exchange Rates

The first set of charts in this exhibit contains the one month ahead implied volatility on Yen/Dollar and Euro/Dollar exchange rates as measured by the width of a 90 percent confidence interval. The second set of charts show the change in the expected implied volatility over the next six months.
Source: Markets Group, FRBNY; Reuters

Exhibit B-9. Energy Futures Curves

This exhibit contains charts showing futures curves for gasoline, heating oil, natural gas, and crude oil. August 26 represents the state of the futures markets just before Hurricane Katrina. December 7 represents the state of the markets prior to the December FOMC meeting, January 27 represents the state prior to the January FOMC meeting, and March 23 represents current data.
Source: Bloomberg.

Appendix to Exhibit B-1. Construction of Implied Inflation from TIPS

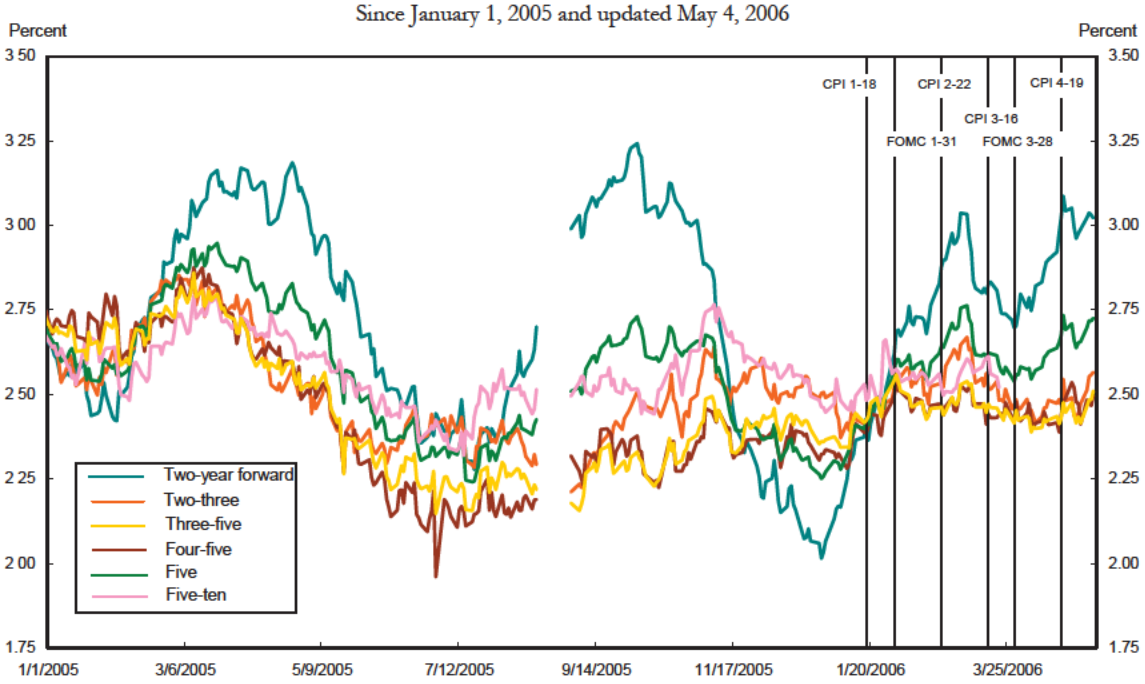
The implied inflation series are estimates of the inflation expectations derived from TIPS and nominal Treasury securities, not accounting for risk premia or other technical factors. They differ from the simpler breakeven inflation rates which just subtract the real yield on TIPS securities from the on-the-run treasury yield with the same maturity. For each individual TIPS, we solve for the inflation rate that equates the discounted payments of the TIPS to its price, where the discount rates are derived from off-the-run nominal Treasury securities. We then calculate two-, three-, and five-year inflation rates as the inflation rate corresponding to a TIPS with duration of two, three or five years respectively. Finally, we compute approximate forward rates from the rates at the shorter- and longer-dated durations. For example, the two-to-three year forward rate is computed from the two-year and three-year implied inflation values. The five-to-ten year forward rate uses the five-year implied inflation value and the implied inflation rate on the most recently issued ten-year TIPS.

The carry-adjusted implied inflation series are measures of inflation expectations that remove the impact of forecast inflation accrual in NSA CPI over the 2.5 month indexation lag period in TIPS. Since inflation over that period is either known or largely predictable, it induces predictable variation in the unadjusted implied inflation series that is not necessarily related to future expected inflation. Our adjustment is derived from the forecast of NSA CPI implicit in same day CME CPI futures contracts.

B. Financial Markets

Exhibit B-1:
TIPS Implied Inflation at Various Horizons

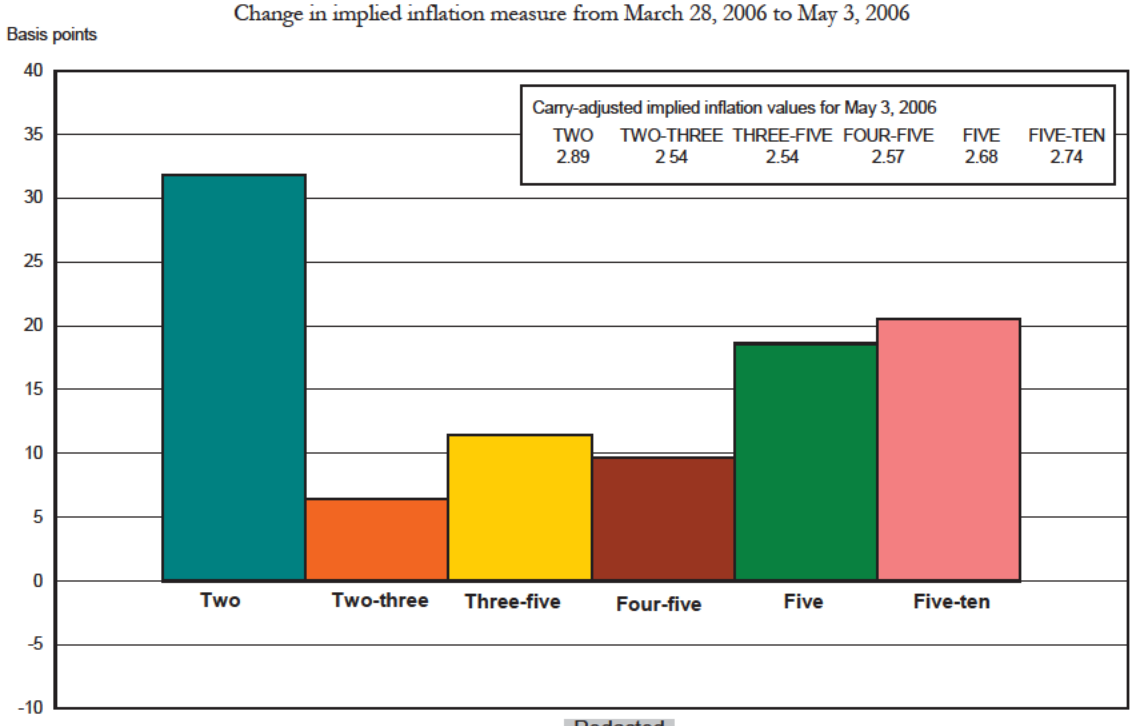
Since January 1, 2005 and updated May 4, 2006



Implied inflation values between 8-18 and 8-31 are not reported because of data reliability problems.
Data based on FRBNY calculations using 8:40am quotes. Tony Rodrigues Redacted

Change in Carry-adjusted TIPS Implied Inflation Since Last FOMC Meeting

Change in implied inflation measure from March 28, 2006 to May 3, 2006



Data based on FRBNY calculations using 8:40am quotes. Tony Rodrigues Redacted

B. Financial Markets

Exhibit B-2:
Breakeven Inflation Table

Real and Nominal Yield Spreads

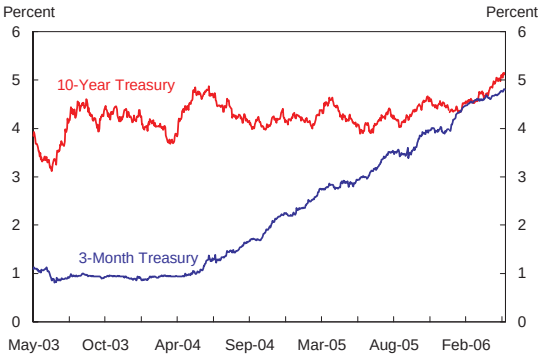
	31-Jan-05	30-Nov-05	30-Dec-05	31-Jan-06	28-Feb-06	31-Mar-06	28-Apr-06	4-May-06
Five-year Spread (%)	2.55	2.37	2.23	2.52	2.68	2.58	2.65	2.72
Ten-year Spread	2.48	2.37	2.31	2.51	2.54	2.51	2.64	2.68
Five-year Real Yield (%)	1.17	2.01	2.08	1.94	1.95	2.23	2.31	2.32
Ten-year Real Yield	1.67	2.09	2.04	2.03	2.03	2.34	2.45	2.48
Five-year Nominal Yield	3.72	4.38	4.31	4.46	4.63	4.81	4.96	5.04
Ten-year Nominal Yield	4.15	4.46	4.35	4.54	4.57	4.85	5.09	5.16

Source: FRBNY. 8:40am quotes.

B. Financial Markets

Exhibit B-3:
Interest Rates

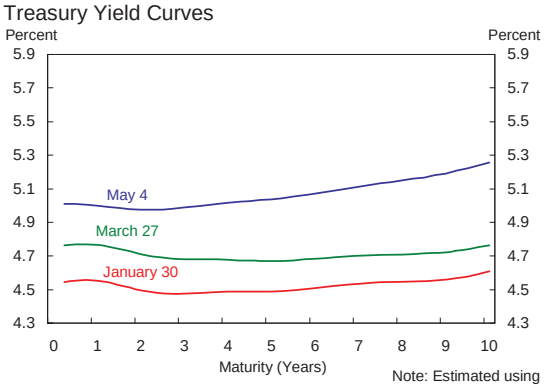
Short- and Long-Term Rates



Source: Bloomberg

Note: Yields of on-the-run securities

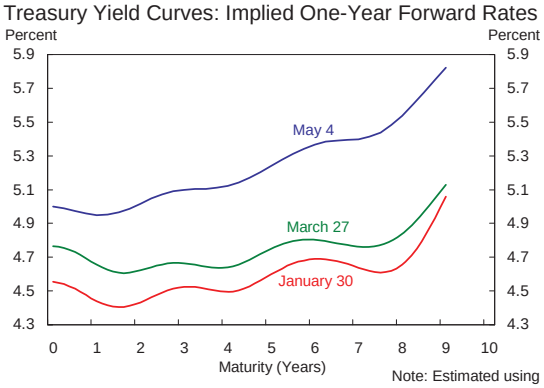
Treasury Yield Curves



Source: 8:40AM quotes and FRBNY Calculations

Note: Estimated using off-the-run securities

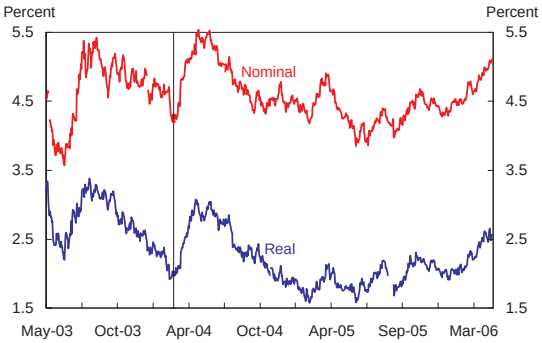
Treasury Yield Curves: Implied One-Year Forward Rates



Source: 8:40AM quotes and FRBNY Calculations

Note: Estimated using off-the-run securities

4-5 Year Forward Rates

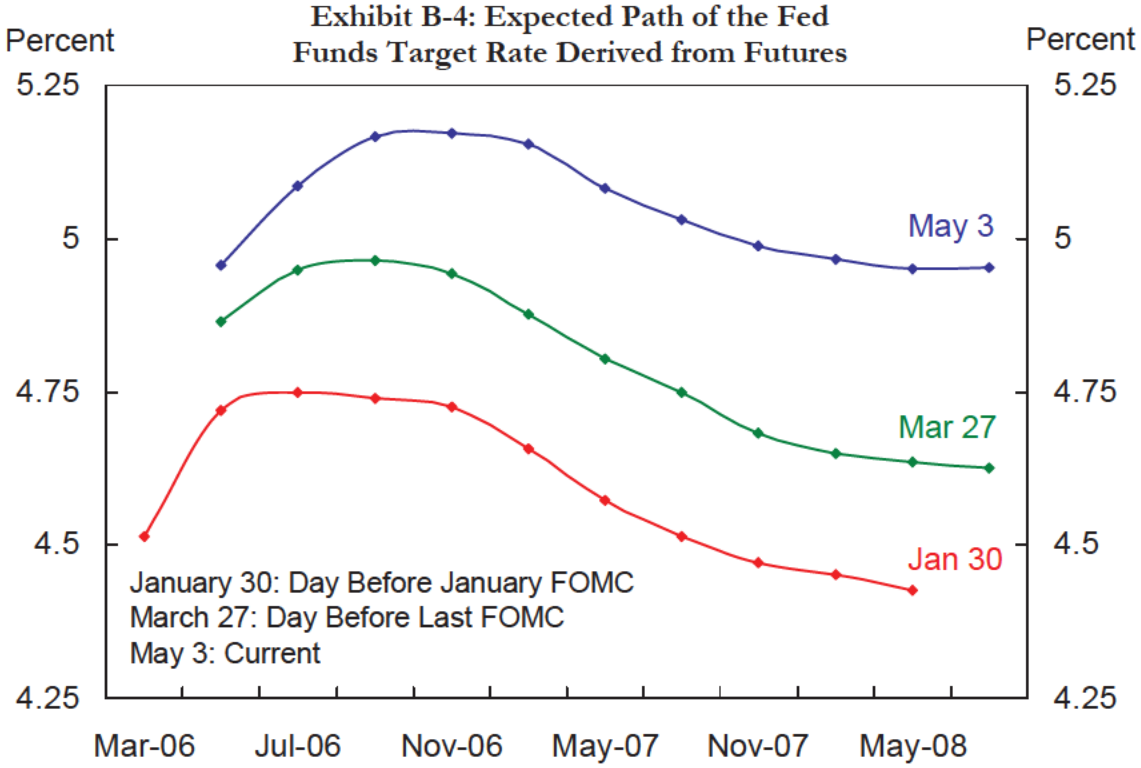


Source: 8:40AM quotes; CPI and CME CPI futures; and FRBNY calculations

Note: Carry-adjusted data from 3/17/04. Data from 8/19/05-8/31/05 unavailable.

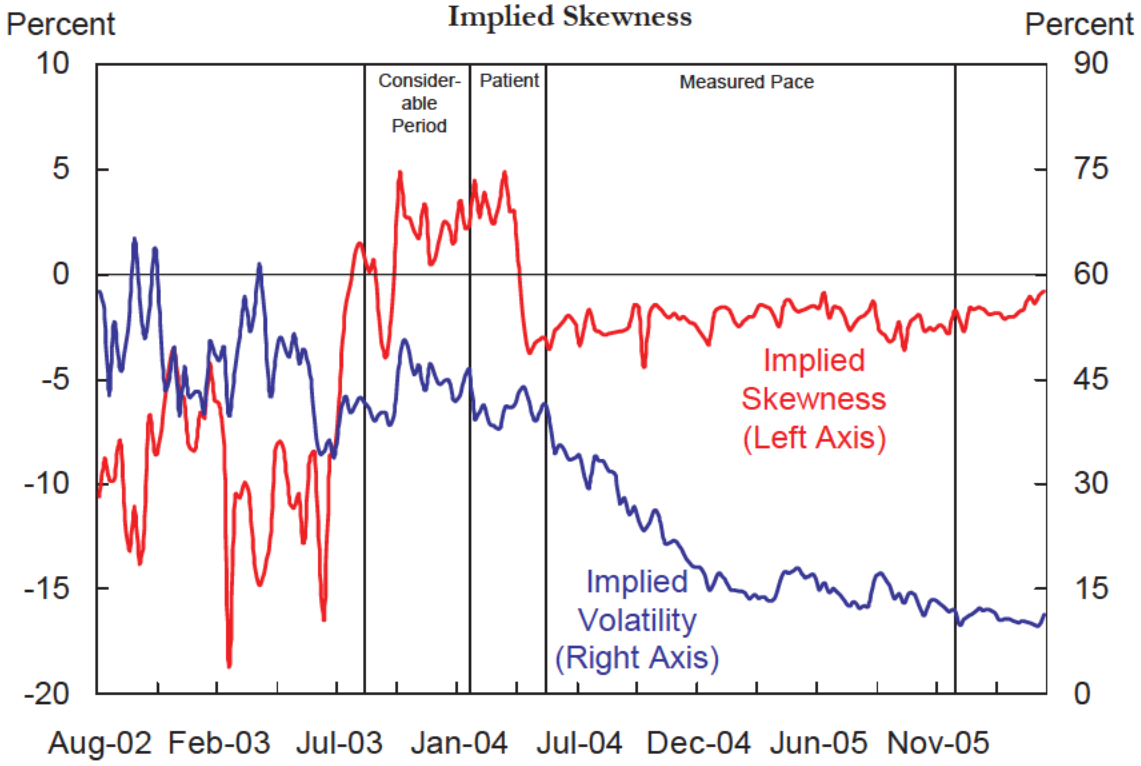
B. Financial Markets

Exhibit B-4: Expected Path of the Fed Funds Target Rate Derived from Futures



Source: Federal Reserve Board

Exhibit B-5: Implied Skewness



Source: CME and Author's Calculations

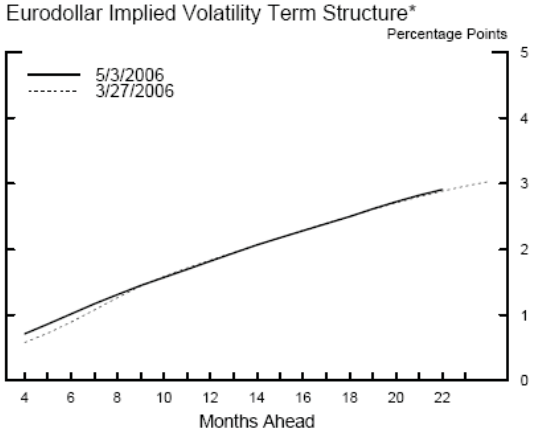
Joshua Rosenberg

Redacted

B. Financial Markets

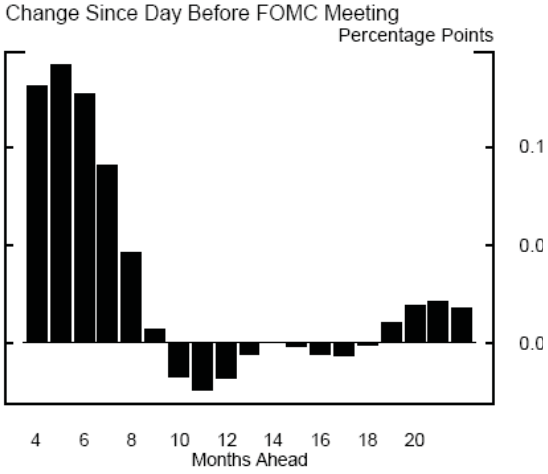
Exhibit B-6:
Implied Volatility on Fed Funds Options

Eurodollar Implied Volatility Term Structure*

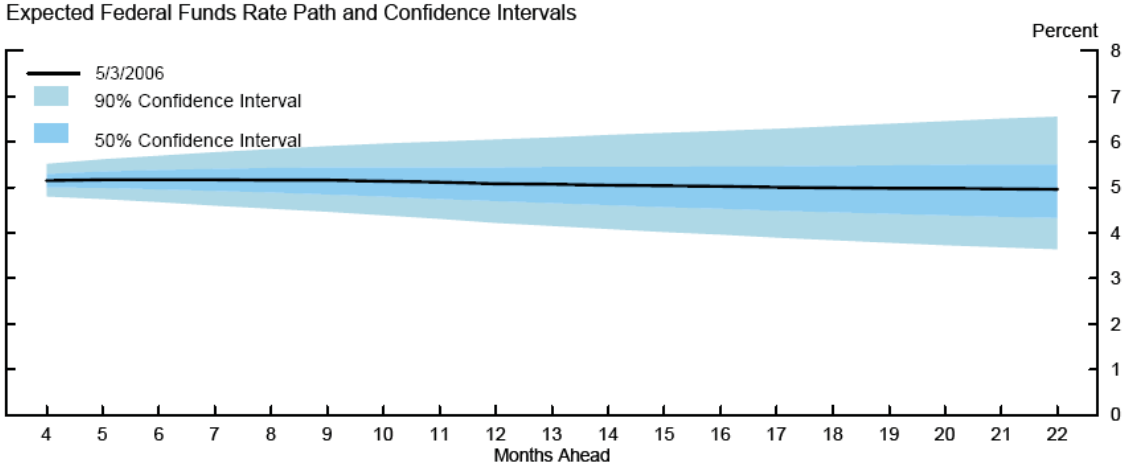


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

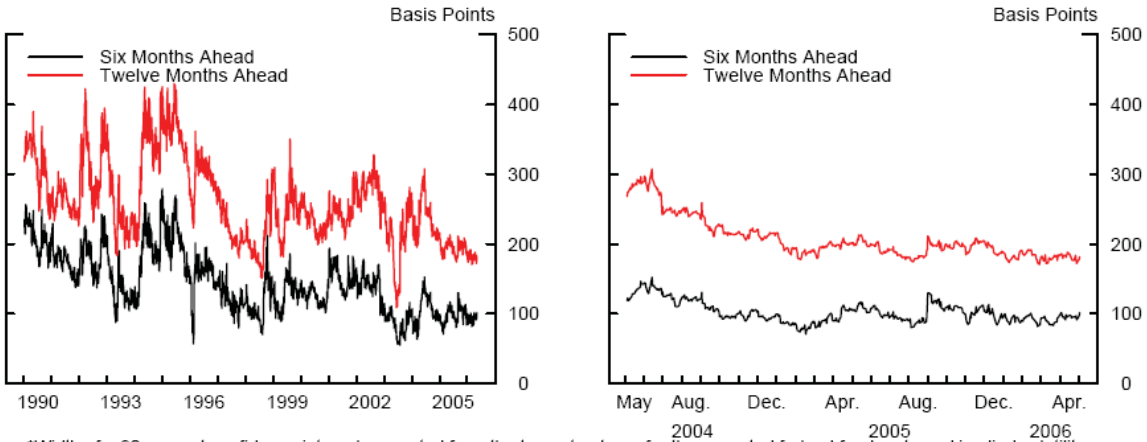
Change Since Day Before FOMC Meeting



Expected Federal Funds Rate Path and Confidence Intervals



Eurodollar Implied Volatility at Selected Maturities*

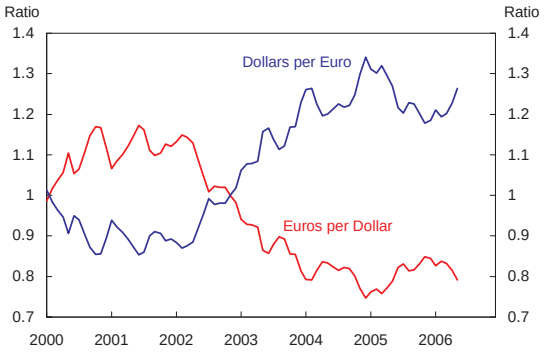


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

B. Financial Markets

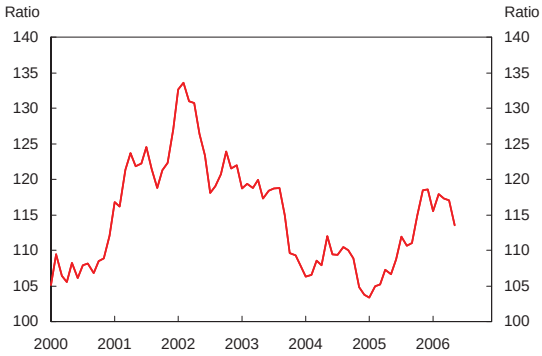
Exhibit B-7:
United States Exchange Rates

Dollar-Euro Exchange Rates



Source: Reuters

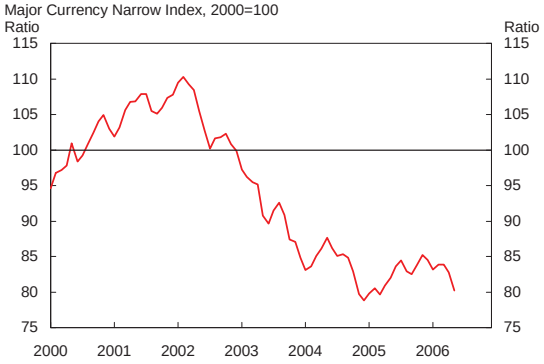
Yen per Dollar



Source: Reuters

Nominal Effective Exchange Rate

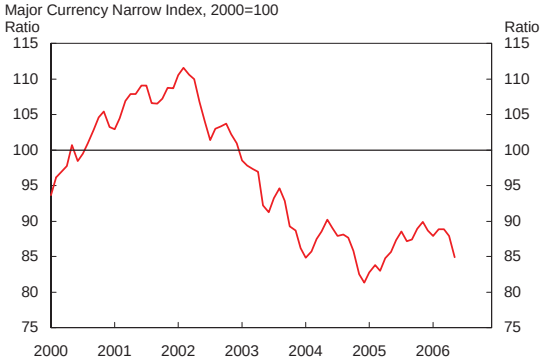
Major Currency Narrow Index, 2000=100



Source: Reuters

Real Effective Exchange Rate

Major Currency Narrow Index, 2000=100

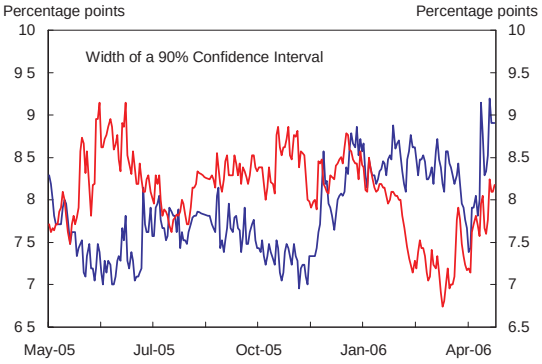


Source: Reuters

B. Financial Markets

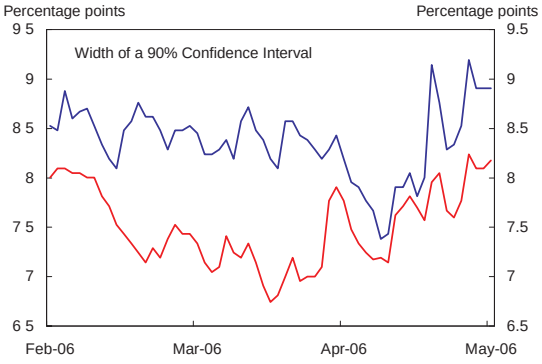
Exhibit B-8:
Euro and Yen Implied Option Volatility
Euro options are in red and Yen options are in blue

One-Month Volatility – Past Year



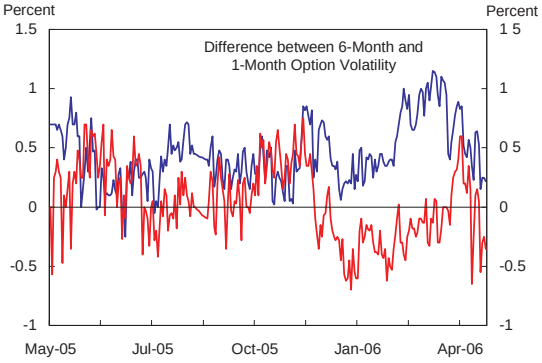
Source: Reuters

One-Month Volatility – Past 60 Days



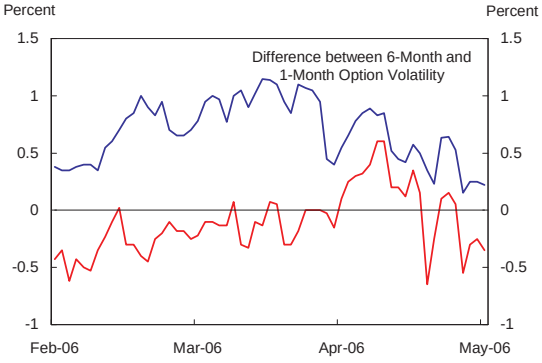
Source: Reuters

Changes in Expected Volatility – Past Year



Source: Reuters

Changes in Expected Volatility – Past 60 Days

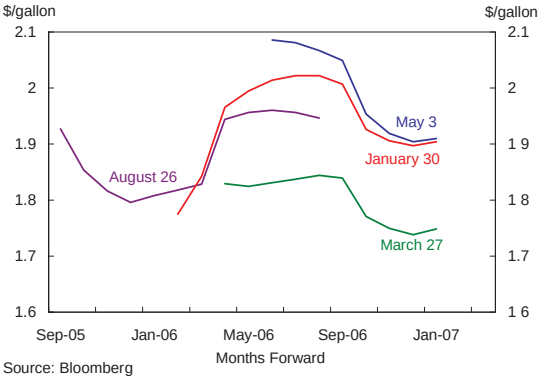


Source: Reuters

B. Financial Markets

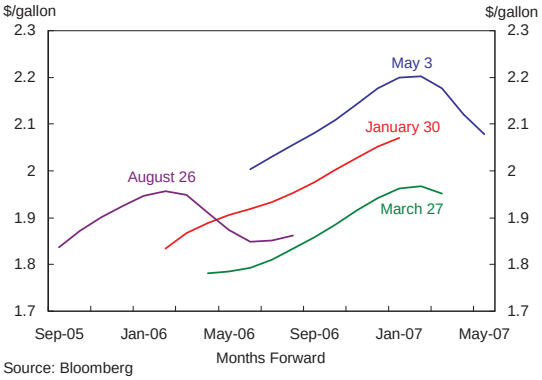
Exhibit B-9:
Energy Futures Curves

Gasoline Futures



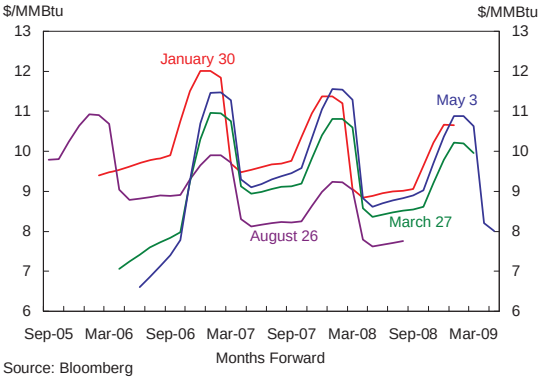
Source: Bloomberg

Heating Oil Futures



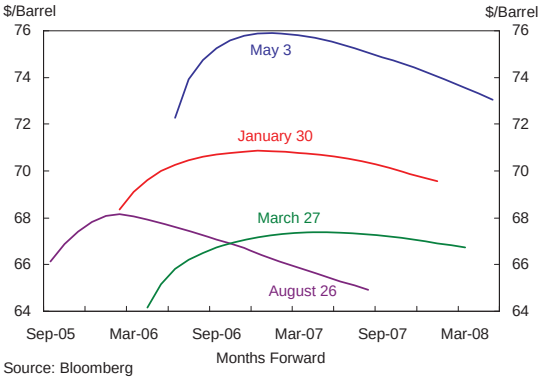
Source: Bloomberg

Natural Gas Futures



Source: Bloomberg

Crude Oil Futures



Source: Bloomberg

C. FRBNY Forecast Distributions

Background

The FRBNY forecast distributions are a generalization of techniques used at the Bank of England and other central banks to show future uncertainties and the balance of risks. The generalization allows for a dynamic balance of risks that is jointly assessed over inflation and output. There are two classes of shocks to current central projections that are of interest to central banks: supply shocks, which move inflation and output in opposite directions; and demand shocks, which move inflation and output in the same direction. Instead of providing a static assessment of the risks we use a dynamic one that allows the probability of a deviation to build over time. After a deviation, it is assumed that the economy returns to its average long run behavior centered at the implicit inflation target and potential growth. Although this is not a substitute for a dynamic model with an explicit transmission mechanism for monetary policy, it can have good properties in mimicking the behavior of an economy where the central bank has sufficient credibility to achieve its long-run inflation target while pursuing short-run stabilization policy.

Exhibit C-1: Risks

This exhibit shows the "balance of risks" for the individual alternative scenarios listed in Section 3 ("FRBNY Alternative Scenarios and Risks") and the central scenario contained in the Bank's forecast. Two types of measures of the balance of risks are shown. One type indicates the probability of being in a particular scenario at a specific date. These scenarios are mutually exclusive so at any specific date they add up to one.

A second type calculates the probability of being in a particular scenario at any time through 2008. The one exception is for the central scenario, where the probability shown is for not deviating from this scenario at any time through 2008. Hence, one minus this latter probability is the risk of deviating from the central scenario at some point over the forecast horizon and this is equal to the sum of the probabilities of the other scenarios occurring.

Exhibit C-2 & C-3: Alternative Scenarios

These exhibits take the balance of risks for each scenario and show their implications for GDP growth and core PCE inflation. They plot the expected path (calculated by averaging all paths that have at least one quarter in that scenario) of four-quarter changes in the core PCE deflator and real GDP under the central scenario and the alternative scenarios.

The global deflation scenario assumes that output growth is slower than the central scenario and inflation is dramatically lower. The overheating scenario assumes that for two quarters the economy grows quicker than expected under the central scenario, with both inflation and output higher than our central forecast. Then the real economy slows dramatically but inflation continues to be above the central forecast.

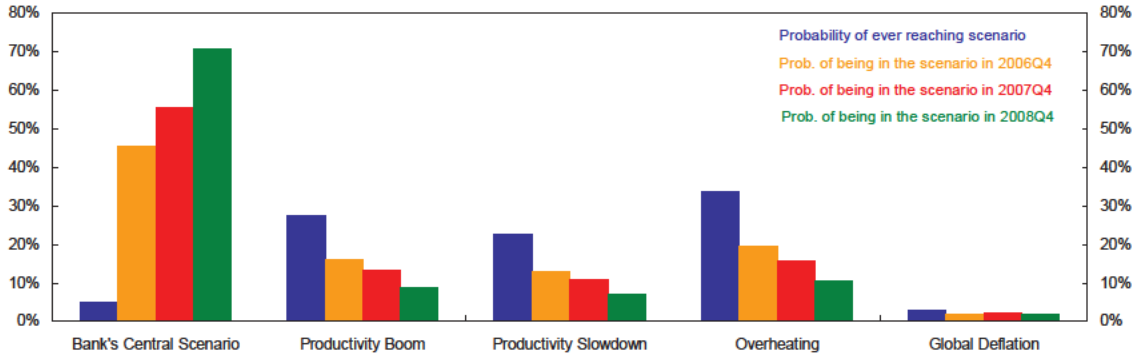
Exhibit C-4 & C-5: Fan Charts

Fan charts are shown for the core PCE deflator [Exhibit C-4] and real GDP growth [Exhibit C-5]. These charts are constructed to represent the overall uncertainty contained in our main scenario and alternative scenarios. They combine the information contained in the previous exhibits with the additional uncertainty that we cannot predict perfectly the path of the economy, even if we knew which scenario was true. The amount of total uncertainty in the forecast distributions is now calibrated to imply fundamental interest rate volatility lower than that given by the implied Eurodollar forward volatility curve averaged across possible policy rules from a market perspective (see the text for Exhibit D-4). In addition the expected value for each of the two forecast distributions is included in the fan chart. These expected values are computed as averages over the realizations across all possible scenarios considered in Exhibit C-1.The difference between this profile and the central bank scenario is another measure of the balance of risks. If they are equal the risks are balanced; if the expected value is above the central bank scenario, there is upside risk; if it is below, there is downside risk.

Source: MMS Function, FRBNY

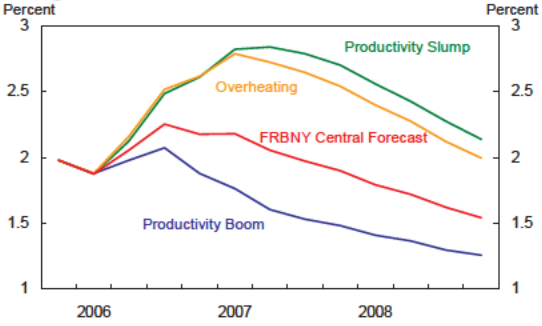
C. FRBNY Forecast Distributions

C-1: Risks



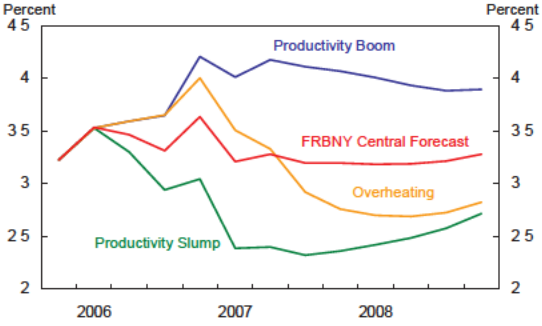
Source: MMS Function (FRBNY)

C-2: Alternative Scenarios of Core PCE Inflation through 2008



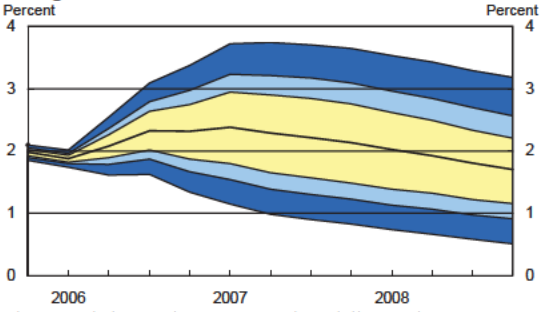
Source: MMS Function (FRBNY)

C-3: Alternative Scenarios of GDP Change through 2008



Source: MMS Function (FRBNY)

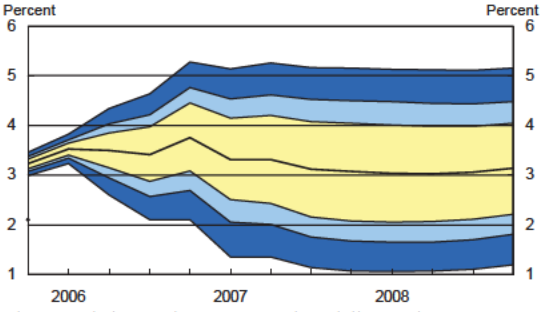
C-4: Four Quarter Core PCE Inflation Forecast through 2008



Note The probability interval shows the 50, 75, and 90 percent chance that the four quarter change in Core PCE will be within the respective range. The thick black line represents the expected value of the forecast.

Source: MMS Function (FRBNY)

C-5: Four Quarter GDP Growth Forecast through 2008



Note The probability interval shows the 50, 75, and 90 percent chance that the four quarter change in Core PCE will be within the respective range. The thick black line represents the expected value of the forecast.

Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

The exhibits in this section are constructed using the baseline specification, and two modifications, of the policy rule detailed below, the Bank forecast distribution, and information from Fed Funds futures and Eurodollar futures. The policy rules convert the uncertainty over future inflation and output into uncertainty about future values of the Fed Funds rate. This allows us to use information from financial markets to calibrate the type and amount of uncertainty.

In all specifications the policy rate responds to deviation of inflation from target and output from potential, and incorporates some degree of inertia. We draw the future paths of these deviations from the forecast distribution of inflation and output (we specify an implicit inflation target of 1.5%, and assume potential output growth is 3.3%.

The two modifications of the baseline rule that we use in this cycle, labeled *Pause* and *Inflation Hawk,* are obtained as follows.

The "pause" is obtained as follows. We compute the level of the FFR implied by our baseline Taylor rule, given the realizations of inflation and output gap, and imputing 4.9% as initial value for the forecast (this is the assumed average for the FFR in 2006-Q2). We denote this rate as r^* and then apply the mapping described in the table below to produce a policy rate for the last two quarters of 2006.

Standard Policy Rule Prescription	Average FFR in 2006Q3	Average FFR in 2006Q4
r* < 3.00	4.0	r*
3.00 < r* < 3.75	4.0	4.0
3.75 < r* < 4.00	4.5	4.5
4.00 < r* < 4.25	4.75	4.75
4.25 < r* < 4.5	4.75	4.75
4.5 < r* < 4.75	5.0	4.75
4.75 < r* < 5.00	5.0	5.0
5.0 < r*<5.25 5.25< r*<5.5 5.5< r*<5.75 5.75<r*<6 r*>6	5.0 5.0 5.0 5.25 5.25	5.0 5.25 5.5 5.5 r*

The “inflation hawk” policy rule follows the “pause” rule in 2006Q3 if four-quarter core PCE inflation remains below 2.1% but increases the FFR twice by 25 basis points in June and August if its does not. In 2006Q4 the prescription of the standard policy rule (with initial condition from the inflation hawk rule from the previous quarter is followed) unless inflation remains above 2.1%. Then the maximum of 5.75% or the prescription of the standard policy rule is followed.

Exhibit D-1: Implications of Different Policy Rules for Nominal Fed Funds Rate

Exhibit D-1 shows the expected path of the FFR under the three rules described, together with the most recent implied market path from Exhibit B-5.
The paths under each rule are constructed by evaluating the policy rule at each of the draws from the forecast distribution of output and inflation and then averaging them to produce an expected path under that particular rule.

Exhibit D-2 & D-3: Alternative Forecast Scenarios: Nominal and Real Federal Funds Rate

In these exhibits, we focus on the policy rule "pause" and evaluate it under the Bank's central projection, and under the alternative scenarios of a productivity slowdown, a productivity boom, and overheating. Each path is obtained by evaluating the "pause" rule at each of the draws from a forecast distribution of output and inflation under that particular scenario, and averaging them to produce an expected path. The pause rule is also evaluated at the Bank's central forecast. Exhibit D-2 presents the implications for the nominal FFR. Exhibit D-3 presents the implications for average ex post real rate obtained by subtracting the four-quarter lagged change of core PCE inflation from the paths of the nominal rate.

Exhibit D-4: Effect of different inflation targets and recent actual FFR target decisions.

This exhibit shows the effect of different inflation targets and gives a measure of how the recent actual path of the FFR has differed from the prescription of our policy rule. This is implemented by running the standard policy rule with two different inflation targets and not using the information about the 10 most recent increases in the FFR. Thus, policy rule paths are conditioned on the average FFR in 2004 Q4 of 1.9%. It also plots an average over the three rules evaluated this cycle, with weights of 0.1, 0.6 and 0.3 respectively and the implied market path.

Exhibit D-5: FFR Distributions

In this exhibit we examine the distribution of the FFR under the three different policy rules through the second quarter of 2007. We also include the market distribution by assuming it has a normal distribution centered at the market path from Exhibit B-5 with a standard deviation derived from Exhibit B-6. The distribution is represented by a boxplot to this allow more direct comparison of the implications of different policy rules. 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 D-6: Comparing Market Beliefs to FRBNY

In this exhibit, two metrics of measuring the distance between the market-implied path and the FRBNY implied path are shown:

1. The percentile of the market distribution of the prediction from our policy rule.
2. The percentile of our policy rule distribution of the expected path priced into markets.

There are many other sources of differences between the two paths. One important consideration is the adjustment for risk in constructing the market path. We use an adjustment from the Board that is constant over time but there is some evidence that the adjustment may be time varying. Furthermore, the market faces uncertainty over the policies and targets used by the FOMC. We can attempt to capture this uncertainty but again it might vary over time.
Source: MMS Function, FRBNY

Policy Rule: Baseline Specification

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

$\rho = 0.8$

$i_{2006Q2} = 4.9$

$i^* = 4.25$

$\pi^* = 1.5$

$\varphi_\pi = 1.5$

$\varphi_x = 0.5$

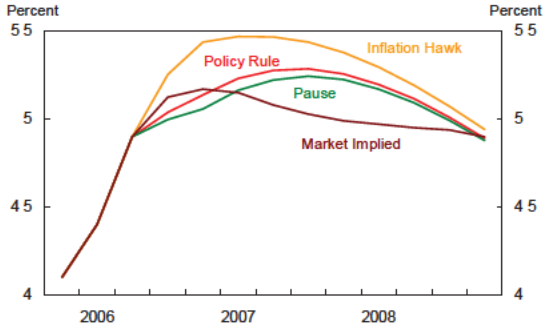
π_t : Core PCE 4 Q average

x_t : Output Gap using 3.3% potential growth rate

Source: MMS function, FRBNY

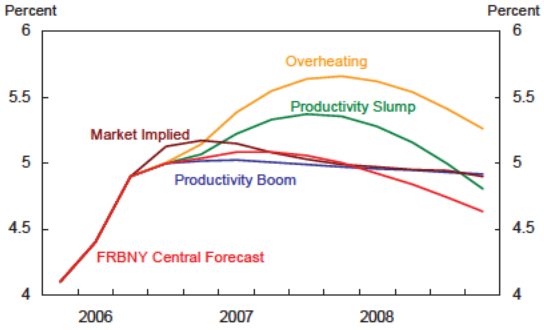
D. FRBNY Fed Funds Rate Projections

D-1: Implications of Different Policy Rules for Nominal FFR



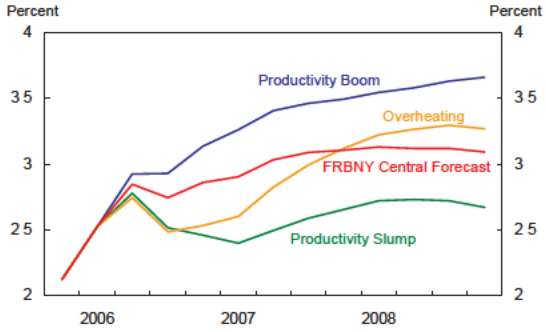
Source: MMS Function (FRBNY)

D-2: Alternative Forecast Scenarios: Nominal FFR
(Under "Pause")



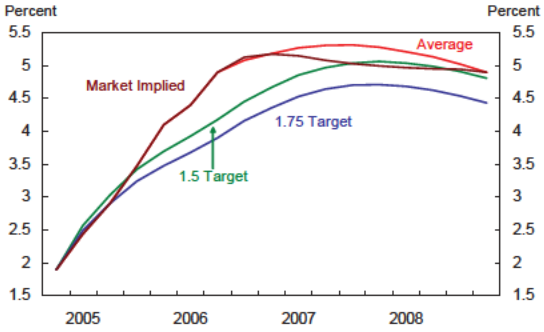
Source: MMS Function (FRBNY)

D-3: Alternative Forecast Scenarios: Real FFR
(Under "Pause")



Source: MMS Function

D-4: Different Inflation Targets



Source: MMS Function (FRBNY)

D. FRBNY Fed Funds Rate Projections

Exhibit D-5: Fed Funds Rate Distributions

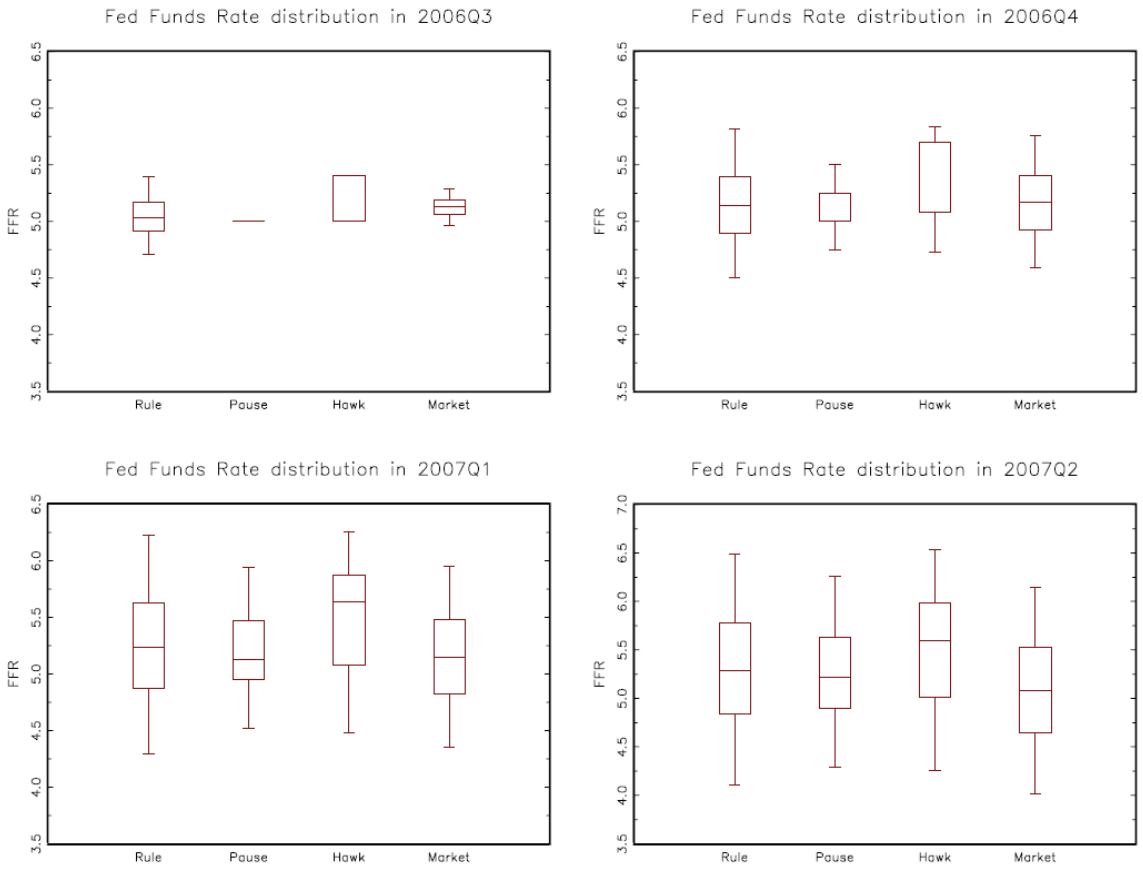


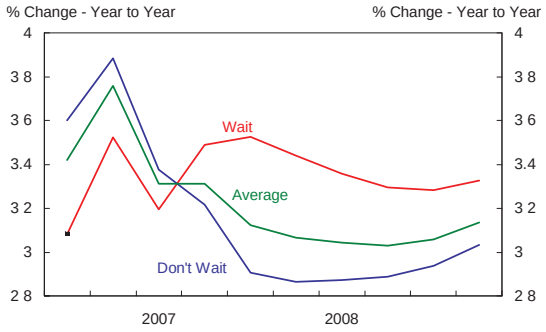
Exhibit D-6:
Market Expectations of Future FFR and FRBNY Outlook for FFR

	Percentile of FRBNY Expectation in Market Distribution	Percentile of Market Expectation in FRBNY Distribution
Pause	37	72
Policy Rule	47	53
Inflation Hawk	78	27
Average	51	38

Note: "Average" weights pause at .6, rule at .1, and hawk at .3.

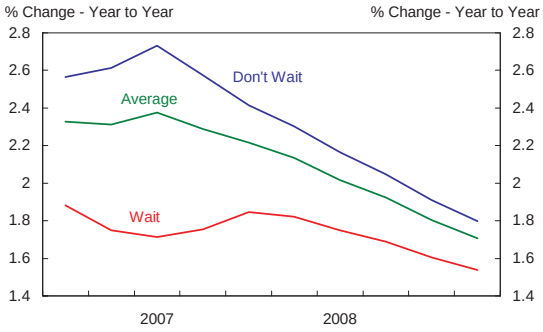
D. FRBNY Fed Funds Rate Projections

D-7: Implied Forecast Differences from Wait/Don't Wait
4 Quarter GDP Growth



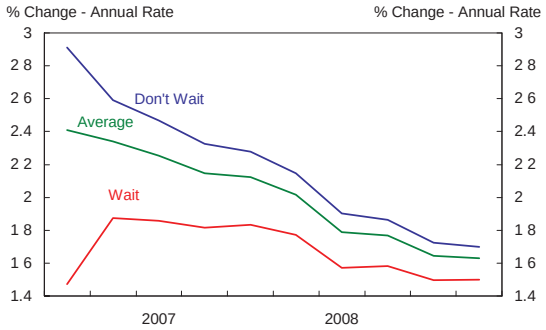
Source: MMS Function (FRBNY)

D-8: Implied Forecast Differences from Wait/Don't Wait
4 Quarter Core PCE Inflation



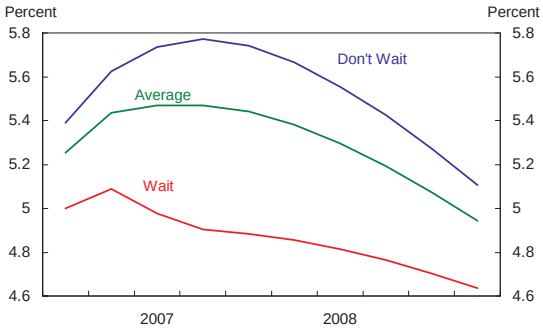
Source: MMS Function (FRBNY)

D-9: Implied Forecast Differences from Wait/Don't Wait
1 Quarter Core PCE Inflation (Annualized)



Source: MMS Function (FRBNY)

D-10: Implied Forecast Differences from Wait/Don't Wait
FFR Quarterly Average



Source: MMS Function (FRBNY)

E. Regional Charts

Exhibit E-1. Federal Reserve Bank of New York's Indexes of Coincident Economic Indicators

The chart in this exhibit shows our monthly coincident indexes for New York, New Jersey, and New York City through March 2006. The indexes are a composite of four economic indicators: payroll employment, unemployment rate, average weekly hours in manufacturing, and real wage & salary earnings.

More details on the methodology and construction of these indexes can be found at

http://www.ny.frb.org/research/regional_economy/coincident_summary.html

Source: MaRS Function, FRBNY

Exhibit E-2. Federal Reserve Bank of New York's Indexes of Leading Economic Indicators

This chart shows the growth in our monthly leading indexes for New York, New Jersey, and New York City through March 2006. The growth in the index for a given month represents a forecast of the growth in the coincident index nine months ahead. The components used in these three indexes differ slightly, but include: housing permits, stock prices, the national leading index, the lagged coincident index.

[NOTE: This index is not released publicly.]

More details on the methodology and construction of these indexes can be found at:

http://www.ny.frb.org/research/regional_economy/coincident_summary.html

Source: MaRS Function, FRBNY

Exhibit E-3. Private-Sector Job Growth in the U.S. and the Region

This chart shows the 12-month growth rate of private-sector employment for New York-New Jersey (combined), New York City, and the U.S. (bars) from 1996 to present.

Underlying data can be found at:

http://stats.bls.gov/news.release/laus.t06.htm and

http://stats.bls.gov/news.release/metro.t02.htm

Source: U.S. Bureau of Labor Statistics

Exhibit E-4. Unemployment Rates

This chart shows the monthly unemployment rate for New York State, New Jersey, New York City, and the U.S. from 1992 to present.

Source: U.S. Bureau of Labor Statistics, New York State Dept. of Labor and the New Jersey Department of Labor.

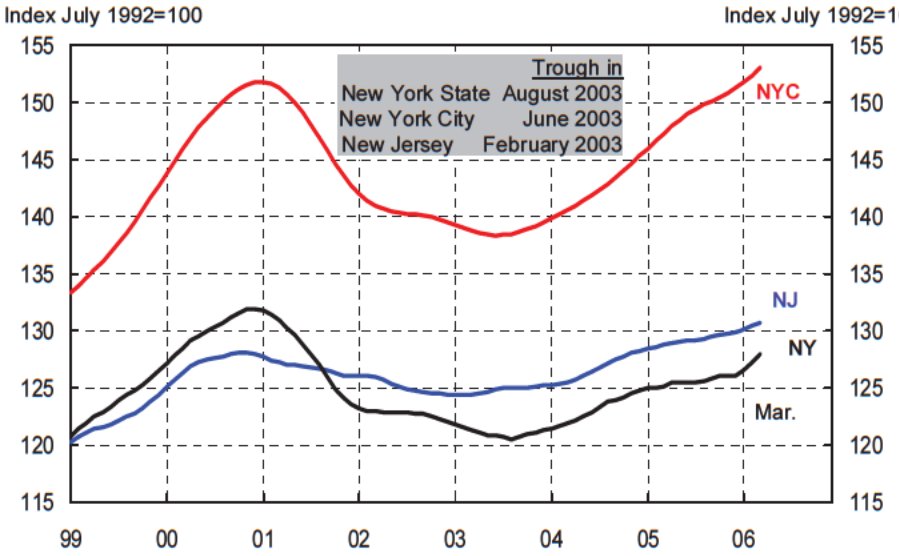
Data can be found at:

http://www.labor.state.ny.us/agency/pressrel/pruistat.htm

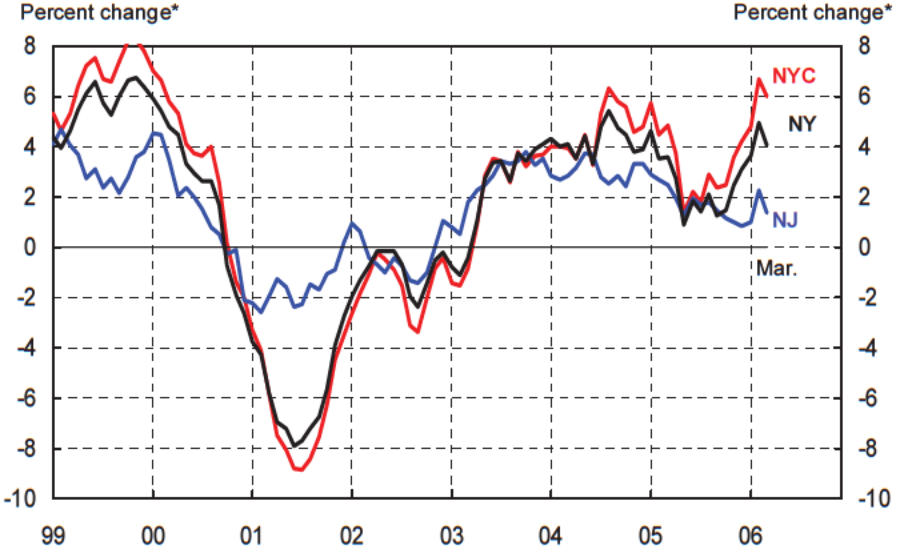
http://www.wnjpin.net/OneStopCareerCenter/LaborMarketInformation/lmi16/release1.htm

E. Regional Charts

E1: INDEX OF COINCIDENT ECONOMIC INDICATORS

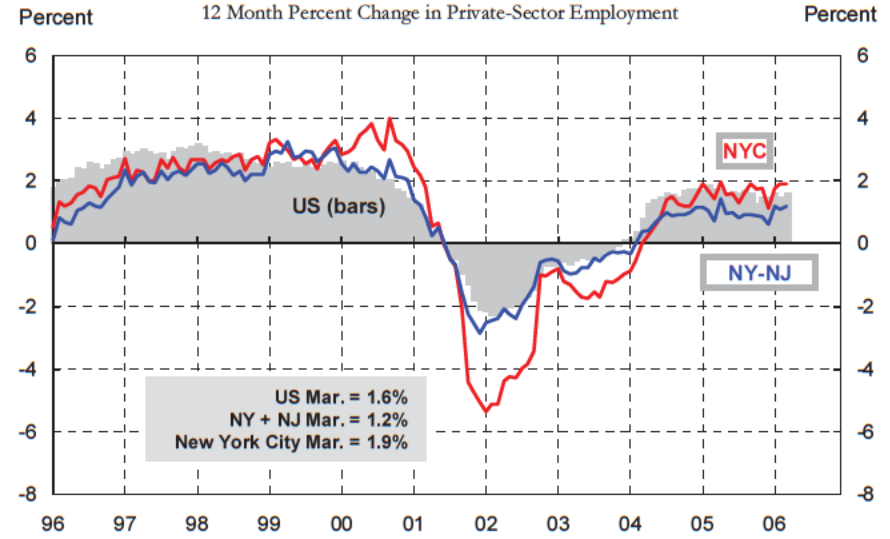


E2: INDEX OF LEADING ECONOMIC INDICATORS



** Percent change represents the forecasted growth in the Coincident Index, over the next 9 months, at an annual rate.*

E3: PRIVATE-SECTOR JOB GROWTH: U.S. AND THE REGION



E4: UNEMPLOYMENT RATES