

FRBNY Blackbook

RESEARCH AND STATISTICS GROUP

FOMC Background Material

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FRBNY BLACKBOOK

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1. Overview

Our baseline forecast and risk assessment remain consistent with a 25 basis point increase in the target rate at the upcoming meeting and maintenance of the medium-term signal of a FFR target around 4.5% in 2006. At this juncture our assessment of the path is almost identical to that currently priced into markets and is consistent with an increase in real rates to neutral levels.

Our baseline forecast for inflation in 2006 and 2007 is little changed. In contrast the Greenbook has kept the same inflation profile in 2006 but has lowered the core inflation forecast to below 2% in 2007, ostensibly because of an increase in the output gap. We have lowered the risk of inflation exceeding implicit bounds. Thus, the overall change in our inflation outlook is similar to the Greenbook.

The main change in our baseline forecast for real activity is higher growth in the second half of 2005. In addition, we see reduced downside risk to that forecast compared to last cycle. The Greenbook has a similar view of 2005H2 to ours but sees more impact from monetary tightening on real activity in late 2006 and 2007 than we do.

Measures of long-run inflation expectations derived from financial markets remain well contained. At the same time, however, consumer survey measures of inflation expectations and manufacturers' surveys of prices paid continue to indicate high inflationary pressures. The lack of reaction of inflation expectations derived from financial market instruments to the large inflation readings in September adds further support to the enhanced credibility of monetary policy.

The overall uncertainty around our inflation and output forecast remains very low compared to historical experience. Further, recent realizations of output and core inflation have been remarkably close to our forecasts. This is despite large unforeseen shocks such as the persistent energy price increase and the recent clustering of powerful hurricanes making landfall in the US. The continued moderation of economic fluctuations is

reflected in financial market indicators such as risk spreads and equity prices, as well as implied volatility measures from equity markets and long-term interest rates.

2. Recent Developments

U.S.

Summary. The data released since the last FOMC meeting, which incorporate the initial assessments of the effects of the Gulf hurricanes, indicate continued upside risk of inflation exceeding the 1½% implicit target and greater uncertainty about the inflation outlook, but somewhat less near-term downside risk and uncertainty about the real activity outlook. Core inflation measures remained near recent levels, but total inflation measures rose because of sharply higher energy prices. This has made it more difficult to ascertain underlying inflation. Real GDP growth in Q3 was 3.8% (annual rate). After allowing for the direct effects of the hurricanes on economic activity, spending and production indicators appeared to be fairly robust and the labor market appeared to maintain its vigor. Consumer confidence indicators dropped sharply in the aftermath of the hurricanes and have remained at these lower levels. In contrast, business survey indicators generally have held up fairly well.

Inflation. Core inflation measures remained near recent levels, indicating that surging energy prices have had little effect so far on these measures [see Exhibit A-6]. The 12-month change in the core PCE deflator, available through August only, was 2%, a level near that of the past five months. In the quarterly data, the core PCE deflator increased 1.3% (annual rate) in Q3 and the four-quarter change was 2.0%. The year-over-year changes in the monthly and quarterly deflators are still above the implicit target and probably near the top end of the acceptable range of the FOMC. Core CPI increased 0.1% in September, leading to a small decline in the 12-month change to 2%. Core goods inflation remained near the small positive levels of the past few months while core services inflation continued its recent moderation. The 12-month change in core finished goods PPI was 2½% in September, equal to that of August. The higher rate of core PPI inflation has led to some concern of possible pipeline pressures for consumer inflation. However, differences in the index construction between PPI and CPI suggest that these

pressures may be less than indicated. See the special topic box on this subject for more details.

The surge in energy prices through September pushed up overall inflation rates substantially: the 12-month change in total CPI through September was 4.7% and the 12-month change in the overall PCE deflator through August was 3.0% (the four-quarter change in the quarterly PCE deflator was 3.1%). Both were notably higher than the corresponding number of the previous month. The contrast between the behavior of overall and core inflation has increased the uncertainty about the underlying inflation rate. Measures based on times series models of overall inflation indicate underlying inflation and inflation pressures have risen significantly, which has the implication that energy price increases could have a persistent effect on inflation. In contrast, our underlying inflation gauge (UIG) has changed little at longer (2-3 and 3-5 year) horizons and has risen only very modestly at the 2-year horizon, indicating that this model sees energy price increases having only a temporary effect on inflation [see Exhibit A-7]. Other alternative measures of “core” inflation (medians and trimmed means) also have been flat or up only modestly in recent months [see Exhibit A-8]. For now, financial markets appear to the latter view: implied longer-term inflation expectations from TIPS have changed little. However, household survey inflation expectations remain elevated compared to pre-Katrina levels.

Real activity. Real GDP growth in Q3 was 3.8% (annual rate), above Q2’s growth rate of 3.3% and close to our projection prior to the release. The spending and production indicators generally have been fairly strong during the inter-meeting period, especially once the direct effects of the hurricanes are taken into account.

Consumer spending appeared to be maintained through the end of Q3 despite concerns of the effects of higher energy prices on consumer finances and spending patterns, as real PCE growth in Q3 was 3.9% (annual rate). Auto sales in September displayed a further payback from the “employee discount” incentive-induced surge of the summer, but they remained above 16 million units (annual rate), and the Q3 average of nearly 18 million

was the second highest after 2001Q4. Retail sales excluding autos rose smartly in September although this partly reflects higher prices in some sectors. The housing market continued to be robust with housing starts and home sales near record levels.

Business spending displayed rather moderate growth. Equipment and software expenditures increased 8.9% (annual rate) in Q3, a moderate pace compared to the prior 1½ years, as shipments and orders for nondefense capital goods excluding aircraft rose at a restrained rate in Q3. Inventories rose in August, reversing a fall (largely the result of declining auto inventories) in July, but inventories-sales ratios remained at relatively low levels. Inventory investment was estimated to have contributed -0.55 percentage point to Q3 GDP growth. Although manufacturing production fell in September, once the direct effects of the hurricanes and a Boeing strike (since settled) were taken into account, production would have shown fairly strong growth in the month. Production growth in the IT sector particularly was robust. This is consistent with our Tech Pulse index, which continued to show strong growth in the sector.

Labor market. The indicators suggest that the labor market has held up fairly well so far after the disruptions from the Gulf hurricanes. Although payroll employment fell 35,000 in September, this was at the lower end of prior estimates for the decline in the month; furthermore, there were upward revisions for July and August. There was an increase in the unemployment rate for September of 0.2 percentage points to 5.1%. The labor force participation ratio was unchanged while the employment-population ratio fell slightly. A note of caution concerning these numbers is that the hurricanes affected data collection, which makes these data noisier. Unemployment claims also indicate little spillover of the hurricane disruptions to the aggregate market. Although initial claims were elevated in the aftermath of the hurricanes, they have returned to near the levels that prevailed before Hurricane Katrina struck. Continuing claims remain elevated, which suggest a continued modest effect on the level of the unemployment rate. Wage growth continued to be moderate with the 12-month change of average hourly earnings at 2.6%. Compensation growth as measured by the employment cost index also remained moderate, with the 12-month change at 3.1%.

Surveys. Consumer confidence indicators fell sharply in September, probably in response to the aftermath of the hurricanes and to higher energy prices. Nonetheless, consumer confidence indicators remained at these lower levels in October. The decline in confidence still may be a temporary reaction to higher gasoline prices and has yet to be translated into significantly slower consumption growth, but if sustained, it may signal greater uncertainty leading to weaker spending than currently anticipated. In contrast, business survey indicators generally have held up fairly well. The September ISM manufacturing, the October Empire State, and the October Philadelphia Fed indices all are at levels consistent with healthy growth in the manufacturing sector. The ISM non-manufacturing index fell in September to its lowest level in over two years, but it remains at a level consistent with moderate growth in the service sector. The prices paid index within these surveys remained at elevated levels, indicating continued input cost pressures on firms.

Special Topic

Individual Price Computations in the CPI, PPI, and Import Price Indexes

October 28th, 2005
Charles Steindel^{Redacted}

In recent years, major divergences have developed between the growth of seemingly comparable CPI and supplier price measures. Starting in 1999, annual growth in the CPI goods index less food and energy has been less than growth in the finished goods PPI for consumer goods less food and energy by about two percentage points. Import prices for consumer goods less automobiles also have grown more rapidly than the core goods CPI during this expansion, though the divergence generally has been less pronounced than the PPI-CPI gap.

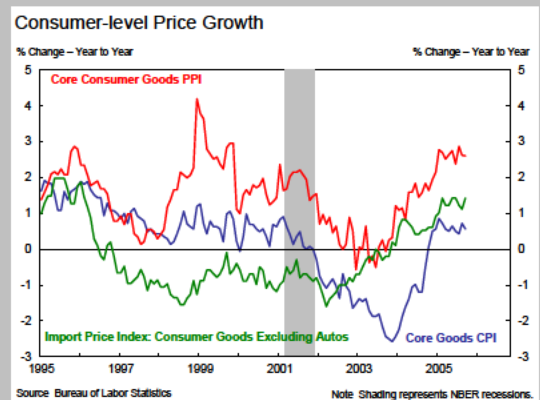
A major difference between the CPI and the other indices is in the procedures used to calculate price changes for individual items. The PPI and import price index use the traditional Laspeyres procedure to compute item price indices. The implicit assumption underlying this procedure is that the distribution of real sales (quantities) of the item across sellers is the same as in the index's base period. This has the well-known effect of giving greater weight to sellers whose prices are rising most rapidly.

In contrast, the CPI has used a "geo-mean" procedure since the start of 1999. The implicit assumption behind this procedure is that the dollar distribution of sales of most goods across sellers is the same as in the base period. This implies that sellers whose prices are rising most rapidly will lose unit sales, and consequently, the "geo-mean" procedure will tend to lower growth

in the price of individual items relative to that reported in the other indexes. In addition, there is no reason to believe that the difference between the price growth for an item in the CPI and in the other two indexes will be stable.

Economic intuition suggests that it is reasonable to think that retailers choosing between suppliers of comparable products would also be price sensitive. This suggests that the Laspeyres assumption used to compute the individual prices in the PPI and import price indexes is questionable.

The overall implication of these differences in item price computations is that the linkages from item prices in the import price index and the PPI to those in the CPI have weakened. A similar degradation can be expected in the relationship between the supplier indices and the PCE deflator, since most of the underlying data for the changes in prices of individual goods in the PCE deflator are taken from the CPI.



Global

The forecast is essentially unchanged, with foreign GDP projected to increase 2.6 percent (Q4/Q4) in 2005, matching last year's growth rate. Strong data and lower oil prices were balanced by signs that policy rates in the euro area and Asia (outside of China) will be raised at a faster pace than previously expected. For the second half of 2005, the outlook has Japan slowing significantly from the fast pace of the first half of the year, while the euro area gains some modest momentum. China is expected to slow to closer to its potential rate in Q4, while Mexico recovers from a drop in output in Q2, although more slowly than previously expected.

Industrial Countries. Euro area data over Q3 covering production, exports, and orders were all positive. In addition, the euro area industrial confidence indicator improved through September, while the IFO confidence index for Germany rose sharply in October. The forecast has the region's output up 1.50 percent (saar) in Q3 and 1.75 percent in Q4, modestly higher than Q2's rate. Consumer prices increased 2.6 percent over the year through September. Core prices, though, remained well contained. Japanese monthly indicators suggest slower growth in the second half of the 2005, with GDP projected to have grown only 0.5 percent (saar) in Q3, partly as payback for very fast growth in the first half of the year. The forecast is for 1.0 percent growth in Q4. The UK economy looks to continue growing at a below-trend rate, while Canada is expected to benefit from its position of being a net energy exporter.

Emerging Economies. The 2005 growth forecast for China was upgraded from 8.9 percent to a slightly-above-potential 9.2 percent (Q4/Q4). The 2006 forecast was also upgraded from 7.8 percent to 8.5 percent. These revisions reflect stronger-than-expected Q3 GDP growth and other favorable data. In particular, imports, industrial production, and monetary aggregates all grew faster in August and September than in the first half of the year; and exports, while decelerating, still grew at a healthy 20 percent pace. An additional factor is that macroeconomic policies have become somewhat expansionary. Data for the Asian NIEs showed generally solid gains in exports and industrial

production. The 2005 forecast for the region has been bumped up slightly to 3.9 percent from 3.7 percent (Q4/Q4), reflecting robust third quarter growth in Korea.

In Mexico, recovery from a sluggish first half has occurred at a somewhat slower pace than expected. Brazilian indicators suggest growth moderated in Q3 from Q2's strong pace, where GDP growth clocked in at 5.8 percent (saar). In Argentina, September industrial production rose more than expected, leading us to revise the GDP forecast for 2005 up to 5.6 percent (Q4/Q4).

Trade

The August trade deficit continued the pattern of relatively stable monthly trade deficits since November 2004. Over this period, non-oil import growth has been surprisingly soft given the overall strength of the U.S. economy while exports have grown at a healthy rate.

The U.S. trade deficit increased to \$59.0 billion in August from \$58.0 billion in July. Higher prices pushed up oil imports by \$2 billion. Exports to Asia rose dramatically in August: up 8 percent to Japan and 34 percent to China. Export growth to Europe, Canada, and Mexico remained strong. Non-oil imports rose moderately, held down by consumer goods imports. The imposition of quotas on Chinese textile imports appeared to have been a factor.

The contributions of net exports to GDP growth are projected to be 0.1 and -0.7 percentage point in Q3 and Q4, respectively. (In the advance Q3 GDP estimate, the contribution was 0.1 percentage point.) The large drag forecast for Q4 is from an expected rebound of non-oil imports that matches the underlying strength of the U.S. economy. Over the four quarters of 2005, net exports are projected to have a negligible effect on growth.

Financial

Domestic markets

Implied inflation expectations derived from comparing yields on TIPS securities with Treasuries have increased marginally since the last FOMC once allowance is made for the carry effect of the high CPI readings in July, August, and September [Exhibit B-1 and B-2]. The 2-year implicit CPI inflation compensation is around 3%. Forward inflation compensation is similar to the predictions of the UIG [Exhibit A-7].

Since the last FOMC meeting, nominal yields at all maturities have increased markedly [Exhibit B-3]. This reflects the positive resolution of uncertainty surrounding the hurricanes and a market reassessment of likely FOMC actions produced by Fed communication since the September FOMC meeting. The path of forward rates supporting this pattern is in the second panel of Exhibit B-3. Because inflation compensation is little changed since the last FOMC most of the increase is real. Analysis based on a daily term structure model used by Monetary Affairs suggests that higher term premia account for about half of the increase in long-term rates with the other half coming from higher expectations for policy tightening over the short run. Although the ten-year yield is back within 15 basis points of its June 2004 level, the one-year forward rate ending ten years hence is still down 125 basis points. Moreover, though the ten-year yield has risen since the Chairman's "conundrum" remarks, the distant horizon forward rates have not.

Yields on corporate debt also have increased. However, spreads to Treasuries have changed little and remain at relatively low levels compared to recent experience despite a deluge of bankruptcies, SEC investigations, and the failure of Refco during the inter-meeting period. Although it has declined recently, the stock market has not produced any strong negative signals. There has been a mild increase in the implied volatility of stock market indices.

Financial markets views of future policy actions have moved to be in line with our interpretation of the economic outlook. There is an expectation of 25 basis point rate increases at the next three FOMC meetings, which would then be followed by a slowdown in the frequency of rate increases [Exhibit B-4]. Measures of uncertainty around the expected path have decreased since the last FOMC meeting, which is consistent with the resolution of some of the uncertainty associated with the hurricanes and the nomination of a new Fed chair [Exhibits B-5 and B-6]. The FRBNY implied skewness measure suggests that market participants are not pricing in large movements in the FFR above the expected path [Exhibit B-5].

Monetary Policy and Global Bond Markets

With energy prices remaining high and more robust evidence of continuing global expansion, global financial markets appeared to put more focus on prospective inflation risk during the inter-meeting period. Generally, perceptions strengthened that global monetary policy might be taking a more decisive turn towards tightening. Market expectations are now that the ECB will raise its policy rate soon – perhaps in 2006Q1 or even before year end-2005 – while expectations of the Bank of Japan abandoning quantitative easing in 2006 increased. A drift towards policy tightening has also become more pronounced in the rest of the industrial world – the Bank of Canada hiked rates again in October and the Bank of England has delayed previously anticipated easing. In Emerging Asia, rates were hiked in Korea, India, Thailand, Taiwan, Indonesia, and the Philippines. Exceptions to this trend were mostly in Latin America, where the Brazilian and Mexican central banks just lowered their target interest rates.

Supported by tighter policy conditions, debt yields rose worldwide. In accord with the projected timing of policy changes, the increases were mostly in the one-to-two year range in Europe (where rates rose between 20 and 50 basis points, driven mostly by rising real rates, recovering a 30 basis points decline in August), but more in the five year range in Japan (with yields rising about 15 basis points). Bond yields also rose in most other industrial and emerging countries.

Equity Markets.

With strong corporate profit growth already expected, higher interest rates were the main factors driving equity markets over the inter-meeting period. The result was stalled growth of equity indices after the sharp rallies of previous months. European indices fell between 3 and 4 percent. Indices in Japan rose marginally (between 1 and 3 percent), largely because of the approval of postal system reform. As it is often the case in response to rising interest rates in industrial countries, emerging country asset markets came under pressure, although changes in asset prices in both Asia and Latin America generally stayed within recent ranges.

Exchange Rates and Capital Flows.

Expectations of greater policy tightening in the United States than in its major foreign trading partners supported the dollar, which strengthened marginally over the inter-meeting period [Exhibit B-7]. The dollar gained 1 percent in effective terms since the September FOMC meeting. Most of the gains were recorded against the yen, which fell to a two-year low of over 115 against the dollar despite ongoing optimism regarding Japan's recovery, as the low-yielding yen continued to act as a funding currency for higher-yield investment abroad. Changes in dollar/euro rates were driven first by the post-election political impasse in Germany, which weighed against the euro, and then by strengthening perception of policy tightening in the euro area, which brought the euro back to its September 20 level of 1.21 dollar/euro. The dollar's gains against emerging markets' currencies were small, with the renminbi continuing to trade in a very narrow corridor.

Option-implied volatility of major exchange rates remained at relatively low levels, suggesting moderate uncertainty about the cross-regional impact of future shocks [Exhibit B-8]. Capital flows – essentially U.S.-bound – continued at a smooth pace, with oil-exporting countries emerging as key sources of global savings.

Energy Markets

Energy prices remain high, but have fallen considerably since the September FOMC meeting [Exhibit B-9]. After spiking up in response to Hurricane Rita, prices, with the exception of natural gas, fell for much of the inter-meeting period as production and distribution gradually returned towards pre-hurricane levels and as some signs of weaker energy demand emerged. Nevertheless, implied volatility is still very high and a significant probability remains of a new round of energy price increases as winter approaches. Prices picked up in the last few days, although they remain well below their levels at the time of the last FOMC meeting: the spot WTI price has fallen from \$66.2/barrel on September 20 to \$61.1/barrel on October 27, while the prices of December 2006 futures have fallen from \$66.2/barrel to \$61.9. U.S. retail gasoline prices also have declined 15 percent from their September peaks.

Second District

Our Indexes of Coincident Economic Indicators for September indicate fairly brisk economic growth in New York State and City, and continued modest growth in New Jersey [Exhibit E-1]. Looking ahead to the next nine months, our leading indexes predict that the regional economy will expand moderately: New Jersey's economy is projected to grow nearly 3% (annual rate), New York State's roughly 3½%, and New York City's over 5% [Exhibit E-2]. Soaring energy prices drove up inflation in metropolitan New York City in September: the Consumer Price Index (CPI) rose 4.8% from a year earlier, about the same as for the U.S. and up from 4.1% in August. The core CPI rose 2.5% versus 2.0% nationally. Over the past year, most categories of goods and services have registered somewhat larger price rises locally than nationally, though no one category stands out in particular.

Labor Markets. In September, private-sector job growth in the region accelerated to a fairly brisk 1.7% annual rate, up from slightly under 1% in July and August. Job growth was about the same in New York and New Jersey, though upstate New York continued to lag the New York City metropolitan area. Year-over-year, private-sector employment

was up 1.2% in the New York-New Jersey region and up 1.5% in New York City, compared with 1.8% nationally [Exhibit E-3]. Although the unemployment rate rose moderately in September in New York and New Jersey and jumped nearly a full point in New York City, all of the increase (and then some) reflected a dramatic rise in labor force participation; that is, the proportion of the population looking for work rose more than the proportion employed. In fact, the employment-population ratio—more indicative of underlying conditions—jumped roughly ½ point to a nearly 5-year high in both New York State and New Jersey, and to a more than 28-year high in New York City [Exhibit E-4].

Real Estate. Construction activity in New York and New Jersey rebounded in September after a lull in July and August, led by the single-family segment. Single-family permits jumped to a cyclical high and were up more than 20% from a year earlier. Multi-family permits rose moderately and, though still well below the robust second-quarter levels, were up 12% from a year earlier. Home prices across most of the region continue to run well ahead of a year ago, though there has been a further pullback in unit sales and an increase in the inventory of unsold homes. Both office markets and industrial markets across most of the New York City metropolitan region showed greater strength in the third quarter.

Surveys and Other Business Activity. Recent surveys of businesses and consumers suggest stable growth in the regional economy. Our October Empire State Manufacturing Survey suggests continued moderate expansion in business activity but indicates somewhat less optimism about the six-month outlook. Of particular note, manufacturers indicated continued widespread increases in input prices, and most expected further increases. Firms also noted increases in selling prices, though these were not quite as widespread. Based on the Conference Board's latest survey of residents across the region (New York, New Jersey and Pennsylvania), consumer confidence, which fell sharply in the wake of Katrina, bounced back a bit in October.

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 well-contained despite the large increase in headline inflation
2. There is little if any remaining slack in resource utilization. Consequently, assuming no large shocks, future growth will be near its potential rate, which is about 3¼% (2¼% long-run productivity growth plus 1% labor force growth).
3. Long-term interest rates will remain relatively low.

Inflation. The recent increases in energy prices have led us to increase our short-term forecast for overall PCE inflation to over 3%, but we expect this impetus to be temporary and for overall inflation to return to around 2% in 2006 and 2007. Moreover, we expect that, in an environment of flexible labor and product markets and FOMC credibility, energy price increases should not spread into prices of other goods and services (aside from energy-intensive items such as air fares). Consequently, we expect core PCE inflation to remain near its recent level of around 2% through 2006. In 2007, continued FOMC credibility and the effects of monetary tightening cause core PCE inflation to decline to near 1¾% as it returns gradually to the implicit target.

Real Activity. Our forecast has changed little, as the effects of the Gulf hurricanes on the aggregate economy appear to have been limited. The recent data have been a little stronger than expected at the time of the September FOMC meeting, and the advance estimate of Q3 real GDP growth of 3.8% (annual rate) was slightly above our forecast at that time (although it was close to our projection prior to the GDP release). We would note that the greater than usual noise in the September data will mean greater uncertainty about the advance estimate. Nevertheless, we expect real growth over the near- to medium-term to remain around our estimate for the potential growth rate (about 3¼%).

Rebuilding from the storms, including higher federal government outlays, and a pickup in inventory accumulation may lead to slightly higher growth in the first half of 2006. This may be mitigated by the possible effects of higher energy prices on consumer spending and some retrenchment in housing. The fading of the special positive factors of the first half suggest a modestly slower growth in the second half of the year. In 2007, with long rates remaining low, we expect growth to be near potential. Because real growth continues to be near potential, we expect the unemployment rate to remain near 5%.

Comparison with Greenbook Forecasts

GDP and Inflation Forecast. [See Exhibit A-2.] One of the more substantive differences between our outlook and the Greenbook (GB) is the GB assumption that the economy will slow appreciably in the 2007. The primary sources of slowing in the GB outlook are tight(er) monetary policy, declines in household wealth to income ratios, and waning fiscal stimulus—which taken together are assumed to slow household and business spending over the period despite the assumed concurrent declines in energy prices. The differences in the inflation outlook across the two forecasts are driven mainly by their assumptions about the path of energy prices (the GB's assumed slowing of energy prices dampens overall inflation relative to our assumption) and the degree to which inflation expectations rise over the forecast horizon (the GB assumes a rise in expectations that we do not currently foresee). Both forecasts have similar projections for core in 2007, though the underlying mechanisms generating core inflation seem to differ somewhat across our two models. Finally, the GB assumes a slightly softer path for policy than we do, with the target FF rate rising to 4.25% by the end of 2005 and holding steady thereafter.

The GB has real growth slowing to 2.8% (which is below their assumed potential growth rate of 3.0%) in 2007, while we forecast growth at potential in both 2006 and 2007 (around 3.3%). Relative to our forecast, the GB projects lower overall inflation in both 2006 and 2007, but higher core inflation in 2006 and similar core inflation in 2007. The

underlying GB assumption is that energy prices fall in both 2006 and 2007, and this accounts for lower overall inflation. The strength in the GB core inflation for 2006 is attributable to pass-through from higher energy prices, both into the core and into inflation expectations, with the latter being assumed to rise modestly in 2006 and 2007.

The GB assumption on productivity growth is similar to ours over the forecast horizon, though it is slightly stronger in 2007. However, with a falling labor force participation rate (which by the end of 2007 is at 65.8% as compared to our 66.2%) and the assumption that higher overall inflation is passed through to compensation, the GB forecast generates higher growth in unit labor costs and compensation per hour than we are projecting. With the weakness in overall growth, the unemployment rate edges up over the forecast period in the GB, ending 2007 at 5.1%, while our forecast holds the unemployment rate steady at 4.9% through 2007.

Alternative Board Scenarios. The following scenarios are considered: an increase in inflation expectations relative to the increase already built into the baseline forecast, an increase in risk premiums on longer-term financial market assets in conjunction with the above mentioned increase in inflation expectations, unchanged inflation expectations over the period instead of the rise assumed in the baseline, stronger spending (less of an increase in the saving rate) than is assumed in the baseline, and the funds rate follows a higher path than in the baseline. The range of outcomes generated under these scenarios is fairly narrow, and nearly all generate higher core inflation than in the baseline. Referring only to 2007 and assuming no policy response, the weakest real growth realizations are 2.0% GDP growth relative to the baseline of 2.8%, and a 5.8% unemployment relative the baseline of 5.1%. These realizations are generated by the scenario in which risk premiums and inflation expectations both rise, labeled “stagflation.” The largest increase in inflation relative to the baseline is generated by the unanchored inflation scenario, in which core inflation is 2.8% relative to the baseline 1.9%.

Scenario 1: Unanchored inflation expectations

Long-run inflation expectations rise a percentage point relative to the baseline over the course of next year, making the cumulative increase three times as large as in the baseline. Holding policy fixed, this translates into lower real interest rates and thus stimulates growth and inflation.

Scenarios 2: Stagflation

The rise in inflation generated by the above scenario leads to a rise in term premiums on long-term Treasury securities by ½ percentage point above the baseline assumption. Also, risk spreads on investment-grade corporate bond over government bonds increase by ½ percentage point, part of which occurs because of the economic weakness. The deterioration in financial market sentiment depicted in this scenario depresses consumption, investment and exports, lowers household wealth and strengthens the dollar. The “stagflation” aspect of this scenario is that inflation expectations are in the background. In the case that policy responds according to the Taylor rule, policy is more accommodative over this period, holding at 4.0% rather than the 4.25% assumed in the baseline.

Scenario 3: Low inflation

Low inflation in this case means that the underlying rate of inflation does not drift up over the period as assumed in the baseline. Since inflation expectations also do not rise, this shuts down the indirect pass-through to the core (e.g., through compensation as assumed in the baseline) so that once the direct pass-through from higher energy prices is completed the core declines, falling below 1.5% by the end of 2007.

Scenario 4: Spending boom

The low interest rate environment provides a stimulus to growth, with personal saving rising only half as much as assumed in the baseline. This pushes labor and product markets above trend assumptions and generates core inflation even after energy prices

have moderated. Under the Taylor rule, policy succeeds in keeping inflation at the baseline with stronger output growth and lower unemployment than in the baseline.

Scenario 5: Higher funds rate path

The FF rate is raised a quarter point each meeting until it reaches 5.0% in May 2006. GDP growth slows from the baseline 2.8% in 2007 to 2.25% and unemployment rises to 5.5%. Core inflation slows to 1.75% in 2007.

Foreign Outlook. Our forecast of the major foreign economies is similar to the Board's forecast for the second half of 2005. Notable differences include the Board expecting somewhat less of a slowdown in Japanese economy than we do. They have a weaker rebound in Mexico following that country's drop in output in Q2. For 2006, our forecast is more optimistic for the euro area. We see the region getting to its potential growth rate next year while the Board has higher energy prices being a moderating influence until 2007. We also project faster growth in China next year, in large part because we have an estimate of potential growth that is roughly 1.0 percentage point higher than the Board's estimate.

U.S. Trade. Our trade forecast largely matches the Board's for the second half of 2005. We both expect a small positive contribution of net exports to GDP growth in Q3 and some drag in Q4. For Q4, we anticipate higher import growth and, as a consequence, a larger drag from net exports than does the Board, at 0.7 percentage point versus 0.3 percentage point. For 2006, we anticipate 0.2 percentage point more drag from net exports than the Board, with the difference again tied to our expectation of modestly faster import growth.

Comparison with Other Forecasts

[See Exhibit A-5.] Most forecasters, including FRBNY, raised their growth projections for both 2005Q4 and 2006Q1. All forecasters raised their estimates of overall CPI inflation in 2005Q4 and left 2006Q1 roughly unchanged. Only FRBNY and Macro

Advisors forecast core CPI, and both have roughly similar estimates over the forecast horizon.

Alternative Scenarios and Risks

Alternative 1: Global Deflation. The scenario is related to changes in the world economy, particularly the growth of the Chinese economy and the stagnation of the economies of Europe and Japan. The Chinese growth represents a shift in the aggregate supply curve, leading to higher growth and lower inflation in the US; while the European and Japanese stagnation 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 but the downside risk in this scenario comes from an abrupt slowdown in Chinese growth without a compensating increase in Europe or Japan, thus generating a bad deflationary shock to the world economy. Recent reported improvements in Chinese economic performance have slightly lowered the probability of this scenario. However, given the inadequacies of national income accounts in China more indirect indicators such as core goods prices and world interest rates need to be followed. The evidence from these two indicators is mixed with core goods prices weak but world interest rates increasing during the inter-meeting period.

Alternative 2: Productivity. 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 on, 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 continued strength of labor productivity over the longer term—despite the recent short-term moderation—suggest that firms have become more efficient in using labor. As such, strong productivity growth could persist. This would imply that the potential growth rate is higher than our current estimates. In

addition, strong productivity growth would limit labor cost pressures, and inflation thus would remain subdued. For most of the past year the incoming data have been less supportive of this scenario. However, the continued strength in IT industrial production growth and the FRBNY Tech pulse index as well as our staff estimate of strong productivity growth in 2005Q3 has partially reversed this trend of lesser support. In addition, the recent increase in real rates is more supportive of this scenario.

2.b Productivity Slump

Recent productivity revisions provide more evidence of a slowdown in productivity growth. Our central projection continues to assume that this is only a temporary cyclical moderation in productivity growth, but there is downside risk to this assessment. Further, the persistent increase in the level and volatility of energy prices and reallocation of resources produced by recent natural disasters in the US also could be associated with lower labor productivity growth. The projected high productivity growth rate in Q3 has lowered the probability of this scenario.

Alternative 3: Overheating. The extremely accommodative policy followed in the US and other countries since 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 early 2006. There are two potential connected channels at work here. The first is a continued underestimate of the equilibrium real rate (i.e., an overestimate of slack in the economy) and the second is higher energy 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 as inflation expectations increase. The evidence from core inflation reports recently has not been supportive of this viewpoint, although total inflation has been very high because of energy price increases. TIPS implied inflation rates give no indication that markets are pricing in a large increase in underlying inflation, and the UIG also does not indicate a large increase. However, household inflation expectations have moved up as retail gasoline prices spiked. Further, residential real estate prices continue to increase and although our central projection

assumes this increase is mainly due to fundamentals, there continues to be the possibility that it is partly caused by over-accommodation in monetary policy.

Alternative 4: Hurricane. This scenario captures the increased uncertainty associated with the hurricane. It assumes that the hurricane causes an abrupt slowdown in real activity, followed by a sharp snapback. It is agnostic on the inflation implications. The information in the inter-meeting period, despite the landfall of two additional major hurricanes, has not been supportive of this scenario with the exception of the continued fall in consumer confidence.

Exhibits C-2 and C-3 show the path of inflation and output under the alternative scenarios compared to the Bank's central scenario forecast.

Additional Uncertainties

Foreign Outlook. Energy prices and the extent of monetary tightening abroad are the two major sources of uncertainty in the global outlook. The euro area's outlook is relatively optimistic, based on output and confidence indicators. Nevertheless, the forecast requires some pickup in consumer spending, which has tended to come in weaker than expected over the last year. The momentum in Japan is also in question because of a slowdown in private consumption in Q2. An upside risk is that investment spending may be stronger than expected given rising profits and strong business confidence.

Markets appear increasingly comfortable with China's new currency regime, and now expect only modest further appreciation over the next year. This approach, though, runs the risk of trade tensions. As a result, the current quiet environment could give way to currency speculation. Investment in China continues to grow at an unsustainable pace (46 percent of GDP this year and rising). As a result, China remains vulnerable to an abrupt slowdown, with unwelcome spillover effects for the rest of Asia. The focus in Emerging Asia outside China has shifted from the risk of slow growth to the risk of higher inflation, reflecting higher energy prices and mostly improved growth figures. As

a result, the ongoing tightening cycle in the region may prove more aggressive than expected. The downside risk is that policy tightening and expensive energy products might derail regional recoveries.

In Latin America, key watch points are tied to upcoming elections. In Mexico, the presidential campaign already has reached almost full intensity ahead of the July 2006 election. A period of investor uncertainty then is likely to prevail, until the new government, which takes office in December 2006, establishes its policy priorities. In Brazil, a bribery scandal and other corruption allegations will continue to be a source of uncertainty, particularly in the lead-up to the 2006 presidential election. In Argentina, inflation remains a key concern. The government has a stronger mandate based on the results of the October 23rd Congressional elections, but it remains to be seen whether the authorities now will address inflation with more orthodox methods or will continue with ineffective micro-level interventions.

U.S. Trade Forecast. The impact of Hurricane Katrina on net exports is not yet clear. There may be a decline in both exports and imports in Q3 due to the destruction of ports on the Gulf Coast, with ambiguous effects on the trade deficit. At the same time, rebuilding efforts may lead to a surge in imports of building-related materials, causing the trade deficit to deteriorate.

Quantifying the Risks. The incoming data, despite the additional uncertainty produced by Katrina, have continued to be consistent with our central scenario. Therefore, we are raising the current probability assessment of the central scenario to 67% (it was 64% for the September FOMC). We are changing the balance of risks by placing less weight on the productivity slump, global deflation and hurricane scenarios and more weight on the productivity boom. **The combination of these changes produces less downside risk to the output forecast in 2006 and 2007 and less upside risk to inflation although the probability of exceeding implicit target ranges is still relatively high [see Exhibit C-4].**

We assume that the most likely alternative scenario is the productivity slowdown at 10% (12% in September), next is overheating at 8% (8% in September), then continued productivity surge at 8% (4% in September), followed by global deflation at 3% (4% in September), and the hurricane scenario at 2% (5% in September). The remaining 2% (3%) covering the additional uncertainties is all on the upside. The implied dynamic balance of risks is shown in Exhibit C-1.

The forecast distributions for core PCE inflation and GDP growth produced by these 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 inflation converges back to the implicit inflation target of 1.5%. The relatively high central inflation path keeps the probability at 63% (70% in November) of core PCE inflation exceeding 2.5% by the end of 2008 (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” are very similar to those presented in the Greenbook for 2005. There are differences in 2006 and 2007. We are more confident in the output forecast in 2006 and less confident on the inflation forecast than is the Greenbook. Further, we have more upside risk to inflation and more downside risk to output than the Greenbook in 2006. For 2007 we are less confident on inflation but are similar on output to the Greenbook.

4. Policy Alternative

As has been the case for some time, our baseline forecast and risk assessment remains consistent with a 25 basis point increase in the funds rate at the upcoming meeting. There also continues to be no evidence to suggest changing the medium-term signal that the funds rate will peak at roughly 4½% some time in 2006. Given the relatively advanced stage of the tightening cycle, it also continues to be appropriate that the short-term outlook for policy is data dependent. Also, while the FOMC succession process has

been clarified, there is still uncertainty in the markets about how the Bernanke-led Fed might change the conduct of monetary policy.

We consider three possible signals in our policy alternative exercises:

1. *Raise and Wait (Below short-run market expectation, below market expectation by end of 2006)*. Increase 25 bp in November with a more data dependent signal. A continued signal of aggressive future response to higher inflation/inflation expectations in 2006; in particular, a 50 bp increase might be required in 2006.
2. *Continued Measured Firming (At market expectation)*. Increase 25 bp in November, December and January unless the incoming data is very different from current forecasts. Continued signal of aggressive future response to higher inflation/inflation expectations in 2006.
3. *Inflation Hawk (At short run market expectation, above expectation in 2006)*. Increase 25 bp with a signal of little sensitivity to the activity data and more sensitivity to inflation data and expectations.

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 rules over the Bank forecast. It shows the implied (quarterly average path) of FFR through the end of 2006 compared to that currently priced into markets.

Only the inflation hawk rule produces a higher level for the FFR at the end of 2006 than presently is priced into financial markets. This is different from the situation of the last few cycles where the market was pricing in less tightening than the prescriptions of our various policy rules. Further, the gap between the market expectation and the expected values prescribed by the inflation hawk and continued measured pace rules is very small using the metrics introduced in the September Blackbook as shown in Exhibit D-6. There continues to be some positive skewness in the distribution of FFR implied by our rules (that is, the expected value is above the median as can be seen in the Exhibits D-5 and D-6). There is no evidence that such positive skewness is priced into markets [see Exhibit B-5] but the positive skewness is consistent with Fed commentary during the inter-meeting period.

If we focus on the signal that appears to be most consistent with market expectations for the next few meetings, *Continued Measured Firming*, then the alternative scenario of global deflation continues to have very different implications for policy in 2006 and 2007. Exhibit D-2 contains the path of the nominal FFR and Exhibit D-3 that of the real FFR for our four main alternative scenarios.

As seen in Exhibit D-2, the projected path of the FFR is much higher under the overheating scenario in 2006 than in either our central projection or the market-implied path. The path of the FFR under the global deflation scenario is very different, even in the short-run, from the other paths as the Fed reacts quickly to signs of deflationary pressures. Note that in the simulation it is assumed that the Fed recognizes immediately that the global deflation scenario is occurring. As discussed in the September Blackbook the noise in the data produced by the hurricanes could produce an even longer recognition lag if global deflation does occur. However, because it appears that the disturbance produced by the hurricane is less than assessed in September, this risk has been reduced [see Exhibits C-2 and C-3].

Exhibit D-4 shows the result of running our standard policy rule (setting the initial FFR at its value in 2004Q4) with a 1.5% inflation target and with a 1.75% inflation target. The path derived from the 1.5% target follows quite closely the actual FFR increases in 2005 albeit with less steepness to its slope. The endpoint is very similar to that from our three policy rules discussed above. In contrast, the path of the FFR in 2005 under the higher inflation target is considerably lower than the actual path. One tentative conclusion from this analysis is that the markets have responded to recent Fed commentary and statements by lowering their estimate and/or reducing the uncertainty about the Fed's implicit inflation target.

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 as well as 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 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 as well as 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 forecasts 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 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 variety of sources. Besides the FRBNY forecast, the table includes the medians from two surveys of forecasters (Blue Chip and Survey of Professional Forecasters [SPF]), the forecasts from Macroeconomic

Advisors, 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 Advisors

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

The three tables in this exhibit are included as reference: they show the actual changes in inflation over 1, 3, 6, 12, and 24 months.

Source: Bureau of Economic Analysis, 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) and the UIG measure. The measures of PCE inflation are core and the trimmed mean (Dallas Fed).

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 chosen 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.

We use this factor model to determine the oscillations of the UIG about its long-term level. Assuming that long-term expectations are well anchored, we set the long-term level of the UIG to 2.25%, the average inflation rate since 1994, which can be interpreted as an implicit inflation target.

A. Forecast Details

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

	Chain Type															
	Real GDP			GDP Price Index			PCE Deflator			Core PCE			Unemployment Rate			
	Aug05	Sep05	Oct05	Aug05	Sep05	Oct05	Aug05	Sep05	Oct05	Aug05	Sep05	Oct05	Aug05	Sep05	Oct05	
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	5.3	5.3	5.3	
2005 Q2	3.4	3.3	3.3	2.4	2.4	2.6	3.3	3.2	3.3	1.7	1.6	1.7	5.1	5.1	5.1	
2005 Q3	4.0	3.5	3.8	1.6	2.6	3.1	2.4	3.6	3.7	1.8	1.4	1.3	5.0	4.9	5.0	
2005 Q4	3.9	3.3	3.8	1.6	1.4	2.8	2.2	1.7	3.3	1.9	1.8	1.8	5.0	4.9	4.9	
2006 Q1	3.5	3.4	3.6	2.6	2.5	2.7	2.2	2.2	2.2	2.0	1.9	1.9	4.9	4.8	4.9	
2006 Q2	3.5	3.3	3.4	2.2	2.2	2.3	2.2	2.2	2.2	2.0	2.0	2.0	4.8	4.8	4.9	
2006 Q3	3.5	3.2	3.1	2.3	2.2	2.0	2.3	2.3	2.0	2.1	2.1	2.1	4.8	4.8	4.9	
2006 Q4	3.5	3.2	3.1	2.2	2.2	2.2	2.3	2.3	2.1	2.1	2.1	2.1	4.7	4.8	4.9	
2007 Q1	3.3	3.3	3.3	2.6	2.2	2.3	2.2	2.2	2.1	2.0	2.0	2.0	4.7	4.8	4.9	
2007 Q2	3.3	3.4	3.4	2.1	2.1	2.0	2.1	2.1	1.9	2.0	1.9	1.8	4.7	4.8	4.9	
2007 Q3	3.3	3.3	3.3	2.0	2.0	2.0	2.0	2.0	2.0	1.7	1.8	1.8	4.7	4.8	4.9	
2007 Q4	3.3	3.3	3.3	1.9	2.0	1.9	1.9	1.9	1.9	1.7	1.7	1.7	4.7	4.8	4.9	
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	3.8	3.5	3.7	2.2	2.4	2.9	2.5	2.7	3.1	2.0	1.8	1.8	-0.4	-0.5	-0.5	*
2005 Q4 to 2006 Q4	3.5	3.3	3.3	2.3	2.3	2.3	2.3	2.2	2.1	2.0	2.0	2.0	-0.3	-0.1	0.0	*
2006 Q4 to 2007 Q4	3.3	3.3	3.3	2.2	2.1	2.0	2.0	2.0	2.0	1.8	1.8	1.8	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	
	SEP	OCT	SEP	OCT	SEP	OCT	SEP	OCT	SEP	OCT	SEP	OCT
REAL GDP (Q4/Q4)	3.5	3.7	3.3	3.3	3.3	3.3	3.5	3.5	3.4	3.3	2.9	2.8
GROWTH CONTRIBUTIONS(Q4/Q4)												
FINAL SALES TO DOMESTIC PURCHASERS	3.6	3.9	3.6	3.6	3.6	3.6	3.5	3.5	3.9	3.7	3.0	3.0
CONSUMPTION	2.3	2.4	2.3	2.3	2.2	2.2	2.1	1.9	2.5	2.3	2.2	2.2
BFI	0.7	0.7	0.9	0.9	1.0	1.0	0.5	0.6	0.9	1.0	0.6	0.5
STRUCTURES	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.0
EQUIPMENT & SOFTWARE	0.7	0.7	0.8	0.8	0.8	0.8	0.5	0.5	0.7	0.7	0.5	0.5
RESIDENTIAL INVESTMENT	0.2	0.3	-0.1	-0.1	-0.1	-0.1	0.4	0.5	0.1	0.0	-0.1	0.0
GOVERNMENT	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3
FEDERAL	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.0	0.0
STATE & LOCAL	0.3	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
INVENTORY INVESTMENT	-0.1	-0.2	0.1	0.2	0.1	0.1	-0.1	-0.2	-0.1	-0.1	0.3	0.3
NET EXPORTS	0.0	0.0	-0.5	-0.5	-0.4	-0.4	0.1	0.2	-0.4	-0.3	-0.4	-0.4
INFLATION/PRODUCTIVITY/WAGES (Q4/Q4)												
GDP DEFLATOR	2.4	2.9	2.3	2.3	2.1	2.0	2.7	2.8	2.0	2.1	2.1	1.9
PCE	2.7	3.1	2.2	2.1	2.0	2.0	3.2	3.2	1.9	1.9	1.8	1.7
CORE PCE	1.8	1.8	2.0	2.0	1.8	1.8	1.9	1.9	2.3	2.3	2.0	1.9
COMPENSATION PER HOUR	4.8	4.8	4.4	4.6	4.2	4.5	4.7	4.4	5.4	5.3	5.1	5.0
OUTPUT PER HOUR	2.4	2.8	2.2	3.0	2.2	3.0	2.8	2.8	2.2	2.2	2.5	2.5
UNIT LABOR COSTS	2.4	2.0	2.2	1.6	2.0	1.5	1.8	1.5	3.1	2.9	2.5	2.4
EMPLOYMENT VARIABLES												
UNEMPLOYMENT RATE (Q4 LEVEL)	4.9	4.9	4.8	4.9	4.8	4.9	5.0	5.0	5.0	5.0	5.0	5.1
PARTICIPATION RATE (Q4 LEVEL)	66.2	66.2	66.2	66.2	66.2	66.2	66.1	66.2	66.0	66.0	65.9	65.8
NONFARM PAYROLL EMPLOYMENT (Q4/Q4 CHANGE)												
TOTAL, IN THOUSANDS	2107	2074	1741	1431	1765	1340	2000	2100	2000	1900	1100	1100
AVERAGE PER MONTH, IN THOUSANDS	176	173	145	119	147	112	167	175	167	158	92	92
FINANCIAL MARKET VARIABLES												
FED FUNDS RATE (PERCENT)	3.92	3.96	4.25	4.50	4.25	4.50	4.00	4.25	4.25	4.25	4.25	4.25
BAA BOND YIELD (PERCENT)	6.1	6.2	6.5	6.6	6.5	6.6	6.0	5.95	6.0	5.95	6.1	5.9
EFFECTIVE EXCHANGE RATE (Q4/Q4 % CHANGE)	-2.5	-1.3	-1.5	-1.5	N/A	N/A	1.3	-2.0	-1.7	-2.1	N/A	N/A

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			
													2004	2005	2006	2007
REAL GDP AND COMPONENTS (% Change, AR)																
GDP.....	3.8	3.3	3.8	3.8	3.6	3.4	3.1	3.1	3.3	3.4	3.3	3.3	3.8	3.7	3.3	3.3
CHANGE IN INVENTORIES (GROWTH CONTRIBUTION) 1\.....	0.3	-2.1	-0.6	1.5	0.3	0.4	0.0	0.1	-0.1	0.2	0.2	0.1	0.2	-0.2	0.2	0.1
DOMESTIC PRIVATE PURCHASES.....	4.0	2.1	3.5	4.3	3.8	3.7	3.5	3.5	3.5	3.5	3.5	3.4	4.5	3.5	3.6	3.5
CONSUMPTION EXPENDITURES.....	3.5	3.4	3.9	2.8	3.1	3.3	3.4	3.3	3.1	3.1	3.2	3.2	3.8	3.4	3.3	3.1
BUSINESS FIXED INVESTMENT.....	5.7	8.8	6.2	6.9	8.5	8.5	8.5	8.5	8.8	8.8	8.8	8.8	10.9	6.9	8.5	8.8
RESIDENTIAL INVESTMENT.....	9.5	10.8	4.8	-4.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	6.6	5.1	-2.0	-2.0
NET EXPORTS (GROWTH CONTRIBUTION) 1\.....	-0.4	1.1	0.1	-0.7	-0.4	-0.5	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.9	0.0	-0.5	-0.4
EXPORTS	7.5	10.7	0.7	7.0	7.9	6.1	5.3	6.1	6.6	6.6	6.6	6.6	6.1	6.4	6.3	6.6
IMPORTS	7.4	-0.2	0.0	8.7	7.8	6.9	6.9	7.2	6.5	6.5	6.5	6.5	10.6	3.9	7.2	6.5
FEDERAL GOVERNMENT.....	2.3	2.4	7.7	3.3	6.0	1.0	2.2	1.8	5.5	1.7	1.7	1.7	4.2	3.9	2.7	2.6
STATE & LOCAL GOVERNMENTS.....	1.6	2.6	0.6	2.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.9	1.8	3.0	3.0
INTEREST RATE ASSUMPTIONS (%)																
FEDERAL FUNDS RATE (TARGET).....	2.44	2.92	3.43	3.96	4.42	4.50	4.50	4.50	4.50	4.50	4.50	4.50	1.94	3.96	4.50	4.5
YIELD ON 10-YR GOVERNMENT.....	4.3	4.2	4.2	4.5	4.8	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.2	4.5	4.9	4.9
BAA BOND YIELD.....	6.0	6.0	6.0	6.2	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.2	6.2	6.6	6.6
INCOME (% Change, AR)																
PERSONAL INCOME.....	2.0	6.0	2.8	7.0	6.8	6.5	6.7	4.9	7.2	6.3	7.0	5.0	7.5	4.4	6.2	6.4
REAL PERSONAL DISPOSABLE INCOME.....	-3.4	1.5	-0.9	3.4	4.5	4.2	4.7	2.6	5.2	4.3	5.1	2.9	4.1	0.1	4.0	4.4
PERSONAL SAVING RATE (% OF DPI).....	0.5	0.1	-1.1	-1.0	-0.8	-0.6	-0.3	-0.6	-0.2	0.0	0.4	0.2	1.7	-0.4	-0.5	0.1
CORPORATE PROFITS BEFORE TAXES.....	24.5	22.1	-18.1	34.5	-2.0	2.4	2.2	1.0	1.2	2.3	2.6	2.5	9.6	13.7	0.9	2.2
PRICES & PRODUCTIVITY (% Change, AR)																
GDP IMPLICIT DEFLATOR.....	3.1	2.6	3.1	2.8	2.7	2.3	2.0	2.2	2.3	2.0	2.0	1.9	2.9	2.9	2.3	2.0
PERSONAL CONSUMPTION EXPENDITURES.....	2.3	3.3	3.7	3.3	2.2	2.2	2.0	2.1	2.1	1.9	2.0	1.9	3.1	3.1	2.1	2.0
CORE PERSONAL CONSUMPTION EXPENDITURES.....	2.4	1.7	1.3	1.8	1.9	2.0	2.1	2.1	2.0	1.8	1.8	1.7	2.2	1.8	2.0	1.8
CONSUMER PRICE INDEX.....	2.4	4.2	5.1	3.6	2.2	2.3	2.4	2.4	2.2	2.1	2.1	2.0	3.4	3.8	2.3	2.1
CORE CONSUMER PRICE INDEX.....	2.6	2.0	1.5	1.9	2.1	2.2	2.3	2.3	2.1	2.0	1.9	1.9	2.1	2.0	2.2	2.0
COMPENSATION PER HOUR (NONFARM BUSINESS).....	5.6	4.5	4.5	4.8	4.8	4.7	4.4	4.5	4.5	4.4	4.5	4.5	5.8	4.8	4.6	4.5
OUTPUT PER HOUR (NONFARM BUSINESS).....	3.0	1.8	3.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.6	2.8	3.0	3.0
UNIT LABOR COST (NONFARM BUSINESS).....	2.5	2.7	1.0	1.8	1.8	1.7	1.4	1.5	1.5	1.4	1.5	1.5	3.2	2.0	1.6	1.5
REAL ACTIVITY																
CAPACITY UTILIZATION (MANUFACTURING, %).....	78.2	78.1	78.2	78.6	79.3	79.7	80.0	80.4	80.6	80.9	81.1	81.2	76.7	78.3	79.9	81.0
CIVILIAN UNEMP RATE (%) 2\.....	5.3	5.1	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.4	4.9	4.9	4.9
PRIVATE HOUSING STARTS (THOUS, AR).....	2083	2044	2069	2020	1990	1950	1930	1910	1895	1880	1865	1840	1950	2054	1945	1870
LIGHT VEHICLE SALES (MILS, AR) 3\.....	16.5	17.2	17.9	16.6	17.1	17.1	17.2	17.2	17.3	17.3	17.3	17.3	16.9	17.1	17.1	17.3
FEDERAL SURPLUS/DEFICIT (Unified Basis, Bil\$, NSA) 4\.....	-176.6	45.2	-69.2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	-412.1	-377.1	-301.5	#N/A

NOTE: All series other than interest rates and the federal deficit are seasonally adjusted. Italics indicates a reported value. 1\ Growth contribution to real GDP 2\ Annual values are end of Q4 levels 3\ Includes domestic and foreign 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	3.8	3.8	3.6	3.4	3.1	3.1	3.3	3.4	3.3	3.3	3.8	3.7	3.3	3.3
<u>Contributions to GDP growth:</u>																
FINAL SALES TO DOMESTIC PURCHASERS.....	3.9	4.4	4.3	3.0	3.7	3.5	3.6	3.5	3.7	3.5	3.5	3.5	4.5	3.9	3.6	3.6
CONSUMPTION EXPENDITURES.....	2.4	2.4	2.7	2.0	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.7	2.4	2.3	2.2
BUSINESS FIXED INVESTMENT.....	0.6	0.9	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.1	0.7	0.9	1.0
RESIDENTIAL INVESTMENT.....	0.5	0.6	0.3	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.4	0.3	-0.1	-0.1
FEDERAL GOVERNMENT.....	0.2	0.2	0.5	0.2	0.4	0.1	0.2	0.1	0.4	0.1	0.1	0.1	0.3	0.3	0.2	0.2
STATE & LOCAL GOVERNMENTS.....	0.2	0.3	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.1	0.2	0.4	0.4
NET EXPORTS.....	-0.4	1.1	0.1	-0.7	-0.4	-0.5	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.9	0.0	-0.5	-0.4
EXPORTS.....	0.7	1.1	0.1	0.7	0.8	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7
IMPORTS.....	-1.1	0.0	0.0	-1.4	-1.2	-1.1	-1.1	-1.2	-1.1	-1.1	-1.1	-1.1	-1.5	-0.6	-1.2	-1.1
CHANGE IN INVENTORIES.....	0.3	-2.1	-0.6	1.5	0.3	0.4	0.0	0.1	-0.1	0.2	0.2	0.1	0.2	-0.2	0.2	0.1

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

A. Forecast Details

Exhibit A-5: Alternative GDP and Inflation Forecasts

		2005-Q3**		GDP 2005-Q4		2006-Q1	
	Release Date	Prev*	Oct	Prev*	Oct	Prev*	Oct
FRBNY	10/27/2005	3.5	3.8	3.3	3.8	3.4	3.6
PSI Model	10/28/2005	2.7	2.7	2.7	3.6	--	3.6
Blue Chip	10/10/2005	3.6	3.4	3.0	2.9	3.1	3.4
Median SPF	8/15/2005	3.5	4.2	3.4	3.6	3.2	3.3
Macro Advisers	10/26/2005	3.2	3.4	3.3	3.6	4.4	4.5

		2005-Q3**		CPI 2005-Q4		2006-Q1	
	Release Date	Prev*	Oct	Prev*	Oct	Prev*	Oct
FRBNY	10/27/2005	--	5.1	2.5	3.6	2.4	2.2
Blue Chip	10/10/2005	--	--	2.8	3.5	2.4	2.4
Median SPF	8/15/2005	--	--	2.4	2.4	2.4	2.4
Macro Advisers	10/26/2005	--	--	2.7	4.0	1.0	1.0

		2005-Q3**		Core CPI 2005-Q4		2006-Q1	
	Release Date	Prev*	Oct	Prev*	Oct	Prev*	Oct
FRBNY	10/27/2005	--	1.5	2.4	1.9	2.3	2.1
Macro Advisers	10/26/2005	--	--	2.3	2.1	2.2	2.2

Notes: Previous release of SPF is May and of all others is September. **CPI, Core CPI, and Q3 GDP (equal to 3.8) are actual data.

A. Forecast Details

Exhibit A-6: Reference Table 1 - CONSUMER PRICE INDEX DATA AS OF SEPTEMBER 2005

	Annualized Percent Change Over Indicated Interval					Weights (December 2003)	
	24 Month	12 Month	6 Month	3 Month	1 Month	Total	Core
Consumer Price Index	3.6	4.7	5.6	9.4	15.7	100.00	
Energy	20.0	35.1	54.5	122.1	289.0	7.08	
All Items Ex Energy	2.1	2.0	1.5	1.6	1.8		
Food	2.9	2.5	2.7	1.9	3.2	14.38	
Food Away From Home	3.2	3.0	3.0	2.9	2.5	6.13	
All Items Ex Food and Energy	2.0	2.0	1.3	1.4	1.2	78.54	100.00
Core Chain-Weight CPI (NSA)	1.7	1.8	0.5	1.5	2.2		
Core Goods	0.0	0.6	-0.1	0.0	1.7	22.25	28.34
Apparel	-0.7	-0.7	-2.6	0.0	-1.0	3.98	5.06
Medical Care Commodities	4.2	3.9	3.0	2.8	3.4	1.50	1.91
Durable Goods	-0.5	0.4	-0.7	-1.0	2.1	11.28	14.36
New Vehicles	-0.2	0.7	-2.2	-4.3	5.4	4.82	6.13
Used Vehicles	0.9	3.7	5.6	4.7	-4.1	2.01	2.56
Core Services	2.8	2.5	2.0	2.2	1.5	56.28	71.66
Rent of Primary Residence	2.8	2.9	3.1	3.0	1.7	6.16	7.84
Owners' Equivalent Rent	2.4	2.3	2.2	2.1	1.6	23.38	29.77
Lodging Away from Home	2.6	-2.0	-12.4	-11.2	-26.0	2.95	3.76
Medical Care Services	4.7	4.4	3.0	2.8	3.2	4.58	5.83
Transportation Services	2.4	3.2	4.3	4.3	4.3	6.32	8.05

A. Forecast Details

Exhibit A-6: Reference Table 2 - PCE DEFLATOR DATA AS OF AUGUST 2005

	Annualized Percent Change Over Indicated Interval				
	24 Month	12 Month	6 Month	3 Month	1 Month
PCE Deflator	2.8	3.0	3.3	3.1	5.6
Market Based PCE Deflator	2.6	2.9	3.5	3.3	6.1
Durable Goods	-1.0	-0.2	-1.4	-3.1	1.1
Motor Vehicles and Parts	0.5	2.5	-0.5	-1.5	5.4
Nondurable Goods	3.8	4.4	6.3	6.4	13.5
Clothing and Shoes	-0.7	-1.1	-1.8	-3.5	8.9
Services	3.1	2.9	2.9	2.8	2.8
Housing	2.6	2.5	2.5	2.4	1.6
Transportation	2.8	3.4	6.0	5.5	0.5
Medical Care	3.2	2.9	2.3	3.2	3.4
PCE Deflator Ex Food and Energy	2.0	2.0	1.6	1.2	2.3
Market Based Core PCE Deflator	1.6	1.7	1.4	1.1	2.2
Personal Business Services-Market Based	3.0	2.6	1.9	0.8	0.8
Personal Business Services-Not Market Based	3.1	1.9	2.1	1.4	0.7

A. Forecast Details

Exhibit A-6: Reference Table 3 - PRODUCER PRICE DATA AS OF SEPTEMBER 2005

	Annualized Percent Change Over Indicated Interval				
	24 Month	12 Month	6 Month	3 Month	1 Month
Finished Goods	5.0	6.7	6.9	14.8	24.7
Finished Consumer Goods	6.0	8.3	8.5	18.7	31.4
Finished Consumer Goods Ex Food	7.4	10.8	12.5	25.3	37.6
Nondurables Ex Food	9.8	14.6	17.2	34.7	51.3
Durables	1.7	1.5	1.2	3.3	4.5
Capital Equipment	2.0	2.3	1.8	3.1	4.2
Electronic Computers (NSA)	-17.7	-22.1	-22.1	-18.7	-27.0
Communication and Related Equipment (NSA)	-1.5	-1.0	-1.2	-0.8	0.0
Finished Goods Ex Food and Energy	2.1	2.5	1.8	2.6	3.1
Finished Consumer Goods Ex Food and Energy	2.2	2.6	1.8	2.2	3.0
Intermediate Materials	8.4	8.4	9.1	18.1	35.2
Intermediate Materials Ex Food and Energy	5.6	3.5	1.4	4.2	15.1
Crude Materials	21.4	28.5	35.4	109.7	219.8
Crude Materials Ex Food and Energy	16.2	6.5	13.3	66.3	86.0

A. Forecast Details

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

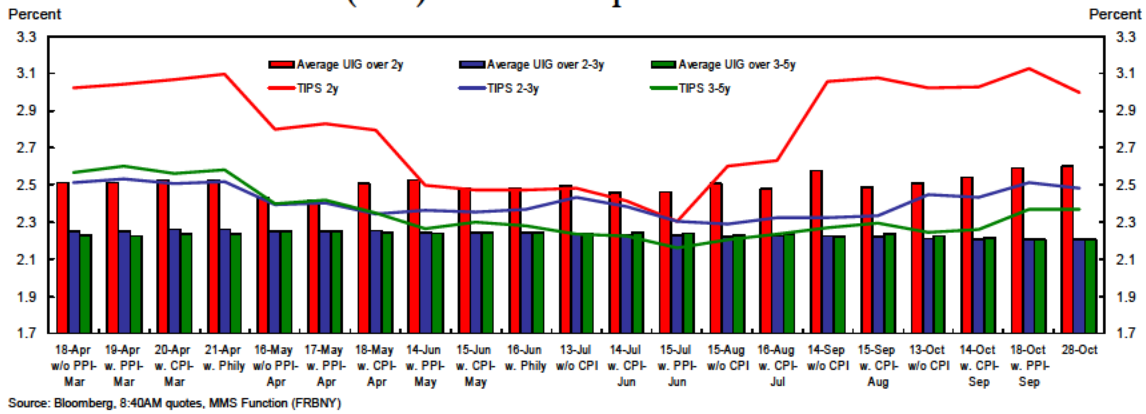
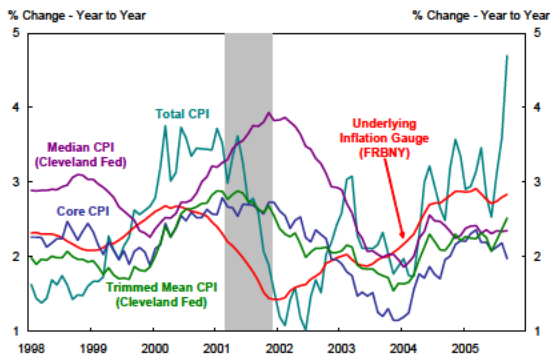
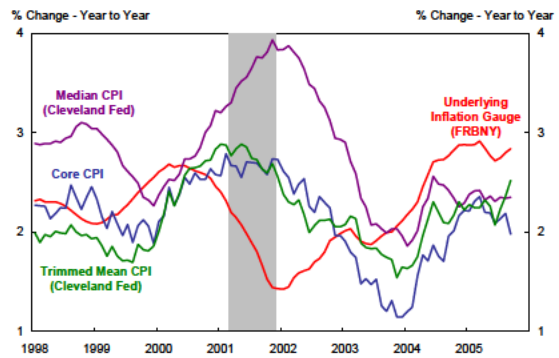


Exhibit A-8: Underlying Measures of Trend Inflation

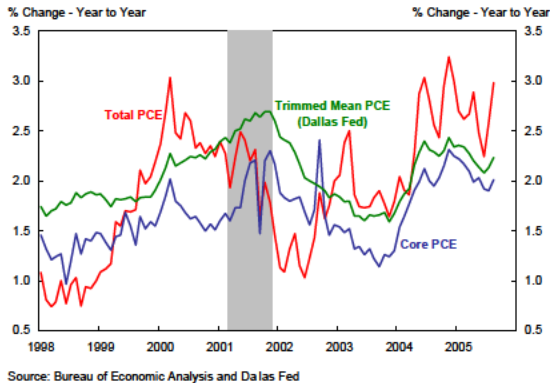
Measures of CPI Inflation



Measures of CPI Inflation



Measures of PCE Inflation



B. Financial Markets

Exhibit B-1. TIPS Implied Inflation at Various Horizons

The first chart in this exhibit gives 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 September 20th to October 26th, 2005.

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 charts in this exhibit show the change in the smoothed (off the run) Treasury yield curve since the day before the last FOMC meeting and the implied forward rate curve.

Source: 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, 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 in this 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 horizon. No risk adjustment is made.

Source: Monetary Affairs, BofG

Exhibit B-7. Dollar Exchange rates

This exhibit contains 4 charts showing the behavior of the dollar in the last 10 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 normalized to 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. The next date represents the post-Katrina peak in energy markets. October 27 represents current data.

Source: Bloomberg.

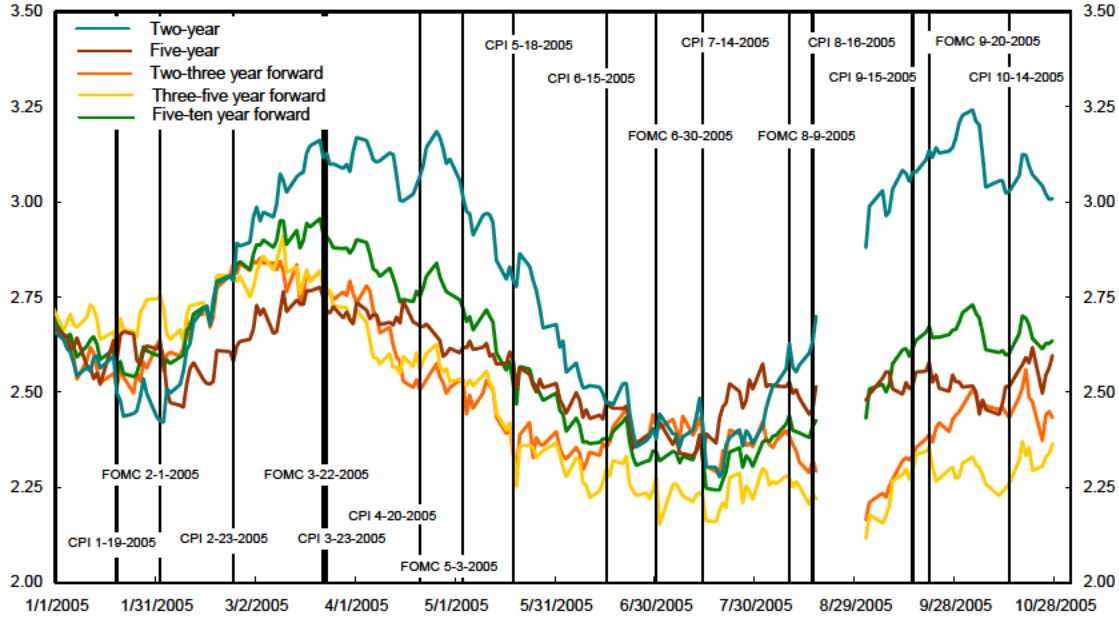
Appendix to Exhibit B-1. Construction of Implied Inflation from TIPS

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

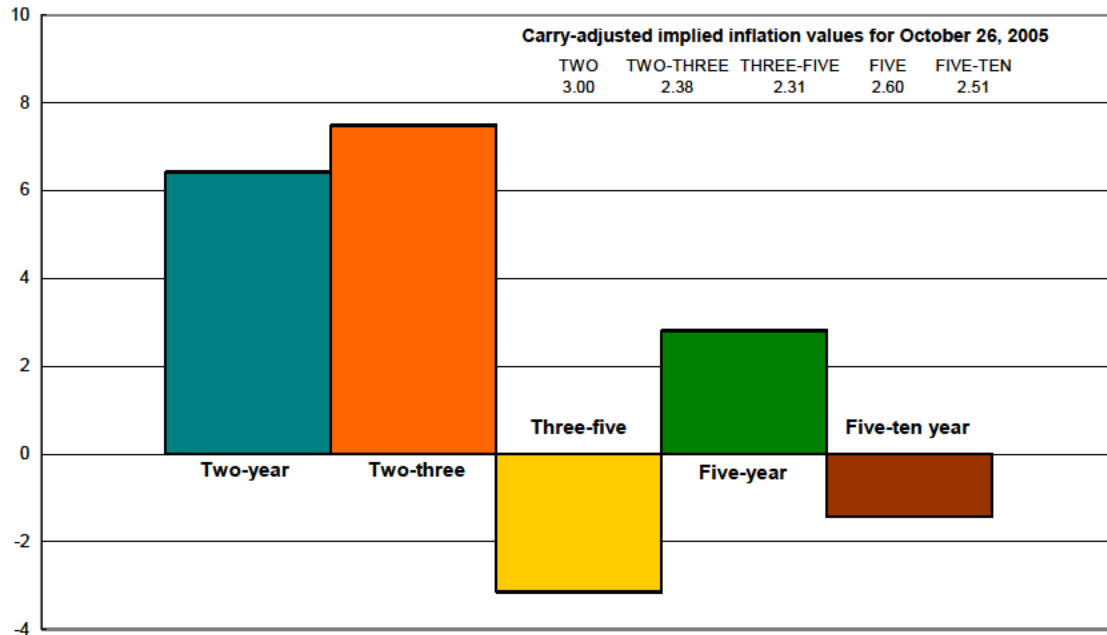
**Exhibit B-1:
TIPS Implied Inflation at Various Horizons**
Since January 2005, updated October 27th



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] and Anna Milanez [Redacted]

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

Basis points Change in implied inflation measure from September 20, 2005 to October 26, 2005



Source: FRBNY

B. Financial Markets

Exhibit B-2: Breakeven Inflation Table

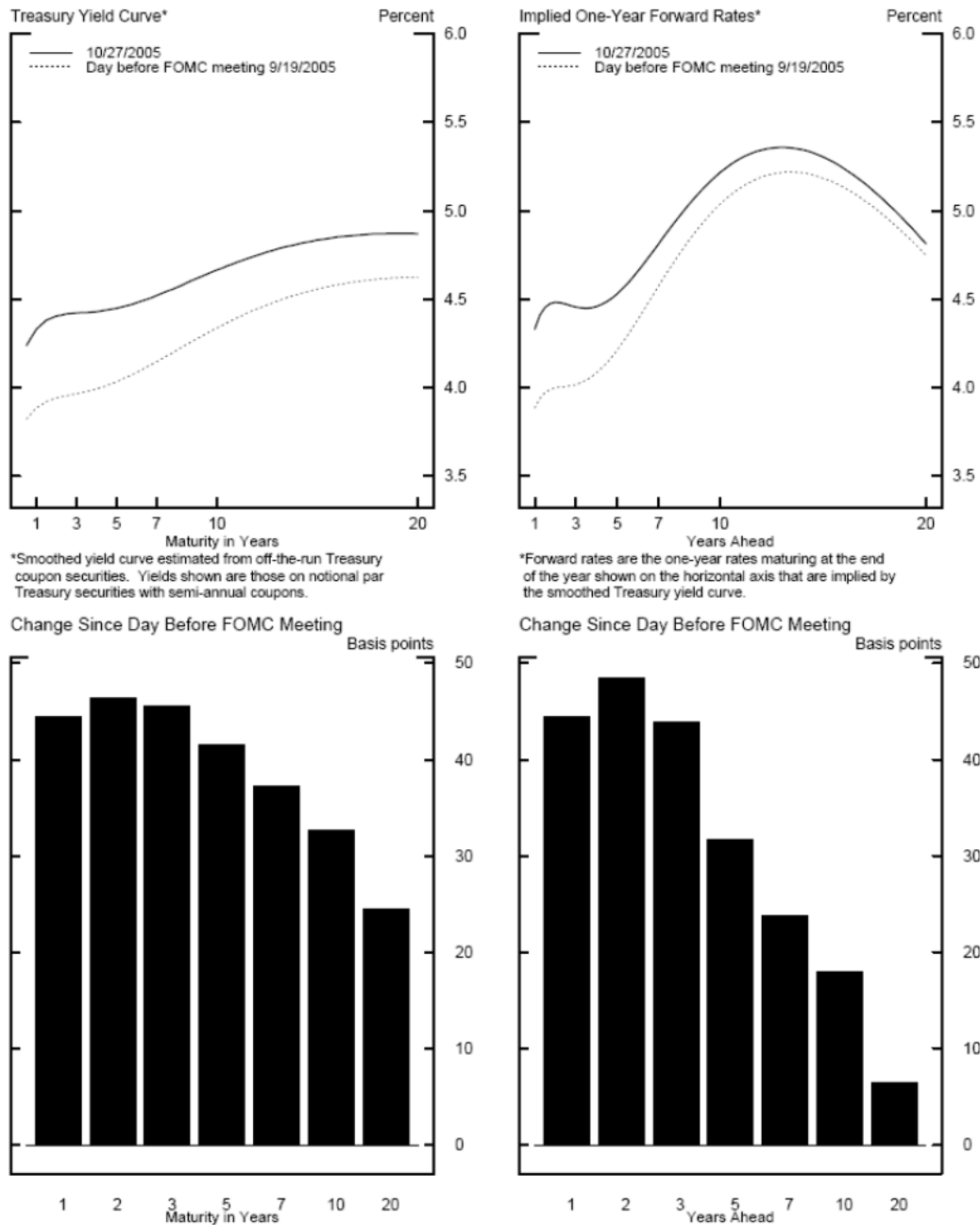
Real and Nominal Yield Spreads

	31-Jan-05	18-Feb-05	21-Mar-05	29-Apr-05	27-May-05*	23-Jun-05	29-Jul-05*	26-Aug-05*	20-Sep-05*	27-Oct-05
Five-year Spread (%)	2.540	2.710	2.903	2.765	2.490	2.354	2.373	2.457	2.655	2.648
Ten-year Spread	2.487	2.579	2.756	2.618	2.425	2.287	2.381	2.388	2.510	2.548
Five-year Real Yield (%)	1.172	1.113	1.289	1.113	1.320	1.380	1.750	1.631	1.396	1.784
Ten-year Real Yield	1.661	1.659	1.771	1.568	1.648	1.664	1.897	1.800	1.734	2.013
Five-year Nominal Yield	3.712	3.823	4.192	3.878	3.810	3.734	4.123	4.088	4.051	4.432
Ten-year Nominal Yield	4.148	4.238	4.527	4.186	4.073	3.951	4.278	4.188	4.244	4.561

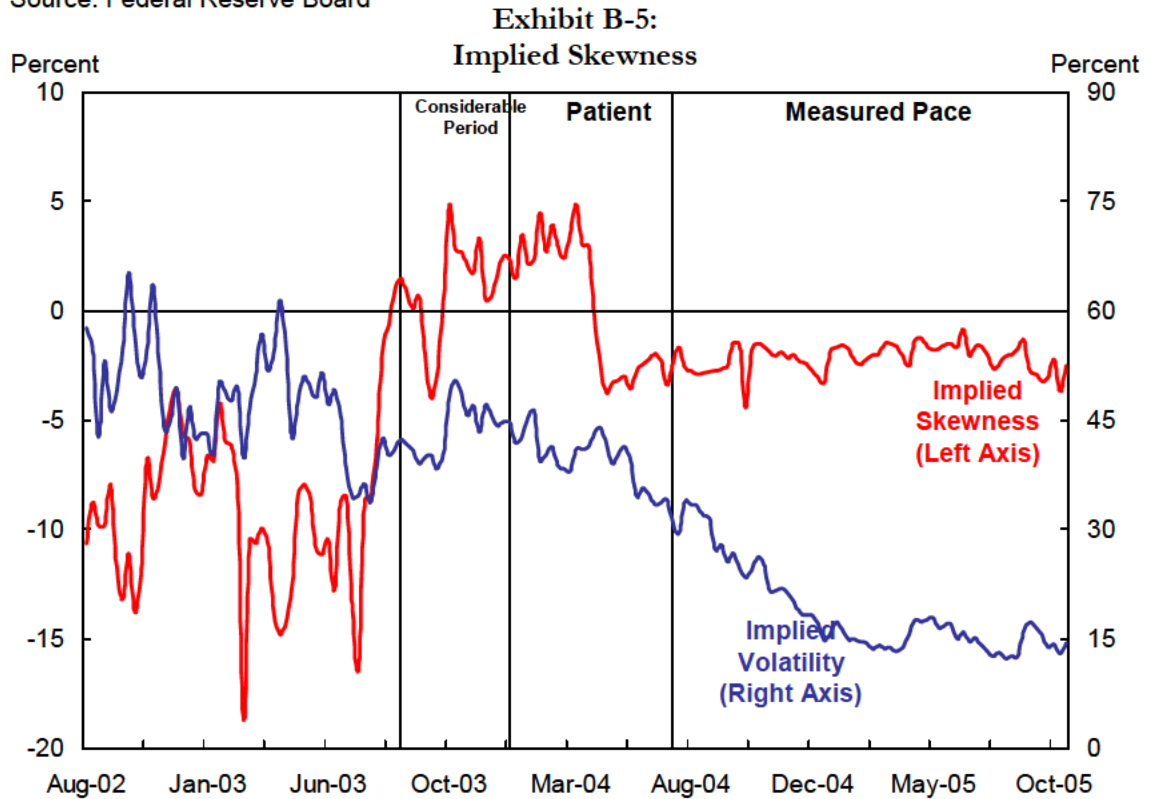
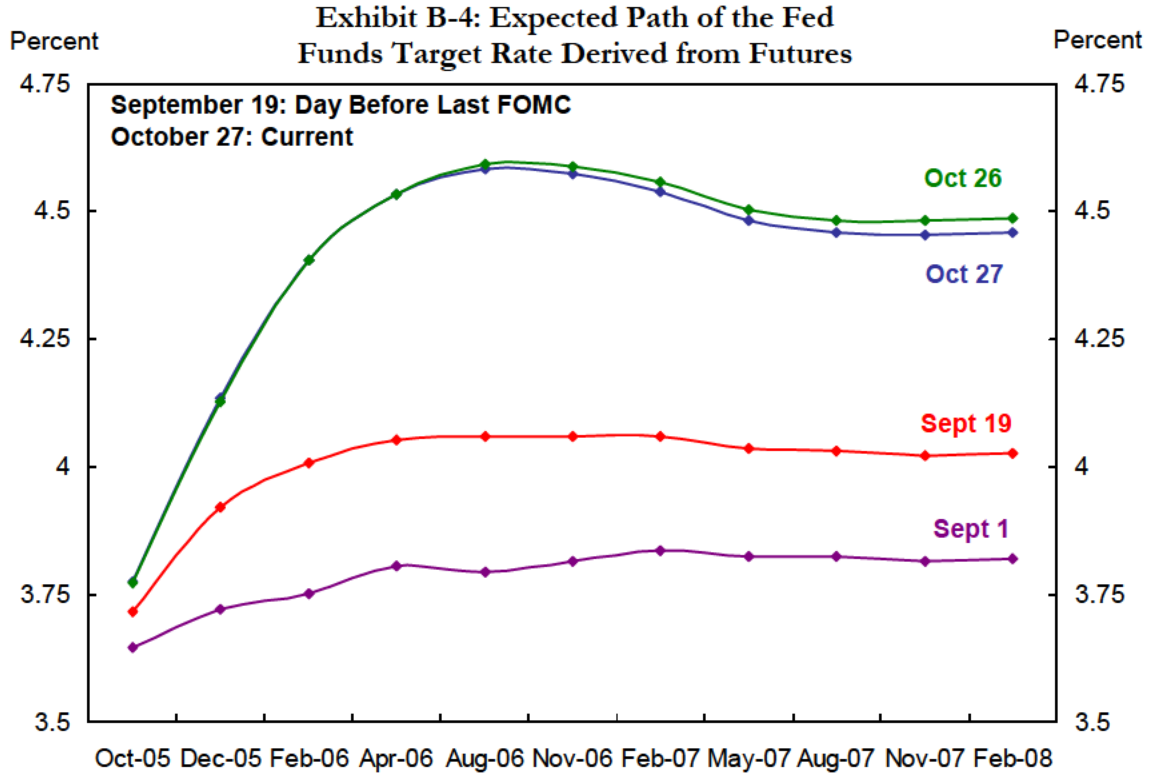
Source: Bloomberg. 8:40am quotes. *End of day quote.

B. Financial Markets

**Exhibit B-3:
Treasury Yield Curve**



B. Financial Markets

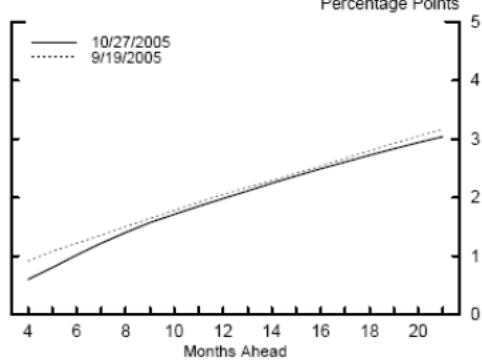


Joshua Rosenberg Redacted

B. Financial Markets

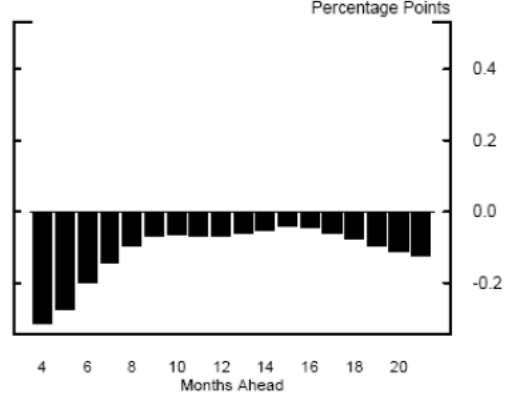
Exhibit B-6: Implied Volatility on Fed Funds Options

Eurodollar Implied Volatility Term Structure*

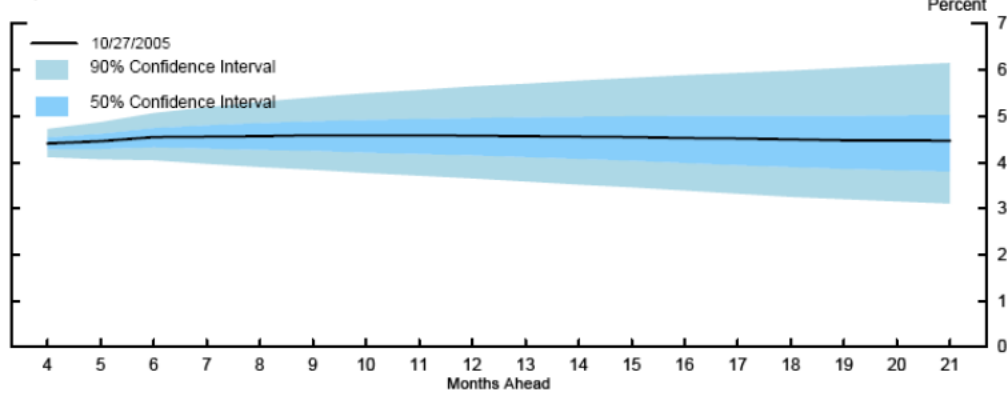


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

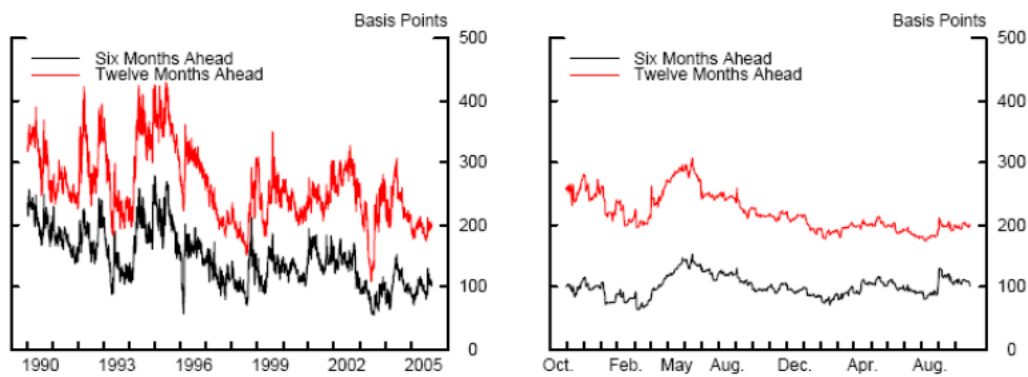
Change Since Day Before FOMC Meeting



Expected Federal Funds Rate Path and Confidence Intervals



Eurodollar Implied Volatility at Selected Maturities*

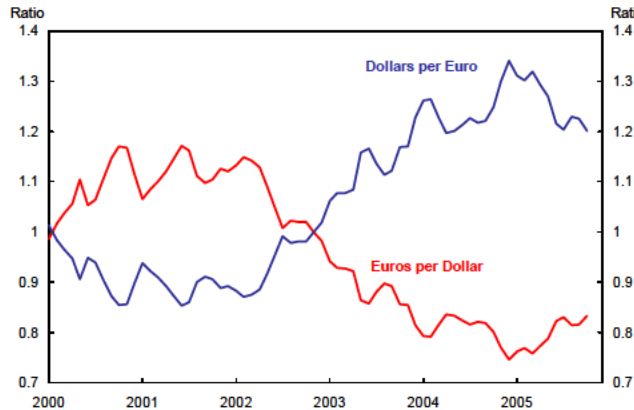


*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.

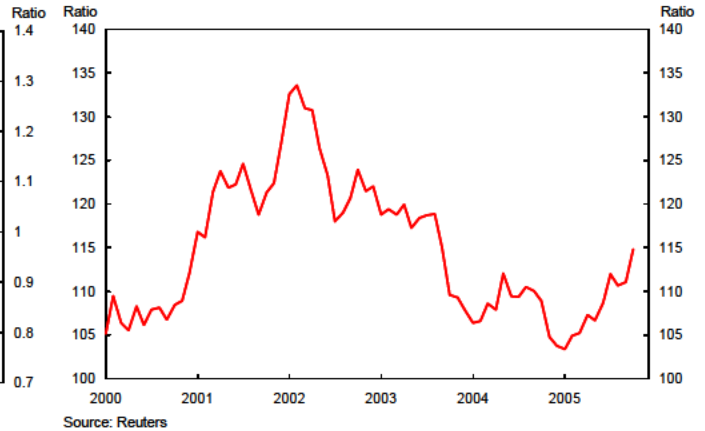
B. Financial Markets

Exhibit B-7: United States Exchange Rates

Dollar-Euro Exchange Rates



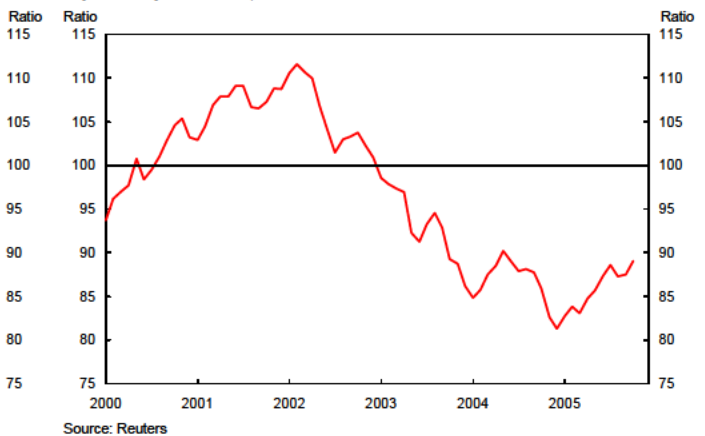
Yen per Dollar



Nominal Effective Exchange Rate
Major Currency Narrow Index, 2000=100



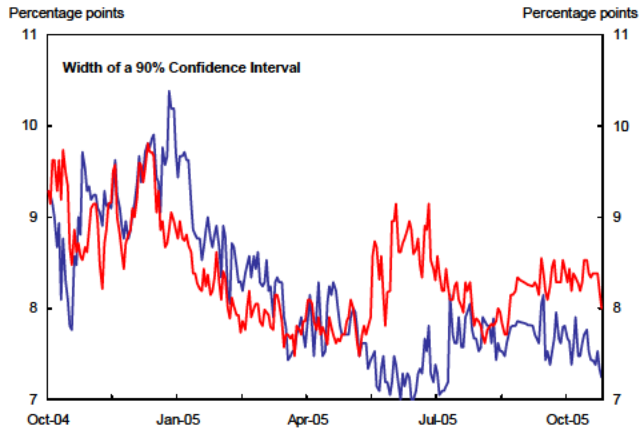
Real Effective Exchange Rate
Major Currency Narrow Index, 2000=100



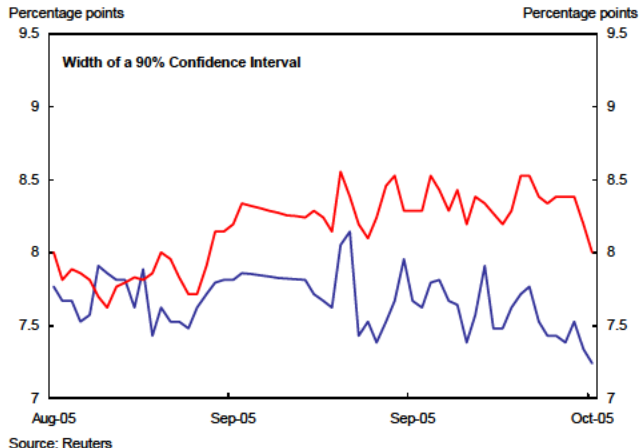
B. Financial Markets

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

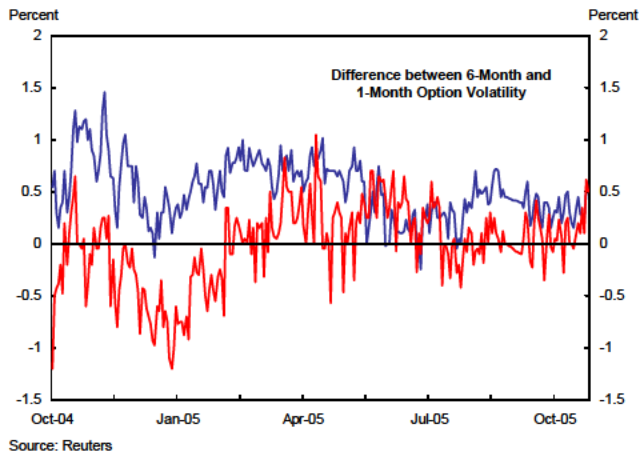
One-Month Volatility – Past Year



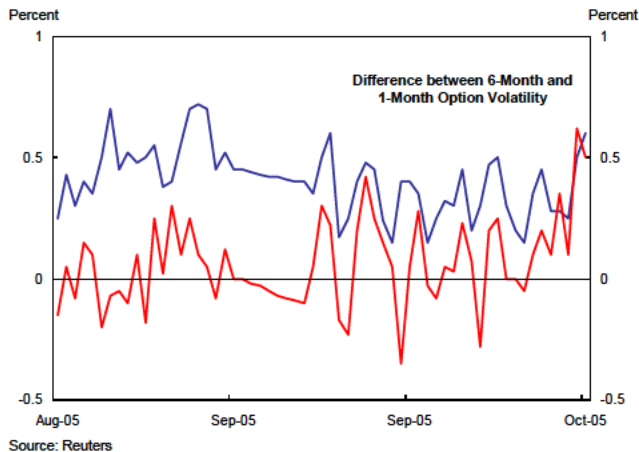
One-Month Volatility – Past 60 Days



Changes in Expected Volatility – Past Year



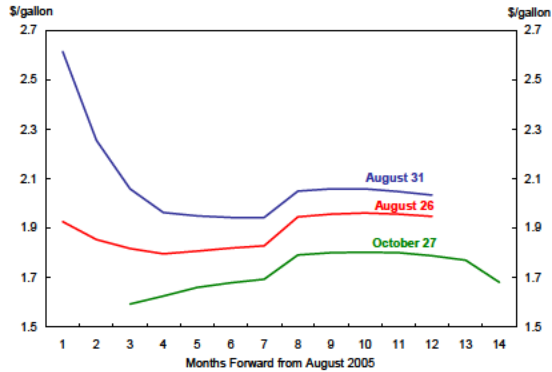
Changes in Expected Volatility – Past 60 Days



B. Financial Markets

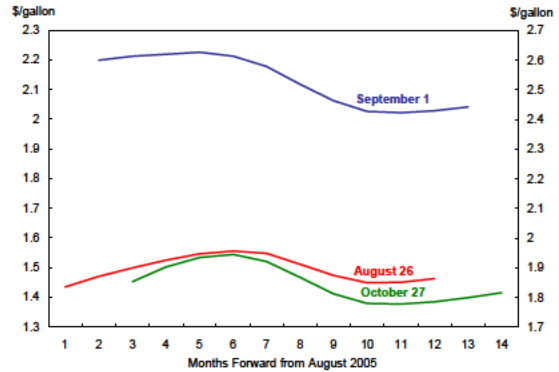
**Exhibit B-9:
Energy Futures Curves**

Gasoline Futures



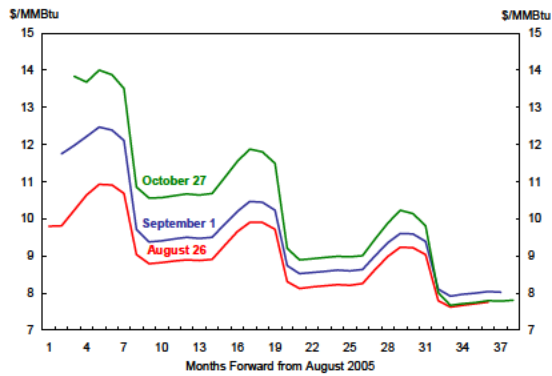
Source: Bloomberg

Heating Oil Futures



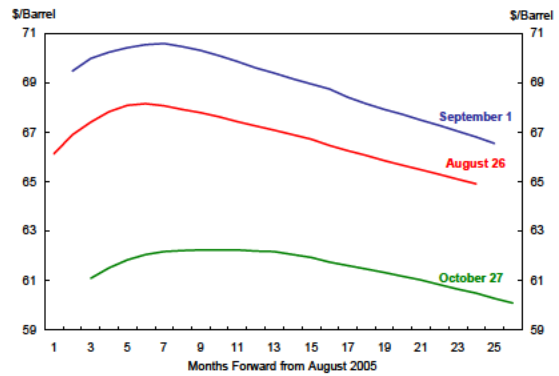
Source: Bloomberg

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 scenarios and the central scenario contained in the Bank’s forecast. Two types of measures of the balance of risk 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 ever being in a particular scenario through 2007, with the exception of the central scenario where the probability shown is for not deviating from this scenario through 2007. Hence, one minus this 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 4-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 is slower than the central scenario and inflation is dramatically lower. The overheating scenario assumes that for 2 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. The hurricane scenario assumes an initial large fall in output followed by a bounceback.

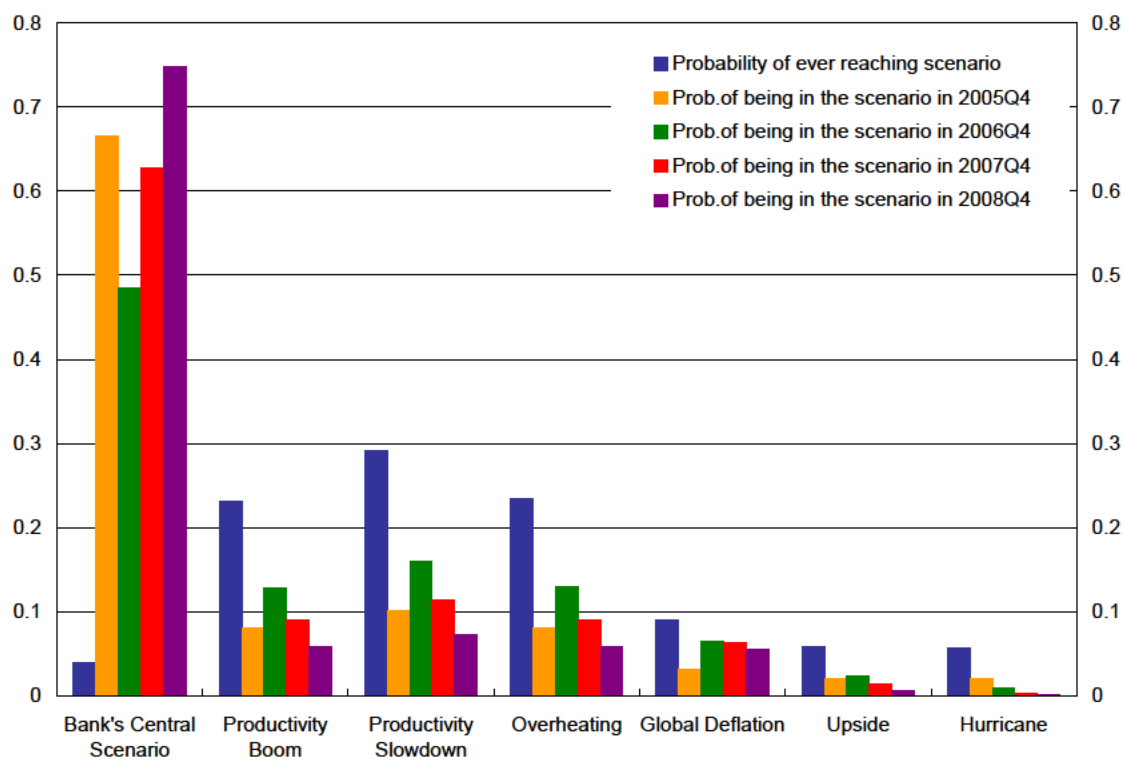
Exhibit C-4 & C-5: Fan Charts

Fan charts are shown for the core PCE deflator (Exhibit C-4) and real GDP (Exhibit C-5). These charts are constructed to represent the overall uncertainty contained in our main scenario and our 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 were 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

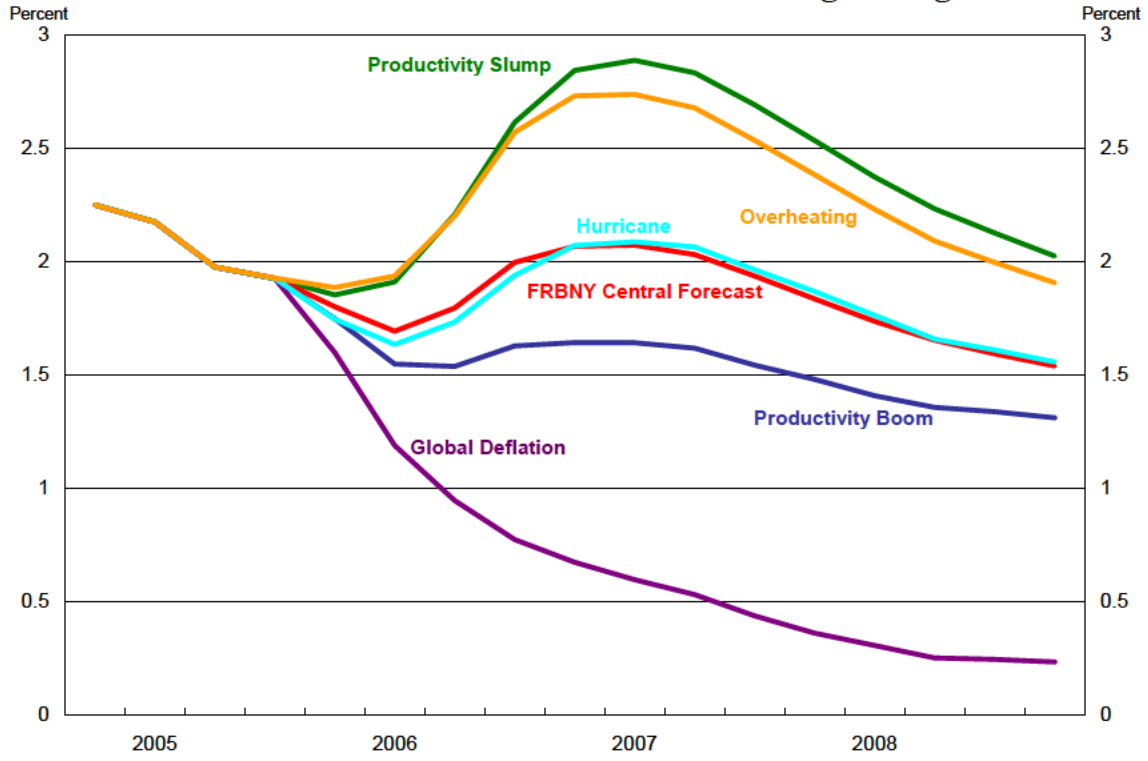
C. FRBNY Forecast Distributions

Exhibit C-1:
Risks

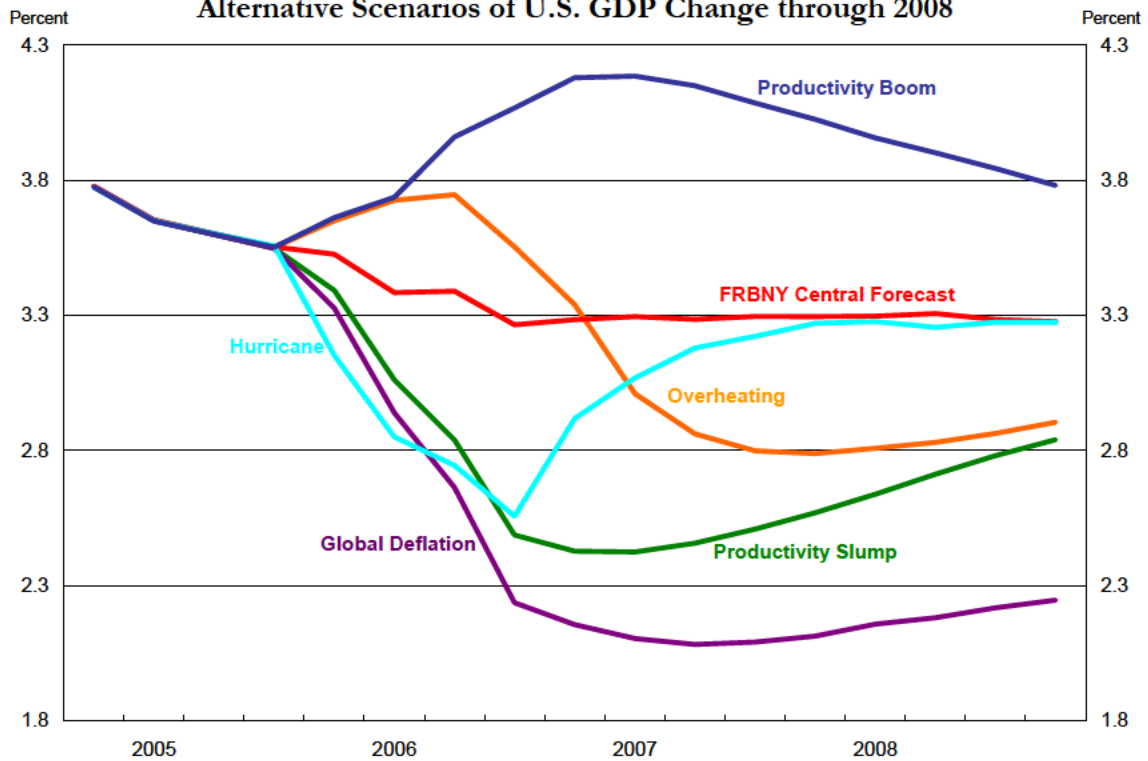


C. FRBNY Forecast Distributions

**Exhibit C-2:
Alternative Scenarios of U.S. Core PCE Inflation Change through 2008**

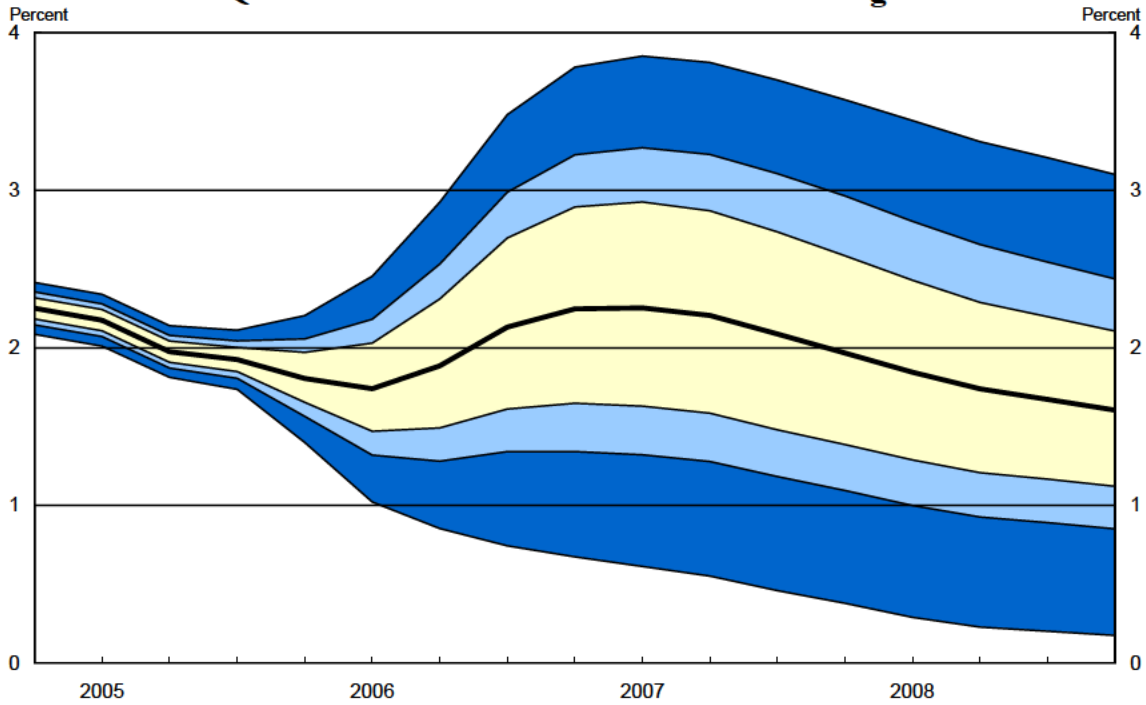


**Exhibit C-3:
Alternative Scenarios of U.S. GDP Change through 2008**



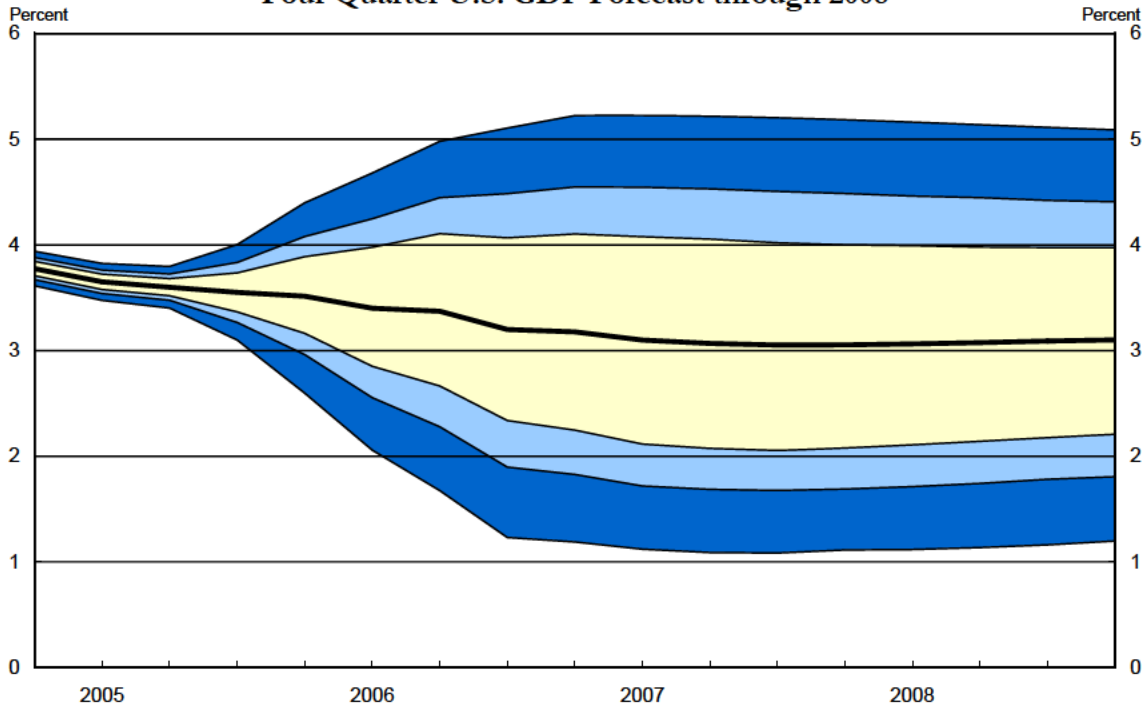
C. FRBNY Forecast Distributions

Exhibit C-4:
Four Quarter U.S. Core PCE Inflation Forecast through 2008



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.

Exhibit C-5:
Four Quarter U.S. GDP Forecast through 2008



The probability interval shows the 50, 75, and 90 percent chance that quarterly GDP change will be within the respective range. The thick black line represents the expected value of the forecast.

D. FRBNY Fed Funds Rate Projections

The exhibits in this section are constructed using the policy rules given 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.

We consider 3 different short-run restrictions to our standard policy rule in this cycle.

1. *Raise and Wait.*
2. *Continued Measured Firming*
3. *Inflation Hawk*

The short-run restriction is enforced in the rules by calculating the FFR without restriction from our standard policy rule described below. Then this value is compared to the prescription of the different short-run rules. If the results are “similar” then the prescription of the short-run rule is followed. For example, under measured firming the FFR is increased by increments of 25 bp for the next 4 meetings unless the standard rule produces a prescription for the FFR outside of the interval 3% to 5%. The inflation hawk rule follows the prescription of the continued measured firming unless the inflation rate increases above a 2% rate.

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

Exhibit D-1 evaluates the three different policy rules at each of the draws from the forecast distribution of output and inflation and then averages them to produce an expected path if the rule is followed. The results are compared to the most recent implied market path from Exhibit B-5.

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

In these exhibits, we focus on the policy rule “continued measured firming” and evaluate it at the Bank’s central projection, hurricane, productivity slowdown and boom, overheating and global deflation scenarios. Exhibit D-3 presents the average of FFR over

paths containing these scenarios. Exhibit D-4 presents the average ex post real rate obtained by subtracting the 4-quarter lagged change of core PCE inflation from the paths of the nominal rate.

Exhibit D-4: Implications of Different Inflation Targets

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. The policy rule paths are calculated using the actual FFR at the end of 2004. It also plots an average over the three rules evaluated this cycle, with weights of 0.05, 0.8 and 0.15 respectively.

Exhibit D-5: FFR Distributions

In this exhibit we examine the distribution of the FFR under the 3 different policy rules through the end of 2006. 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 because this allows more direct comparison of the implications of different policy rules. It replaces the previous exhibits that showed the market volatility term structure compared to one derived from the combination of our policy rules with the forecast distribution.

Source: MMS Function, FRBNY

Exhibit D-6: Comparing Market Beliefs to FRBNY

In this exhibit the two metrics from Box B of the September Blackbook are shown. This leads to two metrics for measuring the distance:

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

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

$$\rho = 0.8$$

$$i_{2005Q2} = 2.91$$

$$i^* = 4.0$$

$$\pi = 1.5 \text{ (Core PCE y/y)}$$

$$\pi^* = 1.5$$

$$\varphi_\pi = 1.5$$

$$\varphi_x = 0.5$$

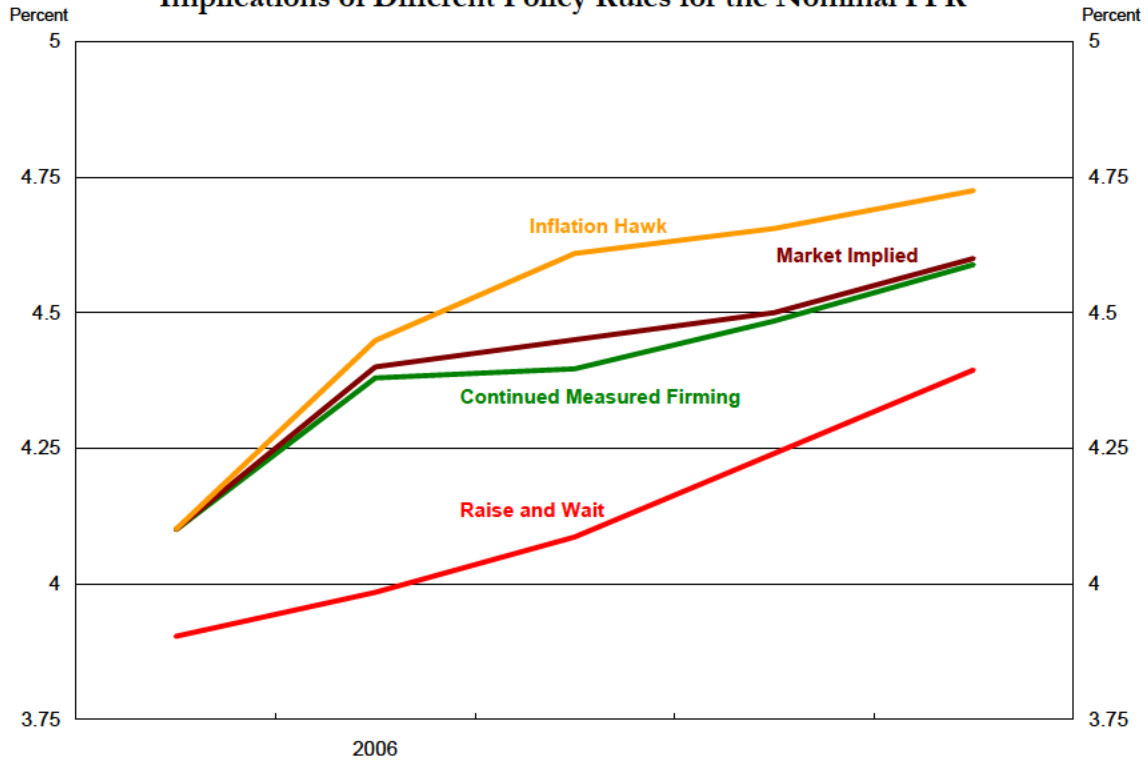
$$\pi_t : \text{Core PCE y/y}$$

$$x_t : \text{Output Gap}$$

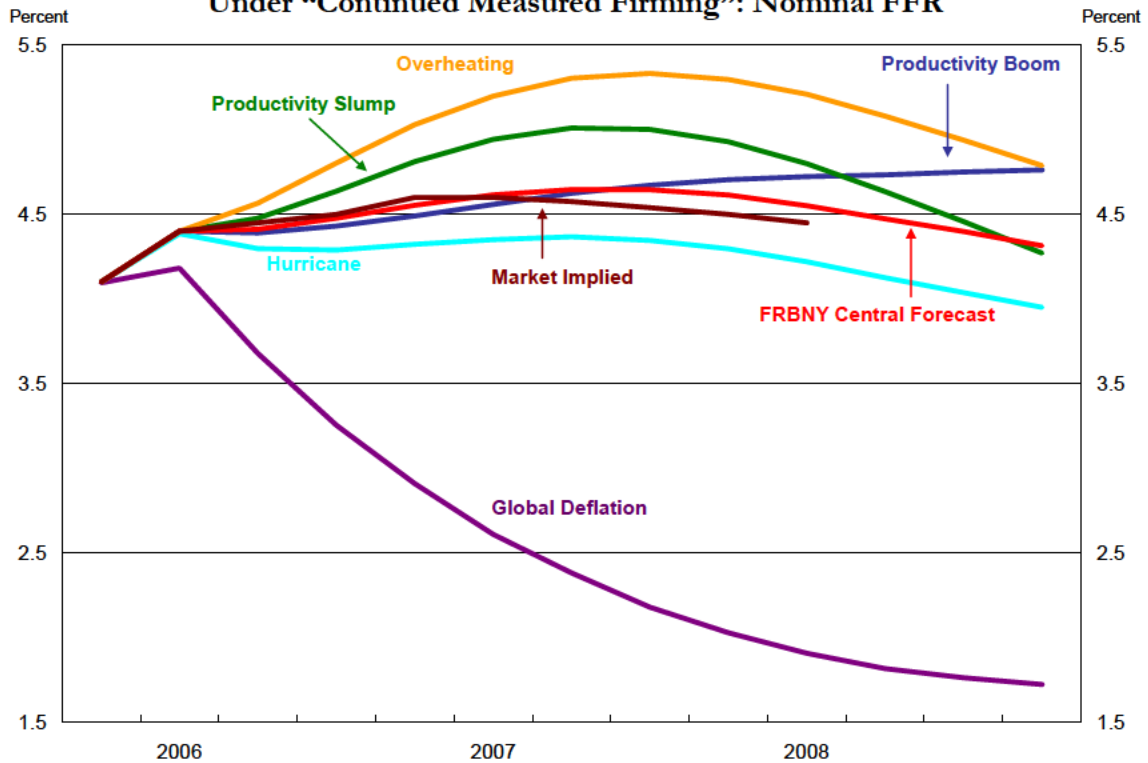
Source: MMS function, FRBNY

D. FRBNY Fed Funds Rate Projections

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

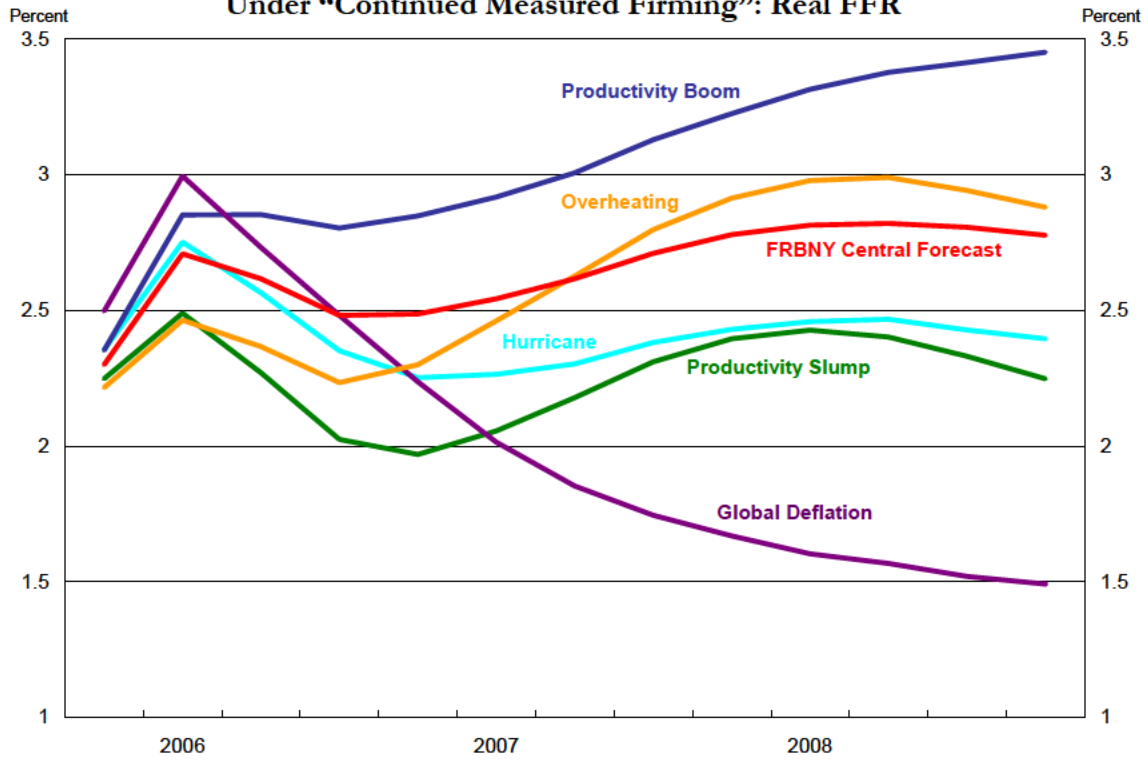


**Exhibit D-2:
Alternative Forecast Scenarios
Under "Continued Measured Firming": Nominal FFR**

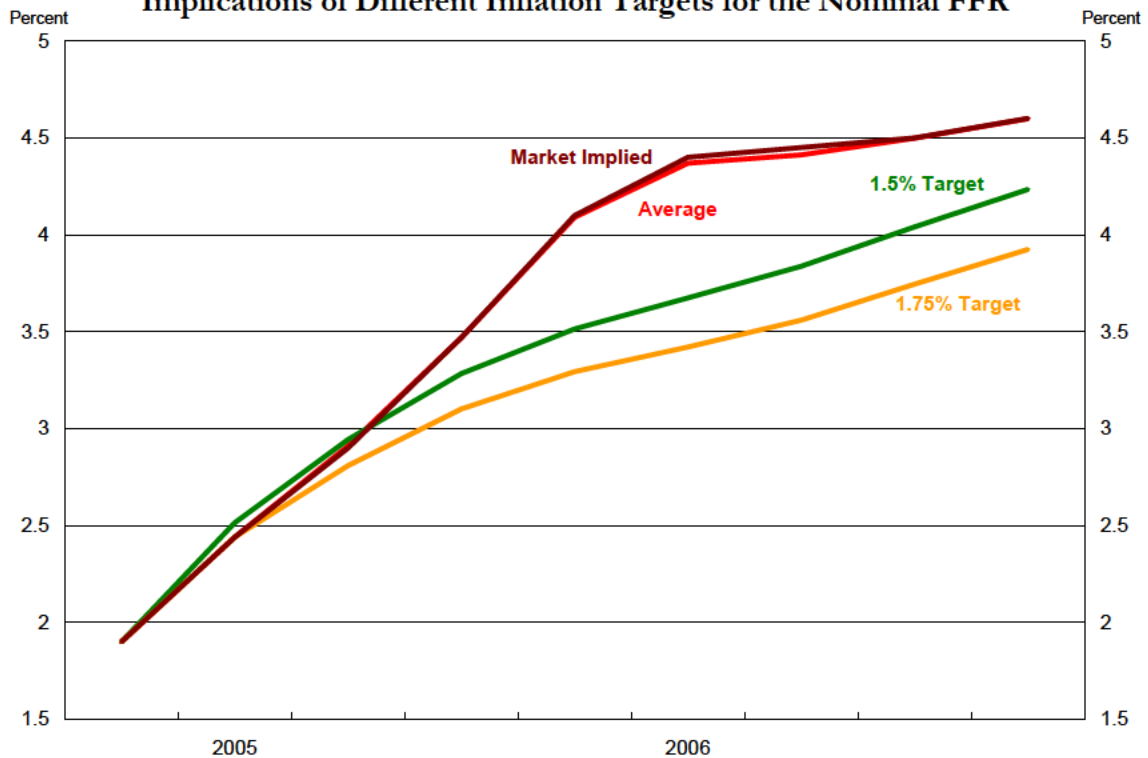


D. FRBNY Fed Funds Rate Projections

**Exhibit D-3:
Alternative Forecast Scenarios
Under "Continued Measured Firming": Real FFR**



**Exhibit D-4:
Implications of Different Inflation Targets for the Nominal FFR**



D. FRBNY Fed Funds Rate Projections

Exhibit D-5: Fed Funds Rate Distributions

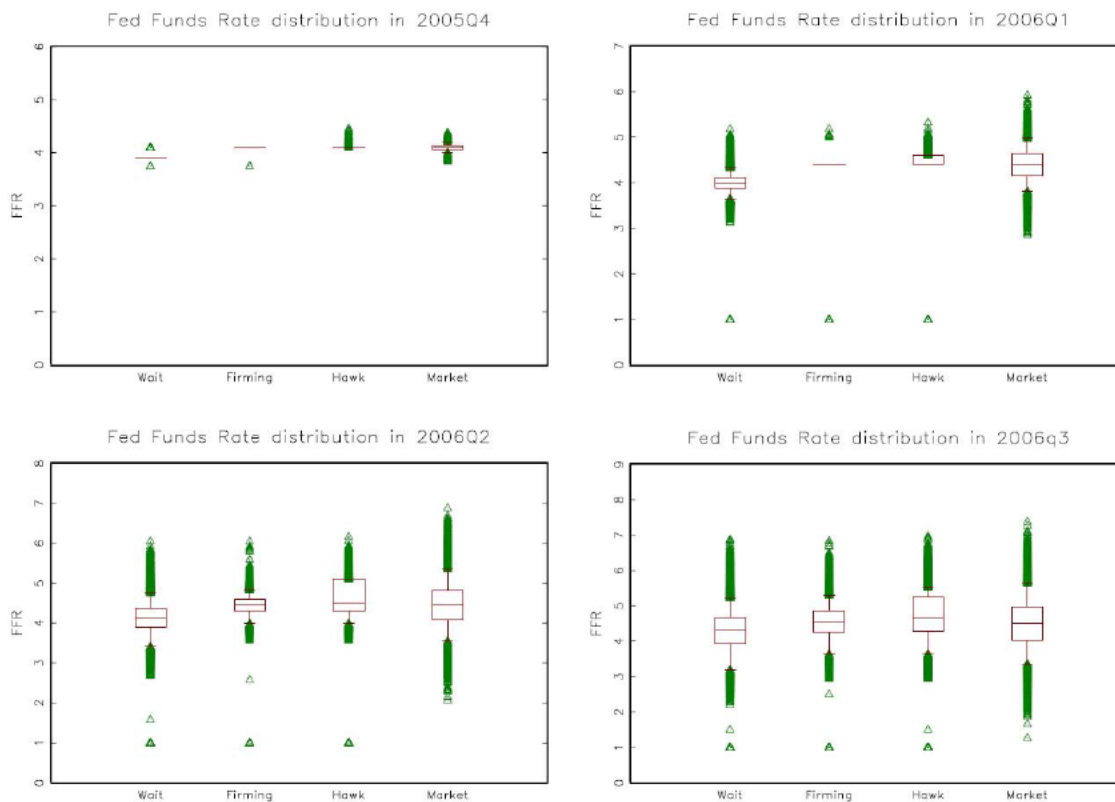


Exhibit D-6: Market Expectations of Future FFR and FRBNY Outlook for FFR

	Percentile of FRBNY Expectation in Market Distribution	Percentile of Market Expectation in FRBNY Distribution
<i>Raise and Wait</i>	40	57
<i>Continued Measured Pace</i>	49	45
<i>Inflation Hawk</i>	55	40

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 up through September 2005. The indexes are a composite of 4 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 August 2005. The growth in the index for a given month represents a forecast of the growth in the coincident index 9 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 1995 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. Employment-Population Ratios

This chart shows the monthly employment-population ratios for New York State, New Jersey, New York City, and the U.S. from 1995 to present.

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

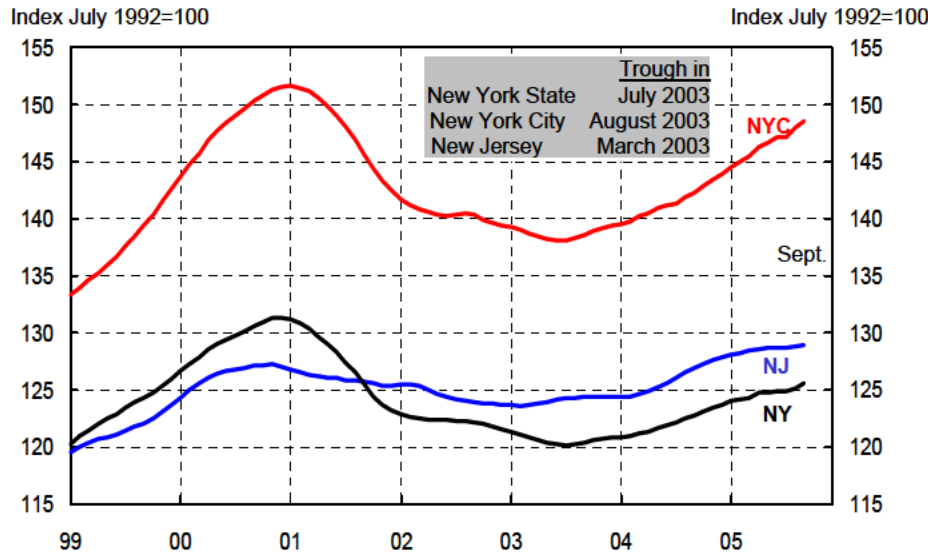
Data can be found at:

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

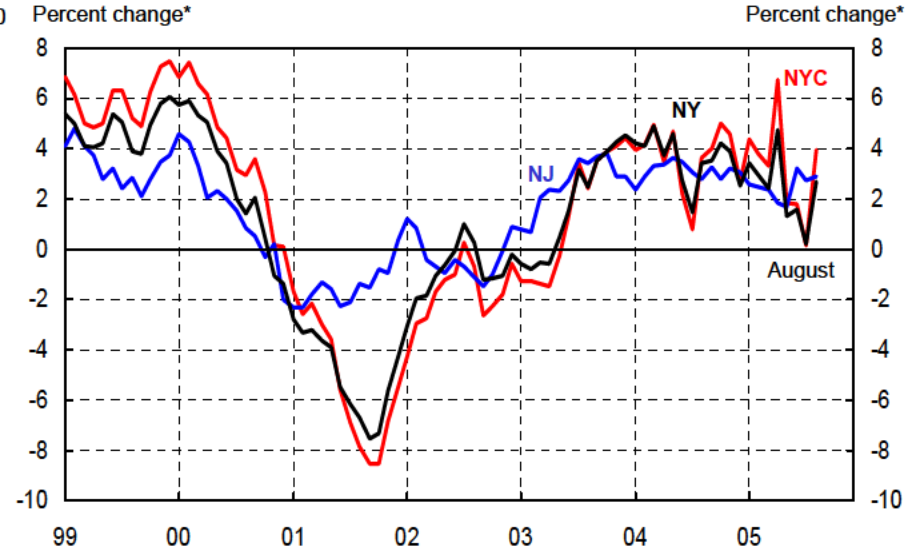
<http://www.wnjp.in.net/OneStopCareerCenter/LaborMarketInformation/lmi16/release1.htm>

E. Regional Charts

E1: INDEX OF COINCIDENT ECONOMIC INDICATORS

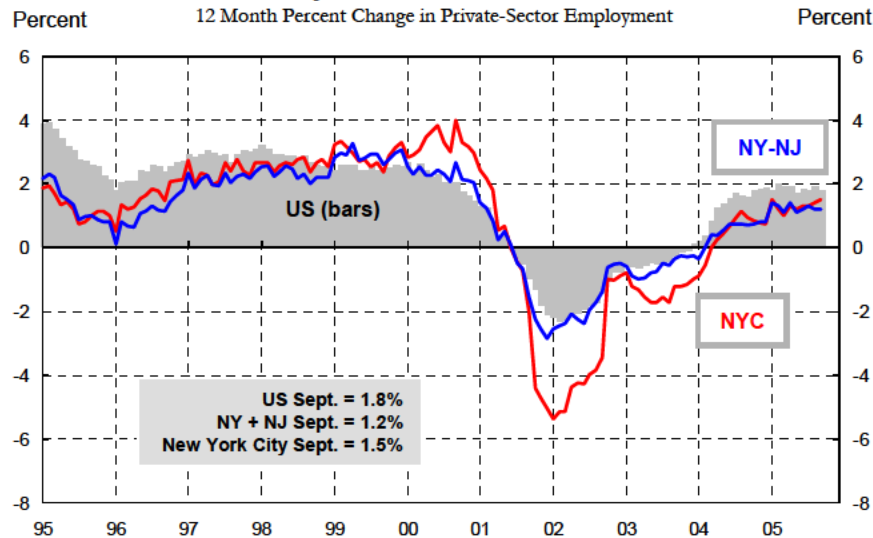


E2: INDEX OF LEADING ECONOMIC INDICATORS



* The percent change in this index represents the forecasted growth in the Coincident Index over the next 9 months.

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



E4: EMPLOYMENT-POPULATION RATIOS

