FRBNY Blackbook

RESEARCH AND STATISTICS GROUP

FOMC Background Material

January 2005

CONFIDENTIAL(FR) Class II FOMC

FRBNY BLACKBOOK

January 2005

TABLE OF CONTENTS

1. Overview

Economic and financial developments since the last FOMC meeting generally have been consistent with our central projection of real growth close to the potential rate and inflation stable around implicit targets. Our central projection and balanced risk assessment are consistent with a 25 basis point increase in the Fed Funds target rate at present and imply a measured pace of future rate increases similar to market expectations. With the data continuing to come in consistent with our outlook, we have reduced slightly the risks to our central projection, and we continue to view the risks as balanced. Adding support to our central projection is the relative tranquility of financial markets developments since the last FOMC and for the last 6 months.

2. Recent Developments

U.S.

Summary. As over the previous FOMC cycle, data released since the last FOMC meeting have been generally consistent with our outlook. Inflation indicators suggest little change in the low underlying rate of inflation. Rising goods prices and dollar depreciation suggest some upside risk. Real GDP growth in 2004Q4 was 3.1% (annual rate), led again by robust consumer spending. The December employment report points to little change in the fundamentals of the labor market.

Inflation. The recent data indicate little change in the low underlying inflation rate. The core PCE deflator increased modestly in November. The 3-, 6-, and 12-month changes of the index were 1½% (annual rate) or less, about where they have been in recent months. The core CPI had a rise in December comparable to recent months, and its 12-month change was about 2¼%. The core goods CPI and core PPI indicate that goods inflation, although still modest, is at its highest level since early 2001. The increase in core good prices and the recent depreciation of the dollar suggest some upside inflation risk. Nonetheless, household inflation expectations appear to remain contained. Near-term expectations in the preliminary January Michigan survey fell slightly while long-term expectations were unchanged.

Real activity. The initial estimate of real GDP growth in 2004Q4 was 3.1% (annual rate), consistent with our view of real growth remaining close to the potential growth rate, which we estimate at about 3½%, over the near and medium term. Real growth was led by robust consumer spending. The real PCE growth rate in the quarter was 4.6%, nearly matching 2004Q3's growth rate of 5.1%. This was sparked in part by strong auto sales in December, which were at the highest pace since October 2001. Non-auto retail sales also remained robust in the quarter. Building and sales activity in the housing market remained vigorous through the end of 2004.

Even though some of the monthly data had been rather soft, the growth of business capital spending moderated only slightly in the fourth quarter. Nonresidential fixed investment rose 10.3% (annual rate) in 2004Q4 compared to 13% in 2004Q3. Orders of nondefense capital goods rose in December, suggesting there may be a smaller payback from the expiration of investment tax incentives at the end of 2004. The 12-month change of our Tech Pulse Index was about the same in December as in the previous two months, indicating little change in the tech sector. Manufacturing production was strong in December. Its underlying growth appears to be around 5%, a little less than earlier in 2004, but still fairly brisk.

Employment. Payroll employment growth in December was 157,000, a little under the average for 2004 (186,000/month), but still consistent with employment growth near or slightly above the trend growth rate. Other indicators of the labor market also suggest little change in its fundamental condition. The index of aggregate hours rose moderately in December and over 2004Q4. The growth of wages and compensation remained modest. The unemployment rate in December was unchanged at 5.4%. The labor force participation rate and the employment-population ratio remained near the levels that prevailed over the second half of 2004.

Surveys. Survey data signaled little change in the near-term outlook. Both the ISM manufacturing and non-manufacturing indices rose in December and are at levels consistent with sustained growth in manufacturing and services. Although both the Empire State and Philadelphia Fed indices declined in January, their levels continue to point to further growth in manufacturing in those areas. After strong increases in December, the Michigan (the preliminary release) and Conference Board measures of consumer confidence maintained those levels in January, which are at the higher end of the fairly narrow ranges that have prevailed over the past year.

Global

Foreign GDP is expected to grow 2.7 percent in 2005, or roughly at potential. The outlook is largely unchanged since the last FOMC forecast, with modestly higher projected growth rates for China and Mexico offset by lower projected growth for Canada.

Industrial Economies. Recent euro area data have been mixed, with favorable reports on industrial confidence, retail sales and exports countered by weak production data. December data for Japanese production, exports and consumer spending were notably soft. Canadian exports have been flat in recent months, while initial U.K. GDP data had growth near potential in 2004Q4.

Emerging Economies. Data suggest that growth in Emerging Asia outside of China has stabilized after several months of deceleration. In China, both real and monetary data point to accelerating growth, even as inflation slows. Data for the major Latin American economies in 2004Q4 provided additional evidence of the region's continued momentum.

Trade

The trade deficit was $60.2 billion in November, a record level. The BEA assumed a similar deficit in December, causing the net export component to take 1.7 percentage points off GDP growth in Q4 2004. In comparison, with the trade deficit rising through most of 2004, net exports subtracted 0.8, 1.1, and 0.1 percentage points from GDP growth in the first three quarters of 2004.

Exports grew at roughly a 10 percent rate for much of 2004, but faltered towards the end of the year, with the NIPA estimate having exports falling 4 percent (SAAR) in Q4 2004. The recent weakness has been concentrated in sales to China and to the rest of the Pacific Rim.

Imports remain the main driver of the growing trade deficit. Imports of goods increased 12 percent in 2004, with increases spread across all major categories. The surge in oil prices over the past year has been a major contributor to the increase in total nominal imports, with petroleum products accounting for over a fifth of the increase in the nominal import bill.

Going forward, the net export contribution to GDP growth in Q1 and Q2 of 2005 is projected to be +0.1 and -0.1 percentage point (AR) respectively. The moderation in the projected net export drag in the first half of 2005 reflects some payback for the sharp slowdown in export growth in 2004Q4.

Financial

Domestic markets

Implied inflation expectations derived from comparing yields on TIIS securities with Treasuries are little changed since the last FOMC (see Exhibit B-1). The implicit CPI inflation compensation is about 2.6%

Since the last FOMC meeting, yields at long maturities have declined but have firmed at maturities of five years or less (see Exhibit B-2). The path of forward rates supporting this pattern is in the second panel of the Exhibit. The fall in forward rates at the 5 year and higher horizon appears to be related to a drop in real rates by comparison to the behavior of TIIS. Exhibit B-3 shows the recent behavior of the two to 10 year spread in comparison to previous tightening cycles. It seems similar.

Yields on corporate debt have been stable. Spreads between risk classes are little changed and are at relatively low levels compared to recent experience. The stock market is not producing any strong negative signals. There has been a mild increase in implied volatility for stock market indices.

The relative tranquility of financial markets developments since the last FOMC (and for the last 6 months) is consistent with our view of economic developments.

Financial markets views of future policy actions have been broadly consistent with our interpretation of economic developments. There is an expectation of 25 basis point rate increases at the next three FOMC meeting, followed by a slowdown in the frequency of rate increases (see Exhibit B-4). Measures of uncertainty around the expected path have fallen (see Exhibit B-5).

Global Markets

Monetary Policy. Monetary policy is likely to remain unchanged in most major foreign countries through mid-2005. Concerns about the impact of the strong euro on growth probably will keep the ECB from tightening until the second half of 2005. The Bank of Japan is expected to remain on hold for at least a year and a half. The Bank of Canada, concerned with the strong Canadian dollar, probably will pause after raising rates throughout 2004. The recent slowdown in inflation means the Central Bank of China may raise rates only modestly this year. The Bank of Mexico tightened on January 28th and may tighten a bit more in the near term to bring down core inflation.

Exchange Rates and Capital Flows. The dollar stabilized in the inter-meeting period, after its frenzied weakening through most of 2004Q4: since December 14, the dollar has gained 1.6 percent on the euro, lost 2.4 percent on the yen, and gained 1 percent in nominal effective terms. Markets have put upward pressure on Asian currencies, relative to both the dollar and the euro, prompting massive intervention by non-Japan Asian central banks at the end of 2004. The Korean won, Taiwanese dollar, and Thai baht have all appreciated relative to the dollar (between 1.5 and 2.5 percent) since the last FOMC meeting.

Asset markets continue to take the depreciation of the dollar in stride, although official flows have been above average since the fall. Data for 2004Q3 show that a small drop in purchases of U.S. bonds was offset by higher direct investment. Option-implied volatility of dollar rates remains elevated relative to the fall period, in part reflecting continued uncertainty about possible official responses to dollar changes.

Euro Area. Mixed macroeconomic data and expectations of a cautious stance by the ECB contributed to a rise in dollar-euro interest rates spreads in the inter-meeting period (by about 20 points at the 2-year maturity, and about 10 points at the 10-year maturity). Euro area stocks and bonds continued to outperform comparable U.S. securities.

Japan. JGB yields remain stable near their recent lows of about 1.5 percent, after soft growth data and stronger deflation in core prices. Supported by continued net foreign inflows into equities, the Nikkei out-performed major U.S and European equity indices over the inter-meeting period.

Emerging Economies. Non-Japanese Asian currencies continued to strengthen against the dollar, albeit at a slower pace than prior to the December FOMC meeting. Elsewhere, the Brazilian real appreciated in response to higher interest rates and investors' growing confidence in the central bank's policy stance.

The discount of twelve-month Chinese NDFs relative to the fixed yuan has fallen recently from a 12-month high in December. Holiday-related thinness may have contributed to earlier performance, but a decline in Chinese inflation may have also calmed speculation of a near-term change in the country's exchange rate policy.

Oil Markets

Oil prices rose steadily in January (to average $43.94/barrel through January 24th for Brent crude), after falling in November and December. Rigid supply conditions persist in oil markets and are projected to significantly moderate growth in oil consumption relative to 2004. Still, there is significant risk of new price spikes from strong Asian demand, despite the projection of flat-to-falling prices implied by the futures market (at $42.50 and $40.00 per barrel for Brent crude for end-2005 and end-2006 delivery).

Second District

Our Indexes of Coincident Economic Indicators for December signal continued moderate growth in both New York City and New Jersey, but some leveling off in New York State [Exhibit E-1]. Looking ahead, our leading indexes continue to predict a roughly 4% pace of growth over the next three quarters—a bit higher in New York City, a bit lower in New Jersey [Exhibit E-2]. Consumer price inflation has decelerated a bit since mid-year but is still about ½ point above the national rate.

Labor Markets. Private-sector job growth decelerated to a 0.7% annual rate in both New York and New Jersey in December, and it was virtually unchanged in New York City. Compared with a year earlier, employment was up 1.3% in New York City and 1.1% in New York-New Jersey combined, below the 1.8% rise nationwide [Exhibit E-3]. Unemployment trends were mixed at year end, though the district showed marked improvement during 2004. New Jersey's jobless rate slipped to a 3½ year low of 4.2% in December—down from 4.4% in November and 5.6% a year earlier. New York State's rate rose to 5.3%—up from 4.9% in November, but still down sharply from 6.3% a year earlier.

Real Estate. Housing continued to show exceptional strength at the end of 2004, particularly in the New York City area. Housing permits have remained persistently strong in recent months; in New York City, more residential units were authorized in 2004 than in any year since 1972 [Exhibit E-4]. Prices of Manhattan co-ops and condos continued to advance at a double-digit annual rate in the fourth quarter. Commercial markets ended 2004 on a strong note as well: Manhattan's Class A office vacancy rate fell to a 2½-year low of 9.8 percent, down from 10.3 percent in November. Vacancy rates also fell in Long Island and edged down in northern New Jersey and Fairfield County but edged up in Westchester County.

Surveys and Other Business Activity. Recent surveys of businesses and consumers have shown mixed but generally positive results. Our January Empire State Manufacturing Survey points to a slight deceleration in business activity from December's robust pace, but there was a pickup in hours worked, and some acceleration in selling prices. Buffalo purchasing managers report that conditions improved in December, but purchasers in New York City's manufacturing sector report some slowing. Consumer confidence in the Middle Atlantic states (NY, NJ, PA) rose to a four-month high in January. Finally, tourism indicators showed continued strength in January.

3. Outlook

Summary of 2004

Real GDP grew 3.7% (Q4/Q4) in 2004, down from the 4.4% growth of the previous year but still quite impressive given that energy prices rose substantially for the second consecutive year. The household sector remained the main engine of growth. Most notably, housing was stronger than we expected as nominal long-term interest rates remained very attractive and home prices continued to rise rapidly. In contrast, the growth rate of real business fixed investment spending did not increase, suggesting that businesses remained cautious despite high profitability and temporary tax incentives to encourage investment in new equipment and software. Growth of government spending was somewhat weaker than anticipated while the drag from trade rose to 0.9 percentage points from 0.1 in 2003. This drag was offset somewhat by a positive 0.4 percentage point swing in the growth contribution from inventories.

Productivity growth slowed substantially in 2004. We estimate that labor productivity in the nonfarm business sector was between 2½% and 2¾% (Q4/Q4) in 2004, down from 5.7% in 2003. Payroll employment increased an average of 175,000 per month after declining the previous year. Although wage growth picked up a bit in the second half of the year, it remained relatively sluggish, suggesting that a fair amount of slack remained in the labor market. After a scare during the first half of the year, inflation appears to have stabilized at around 1½% for the core PCE by year end.

Forecasts

We expect real GDP to grow at or slightly above our estimate of potential (3½%) over the forecast horizon—just a modest slowing from the 2004 pace. This assumes some further tightening of monetary policy, with the federal funds rate reaching 3.0% by the end of this year and 3.5% by the end of 2006. The composition of growth is expected to gradually shift away from spending by the household sector toward spending by the business sector, with less drag from net exports. While fiscal and monetary policies are not as accommodative as they were a year ago, underlying fundamentals remain conducive to continued growth. Credit is readily available to both the household and business sectors. Real long-term interest rates are low by historic standards and will likely remain so over the forecast horizon. Even though the past and anticipated decline of the exchange value of the dollar is unlikely by itself to lead to any significant improvement in our trade imbalance, at the margin it appears to be providing a boost to our manufacturing sector. This in turn should help to further dissipate the business caution which has been a characteristic of the economy for the past several years.

Growth of real PCE is likely to slow over the forecast horizon while housing market activity gradually declines, becoming a modest drag on growth. However, despite the low personal saving rate, the decline in the growth contribution from the household sector will likely be quite gradual. Energy prices are expected to fall, giving back some of the purchasing power lost over the past two years. Productivity growth is expected to continue its cyclical slowing, with year-over-year growth declining to around 2%. With the rate of growth of wages firming a bit, the wage and salary share of national income is expected to rise modestly. This shifts income from firms, which in the current environment are inclined to save, to households, which are inclined to spend. The resulting upward pressure on unit labor costs is more likely to result in declining profit margins rather than increased inflation. Indeed, under this forecast the existing slack in the economy is used up very gradually with core PCE deflator inflation remaining close to its recent level.

Comparison of Greenbook and other Forecasts

The Greenbook presents a forecast for the near term basically unchanged with respect to the December forecast; for the longer term, it shaved off 0.1% to GDP growth, setting it at 3.6%, which is the same as our own estimate. For the year 2005, the Board's GDP growth forecast is therefore higher than ours, since we project, on the basis of the last release of data for the non-farm business sector, a slower pace of productivity growth. As for the components of spending, a key role is assigned in the Greenbook to consumption spending, which is projected to be sustained throughout the next two years by higher housing prices and low mortgage costs. Business fixed investment, as in our forecast, slows down marginally in 2005 and rebounds in 2006, although at a slightly lower pace than the one we project.

The projected inflation path of the Greenbook shows a faster deceleration of total PCE deflator to a steady 1.3% growth in 2005 and 2006. Although labor costs are projected to rise over these two years, they are absorbed by a strengthening of productivity, and the predicted slowdown of energy prices. In addition, it is possible that the Board assumes that labor costs are absorbed by an erosion of profit margins to a greater extent than we do.

The Board expects 0.4 percentage point contribution to GDP growth from net exports in Q1 and Q2 2005 while we project contributions of +0.1 and -0.1 percentage points in Q1 and Q2 respectively. The difference is due to the Board expecting import growth to be below 3 percent in the first half of 2005 while we expect import growth to be around 6 percent. Their import optimism is due to putting a heavy weight on expiring investment tax credits that they believe brought forward imports into 2004 that would otherwise have arrived in Q1 and Q2 of 2005. There was no obvious surge in imports at the end of last year and so this adjustment is not in our forecast. The forecasts for Q3 and Q4 2005 are similar.

With respect to the global outlook (not shown in an Exhibit), the more significant discrepancies between FRBNY and Board forecasts pertain to the euro area, Japan, and

China. Both FRBNY and Board staff project the euro area and Japan to grow near potential in 2005H1, but the Board's assumed potential growth for both regions is lower than that assumed by FRBNY staff. The Board assumes potential growth rates of 1.5 and 1.2 percent for the euro area and Japan, respectively, against FRB-NY assumptions of 2 percent potential growth in both areas. For China, the Board projects a more pronounced slowdown in 2005 than FRBNY staff. This discrepancy is partly due to the fact that the Board made its forecast before the release of buoyant Q4 GDP data.

Among the alternative scenarios presented in the Greenbook, the ones with more significant impact on GDP, employment, and inflation are the one that varies the productivity assumption and the one that imposes a flat mark-up.

The "Flat mark up and higher compensation inflation" scenario assumes that firms may have greater ability to pass labor costs into prices, and in addition that employer health care costs increase 10% both in 2005 and 2006 (a 7% increase is assumed in the baseline model). Under these assumptions, core inflation is projected above 2% in 2005 and 2.4% in 2006, GDP is about .2% lower than the baseline in 2005, while unemployment is about .2% higher than the baseline over the two years.

By contrast, in the favorable scenario of "Faster productivity growth" productivity is assumed to reach the historical growth average of 2.4% already in 2004, and maintain it throughout 2006; as a consequence, output growth is projected to rise above 4%, and inflation to drop to 1% by the year 2006.

The Board also considers a scenario of a slightly tighter monetary policy, by replacing the baseline assumption for the federal funds rate, 3% in 2005 and 3.5% in 2006, with the path implied by the future markets, which is 20 basis point higher. In this scenario GDP growth is slightly lower at the end of 2005 and into 2006, unemployment is .1% higher in 2006, but there is no gain in inflation.

Comparing the FRBNY real GDP forecast to private sector forecasts, we are in rough agreement about growth being near the potential growth rate. For the first quarter, the PSI model, which incorporates survey data on business sentiment and activity, predicts somewhat higher growth (4.3%). This is because of the strong survey data in the fourth quarter. In subsequent quarters, the FRBNY forecast is a little above the consensus of private forecasts but a little below that of the Macro Advisors' forecast.

Alternative Scenarios and Risks

Alternative 1: Extinguishing a Low Burning Candle Capital spending growth has been consistently less than the predictions based on historical fundamentals in the recovery until 2004. The recent acceleration may have been nothing more than tax-induced forward shifting of spending; thus the anticipated early-year retrenchment could be greater and deeper than currently expected. Likewise, the great strength in housing may reflect a rush to purchase in anticipation of rate increases, and the sector could hit an air pocket when the queue of buyers is exhausted.

Alternative 2: Productivity. In the post-war 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.

Continued Surge

The recent developments in the labor market and continued strength of labor productivity 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. Incoming data that would support this scenario would be continued upside surprises in labor productivity growth that keep the four-quarter average above 3%.

Slower Productivity Growth

The anticipated cyclical moderation in productivity growth in our central projection may turn into a low productivity period. Arguably, a slowdown in productivity could lead to somewhat greater hiring, but in a higher interest rate environment the increase in labor costs could prompt a renewed wave of business caution, leading to weaker investment and GDP growth. Weaker demand and continued foreign competitive pressure would be required to limit the inflationary pressure resulting from such a higher labor cost profile.

Alternative 3: Latent Overheating. A continuation of extremely accommodative policy of the past year going forward has a quicker, stronger effect on prices as well as a more subdued effect on real output. There are two potential connected channels at work here. The first is an underestimate of the equilibrium real rate (i.e., an overestimate of slack in the economy) and the second is higher energy prices. As we have argued before, 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. For the time being we are not seeing this excess demand translate into inflation—perhaps because it is being absorbed by the widening trade deficit and the support of the dollar by Asian governments—but eventually the situation may resolve itself in the form of a more rapidly depreciating dollar and increased domestic inflation. Also, with the trade deficit and Asian dollar support absorbing excess demand, strong household spending has been maintained, and the housing market and home prices have remained robust. In this environment, core inflation and inflation expectation measures move steadily upward, while the current account deficit continues to deteriorate. Eventually, the conditions would start to come into place for a bust in both the housing and foreign exchange markets.

Additional Uncertainties

Uncertainty about the impact of higher energy prices and the weak dollar are the major risks to the near-term foreign growth outlook. For industrial countries that are coping with the weaker dollar, the issues are if domestic demand can make up for the projected decline in the growth contributions from net exports.

Over the medium term, a key risk lies with the potential sudden stop in China's investment spending which remains at an extraordinarily high and likely unsustainable share of GDP (46 percent).

The forecast for real net exports relies on the dollar's depreciation sustaining relatively strong export growth in 2005. The extent of the boost to exports from the weak dollar is a key uncertainty in the forecast. The notable slowdown in foreign sales at the end of last year, particularly those to Asia, is a concern. On the import side, there is substantial uncertainty about how much foreign firms will allow their prices, in dollar terms, to rise in response to the dollar's decline. Larger-than-expected increases in import prices would decrease the demand for imports, leading to less of a drag from net exports on GDP growth.

Quantifying the Risks

The incoming data have been consistent with our central scenario for some months. We are raising the current probability assessment of the central scenario to 65% (it was 60% for the December FOMC) and keeping the risks balanced around the central projection. Financial market developments reviewed above also support our view that the risks to deviating from the central projection--economic growth at the potential rate with moderate core inflation--have decreased recently and remain approximately balanced. We assume that the most likely alternative scenario is a productivity slowdown at 10% (not explicitly included in December but implicitly included in the additional uncertainties), continued productivity surge at 8% (10% in December), with the latent overheating at 5% (5% in December) and extinguishing a slow burning candle scenarios at 3% (5% in December). The remaining 10% covering the additional uncertainties is split evenly between upside and downside risk.

The forecast distributions for inflation and output produced by these risk assessments are shown in Exhibits C-1 and C-2. The risks from higher energy prices on overall inflation produce a 33% chance that annual inflation will exceed 3% in the next 8 quarters (this probability is produced by considering the share of inflation paths that exceed 3% and can not be obtained directly from the forecast distribution presented in Exhibit C-1).

4. Policy Alternatives

Our baseline forecast and balanced risk assessment are consistent with a 25 basis point increase in the target rate at present. In addition, policy remains accommodative, and the real funds rate remains below levels that are consistent with our forecasts for growth and inflation. Both of these factors call for a continued commitment to reducing policy accommodation going forward.

Even under our alternative economic scenarios, it is difficult to justify a pause in tightening at present, given the low level of real policy rates and current data on output and inflation.   However, a pause in the expected pace of policy tightening could be justified if we believe that there is significant downward pressure on inflation from noticeably weaker near-term growth prospects, particularly those internationally. This would be consistent with the view of the current recovery as a "low-burning candle" that could be snuffed out by continued rate increases. Alternatively, a more aggressive tightening, or a change in committee's view on the "measured pace" of policy tightening would be consistent with either a scenario where a slowdown in productivity growth ignites inflationary pressures, or the risk that economy may be experiencing latent overheating. The latter could occur because of an overestimate of economic slack, or an underestimate of the effect of past accommodation on expected inflation.   At present we attach relatively low probabilities to all of these alternative scenarios.

These views are buttressed by a standard Taylor-style analysis of the current policy stance, which is consistent with a 25 basis point increase in the target rate at the present meeting.   Given our near-term projections for growth and inflation, the analysis suggests an additional 25 basis point increase in the target rate at the March meeting.   Both of these assessments are consistent with current market expectations.   Of course, our Taylor rule analysis is sensitive to assumptions about inflation and growth in the future, and thus may change as we adjust our forecasts for incoming economic data. In particular, the path of productivity growth in 2005 will be important in determining policy as we approach the end of the measured pace regime.

A. FRBNY Forecast Tables

Exhibit A-1. Percentage Changes in Actual and Projected 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: FRBNY Business Conditions Function

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: FRBNY Business Conditions Function; Board staff

Exhibit A-3. Judgement Table

History and forecasts of the primary variables in the FRBNY forecast. This includes the detailed judgements, 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: FRBNY Business Conditions Function

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: FRBNY Business Conditions Function

Exhibit A-5. Alternative GDP Forecasts

Real GDP growth forecasts from a variety of sources. Besides the FRBNY forecast, this 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: FRBNY Business Conditions and Domestic Research Functions; 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 show the 3, 6, 12, and 24 month changes in a variety of models of inflation.
Source: Bureau of Economic Analysis, Bureau of Labor Statistics

Exhibit A-7. Monetary Aggregates

Reference charts showing the three and twelve month growth rates of the M1, M2, and M3 monetary aggregates. Previously, ranges for these aggregates were included in the bi-annual Monetary Policy Report to Congress under the requirements of the Full Employment and Balanced Growth Act of 1978 which expired in 2000.
Source: Board of Governors

A. FRBNY Forecast Tables

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

	Real GDP			**Chain Type GDP Price Index**			**PCE Deflator**			**Core PCE**			**Unemployment Rate ***			
	Nov	Dec	Jan	Nov	Dec	Jan	Nov	Dec	Jan	Nov	Dec	Jan	Nov	Dec	Jan	
2004 Q1	*4.5*	*4.5*	*4.5*	*2.8*	*2.8*	*2.8*	*3.3*	*3.3*	*3.3*	*2.1*	*2.1*	*2.1*	*5.6*	*5.6*	*5.7*	
2004 Q2	*3.3*	*3.3*	*3.3*	*3.2*	*3.2*	*3.2*	*3.1*	*3.1*	*3.1*	*1.7*	*1.7*	*1.7*	*5.6*	*5.6*	*5.6*	
2004 Q3	3.7	3.9	*4.0*	1.3	1.3	*1.4*	1.1	1.1	*1.3*	*0.7*	*0.7*	*0.9*	5.4	5.4	*5.4*	
2004 Q4	4.0	3.9	*3.1*	1.7	1.4	*2.0*	2.7	2.7	*2.5*	1.1	1.1	*1.6*	5.3	5.4	*5.4*	
2005 Q1	2.8	3.0	3.3	2.0	1.7	2.0	1.5	1.5	1.6	1.2	1.2	1.5	5.2	5.3	5.3	
2005 Q2	3.9	4.0	3.9	1.9	1.7	2.0	1.7	1.6	1.8	1.3	1.3	1.4	5.2	5.2	5.2	
2005 Q3	3.7	3.8	3.8	2.0	1.9	2.0	1.8	1.7	1.9	1.4	1.4	1.5	5.2	5.2	5.2	
2005 Q4	3.7	3.7	3.7	1.9	1.8	2.0	1.9	1.8	1.9	1.4	1.4	1.5	5.2	5.2	5.2	
2006 Q1	3.5	3.4	3.7	2.3	2.3	2.5	1.9	1.9	1.9	1.4	1.4	1.5	5.2	5.2	5.2	
2006 Q2	3.6	3.6	3.5	1.9	1.8	2.0	1.9	1.9	1.9	1.4	1.4	1.5	5.2	5.2	5.2	
2006 Q3	3.5	3.6	3.6	2.0	1.9	2.1	2.0	2.0	2.0	1.5	1.5	1.5	5.2	5.2	5.2	
2006 Q4	3.5	3.6	3.7	2.0	2.0	2.2	2.0	2.0	2.0	1.5	1.5	1.5	5.2	5.2	5.2	
2002 Q4 to 2003 Q4	*4.4*	*4.4*	*4.4*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.2*	*1.2*	*1.2*	*0.0*	*0.0*	*0.0*	*
2003 Q4 to 2004 Q4	3.9	3.9	*3.7*	2.2	2.2	*2.4*	2.6	2.6	*2.5*	1.4	1.4	*1.6*	-0.6	-0.5	*-0.4*	*
2004 Q4 to 2005 Q4	3.5	3.6	3.7	2.0	1.8	2.0	1.7	1.7	1.8	1.4	1.4	1.5	-0.1	-0.2	-0.2	*
2005 Q4 to 2006 Q4	3.5	3.6	3.6	2.1	2.0	2.2	1.9	1.9	1.9	1.4	1.4	1.5	0.0	0.0	0.0	*

* Q4 to Q4 absolute change Note: Italics indicates a reported value

A. FRBNY Forecast Tables

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

	FRBNY						Board					
	2004		2005		2006		2004		2005		2006	
	DEC	JAN	DEC	JAN	DEC	JAN	DEC	JAN	DEC	JAN	DEC	JAN
REAL GDP (Q4/Q4)	3.9	3.9	3.6	3.7	3.6	3.6	3.8	3.8	3.9	3.9	3.7	3.6
GROWTH CONTRIBUTIONS (Q4/Q4)												
FINAL SALES TO DOMESTIC PURCHASERS	4.3	4.4	3.8	3.9	3.9	3.9	3.5	4.2	4.0	4.1	3.7	3.5
CONSUMPTION	2.5	2.7	2.4	2.4	2.3	2.3	2.5	2.7	2.8	2.7	2.7	2.6
BFI	1.0	1.0	0.9	0.8	1.2	1.2	1.0	0.9	0.7	0.6	0.9	0.9
STRUCTURES	(0.0)	0.0	0.2	0.1	0.2	0.2	0.0	(0.0)	0.1	0.1	0.1	0.1
EQUIPMENT & SOFTWARE	1.0	1.0	0.7	0.7	1.0	1.0	1.0	1.0	0.5	0.5	0.8	0.8
RESIDENTIAL INVESTMENT	0.4	0.4	(0.1)	(0.0)	(0.1)	(0.1)	0.3	0.4	0.1	0.2	0.1	0.1
GOVERNMENT	0.4	0.3	0.6	0.6	0.6	0.6	0.3	0.2	0.5	0.6	0.5	0.5
FEDERAL	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.1	0.1
STATE & LOCAL	0.1	0.1	0.4	0.3	0.4	0.3	0.1	0.1	0.3	0.3	0.3	0.3
INVENTORY INVESTMENT	0.2	0.3	0.1	(0.0)	(0.0)	(0.0)	0.3	0.4	(0.1)	(0.2)	0.0	0.1
NET EXPORTS	(0.6)	(0.7)	(0.3)	(0.2)	(0.3)	(0.3)	(0.6)	(0.9)	(0.1)	0.0	(0.5)	(0.4)
INFLATION/PRODUCTIVITY/WAGES (Q4/Q4)												
GDP DEFLATOR	2.2	2.3	1.8	2.0	2.0	2.2	2.3	2.4	1.5	1.5	1.6	1.6
PCE	2.6	2.5	1.7	1.8	1.9	1.9	2.5	2.5	1.2	1.3	1.3	1.3
CORE PCE	1.4	1.5	1.4	1.5	1.4	1.5	1.5	1.6	1.6	1.6	1.4	1.4
COMPENSATION PER HOUR	3.9	3.7	4.1	3.7	3.9	3.7	3.8	4.0	4.2	4.2	4.2	4.2
OUTPUT PER HOUR	3.0	2.9	2.1	1.9	2.5	2.5	2.8	2.8	1.7	1.7	2.2	2.2
UNIT LABOR COSTS	0.9	0.8	1.9	1.8	1.4	1.2	0.9	1.1	2.4	2.4	2.0	2.0
UNEMPLOYMENT RATE (Q4 LEVEL)	5.4	5.4	5.2	5.2	5.2	5.2	5.4	5.4	5.3	5.3	5.1	5.1
PARTICIPATION RATE (Q4 LEVEL)	66.1	66.1	66.4	66.4	66.5	66.5	66.0	66.0	66.3	66.0	66.4	66.4
NONFARM PAYROLL EMPLOYMENT (Q4/Q4 CHANGE)												
TOTAL, IN THOUSANDS	1972	2114	2118	2674	1412	1775	2100	2114	2700	2800	2500	2400
AVERAGE PER MONTH, IN THOUSANDS	164	176	177	223	118	148	175	176	225	233	208	200
FINANCIAL MARKET VARIABLES												
FED FUNDS RATE (PERCENT)	2.05	2.25	3.00	3.00	3.50	3.50	2.25	2.25	2.75	3.00	3.25	3.50
Baa BOND YIELD (PERCENT)	6.35	6.19	6.35	6.35	6.35	6.35	6.50	6.19	6.25	6.19	N/A	6.19
EFFECTIVE EXCHANGE RATE (Q4/Q4)	(3.60)	(3.60)	(1.20)	(1.20)	N/A	N/A	(1.90)	(1.70)	(1.30)	(1.30)	N/A	N/A

A. FRBNY Forecast Tables

Exhibit A-3: Judgement Table

	2004:01	2004:02	2004:03	2004:04	2005:01	2005:02	2005:03	2005:04	2006:01	2006:02	2006:03	2006:04	Q4/Q4 % CHANGE/Q4 LEVEL 2004	2005	2006
REAL GDP AND COMPONENTS (% Change, AR)															
GDP	4.5	3.3	4.0	3.1	3.3	3.9	3.8	3.7	3.7	3.5	3.6	3.7	3.7	3.7	3.6
CHANGE IN INVENTORIES (Growth Contribution) 1\	1.2	0.8	-1.0	0.4	0.1	-0.1	0.0	0.0	-0.1	0.0	-0.1	0.0	0.3	0.0	0.0
DOMESTIC PURCHASES	5.0	4.2	3.9	4.7	3.1	3.8	3.9	3.8	3.7	3.7	3.7	3.7	4.5	3.6	3.7
CONSUMPTION EXPENDITURES	4.1	1.6	5.1	4.6	3.4	3.5	3.6	3.5	3.1	3.3	3.4	3.3	3.9	3.5	3.3
BUSINESS FIXED INVESTMENT	4.2	12.4	13.0	10.3	-1.1	12.1	10.6	10.6	10.6	10.6	10.6	10.6	9.9	7.9	10.6
RESIDENTIAL INVESTMENT	5.0	16.5	1.6	0.3	5.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	5.7	-0.3	-2.0
NET EXPORTS (Growth Contribution) 1\	-0.8	-1.1	-0.1	-1.7	0.0	-0.1	-0.2	-0.3	-0.2	-0.3	-0.3	-0.2	-0.9	-0.2	-0.3
EXPORTS	7.3	7.3	6.0	-3.9	10.4	9.8	9.2	6.9	7.0	5.7	6.4	6.3	4.1	9.0	6.3
IMPORTS	10.6	12.6	4.6	9.1	6.4	6.9	7.3	6.0	5.7	5.7	6.0	5.5	9.2	6.7	5.7
FEDERAL GOVERNMENT	7.1	2.7	4.8	1.6	5.6	4.0	3.6	3.6	5.3	3.0	2.8	2.7	4.0	4.2	3.5
STATE & LOCAL GOVERNMENTS	0.0	1.9	-1.7	0.6	2.5	2.5	2.5	2.5	3.0	3.0	3.0	3.0	0.2	2.5	3.0
INTEREST RATE ASSUMPTIONS (%) 1															
FEDERAL FUNDS RATE	1.00	1.00	1.42	1.94	2.39	2.50	2.75	3.00	3.25	3.25	3.50	3.50	1.34	2.66	3.38
YIELD ON 10-YR GOVERNMENT	4.0	4.6	4.3	4.2	4.3	4.3	4.4	4.4	4.5	4.5	4.6	4.6	4.3	4.4	4.6
BAA BOND YIELD	6.3	6.7	6.5	6.2	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
INCOME (% Change, AR)															
PERSONAL INCOME	5.0	6.4	3.4	10.8	2.4	6.0	6.0	6.2	5.9	6.3	6.3	6.4	6.4	5.1	6.2
REAL PERSONAL DISPOSABLE INCOME	2.4	2.8	2.0	8.4	0.9	4.1	4.0	4.2	3.9	4.3	4.3	4.3	3.9	3.3	4.2
PERSONAL SAVING RATE (%) 3\	1.0	1.3	0.5	1.3	0.8	0.9	0.9	1.0	1.2	1.3	1.4	1.5	1.0	0.9	1.4
CORPORATE PROFITS BEFORE TAXES	13.6	2.9	-21.0	49.3	-3.7	1.6	2.3	1.2	0.2	1.2	1.0	1.2	8.3	0.3	0.9
PRICES & PRODUCTIVITY (% Change, AR)															
GDP IMPLICIT DEFLATOR	2.8	3.2	1.4	2.0	2.0	2.0	2.0	2.0	2.5	2.0	2.1	2.2	2.4	2.0	2.2
PERSONAL CONSUMPTION EXPENDITURES	3.3	3.1	1.3	2.5	1.6	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.5	1.8	1.9
CORE PERSONAL CONSUMPTION EXPENDITURES	2.1	1.7	0.9	1.6	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5
CONSUMER PRICE INDEX	3.4	4.7	1.9	3.4	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	3.4	1.9	2.1
CORE CONSUMER PRICE INDEX	1.8	3.0	1.5	2.3	1.7	1.8	1.8	1.8	2.0	2.0	2.1	2.1	2.1	1.8	2.0
COMPENSATION PER HOUR (Nonfarm Business)	3.9	3.7	3.5	4.1	3.5	3.8	3.6	3.7	3.6	3.4	3.1	3.1	5.1	5.1	5.1
OUTPUT PER HOUR (Nonfarm Business)	3.4	4.0	1.8	1.2	1.5	1.8	2.0	2.3	2.5	2.5	2.5	2.5	2.6	1.9	2.5
UNIT LABOR COST (Nonfarm Business)	0.5	-0.3	1.7	2.9	2.0	2.1	1.6	1.4	1.1	0.9	0.6	0.6	2.5	3.2	2.6
REAL ACTIVITY															
CAPACITY UTILIZATION (Manufacturing, %)	75.6	76.5	77.0	77.5	78.2	78.7	79.3	80.0	80.6	81.0	81.3	81.6	76.7	79.1	81.1
CIVILIAN UNEMP RATE (%)	5.7	5.6	5.4	5.4	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.4	5.2	5.2
PRIVATE HOUSING STARTS (Thous, AR)	1943	1920	1969	1959	1950	1930	1920	1910	1900	1890	1870	1870	1948	1928	1883
LIGHT VEHICLE SALES (Mil$, AR) 4 \	16.5	16.5	17.1	17.2	16.9	17.2	17.3	17.3	17.4	17.5	17.6	17.7	16.8	17.2	17.5
FEDERAL SURPLUS/DEFICIT (Unified Basis, Bil$, NSA) 5	-170.8	-25.7	-102.4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	-412.3	-423.1	-357.5

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\ Overall outlook is based on an assumption (not a forecast) that interest rates will remain near current levels 3\ Level, Percent 4\ Includes domestic and foreign auto and light truck sales 5\ Yearly numbers are based on the fiscal year

A. FRBNY Forecast Tables

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

	2004				2005				2006				Q4/Q4 % CHANGE/Q4 LEVEL			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2003	2004	2005	2006
REAL GDP (Growth, Annual Rate)........................	***4.5***	***3.3***	***4.0***	***3.1***	**3.3**	**3.9**	**3.8**	**3.7**	**3.7**	**3.5**	**3.6**	**3.7**	***4.4***	***3.7***	**3.7**	**3.6**
Contributions to GDP growth:																
FINAL SALES TO DOMESTIC PURCHASERS...	***4.1***	***3.6***	***5.1***	***4.5***	**3.2**	**4.1**	**4.0**	**4.0**	**3.9**	**3.8**	**3.9**	**3.9**	***4.6***	***4.3***	**3.9**	**3.9**
CONSUMPTION EXPENDITURES...............	*2.9*	*1.1*	*3.6*	*3.2*	2.4	2.4	2.5	2.4	2.2	2 3	2 3	2.3	*2.7*	*2.7*	2.4	2.3
BUSINESS FIXED INVESTMENT.................	*0.4*	*1.2*	*1.3*	*1.1*	-0.1	1.2	1.1	1.1	1.1	1.1	1 2	1.2	*0.9*	*1 0*	0 8	1.2
RESIDENTIAL INVESTMENT.........................	*0.3*	*0.9*	*0.1*	*0.0*	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	*0.6*	*0 3*	0 0	-0.1
FEDERAL GOVERNMENT.............................	*0.5*	*0.2*	*0.3*	*0.1*	0.4	0.3	0.3	0.3	0.4	0 2	0 2	0.2	*0.4*	*0 3*	0 3	0.2
STATE & LOCAL GOVERNMENTS..................	*0.0*	*0.2*	*-0 2*	*0.1*	0.3	0.3	0.3	0.3	0.3	0 3	0 3	0.3	*0.1*	*0 0*	0 3	0.3
NET EXPORTS...	***-0.8***	***-1.1***	***-0.1***	***-1.7***	**0.0**	**-0.1**	**-0.2**	**-0.3**	**-0.2**	**-0.3**	**-0.3**	**-0.2**	***-0.1***	***-0.9***	**-0.2**	**-0.3**
EXPORTS...	*0.7*	*0.7*	*0.6*	*-0.4*	1.0	1.0	0.9	0.7	0.7	0.6	0.6	0.6	*0.6*	*0.4*	0 9	0.6
IMPORTS..	*-1.5*	*-1.8*	*-0.7*	*-1.3*	-1.0	-1.1	-1.1	-0.9	-0.9	-0.9	-0 9	-0.9	*-0.7*	*-1.3*	-1.0	-0 9
CHANGE IN INVENTORIES...................................	***1.2***	***0.8***	***-1.0***	***0.4***	**0.1**	**-0.1**	**0.0**	**0.0**	**-0.1**	**0.0**	**-0.1**	**0.0**	***-0.1***	***0.3***	**0.0**	**0.0**

NOTES: Italics indicates a reported value.

A. FRBNY Forecast Tables

Exhibit A-5: Alternative GDP Forecasts

		2005-Q1		2005-Q2		2005-Q3		2005-Q4	
	Release Date	Prev	Jan	Prev	Jan	Prev	Jan	Prev	Jan
PSI Model	1/18/2005	4.1	4.3	--	--	--	--	--	--
Blue Chip	1/10/2005	3.3	3.5	3.5	3.6	3.5	3.5	3.5	3.5
Median SPF	11/22/2004	3.8	3.4	3.7	3.4	3.3	3.4	--	3.4
FRBNY	1/28/2005	3.0	3.3	4.0	3.9	3.8	3.8	3.7	3.7
Macro Advisors	1/20/2005	3.8	4.1	3.8	4.2	3.9	4.0	4.0	3.8

Note: Previous release of all forecasts except for the SPF is December. The previous release of the SPF was in August.

A. FRBNY Forecast Tables

Exhibit A-6(1): Consumer Price Index Data as of December 2004

	WEIGHTS (December 2003) TOTAL	CORE	Annualized Percent Change over Indicated Interval 24 MONTH	12 MONTH	6 MONTH	3 MONTH	1 MONTH
CONSUMER PRICE INDEX	100.00		2.6	3.4	1.8	3.0	-0.6
ENERGY	7.08		11.6	16.5	-0.3	10.4	-19.8
ALL ITEMS EX ENERGY			1.9	2.3	1.9	2.1	1.2
FOOD	14.38		3.1	2.7	2.2	3.0	0.0
FOOD AWAY FROM HOME (NSA)	6.13		2.7	3.0	3.1	2.1	1.9
ALL ITEMS EX FOOD & ENERGY	78.54	100.00	1.7	2.3	1.9	2.0	1.8
CORE CHAIN-WEIGHT CPI (NSA)			1.3	1.9	0.9	0.4	-3.3
CORE GOODS	22.25	28.34	-1.0	0.6	0.3	1.4	-0.9
APPAREL	3.98	5.06	-1.1	-0.2	-2.5	-0.7	-4.9
MEDICAL CARE COMMODITIES	1.50	1.91	2.2	2.2	1.4	0.6	-3.5
DURABLE GOODS	11.28	14.36	-1.9	0.4	1.4	2.5	2.1
NEW VEHICLES	4.82	6.13	-0.6	0.7	0.4	5.7	3.5
USED VEHICLES (NSA)	2.01	2.56	-3.8	4.8	10.5	2.4	5.4
CORE SERVICES	56.28	71.66	2.8	2.9	2.5	2.1	2.1
RENT OF PRIMARY RESIDENCE	6.16	7.84	2.7	2.8	2.6	2.3	2.3
OWNERS' EQUIVALENT RENT	23.38	29.77	2.1	2.3	1.8	1.6	2.1
LODGING AWAY FROM HOME	2.95	3.76	4.3	5.3	4.7	0.0	3.8
MEDICAL CARE SERVICES	4.58	5.83	4.5	4.9	4.3	4.9	5.7
TRANSPORTATION SERVICES	6.32	8.05	2.3	1.9	2.0	2.7	-3.2

A. FRBNY Forecast Tables

Exhibit A-6(2): PCE Deflator as of December 2004

	Annualized Percent Change Over Indicated Interval				
	24 MONTH	12 MONTH	6 MONTH	3 MONTH	1 MONTH
PCE DEFLATOR	2.0	2.4	1.3	2.0	-1.3
MARKET-BASED	2.2	2.7	1.3	2.4	-1.0
DURABLE GOODS	-2.2	-0.5	-1.3	0.7	0.1
MOTOR VEHICLES AND PARTS	-0.9	1.4	1.7	4.2	2.6
NONDURABLE GOODS	2.8	3.9	0.7	2.6	-6.3
CLOTHING AND SHOES	-1.2	-0.7	-2.8	-1.7	-8.0
SERVICES	2.4	2.2	2.1	2.0	1.0
HOUSING	2.3	2.5	2.1	1.7	2.4
TRANSPORTATION	2.1	0.9	1.5	5.5	-2.0
MEDICAL CARE	3.0	2.3	2.0	1.5	0.9
PCE DEFLATOR EX FOOD AND ENERGY	1.3	1.5	1.2	1.4	0.0
MARKET-BASED	1.3	1.7	1.2	1.7	0.6
PERSONAL BUSINESS SERVICES-MB	3.6	3.3	3.2	4.3	2.4
PERSONAL BUSINESS SERVICES-NMB	-0.5	-0.9	-0.8	-2.1	-3.0

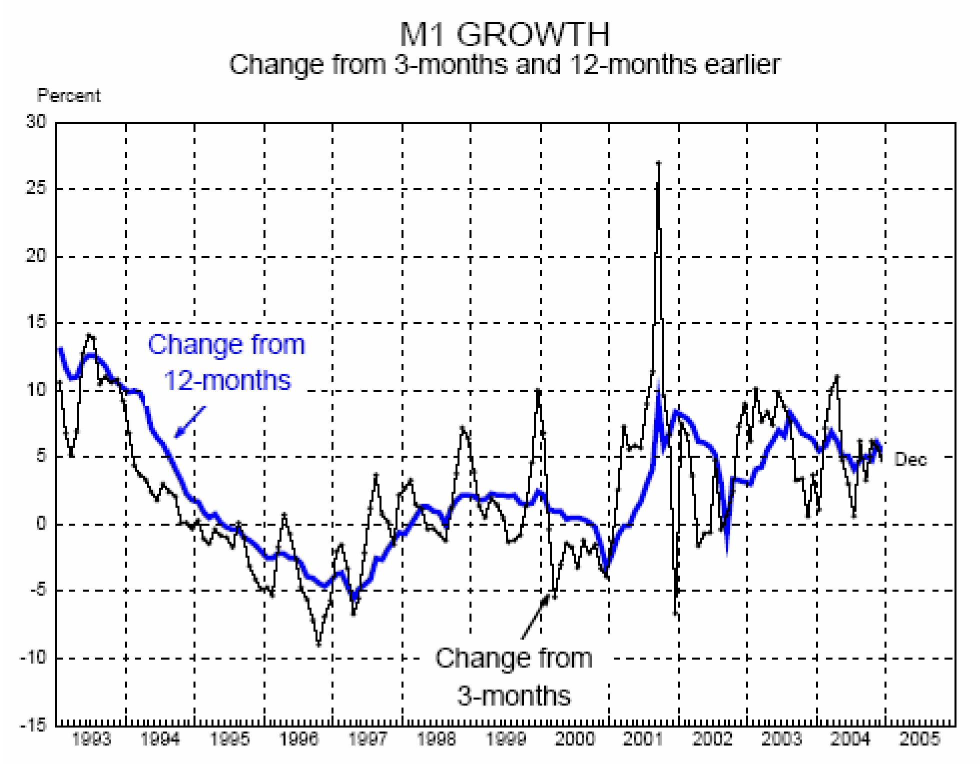
A. FRBNY Forecast Tables

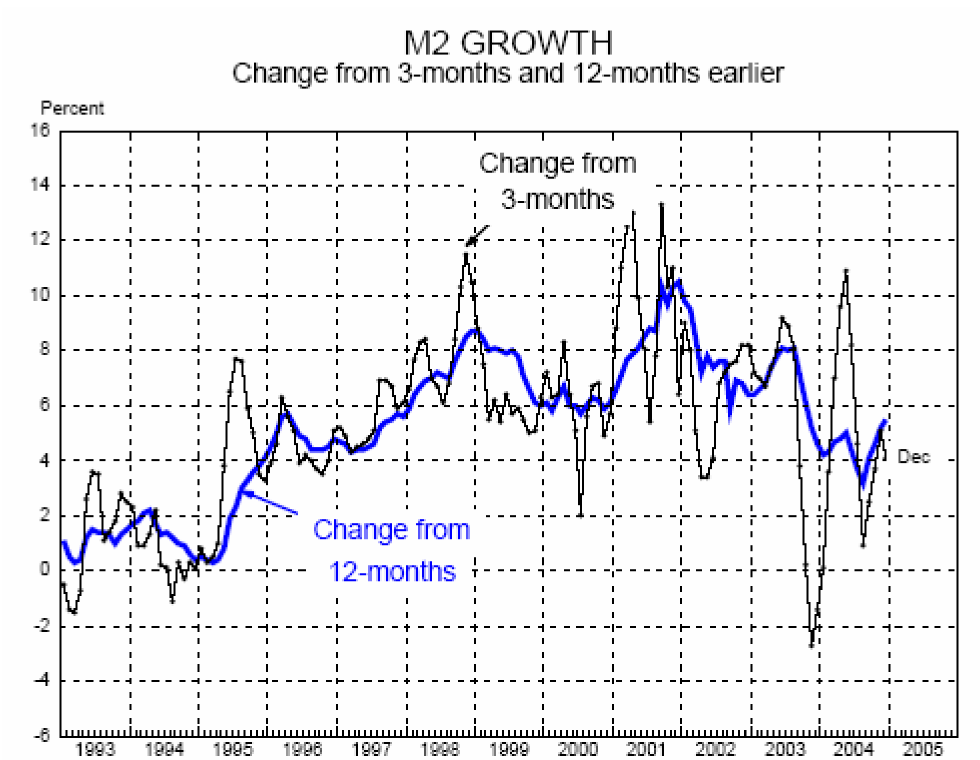
Exhibit A-6(3): Producer Price Data as of December 2004

	Annualized Percent Change Over Indicated Interval				
	24 MONTH	12 MONTH	6 MONTH	3 MONTH	1 MONTH
FINISHED GOODS	4.0	4.1	3.4	6.3	-7.6
FINISHED CONSUMER GOODS	4.9	4.8	3.6	7.6	-10.3
FINISHED CONSUMER GOODS EX FOOD	4.8	5.5	5.1	7.1	-14.4
NONDURABLES EX FOOD	6.2	6.9	6.8	9.0	-20.0
DURABLES	1.7	2.2	1.2	3.0	0.9
CAPITAL EQUIPMENT	1.6	2.4	2.6	3.1	1.7
ELECTRONIC COMPUTERS (NSA)	-14.8	-12.3	-14.7	-14.3	-4.2
COMMUNICATION & RELATED EQUIP. (NSA)	-1.6	-2.3	-0.6	-3.1	-9.9
FINISHED GOODS EX FOOD & ENERGY	1.6	2.2	2.1	2.6	1.6
FINISHED CONS GOODS EX FOOD & ENERGY	1.6	2.0	1.8	2.3	0.7
INTERMEDIATE MATERIALS	6.5	9.0	6.4	5.3	-4.0
INTERMEDIATE MATERIALS EX FOOD & ENERG	5.2	8.3	7.1	4.6	5.7
CRUDE MATERIALS	18.9	18.2	8.1	46.7	-30.1
CRUDE MATERIALS EX FOOD & ENERGY	21.1	20.4	38.9	27.5	-18.7

A. FRBNY Forecast Tables

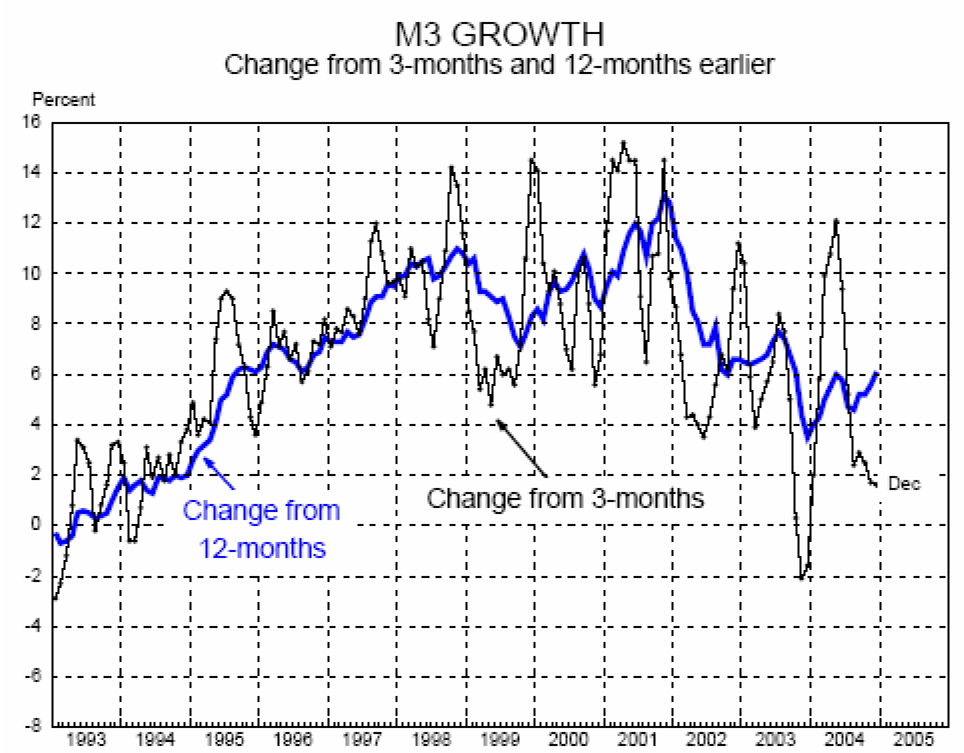
Exhibit A-7:





A. FRBNY Forecast Tables

Exhibit A-7:



B. Financial Markets

Exhibit B-1. TIIS Implied Inflation and real rates

The chart in this exhibit gives the time series of implied expected CPI inflation
The table contains the current (1/28/05) yields on 5 and 10 year nominal and TIIS Treasuries.
Source: Capital Markets Function FRBNY

Exhibit B-2. 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-3. Yield Curve Over Tightening Cycle

The spider chart in this exhibit shows the spread between the 10-year Treasury and the 2-Year Treasury (yield curve) centered on the date when the Open Market Committee began raising the target Fed Funds Rate. The current numbers reflect the tightening cycle that began in June 2004, while the average of the previous cycles reflects market behavior during the late 1980's and 1990's tightening cycles.
Source: Business Conditions Function FRBNY

Exhibit B-4. Expected Path of Fed Funds Target from Financial Markets

The charts in this exhibit show the changes in expected path of the Fed Funds Target from financial markets since the last FOMC meeting and over the last week.
A constant term premium risk adjustment is made but there is no allowance for time-varying risk.
Source: Monetary Affairs BofG

Exhibit B-5. Implied volatility on Fed Funds Options

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 set of 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-6. 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 weakening 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

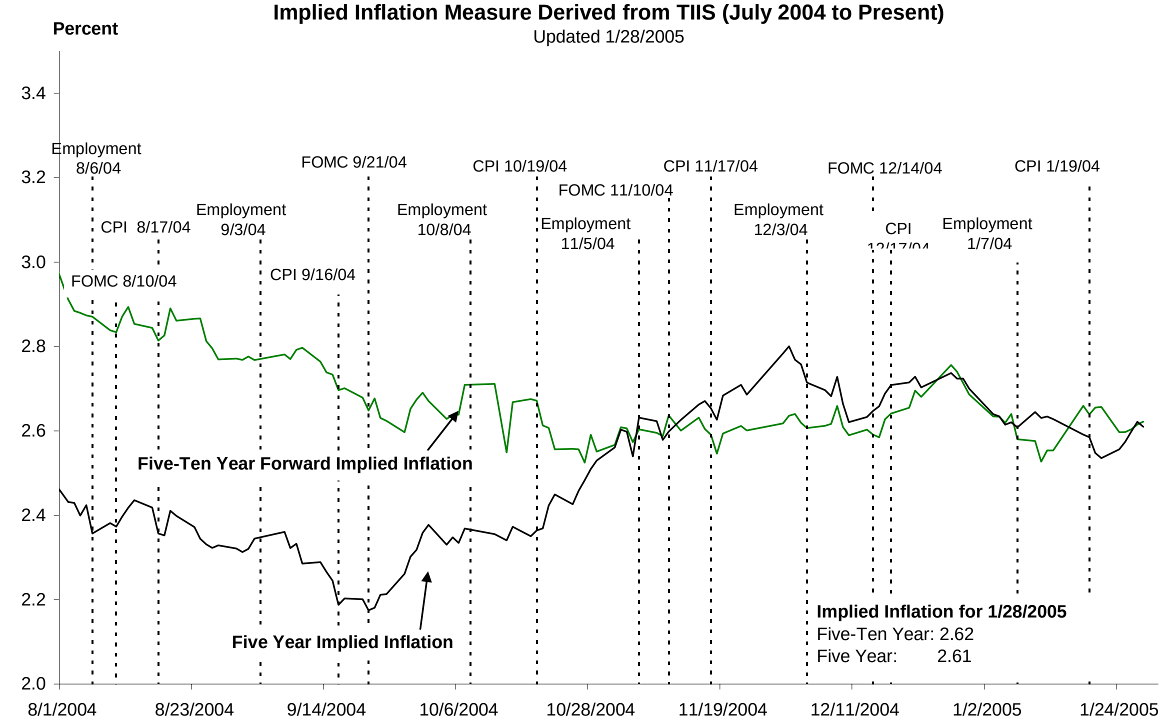
Exhibit B-7. Implied volatility on Yen/Dollar and Euro/Dollar Exchange Rates

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 contains information of the expected path of implied volatility over the next six months.
Source: Markets Group FRBNY, Reuters

B. Financial Markets

Exhibit B-1:

Implied Inflation Measure Derived from TIIS (July 2004 to Present)
Updated 1/28/2005



Data based on FRBNY calculations using 3:15pm quotes;; 8:40 quotes reported for 1/28/2005.
The chart shows the timing of CPI and employment announcements as well as recent FOMC meetings.

Real and Nominal Yield Spreads

	16-Aug-04	16-Sept-04	20-Oct-04	23-Nov-04	30-Dec-04	28-Jan-05
Five-year Spread (%)	2.566	2.323	2.523	2.593	2.593	2.548
Ten-year Spread	2.461	2.273	2.343	2.589	2.620	2.491
Five-year Real Yield (%)	0.888	0.955	0.727	0.993	1.088	1.160
Ten-year Real Yield	1.803	1.801	1.640	1.607	1.693	1.678
Five-year Nominal Yield	3.454	3.278	3.250	3.586	3.681	3.708
Ten-year Nominal Yield	4.264	4.074	3.983	4.196	4.313	4.169

Source: Bloomberg.

B. Financial Markets

Exhibit B-2

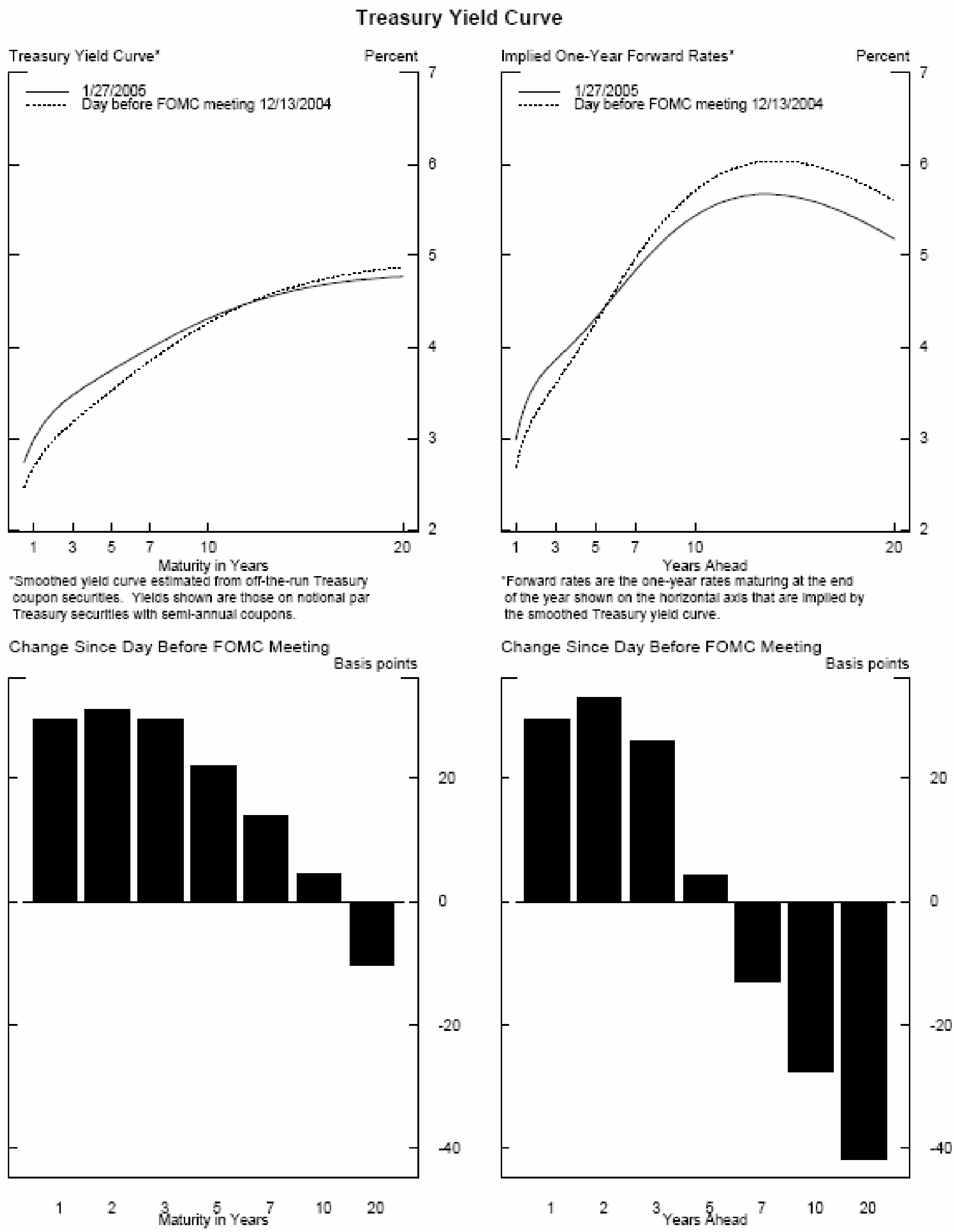
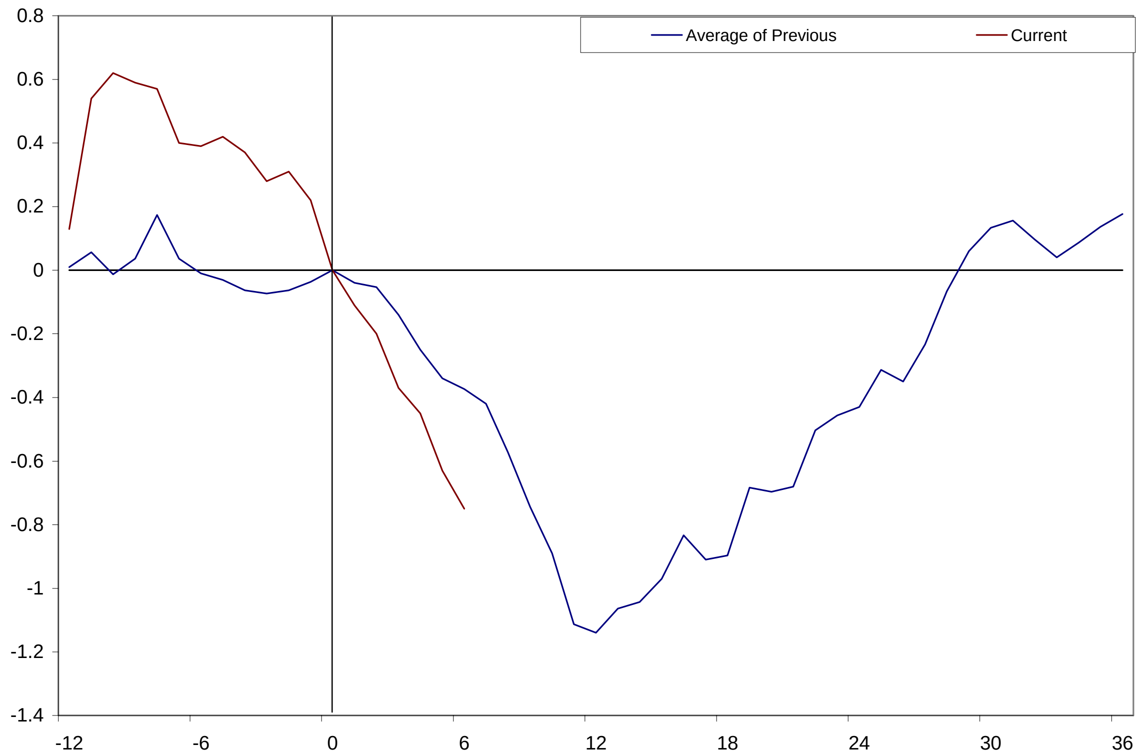
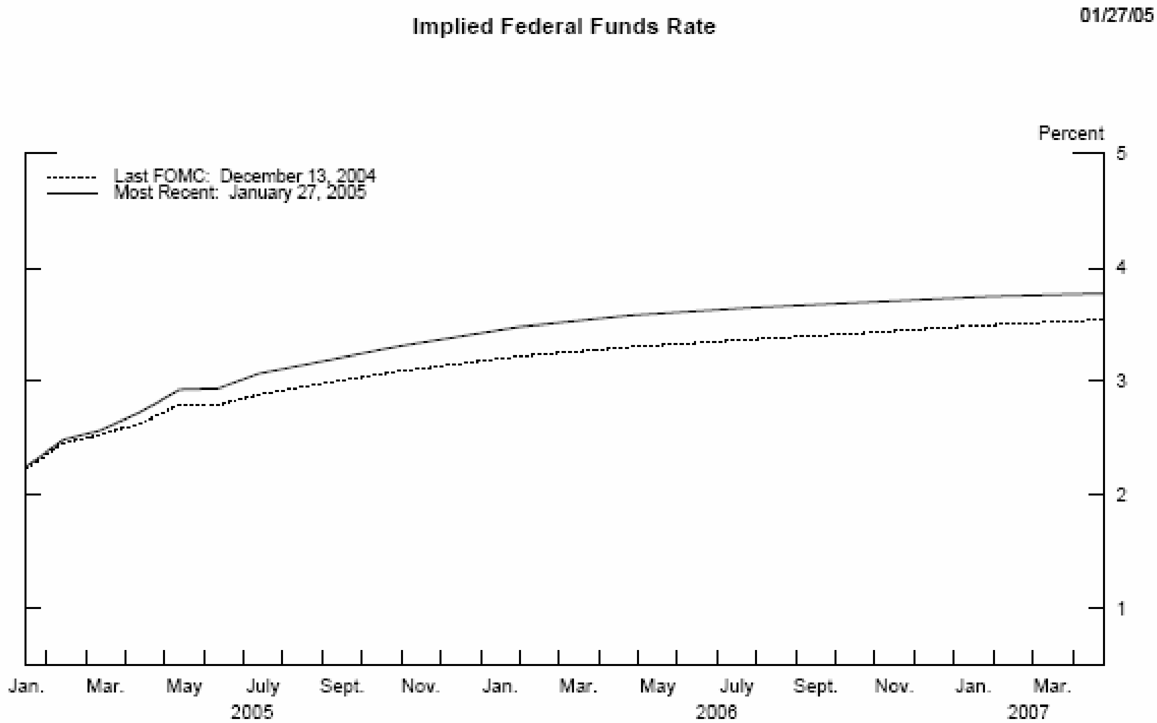


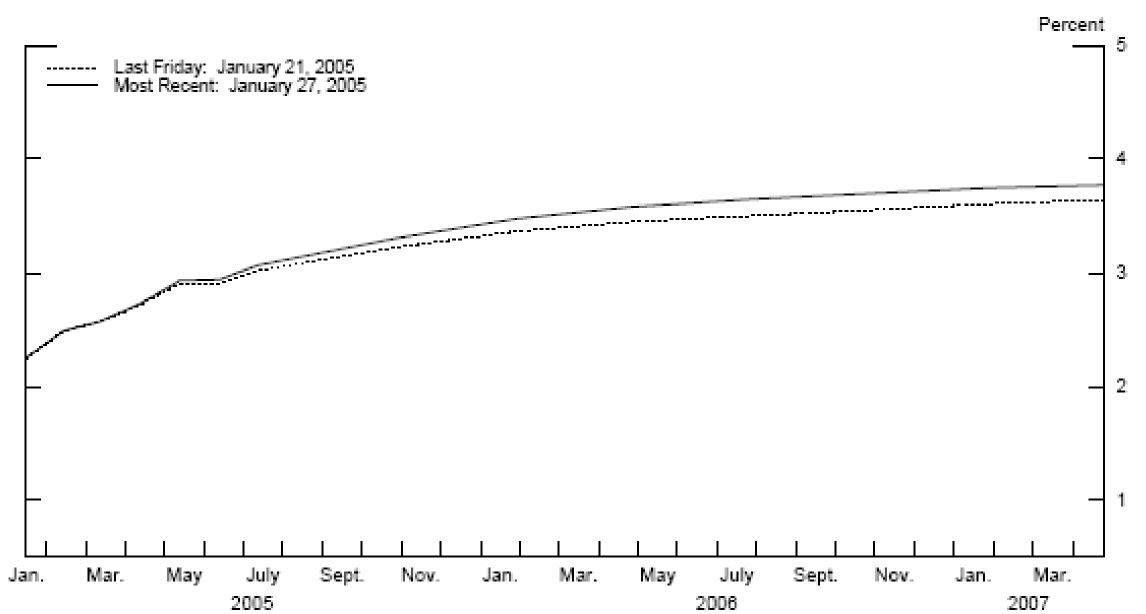
Exhibit B-3: Yield Curve over Tightening Cycle



B. Financial Markets

Exhibit B-4:

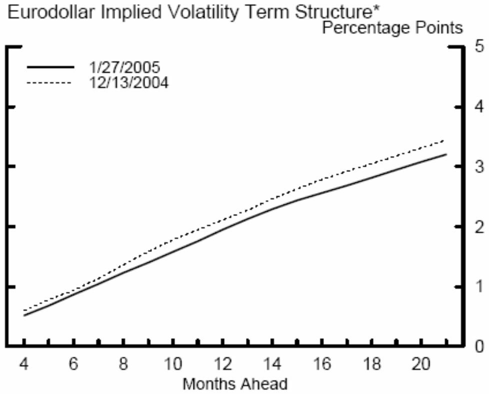




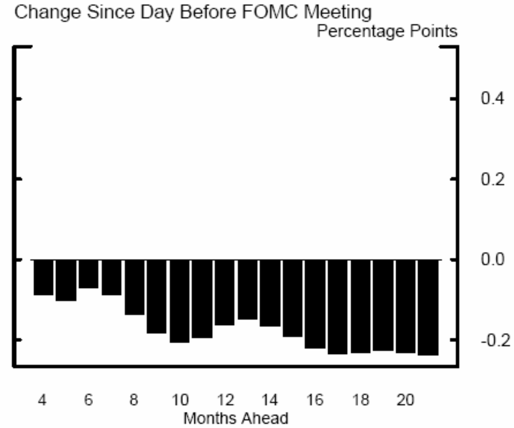
B. Financial Markets

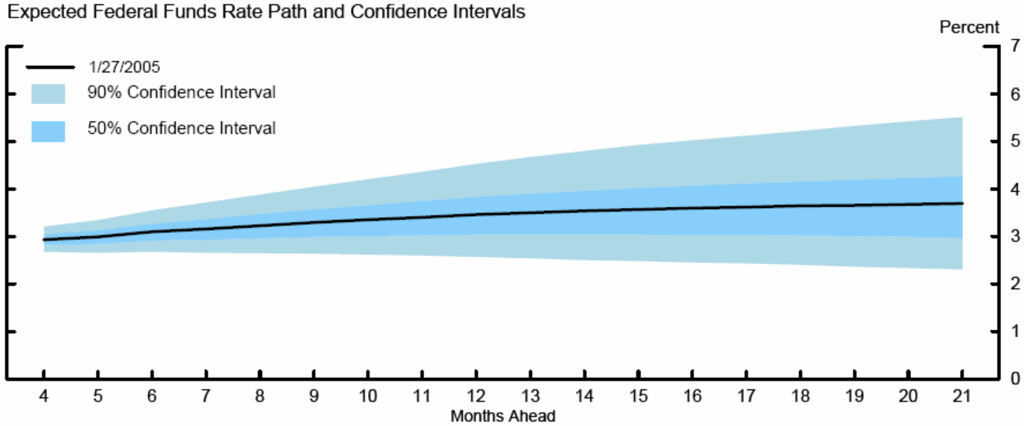
Exhibit B-5:

Policy Uncertainty

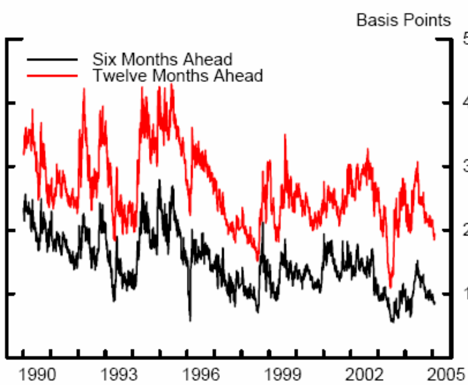


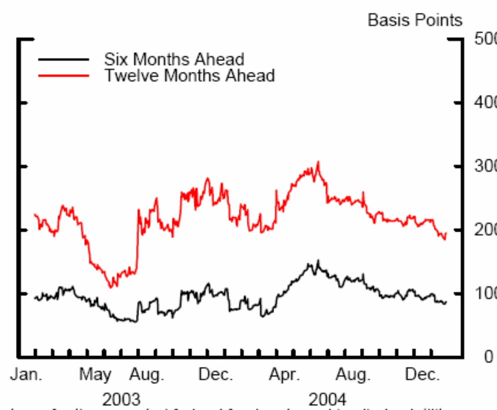
*Width of a 90 percent confidence interval computed from the term structures for the expected federal funds rate and implied volatility.





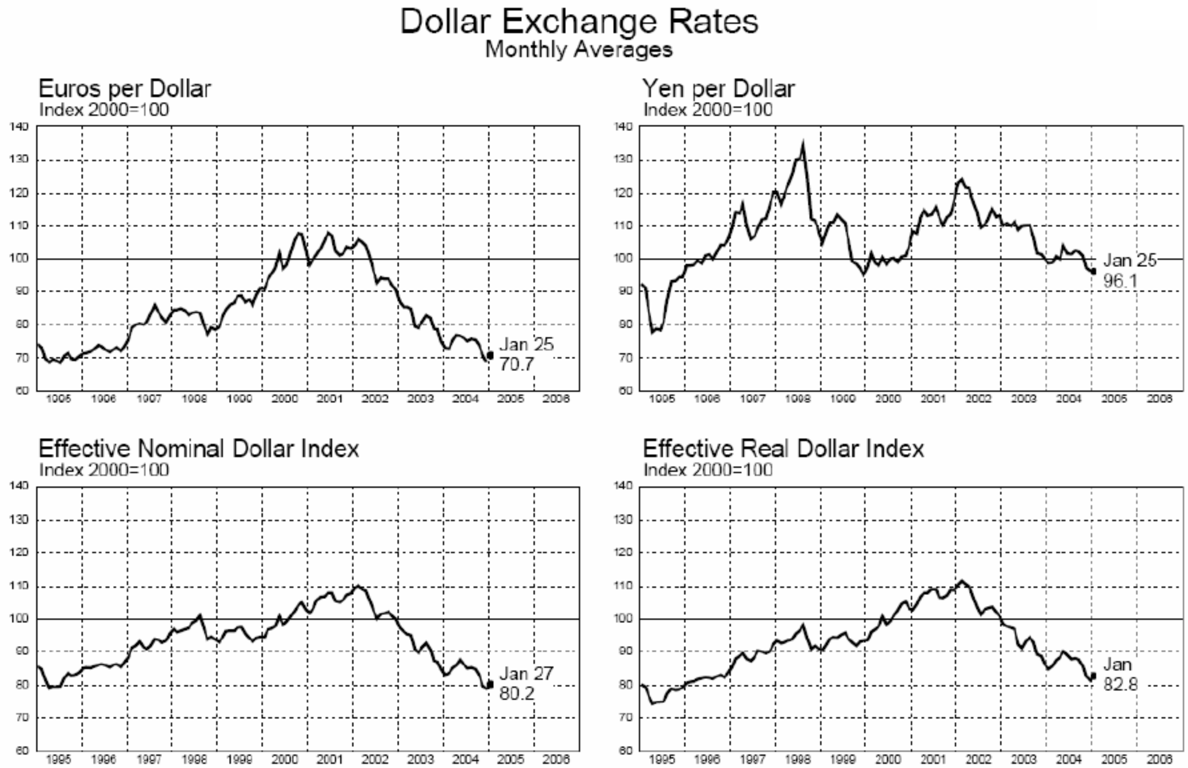
Eurodollar Implied Volatility at Selected Maturities*





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

Exhibit B-6:



Source: Board of Governors; National Sources

January 28, 2005

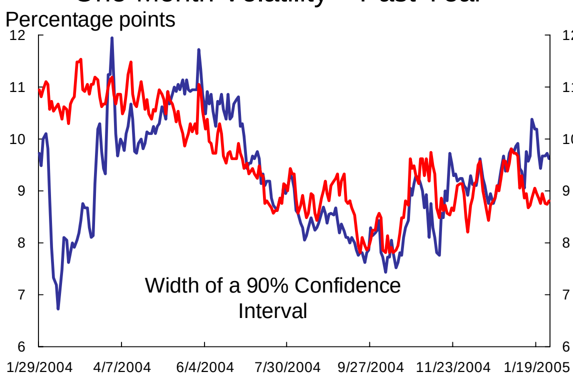
B. Financial Markets

Exhibit B-7:

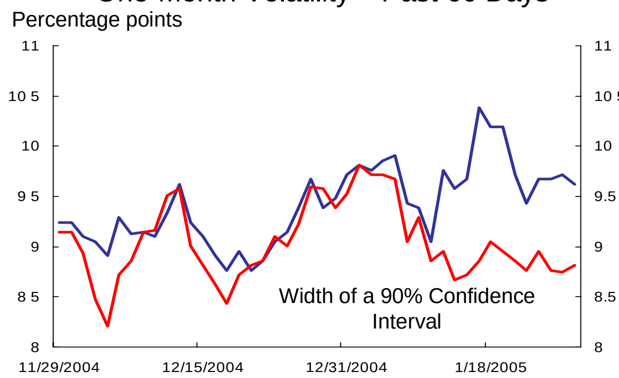
Euro and Yen Implied Option Volatility

Euro options are in red and Yen options are in blue.

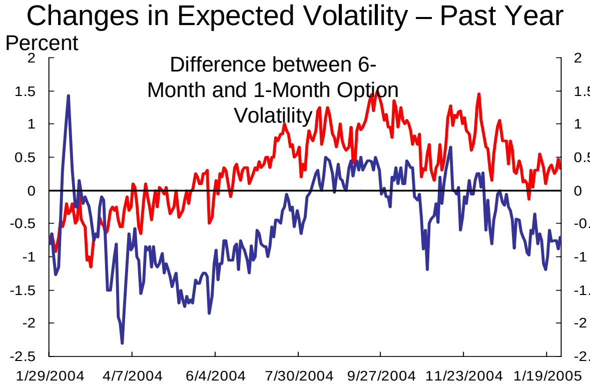
One-Month Volatility – Past Year



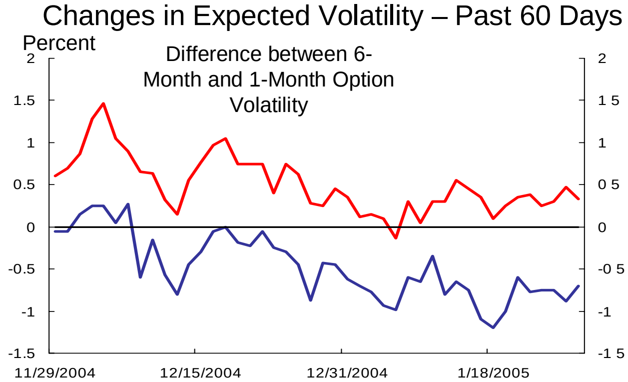
One-Month Volatility – Past 60 Days



Changes in Expected Volatility – Past Year



Changes in Expected Volatility – Past 60 Days



Source: Reuters

C. FRBNY Forecast Distributions

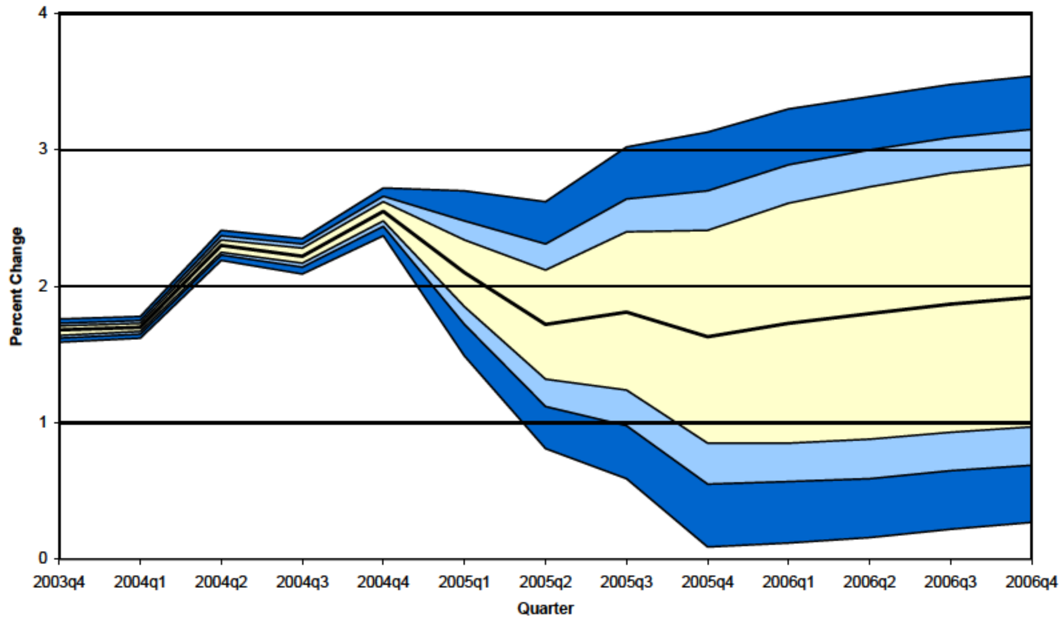
Two fan charts are shown for the 4-quarter changes in the PCE deflator (Exhibit C-1) and real GDP (Exhibit C-2). These charts are constructed to represent the uncertainty contained in our main scenario and our upside and downside alternatives. We view the risks to the FRBNY modal forecast as symmetric. We associate 65% (60% last cycle) current probability with the scenario associated with the mode and have balanced risks around this central assessment. We attach quite high (high last cycle) confidence to this probability assessment. The fan charts are constructed so that eventually inflation and output return to the modal scenario. The greater inertia of inflation means that the potential deviations from the modal scenario last longer than for output.

An additional calculation produced is the probability that the 4-quarter change in PCE inflation will exceed 3% in the next quarters.

C. FRBNY Forecast Distributions

Exhibit C-1:

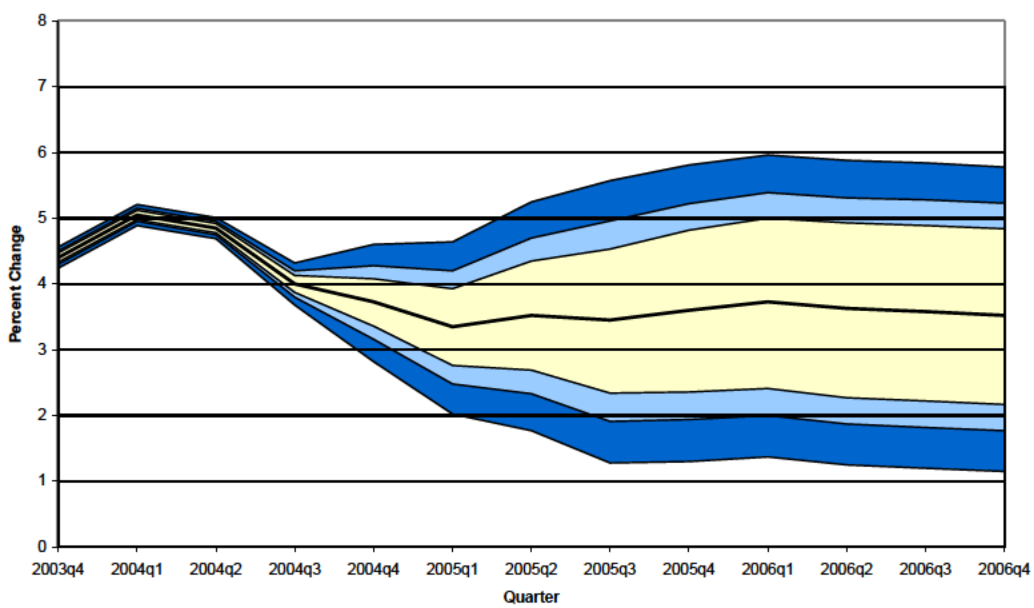
Four Quarter U.S. PCE Inflation Change Forecast through 2006



The probability interval shows the 50, 75, and 90 percent chance that the four quarter change in PCE will be within the respective range. The thick black line represents the bank's forecast.

Exhibit C-2:

Four Quarter U.S. GDP Change Forecast through 2006



The probability interval shows the 50, 75, and 90 percent chance that quarterly GDP change will be within the respective range. The blue line represents the bank's forecast.

D. Fed Funds Rate Projections

Exhibit D-1. Results from Simple Taylor Rule

Exhibit D-1 is constructed using the Taylor rule given below and the Bank forecast. The market expectations of the future Fed Funds rate are taken from futures prices. The path under the continued productivity surge and latent overheating scenarios are generated using paths from the forecast distributions. The path for the latent overheating scenario would be substantially higher if a correct initial condition for the Fed Funds rate was used.

Taylor Rule: Baseline Specification

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

$$p = 0.8$$

$$i_{2004Q3} = 1.5$$

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

$$\varphi_\pi = 1.5$$

$$\varphi_x = 0.5$$

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

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

Source: Domestic Research Function, FRBNY

Exhibit D-2. Spider Chart of Real FFR in Recoveries

This spider chart plots the behavior of the real FFR in recoveries (CPI inflation is used to proxy for inflation expectations and the results are similar for other inflation measures). The forecasts for the current recovery are produced using financial market expectations of FFR and CPI inflation forecasts.

Source: Domestic Research Function, FRBNY

D. Fed Funds Rate Projections

Exhibit D-1:

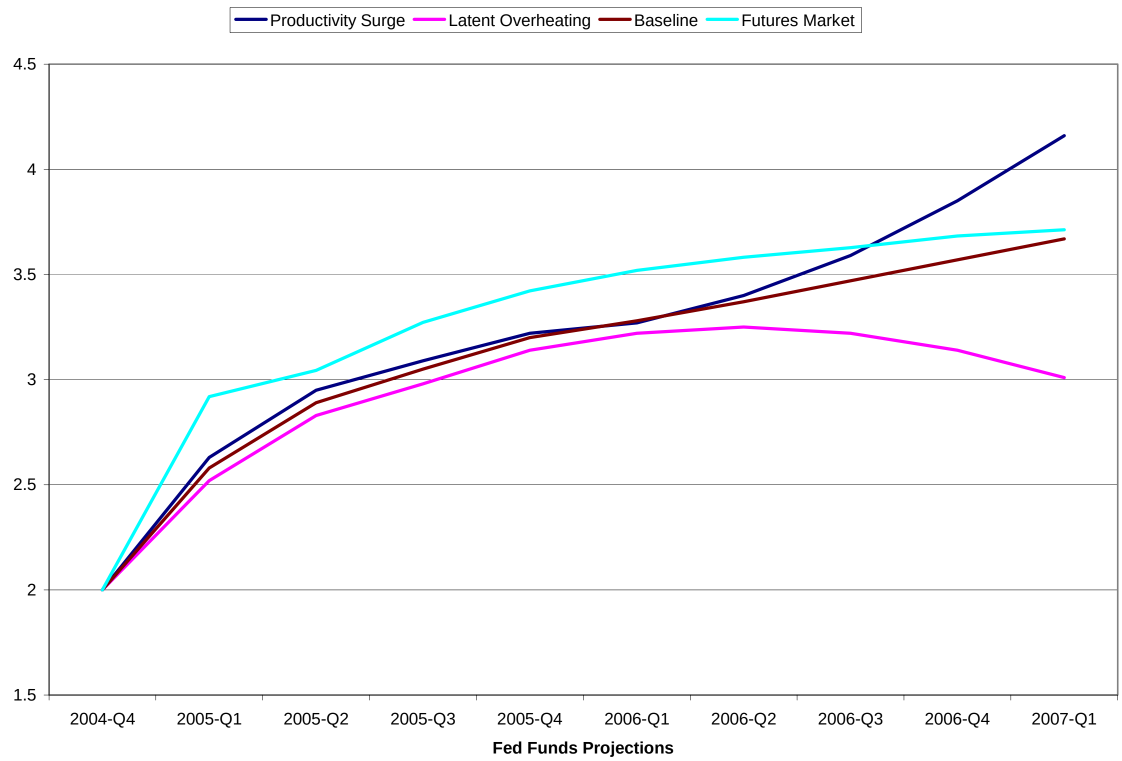
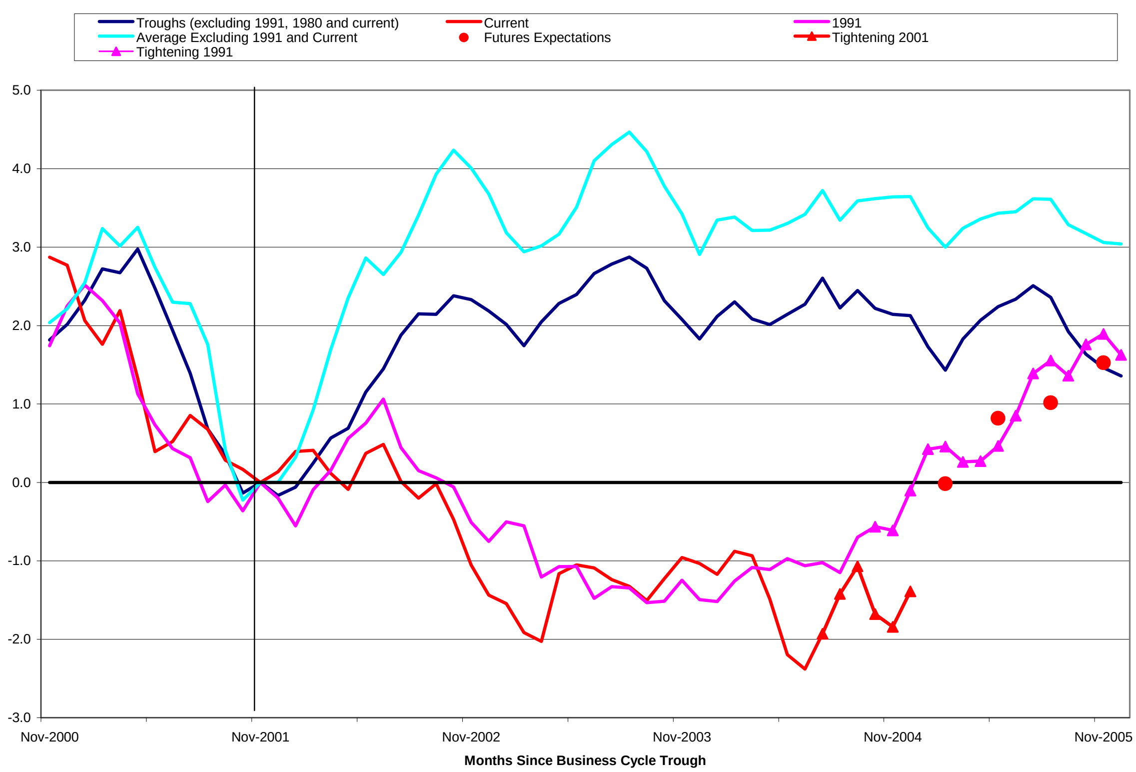


Exhibit D-2:



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 December 2004. 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: 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 up through November 2004. 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: 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). 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. Residential Building Permits in New York City

This chart shows the annual number of residential building permits authorized in New York City from 1965-2004. This includes the total number of single-family and multi-family housing units authorized in the five boroughs combined. This does not include renovations or conversions (i.e. of commercial to residential use). The data from 1965-2003 are taken from *"2004 Housing Supply Report"* published by the New York City Rent Guidelines Board (see link below). The 2004 figure comes directly from the Census Bureau's website. The original source of the data is the U.S. Bureau of the Census.

Data can be found at:

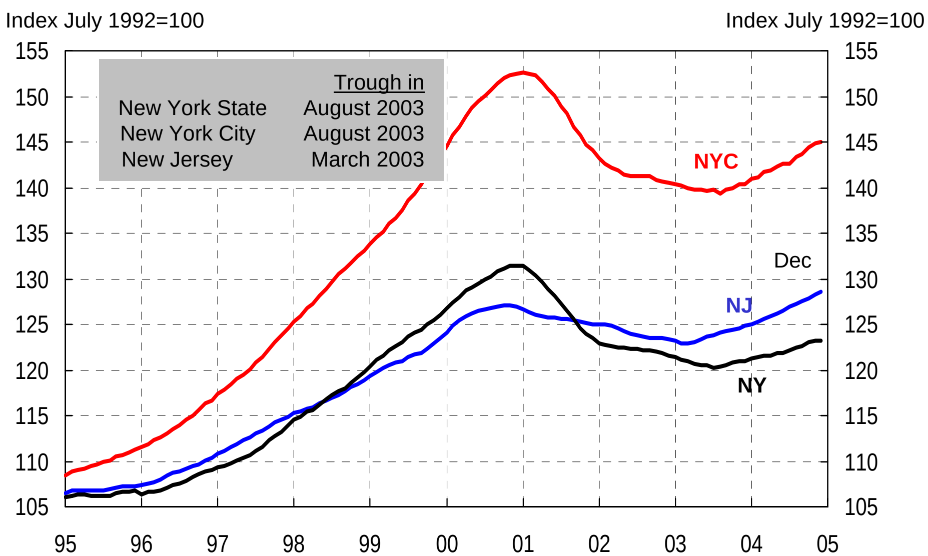
http://www.housingnyc.com/downloads/research/pdf_reports/hsr04.pdf: *Appendix, P. 11*

http://censtats.census.gov/bldg/bldgprmt.shtml: *Sum of 5 counties (Bronx, Kings, New York, Queens, Richmond)*

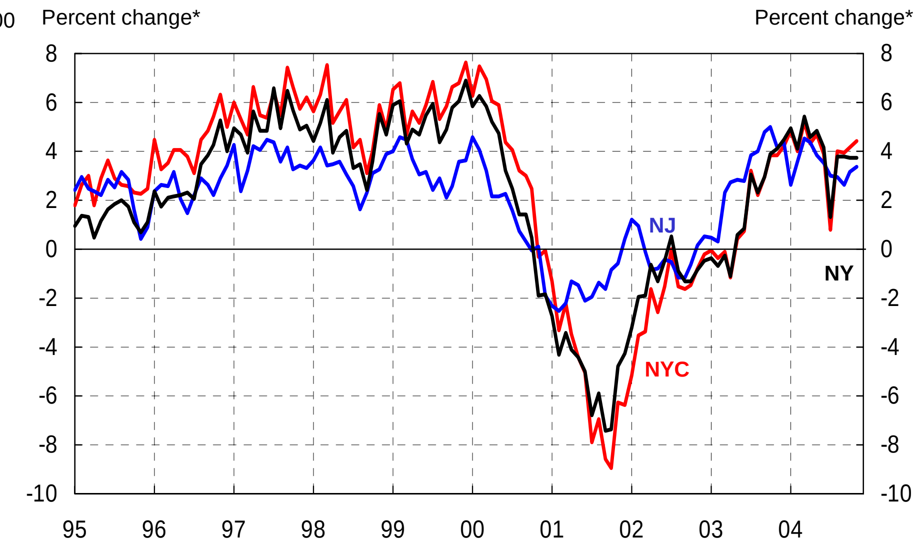
Sources: U.S. Bureau of the Census, NYC Rent Guidelines Board, Federal Reserve Bank of New York calculations.

E. Regional Charts

E1: INDEX OF COINCIDENT ECONOMIC INDICATORS



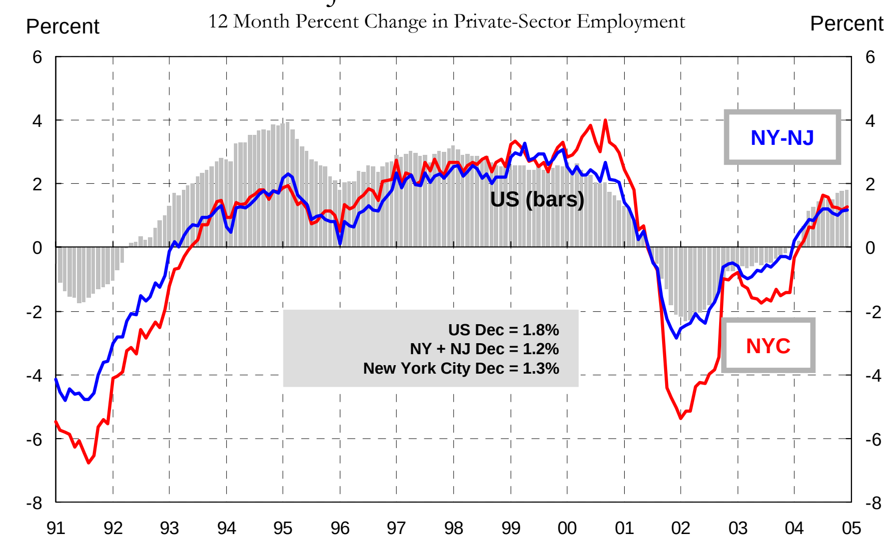
E2: INDEX OF LEADING ECONOMIC INDICATORS



* 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

12 Month Percent Change in Private-Sector Employment



E4: RESIDENTIAL BUILDING PERMITS IN NYC

Annual Number