# U.S. Economic Outlook

Federal Reserve Bank of New York, Research and Statistics Group

April 13, 2012



# Contents

FRBNY Staff Outlook Overview	1
FRBNY Staff Risk Assessment	3
Inflation	4
Real Activity	6
Labor Market	7
Productivity and Costs	9
Consumption	10
Consumer Confidence	12
Household Financial Conditions	13
Housing	14
Investment and Inventories	16
Manufacturing	18
FRBNY Staff Foreign Outlook	19
Trade	20
Financial Markets	21
Bank Lending Standards	25
Corporate Profits	26
Government Spending	27
FRBNY Staff Federal Fiscal Outlook	27
Reference	28

<u>Growth, AR or</u> Q4/Q4 gth. rate	2012 Q1	2012 Q2	2012 Q3	2012 Q4/Q4	2013 Q4/Q4			
Real GDP								
FRBNY Staff	2.7	2.2	3.2	2.8	2.9			
Consensus**	2.2	2.3	2.4	2.4	2.7			
PCE Deflator FRBNY Staff	2.3	1.9	1.8	1.9	1.8			
Core PCE Deflator								
FRBNY Staff	2.2	1.7	1.7	1.8	1.8			
Unemp. Rate (Annual Data is Q4 Average)								
FRBNY Staff	8.3	8.0	7.7	7.5	6.7			
Consensus**	8.3	8.2	8.1	8.0	7.5			
**Blue Chip Forecast (4/10/2012)								

Blue Chip Forecast (4/10/2012)

## **FRBNY Staff Outlook Overview**

Based on the current estimate, real GDP grew at a 3.0% annual rate in 2011Q4, the best performance since the first half of 2010. Real PCE grew at a 2.1% annual rate in the fourth quarter, led by strong growth of spending on durable goods. The rate of growth of business fixed investment slowed some, the net export growth contribution was -0.3 percentage point, and government spending fell sharply. Inventory investment contributed 1.8 percentage points to the fourth quarter growth rate, and such large contributions are rarely followed by a similar contribution in the next quarter.

With the firming of growth we have also seen some improvement in labor market conditions. Aggregate hours worked by all private sector employees rose at a 3.7% annual rate in 2012Q1, up from increases of 1.1% and 2.6% (annual rate) in 2011Q3 and 2011Q4 respectively. The unemployment rate fell a cumulative 0.8 percentage

		olution of FR	BNY Staff Forec 2013 (	
	2/10/12 <b>4/13/12</b>		2/10/12	4/13/12
Real GDP	2.6	2.8	2.8	2.9
PCE Deflator	1.5	1.9	1.7	1.8
Core PCE Deflator	1.4	1.8	1.6	1.8
Unemp. Rate (Q4 Avg.)	7.6	7.5	7.1	6.7

points between September and March-a large decline by standards of the past 25 years—to 8.2%, the lowest since January 2009. However, the employment to population ratio was 58.5% in March, about where it has been since 2009Q4.

With the decline of energy prices over the second half of 2011, the 12-month change in the PCE price index has slowed to 2.3% as of February from a recent peak of 2.9% in September. Although limited by the recent rise in gasoline prices, further slowing is likely in time. The 12-month change in the core PCE price index was 1.9% in February, little different from December. But slowing of trend inflation is still in the pipeline: the 6-month change in the core PCE deflator was 1.6 in February compared to 2.3% in August.

Staff Outlook and Risks: For 2012 we expect real GDP to increase around  $2\frac{3}{4}\%$  (Q4/Q4), up from 11/2% in 2011. This is likely to lead to further declines of the unemployment rate, perhaps to

Real and Potential GDP



around 7<sup>1</sup>/<sub>2</sub>% by the end of the year, although the path will depend on the behavior of the labor force participation rate.

Private domestic demand is expected to gradually strengthen as credit conditions ease and confidence improves. Growth of exports is expected to be well maintained. However, spending at both the federal and state and local levels of government is expected to continue to decline. Overall inflation will be affected near term by the recent rise in gasoline prices, but it should slow later in the year so that overall PCE inflation for 2012 is expected to be a little below 2% (Q4/Q4; core inflation should be slightly lower). This forecast is predicated on low levels of resource utilization restraining firms' marginal costs and prices, as well as on stable longterm inflation expectations.

All else equal, growth in 2013 would be somewhat stronger than in 2012 as the economy continues to heal. However, there are numerous fiscal policy issues on the table for 2013 which will have a very significant impact on the actual outcome; for now, we see growth near 3%.

Nonfarm Payroll Employment Millions Millions 139 139 138 138 137 137 136 136 135 135 134 134 133 133 132 132 131 131 130 130 129 129 2000 2002 2004 2006 2008 2010 2012 Note: Throughout text, shading represents NBER recessions. Source: Bureau of Labor Statistics

We regard risks for growth to be skewed to the downside, with risks to inflation being roughly balanced.

In large part, these conclusions are based on the lackluster recovery to date and the economy's vulnerability to further negative shocks at a time when the policy rate is stuck at its zero lower bound. For example, events in the Euro Area could deteriorate again and turn out to be worse than expected, with substantial negative spillovers to global financial markets and economic activity.

However, there are upside risks as well. Given the possible extent of pent up demand, we may be pleasantly surprised by the strength of consumer spending as access to credit continues to improve. In addition, the recent softness of business investment spending may be even more transitory and could rebound more than expected. Regarding inflation, a key upside risk is that if world growth turns out to be stronger than expected, energy prices are likely to rise over the forecast horizon rather than being essentially flat, as is currently reflected in futures prices.

#### Core PCE Inflation Forecast Distribution



## **FRBNY Staff Risk Assessment**

Staff Inflation Outlook. The economic and financial market developments since February indicate some increase in upside risks and decrease in downside risks to the inflation outlook, and the risks are now roughly balanced. Near term, the higher probability of stronger expansion dynamics offset the continued notable probability of significant resource slack leading to downside inflation risks. One additional near-term upside risk is a politically-related oil supply shock. Longer term, we still place notable weight on downside scenarios-the Fiscal Consolidation, Global Deflation, and Global Credit Crunch scenarios—and relatively less weight on the Loss of Credibility scenario. We do have more weight on the Faster Growth scenario. In part, the relatively low weight on Loss of Credibility reflects that many measures of longer-term inflation expectations have remained fairly stable at low levels. Our forecast distribution has less probability of deflation between mid-2012 and mid-2013 than previously, but the probability of high (>3%) inflation is still fairly low. There remains higher than usual uncertainty around the inflation outlook.

#### Real GDP Growth Forecast Distribution



Staff Real Activity Outlook. Although we recently have reduced some of our downside risks and raised our upside risks, the balance of risks for real activity remains to the downside. We still have notable weights on the downside scenarios of Fiscal Consolidation (which includes larger-than-expected fiscal restraint and higher risks of short-term supply shocks), Global Deflation, and Global Credit Crunch (both reflecting risks from the European sovereign debt crisis, falling home prices, and balance sheet adjustments). As has been the case recently, the Fiscal Consolidation scenario is the most likely alternative scenario. We have a higher weight on Faster Growth, as the recent data releases overall suggest a greater probability of stronger expansion dynamics; its weight is now only somewhat below that of Fiscal Consolidation. With this forecast distribution, the probability of a recession through end-2012 is lower than it was a few months back, and any recession would most likely be mild. At the same time, there is notable probability of strong growth (>6%), which illustrates the continued considerable uncertainty around the real outlook.

#### Total and Core CPI



## Inflation

*Developments*. Inflation continues its stabilization process around mandate-consistent levels, which started during the fall of last year after the notable rise between the fall of 2010 and the summer of 2011.

In March, the 12-month change in the nonseasonally-adjusted (NSA) core Consumer Price Index (CPI less food and energy) was 2.3%, similar to recent readings, but a small uptick relative to the February increase of 2.2%. The core CPI has been steadily increasing for over a year now, following the historical low of 0.6% in October 2010, but its pace appears to be stabilizing.

The 12-month change in the seasonally adjusted (SA) core Personal Consumption Expenditure (PCE) price index was 1.9% in February, the same as in the previous two months.

At shorter horizons, the momentum that inflation had displayed throughout the summer of 2011 has slowed. The three-month change of

Total and Core PCE Deflator





core CPI (SAAR) was 2.2% in March, down from a peak of 2.8% in July. Over the three months to February, the change of the core PCE price index (SAAR) was 2.1%, down from the July peak of 2.5%.

The retrenchment in energy prices since the summer has mainly driven the deceleration in headline measures of inflation. Headline CPI increased 2.7% in March (NSA) over a year before, compared to the 3.9% peak in September. The 12-month change in the PCE price index was 2.3% in February, compared to 2.4% in January and a peak of 2.9% in September.

In addition to the available core indexes, we also look at several alternative measures to assess the underlying inflation trends. These alternatives include smoothed inflation, trimmed mean, and our own underlying inflation gauge (UIG) and signalcomponent (SiCo) indicator for PCE inflation. Similar to core, most of these measures currently signal that inflation is stabilizing, or as in the case

#### Measures of PCE Inflation Since 2000



of the UIG and smoothed inflation measures, slightly decreasing.

*Staff Outlook and Risks*. In our central projection, core inflation, which was slightly higher than expected in 2012Q1, slows down in the course of 2012, and we expect core PCE inflation to remain below mandate-consistent levels over the forecast horizon.

In the medium run, this forecast is predicated on the continuing restraint exercised by low levels of resource utilization on firms' marginal costs and prices. These factors, however, are expected to subside over time, as the economy finally regains a firmer footing. At the same time, the broad stability of long-term inflation expectations should contribute to keeping inflation relatively close to mandate-consistent levels. The continuing unprecedented slow growth of wages also points to fairly stable inflation expectations and subdued cost pressures.

Around this central scenario, risks are roughly balanced. With the policy rate effectively at its zero lower bound, the economy remains vulnerable to further negative shocks almost three years after the official end of the recession. Offsetting this downside risk, however, there are signs that the recovery may be finally gaining firmer ground.

## Quarterly Real GDP Growth



## **Real Activity**

Developments. Based on the third estimate, real GDP grew at a 3.0% annual rate in 2011Q4, the best performance since the first half of 2010. However, 1.8 percentage points were due to inventory accumulation. Real final sales increased only 1.1% in the fourth quarter, compared with an increase of 3.2% in the third quarter. Real PCE grew at a 2.1% annual rate in the fourth quarter, led by strong growth of spending on durable goods. The rate of growth of business fixed investment slowed relative to the third quarter, with nonresidential investment growing by 5.2%, compared to 15.7% growth in the third quarter. The net export growth contribution was -0.3 percentage point, reflecting a decline in the rate of growth of exports, and a marked pickup in the rate of growth of imports relative to the third quarter. Government spending fell sharply, led by a very steep decline of defense spending.

With the firming of growth we have also seen some improvement in labor market conditions. Aggregate hours worked by all private sector employees rose at a 3.7% annual rate in the first quarter of 2012, following an increase of 2.6% in



2011Q4. The unemployment rate fell a cumulative 0.8 percentage points from September to March, and stands at 8.2% in March, the lowest rate since February of 2009. However, the employment to population ratio remained at 58.5% in March, about where it has been since 2009Q4.

Staff Outlook and Risks. For 2012 we expect real GDP to increase around 2.8% (Q4/Q4), up from 1.6% in 2011. This is likely to lead to further declines of the unemployment rate, perhaps to around 7 1/2% by the end of the year, although the exact path will depend on the behavior of the labor force participation rate. Private domestic demand is expected to strengthen somewhat as credit conditions continue to ease and confidence improves. Federal fiscal policy will weigh negatively on the outlook, as state and local government spending and employment are expected to decline.

All else equal, growth in 2013 is expected to be somewhat stronger than in 2012 as the economy continues to heal. However, there are numerous fiscal policy issues on the table for 2013 that will have a very significant impact on the actual outcome.

Private Nonfarm Payroll Employment and Total Hours Worked



## **Labor Market**

Developments. The labor market conditions improved in the first quarter of the year. The pace of the improvement was faster in January and February and somewhat slower in March. While the March labor market report suggests the possibility of some moderation in the recent pace of improvement in labor market conditions, some of the weakness in March's payroll numbers might be consequence of unseasonably warm weather in January and February, which may have pulled forward some hiring. Given this possibility, the average three-month increase of private payroll employment (210,000) may be a more accurate gauge of conditions, and it still suggests a fairly robust pace for job creation. Job gains in the first quarter was mostly concentrated in the serviceproviding sector, and the diffusion index-the fraction of industries increasing employment-was 59.6 in March.

Aggregate weekly hours has seen a recovery in the last three months and has risen 0.5% from December 2011 to March 2012. The length of the average work week was 34.5 hours.

Measures of the Employment Situation



After fluctuationg in a fairly narrow range of 8.9% to 9.1% from January to October of 2011, the unemployment rate has been nudging down and reached 8.2% this March This is the lowest level of the unemployment rate since February 2009.

The improvement in the unemployment rate has been particularly pronounced for male workers. The unemployment rate for male workers decreased from 10.0% in December 2010 to 8.3% in March 2012. The unemployment rate for women went down only by 0.5 percentage points from 8.6% to 8.1% during the same period. The gender unemployment gap, which reached a post-war high level of 2.7 percentage points in August 2009, has almost disappeared in March. So far during the recovery, male workers have been doing relatively better than female workers, and this discrepancy is not a consequence of gender differences in sectoral distribution of employment. Employment Declines During Recessions



Despite the improvement in the unemployment rate, the employment-to-population ratio continues to remain low. The employment-topopulation ratio was 58.5% in March, only 0.2 percentage points higher than its value in December 2010. The labor force participation rate stood at 63.8% in March, down from 64.3% in December 2010.

The duration of unemployment continued to be high. The median duration of unemployment stood at 19.9 weeks in March, down from its postwar high of 25.0 weeks in June 2010, but still at elevated levels. When the recession started in December 2007, the median duration of unemployment was 8.4 weeks. The continued high level of this measure indicates that long-term unemployment remains a significant issue for the labor market.



15-26 weeks

27 Weeks+



*Staff Outlook and Risks.* The labor market indicators suggest that labor market conditions improved in the first three months of the year, especially in January and February. While the March labor market report was weak, given the crosscurrents in the March report, the possibility of weather effects, and the typical noise in the monthly data, we will need to monitor the upcoming data to assess whether the March labor market report signals a more fundamental change in the pace of the labor market recovery.

We expect the labor market to continue to improve, though at a slow pace. In the second quarter of 2012, we project the average monthly change in payroll employment to be roughly 237,000 jobs, and the unemployment rate to decline to around 8.1%. Productivity

Nonfarm Business Sector



## **Productivity and Costs**

*Developments.* Output per hour in the nonfarm business sector rose 0.9% (annual rate) in 2011Q4, below the 1.8% increase in Q3. Productivity growth was weak during 2011, and remains below the pace observed during the last two years. The four-quarter change in productivity was 0.3%, which is below our  $1\frac{1}{2}-1\frac{3}{4}$ % estimate of trend productivity growth.

Hours worked rose 2.7% (annual rate) in 2011Q4, up from 1.0% in the previous quarter. The four-quarter change was 1.9%. Since 2009Q3, hours worked has increased every quarter and its growth rate now appears to have stabilized and returned to levels observed over the 2004-06 period.

Compensation growth showed robust growth during the last two quarters of 2011: it rose 3.7% (annualized) in 2011Q4, after increasing 5.7% in Q3. The four-quarter change in compensation per hour was 3.5%, the largest increase since 2008Q3. This increase marked the first time in three years that compensation per hour was close to the 4% growth rate typically observed during the 2003-08 period. Compensation and Unit Labor Costs Nonfarm Business Sector



With ongoing weakness in productivity growth and recent strength in compensation growth, unit labor costs increased 2.8% (annual rate) in 2011Q4, following a rise of 3.9% in the previous quarter; the four-quarter change was 3.1%. Unit labor costs showed some firming during 2011 after declining for most of the previous two years.

Taken together, the slower growth of productivity, the gradual increase in hours worked, and stronger compensation growth are consistent with an ongoing recovery in the labor market.

*Staff Outlook and Risks.* An issue of great importance is the outlook for trend productivity growth. Evidence from a model developed to analyze this issue has recently alternated between viewing the robust productivity growth from 2009 through 2010 as indicative of a shift to a higher trend growth or as a largely cyclical fluctuation. As a consequence of sizeable downward data revisions in August as well as recent data, the model remains very firm in its conclusion that productivity has been in a low growth regime since 2004 and that robust growth during 2009 was only cyclical and transitory.





## Consumption

Developments. Real personal consumption expenditures (PCE) increased at a 2.1% annual rate in the fourth quarter, up somewhat from the 1.7% growth rate of the third quarter. This strengthening was due primarily to a pickup in spending on durable goods, particularly motor vehicles. Sales of light weight motor vehicles averaged 13.5 million (annual rate) in 2011Q4, the highest quarterly average sales pace since the first half of 2008. The strengthening in real PCE has extended into 2012, with January and February showing monthly gains of 0.2% and 0.5%, respectively. Spending growth continues to be led by durable goods - up 1.6% in February, following a 1.4% rise in January. Sales of light weight motor vehicles have shown further strength and have averaged 14.5 million (annual rate) during the first 3 months of 2012. In contrast to spending on durable goods, growth of real consumer spending on nondurable goods remains sluggish, edging up 0.1% in February. While real spending on services had remained essentially flat for a number of months, it expanded by 0.4% in





February and was responsible for most of the acceleration in real PCE growth.

Staff Outlook and Risks. Our modal forecast now assumes that the 2 percentage point payroll tax cut, which was extended for all of 2012, will not be renewed for 2013. We expect growth of real PCE during 2012 to be slightly above the 2.1% rate of 2011Q4, with the saving rate somewhat below that of 2011. Real disposable income declined during January and February, and we expect it to be flat during the first quarter of 2012. Over the remainder of the year, however, we expect modest growth in real disposable income due to ongoing growth in hours worked and some firming in wages. Taken together, we still view consumers as being cautious and unlikely to continue to have spending run significantly faster than disposable income. In addition, some of the increase in consumer spending on durable goods during the fourth quarter and early into this year was "catching up" for depressed sales earlier in 2011.

Consumer Debt by Credit Score Quintile



We regard the risks to our forecast for consumer spending to be reasonably balanced. On the downside, the level of the unemployment rate remains relatively high. Even though credit standards appear to be easing somewhat, demand for consumer credit may remain weaker than expected due to a pervasive uncertainty regarding employment security and future income prospects. And while lending standards may be easing, the absolute level remains relatively stringent, limiting the supply of credit. In addition, home prices remain under some downward pressure. For most people, the home they own is their primary source of net worth. Another concern is the large run-up in gas prices starting in February and the impact on purchasing power if the price increases were to persist. Finally, the demographic profile of the country is such that the number of households headed by an individual 45 years of age or older has increased substantially over the last decade, while the number of households headed by someone younger than 45 has declined. These older

households are likely to want to boost saving for retirement and college educations due to low interest rates and equity losses since 2007.

Regarding upside risk, real personal consumption expenditures in December of 2011 were only 1.6% above the previous peak level in December of 2007. This sustained sluggishness of consumer spending is unprecedented in the post WWII period. This pattern suggests substantial pent up demand for durable goods such as light-weight vehicles, appliances, and furniture, in addition to nondurables such as apparel. Despite the low level of the personal saving rate and household net worth, we may be surprised by the strength of consumer spending once the labor market begins a more substantial improvement and households become more confident about their income prospects.

#### Components of Conference Board Index



## **Consumer Confidence**

Developments. The major consumer confidence measures—based on the Conference Board and University of Michigan monthly surveys and Bloomberg's weekly survey—moved up sharply in the final months of 2011 and continued to advance modestly in early 2012. Michigan's index climbed to a one-year high in March, while the Conference Board's edged back from a one-year high. Both these measures are just a shade below their cyclical highs set in February 2011. Bloomberg's weekly index has given even more positive signals recently, surging to a four-year high at the end of March. All three of these measures are still at low levels by historical standards, but the recent improvement is nonetheless encouraging.

While the Conference Board's headline index was little changed in March, the Present Situation component chalked up its fourth gain in the past five months and stands at its highest level since September 2008. That measure, which closely tracks the labor market, has now more than reversed its 6-month decline from last April to last October.

Consumer Confidence/Sentiment Indices



Source: University of Michigan and the Conference Board

Staff Outlook and Risks. Although consumer confidence is not the predominant determinant of consumer spending, it has been shown to have some effect; thus it is likely that the persistently low levels of confidence have held back consumption somewhat. Given that job market perceptions are a factor influencing consumer confidence, it is a channel through which a pickup in the labor market would buoy consumer spending. Tracking the Conference Board's Present Situation component index can be helpful in identifying incipient shifts in the job market before they show up in the employment numbers. This series tends to correlate closely with the unemployment rate, often with a slight lead—partly due to its early release. The fact that the Conference Board's Present Situation index is at a multi-year high bolsters the view that there has been fundamental improvement in the labor market.

Moreover, Michigan's March survey points to increasingly widespread confidence in the job outlook: The net proportion of respondents anticipating declining unemployment over the next 12 months climbed to its highest level since 1984.

Household Net Worth



## **Household Financial Conditions**

Developments. US households experienced a steep decline of net worth over the past few years, the result of a substantial increase in liabilities during the period when home prices and equity values were rising followed by steep declines of those asset values. In response, households have increased their saving out of current income, and total household indebtedness has been declining since 2008 through a combination of paying down debt debt being charged off. More recently, and nonmortgage consumer credit has begun to increase, but total household liabilities continue to decline due to ongoing contraction of mortgage debt. In addition, many households have been able to refinance existing debt at lower interest rates. As a result, the ratio of financial obligations, defined as debt service plus other housing related financial obligations, over disposable income has declined to levels that prevailed in the mid 1990s. While still high, serious (90+ day) delinquencies on first mortgage loans and credit cards have begun to

90+ Days Delinquency Rate by Loan Type





decline. Serious delinquencies on auto loans and home equity lines of credit have stabilized.

Staff Outlook and Risks. Uncertainty about the pace of further deleveraging by the household sector is a source of both upside and downside risk for growth over the forecast horizon. Lending standards, while tight in absolute terms, appear to be easing. At the same time, consumers have substantial pent-up demand for durable goods. Therefore, consumer spending could turn out to be stronger than we expect. However, net worth is still well below the levels reached at the peak. With a large fraction of households approaching normal retirement age amid increasing uncertainty about future retirement benefits, it is also possible that households will want to push the personal saving rate higher over the forecast horizon, resulting in a lower path for consumer spending.



## Housing

*Developments*. Single family housing starts peaked around 1.75 million units (annual rate) in 2006Q1. They then plunged to just 356,000 in the first quarter of 2009, a decline of 80%. In January and February, single-family starts averaged about 480,000 units, a bit above the pace over the past couple of years.

A number of factors continue to affect the single-family housing market adversely despite record high levels of cash-flow affordability indices. Mortgage underwriting standards are reported to be quite restrictive, with even good credit risk applicants required to make substantial down payments. In addition, the continued weak labor market and general uncertainty about the outlook for the economy and home prices continue to dampen demand. Finally, there is still a significant excess supply of housing units.

Due to rising demand for rental housing, multi-family housing starts have begun to rebound more significantly, with the January-February average up almost 170% from the 2009Q4 trough.



Source: CoreLogic, National Association of Realtors, Census Bureau

Despite this impressive gain, the absolute level of multi-family starts remains relatively low.

Home Prices. As measured by the CoreLogic repeat sales home price index, home prices peaked in the second quarter of 2006. Over the next three years they declined by nearly 30%. The index then rose modestly through 2010Q2, aided by the stronger demand resulting from the home buyer tax credit. However, as the effects of that credit began wane, home prices came under renewed to downward pressure. From a recent peak in the spring of 2010 through February 2012, the index including distressed sales is down 10.5% while the index excluding distressed sales is down 5.2%. Although the pace of decline has moderated recently, home prices are likely to remain under downward pressure due to a continued high volume of distressed sales. Staff projections indicate that the volume of homes flowing into lenders' REO through foreclosures will remain high well into 2013.

Price to Earnings Ratios



*Staff Outlook and Risks.* Our modal forecast anticipates a very gradual recovery of housing market activity over 2012-13. In addition, given that the base from which this recovery is starting is so low, the housing contribution to real GDP growth will be relatively modest, especially compared to prior recoveries.

The risks around our outlook for housing market activity and home prices are reasonably balanced. Mortgage interest rates are quite low and home prices have declined substantially in some markets, leading to a significant improvement in cash flow affordability. It is certainly possible that home sales and starts could improve considerably more than we are assuming.

However, ratios of home prices to rents have declined from its 2006 peak but are not particularly low relative to the standards of the previous two decades. With underwriting standards still tight and uncertainty regarding the future path of home prices prevalent, demand may not recover as anticipated, leading to further price declines. This, of course, could produce self-reinforcing downward pressure on prices and retard any recovery in activity.

#### Real Business Investment: Equipment and Software



## **Investment and Inventories**

Developments—Equipment and Software. Real spending on equipment and software (E&S) increased 7.5% (annual rate) in 2011Q4, somewhat below its average growth during this expansion. The E&S expansion in this cycle overall has been faster than its recovery following the 2001 recession. The level of real outlays in 2011Q4 was only 4.0% above its previous peak in 2007Q4. In 2011Q4, a decline in spending for "other equipment" (including mining machinery) partially offset increases in other categories of E&S spending.

Orders and shipments of nondefense capital goods excluding aircraft, monthly proxies for equipment spending, fell sharply in January and rebounded only partially in February. Consequently, growth of E&S expenditures will likely be a little softer in 2012Q1. However, orders for nondefense capital goods excluding aircraft continued to run above shipments, which is consistent with some near-term momentum for the sector. **Business Investment in Nonresidential Structures** 





*Nonresidential Structures.* Real expenditures on nonresidential structures decreased 0.9% (annual rate) in 2011Q4 after rising strongly in the two previous quarters. These expenditures are 30% below their peak set in 2008Q2. Most categories of nonresidential structures are still well below their peaks, with the exceptions of spending on oil and gas wells as well as power and communications structures, both of which are relatively modestly below their peaks.

Outside of energy (where relatively high energy prices support investment), the fundamentals for investment in nonresidential structures remain fairly soft, with elevated vacancy rates and stilltight financing for new construction. In addition, nonresidential construction fell in January and February. Thus, the prospects for the sector remain tepid such that nonresidential construction could be depressed for some time. In sum, it now appears that a recovery in this sector probably has begun, but it still appears to be very slow.





*Inventories.* Real inventories increased notably in 2011Q4, resulting in an inventory investment contribution to real GDP growth of +1.81 percentage points for the quarter. Inventories rose in most industries, indicating that the positive contribution from inventory investment was widespread. One notable exception to this pattern was inventories at motor vehicle dealers.

While they are slightly higher than they were in the early part of 2011, inventory-sales ratios remain low: the January level of the ratio for total business was modestly above its historical low. The ratio for retailers was below pre-recession figures and just above its historical low. The February manufacturing ratio was somewhat above its prerecession levels, particularly those in the mid-2000s. The February wholesale trade ratio was slightly above its historical low. At this point, inventories-sales ratios appear to be fairly near firms' desired levels, suggesting that the near-term pace of inventory accumulation will largely reflect perceived sales prospects.

#### Nondefense Capital Goods Excluding Aircraft



*Staff Outlook and Risks.* With inventories-sales ratios near desired levels, we expect somewhat slower pace of accumulation than in 2011Q4; therefore, inventory investment is projected to have a small negative GDP growth contribution over 2012H1 and then have little contribution thereafter. Growth of equipment and software spending is expected to pick up modestly from the recent pace over the rest of 2012 and 2013. We project spending on nonresidential structures to be flat in 2012Q1 and then to rise at a moderate rate over the rest of 2012 and 2013, as the effects of high vacancies and tight financial conditions fade.

Because of the downside risks to real activity, the balance of risks to the equipment and software outlook is to the downside. Risks to inventory investment are also to the downside due to the sales risks; the uncertainty is sizable because of uncertainties about desired levels. Risks to nonresidential structure expenditures are to the downside, reflecting continuing financial problems and downward pressures on property values.

#### Manufacturing Output Growth



## Manufacturing

*Developments*. Manufacturing production growth in January and February was 9.4% (annual rate), above the 4.3% growth over 2011. Part of the recent rebound reflects stronger motor vehicle production as sales in the sector have improved. Outside of motor vehicles, production has picked up recently in non high-tech industries, but has declined slightly over January and February in hightech industries. The ISM index and the regional Fed survey indices have been at levels typically consistent with moderate growth in the sector.

Despite the rebound in the overall sector since mid-2009, production in many major manufacturing industries remains below earlier peaks, with some exceptions being the computer, aerospace, food, and petroleum industries. As such, the capacity utilization rate in manufacturing was 77.6% in February, somewhat below the long-term average of about 80%. These utilization estimates incorporate an assumption that manufacturing capacity has risen only modestly over the past year—reflecting the limited levels of net capital spending in the sector.

#### ISM Manufacturing Index



*Staff Outlook and Risks*. Because we see transitory factors as having contributed to relatively weak manufacturing production in 2011, we expect manufacturing to rise moderately over 2012-13. The recent survey data have been at levels that typically point to moderate growth in the manufacturing sector, although orders have been a bit softer. Concerns about growth in final demand from foreign sources could limit near-term U.S. manufacturing growth.

With continued downside risks to final demand, the risks to the manufacturing outlook are skewed to the downside. Beyond these general risks, intense competition from foreign producers, especially if global downside risks are realized, may exacerbate the downside risks for domestic manufacturers. Finally, given the shrinkage in capacity over the past few years, there is the potential for bottlenecks in some sectors to hinder expansion in the overall manufacturing sector if growth prospects rebound more substantially.

GDP Growth			
Percent Change (Q4/Q4)	)		
	2010	2011	2012 <sup>f</sup>
Euro Area	2.0	0.7	0.5
Japan	3.2	-0.6	1.4
U.K.	1.7	0.7	0.7
Canada	3.3	2.2	2.1
China	9.8	8.8	8.3
Asia-4 NIEs	6.2	3.1	3.4
Mexico	4.4	3.7	3.0
Brazil	5.3	1.4	5.2
Foreign Economies	3.9	2.2	2.5

Source: Haver and FRBNY Staff

## **FRBNY Staff Foreign Outlook**

The foreign growth outlook is essentially unchanged since the last meeting as global confidence measures have stabilized after falling during the second half of 2011.

<u>Euro area:</u> Output fell in 2011Q4 1.3% (SAAR). The region's economy is faltering with the turmoil in periphery countries leading to tighter credit conditions throughout the region and the broad shift to tighter fiscal policy. Another weak result is expected in Q1. The ECB policy to significantly increase liquidity in the banking system has helped calm financial markets, but concerns about Spain have increased recently.

Japan: GDP fell 0.7% in Q4, with a drop in exports tied to the flooding in Thailand. The floods limited needed components for export production. A rebound is expected to have occurred in Q1.

Inflation			
Percent Change (Q4/Q4	)		
	2010	2011	2012 <sup>f</sup>
Euro Area	2.0	2.9	1.7
Japan	-0.3	-0.3	-0.2
U.K.	3.4	4.7	1.1
Canada	2.2	2.7	2.0
China	4.6	4.0	4.0
Asia-4 NIEs	3.1	3.1	2.5
Mexico	4.4	3.8	3.9
Brazil	5.9	6.5	5.5
Foreign Economies	2.5	2.9	2.1

Source: Haver and FRBNY Staff

<u>Emerging Asia</u>: China's growth slowed in Q1, with output up 8.1% over the year. Confidence measures point to a slowing economy from weakness in the property market sector and in exports. The rest of Emerging Asia appears to be rebounding, with firmer soft trade, production, and confidence data in Q1 2012.

Latin America: Growth in Brazil grew at a subdued 1.3% rate in Q4 after contracting slightly in Q3. The weakness is tied to previous policy tightening. Mexican GDP was up 1.7% in Q4, helped by consumption and exports.



## Trade

*Developments*. The US trade deficit narrowed to \$46.0 billion in February, down from a revised \$52.5 billion deficit in January.

Export volumes fell 1.0 percent in February over the previous month, offsetting the increase in January. All major categories were down, except consumer goods. Over the 12 months ending in February, real exports of goods moved up 7.3 percent.

Nonoil import volumes decreased 2.9 percent in February, following increases of around two percent in each of the last two months. All major categories were down, with the largest decline in consumer goods. Over the year, real nonoil import volumes advanced only 4.4 percent.

The current-dollar oil bill only fell US\$1.6 billion, due to lower oil prices and lower oil volumes.



These data suggest that net exports will add 0.3 percentage point to GDP growth in 2012 Q1, following a negative 0.3 percentage point contribution in 2011 Q4.

*Staff Outlook and Risks.* The forecast for 2012 is for net exports to add 0.3 percentage point to GDP growth over the year (Q4/Q4). The current account deficit is projected to be 3.3 percent of GDP in 2012.

The risk for net exports is largely tied to the U.S. and foreign growth outlooks. The uncertainty surrounding the forecast for Europe is a particular risk to the outlook given the size of its market. An additional risk to the forecast is tied to the volatility of the US dollar relative to its major trading partners.



## **Financial Markets**

*Nominal Interest Rates.* Treasury yields are currently only slightly above their levels at the time of the last Directors' meeting in February. The yield on the 10-year benchmark is now trading at 2.06%, up only 6 basis points from its level on February 7, but down approximately 35 basis points from its peak in mid-March as a result of mixed economic data and renewed concerns about the European fiscal situation with particular emphasis on the Euro-area periphery. Shorter dated yields were also little changed since the last meeting owing to the maintained forward policy guidance in the FOMC statement.

Option implied volatilities in Treasury and swap markets as measured by the 3-month MOVE and SMOVE indices are modestly below their level at the time of the last Directors' meeting and are now trading near the bottom of the range observed since the end of the recession in mid-2009.

TIPS Implied Inflation Compensation: 0-5, 5-10 Year Horizons
Percent
Percent
Percent



*Inflation Compensation.* Long- and short-dated TIPS implied measures of inflation compensation were little changed since the last Directors' meeting in February. Near-term market implied breakeven measures declined modestly, with inflation compensation over the next 5 years falling from 2.04% on February 7 to 1.90%. Meanwhile, 5- to 10-year inflation compensation declined slightly to 2.57% from 2.61%.

Survey-based measures of medium- to longterm inflation expectations are also little changed since the last Directors' meeting. The median 5year inflation expectations as measured by the University of Michigan's Survey of Consumers rose slightly to 3.0% from 2.9% in February, well within the range of values observed over the recent past. This suggests that inflation expectations remain well-anchored.



*Expected Policy Rate Path.* The expected path of the federal funds rate as inferred from market data was little changed, on balance, since the February Directors' meeting. Consistent with the conditional language in the "late-2014" forward policy guidance in the FOMC statement, market quotes imply that the federal funds rate will remain in the current range until the second half of 2013 with a small rise before the end of 2014.

Survey responses from the Blue Chip Financial Forecasts' April 2012 panel (survey period: March 26-27) were approximately in line with the market implied expectations. Indeed, according to the median forecast, the federal funds rate is expected to trade in its current range until at least the second half of 2013. The survey also conducted special questions about future Federal Reserve actions. 73% of respondents expected that the FOMC would raise its target rate before late 2014.



*Large-Scale Asset Purchases.* In its March statement, the FOMC decided to maintain its policy to reinvest principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities, as well as to extend the maturity of the SOMA by purchasing longer-dated Treasuries with maturities over 6 years and selling an equal amount of Treasury securities with remaining maturities of less than 3 years. The total size of the SOMA was little changed at about \$2.6 trillion.

The April 2012 Blue Chip Financial Forecasts Survey included a special question about the expectations of future changes in the Federal Reserve's balance sheet. Only 34% of respondents expected a continuation in the policy of extending the average maturity of holdings beyond June 2012.



*Equity Markets.* Broad stock market indexes moved higher through March, only to reverse course since the beginning of April. On net, the S&P500 index is only about 1% higher than its level on February 7, now standing at about 1360. Despite the recent decline, the index has risen appreciably since the fall of last year, up from a low of about 1100.

Over the same period, implied equity volatility, as measured by the VIX, followed a similar pattern. The VIX moved from about 18 on February 7, to about 14 in late March, and now stands at about 20. That said, the VIX is substantially lower than the levels observed in the late summer and early fall of last year. That rise in US equity realized and implied volatility was generally attributed to concerns about the European fiscal situation.





Note: Option-adjusted spreads.

*Credit Spreads.* Broad measures of corporate credit spreads continued to decline, although the levels remain above the recent lows seen in the first half of 2011. High-yield corporate bond spreads to comparable maturity Treasuries declined only modestly since the last Directors' meeting and are now at about 630 basis points. Meanwhile, investment grade corporate bond spreads declined by a similar magnitude over the same period and are now at approximately 200 basis points.

Nominal Broad Dollar Index



*Foreign Exchange*. The trade-weighted dollar index is roughly 10% below its average over the last fifteen years. The dollar strengthened in Q1 2012 in response to relatively solid U.S. data and ongoing concerns about the sovereign debt crisis in the euro area.

The yen settled near 77 yen/dollar after the earthquake and was stable at that level for the second half of 2011. The yen then weakened to above 80 yen/dollar in Q1 2012 reflecting the relative performance of the two economies and expansionary policy moves by the Bank of Japan.

China's yuan's started appreciating in mid-2010 and is now almost 10% stronger. The pace of appreciation against the dollar stayed near a 5% annual rate until Q4 and has eased considerably in 2012. The rate of reserve accumulation by Chinese monetary authorities slowed significant from \$110 billion in Q3 to \$18 billion in Q4. Reserve purchased totaled \$375 billion in 2011, down from \$470 billion in 2010.



Source: Haver/Bloomberg. Oil is average of WTI, Brent, and Bonny Light prices.

*Petroleum Prices*. An index of oil prices had been relatively stable at around \$110 a barrel since June 2011 until moving modestly higher to around \$115 in response to geopolitical worries.

Oil demand is projected to rise 0.9% this year, with all the additional demand coming from emerging economies. China accounts for almost half of the projected growth, with increases also in the Middle East and Latin America. Demand is set to fall in the United States and Europe.

The crisis in Libya reduced global production by 1.5 million barrels a day. Production has since recovered to 1.3 million barrels per day. Nevertheless, Saudi Arabia has not cut from the production boost that helped make up for the Libya shortfall. Notable increases in 2012 are expected from Canada and the United States.

*Other Commodities.* Wheat and corn prices have been stable so far in 2012 as have prices for industrial metals and raw materials.

Net Percentage of Loan Officers Tightening Standards and Raising Spreads for Loans to Large and Mid-Sized Firms



## **Bank Loan Standards**

Developments. According to the latest Senior Loan Officers' Opinion Survey, the net percent of loan officers tightening reporting standards for approving loans to large and mid-sized firms rose from -5.9 percent last quarter to 5.4 percent this quarter. The tightening this quarter reverses eight consecutive quarters of easing standards. The most commonly cited reason for the tightening was a diminished (or more uncertain) economic outlook; 88.9 percent of loan officers reported the outlook as a somewhat or very important reason for tightening standards. Reduced tolerance for risk was cited as somewhat or very important by 62.5 percent of loan officers. The same fraction of loan officers cited "increased concerns about legislative changes, supervisory actions, or changes in accounting standards" as somewhat or very important.

C&I Loan Growth -- Actual and Forecasted (With Various Degrees of Easing Standards)





According to a model maintained at the FRBNY, the tightening in standards is predicted to flatten growth in C&I loan growth over the next year.<sup>1</sup> Under the previous level of standards (-5.9 percent net tightening), loan growth was predicted to be growing at 14.2 percent rate by 2013:Q1. Under the current level, loan growth is predicted to only be growing by 9.1 percent by 2013:Q2.

<sup>&</sup>lt;sup>1</sup> For detail on the model, see "Listening to Loan Officers," Lown, Morgan, and Rohatgi, FRBNY Economic Policy Review, July 2000.

#### Corporate Profits as a Percent of National Income



#### **Corporate Profits**

Corporate profits were 14.6% of national income in 2011Q4, around the highest shares of national income in the history of the series dating back to 1947. Profits in the domestic nonfinancial corporate sector were 8.2% of national income in 2011Q4, the highest since 2006Q3 but well below average levels of the 1950s and 1960s. Profits of the domestic financial corporate sector were 3.4% of national income in the fourth quarter, somewhat below the 3.6% to 3.7% range reached in 2005-2006 and again in 2010, but well above average levels of the 1950s and 1960s. (Note that the profits of the financial corporate sector include those of the Federal Reserve System, which have risen to around 0.6% of national income from 0.2% to 0.3% before the expansion of the balance sheet.) Profits from the rest of the world, defined as receipts flowing into the US less receipts flowing out of the US, 3.0% of national income in 2011Q4, were somewhat below the third quarter share of 3.4%. In the 1950s and 1960s this series averaged less than 1% of national income.

#### Real Government Consumption and Gross Investment



## **Government Spending**

On a year-over-year basis, real spending at both the federal and the state and local levels continued to decline in 2011Q4, with the rate of decline showing no sign of abating. As of 2012Q1, excluding employment in the postal service, employment at the federal level is up by about 250,000 or about 13% since 2007Q2. In contrast, employment in the state and local government sector is down by about 640,000, or 3.2% from its peak in 2008Q3.

State and local government tax receipts grew at a subdued pace in 2011Q4 and remain below their previous cyclical peak in 2008Q2. At the same time, grants-in-aid from the federal government continue to decline through 2011Q4 and were down 16% from the peak in 2010Q4. As a result, total state and local receipts remained roughly unchanged in 2011Q4 at a level below their previous peak in 2010Q4.

Total government spending is expected to continue to decline over the forecast horizon, with a slower rate of decline at the state and local level.

	FY2010*	FY2011*	FY2012	FY2013
Receipts \$ Billions % of GDP	2,163 15.1	2,303 15.4	2,456 15.8	2,968 18.7
Outlays \$ Billions % of GDP	3,456 24.1	3,603 24.1	3,627 23.4	3,580 22.5
Balance \$ Billions % of GDP	-1,294 -9.0	1,300 -8.7	-1,171 -7.6	-612 -3.8
Debt Held by the Public % of GDP	62.8	67.7	73.2	75.8

Source: Congressional Budget Office

\* indicates actual values

## **FRBNY Staff Federal Fiscal Outlook**

For FY2011, the deficit was \$1.3 trillion, or 8.7% of GDP. Federal debt held by the public rose to 67.7% of GDP at the end of the fiscal year.

The Congressional Budget Office released its updated "current law" baseline in mid-March. As shown in the chart, the deficit is expected under current law to decline to 3.8% of GDP in FY2013. However, this is not a realistic projection. Under current law there will be substantial restraint on spending stemming from the Budget Control Act enacted in August 2011. In addition, revenues are projected to rise to 18.7% of GDP in FY2013, as the payroll tax cut and the tax cuts of the early 2000s expire. A more modest pace of fiscal consolidation is more likely: an alternative CBO scenario projects considerably higher deficits such that the public debt-to-GDP ratio rises to over 90% by FY 2021.

# FRBNY Staff Forecast Summary

	2011 Q4	201	2 Q1	201	2 Q 2		2011 Q4/Q4	2012	Q4/Q4	2013	Q4/Q4
Summary	Final	2/9	4/13	2/9	4/13		Final	2/9	4/13	2/9	4/13
Real GDP	3.0	1.9	2.7	2.7	2.2	1	1.6	2.6	2.8	2.8	2.9
Total PCE Deflator	1.2	1.5	2.3	1.5	1.9		2.7	1.5	1.9	1.7	1.8
Core PCE Deflator	1.3	1.4	2.2	1.3	1.7		1.8	1.4	1.8	1.6	1.8
Nonfarm Business Sector											
Output	3.7	2.5	3.2	3.5	3.2	1	2.3	3.3	3.5	3.5	3.6
Hours	2.7	2.5	3.0	2.5	2.2		1.9	2.2	2.4	1.7	1.9
Productivity Growth	0.9	0.0	0.2	1.0	1.0		0.3	1.1	1.1	1.7	1.7
Compensation	3.7	1.8	2.5	1.8	2.5		3.5	1.7	2.5	2.1	2.7
Unit Labor Costs	2.8	1.8	2.3	0.8	1.5		3.1	0.7	1.4	0.4	1.0
Real GDP Growth Contributions**											
Final Sales to Domestic Purchasers	1.4	2.1	2.3	2.3	2.4	1	1.5	2.4	2.5	2.5	2.5
Consumption	1.5	1.3	1.7	1.6	1.6		1.2	1.6	1.7	1.5	1.5
BFI: Equipment and Software	0.6	0.4	0.4	0.6	0.6		0.7	0.6	0.6	0.8	0.8
BFI: Nonresidential Structures	0.0	0.2	0.0	0.2	0.1		0.1	0.2	0.1	0.2	0.2
ResidentialInvestment	0.3	0.2	0.2	0.3	0.5		0.1	0.3	0.3	0.2	0.3
Government: Federal	-0.6	0.3	0.2	-0.3	-0.3		-0.3	-0.1	-0.2	-0.3	-0.3
Government: State and Local	-0.3	-0.2	-0.2	-0.2	-0.2		-0.3	-0.2	-0.1	0.0	0.0
Inventory Investment	1.8	-0.6	0.0	0.1	-0.4		0.1	-0.1	0.0	0.1	0.1
Net Exports	-0.3	0.4	0.3	0.3	0.3		0.0	0.2	0.3	0.3	0.3
Real GDP Components' Growth Rates											
Final Sales to Domestic Purchasers	1.3	2.0	2.3	2.2	2.3		1.4	2.3	2.4	2.4	2.4
Consumption	2.1	1.8	2.4	2.2	2.2		1.6	2.2	2.3	2.1	2.1
BFI: Equipment and Software	7.5	6.0	6.0	8.0	8.0		9.6	8.5	8.5	10.0	10.0
BFI: Nonresidential Structures	-1.0	6.0	0.0	8.0	5.0		4.4	7.5	5.2	8.0	8.0
ResidentialInvestment	11.7	6.8	10.0	15.0	25.0		3.5	11.0	15.4	10.0	10.0
Government: Federal	-7.0	3.4	2.0	-3.3	-3.3		-3.2	-1.7	-2.0	-3.3	-3.3
Government: State and Local	-2.2	-1.7	-1.3	-1.4	-1.4		-2.5	-1.3	-1.2	-0.3	-0.3
Inventory Investment	n/a	n/a	n/a	n/a	n/a		n/a	n/a	n/a	n/a	n/a
Net Exports	n/a	n/a	n/a	n/a	n/a		n/a	n/a	n/a	n/a	n/a
Exports	2.7	6.8	7.1	6.9	7.2		4.7	7.5	7.9	8.2	8.1
Imports	3.7	3.0	3.8	3.5	4.2		3.6	4.5	4.4	5.2	4.6
Labor Market											
Nonfarm Payroll Employment	151	247	212	276	237		147	238	238	162	214
(Average per Month, Thousands)								200			
Unemployment Rate***	8.7	8.3	8.3	8.0	8.0		8.7	7.6	7.5	7.1	6.7
Income											
Real Disposable Personal Income	1.7	1.5	0.4	2.4	1.1		0.8	2.1	1.6	1.2	1.3
Personal Saving Rate***	4.5	3.6	4.1	3.8	3.9		4.5	3.7	3.8	2.8	3.1

\*\*Grow th contributions may not sum to total due to rounding.

\*\*\*Quarterly values are the average rate for the quarter. Yearly values are the average rate for Q4 of the listed year.

Blue and *italic* text indicate released data; darker colors indicate the most recent forecast.

# **Evolution of FRBNY Staff Forecasts**





**Unemployment Rate** 



Note: Forecast vintage represents date at which forecast was produced.

		Real GDP Growth						
	Release Date	2012Q1	2012Q2	2012Q3	2012 Q4/Q4	2013 Q4/Q4		
FRBNY Staff	4/13/2012	2.7	2.2	3.2	2.8	2.9		
Blue Chip	4/10/2012	2.2	2.3	2.4	2.4	2.7		
Median SPF	2/10/2012	2.2	2.3	2.6	2.3	2.7		
Macro Advisers	4/11/2012	2.2	2.6	2.6	2.6	3.3		
				Core PCE	Inflation			
	Release Date	2012Q1	2012Q2	2012Q3	2012 Q4/Q4	2013 Q4/Q4		
FRBNY Staff	4/13/2012	2.2	1.7	1.7	1.8	1.8		
Median SPF	2/10/2012	1.6	1.7	1.7	1.6	1.8		
Macro Advisers	4/11/2012	2.1	1.6	1.7	1.8	1.8		
				CPI Inf	lation			
	Release Date	2012Q1	2012Q2	2012Q3	2012 Q4/Q4	2013 Q4/Q4		
FRBNY Staff	4/13/2012	2.5	2.4	2.2	2.3	2.3		
Blue Chip	4/10/2012	2.5	2.4	2.2	2.3	2.2		
Median SPF	2/10/2012	2.0	2.0	2.1	2.0	2.2		
Macro Advisers	2/9/2012	2.5	2.7	2.0	2.3	2.0		
				Core CPI	Inflation			
	Release Date	2012Q1	2012Q2	2012Q3	2012 Q4/Q4	2013 Q4/Q4		
FRBNY Staff	4/13/2012	2.0	2.0	2.1	2.1	2.2		
Median SPF	2/10/2012	1.9	1.8	1.9	1.9	2.1		
Macro Advisers	2/9/2012	2.0	1.8	2.1	2.0	2.2		

# Alternative GDP and Inflation Forecasts

Source: FRBNY Staff, Blue Chip Consensus Forecasts, Survey of Professional Forecasters, and Macro Advisers

# PCE and CPI Measures of Inflation since 2000



#### Total and Core PCE Deflator

Source: Bureau of Economic Analysis

#### Measures of PCE Inflation



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

#### Core PCE Inflation over Various Horizons



Source: Bureau of Economic Analysis



#### Measures of CPI Inflation



Source: Bureau of Labor Statistics and FRBNY Staff

#### Core CPI Inflation over Various Horizons



Source: Bureau of Labor Statistics

Total and Core CPI Deflator

# Exports and Industrial Production

















# **Global Interest Rates and Equity Markets**



Source: Bloomberg





#### Euro Area Equity Price Indices











# **Exchange Rates**



Nominal Effective Exchange Rates



Euro Area and Japan Effective Exchange Rates Index (2006=100) 150 Index (2006=100) 150 140 140 130 Apr 10 130 136.5 120 110 120 100 110 Euro Apr 10 90 97.4 100 80 2009 2010 2011 2012











# **Treasury Yields and Inflation Expectations**















Source: Federal Reserve Board, Barclays, and FRBNY Staff



# TIPS Implied Inflation: 4-5 and 5-10 Year Horizons

# **Market Policy Expectations and Uncertainty**



Fed Funds Probabilities December 2012



Expected Fed Funds from March 2012 Survey







Percentage Points

5

4

3

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

Fed Funds Probabilities December 2012

Eurodollar Implied Volatility Term Structure\*

4/10/2012 3/12/2012



Expected Fed Funds from April 2012 Survey Percent Percent 0.40 0.40 Mean 0.30 0.30 Average of March 26-27 75th Market-Implied FFR Percentile 0.20 0.20 Median 25th 0.10 0.10 Percentile 0.00 0.00 Apr-12 Jul-12 Oct-12 Jan-13 Apr-13 Jul-13 Oct-13 Jan-14 Note: Implied FFR estimated from OIS quotes.

Source: The Blue Chip Financial Forecast conducted on March 26-27.

#### Page 36 of 37

# **Equity Markets and Corporate Credit Risk**



Corporate Credit Spreads



Source: Bloomberg

Note: Option-adjusted spreads.













## Equity Indices: One-Month Implied Volatility