

Accessible Version

Meeting of the Federal Open Market Committee January 24-25, 2012 Presentation Materials

[Presentation Materials \(PDF\)](#)

Pages 246 to 314 of the Transcript

Appendix 1: Materials used by Messrs. Duca, Haughwout, and Cooper

Material for

FOMC Briefing on Lending and Leverage

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January 24, 2012

Class II FOMC - Restricted (FR)

Debt, Leverage and the Recovery of Consumption: Time Series Evidence

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Exhibits by J.B. Cooke and David Luttrell

Exhibit 1: Real Per Capita Consumption Weak in Current Cycle

The data are plotted as a curve with a range around 5 prior major business cycle peaks. Units are percentage point deviations of real per capita consumption expenditures from its level at a business cycle peak, running from 12 quarters before a business cycle peak to 15 quarters after a business cycle peak. A range of low and high values across all the business cycles is depicted in a gray range. As shown in the figure, in the earlier business cycles, on average consumption rose up until two quarters before the business cycle peak, then barely changed for a year following the peak. Starting about one year after a peak, consumption typically began rising, increasing roughly 10 percentage points from the peak level 15 quarters after the peak. In the most recent cycle, real per capita consumption fell below the average path three quarters after the 2007Q4 peak and continued declining until 6 quarters after the peak. Although it has recovered some, this measure of consumption has stayed well below the average and the range of the earlier recessions, not even fully recovering from the declines seen in the recession.

Notes: The grey area indicates the range of the last five major recessions (1970, 1974, 1981-82, 1990, and 2001), excluding the very short 1980 recession.

Exhibit 2: Personal Saving Rate Rose in Recent Cycle, Before Ebbing

The data are plotted as a curve with a range around 5 prior major business cycle peaks. Units are percentage point deviations of the personal saving rate from its level at a business cycle peak, running from 12 quarters before a business cycle peak to 15 quarters after a business cycle peak. A range of low and high values across all the business cycles is depicted in a gray range. As shown in the figure, in the earlier business cycles, the personal saving rate on average changed little before and after business cycle peaks, generally moving within a range between 2 percentage points above and 3 percentage points below its level at the business cycle peak. In the most recent cycle, the personal saving rate jumped nearly 4 percentage points above its 2007Q4 peak level and only in 2011q3 did it fall within the range seen in the prior five major business cycles. Nevertheless, in 2011Q3 it was about 2 percentage points above the average seen in those earlier episodes.

Notes: The grey area indicates the range of the last five recessions (1970, 1974, 1981-82, 1990, and 2001, excluding the very short 1980 recession).

Exhibit 3: Consumer Credit Conditions Weak, But Recently Improving

The data are plotted as a curve with a range around 5 prior major business cycle peaks. Units are percentage point deviations of the credit conditions index from its level at a business cycle peak, running from 12 quarters before a business cycle peak to 15 quarters after a business cycle peak. A range of low and high values across all the business cycles is depicted in a gray range. As shown in the figure, in the earlier business cycles, on average the consumer credit conditions index rose a little from 3 years before until 4 quarters before a business cycle peak. It then typically began rising about five quarters after a business cycle, rising nearly 10 percentage points above its prior peak level about 4 years after a peak. In the most recent cycle, the consumer credit conditions index fell from the peak for about nine quarters, until falling nearly 5 percentage points below its 2007Q4 level. It only started recovering some since 10 quarters following that peak, and has nearly recovered its level at that peak.

Notes: The grey area indicates the range of the last five recessions (1970, 1974, 1981-82, 1990, and 2001, excluding the very short 1980 recession).

Exhibit 4: Trends in Saving Reflect More Than Movements in Household Net Wealth

The data are plotted as two curves ranging from 1970 to 2011. Units are the ratio of net worth to income in whole numbers and the saving rate is measured as a percent of disposable personal income. The plot of the net worth to income ratio shows it fluctuating between 4 and 5 until 1996. It then rises to nearly 6 in the late 1990s, falls back to about 5 in the early 2000s. It then rises to 6.5 in the mid-2000s, before falling back to around 5 during the 2008-09 recession, and staying around that level since then. The personal saving rate fluctuated between 8 and 10 percent in the 1970s and early 1980s, before trending down to about 2 percent between 1982 and 2000. It then fluctuated between 1 and 4 percent until 2007Q4 before rising 4 percentage points and fluctuating in a range between 4 and 6 percent since then. The chart shows that the saving rate and wealth-to-income ratio move synchronously, though in opposite directions as theory would predict. But the saving rate is roughly half its level of the 1970s and early 1980s, even though the wealth-to-income ratio is roughly similar.

Note: Shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research (NBER): December 1969-November 1970, November 1973-March 1975, January 1980-July 1980, July 1981-November 1982, July 1990-March 1991, March 2001-November 2001, and December 2007-June 2009.

Exhibit 5: Components of Household Wealth

The data plotted as three curves ranging from 1970 to 2011. The units are the ratio of three categories of wealth to disposable personal income in whole numbers. One category, measures gross housing assets of households, showing that it fluctuated between 1.2 and 1.7 from 1970 to 2000, before rising to 2.5 by 2005 and then falling back to 1.4 in 2011Q3. Another curve plots illiquid financial assets, the sum of stock, bond, pension, and other illiquid financial assets as a share of disposable income. This ratio generally moves between 2 and 2.6 between 1970 and 1995. It rises to nearly 4 in 1999 and then falls to 3 by 2002. It then rose in the mid-2000s to a peak near 4 before falling during the 2008-9 recession to a level near 3. The third curve plots net liquid assets--the sum of cash-like assets minus household debt--as a share of disposable income. After staying flat at about 0.5 percent of income from 1970 to 1990, it trends down to about -0.1 in the mid-2000s, before edging up to about 0.06 percent in 2011.

Note: Shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research (NBER): December 1969-November 1970, November 1973-March 1975, January 1980-July 1980, July 1981-November 1982, July 1990-March 1991, March 2001-November 2001, and December 2007-June 2009.

Exhibit 6: Sensitivities of Consumption to Wealth

Estimated \$ Change in Annual Total Consumption Per \$100 Increase In Wealth
(Marginal Propensity to Consume, mpc)

Net Liquid Assets	Illiquid Financial Assets	Gross Housing Assets
\$13.4	\$2.0	\$3.6 at peak, \$2.1 in 2011Q1

Exhibit 7: Sensitivity of Consumption to Housing Wealth Triples in Late-1990s, Retreats During the Subprime Bust

The data are plotted as a curve ranging from 1973 to 2011. Units are in dollars, showing how much annual consumption will rise in dollars per \$100 rise in gross housing assets. The estimated impact was near \$0.5 in the early 1970s, and rose to around \$1 for most of the late 1970s to early 1990s. It rose sharply in the late 1990s to a height of nearly \$3.6 by 2003. As labeled in the chart, most of this rise coincides with the rise of cash-out mortgage refinancing that enabled households to borrow more against their houses when refinancing their mortgages.

Source: "How Financial Innovations and Accelerators Drive U.S. Consumption Booms and Busts," J. Duca, J. Muellbauer, and A. Murphy, Dec. 2011.

Exhibit 8: Consumer Credit Conditions Index Rises Sharply from 1970 to Mid-1990s, and Swings Since the Mid-2000s

The data are plotted as a curve ranging from 1966 to 2011. Units are normalized so that the index has an initial value of zero in 1966 and a maximum value of 1 at its peak in 2007. The index rises from 0 in 1970 to about 0.3 by 1978. As labeled in the chart, this coincides with the rise of installment credit and credit cards in much of the 1970s. It dips some and stays flat until the early 1980s. It rises strongly from about 0.25 to about .75 between 1982 and 1990. As indicated in the chart, this coincided with an era of deposit deregulation and the rise of credit scoring and screening that encouraged consumer lending. The index stopped rising in the 1990s when the new Basel bank capital standards temporarily deterred banks from expanding consumer credit. The index rose moderately between 1992 and 1995, before stabilizing until the mid-2000s, when it rose from about .9 to 1.0 by 2007. It fell back to .9 by late 2009 in the index's largest sized decline before recovering to nearly 1 by the end of 2011.

Note: Shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research (NBER): December 1969-November 1970, November 1973-March 1975, January 1980-July 1980, July 1981-November 1982, July 1990-March 1991, March 2001-November 2001, and December 2007-June 2009.

Exhibit 9: Changes in Ratio of Consumption-to-Income Tracked Well by Combined Credit and Wealth Effects

The data are plotted as three curves. Units are percentage point deviations for the level of 1995Q1. One line plots the percent deviation of the log of the consumption to non-property income ratio, which rises about 4 percentage points in the late 1990s, and then falls back to being about 2 percentage points above in the 2002-04 period. The ratio then rises to about 5.5 percent between 2005 and 2007, before falling to about (-0.5) percent by early 2009, before rising to its 1995Q1 level by the end of 2010. The estimated impact of changes in credit and wealth effects tracks these movements closely. Also shown is a third curve, the personal saving rate. This moves synchronously with the consumption-to-income ratio, but in an opposite direction as can be expected.

Exhibit 10: Impact of Credit Conditions and Wealth on the Consumption-to-Income Ratio

Estimated % Point Long-Run Effects on Consumption-Income Ratio

Period	Change in Log Actual Consumption to-Income Ratio	Combined Estimated Equilibrium Credit and Wealth Effects	Contributions to Estimated Equilibrium Effect			
			Consumer Debt + Credit Conditions Index	Illiquid Financial Assets	Housing Assets & Mortgage Debt	Liquid Assets
Housing and Stock Bubbles 1995q1-2006q3	5.5	5.5	1.0	2.9	1.0	0.6
Housing and Financial Crisis 2006q3-2009q2	-6.3	-6.6	-0.7	-2.7	-5.2	2.1
Anemic Recovery Period 2009q2-2010q4	0.9	0.8	0.4	0.8	0.8	-1.3
Recent Quarters 2011q1-2011q3	1.2	1.0	0.5	0.8	-0.2	-0.1

Note: The estimated equilibrium Consumption/Income is proportional to 0.126 x Credit Conditions Index + 0.020 x Illiquid Assets/Income + 0.134 x (Liquid Assets - Consumer Debt - Mortgage Debt)/Income + Housing MPC x Housing Assets/Income. The housing MPC (marginal propensity to consumer) is time-varying. [In the table, strong emphasis (bold) indicates text highlighted with a red dotted circle in the original document.]

Exhibit 11: Consumer Debt-to-Income Ratio Stabilizes, While Mortgage Ratio Continues Declining, Though Less Rapidly of Late

The data are plotted as two curves. One series, the mortgage-debt-to-disposable income ratio, fluctuated around 40 percent between 1970 and 1985. It shifted up to 60 percent by 1990 and stayed near that level until 1995. It rose to 100 percent by 2005 before falling to nearly 95 percent by 2011. The trends suggest the ratio may fall further, though more slowly in coming quarters. The other plotted series is the consumer-debt-to-income ratio, which oscillated between 1970 and 1980 in a range between 12 and 18 percent. It then rose in the late 1980s peaking around 18 percent, before falling in the early 1990s. It then recovered in the mid-1990s and rose to nearly 25 percent by 2000, staying near that level until 2008, when it fell to nearly 22 percent by 2011. In recent quarters it has stopped falling and ticked up, suggesting that the consumer credit deleveraging process is nearing an end.

Note: Shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research (NBER): December 1969–November 1970, November 1973–March 1975, January 1980–July 1980, July 1981–November 1982, July 1990–March 1991, March 2001–November 2001, and December 2007–June 2009.

Supplementary Exhibits

Supplementary Exhibit 1: The Consumer Credit Conditions Index Tracks the Rise of Bank Credit Card Ownership Rates

The data are plotted as a mixture of bars and a curve. The bars depict the percent of families owning bank credit cards, which rose from 15 percent in 1970 to about 70 percent by the 1995, rising further to a little over 70 percent in 2001 and staying roughly flat through 2007. The curve is a plot of the consumer credit conditions index for the same selected years, rising from about 0 in 1970 to roughly 1 by 2007. The chart shows that the consumer credit index based on installment loan policies at banks tracks the credit card ownership rate, ostensibly because financial innovations and deregulation have boosted the availability of revolving and installment credit.

Notes: All credit cards generally excludes cards limited to only one particular retailer. Bank cards are those on which households can carry-over balances.

Sources: Durkin (2000), Bertaut and Haliassios (2006) for 1992 data, Bucks, et al., (2007, 2009) for 2001–07, and authors' calculations using Bucks, et al. (2009) figures for bank card ownership in 2004 and 2007.

Supplementary Exhibit 2: Subpar Recovery in Consumer Durables

The data are plotted as a curve with a range around 5 prior major business cycle peaks. Units are percentage point deviations of real per capita consumer durable expenditures from its level at a business cycle peak, running from 12 quarters before a business cycle peak to 15 quarters after a business cycle peak. A range of low and high values across all the business cycles is depicted in a gray range. As shown in the figure, in the earlier business cycles, on average consumer durable purchases rose up until two quarters before the business cycle peak, then edged lower for about year following the peak. Starting about one year after a peak, this component of consumption typically began rising, increasing roughly 20 percentage points from the peak level 15 quarters after the peak.

In the most recent cycle, real per capita consumer durable purchases fell below the average path three quarters after the 2007Q4 peak and continued declining until 6 quarters after the peak. Although it has recovered to its pre-recession peak, this measure of consumption has stayed well below the average and the range of the earlier recessions.

Notes: The grey area indicates the range of the five prior recessions (1970, 1974, 1981–82, 1990, and 2001, excluding the very short 1980 recession).

Supplementary Exhibit 3: Similar Sensitivities of Consumption to Wealth in the U.S., UK and Australia

Estimated \$ Change in Annual Total Consumption Per \$100 Increase In Wealth
(Marginal Propensity to Consume, mpc)

	Net Liquid Assets	Illiquid Financial Assets	Gross Housing Assets
U.S.	13.4	2.0	Max. of 3.6
UK	11.4	2.2	Max. of 4.3
Australia	15.9	2.2	Max. of 4.9

Notes: U.S. estimates from Duca, Muellbauer and Murphy (2011). UK estimates from Aron, Duca, Muellbauer, Murphy and Murata (2011). Estimates for Australia from Muellbauer and Williams (2011).

Recent Developments in Household Debt

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Exhibit 1

Top panel

Total Household Debt: Flow of Funds Accounts and FRBNY Consumer Credit Panel

Line chart. Unit is trillions of dollars. The graphic compares the long-run trends in aggregate household debt measures from the Flow of Funds and the FRBNY Consumer Credit Panel (CCP). The Flow of Funds series begins in 1952 and shows generally increasing levels of household debt until 2008. In that year it begins a sustained decline that continued through 2011:Q3. FRBNY CCP data begins in 1999 and shows a similar pattern, although it is always lower than the Flow of Funds.

Bottom panel

Total Household Debt and Its Composition

Stacked bar chart. Unit is trillions of dollars. The graph shows the components of household debt since 1999, using the FRBNY CCP. Debts secured by residential real estate -- closed end mortgages and home equity lines of credit -- are the dominant household liability, comprising about ¾ of household debt. Mortgage debt was the driving force behind the 1999–2008 increase in household liabilities, rising by \$6.7 trillion to nearly \$10 trillion. Other forms of household debt increased as well, albeit by much smaller amounts. Mortgage debt began declining in 2008:Q3.

Sources: Board of Governors of the Federal Reserve System, Flow of Funds accounts; FRBNY Consumer Credit Panel.

Notes: Shading represents NBER recessions. Flow of Funds measure includes non-profit sector; FRBNY CCP excludes student loans.

Exhibit 2

Housing Assets, Mortgage Debt, and Owners' Equity Share

Line chart. Unit is trillions of dollars except as noted. The chart shows the aggregate value of owner-occupied real estate, aggregate household mortgage liabilities and the owner's equity share in household real estate, 1999-2011:Q3. Flow of Funds data indicate that the aggregate value of owner-occupied real estate rose sharply from 1999-2006, then began to decline in 2007. Home mortgage liabilities of households rose at the same time, and started to fall somewhat later, in 2008. Owner's equity as a share of residential real estate was roughly constant at around 60% until 2006, when it began a sustained decline that took it to below 40% in 2009. Owner's equity share has hovered around 40% since 2009.

Source: Board of Governors of the Federal Reserve System, Flow of Funds accounts.

Exhibit 3

Top panel Combined Negative and Near-negative Equity Rates in 168 Metro Areas

Heatmap of the US, with metropolitan areas shaded to indicate the share of mortgages in negative or near-negative equity in 2011:Q3. Negative and near-negative equity mortgages are somewhat concentrated in metro areas in Arizona, California, Florida and Nevada as of 2011:Q3. But rates of negative and near-negative equity in excess of 29% are found in many US metropolitan areas, including Atlanta, Denver, Memphis and Tacoma, Washington.

Bottom panel Negative Equity Debt Overhang

Bar and line chart shows the aggregate negative equity amount in dollars, and the share of mortgages in negative or near-negative equity from 1999:Q3-2011:Q3. CoreLogic aggregate data indicate that as of 2011:Q3, aggregate mortgage balances in negative equity remain around \$700 billion, down from about 800 billion in late 2009 and early 2010. Over the same period, the share of mortgage in negative or near-negative equity has fallen from about 28.5% to 27%.

Source: CoreLogic.

Note: The 2011:Q1 reduction in the aggregate negative equity amount partially reflects a revision to CoreLogic's methodology.

Exhibit 4

Top panel Sources of Change in Aggregate Mortgage Balances

Line chart breaks down annual changes in mortgage balances into three components, for 2000-2011.

1. Changes associated with housing transactions other than foreclosures rose from \$400 billion in 2001 to about \$900 billion in 2006, before falling to \$200 billion in 2009-2011.
2. First-lien amortization, junior lien balance changes and refinance activity's effect on balances was a net positive contributor to balance change at about \$200 billion per year from 2003-2007, then fell sharply to negative \$200 billion in 2010 and 2011.
3. Charge-offs resulting from foreclosures were small until 2007, but have reduced mortgage balances by between \$300 and \$400 billion annually ever since.

Bottom panel Annual Cash Flows from All Forms of Household Debt

Bar chart combines series 2 above with analogous figures for non-mortgage debt. Total cash flow from household debt averaged over \$300 billion from 2002-2007. In 2008 this figure fell to \$100 billion and in 2009-2011 households were paying back debts at an average rate of over \$150 billion per year.

Source: FRBNY Consumer Credit Panel, annual data.

Note: The plot for 2011 is annualized from data through the second quarter.

Exhibit 5

Top panel Credit Limit and Balance: Credit Cards and HELOC

Stacked bar chart shows aggregate credit limits and balances for credit cards and HELOCs. Aggregate credit limits on revolving accounts -- credit cards and home equity lines of credit -- rose by over \$2 trillion from 1999-2008. At the peak, credit card limits were \$3.7 trillion; HELOC limits exceeded \$1.3 trillion. In late 2008, credit limits -- especially for credit cards -- began a sustained decline and fell by over \$1 trillion. In the last year, credit card limits have stabilized at around \$2.7 trillion. HELOC limits are stable around \$1.2 trillion. Aggregate credit card and HELOC balances have fallen over the same period, albeit more slowly than limits.

Bottom panel Total Number of New and Closed Accounts and Inquiries

Line chart shows accounts opened and closed in the previous 12 months, as well as credit bureau inquiries in the past six months, for the period 2000:Q1-2011:Q3. Account closings rose sharply during the financial crisis, but have returned to their earlier levels of around 200 million closings per year. At the peak in 2009:Q3, over 375 million credit accounts had been closed in the previous 12 months. Openings and inquiries fell as closings rose, but in the last year have stabilized at between 155 million and 165 million per year.

Source: FRBNY Consumer Credit Panel.

Exhibit 6

Change in Debt 2010Q3-2011Q3, by Borrower Characteristics

Four panels show percentage changes in three kinds of debt balances (mortgage/HELOC, auto and credit card) and inquiries for the period 2010:Q3-2011:Q3.

Top-left panel By Credit Score Quintile

Over the last year, borrowers in lowest 20% of the credit score distribution have seen the largest increase in inquiries for new credit, but have reduced their credit card and mortgage/HELOC balances the most as well. Auto loan balances are increasing for all borrowers except those with the lowest credit scores.

Top-right panel By Selected States

AZ, CA, FL, NV, OH, MI, TX and rest of US are displayed. Borrowers in states hardest hit by housing cycle - AZ, CA, FL and NV - continue to reduce debts of all types. Single exception is auto debt in Florida, which rose slightly over the last year. Excepting Florida, inquiries are growing more slowly in these states than in balance of US.

Bottom-left panel By Borrower Age

Younger borrowers reduced their debts, especially mortgage/HELOC and credit cards. Older borrowers are increasing their real estate and auto loan indebtedness, but continue to reduce credit card balances. Inquiries are rising across the age distribution

Bottom-right panel By Presence of Housing Debt in 2010Q3

Borrowers with housing debt on their credit reports as of 2011Q3:

- Have reductions in credit card debt roughly equivalent to those without housing debt.
- Increased auto debt by less than 1%, compared with over 5% for those without housing debt.
- Saw a 5% decline in inquiries, compared with a 10% increase in inquiries among those without housing debt.

Source: FRBNY Consumer Credit Panel.

Household Deleveraging and Consumption: Evidence using Aggregate and Household-Level Data

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Exhibits by Kevin Todd

Exhibit 1

Top panel Deleveraging Defined

- Household balance sheet debt adjustment that lowers consumption.
- Consumption decline exceeds what would be predicted based on current and past changes in income and asset values.
 - Assumes a previous phase of leveraging where households increased consumption through debt accumulation.
 - Leveraging based on expectations about future returns to housing.
- Heavily indebted households decided that debt burdens were inconsistent with downwardly revised price expectations.

Deleveraging is not:

- Mortgage charge-offs due to foreclosure
- Debt reorganization to take advantage of lower interest rates
- Debt repayment through mortgage amortization
- Mortgage lenders forcing households to repay debt when house prices fall.

Bottom panel Overview of Presentation

- Analyze deleveraging at the aggregate and household level.
- Household-level data come from the Panel Study of Income Dynamics.
- Find little evidence of deleveraging in the micro or macro data.
- Movements in consumption prior to, during, and following the Great Recession are driven by employment, income, and net worth.

Exhibit 2

Top panel Growth in Consumption, Income, and Debt

Year-over-year percentage changes in consumption, income, and debt, 2003 through 2006 and the average growth rate for 2003-to-2006. Data are plotted as a bar chart. Units are year-over-year percentage growth rates. The chart displays bars for income growth, consumption growth, and debt growth by year and the average growth rate for these series. Debt growth exceeds 6.0 percent in every year and has an average growth rate of about 8.5 percent. Consumption growth remains roughly constant across all years and averages a little more than 3.0 percent. Income growth fluctuates between 0.6 percent and 4.6 percent, and has an overall average growth rate of just above 3.0 percent--almost exactly matching the average consumption growth rate.

Source: BEA, Flow of Funds.

Note: Income is disposable personal income.

Bottom panel Debt-to-Income Ratio

Debt to income ratio, first quarter 1995 through the third quarter of 2011. Data are plotted as a line graph. Units are ratio points. Income is disposable personal income. The chart shows a steady upward trend in the debt-to-income ratio starting in the first quarter of 1995, when the ratio was a bit below 0.9, and continuing until just before the recession that began in the fourth quarter of 2007. The debt-to-income ratio peaked at around 1.35 and then dropped noticeably at the very beginning of the recession before rebounding slightly and remaining steady at a little less than 1.3 through late 2009. The ratio has declined steadily since late 2009 to a level of 1.2 as of the third quarter of 2011.

Source: BEA, Flow of Funds.

Note: Income is disposable personal income. Shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research: 2001:Q1-2001:Q4 and 2007:Q4-2009:Q2.

Exhibit 3 Consumption, Income, and Net Worth

Top panel Current versus Previous Business Cycles

Consumption, disposable income, and net worth, sixteen quarters before and after business cycle peaks. Data are plotted as line graphs. The chart compares the performance of consumption, disposable income, and net worth of U.S. households before, during, and after the 2007 business cycle peak (solid lines) with the average performance of these three measures during the previous 5 major business cycles, which occurred in 1970, 1974, 1981-82, 1990, and 2001 (dashed lines). The short-lived 1980 recession is excluded from the analysis. Consumption, disposable income and net worth in the prior cycles were relatively flat for roughly two quarters after the business cycle peak but then quickly resumed growing at a very similar rate as they were prior to the peak. In the most recent cycle, disposable income, consumption and net worth were higher relative to their averages in the quarters preceding the business cycle peak. After the peak, disposable income grew for two quarters, then fell noticeably before starting to grow again, but a sluggish pace, about eight quarters after the business cycle peak. Consumption in the most recent cycle has followed a path similar to that of income, although it was relatively flat immediately following the business cycle peak, while income rose. Since the peak consumption has remained somewhat below income, although the gap has been closing slightly in recent quarters. Both series are well below their post-peak averages in prior business cycles. Net worth in the most recent cycle peaked prior to the business cycle peak, and fell by more than 20 percent in the five quarters immediately following the peak. Net worth has rebounded a little since then, but remains very weak even when compared with consumption and income in the current cycle.

Source: BEA, Flow of Funds.

Note: Prior cycles include the 1970, 1974, 1981-82, 1990, and 2001 recessions.

Bottom panel Consumption versus Net Worth over Time

Consumption-to-income and net worth-to-income ratios, quarterly, from the first quarter of 1980 to the third quarter of 2011. Data are presented as a scatter plot. The log of net worth divided by income is plotted on the x-axis and the log of consumption divided by income is plotted on the y-axis. Units on both axes are logarithmic points. The plot includes a line showing predicted values based on a regression of log consumption-to-income on log net worth-to-income using data from 1996Q1 to 2007Q4. There was a shift in the relationship between consumption-to-income and net worth-to-income around the beginning of 1996. The more recent points are clustered around a flatter sloped line—relative to the pre-1996 data points—indicating that consumption has perhaps become less sensitive to net worth. The plot further shows that the points depicting the relationship between net worth-to-income and consumption-to-income since the second quarter of 2009 are roughly in line with the relationship between these two series from 1996 to 2007.

Source: BEA, Flow of Funds.

Note: Income is disposable personal income.

Exhibit 4 Panel Study of Income Dynamics

Top panel Key Characteristics

- Began in 1968.
- Follows households and their offspring annually through 1997; biennially there-after.
- Most recent waves contain between 7,000 and 8,000 households.
- More comprehensive consumption data (in addition to food consumption) starting in 1999.
 - Designed to bring coverage more in line with the *Consumer Expenditure Survey*.
 - Added in 1999: health care, mortgage or rent payments, housing insurance, transportation, child care, schooling, recurring automobile costs, and utilities.
 - Added in 2005: home furnishings, recreation, clothing, and vacations.
- Most recent data are for 2009.

Bottom panel Selected Summary Statistics

	Avg. 2001-07	2007-09
Avg. Net Worth Decline (%)	11.1	15.0
Percent of Households w/ Debt Decline (%)	45.3	47.0
Avg. Debt Repayment (\$)	7478	7937

Note: Sample restricted to households 64 or younger who did not move between PSID waves. Average net worth decline results are conditional on households' reporting a net worth decline. Average dollars of debt repayment are conditional on households' reporting a decline in debt, and are in constant 2000 dollars.

Exhibit 5

Top panel Change in Households' Consumption-to-Income and Debt-to-Income Ratios, 2007 to 2009

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		<i>Cons. / Y</i>	<i>(Tot. Debt) / Y</i>	N
Displaced Worker	High Debt	-0.161	-0.037	18
	Low Debt	-0.090	-0.114	29
Non-Displaced Worker	High Debt	-0.025	0.103	709
	Low Debt	-0.023	0.031	683

Note: Income held fixed at 2007 levels. *Tot. Debt* is total household debt. *Cons.* is reported household consumption and includes household spending on health care, housing, insurance, transportation, child care, schooling, recurring automobile costs, utilities, home furnishings, recreation, clothing, and vacations.

Bottom panel Empirical Specification

$$\text{Equation 1 : } \Delta C_t = \alpha_0 + \alpha_1 \Delta Y_t + \alpha_2 \Delta NW_t + \alpha_3 age_t + \alpha_4 age_t^2 + \alpha_5 age_t^3 + \alpha_6 famsize_t + \alpha_7 year_t + \epsilon_t$$

Exhibit 6 Impact of Growth in Income and Net Worth on Consumption

Top panel Baseline Estimates

	All Households	
	2001-2007	2007-2009
Income Growth	0.10***	0.11***
Net Worth Growth	0.033***	0.040***
N	11911	2849

Note: Sample is restricted to households 64 or younger who did not move between PSID waves. Additional controls include a cubic term for the age of the head of household, family size, and year fixed effects. Robust standard errors; *** significant at the 1 percent level. [Return to table](#)

Middle panel Results by Homeownership Status

	Owners		Renters	
	2001-2007	2007-2009	2001-2007	2007-2009
Income Growth	0.08***	0.09***	0.11***	0.12***
Net Worth Growth	0.024***	0.024**	0.050***	0.073***
N	9973	2515	1377	337

Note: Owners own their home in consecutive PSID waves, while renters are tenants in consecutive waves. Sample is restricted to households 64 or younger who did not move between PSID waves. Additional controls include a cubic term for the age of the head of household, family size, and year fixed effects. Robust standard errors; *** significant at the 1 percent level [Return to table](#), ** significant at the 5 percent level [Return to table](#).

Bottom panel Results based on Debt Holdings

	Above Median Debt		Below Median Debt	
	2001-2007	2007-2009	2001-2007	2007-2009
Income Growth	0.11***	0.10***	0.08***	0.12***
Net Worth Growth	0.018***	0.028**	0.044***	0.062***
N	5707	1627	6114	1307

Note: Debt is total household debt and includes both collateralized and noncollateralized debt holdings. Sample is restricted to households 64 or younger who did not move between PSID waves. Additional controls include a cubic term for the age of the head of household, family size, and year fixed effects. Robust standard errors; *** significant at the 1 percent level [Return to table](#), ** significant at the 5 percent level [Return to table](#).

Exhibit 7

Top panel Household Net Worth and Liabilities

Total debt-to-income ratio and net worth-to-income ratios from the first quarter of 1975 through the third quarter of 2011. Data are presented as a line graph. Time is on the x-axis. Total debt-to-income is on the left axis and net worth-to-income is on the right axis. Units are ratio points. The chart shows that the debt-to-income ratio fluctuated between 0.6 and 0.7 from 1975-to-1985 and then grew steadily to about 1.0 in the first quarter of 2000. The ratio then surged to a high of about 1.35 in the third quarter of 2007. The series then drops and is subsequently mostly flat at around 1.3 during the recent recession and declines persistently in the recession's aftermath, dropping to about 1.2 in the third quarter of 2011. Net-worth-to-income fluctuates more than debt-to-income over the sample horizon, but overall exhibits a similar upward trend through 2007. In particular, net worth-to-income is about 4.4 or 4.5 from 1975 until the first quarter of 1985, before rising to around 4.7 by 1995. The ratio subsequently skyrockets to about 6.0 by late 1999, and then plummets to about 5.0 by 2002 before rising back to about 6.5 in the second quarter of 2007. Net worth-to-income subsequently sank to 4.7 by the first quarter of 2009, and has recovered only a bit to a level of 5.0 by the third quarter of 2011. As of the third quarter of 2011, debt-to-income remains well above net worth-to-income especially by historical standards—historically the two ratios moved together over time.

Source: BEA, Flow of Funds.

Note: Income is disposable personal income. Shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research: 1980:Q1-1980:Q3, 1981:Q3-1982:Q4, 1990:Q3-1991:Q1, 2001:Q1-2001:Q4, and 2007:Q4-2009:Q2.

Bottom panel Consumption Growth Estimates Households with Debt Declines

	All Households
--	----------------

	2001-2007	2007-2009
Income Growth	0.09***	0.10***
Net Worth Growth	0.040***	0.036***
Households w/ Debt Decline [DD]	-0.024***	-0.027***
Income Growth x DD	0.007	-0.004
Net Worth Growth x DD	-0.006	0.018
N	11639	2849

Note: Sample is restricted to households 64 or younger who did not move between PSID waves. Debt Decline [DD] is an indicator variable for households who report a debt decline between consecutive PSID waves. Additional controls include a cubic term for the age of the head of household, family size, and year fixed effects. Robust standard errors; *** significant at the 1 percent level. [Return to table](#)

Exhibit 8 Summary

- Little empirical evidence during and/or following the Great Recession that factors other than ongoing developments in income and net worth had an impact on consumption.
- Even if pent-up demand for deleveraging exists, the risks to consumption growth would be limited.
- The standard relationship linking consumption to income and net worth should continue to be a reasonable predictor of household spending.

Appendix 2: Materials used by Ms. Yellen

Consensus Statement on Longer-Run Goals and Policy Strategy

January 24, 2012

Class I FOMC - Restricted Controlled (FR)

The FOMC's Longer-Run Goals and Policy Strategy

Following careful deliberations at its recent meetings, the Federal Open Market Committee (FOMC) has reached broad agreement on the following principles regarding its longer-run goals and monetary policy strategy. The Committee intends to reaffirm these principles and to make adjustments as appropriate at its annual organizational meeting each January.

1. The FOMC is firmly committed to fulfilling its statutory mandate from the Congress of promoting maximum employment, stable prices, and moderate long-term interest rates. The Committee seeks to explain its monetary policy decisions to the public as clearly as possible. Such clarity facilitates well-informed decision-making by households and businesses, reduces economic and financial uncertainty, increases the effectiveness of monetary policy, and enhances transparency and accountability, which are essential in a democratic society.
2. Inflation, employment, and long-term interest rates fluctuate over time in response to economic and financial disturbances. Moreover, monetary policy actions tend to influence economic activity and prices with a lag. Therefore, the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals.
3. The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation. The Committee judges that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate. Communicating this inflation goal clearly to the public helps keep longer-term inflation expectations firmly anchored, thereby fostering price stability and moderate long-term interest rates and enhancing the Committee's ability to promote maximum employment in the face of significant economic disturbances.
4. The maximum level of employment is largely determined by nonmonetary factors that affect the structure and dynamics of the labor market. These factors may change over time and may not be directly measurable. Consequently, it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the maximum level of employment, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments. Information about Committee participants' estimates of the longer-run normal rates of output growth and unemployment is published four times per year in the FOMC's Summary of Economic Projections. For example, in the most recent projections, FOMC participants' estimates of the longer-run normal rate of unemployment had a central tendency of 5.2 percent to 6.0 percent, roughly unchanged from last January but substantially higher than the corresponding interval several years earlier.
5. In setting monetary policy, the Committee seeks to mitigate deviations of inflation from its longer-run goal and deviations of employment from the Committee's assessments of its maximum level. These objectives are generally complementary. However, under circumstances in which the Committee judges that the objectives are not complementary, it follows a balanced approach in promoting them, taking into account the magnitude of the deviations and the potentially different time horizons over which employment and inflation are projected to return to levels judged consistent with its mandate.

Appendix 3: Materials used by Mr. Sack

Material for

FOMC Presentation: *Financial Market Developments and Desk Operations*

Brian Sack

January 24, 2012

Exhibit 1

Top-left panel (1)

Title: Euro Area Excess Liquidity

Series: Euro area excess reserves plus deposit facility balance at ECB, excluding fine-tuning operation days

Horizon: April 1, 2010 - January 20, 2012

Description: The ECB's recent operations, most notably the 3-year longer-term refinancing operation (LTRO), have provided the euro area with considerable excess euro liquidity.

Source: ECB

Top-right panel (2)

Title: Maturing European Bank Debt

Series: Maturing longer-term unsecured and secured bank debt by month in 2012 for 16 large banks in the euro area, UK, and Switzerland

Horizon: January 2012 - December 2012

Description: The amount of longer-term bank debt coming due for European banks over 2012 is quite sizable and relatively evenly distributed throughout the year. The liquidity provided by the ECB may aid in helping banks replace those funds.

Source: Dealogic

Middle-left panel (3)

Title: Dollar Funding Spreads to OIS (3-Month Rates)

Series: Euro Libor rate swapped to dollars spread to OIS, 3-month forward dollar Libor spread to OIS, spot 3-month dollar Libor

Horizon: April 1, 2010 - January 20, 2012

Description: Spreads indicating current and future funding stresses have decreased moderately, but remain somewhat elevated.

Source: Bloomberg, Federal Reserve Bank of New York

Middle-right panel (4)

Title: Euro Area Sovereign Yields (2-Year Rates)

Series: Spain 2-year yield, Italy 2-year yield

Horizon: April 1, 2010 - January 20, 2012

Description: Shorter-term sovereign debt yields have decreased significantly since December, perhaps in part aided by bank buying of sovereign debt to pledge to the ECB for funding via the 3-year LTRO.

Source: Bloomberg

Bottom-left panel (5)

Title: ECB Securities Markets Program Weekly Purchase Amounts

Series: ECB Securities Markets Program weekly purchase amounts

Horizon: August 5, 2011 - January 13, 2012

Description: The ECB has maintained a relatively slow pace of sovereign debt purchases in recent weeks.

Source: ECB

Bottom-right panel (6)

Title: Price of Greek Bond Maturing on 05/20/13

Series: Price of 10-year Greek note issued January 9, 2003 and maturing May 20, 2013, with 4.6% coupon

Horizon: January 1, 2011 - January 20, 2012

Description: Greek debt is currently trading at around 30 cents on the dollar, as negotiations over debt restructuring continue.

Source: Bloomberg

Exhibit 2

Top-left panel (7)

Title: Equity Prices and Volatility

Series: S&P 500 indexed to 4/1/2010, VIX Index

Horizon: April 1, 2010 - January 20, 2012

Description: Domestic equity prices increased substantially in the intermeeting period, while implied volatility has continued to decrease.

Source: Bloomberg

Top-right panel (8)

Title: Correlation of S&P 500 with Euro

Series: 30-day rolling correlation of daily percent changes in S&P 500 index and euro-dollar exchange rate

Horizon: April 1, 2010 - January 20, 2012

Description: The correlation of S&P 500 returns with the euro-dollar exchange rate has decreased off its highs but remains elevated, suggesting that developments in Europe will continue to be an important driver of U.S. asset prices.

Source: Bloomberg

Middle-left panel (9)

Title: Corporate Bond Spreads to Treasury

Series: Bank of America-Merrill Lynch high-yield bond index spread to Treasury and investment grade index spread to Treasury

Horizon: April 1, 2010 - January 20, 2012

Description: Yield spreads on corporate bonds have turned down following their rise in the second half of last year.

Source: Bank of America-Merrill Lynch

Middle-right panel (10)

Title: Treasury Yields

Series: 2-year, 5-year, and 10-year Treasury yields

Horizon: April 1, 2010 - January 20, 2012

Description: Despite the general shift into risky assets, U.S. Treasury yields remained at very low levels and were roughly unchanged over the intermeeting period.

Source: Bloomberg

Bottom-left panel (11)

Title: Implied Federal Funds Rate Path

Series: Risk neutral implied federal funds rate path derived from federal funds futures and eurodollar futures

Horizon: January 20, 2012 - January 1, 2015

Description: The expected path of the federal funds rate remains roughly flat through 2013 and only begins to turn gradually higher in 2014. This expected path decreased very slightly in the intermeeting period.

Source: Bloomberg, Federal Reserve Bank of New York

Bottom-right panel (12)

Title: Estimated Effect of SOMA Balance Sheet on Term Premium

Series: Estimated effect of SOMA balance sheet on term premium embedded in 10-year Treasury yield, as estimated by Min Wei and Canlin Li in 2012 model developed at Federal Reserve Board of Governors

Horizon: December 31, 2009 - December 31, 2016

Description: The balance sheet policies of the FOMC appear to be exerting downward pressure on longer-term yields through a term premium effect, as Board staff estimate that the Federal Reserve's asset holdings are keeping the term premium embedded in the 10-year Treasury yield about 65 basis points lower than it would be if the balance sheet were of normal size and composition.

Source: Federal Reserve Board of Governors

Exhibit 3

Top-left panel (13)

Title: Probability of Additional Policy Actions

Series: Federal Reserve Bank of New York Survey additional policy action responses by primary dealers

Horizon: Current meeting & 1 year

Description: Participants placed a high probability of additional easing over the next year, particularly in the form of further asset purchases, guidance on the size of the SOMA portfolio, or guidance on the target federal funds rate. For the current meeting, participants placed a roughly 70 percent probability to a change in rate guidance, and less than 50 percent probability to the other easing options listed here.

Source: Federal Reserve Bank of New York Survey

Top-right panel (14)

Title: Probability Distribution of First Increase in Federal Funds Target Rate

Series: Average probabilities of first increase in federal funds target rate by half-year, as assessed in Federal Reserve Bank of New York Survey of primary dealers

Horizon: 2012:H1 to 2016 or later

Description: Dealer survey respondents place sizable odds on policy remaining on hold for a long period, with a 95 percent probability that the first increase will take place after mid-2013. This indicates a shift out in their estimates for this lift-off.

Source: Federal Reserve Bank of New York Survey

Middle-left panel (15)

Title: SOMA Portfolio Holdings

Series: Actual past SOMA portfolio holdings and median expected future holdings as indicated in the January Federal Reserve Bank of New York Survey and November Survey

Horizon: January 1, 2007 - January 1, 2017

Description: Dealer survey respondents have increased their future estimates for SOMA portfolio holdings, as the median forecast now includes an increase in SOMA size.

Source: Federal Reserve Bank of New York Survey

Middle-right panel (16)

Title: MBS Option-Adjusted Spread to Treasury

Series: FNMA 30-year current coupon MBS option-adjusted spread to Treasury securities, spliced with 3.5% coupon option-adjusted spread to Treasury when current coupon rate is below 3.5%

Horizon: March 1, 2011 - January 20, 2012

Description: The option-adjusted MBS spread to Treasury securities decreased in the intermeeting period.

Source: Barclays Capital

Bottom-left panel (17)

Title: Annual Treasury Remittances

Series: Actual past annual Federal Reserve remittances to U.S. Treasury and projected future remittances

Horizon: 2002 - 2020

Description: The elevated size of the SOMA portfolio continues to produce a substantial financial return, with a preliminary estimate of a \$77 billion remittance to Treasury for 2011. The strong pace of remittance is expected to continue for several years, but this path is dependent on the course of interest rates.

Source: Federal Reserve Bank of New York

Bottom-right panel (18) SOMA Operations Since September 2011 FOMC Meeting

	Number of Operations/Transactions	Total Amount (\$ Billions)
MEP Treasury Purchases	48	162.5
MEP Treasury Sales	23	170.4
MBS Purchases	635	98.1

Source: Federal Reserve Bank of New York

Appendix 4: Materials used by Messrs. Engen, Reeve, and Gallin

Material for

Staff Presentation on the Economic Outlook

January 24-25, 2012

Class II FOMC - Restricted (FR)

Exhibit 1 Recent Indicators

Top-left panel Change in Private Payroll Employment

Period	Thousands of employees
January 2007	185.00
February 2007	141.00
March 2007	149.33
April 2007	105.00
May 2007	122.67
June 2007	72.67
July 2007	59.33
August 2007	-9.33
September 2007	-24.33
October 2007	-5.33
November 2007	59.00
December 2007	70.00

January 2008	46.67
February 2008	-28.67
March 2008	-70.33
April 2008	-133.67
May 2008	-171.00
June 2008	-214.33
July 2008	-240.67
August 2008	-266.33
September 2008	-338.67
October 2008	-414.00
November 2008	-570.67
December 2008	-638.00
January 2009	-754.67
February 2009	-732.67
March 2009	-783.00
April 2009	-760.33
May 2009	-628.67
June 2009	-512.33
July 2009	-350.33
August 2009	-313.33
September 2009	-238.33
October 2009	-226.00
November 2009	-165.67
December 2009	-128.67
January 2010	-59.33
February 2010	-55.00
March 2010	27.00
April 2010	117.33
May 2010	140.33
June 2010	114.00
July 2010	68.67
August 2010	89.33
September 2010	104.00
October 2010	120.67
November 2010	126.67
December 2010	146.00
January 2011	129.67
February 2011	174.00
March 2011	191.33
April 2011	240.33
May 2011	186.33
June 2011	138.33
July 2011	115.67
August 2011	106.67
September 2011	155.00
October 2011	142.00
November 2011	158.00
December 2011	155.33

Note: Three-month moving average.

[Inset:] Unemployment Rate

Percent

2011	
Q3	Dec.
9.1	8.5

Top-right panel Manufacturing IP

Period	Index, 2007 = 100
January 2007	98.24
February 2007	98.74
March 2007	99.45
April 2007	100.18
May 2007	100.03
June 2007	100.28
July 2007	100.58
August 2007	100.10

September 2007	100.68
October 2007	100.20
November 2007	100.62
December 2007	100.93
January 2008	100.63
February 2008	100.15
March 2008	99.70
April 2008	98.53
May 2008	97.98
June 2008	97.35
July 2008	96.36
August 2008	94.99
September 2008	91.63
October 2008	91.09
November 2008	88.88
December 2008	86.08
January 2009	83.70
February 2009	83.81
March 2009	82.24
April 2009	81.64
May 2009	80.63
June 2009	80.35
July 2009	81.47
August 2009	82.25
September 2009	82.94
October 2009	82.94
November 2009	83.63
December 2009	83.79
January 2010	84.70
February 2010	84.81
March 2010	85.61
April 2010	86.31
May 2010	87.26
June 2010	87.22
July 2010	87.99
August 2010	88.07
September 2010	88.31
October 2010	88.54
November 2010	88.68
December 2010	89.63
January 2011	90.30
February 2011	90.47
March 2011	91.15
April 2011	90.63
May 2011	90.78
June 2011	90.91
July 2011	91.63
August 2011	91.81
September 2011	92.22
October 2011	92.70
November 2011	92.39
December 2011	93.19

[Inset]

Percent change, a.r.	
2011:Q3	5.0
2011:Q4	3.9
2012:Q1 ^f	4.1

f. Staff forecast. [Return to table](#)

Middle-left panel Real Personal Consumption Expenditures

Billions of chained (2005) dollars

Period	Real PCE
January 2007	9204.56
February 2007	9208.98
March 2007	9214.10

April 2007	9236.74
May 2007	9249.89
June 2007	9247.01
July 2007	9261.82
August 2007	9292.99
September 2007	9300.90
October 2007	9296.09
November 2007	9313.92
December 2007	9327.77
January 2008	9310.62
February 2008	9273.15
March 2008	9283.46
April 2008	9289.26
May 2008	9287.61
June 2008	9280.47
July 2008	9226.37
August 2008	9209.75
September 2008	9151.77
October 2008	9107.47
November 2008	9084.54
December 2008	9036.11
January 2009	9071.52
February 2009	9042.60
March 2009	9008.53
April 2009	8993.07
May 2009	9002.40
June 2009	9000.15
July 2009	9023.47
August 2009	9104.67
September 2009	9022.74
October 2009	9044.64
November 2009	9044.68
December 2009	9091.21
January 2010	9086.77
February 2010	9119.10
March 2010	9157.71
April 2010	9164.70
May 2010	9192.38
June 2010	9203.67
July 2010	9216.76
August 2010	9254.41
September 2010	9270.10
October 2010	9305.50
November 2010	9334.41
December 2010	9345.26
January 2011	9348.61
February 2011	9382.12
March 2011	9399.49
April 2011	9394.21
May 2011	9395.66
June 2011	9388.36
July 2011	9425.12
August 2011	9411.84
September 2011	9463.55
October 2011	9476.31
November 2011	9494.78

Quarterly averages

Billions of chained (2005) dollars

Period	Real PCE
2011:Q1	9376.74
2011:Q2	9392.74
2011:Q3	9433.50
2011:Q4 (staff estimate)	9484.88
2012:Q1 (staff estimate)	9533.36

[Inset]

Percent change, a.r.

	2011:Q3	2011:Q4 ^f	2012:Q1 ^f
Current	1.8	2.2	2.1
Dec. TB	2.1	2.4	2.3

Middle-right panel Nondefense Capital Goods Ex. Aircraft

Billions of dollars, ratio scale

Period	New orders	Shipments
March 2007	43.57	42.28
April 2007	44.90	43.44
May 2007	45.17	43.83
June 2007	45.24	44.18
July 2007	44.84	43.90
August 2007	45.12	44.09
September 2007	45.15	44.31
October 2007	45.04	44.69
November 2007	44.79	44.54
December 2007	45.24	44.41
January 2008	45.68	44.31
February 2008	45.73	44.31
March 2008	45.16	44.04
April 2008	45.52	44.17
May 2008	45.82	44.23
June 2008	46.35	44.52
July 2008	46.27	44.58
August 2008	46.13	44.47
September 2008	45.08	44.40
October 2008	42.96	43.69
November 2008	41.22	42.90
December 2008	39.14	41.73
January 2009	36.86	40.10
February 2009	35.23	38.93
March 2009	34.16	37.54
April 2009	33.82	36.87
May 2009	33.53	36.06
June 2009	34.06	35.76
July 2009	34.94	36.08
August 2009	35.08	36.11
September 2009	35.40	36.13
October 2009	35.55	36.03
November 2009	36.10	36.31
December 2009	36.50	36.68
January 2010	36.88	36.99
February 2010	37.37	37.62
March 2010	38.22	38.25
April 2010	39.09	38.91
May 2010	40.10	39.55
June 2010	41.12	40.02
July 2010	41.59	40.45
August 2010	42.12	40.75
September 2010	42.14	41.10
October 2010	42.55	41.31
November 2010	42.66	41.43
December 2010	43.16	41.73
January 2011	43.42	41.91
February 2011	43.47	41.92
March 2011	43.60	42.10
April 2011	44.26	42.29
May 2011	44.84	42.63
June 2011	44.81	42.89
July 2011	45.03	43.55
August 2011	45.14	44.49
September 2011	45.28	44.86
October 2011	45.12	44.98
November 2011	44.88	44.47

Note: Three-month moving average. Weighted sum of new orders and shipments across more than 30 equipment categories, with weights given by the share of total shipments in each category that is purchased for private business investment.

[Inset] E&S Spending

Percent change, a.r.	
2011:Q3	16.2
2011:Q4 ^f	3.0
2012:Q1 ^f	2.2

Bottom-left panel
Real Federal Government Purchases

Contribution to real GDP growth, p.p.

Period	Current	Dec. TB
2011:Q1	-0.82	
2011:Q2	0.16	
2011:Q3	0.17	0.15
2011:Q4 ^f	-0.82	-0.27
2012:Q1 ^f	0.11	0.33

f. Staff forecast. [Return to table](#)

Bottom-right panel
Real GDP

Percent change, annual rate

Period	Current	Dec. TB
2011:Q1	0.36	
2011:Q2	1.34	
2011:Q3	1.81	1.92
2011:Q4 ^f	2.93	3.21
2012:Q1 ^f	1.57	2.05

f. Staff forecast. [Return to table](#)

Exhibit 2
Medium-term Forecast

Top-left panel
Real GDP

Four-quarter percent change

Period	Current	June 2011 TB
2010:Q1	2.17	2.39
2010:Q2	3.30	3.00
2010:Q3	3.51	3.25
2010:Q4	3.14	2.78
2011:Q1	2.24	2.37
2011:Q2	1.63	2.43
2011:Q3	1.46	2.76
2011:Q4	1.60	2.71
2012:Q1	1.91	2.97
2012:Q2	2.03	3.32
2012:Q3	2.16	3.26
2012:Q4	2.10	3.50
2013:Q1	2.22	3.64
2013:Q2	2.31	3.84
2013:Q3	2.34	4.03
2013:Q4	2.36	4.21

Note: Blue shading represents the forecast period, which begins in 2011:Q4.

Top-right panel
Unemployment Rate

Percent

Period	Current	June 2011 TB
2010:Q1	9.80	9.70
2010:Q2	9.60	9.66
2010:Q3	9.50	9.59
2010:Q4	9.60	9.63
2011:Q1	9.00	8.93
2011:Q2	9.10	9.02
2011:Q3	9.10	9.00

2011:Q4	8.70	8.86
2012:Q1	8.68	8.79
2012:Q2	8.68	8.63
2012:Q3	8.65	8.42
2012:Q4	8.59	8.13
2013:Q1	8.51	7.88
2013:Q2	8.42	7.63
2013:Q3	8.32	7.38
2013:Q4	8.23	7.10

Note: Blue shading represents the forecast period, which begins in 2012:Q1.

Middle-left panel Factors Restraining Recovery

- European situation:
 - Higher value of the dollar.
 - Lower exports.
 - Increased uncertainty.
- Difficult access to credit.
- Depressed housing market.

Middle-right panel Reserve Bank Inquiries of Their District Business Contacts

Question	Percent	
	Jun. 2011	Jan. 2012
Plan to increase employment	45	41
Low sales growth restraining hiring	42	47

Bottom-left panel Fiscal Impetus: Federal Government

Period	Contribution to real GDP growth, p.p.
2007	0.24
2008	1.09
2009	1.26
2010	0.54
2011	-0.39
2012	-0.41
2013	-1.10

Note: Staff estimates. Blue shading represents the forecast period, which begins in 2012.

Bottom-right panel Real State and Local Government Purchases

Period	Contribution to real GDP growth, p.p.
2007	0.15
2008	-0.11
2009	-0.13
2010	-0.21
2011:H1	-0.38
2011:H2	-0.14
2012	-0.06
2013	0.08

Note: Blue shading represents the forecast period, which begins in 2012.

Exhibit 3 Some Risks Around the Forecast

Top-left panel Faster Snapback

- Financial recovery may be further along than assumed.
- Recent improvement in labor and production indicators may signal more sustained recovery.
- More pent-up demand for durables and business equipment is released.

Top-right panel Lost Decade

- Improvements in financial conditions are slower to materialize.
- Consumer and business confidence remains subdued.

- Persistently slow spending has negative supply-side effects.

Middle-left panel Real GDP

Four-quarter percent change

Period	Baseline	Faster snapback	Lost decade
2010:Q1	2.17	2.17	2.17
2010:Q2	3.30	3.30	3.30
2010:Q3	3.51	3.51	3.51
2010:Q4	3.14	3.14	3.14
2011:Q1	2.24	2.24	2.24
2011:Q2	1.63	1.63	1.63
2011:Q3	1.46	1.46	1.46
2011:Q4	1.60	1.60	1.60
2012:Q1	1.91	2.04	1.91
2012:Q2	2.03	2.33	2.03
2012:Q3	2.16	2.68	2.16
2012:Q4	2.10	2.86	1.88
2013:Q1	2.22	3.14	1.93
2013:Q2	2.31	3.31	1.93
2013:Q3	2.34	3.37	1.80
2013:Q4	2.36	3.35	1.82
2014:Q1	2.62	3.40	1.86
2014:Q2	2.94	3.49	1.92
2014:Q3	3.31	3.64	1.98
2014:Q4	3.61	3.75	2.04
2015:Q1	3.92	3.79	2.09
2015:Q2	4.17	3.88	2.14
2015:Q3	4.20	3.73	2.21
2015:Q4	4.17	3.49	2.27
2016:Q1	4.03	3.22	2.33
2016:Q2	3.85	2.89	2.39
2016:Q3	3.75	2.65	2.46
2016:Q4	3.69	2.57	2.52

Middle-right panel Unemployment Rate

Percent

Period	Baseline	Faster snapback	Lost decade
2010:Q1	9.80	9.80	9.80
2010:Q2	9.66	9.66	9.66
2010:Q3	9.52	9.52	9.52
2010:Q4	9.57	9.57	9.57
2011:Q1	8.98	8.98	8.98
2011:Q2	9.06	9.06	9.06
2011:Q3	9.05	9.05	9.05
2011:Q4	8.70	8.70	8.70
2012:Q1	8.68	8.64	8.70
2012:Q2	8.68	8.57	8.72
2012:Q3	8.65	8.44	8.71
2012:Q4	8.59	8.29	8.72
2013:Q1	8.51	8.07	8.69
2013:Q2	8.42	7.84	8.69
2013:Q3	8.32	7.59	8.69
2013:Q4	8.23	7.36	8.72
2014:Q1	8.11	7.15	8.70
2014:Q2	8.01	6.98	8.71
2014:Q3	7.92	6.84	8.73
2014:Q4	7.83	6.71	8.78
2015:Q1	7.66	6.57	8.77
2015:Q2	7.49	6.45	8.77
2015:Q3	7.32	6.34	8.76
2015:Q4	7.16	6.26	8.75
2016:Q1	7.00	6.23	8.73
2016:Q2	6.85	6.23	8.69
2016:Q3	6.69	6.24	8.64
2016:Q4	6.53	6.24	8.56

Bottom-left panel Core PCE Prices

Four-quarter percent change

Period	Baseline	Faster snapback	Lost decade
2010:Q1	1.74	1.74	1.74
2010:Q2	1.54	1.54	1.54
2010:Q3	1.35	1.35	1.35
2010:Q4	0.96	0.96	0.96
2011:Q1	1.06	1.06	1.06
2011:Q2	1.31	1.31	1.31
2011:Q3	1.63	1.63	1.63
2011:Q4	1.69	1.69	1.69
2012:Q1	1.68	1.68	1.68
2012:Q2	1.48	1.48	1.48
2012:Q3	1.33	1.34	1.33
2012:Q4	1.47	1.49	1.47
2013:Q1	1.45	1.49	1.45
2013:Q2	1.43	1.50	1.44
2013:Q3	1.42	1.52	1.42
2013:Q4	1.42	1.55	1.40
2014:Q1	1.42	1.59	1.38
2014:Q2	1.41	1.63	1.36
2014:Q3	1.41	1.66	1.33
2014:Q4	1.40	1.69	1.29
2015:Q1	1.41	1.73	1.26
2015:Q2	1.41	1.77	1.24
2015:Q3	1.43	1.82	1.22
2015:Q4	1.44	1.88	1.20
2016:Q1	1.46	1.93	1.18
2016:Q2	1.49	1.97	1.16
2016:Q3	1.51	2.01	1.14
2016:Q4	1.53	2.04	1.12

Bottom-right panel Federal Funds Rate

Percent

Period	Baseline	Faster snapback	Lost decade
2010:Q1	0.13	0.13	0.13
2010:Q2	0.19	0.19	0.19
2010:Q3	0.19	0.19	0.19
2010:Q4	0.19	0.19	0.19
2011:Q1	0.16	0.16	0.16
2011:Q2	0.09	0.09	0.09
2011:Q3	0.08	0.08	0.08
2011:Q4	0.08	0.08	0.08
2012:Q1	0.08	0.08	0.08
2012:Q2	0.10	0.10	0.10
2012:Q3	0.12	0.12	0.13
2012:Q4	0.12	0.13	0.13
2013:Q1	0.12	0.12	0.13
2013:Q2	0.12	0.13	0.13
2013:Q3	0.12	0.23	0.13
2013:Q4	0.12	0.43	0.13
2014:Q1	0.13	0.64	0.13
2014:Q2	0.13	0.87	0.13
2014:Q3	0.18	1.21	0.13
2014:Q4	0.32	1.59	0.13
2015:Q1	0.58	1.91	0.13
2015:Q2	0.93	2.24	0.13
2015:Q3	1.25	2.51	0.13
2015:Q4	1.55	2.69	0.13
2016:Q1	1.81	2.75	0.13
2016:Q2	2.05	2.76	0.13
2016:Q3	2.28	2.76	0.13
2016:Q4	2.50	2.79	0.13

Exhibit 4 Inflation Projection

Top-left panel PCE Prices

Percent change, annual rate

Period	Total (12-month)	Core (12-month)	Core (3-month)
January 2007	2.13	2.50	2.52
February 2007	2.46	2.58	3.25
March 2007	2.70	2.44	2.97
April 2007	2.53	2.30	1.90
May 2007	2.57	2.19	1.44
June 2007	2.54	2.14	1.65
July 2007	2.39	2.20	1.79
August 2007	2.07	2.12	2.00
September 2007	2.67	2.21	2.46
October 2007	3.20	2.25	2.79
November 2007	3.63	2.38	2.83
December 2007	3.55	2.46	2.76
January 2008	3.55	2.29	2.67
February 2008	3.41	2.18	2.45
March 2008	3.36	2.32	2.42
April 2008	3.46	2.37	2.23
May 2008	3.59	2.47	2.59
June 2008	4.06	2.52	2.43
July 2008	4.44	2.50	2.33
August 2008	4.28	2.46	1.99
September 2008	4.00	2.35	1.80
October 2008	3.17	2.16	1.43
November 2008	1.38	2.01	1.03
December 2008	0.56	1.77	0.45
January 2009	0.42	1.65	0.62
February 2009	0.49	1.65	1.01
March 2009	0.05	1.52	1.39
April 2009	-0.10	1.59	2.01
May 2009	-0.39	1.52	2.04
June 2009	-0.47	1.47	2.25
July 2009	-0.91	1.39	1.52
August 2009	-0.53	1.40	1.53
September 2009	-0.48	1.41	1.55
October 2009	0.36	1.67	2.54
November 2009	1.77	1.72	2.32
December 2009	2.35	1.75	1.81
January 2010	2.44	1.75	0.92
February 2010	2.23	1.71	0.95
March 2010	2.48	1.78	1.52
April 2010	2.34	1.58	1.35
May 2010	2.16	1.58	1.51
June 2010	1.46	1.47	1.00
July 2010	1.60	1.44	0.95
August 2010	1.45	1.37	0.71
September 2010	1.39	1.23	0.59
October 2010	1.29	0.97	0.67
November 2010	1.17	0.97	0.70
December 2010	1.37	0.93	0.61
January 2011	1.49	1.04	1.20
February 2011	1.81	1.10	1.51
March 2011	2.05	1.04	1.97
April 2011	2.36	1.18	1.91
May 2011	2.59	1.31	2.36
June 2011	2.63	1.42	2.51
July 2011	2.78	1.57	2.52
August 2011	2.89	1.68	2.17
September 2011	2.94	1.65	1.50
October 2011	2.66	1.65	0.97
November 2011	2.54	1.65	0.59
December 2011	2.38	1.82	1.30

Note: Staff forecast for December.

Top-right panel PCE Energy Prices

Period	Percent change, annual rate
2010:Q1	13.65
2010:Q2	-14.89
2010:Q3	5.63
2010:Q4	24.70
2011:Q1	40.73
2011:Q2	15.04
2011:Q3	3.29
2011:Q4	-6.79
2012:Q1	0.80
2012:Q2	4.89
2012:Q3	0.69
2012:Q4	-0.47
2013:Q1	-0.50
2013:Q2	-0.90
2013:Q3	-0.96
2013:Q4	-0.78

Note: 2011:Q4 is an estimate based on monthly data through October. Blue shading represents the forecast period, which begins in 2012:Q1.

Middle-left panel Core Nonfuel Import Prices

Period	Percent change, annual rate
2010	2.63
2011:H1	7.73
2011:H2	0.75
2012	0.21
2013	1.55

Note: 2011:Q4 is an estimate based on monthly data through October. Blue shading represents the forecast period, which begins in 2012.

Middle-right panel Inflation Expectations

Michigan, next 5 to 10 years

Period	Percent
January 2007	3.0
February 2007	2.9
March 2007	2.9
April 2007	3.1
May 2007	3.1
June 2007	2.9
July 2007	3.1
August 2007	2.9
September 2007	2.9
October 2007	2.8
November 2007	2.9
December 2007	3.1
January 2008	3.0
February 2008	3.0
March 2008	2.9
April 2008	3.2
May 2008	3.4
June 2008	3.4
July 2008	3.2
August 2008	3.2
September 2008	3.0
October 2008	2.9
November 2008	2.9
December 2008	2.6
January 2009	2.9
February 2009	3.1
March 2009	2.6
April 2009	2.8
May 2009	2.9
June 2009	3.0
July 2009	3.0
August 2009	2.8

September 2009	2.8
October 2009	2.9
November 2009	3.0
December 2009	2.7
January 2010	2.9
February 2010	2.7
March 2010	2.7
April 2010	2.7
May 2010	2.9
June 2010	2.8
July 2010	2.9
August 2010	2.8
September 2010	2.7
October 2010	2.8
November 2010	2.8
December 2010	2.8
January 2011	2.9
February 2011	2.9
March 2011	3.2
April 2011	2.9
May 2011	2.9
June 2011	3.0
July 2011	2.9
August 2011	2.9
September 2011	2.9
October 2011	2.7
November 2011	2.7
December 2011	2.7
January 2012 ^p	2.8

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Note: Median responses to the Michigan survey.

SPF, next 10 years

Period	Percent
2007:Q1	2.35
2007:Q2	2.40
2007:Q3	2.40
2007:Q4	2.40
2008:Q1	2.50
2008:Q2	2.50
2008:Q3	2.50
2008:Q4	2.50
2009:Q1	2.40
2009:Q2	2.50
2009:Q3	2.50
2009:Q4	2.26
2010:Q1	2.39
2010:Q2	2.40
2010:Q3	2.30
2010:Q4	2.20
2011:Q1	2.30
2011:Q2	2.40
2011:Q3	2.40
2011:Q4	2.50

Note: The SPF projection is for the PCE price index.

Bottom-left panel Compensation per Hour*

Period	Percent change, Q4/Q4
Average 2005-2007	3.87
2008	2.50
2009	1.80
2010	1.60
2011	1.82
2012	2.34
2013	2.18

Note: Blue shading represents the forecast period, which begins in 2012.

Bottom-right panel PCE Price Projection

(Percent change, Q4/Q4)

		2011	2012	2013
1.	PCE price index	2.5	1.4	1.3
2.	Food	5.0	1.1	1.2
3.	Energy	11.7	1.4	-0.9
4.	Core PCE	1.7	1.5	1.4

Exhibit 5 European Developments

Top-left panel Effects of ECB Operations

Period	Amount outstanding from refinancing operations (Billions of euros)	EONIA (Basis points)
7 January 2011	494.51	38.0
14 January 2011	480.71	36.1
21 January 2011	477.47	82.4
28 January 2011	494.83	104.0
4 February 2011	551.24	36.5
11 February 2011	477.06	92.4
18 February 2011	457.97	50.4
25 February 2011	441.85	62.8
4 March 2011	446.34	38.1
11 March 2011	454.25	74.7
18 March 2011	443.27	71.0
25 March 2011	431.53	63.5
1 April 2011	423.74	58.8
8 April 2011	407.24	54.0
15 April 2011	417.28	114.0
22 April 2011	421.51	143.4
29 April 2011	438.89	142.0
6 May 2011	457.77	59.0
13 May 2011	438.13	111.0
20 May 2011	431.23	115.8
27 May 2011	437.31	92.1
3 June 2011	431.97	88.6
10 June 2011	423.65	154.9
17 June 2011	444.79	133.8
24 June 2011	497.14	85.8
1 July 2011	454.82	90.9
8 July 2011	433.39	59.2
15 July 2011	465.31	148.4
22 July 2011	508.58	97.0
29 July 2011	497.28	97.2
5 August 2011	505.10	84.6
12 August 2011	569.90	88.0
19 August 2011	552.82	89.0
26 August 2011	529.60	87.4
2 September 2011	527.12	86.8
9 September 2011	521.22	85.0
16 September 2011	543.06	111.2
23 September 2011	574.82	105.5
30 September 2011	591.40	146.3
7 October 2011	580.32	91.9
14 October 2011	586.66	93.0
21 October 2011	585.16	93.7
28 October 2011	597.43	91.9
4 November 2011	588.29	89.2
11 November 2011	591.09	73.3
18 November 2011	630.49	72.2
25 November 2011	648.97	73.0
2 December 2011	661.25	72.5
9 December 2011	635.68	73.5
16 December 2011	663.68	56.9

23 December 2011	872.92	42.2
30 December 2011	848.65	62.9
6 January 2012	836.53	35.7
13 January 2012	818.59	38.5
20 January 2012	828.17	39.4
27 January 2012	ND	37.1

Top-right panel Three-month Dollar Funding Rate

Basis points

Date	Dollar rate implied by FX swaps
4 January 2011	75.93
5 January 2011	72.51
6 January 2011	75.72
7 January 2011	74.75
10 January 2011	76.62
11 January 2011	73.47
12 January 2011	69.18
13 January 2011	66.45
14 January 2011	66.50
17 January 2011	66.11
18 January 2011	63.28
19 January 2011	65.82
20 January 2011	60.06
21 January 2011	57.90
24 January 2011	62.11
25 January 2011	53.31
26 January 2011	56.82
27 January 2011	57.38
28 January 2011	57.81
31 January 2011	58.18
1 February 2011	60.17
2 February 2011	58.84
3 February 2011	60.28
4 February 2011	61.90
7 February 2011	63.79
8 February 2011	59.54
9 February 2011	59.99
10 February 2011	61.05
11 February 2011	61.90
14 February 2011	61.77
15 February 2011	61.55
16 February 2011	61.24
17 February 2011	61.37
18 February 2011	62.81
21 February 2011	62.61
22 February 2011	60.26
23 February 2011	57.78
24 February 2011	56.79
25 February 2011	56.84
28 February 2011	56.45
1 March 2011	57.55
2 March 2011	57.49
3 March 2011	48.82
4 March 2011	53.61
7 March 2011	53.22
8 March 2011	53.79
9 March 2011	52.98
10 March 2011	57.89
11 March 2011	58.74
14 March 2011	56.82
15 March 2011	59.51
16 March 2011	57.91
17 March 2011	55.25
18 March 2011	53.36
21 March 2011	51.61
22 March 2011	50.74

23 March 2011	49.99
24 March 2011	50.15
25 March 2011	50.19
28 March 2011	48.04
29 March 2011	47.11
30 March 2011	48.18
31 March 2011	44.94
1 April 2011	46.93
4 April 2011	47.21
5 April 2011	44.45
6 April 2011	42.55
7 April 2011	39.95
8 April 2011	36.36
11 April 2011	38.85
12 April 2011	40.58
13 April 2011	38.14
14 April 2011	38.19
15 April 2011	37.77
18 April 2011	38.27
19 April 2011	37.01
20 April 2011	36.30
21 April 2011	36.20
22 April 2011	ND
25 April 2011	ND
26 April 2011	35.12
27 April 2011	32.21
28 April 2011	30.26
29 April 2011	ND
2 May 2011	ND
3 May 2011	29.05
4 May 2011	26.69
5 May 2011	35.38
6 May 2011	30.44
9 May 2011	36.55
10 May 2011	39.13
11 May 2011	36.32
12 May 2011	37.16
13 May 2011	36.05
16 May 2011	36.93
17 May 2011	38.18
18 May 2011	34.97
19 May 2011	37.23
20 May 2011	40.93
23 May 2011	44.70
24 May 2011	39.49
25 May 2011	41.25
26 May 2011	44.13
27 May 2011	47.28
30 May 2011	ND
31 May 2011	44.48
1 June 2011	39.30
2 June 2011	40.92
3 June 2011	39.47
6 June 2011	35.50
7 June 2011	33.02
8 June 2011	32.77
9 June 2011	33.98
10 June 2011	38.29
13 June 2011	38.43
14 June 2011	33.06
15 June 2011	39.90
16 June 2011	44.96
17 June 2011	39.53
20 June 2011	37.57
21 June 2011	39.66
22 June 2011	41.36
23 June 2011	48.92
24 June 2011	49.35
27 June 2011	49.98

28 June 2011	47.09
29 June 2011	44.34
30 June 2011	45.45
1 July 2011	45.52
4 July 2011	46.72
5 July 2011	48.06
6 July 2011	46.72
7 July 2011	46.73
8 July 2011	48.01
11 July 2011	55.06
12 July 2011	50.80
13 July 2011	44.96
14 July 2011	48.47
15 July 2011	48.84
18 July 2011	51.05
19 July 2011	49.97
20 July 2011	46.72
21 July 2011	46.72
22 July 2011	47.81
25 July 2011	50.98
26 July 2011	52.54
27 July 2011	56.38
28 July 2011	59.18
29 July 2011	66.37
1 August 2011	67.98
2 August 2011	78.11
3 August 2011	74.83
4 August 2011	77.58
5 August 2011	77.31
8 August 2011	104.68
9 August 2011	104.73
10 August 2011	105.74
11 August 2011	108.48
12 August 2011	106.23
15 August 2011	100.58
16 August 2011	101.73
17 August 2011	98.90
18 August 2011	103.72
19 August 2011	109.42
22 August 2011	109.09
23 August 2011	107.58
24 August 2011	103.29
25 August 2011	104.97
26 August 2011	105.57
29 August 2011	ND
30 August 2011	105.41
31 August 2011	106.51
1 September 2011	109.64
2 September 2011	117.75
5 September 2011	123.20
6 September 2011	125.52
7 September 2011	124.80
8 September 2011	119.25
9 September 2011	134.52
12 September 2011	138.97
13 September 2011	125.69
14 September 2011	123.16
15 September 2011	108.97
16 September 2011	114.15
19 September 2011	118.98
20 September 2011	124.89
21 September 2011	126.34
22 September 2011	133.88
23 September 2011	134.68
26 September 2011	133.25
27 September 2011	129.07
28 September 2011	128.83
29 September 2011	133.87
30 September 2011	136.98

3 October 2011	138.99
4 October 2011	138.39
5 October 2011	138.47
6 October 2011	128.85
7 October 2011	129.30
10 October 2011	126.98
11 October 2011	123.80
12 October 2011	119.80
13 October 2011	122.08
14 October 2011	119.63
17 October 2011	122.59
18 October 2011	124.18
19 October 2011	124.06
20 October 2011	126.65
21 October 2011	127.75
24 October 2011	127.22
25 October 2011	128.39
26 October 2011	130.50
27 October 2011	125.42
28 October 2011	126.44
31 October 2011	130.42
1 November 2011	143.72
2 November 2011	139.04
3 November 2011	147.11
4 November 2011	137.59
7 November 2011	139.04
8 November 2011	140.06
9 November 2011	149.25
10 November 2011	153.74
11 November 2011	151.74
14 November 2011	154.11
15 November 2011	161.24
16 November 2011	167.97
17 November 2011	173.36
18 November 2011	171.27
21 November 2011	179.76
22 November 2011	177.03
23 November 2011	184.56
24 November 2011	188.05
25 November 2011	191.35
28 November 2011	196.36
29 November 2011	202.73
30 November 2011	171.99
1 December 2011	164.01
2 December 2011	168.98
5 December 2011	165.68
6 December 2011	162.97
7 December 2011	156.43
8 December 2011	165.20
9 December 2011	168.02
12 December 2011	177.38
13 December 2011	190.51
14 December 2011	194.12
15 December 2011	175.83
16 December 2011	171.14
19 December 2011	159.95
20 December 2011	166.68
21 December 2011	177.80
22 December 2011	177.12
23 December 2011	181.21
26 December 2011	ND
27 December 2011	ND
28 December 2011	176.44
29 December 2011	169.14
30 December 2011	163.45
2 January 2012	ND
3 January 2012	153.62
4 January 2012	157.66
5 January 2012	158.11

6 January 2012	150.94
9 January 2012	148.15
10 January 2012	142.29
11 January 2012	138.73
12 January 2012	132.84
13 January 2012	135.33
16 January 2012	135.30
17 January 2012	129.62
18 January 2012	128.87
19 January 2012	127.35
20 January 2012	127.79
23 January 2012	128.41

Note: December Tealbook is indicated by a vertical line.

Upper-middle-left panel Two-year Sovereign Bond Spreads*

Percentage points

Date	Italy	Spain
3 January 2011	1.98	2.61
4 January 2011	1.83	2.52
5 January 2011	1.74	2.48
6 January 2011	1.84	2.54
7 January 2011	1.89	2.67
10 January 2011	1.90	2.70
11 January 2011	1.79	2.60
12 January 2011	1.62	2.48
13 January 2011	1.48	2.22
14 January 2011	1.43	2.16
17 January 2011	1.42	2.17
18 January 2011	1.41	2.27
19 January 2011	1.37	2.13
20 January 2011	1.36	2.05
21 January 2011	1.29	1.82
24 January 2011	1.29	1.95
25 January 2011	1.38	2.06
26 January 2011	1.31	2.09
27 January 2011	1.30	2.16
28 January 2011	1.28	2.14
31 January 2011	1.21	2.03
1 February 2011	1.05	1.79
2 February 2011	0.89	1.60
3 February 2011	1.08	1.77
4 February 2011	0.97	1.66
7 February 2011	1.04	1.78
8 February 2011	1.04	1.79
9 February 2011	1.03	1.77
10 February 2011	1.04	1.79
11 February 2011	1.09	1.86
14 February 2011	1.14	1.94
15 February 2011	1.09	1.89
16 February 2011	1.05	1.78
17 February 2011	1.10	1.85
18 February 2011	1.03	1.76
21 February 2011	1.06	1.78
22 February 2011	1.05	1.78
23 February 2011	0.96	1.68
24 February 2011	0.98	1.71
25 February 2011	0.99	1.70
28 February 2011	0.99	1.70
1 March 2011	0.97	1.64
2 March 2011	0.96	1.61
3 March 2011	0.88	1.51
4 March 2011	0.87	1.50
7 March 2011	0.91	1.51
8 March 2011	0.94	1.53
9 March 2011	0.97	1.53
10 March 2011	0.97	1.52
11 March 2011	0.85	1.45

14 March 2011	0.77	1.30
15 March 2011	0.80	1.32
16 March 2011	0.84	1.38
17 March 2011	0.76	1.36
18 March 2011	0.67	1.22
21 March 2011	0.62	1.17
22 March 2011	0.67	1.20
23 March 2011	0.70	1.21
24 March 2011	0.70	1.22
25 March 2011	0.68	1.22
28 March 2011	0.73	1.26
29 March 2011	0.70	1.27
30 March 2011	0.71	1.29
31 March 2011	0.71	1.38
1 April 2011	0.65	1.33
4 April 2011	0.62	1.29
5 April 2011	0.58	1.27
6 April 2011	0.56	1.20
7 April 2011	0.59	1.24
8 April 2011	0.97	1.21
11 April 2011	0.93	1.20
12 April 2011	0.96	1.23
13 April 2011	0.98	1.28
14 April 2011	1.03	1.37
15 April 2011	1.12	1.48
18 April 2011	1.31	1.83
19 April 2011	1.24	1.72
20 April 2011	1.19	1.66
21 April 2011	1.32	1.76
22 April 2011	1.32	1.76
25 April 2011	1.32	1.76
26 April 2011	1.40	1.85
27 April 2011	1.34	1.70
28 April 2011	1.30	1.61
29 April 2011	1.25	1.52
2 May 2011	1.19	1.55
3 May 2011	1.12	1.44
4 May 2011	1.09	1.40
5 May 2011	1.18	1.50
6 May 2011	1.19	1.54
9 May 2011	1.29	1.71
10 May 2011	1.25	1.66
11 May 2011	1.15	1.58
12 May 2011	1.12	1.57
13 May 2011	1.13	1.60
16 May 2011	1.09	1.55
17 May 2011	1.12	1.60
18 May 2011	1.11	1.64
19 May 2011	1.14	1.68
20 May 2011	1.23	1.89
23 May 2011	1.38	2.01
24 May 2011	1.33	1.94
25 May 2011	1.33	1.89
26 May 2011	1.35	1.88
27 May 2011	1.42	1.93
30 May 2011	1.47	1.98
31 May 2011	1.40	1.88
1 June 2011	1.37	1.87
2 June 2011	1.30	1.79
3 June 2011	1.19	1.67
6 June 2011	1.22	1.71
7 June 2011	1.20	1.64
8 June 2011	1.28	1.71
9 June 2011	1.36	1.78
10 June 2011	1.43	1.86
13 June 2011	1.42	1.89
14 June 2011	1.33	1.82
15 June 2011	1.48	1.95
16 June 2011	1.60	2.13

17 June 2011	1.49	1.98
20 June 2011	1.49	1.99
21 June 2011	1.45	1.90
22 June 2011	1.56	1.95
23 June 2011	1.80	2.22
24 June 2011	1.95	2.34
27 June 2011	1.91	2.32
28 June 2011	1.83	2.18
29 June 2011	1.67	2.03
30 June 2011	1.49	1.84
1 July 2011	1.39	1.70
4 July 2011	1.38	1.68
5 July 2011	1.45	1.78
6 July 2011	1.69	2.04
7 July 2011	1.75	2.09
8 July 2011	2.05	2.31
11 July 2011	2.94	2.98
12 July 2011	2.82	2.79
13 July 2011	2.78	2.77
14 July 2011	2.82	2.83
15 July 2011	3.01	3.01
18 July 2011	3.38	3.37
19 July 2011	3.02	3.04
20 July 2011	2.68	2.86
21 July 2011	2.20	2.35
22 July 2011	2.26	2.49
25 July 2011	2.66	2.82
26 July 2011	2.71	2.81
27 July 2011	2.90	2.93
28 July 2011	2.97	2.97
29 July 2011	3.16	3.13
1 August 2011	3.38	3.31
2 August 2011	3.57	3.48
3 August 2011	3.52	3.50
4 August 2011	3.85	3.74
5 August 2011	3.75	3.59
8 August 2011	2.82	2.55
9 August 2011	2.71	2.42
10 August 2011	2.94	2.64
11 August 2011	2.82	2.56
12 August 2011	2.79	2.50
15 August 2011	2.70	2.49
16 August 2011	2.66	2.48
17 August 2011	2.58	2.47
18 August 2011	2.72	2.67
19 August 2011	2.65	2.63
22 August 2011	2.65	2.59
23 August 2011	2.67	2.64
24 August 2011	2.63	2.61
25 August 2011	2.71	2.60
26 August 2011	2.71	2.62
29 August 2011	2.67	2.60
30 August 2011	2.78	2.65
31 August 2011	2.70	2.63
1 September 2011	2.77	2.68
2 September 2011	3.00	3.01
5 September 2011	3.67	3.26
6 September 2011	3.76	3.22
7 September 2011	3.32	2.93
8 September 2011	3.48	2.97
9 September 2011	3.76	3.20
12 September 2011	4.08	3.38
13 September 2011	4.14	3.38
14 September 2011	3.95	3.19
15 September 2011	3.82	3.15
16 September 2011	3.65	3.05
19 September 2011	3.73	3.17
20 September 2011	3.83	3.21
21 September 2011	3.89	3.27

22 September 2011	3.84	3.19
23 September 2011	3.85	3.15
26 September 2011	3.88	3.03
27 September 2011	3.72	2.82
28 September 2011	3.77	2.80
29 September 2011	3.69	2.79
30 September 2011	3.70	2.93
3 October 2011	3.73	2.99
4 October 2011	3.77	3.02
5 October 2011	3.75	2.99
6 October 2011	3.50	2.76
7 October 2011	3.50	2.75
10 October 2011	3.46	2.70
11 October 2011	3.48	2.72
12 October 2011	3.51	2.73
13 October 2011	3.73	2.96
14 October 2011	3.66	3.01
17 October 2011	3.80	3.17
18 October 2011	3.87	3.31
19 October 2011	3.86	3.34
20 October 2011	4.03	3.51
21 October 2011	3.80	3.35
24 October 2011	3.82	3.40
25 October 2011	3.95	3.42
26 October 2011	4.05	3.40
27 October 2011	3.77	3.02
28 October 2011	4.15	3.32
31 October 2011	4.46	3.45
1 November 2011	4.87	3.61
2 November 2011	4.83	3.59
3 November 2011	4.82	3.69
4 November 2011	5.06	3.85
7 November 2011	5.60	4.01
8 November 2011	5.98	3.92
9 November 2011	6.85	4.20
10 November 2011	6.03	4.31
11 November 2011	5.29	4.29
14 November 2011	5.68	4.69
15 November 2011	6.17	5.00
16 November 2011	6.01	5.00
17 November 2011	5.82	5.04
18 November 2011	5.66	4.96
21 November 2011	5.99	5.18
22 November 2011	6.60	5.37
23 November 2011	6.68	5.41
24 November 2011	6.85	5.43
25 November 2011	7.20	5.63
28 November 2011	6.66	5.30
29 November 2011	6.66	5.16
30 November 2011	6.60	5.03
1 December 2011	6.02	4.48
2 December 2011	6.26	4.27
5 December 2011	5.22	3.57
6 December 2011	5.25	3.67
7 December 2011	5.34	4.08
8 December 2011	5.94	4.63
9 December 2011	5.64	4.35
12 December 2011	5.59	4.22
13 December 2011	5.39	3.90
14 December 2011	5.79	3.80
15 December 2011	5.29	3.40
16 December 2011	5.07	3.24
19 December 2011	4.92	3.16
20 December 2011	4.76	3.14
21 December 2011	4.85	3.41
22 December 2011	4.92	3.42
23 December 2011	4.86	3.47
26 December 2011	4.86	3.47
27 December 2011	4.90	3.46

28 December 2011	4.83	3.15
29 December 2011	4.79	3.19
30 December 2011	4.97	3.16
2 January 2012	4.49	3.10
3 January 2012	4.44	3.18
4 January 2012	4.42	3.30
5 January 2012	4.69	3.48
6 January 2012	4.87	3.60
9 January 2012	4.95	3.44
10 January 2012	4.81	3.24
11 January 2012	4.57	2.96
12 January 2012	4.09	2.80
13 January 2012	4.15	2.91
16 January 2012	4.08	2.84
17 January 2012	3.92	2.78
18 January 2012	3.82	2.84
19 January 2012	3.78	2.95
20 January 2012	3.64	3.12
23 January 2012	3.38	2.97
24 January 2012	3.48	2.93

* Two-year bond yield relative to German bunds. [Return to text](#)

Upper-middle-right panel 10-year Sovereign Bond Spreads*

Percentage points

Date	Italy	Spain
3 January 2011	1.81	2.49
4 January 2011	1.74	2.43
5 January 2011	1.71	2.37
6 January 2011	1.85	2.55
7 January 2011	1.93	2.64
10 January 2011	1.98	2.68
11 January 2011	1.87	2.56
12 January 2011	1.74	2.40
13 January 2011	1.66	2.31
14 January 2011	1.63	2.30
17 January 2011	1.68	2.40
18 January 2011	1.67	2.36
19 January 2011	1.62	2.27
20 January 2011	1.62	2.18
21 January 2011	1.54	2.03
24 January 2011	1.52	2.09
25 January 2011	1.60	2.20
26 January 2011	1.61	2.25
27 January 2011	1.62	2.29
28 January 2011	1.63	2.31
31 January 2011	1.57	2.21
1 February 2011	1.42	1.99
2 February 2011	1.28	1.84
3 February 2011	1.41	1.97
4 February 2011	1.35	1.89
7 February 2011	1.44	2.00
8 February 2011	1.50	2.06
9 February 2011	1.45	2.01
10 February 2011	1.47	2.03
11 February 2011	1.49	2.08
14 February 2011	1.53	2.16
15 February 2011	1.52	2.13
16 February 2011	1.49	2.10
17 February 2011	1.56	2.18
18 February 2011	1.54	2.12
21 February 2011	1.61	2.18
22 February 2011	1.67	2.22
23 February 2011	1.69	2.22
24 February 2011	1.71	2.24
25 February 2011	1.70	2.25
28 February 2011	1.67	2.22
1 March 2011	1.64	2.18

2 March 2011	1.61	2.13
3 March 2011	1.58	2.08
4 March 2011	1.61	2.12
7 March 2011	1.62	2.11
8 March 2011	1.65	2.17
9 March 2011	1.70	2.22
10 March 2011	1.72	2.26
11 March 2011	1.65	2.21
14 March 2011	1.56	2.04
15 March 2011	1.57	2.06
16 March 2011	1.60	2.08
17 March 2011	1.56	2.07
18 March 2011	1.50	1.98
21 March 2011	1.49	1.92
22 March 2011	1.51	1.93
23 March 2011	1.53	1.94
24 March 2011	1.51	1.92
25 March 2011	1.48	1.89
28 March 2011	1.48	1.89
29 March 2011	1.46	1.87
30 March 2011	1.44	1.87
31 March 2011	1.47	1.94
1 April 2011	1.43	1.94
4 April 2011	1.39	1.91
5 April 2011	1.37	1.90
6 April 2011	1.31	1.80
7 April 2011	1.32	1.82
8 April 2011	1.27	1.78
11 April 2011	1.22	1.75
12 April 2011	1.22	1.75
13 April 2011	1.26	1.80
14 April 2011	1.29	1.89
15 April 2011	1.35	2.04
18 April 2011	1.53	2.31
19 April 2011	1.48	2.23
20 April 2011	1.44	2.17
21 April 2011	1.50	2.21
22 April 2011	1.50	2.21
25 April 2011	1.50	2.21
26 April 2011	1.56	2.26
27 April 2011	1.52	2.20
28 April 2011	1.51	2.13
29 April 2011	1.49	2.05
2 May 2011	1.46	2.04
3 May 2011	1.42	1.98
4 May 2011	1.41	1.96
5 May 2011	1.46	2.02
6 May 2011	1.49	2.07
9 May 2011	1.57	2.22
10 May 2011	1.52	2.15
11 May 2011	1.50	2.13
12 May 2011	1.47	2.11
13 May 2011	1.53	2.18
16 May 2011	1.47	2.13
17 May 2011	1.51	2.22
18 May 2011	1.51	2.24
19 May 2011	1.65	2.28
20 May 2011	1.72	2.43
23 May 2011	1.79	2.50
24 May 2011	1.72	2.40
25 May 2011	1.68	2.31
26 May 2011	1.72	2.31
27 May 2011	1.76	2.34
30 May 2011	1.83	2.41
31 May 2011	1.76	2.34
1 June 2011	1.74	2.33
2 June 2011	1.70	2.30
3 June 2011	1.57	2.17
6 June 2011	1.64	2.24

7 June 2011	1.64	2.24
8 June 2011	1.71	2.32
9 June 2011	1.78	2.41
10 June 2011	1.83	2.51
13 June 2011	1.84	2.53
14 June 2011	1.75	2.45
15 June 2011	1.88	2.60
16 June 2011	1.93	2.74
17 June 2011	1.86	2.61
20 June 2011	1.89	2.62
21 June 2011	1.83	2.51
22 June 2011	1.94	2.59
23 June 2011	2.07	2.77
24 June 2011	2.14	2.85
27 June 2011	2.09	2.80
28 June 2011	2.05	2.70
29 June 2011	1.96	2.59
30 June 2011	1.86	2.42
1 July 2011	1.83	2.35
4 July 2011	1.89	2.38
5 July 2011	1.99	2.47
6 July 2011	2.19	2.67
7 July 2011	2.21	2.66
8 July 2011	2.44	2.85
11 July 2011	3.01	3.36
12 July 2011	2.86	3.14
13 July 2011	2.80	3.07
14 July 2011	2.89	3.12
15 July 2011	3.06	3.38
18 July 2011	3.32	3.67
19 July 2011	3.06	3.42
20 July 2011	2.84	3.21
21 July 2011	2.47	2.85
22 July 2011	2.58	2.94
25 July 2011	2.90	3.27
26 July 2011	2.89	3.22
27 July 2011	3.11	3.32
28 July 2011	3.19	3.40
29 July 2011	3.33	3.54
1 August 2011	3.55	3.75
2 August 2011	3.71	3.87
3 August 2011	3.68	3.85
4 August 2011	3.90	3.98
5 August 2011	3.74	3.69
8 August 2011	3.03	2.89
9 August 2011	2.81	2.72
10 August 2011	2.91	2.84
11 August 2011	2.73	2.69
12 August 2011	2.69	2.66
15 August 2011	2.71	2.67
16 August 2011	2.67	2.67
17 August 2011	2.73	2.75
18 August 2011	2.87	2.90
19 August 2011	2.83	2.86
22 August 2011	2.87	2.86
23 August 2011	2.88	2.86
24 August 2011	2.84	2.80
25 August 2011	2.87	2.81
26 August 2011	2.92	2.84
29 August 2011	2.86	2.79
30 August 2011	2.98	2.89
31 August 2011	2.92	2.83
1 September 2011	3.01	2.91
2 September 2011	3.28	3.12
5 September 2011	3.71	3.41
6 September 2011	3.65	3.34
7 September 2011	3.35	3.10
8 September 2011	3.40	3.17
9 September 2011	3.64	3.38

12 September 2011	3.83	3.58
13 September 2011	3.92	3.59
14 September 2011	3.72	3.48
15 September 2011	3.67	3.48
16 September 2011	3.65	3.43
19 September 2011	3.79	3.55
20 September 2011	3.93	3.59
21 September 2011	3.99	3.64
22 September 2011	3.99	3.62
23 September 2011	3.88	3.46
26 September 2011	3.82	3.33
27 September 2011	3.64	3.09
28 September 2011	3.63	3.07
29 September 2011	3.57	3.09
30 September 2011	3.65	3.25
3 October 2011	3.73	3.31
4 October 2011	3.77	3.37
5 October 2011	3.69	3.25
6 October 2011	3.51	3.07
7 October 2011	3.52	2.99
10 October 2011	3.49	2.91
11 October 2011	3.54	2.94
12 October 2011	3.55	2.93
13 October 2011	3.71	3.10
14 October 2011	3.60	3.05
17 October 2011	3.70	3.22
18 October 2011	3.85	3.34
19 October 2011	3.84	3.34
20 October 2011	4.02	3.53
21 October 2011	3.79	3.37
24 October 2011	3.83	3.43
25 October 2011	3.89	3.48
26 October 2011	3.89	3.44
27 October 2011	3.67	3.13
28 October 2011	3.85	3.33
31 October 2011	4.07	3.52
1 November 2011	4.42	3.75
2 November 2011	4.36	3.64
3 November 2011	4.28	3.59
4 November 2011	4.55	3.76
7 November 2011	4.88	3.85
8 November 2011	4.97	3.83
9 November 2011	5.53	4.10
10 November 2011	5.11	4.09
11 November 2011	4.56	3.96
14 November 2011	4.92	4.33
15 November 2011	5.29	4.55
16 November 2011	5.19	4.60
17 November 2011	4.95	4.60
18 November 2011	4.68	4.41
21 November 2011	4.74	4.64
22 November 2011	4.90	4.69
23 November 2011	4.82	4.50
24 November 2011	4.91	4.43
25 November 2011	5.00	4.44
28 November 2011	4.93	4.27
29 November 2011	4.91	4.06
30 November 2011	4.74	3.95
1 December 2011	4.47	3.56
2 December 2011	4.55	3.55
5 December 2011	3.75	2.92
6 December 2011	3.68	3.02
7 December 2011	3.89	3.33
8 December 2011	4.44	3.80
9 December 2011	4.21	3.60
12 December 2011	4.54	3.77
13 December 2011	4.66	3.68
14 December 2011	4.88	3.77
15 December 2011	4.63	3.49

16 December 2011	4.74	3.45
19 December 2011	4.96	3.29
20 December 2011	4.66	3.11
21 December 2011	4.85	3.34
22 December 2011	4.97	3.42
23 December 2011	5.02	3.42
26 December 2011	5.02	3.42
27 December 2011	5.08	3.41
28 December 2011	5.11	3.26
29 December 2011	5.18	3.33
30 December 2011	5.28	3.26
2 January 2012	5.01	3.20
3 January 2012	5.02	3.39
4 January 2012	5.02	3.51
5 January 2012	5.23	3.77
6 January 2012	5.28	3.85
9 January 2012	5.31	3.72
10 January 2012	5.24	3.60
11 January 2012	5.17	3.51
12 January 2012	4.80	3.30
13 January 2012	4.88	3.46
16 January 2012	4.85	3.42
17 January 2012	4.71	3.34
18 January 2012	4.63	3.36
19 January 2012	4.51	3.37
20 January 2012	4.32	3.56
23 January 2012	4.14	3.49
24 January 2012	4.22	3.51

* 10-year bond yield relative to German bunds. [Return to text](#)

Lower-middle panel Recent Developments

- Little concrete progress on increasing financial backstops.
 - Permanent facility, ESM, may not add to total funds and will take time to implement.
 - Leveraged EFSF not operational.
 - S&P's downgrade of EFSF may limit effectiveness.
- With insufficient firewalls, any number of shocks may cause financial conditions to deteriorate.
 - Efforts to restructure Greek debt may not prevent disorderly default.

Bottom-left panel Euro-area Equity Prices

Jan. 6, 2011 = 100

Date	Total	Banks
6 January 2011	100.00	100.00
7 January 2011	99.37	97.99
10 January 2011	97.86	94.68
11 January 2011	99.28	96.42
12 January 2011	101.65	103.44
13 January 2011	102.23	106.87
14 January 2011	102.37	107.58
17 January 2011	102.09	106.37
18 January 2011	103.25	109.22
19 January 2011	102.45	109.67
20 January 2011	102.06	111.19
21 January 2011	103.19	113.75
24 January 2011	103.38	114.12
25 January 2011	102.87	111.43
26 January 2011	103.50	110.42
27 January 2011	104.10	113.11
28 January 2011	103.11	112.54
31 January 2011	103.03	112.39
1 February 2011	104.73	114.95
2 February 2011	104.75	115.94
3 February 2011	104.30	114.26
4 February 2011	104.59	114.55
7 February 2011	105.60	115.75
8 February 2011	105.97	116.21
9 February 2011	105.74	115.89

10 February 2011	105.47	113.78
11 February 2011	105.59	114.50
14 February 2011	105.63	113.51
15 February 2011	105.82	115.72
16 February 2011	106.70	119.88
17 February 2011	106.75	120.41
18 February 2011	106.82	119.94
21 February 2011	105.03	115.99
22 February 2011	104.29	114.37
23 February 2011	103.13	114.12
24 February 2011	102.74	113.43
25 February 2011	104.09	115.51
28 February 2011	104.97	115.97
1 March 2011	104.26	113.66
2 March 2011	103.49	112.66
3 March 2011	103.85	111.80
4 March 2011	103.22	110.42
7 March 2011	102.85	109.01
8 March 2011	103.25	109.86
9 March 2011	103.10	109.40
10 March 2011	102.08	108.27
11 March 2011	101.13	108.26
14 March 2011	100.16	110.31
15 March 2011	97.83	108.15
16 March 2011	95.93	104.89
17 March 2011	97.92	106.96
18 March 2011	98.28	107.13
21 March 2011	100.42	109.79
22 March 2011	100.09	109.53
23 March 2011	100.58	109.41
24 March 2011	102.06	111.07
25 March 2011	102.13	110.55
28 March 2011	102.26	110.77
29 March 2011	102.21	108.86
30 March 2011	103.11	108.58
31 March 2011	102.29	105.66
1 April 2011	103.90	107.89
4 April 2011	103.92	106.75
5 April 2011	103.80	106.03
6 April 2011	104.40	108.61
7 April 2011	103.96	109.85
8 April 2011	104.47	110.32
11 April 2011	104.10	109.76
12 April 2011	102.63	108.39
13 April 2011	103.36	108.51
14 April 2011	102.37	106.05
15 April 2011	102.45	104.92
18 April 2011	100.21	101.46
19 April 2011	100.66	101.61
20 April 2011	102.72	101.90
21 April 2011	103.15	103.48
22 April 2011	ND	ND
25 April 2011	ND	ND
26 April 2011	103.79	103.89
27 April 2011	104.44	105.16
28 April 2011	105.23	106.91
29 April 2011	105.47	107.28
2 May 2011	105.55	106.81
3 May 2011	105.13	106.41
4 May 2011	103.57	105.43
5 May 2011	102.94	103.92
6 May 2011	103.96	104.87
9 May 2011	102.75	102.20
10 May 2011	103.92	104.09
11 May 2011	104.08	104.21
12 May 2011	103.28	103.51
13 May 2011	102.76	102.42
16 May 2011	102.35	102.02
17 May 2011	101.13	101.35

18 May 2011	101.62	101.75
19 May 2011	102.42	102.28
20 May 2011	101.42	100.18
23 May 2011	99.33	97.69
24 May 2011	99.65	97.58
25 May 2011	100.10	99.75
26 May 2011	99.59	98.96
27 May 2011	100.25	100.12
30 May 2011	100.15	99.28
31 May 2011	101.65	101.58
1 June 2011	100.63	99.82
2 June 2011	99.18	98.64
3 June 2011	99.38	100.57
6 June 2011	98.74	98.49
7 June 2011	98.87	98.66
8 June 2011	97.87	97.19
9 June 2011	98.82	97.26
10 June 2011	97.29	95.75
13 June 2011	97.32	95.55
14 June 2011	98.73	97.59
15 June 2011	97.25	94.93
16 June 2011	96.87	94.58
17 June 2011	97.87	97.76
20 June 2011	97.09	96.60
21 June 2011	98.95	99.20
22 June 2011	98.67	98.83
23 June 2011	96.65	94.83
24 June 2011	96.22	92.66
27 June 2011	96.37	92.68
28 June 2011	97.17	94.45
29 June 2011	99.06	96.17
30 June 2011	100.53	98.42
1 July 2011	101.38	101.71
4 July 2011	101.47	101.01
5 July 2011	100.86	99.52
6 July 2011	100.17	96.62
7 July 2011	100.67	95.95
8 July 2011	99.01	92.15
11 July 2011	96.37	87.48
12 July 2011	95.78	88.43
13 July 2011	96.62	88.45
14 July 2011	95.72	87.71
15 July 2011	95.22	86.30
18 July 2011	93.32	83.17
19 July 2011	94.48	85.14
20 July 2011	95.99	89.13
21 July 2011	97.69	94.25
22 July 2011	98.21	93.71
25 July 2011	97.47	89.72
26 July 2011	97.17	89.96
27 July 2011	95.65	87.43
28 July 2011	95.22	88.54
29 July 2011	94.52	87.99
1 August 2011	92.08	83.88
2 August 2011	90.08	81.09
3 August 2011	88.29	79.32
4 August 2011	84.97	75.52
5 August 2011	83.75	76.07
8 August 2011	80.14	73.84
9 August 2011	80.92	74.01
10 August 2011	77.00	67.45
11 August 2011	79.38	69.44
12 August 2011	82.49	73.09
15 August 2011	83.06	73.98
16 August 2011	82.67	74.37
17 August 2011	82.88	73.76
18 August 2011	78.42	68.98
19 August 2011	76.95	66.92
22 August 2011	77.59	66.88

23 August 2011	78.01	66.36
24 August 2011	79.45	67.09
25 August 2011	78.75	67.75
26 August 2011	78.03	66.46
29 August 2011	79.82	68.57
30 August 2011	79.95	68.47
31 August 2011	82.31	70.46
1 September 2011	82.33	70.42
2 September 2011	79.62	66.69
5 September 2011	75.85	62.39
6 September 2011	75.04	60.61
7 September 2011	77.73	63.00
8 September 2011	78.14	63.66
9 September 2011	75.14	59.31
12 September 2011	72.65	54.98
13 September 2011	73.75	58.16
14 September 2011	75.45	58.58
15 September 2011	77.66	62.25
16 September 2011	78.03	61.55
19 September 2011	75.90	59.52
20 September 2011	77.37	59.56
21 September 2011	76.06	58.18
22 September 2011	72.28	54.84
23 September 2011	72.89	57.49
26 September 2011	74.51	60.17
27 September 2011	78.26	65.03
28 September 2011	77.61	64.17
29 September 2011	78.59	66.30
30 September 2011	77.26	64.67
3 October 2011	75.78	62.37
4 October 2011	73.74	60.05
5 October 2011	76.65	63.50
6 October 2011	79.08	66.05
7 October 2011	79.61	66.30
10 October 2011	81.38	67.63
11 October 2011	81.19	67.98
12 October 2011	83.15	70.43
13 October 2011	81.97	67.03
14 October 2011	82.86	66.28
17 October 2011	81.46	64.22
18 October 2011	81.32	63.63
19 October 2011	81.81	65.62
20 October 2011	79.96	61.77
21 October 2011	82.26	64.59
24 October 2011	83.42	65.34
25 October 2011	82.68	64.34
26 October 2011	82.47	63.76
27 October 2011	86.86	71.04
28 October 2011	86.40	71.15
31 October 2011	83.75	66.48
1 November 2011	79.69	60.64
2 November 2011	80.74	61.23
3 November 2011	82.87	63.25
4 November 2011	81.22	61.55
7 November 2011	80.79	61.11
8 November 2011	81.51	61.98
9 November 2011	79.62	59.93
10 November 2011	79.60	60.02
11 November 2011	81.91	63.02
14 November 2011	80.72	61.54
15 November 2011	79.59	59.58
16 November 2011	79.81	60.07
17 November 2011	78.73	58.66
18 November 2011	78.35	58.66
21 November 2011	75.65	56.18
22 November 2011	74.86	54.28
23 November 2011	73.65	52.96
24 November 2011	73.58	53.61
25 November 2011	74.19	54.14

28 November 2011	77.77	57.89
29 November 2011	78.22	57.81
30 November 2011	81.54	60.53
1 December 2011	80.89	59.88
2 December 2011	81.78	63.04
5 December 2011	82.78	65.19
6 December 2011	82.25	65.02
7 December 2011	81.84	64.48
8 December 2011	79.91	61.68
9 December 2011	81.50	63.81
12 December 2011	79.15	60.63
13 December 2011	78.95	59.51
14 December 2011	77.06	57.59
15 December 2011	77.74	58.62
16 December 2011	77.32	58.55
19 December 2011	77.28	58.78
20 December 2011	79.45	61.55
21 December 2011	78.82	60.62
22 December 2011	79.76	61.86
23 December 2011	80.37	62.04
26 December 2011	ND	ND
27 December 2011	80.37	61.46
28 December 2011	79.38	60.06
29 December 2011	80.45	61.01
30 December 2011	81.22	61.60
2 January 2012	82.98	62.95
3 January 2012	83.72	63.21
4 January 2012	82.54	60.95
5 January 2012	81.42	57.39
6 January 2012	81.09	56.24
9 January 2012	80.71	54.73
10 January 2012	82.60	57.18
11 January 2012	82.46	57.80
12 January 2012	82.76	59.26
13 January 2012	82.45	59.96
16 January 2012	83.22	60.14
17 January 2012	84.37	60.86
18 January 2012	84.32	60.61
19 January 2012	85.81	65.12
20 January 2012	85.63	65.78
23 January 2012	86.23	68.31
24 January 2012	85.26	66.77

Bottom-right panel
Five-year BBB Nonfinancial Corporate Spreads*

Basis points

Date	United States	Euro area
3 January 2011	169.28	158.09
4 January 2011	167.20	159.20
5 January 2011	164.60	159.22
6 January 2011	160.75	160.02
7 January 2011	162.29	158.86
10 January 2011	163.09	160.37
11 January 2011	163.71	159.48
12 January 2011	162.95	143.02
13 January 2011	161.03	142.89
14 January 2011	162.71	142.42
17 January 2011	163.00	143.08
18 January 2011	163.52	141.20
19 January 2011	162.32	141.08
20 January 2011	161.55	138.58
21 January 2011	159.59	138.24
24 January 2011	162.16	137.30
25 January 2011	163.44	136.48
26 January 2011	162.43	137.08
27 January 2011	156.29	136.85
28 January 2011	156.89	137.45
31 January 2011	157.77	139.65

1 February 2011	160.28	137.47
2 February 2011	158.23	134.70
3 February 2011	158.82	136.98
4 February 2011	158.04	134.59
7 February 2011	158.09	133.36
8 February 2011	154.30	131.11
9 February 2011	152.90	130.76
10 February 2011	153.31	130.41
11 February 2011	154.49	130.30
14 February 2011	152.10	129.65
15 February 2011	156.47	130.23
16 February 2011	155.28	129.88
17 February 2011	156.45	129.78
18 February 2011	152.95	128.09
21 February 2011	153.31	129.25
22 February 2011	155.21	129.44
23 February 2011	154.42	130.11
24 February 2011	151.61	130.23
25 February 2011	153.00	129.90
28 February 2011	151.59	128.46
1 March 2011	153.15	127.28
2 March 2011	151.31	128.27
3 March 2011	151.60	126.93
4 March 2011	151.71	129.51
7 March 2011	155.86	130.59
8 March 2011	155.42	128.25
9 March 2011	159.14	129.74
10 March 2011	159.55	129.86
11 March 2011	161.13	132.21
14 March 2011	160.50	132.71
15 March 2011	162.11	134.83
16 March 2011	162.86	136.35
17 March 2011	164.73	134.93
18 March 2011	161.74	133.30
21 March 2011	162.51	134.41
22 March 2011	161.94	134.96
23 March 2011	162.03	132.91
24 March 2011	162.82	137.01
25 March 2011	160.64	133.13
28 March 2011	160.73	134.28
29 March 2011	164.51	128.71
30 March 2011	161.09	130.82
31 March 2011	161.08	130.90
1 April 2011	158.99	130.12
4 April 2011	161.51	130.78
5 April 2011	164.79	130.96
6 April 2011	161.43	130.11
7 April 2011	154.22	131.17
8 April 2011	158.72	131.01
11 April 2011	158.33	130.74
12 April 2011	151.34	132.81
13 April 2011	158.55	132.46
14 April 2011	158.60	132.92
15 April 2011	152.64	137.03
18 April 2011	159.55	136.28
19 April 2011	160.36	136.83
20 April 2011	160.40	132.90
21 April 2011	159.21	138.37
22 April 2011	159.31	138.10
25 April 2011	159.42	138.10
26 April 2011	158.68	138.12
27 April 2011	153.63	140.23
28 April 2011	142.46	140.22
29 April 2011	149.03	140.28
2 May 2011	153.96	140.04
3 May 2011	152.24	138.33
4 May 2011	152.80	139.53
5 May 2011	153.30	140.81
6 May 2011	154.17	137.91

9 May 2011		154.65	140.15
10 May 2011		155.23	139.63
11 May 2011		152.42	137.49
12 May 2011		155.13	137.35
13 May 2011		154.81	137.08
16 May 2011		157.53	135.82
17 May 2011		157.90	136.57
18 May 2011		152.66	132.50
19 May 2011		158.80	136.34
20 May 2011		162.53	136.29
23 May 2011		165.49	137.49
24 May 2011		166.54	136.44
25 May 2011		161.95	137.17
26 May 2011		162.76	140.08
27 May 2011		163.01	135.84
30 May 2011		163.40	139.77
31 May 2011		161.41	137.68
1 June 2011		156.92	138.50
2 June 2011		163.78	138.10
3 June 2011		166.11	136.99
6 June 2011		166.95	137.93
7 June 2011		168.31	137.33
8 June 2011		161.10	141.46
9 June 2011		168.15	142.14
10 June 2011		166.71	144.69
13 June 2011		167.59	143.66
14 June 2011		168.22	144.60
15 June 2011		166.91	148.23
16 June 2011		168.93	152.63
17 June 2011		170.27	151.46
20 June 2011		170.81	151.85
21 June 2011		171.21	150.55
22 June 2011		171.66	153.85
23 June 2011		171.81	155.42
24 June 2011		172.74	155.47
27 June 2011		173.50	157.88
28 June 2011		171.38	157.57
29 June 2011		167.67	155.57
30 June 2011		159.36	153.71
1 July 2011		159.61	153.10
4 July 2011		159.94	152.55
5 July 2011		167.59	152.53
6 July 2011		169.54	153.20
7 July 2011		167.77	158.36
8 July 2011		168.74	157.93
11 July 2011		176.08	160.94
12 July 2011		180.63	162.61
13 July 2011		181.07	164.04
14 July 2011		173.02	162.81
15 July 2011		177.32	162.21
18 July 2011		176.30	163.06
19 July 2011		175.50	165.25
20 July 2011		170.57	164.89
21 July 2011		162.08	160.91
22 July 2011		165.15	162.31
25 July 2011		161.58	162.74
26 July 2011		165.54	164.94
27 July 2011		159.76	165.39
28 July 2011		154.94	166.91
29 July 2011		158.07	171.08
1 August 2011		155.44	173.25
2 August 2011		154.26	174.09
3 August 2011		148.50	179.23
4 August 2011		150.81	185.44
5 August 2011		156.47	192.08
8 August 2011		150.62	188.03
9 August 2011		158.17	197.18
10 August 2011		154.25	208.54
11 August 2011		157.10	218.36

12 August 2011	161.46	223.06
15 August 2011	164.88	225.05
16 August 2011	164.26	222.53
17 August 2011	167.61	225.45
18 August 2011	166.64	227.65
19 August 2011	164.89	232.24
22 August 2011	173.01	235.37
23 August 2011	172.57	234.25
24 August 2011	175.96	236.96
25 August 2011	168.86	240.57
26 August 2011	171.09	241.29
29 August 2011	176.04	242.59
30 August 2011	178.64	243.36
31 August 2011	180.05	240.48
1 September 2011	187.43	244.69
2 September 2011	188.78	258.79
5 September 2011	189.01	265.84
6 September 2011	189.12	267.53
7 September 2011	188.60	272.77
8 September 2011	189.49	274.40
9 September 2011	192.49	276.21
12 September 2011	193.88	280.85
13 September 2011	206.40	283.20
14 September 2011	206.31	282.92
15 September 2011	208.64	282.28
16 September 2011	206.08	285.81
19 September 2011	210.94	285.81
20 September 2011	210.89	286.58
21 September 2011	212.21	286.52
22 September 2011	210.47	293.27
23 September 2011	212.71	288.27
26 September 2011	210.04	287.88
27 September 2011	210.10	283.85
28 September 2011	213.19	269.93
29 September 2011	211.09	274.73
30 September 2011	210.88	277.06
3 October 2011	215.27	279.56
4 October 2011	217.00	286.25
5 October 2011	217.30	284.27
6 October 2011	217.46	284.39
7 October 2011	215.98	282.37
10 October 2011	216.21	280.90
11 October 2011	214.89	277.78
12 October 2011	214.46	270.13
13 October 2011	215.39	267.27
14 October 2011	211.80	267.38
17 October 2011	211.32	266.08
18 October 2011	212.73	270.15
19 October 2011	209.87	268.16
20 October 2011	211.31	276.46
21 October 2011	209.62	270.11
24 October 2011	208.72	264.72
25 October 2011	205.42	267.54
26 October 2011	207.16	265.68
27 October 2011	201.99	265.10
28 October 2011	181.53	264.96
31 October 2011	182.36	266.91
1 November 2011	185.25	278.96
2 November 2011	186.45	279.62
3 November 2011	187.78	274.22
4 November 2011	184.97	278.89
7 November 2011	185.56	281.78
8 November 2011	182.68	279.92
9 November 2011	188.16	278.24
10 November 2011	191.58	278.58
11 November 2011	191.80	277.15
14 November 2011	191.96	285.64
15 November 2011	189.82	286.04
16 November 2011	195.80	288.02

17 November 2011		197.50	288.05
18 November 2011		200.23	293.12
21 November 2011		196.48	298.59
22 November 2011		197.86	305.94
23 November 2011		194.88	304.81
24 November 2011		194.96	302.31
25 November 2011		193.28	312.74
28 November 2011		192.50	316.90
29 November 2011		191.36	321.30
30 November 2011		199.16	322.58
1 December 2011		195.08	325.71
2 December 2011		200.54	329.71
5 December 2011		200.06	320.27
6 December 2011		199.83	319.25
7 December 2011		198.43	318.12
8 December 2011		198.86	319.66
9 December 2011		199.98	321.94
12 December 2011		199.04	325.69
13 December 2011		201.08	325.28
14 December 2011		201.05	330.65
15 December 2011		199.30	323.57
16 December 2011		207.79	323.21
19 December 2011		209.03	325.45
20 December 2011		202.82	323.05
21 December 2011		204.91	322.68
22 December 2011		205.34	320.96
23 December 2011		205.81	320.70
26 December 2011		206.04	321.75
27 December 2011		202.44	320.21
28 December 2011		205.46	319.67
29 December 2011		203.73	321.70
30 December 2011		202.44	322.25
2 January 2012		202.58	322.50
3 January 2012		196.43	318.25
4 January 2012		198.54	315.43
5 January 2012		198.27	317.83
6 January 2012		197.49	317.04
9 January 2012		194.22	318.03
10 January 2012		191.57	317.72
11 January 2012		188.84	320.65
12 January 2012		192.49	314.04
13 January 2012		190.16	318.30
16 January 2012		190.37	319.69
17 January 2012		189.31	320.34
18 January 2012		192.82	318.85
19 January 2012		196.16	316.24
20 January 2012		197.37	312.03

* Relative to comparable German and U.S. sovereign bonds, respectively. [Return to text](#)

Exhibit 6 Outlook for Growth in the Advanced Foreign Economies

Top panel Real GDP*

Percent change, annual rate

	2011		2012		2013 ^f
	Q3	Q4 ^e	Q1 ^f	Q2-Q4 ^f	
1. Advanced foreign economies	2.7	0.6	0.6	0.9	1.5
2. <i>December Tealbook</i>	2.7	1.0	0.7	0.9	1.6
3. Euro area	0.5	-1.2	-1.9	-1.0	0.6
4. United Kingdom	2.3	-0.3	0.1	0.8	1.8
5. Japan	5.6	0.4	2.8	1.6	1.3
6. Canada	3.5	2.0	1.9	1.9	2.0

* GDP aggregates weighted by shares of U.S. merchandise exports. [Return to text](#)

Middle-left panel Industrial Production

Jan. 2007 = 100

Period	Spain	Italy	France	Germany
January 2007	100.00	100.00	100.00	100.00
February 2007	98.42	100.76	101.20	100.73
March 2007	100.19	101.24	102.09	101.29
April 2007	97.49	99.43	100.30	100.37
May 2007	99.91	101.33	102.29	102.02
June 2007	100.19	100.95	101.60	102.39
July 2007	98.42	101.05	102.59	102.94
August 2007	97.21	104.09	102.49	103.31
September 2007	97.67	101.71	101.30	104.04
October 2007	100.37	100.29	103.19	104.04
November 2007	96.09	99.33	101.69	103.86
December 2007	97.86	98.38	101.60	104.32
January 2008	99.16	102.19	102.29	105.79
February 2008	98.05	100.95	102.89	105.88
March 2008	94.23	102.09	101.89	104.96
April 2008	99.44	102.76	104.09	105.60
May 2008	93.40	99.43	99.20	103.49
June 2008	90.23	100.67	99.40	104.41
July 2008	93.58	98.38	100.30	102.85
August 2008	88.93	95.44	99.50	104.78
September 2008	89.77	94.68	98.31	102.48
October 2008	87.35	92.49	95.51	100.37
November 2008	81.86	89.26	92.02	96.33
December 2008	78.79	84.98	90.13	92.38
January 2009	76.65	81.94	86.44	86.13
February 2009	77.49	78.99	85.84	83.84
March 2009	75.07	76.05	84.35	84.48
April 2009	75.81	76.05	84.05	82.37
May 2009	74.60	77.66	84.85	85.49
June 2009	76.00	77.28	85.74	86.96
July 2009	77.30	79.75	86.14	86.04
August 2009	78.88	77.28	87.94	87.42
September 2009	78.14	79.75	87.34	90.08
October 2009	77.67	80.89	87.54	88.43
November 2009	77.02	80.80	88.24	89.07
December 2009	77.02	79.94	87.54	88.34
January 2010	75.44	82.89	88.43	88.98
February 2010	76.19	82.41	88.43	88.61
March 2010	78.51	82.13	89.63	92.19
April 2010	77.95	82.70	90.03	93.66
May 2010	78.79	83.65	91.92	96.24
June 2010	78.33	84.60	89.93	95.87
July 2010	76.93	84.79	90.33	95.96
August 2010	79.44	84.32	89.83	97.25
September 2010	76.74	84.60	90.83	97.43
October 2010	77.02	84.79	90.23	99.45
November 2010	77.86	85.36	91.92	99.27
December 2010	77.12	85.17	92.42	98.35
January 2011	79.91	83.65	93.12	100.09
February 2011	78.98	84.60	93.52	101.47
March 2011	79.07	84.98	92.52	102.75
April 2011	76.37	85.55	91.82	102.85
May 2011	78.42	84.89	93.42	103.58
June 2011	75.81	84.32	91.82	102.75
July 2011	74.98	83.84	93.32	106.06
August 2011	77.30	86.88	93.72	105.60
September 2011	75.72	82.79	91.63	102.66
October 2011	73.77	82.03	91.72	103.49
November 2011	72.09	82.32	92.72	102.85

Middle-right panel Euro Area

Period	Real effective exchange rate (Jan. 2007 = 100)	Consumer confidence (Percent balance)
January 2007	100.00	-6.1
February 2007	100.20	-5.2
March 2007	100.84	-5.1

April 2007	101.64	-4.2
May 2007	101.35	-0.9
June 2007	100.81	-1.4
July 2007	101.31	-1.5
August 2007	101.03	-3.9
September 2007	101.83	-5.9
October 2007	102.41	-6.7
November 2007	103.94	-8.8
December 2007	103.53	-9.1
January 2008	104.01	-11.2
February 2008	103.42	-12.3
March 2008	106.56	-12.7
April 2008	107.41	-12.2
May 2008	106.76	-13.7
June 2008	106.52	-15.9
July 2008	106.53	-19.2
August 2008	103.80	-19.3
September 2008	102.40	-19.1
October 2008	100.06	-24.3
November 2008	99.37	-26.4
December 2008	104.43	-30.8
January 2009	104.33	-30.6
February 2009	103.46	-32.9
March 2009	105.42	-34.2
April 2009	104.26	-30.6
May 2009	104.49	-28.3
June 2009	105.55	-25.2
July 2009	104.99	-23.1
August 2009	105.13	-22.1
September 2009	105.95	-19.1
October 2009	106.73	-17.7
November 2009	106.50	-17.3
December 2009	105.28	-16.1
January 2010	102.86	-15.8
February 2010	100.12	-17.4
March 2010	99.48	-17.3
April 2010	97.94	-15.0
May 2010	94.91	-17.7
June 2010	93.06	-17.3
July 2010	94.92	-14.0
August 2010	94.47	-11.4
September 2010	94.65	-11.0
October 2010	97.70	-10.9
November 2010	96.39	-9.4
December 2010	94.28	-11.0
January 2011	94.16	-11.2
February 2011	95.04	-10.0
March 2011	96.79	-10.6
April 2011	98.40	-11.6
May 2011	97.44	-9.9
June 2011	97.68	-9.7
July 2011	96.47	-11.2
August 2011	96.74	-16.5
September 2011	96.11	-19.1
October 2011	96.51	-19.9
November 2011	96.02	-20.4
December 2011	94.39	-21.1

Bottom-left panel Structural Budget Deficits

Percent of GDP

Period	United Kingdom	Euro area
2007	-3.5	-1.9
2008	-4.5	-2.6
2009	-6.9	-3.8
2010	-6.1	-3.7
2011	-4.8	-2.6

2012	-3.7	-0.9
2013	-2.6	0.8

Note: Blue shading represents the forecast period, which begins in 2011.

Bottom-right panel Industrial Production

Jan. 2007 = 100

Period	United Kingdom	Japan
January 2007	100.00	100.00
February 2007	100.00	100.57
March 2007	100.19	100.57
April 2007	99.22	100.19
May 2007	100.87	101.33
June 2007	100.10	101.42
July 2007	99.61	101.52
August 2007	100.19	104.08
September 2007	99.42	102.37
October 2007	100.00	104.36
November 2007	100.29	102.85
December 2007	100.19	103.51
January 2008	100.10	103.98
February 2008	100.49	104.46
March 2008	99.42	103.13
April 2008	99.42	102.47
May 2008	98.64	103.70
June 2008	97.86	101.61
July 2008	96.89	101.33
August 2008	97.67	98.20
September 2008	97.38	98.29
October 2008	95.14	94.97
November 2008	92.23	88.33
December 2008	90.96	80.93
January 2009	89.60	74.10
February 2009	89.31	67.74
March 2009	88.63	69.26
April 2009	89.41	72.39
May 2009	88.44	75.71
June 2009	88.82	76.85
July 2009	88.73	77.70
August 2009	87.07	78.84
September 2009	87.46	80.27
October 2009	87.95	81.50
November 2009	88.24	83.59
December 2009	87.95	85.77
January 2010	88.24	88.71
February 2010	88.73	90.23
March 2010	90.67	90.32
April 2010	90.18	90.89
May 2010	90.67	90.80
June 2010	89.89	89.47
July 2010	90.18	89.75
August 2010	90.48	89.66
September 2010	90.67	88.90
October 2010	90.28	87.67
November 2010	90.67	89.09
December 2010	90.86	91.27
January 2011	91.06	91.27
February 2011	89.99	92.88
March 2011	90.09	78.46
April 2011	88.53	79.70
May 2011	89.21	84.63
June 2011	89.50	87.86
July 2011	89.12	88.24
August 2011	89.31	88.80
September 2011	89.31	85.86
October 2011	88.44	87.76
November 2011	87.85	85.39

Exhibit 7 Outlook for Growth in the Emerging Market Economies

Top panel Real GDP*

Percent change, annual rate

		2011		2012		2013 ^f
		Q3	Q4 ^e	Q1 ^f	Q2-Q4 ^f	
1.	Emerging market economies	4.6	3.5	4.6	4.3	4.5
2.	<i>December Tealbook</i>	4.7	3.7	4.4	4.4	4.6
3.	China	9.5	8.2	8.0	7.9	8.1
4.	Other emerging Asia	2.3	1.3	4.2	4.2	4.5
5.	Mexico	5.5	3.5	3.7	2.9	3.0
6.	Other Latin America	2.7	2.8	3.3	3.4	3.6

* GDP aggregates weighted by shares of U.S. merchandise exports. [Return to text](#)

Middle-left panel China

12-month percent change

Period	Industrial production	Retail sales
January 2010	20.70	22.55
February 2010	20.81	21.72
March 2010	17.30	18.78
April 2010	17.83	19.84
May 2010	16.42	20.46
June 2010	13.53	20.76
July 2010	13.78	19.95
August 2010	13.98	20.64
September 2010	13.43	20.43
October 2010	13.27	17.33
November 2010	13.39	17.17
December 2010	13.54	16.78
January 2011	13.97	11.70
February 2011	14.05	11.05
March 2011	14.30	14.74
April 2011	13.46	13.26
May 2011	13.41	12.49
June 2011	14.97	11.65
July 2011	14.37	10.83
August 2011	13.57	10.36
September 2011	13.90	10.57
October 2011	13.22	10.00
November 2011	12.41	11.48
December 2011	12.77	11.49

Middle-center panel EME Exports

Jan. 2010 = 100*

Period	Exports
January 2010	100.00
February 2010	103.39
March 2010	103.77
April 2010	105.60
May 2010	107.73
June 2010	109.94
July 2010	110.48
August 2010	109.89
September 2010	109.63
October 2010	111.36
November 2010	115.50
December 2010	120.54
January 2011	127.74
February 2011	127.70
March 2011	131.12
April 2011	130.55
May 2011	134.95
June 2011	133.64

July 2011	133.61
August 2011	133.54
September 2011	132.89
October 2011	130.78
November 2011	130.23

* Three-month moving average. [Return to text](#)

Middle-right panel EME Manufacturing PMI

Period	Diffusion index
January 2010	55.76
February 2010	54.09
March 2010	55.20
April 2010	55.33
May 2010	54.25
June 2010	53.05
July 2010	52.61
August 2010	52.07
September 2010	52.43
October 2010	53.09
November 2010	53.93
December 2010	54.10
January 2011	53.95
February 2011	54.04
March 2011	54.15
April 2011	53.09
May 2011	52.43
June 2011	51.31
July 2011	50.57
August 2011	50.05
September 2011	49.72
October 2011	49.95
November 2011	49.65
December 2011	50.47

Bottom-left panel Flows to EME Dedicated Funds*

Monthly
Billions of dollars

Period	Bond funds	Equity funds
January 2010	1.74	2.09
February 2010	1.89	-1.47
March 2010	4.17	3.20
April 2010	5.06	3.68
May 2010	1.32	-4.63
June 2010	2.91	1.36
July 2010	3.68	3.38
August 2010	3.19	0.88
September 2010	3.93	5.35
October 2010	4.76	7.38
November 2010	1.81	5.29
December 2010	0.60	1.51
January 2011	1.37	2.87
February 2011	-1.15	-7.07
March 2011	0.29	-2.91
April 2011	2.15	4.20
May 2011	2.65	-1.88
June 2011	3.73	0.24
July 2011	2.98	-0.10
August 2011	0.52	-9.85
September 2011	-2.65	-5.81
October 2011	-1.51	-4.00
November 2011	0.18	-0.92
December 2011	-0.66	-5.07
January 2012	-0.54	0.53

* January 2012 is extrapolated from data through January 18, 2012. [Return to text](#)

Source: Emerging Portfolio Fund Research.

Bottom-right panel EME Exchange Rates

Jan. 4, 2010 = 100

Date	EMEs ex. China	China
4 January 2010	100.00	100.00
5 January 2010	100.32	100.02
6 January 2010	100.76	100.00
7 January 2010	100.68	99.99
8 January 2010	100.89	100.00
11 January 2010	101.39	100.01
12 January 2010	100.36	100.01
13 January 2010	100.19	99.97
14 January 2010	100.26	100.01
15 January 2010	100.30	100.01
18 January 2010	ND	ND
19 January 2010	100.25	100.01
20 January 2010	99.60	100.02
21 January 2010	99.48	100.01
22 January 2010	98.78	100.00
25 January 2010	98.91	100.01
26 January 2010	ND	100.01
27 January 2010	98.34	100.01
28 January 2010	98.46	100.01
29 January 2010	98.11	100.01
1 February 2010	98.21	100.02
2 February 2010	98.65	100.00
3 February 2010	98.48	100.02
4 February 2010	97.90	99.99
5 February 2010	97.24	100.00
8 February 2010	97.41	100.01
9 February 2010	97.91	100.01
10 February 2010	97.95	99.99
11 February 2010	98.06	99.92
12 February 2010	98.25	99.92
15 February 2010	ND	ND
16 February 2010	98.80	99.92
17 February 2010	98.85	99.92
18 February 2010	98.88	99.92
19 February 2010	98.84	99.98
22 February 2010	99.04	100.01
23 February 2010	98.75	100.01
24 February 2010	98.76	100.01
25 February 2010	98.51	100.01
26 February 2010	99.06	100.02
1 March 2010	99.26	100.01
2 March 2010	99.51	100.01
3 March 2010	99.80	100.02
4 March 2010	99.59	100.02
5 March 2010	99.97	100.02
8 March 2010	100.08	100.02
9 March 2010	100.11	100.01
10 March 2010	100.42	100.02
11 March 2010	100.34	100.01
12 March 2010	100.68	100.03
15 March 2010	100.45	100.02
16 March 2010	100.63	100.02
17 March 2010	100.82	100.02
18 March 2010	100.74	100.02
19 March 2010	100.44	100.01
22 March 2010	100.14	100.01
23 March 2010	100.45	100.01
24 March 2010	100.34	100.01
25 March 2010	100.37	100.00
26 March 2010	100.25	100.01
29 March 2010	100.72	100.01
30 March 2010	100.94	100.02
31 March 2010	101.36	100.02
1 April 2010	101.53	100.01

2 April 2010		101.59	100.03
5 April 2010		101.80	100.02
6 April 2010		101.88	100.03
7 April 2010		101.98	100.03
8 April 2010		101.90	100.05
9 April 2010		102.27	100.06
12 April 2010		102.32	100.03
13 April 2010		102.10	100.03
14 April 2010		102.49	100.02
15 April 2010		102.49	100.02
16 April 2010		102.19	100.03
19 April 2010		101.71	100.02
20 April 2010		102.18	100.03
21 April 2010		102.43	100.00
22 April 2010		102.08	100.01
23 April 2010		102.34	100.00
26 April 2010		102.67	100.01
27 April 2010		102.09	100.02
28 April 2010		101.46	100.04
29 April 2010		102.29	100.02
30 April 2010		102.47	100.04
3 May 2010		102.07	100.04
4 May 2010		101.50	100.02
5 May 2010		100.58	100.01
6 May 2010		99.30	100.01
7 May 2010		99.15	100.03
10 May 2010		100.84	100.01
11 May 2010		100.77	99.98
12 May 2010		100.88	100.00
13 May 2010		101.29	99.99
14 May 2010		100.41	100.01
17 May 2010		99.56	100.00
18 May 2010		100.09	100.00
19 May 2010		98.53	100.01
20 May 2010		97.41	99.99
21 May 2010		97.87	100.02
24 May 2010		97.78	99.98
25 May 2010		96.53	99.95
26 May 2010		97.23	99.97
27 May 2010		98.12	99.97
28 May 2010		98.47	99.95
31 May 2010		ND	ND
1 June 2010		97.82	100.00
2 June 2010		98.06	99.97
3 June 2010		98.64	99.99
4 June 2010		98.02	100.01
7 June 2010		97.36	99.93
8 June 2010		97.39	99.97
9 June 2010		97.72	99.98
10 June 2010		98.04	99.95
11 June 2010		98.32	99.93
14 June 2010		98.96	99.93
15 June 2010		98.97	99.93
16 June 2010		99.19	99.93
17 June 2010		99.25	99.98
18 June 2010		99.60	100.01
21 June 2010		100.52	100.45
22 June 2010		100.00	100.21
23 June 2010		99.44	100.22
24 June 2010		99.13	100.40
25 June 2010		98.98	100.53
28 June 2010		99.30	100.46
29 June 2010		98.37	100.44
30 June 2010		98.37	100.68
1 July 2010		97.84	100.69
2 July 2010		97.85	100.83
5 July 2010		ND	ND
6 July 2010		98.40	100.70
7 July 2010		98.39	100.74

8 July 2010	98.92	100.75
9 July 2010	99.12	100.82
12 July 2010	98.91	100.83
13 July 2010	99.23	100.82
14 July 2010	99.35	100.83
15 July 2010	99.20	100.74
16 July 2010	98.73	100.77
19 July 2010	98.51	100.73
20 July 2010	98.81	100.73
21 July 2010	99.06	100.74
22 July 2010	99.25	100.71
23 July 2010	99.31	100.69
26 July 2010	99.60	100.72
27 July 2010	99.99	100.73
28 July 2010	99.82	100.73
29 July 2010	99.75	100.76
30 July 2010	100.07	100.79
2 August 2010	100.62	100.79
3 August 2010	100.67	100.80
4 August 2010	100.75	100.82
5 August 2010	100.79	100.84
6 August 2010	100.62	100.88
9 August 2010	100.75	100.89
10 August 2010	100.34	100.82
11 August 2010	99.93	100.78
12 August 2010	99.88	100.63
13 August 2010	99.88	100.47
16 August 2010	100.09	100.35
17 August 2010	100.55	100.52
18 August 2010	100.64	100.53
19 August 2010	100.22	100.55
20 August 2010	100.01	100.55
23 August 2010	99.75	100.41
24 August 2010	99.35	100.45
25 August 2010	99.02	100.41
26 August 2010	99.35	100.40
27 August 2010	99.28	100.44
30 August 2010	98.95	100.36
31 August 2010	98.75	100.30
1 September 2010	99.41	100.25
2 September 2010	99.51	100.30
3 September 2010	99.97	100.38
6 September 2010	ND	ND
7 September 2010	99.50	100.54
8 September 2010	99.82	100.49
9 September 2010	99.97	100.67
10 September 2010	100.16	100.86
13 September 2010	100.58	101.00
14 September 2010	100.72	101.25
15 September 2010	100.68	101.33
16 September 2010	100.46	101.52
17 September 2010	100.71	101.55
20 September 2010	100.85	101.70
21 September 2010	100.87	101.81
22 September 2010	101.29	101.85
23 September 2010	101.40	101.83
24 September 2010	101.82	101.85
27 September 2010	102.09	102.04
28 September 2010	102.13	102.05
29 September 2010	102.38	102.10
30 September 2010	102.10	102.04
1 October 2010	102.52	102.06
4 October 2010	102.38	102.03
5 October 2010	102.71	102.04
6 October 2010	103.15	102.06
7 October 2010	103.03	102.05
8 October 2010	103.07	102.34
11 October 2010	ND	ND
12 October 2010	103.01	102.31

13 October 2010		103.48	102.46
14 October 2010		103.58	102.66
15 October 2010		103.59	102.83
18 October 2010		103.34	102.76
19 October 2010		102.83	102.75
20 October 2010		103.09	102.64
21 October 2010		103.10	102.66
22 October 2010		102.99	102.54
25 October 2010		103.50	102.54
26 October 2010		103.16	102.47
27 October 2010		102.61	102.20
28 October 2010		102.94	102.10
29 October 2010		103.20	102.35
1 November 2010		103.36	102.06
2 November 2010		103.62	102.24
3 November 2010		103.67	102.27
4 November 2010		104.20	102.50
5 November 2010		104.25	102.59
8 November 2010		103.86	102.22
9 November 2010		103.99	102.78
10 November 2010		103.83	102.92
11 November 2010		ND	ND
12 November 2010		103.34	102.87
15 November 2010		103.03	102.79
16 November 2010		102.48	102.85
17 November 2010		102.57	102.80
18 November 2010		103.13	102.93
19 November 2010		103.06	102.82
22 November 2010		103.15	102.80
23 November 2010		101.94	102.77
24 November 2010		102.39	102.62
25 November 2010		ND	ND
26 November 2010		101.83	102.40
29 November 2010		101.51	102.51
30 November 2010		101.86	102.40
1 December 2010		102.43	102.47
2 December 2010		102.63	102.50
3 December 2010		102.91	102.47
6 December 2010		102.84	102.69
7 December 2010		102.90	102.74
8 December 2010		102.58	102.49
9 December 2010		102.47	102.59
10 December 2010		102.51	102.59
13 December 2010		102.76	102.43
14 December 2010		103.04	102.57
15 December 2010		102.65	102.60
16 December 2010		102.42	102.46
17 December 2010		102.48	102.60
20 December 2010		102.46	102.29
21 December 2010		102.71	102.54
22 December 2010		102.91	102.74
23 December 2010		102.95	102.74
24 December 2010		ND	ND
27 December 2010		103.02	102.97
28 December 2010		103.13	103.06
29 December 2010		103.30	103.13
30 December 2010		103.58	103.44
31 December 2010		ND	ND
3 January 2011		104.22	103.61
4 January 2011		103.96	103.34
5 January 2011		103.95	103.68
6 January 2011		103.78	103.04
7 January 2011		103.68	103.01
10 January 2011		103.51	102.88
11 January 2011		103.92	103.15
12 January 2011		104.54	103.39
13 January 2011		104.59	103.38
14 January 2011		104.47	103.64
17 January 2011		ND	ND

18 January 2011		104.66	103.71
19 January 2011		104.58	103.72
20 January 2011		104.17	103.68
21 January 2011		104.38	103.71
24 January 2011		104.45	103.74
25 January 2011		104.28	103.72
26 January 2011		104.54	103.74
27 January 2011		104.50	103.74
28 January 2011		104.05	103.73
31 January 2011		104.02	103.42
1 February 2011		104.70	103.54
2 February 2011		104.68	104.14
3 February 2011		104.59	104.14
4 February 2011		104.70	104.14
7 February 2011		104.99	104.07
8 February 2011		105.14	104.20
9 February 2011		104.85	103.58
10 February 2011		104.52	103.66
11 February 2011		104.39	103.57
14 February 2011		104.48	103.50
15 February 2011		104.27	103.63
16 February 2011		104.51	103.63
17 February 2011		104.75	103.68
18 February 2011		104.97	103.87
21 February 2011		ND	ND
22 February 2011		104.38	103.77
23 February 2011		104.11	103.85
24 February 2011		104.00	103.88
25 February 2011		104.30	103.84
28 February 2011		104.41	103.90
1 March 2011		104.62	103.92
2 March 2011		104.61	103.88
3 March 2011		105.02	103.89
4 March 2011		105.17	103.96
7 March 2011		105.11	104.17
8 March 2011		105.17	103.94
9 March 2011		105.31	104.11
10 March 2011		105.06	103.87
11 March 2011		105.15	103.85
14 March 2011		105.20	103.92
15 March 2011		104.63	103.87
16 March 2011		104.46	103.90
17 March 2011		104.42	103.85
18 March 2011		104.71	103.93
21 March 2011		105.12	104.02
22 March 2011		105.21	104.22
23 March 2011		105.09	104.09
24 March 2011		105.36	104.11
25 March 2011		105.54	104.13
28 March 2011		105.42	104.01
29 March 2011		105.38	104.07
30 March 2011		105.76	104.14
31 March 2011		105.92	104.26
1 April 2011		106.44	104.27
4 April 2011		106.45	104.42
5 April 2011		106.56	104.41
6 April 2011		106.87	104.33
7 April 2011		106.85	104.36
8 April 2011		107.25	104.47
11 April 2011		107.14	104.42
12 April 2011		106.73	104.39
13 April 2011		106.84	104.50
14 April 2011		107.07	104.54
15 April 2011		107.33	104.53
18 April 2011		106.87	104.58
19 April 2011		107.23	104.55
20 April 2011		107.80	104.63
21 April 2011		107.99	105.16
22 April 2011		107.94	104.93

25 April 2011		107.89	104.59
26 April 2011		108.03	104.60
27 April 2011		108.13	104.85
28 April 2011		108.39	105.02
29 April 2011		108.71	105.20
2 May 2011		108.81	105.16
3 May 2011		108.48	105.11
4 May 2011		108.06	105.16
5 May 2011		107.49	105.15
6 May 2011		107.82	105.16
9 May 2011		107.66	105.14
10 May 2011		107.85	105.17
11 May 2011		107.84	105.17
12 May 2011		107.29	105.06
13 May 2011		106.95	105.07
16 May 2011		106.77	104.92
17 May 2011		106.61	104.94
18 May 2011		107.00	104.99
19 May 2011		107.21	104.97
20 May 2011		107.33	105.17
23 May 2011		106.52	104.95
24 May 2011		106.76	105.05
25 May 2011		106.65	105.15
26 May 2011		106.86	105.18
27 May 2011		107.48	105.16
30 May 2011		ND	ND
31 May 2011		107.88	105.38
1 June 2011		107.81	105.39
2 June 2011		107.57	105.32
3 June 2011		107.84	105.37
6 June 2011		107.70	105.37
7 June 2011		107.61	105.34
8 June 2011		107.35	105.43
9 June 2011		107.35	105.43
10 June 2011		106.90	105.36
13 June 2011		106.77	105.31
14 June 2011		107.20	105.37
15 June 2011		106.74	105.33
16 June 2011		106.15	105.45
17 June 2011		106.55	105.52
20 June 2011		106.62	105.49
21 June 2011		107.07	105.60
22 June 2011		107.23	105.64
23 June 2011		106.67	105.56
24 June 2011		106.62	105.46
27 June 2011		106.45	105.34
28 June 2011		106.75	105.52
29 June 2011		107.24	105.63
30 June 2011		107.69	105.63
1 July 2011		108.07	105.61
4 July 2011		ND	ND
5 July 2011		108.09	105.59
6 July 2011		107.98	105.57
7 July 2011		108.37	105.60
8 July 2011		108.29	105.61
11 July 2011		107.72	105.57
12 July 2011		107.36	105.49
13 July 2011		107.92	105.56
14 July 2011		107.98	105.70
15 July 2011		107.89	105.67
18 July 2011		107.47	105.54
19 July 2011		107.97	105.64
20 July 2011		108.21	105.72
21 July 2011		108.49	105.79
22 July 2011		108.63	105.91
25 July 2011		108.51	105.93
26 July 2011		108.88	106.00
27 July 2011		108.66	105.97
28 July 2011		108.57	105.98

29 July 2011		108.35	106.08
1 August 2011		108.35	106.12
2 August 2011		108.14	106.05
3 August 2011		107.78	106.11
4 August 2011		106.94	106.05
5 August 2011		106.51	106.01
8 August 2011		105.77	106.11
9 August 2011		105.00	106.17
10 August 2011		105.05	106.39
11 August 2011		105.08	106.79
12 August 2011		105.52	106.86
15 August 2011		105.86	106.84
16 August 2011		106.04	106.98
17 August 2011		106.23	106.95
18 August 2011		105.34	106.89
19 August 2011		105.63	106.83
22 August 2011		105.42	106.67
23 August 2011		105.58	106.72
24 August 2011		105.09	106.88
25 August 2011		104.92	106.84
26 August 2011		104.97	106.91
29 August 2011		105.28	107.00
30 August 2011		105.12	107.01
31 August 2011		105.76	107.05
1 September 2011		105.94	106.99
2 September 2011		105.43	106.98
5 September 2011		ND	ND
6 September 2011		104.47	106.84
7 September 2011		104.72	106.78
8 September 2011		104.48	106.96
9 September 2011		103.70	106.88
12 September 2011		103.00	106.88
13 September 2011		102.38	106.73
14 September 2011		101.72	106.83
15 September 2011		101.89	106.84
16 September 2011		101.80	106.96
19 September 2011		100.28	106.90
20 September 2011		100.26	106.95
21 September 2011		99.11	106.99
22 September 2011		96.99	106.88
23 September 2011		97.51	106.88
26 September 2011		97.44	106.72
27 September 2011		98.94	106.72
28 September 2011		98.63	106.79
29 September 2011		98.26	106.74
30 September 2011		97.24	107.04
3 October 2011		96.72	107.10
4 October 2011		96.30	107.10
5 October 2011		97.32	107.10
6 October 2011		97.89	107.04
7 October 2011		98.87	107.10
10 October 2011		ND	ND
11 October 2011		99.08	107.10
12 October 2011		99.53	107.38
13 October 2011		99.28	106.98
14 October 2011		99.70	107.04
17 October 2011		99.83	107.19
18 October 2011		99.26	107.00
19 October 2011		99.59	107.06
20 October 2011		98.13	106.97
21 October 2011		98.71	106.97
24 October 2011		99.45	107.11
25 October 2011		99.53	107.34
26 October 2011		99.35	107.46
27 October 2011		100.98	107.36
28 October 2011		101.49	107.40
31 October 2011		101.04	107.44
1 November 2011		99.05	107.44
2 November 2011		99.52	107.43

3 November 2011		99.59	107.49
4 November 2011		99.69	107.69
7 November 2011		99.62	107.55
8 November 2011		99.81	107.58
9 November 2011		99.31	107.68
10 November 2011		98.83	107.59
11 November 2011		ND	ND
14 November 2011		99.07	107.46
15 November 2011		98.63	107.58
16 November 2011		98.58	107.61
17 November 2011		98.45	107.51
18 November 2011		98.09	107.41
21 November 2011		96.97	107.34
22 November 2011		96.99	107.34
23 November 2011		96.17	107.39
24 November 2011		ND	ND
25 November 2011		95.75	107.01
28 November 2011		96.53	106.95
29 November 2011		96.97	107.06
30 November 2011		98.03	107.07
1 December 2011		98.53	107.25
2 December 2011		98.66	107.35
5 December 2011		98.85	107.30
6 December 2011		98.64	107.27
7 December 2011		98.66	107.28
8 December 2011		98.06	107.32
9 December 2011		98.01	107.28
12 December 2011		97.12	107.34
13 December 2011		97.02	107.27
14 December 2011		96.39	107.16
15 December 2011		96.73	107.12
16 December 2011		96.77	107.55
19 December 2011		96.55	107.73
20 December 2011		97.04	107.59
21 December 2011		97.01	107.71
22 December 2011		97.10	107.70
23 December 2011		97.16	107.75
26 December 2011		ND	ND
27 December 2011		96.64	108.01
28 December 2011		96.41	108.01
29 December 2011		96.44	108.05
30 December 2011		96.55	108.47
2 January 2012		ND	ND
3 January 2012		97.58	108.47
4 January 2012		97.52	108.47
5 January 2012		97.18	108.35
6 January 2012		97.22	108.22
9 January 2012		97.18	108.12
10 January 2012		97.89	108.13
11 January 2012		97.72	108.11
12 January 2012		98.09	108.07
13 January 2012		97.97	108.26
16 January 2012		ND	ND
17 January 2012		98.68	108.14
18 January 2012		99.21	108.18
19 January 2012		99.69	108.09
20 January 2012		99.72	107.81
23 January 2012		ND	107.81

Exhibit 8 Inflation and Monetary Policy

Top-left panel Commodity Prices

Date	Oil (Dollars per barrel)	Food (Jan. 7, 2011 = 100)	Metals (Jan. 7, 2011 = 100)
3 January 2011	ND	100.15	98.88
4 January 2011	91.28	99.53	98.88

5 January 2011	91.62	100.86	97.85
6 January 2011	91.32	100.72	98.17
7 January 2011	90.46	100.00	100.00
10 January 2011	91.58	102.50	99.78
11 January 2011	93.21	102.68	100.55
12 January 2011	94.53	104.05	101.26
13 January 2011	94.22	104.46	101.32
14 January 2011	94.21	104.84	101.12
17 January 2011	NC	ND	ND
18 January 2011	93.69	106.01	101.56
19 January 2011	93.83	105.65	101.22
20 January 2011	92.51	105.84	99.95
21 January 2011	92.55	105.84	102.45
24 January 2011	91.84	106.18	102.21
25 January 2011	90.54	106.05	101.47
26 January 2011	92.19	106.90	102.07
27 January 2011	91.88	107.10	102.94
28 January 2011	93.77	107.59	103.97
31 January 2011	95.35	108.51	104.87
1 February 2011	95.77	109.25	105.79
2 February 2011	96.46	109.37	106.50
3 February 2011	ND	109.21	106.72
4 February 2011	ND	109.97	106.41
7 February 2011	94.24	110.04	107.00
8 February 2011	94.13	110.66	106.61
9 February 2011	95.12	112.00	106.47
10 February 2011	95.29	112.13	105.96
11 February 2011	94.61	111.04	106.25
14 February 2011	94.66	110.30	107.74
15 February 2011	94.84	109.02	107.59
16 February 2011	95.42	108.78	107.11
17 February 2011	96.07	109.84	106.33
18 February 2011	95.71	109.21	106.98
21 February 2011	NC	ND	ND
22 February 2011	100.94	107.74	106.14
23 February 2011	104.03	108.38	105.26
24 February 2011	106.94	107.97	105.15
25 February 2011	105.97	110.08	106.50
28 February 2011	105.63	111.02	107.01
1 March 2011	107.34	110.76	107.28
2 March 2011	109.36	111.21	106.56
3 March 2011	108.23	111.80	106.55
4 March 2011	110.12	113.22	106.86
7 March 2011	110.41	113.10	105.33
8 March 2011	109.05	113.06	104.00
9 March 2011	109.53	112.85	103.63
10 March 2011	109.25	112.44	102.31
11 March 2011	107.61	110.37	101.99
14 March 2011	106.96	110.11	102.35
15 March 2011	103.57	107.90	100.32
16 March 2011	104.07	107.42	101.92
17 March 2011	107.79	108.72	102.98
18 March 2011	108.43	108.98	103.29
21 March 2011	108.51	109.31	102.95
22 March 2011	109.28	109.39	103.13
23 March 2011	109.90	109.22	105.01
24 March 2011	110.22	110.89	105.59
25 March 2011	110.23	111.45	107.71
28 March 2011	109.19	111.21	107.03
29 March 2011	109.36	112.32	106.63
30 March 2011	109.46	111.56	106.48
31 March 2011	111.15	113.74	106.60
1 April 2011	112.46	114.88	106.40
4 April 2011	113.78	115.13	106.35
5 April 2011	114.31	115.20	106.94
6 April 2011	115.22	113.81	107.94
7 April 2011	115.98	113.31	108.99
8 April 2011	118.86	113.67	109.99

11 April 2011		117.07	113.46	110.08
12 April 2011		114.74	112.79	109.28
13 April 2011		114.66	112.93	108.45
14 April 2011		115.35	112.57	107.57
15 April 2011		116.12	112.56	107.93
18 April 2011		114.87	113.43	107.63
19 April 2011		114.26	113.76	106.99
20 April 2011		116.89	113.95	107.87
21 April 2011		117.80	114.36	108.04
22 April 2011		ND	ND	ND
25 April 2011		117.98	114.13	107.59
26 April 2011		117.94	113.58	106.86
27 April 2011		118.76	113.16	106.02
28 April 2011		118.81	111.68	106.13
29 April 2011		119.55	113.07	105.60
2 May 2011		ND	113.43	105.69
3 May 2011		117.17	112.39	105.67
4 May 2011		115.44	112.20	104.58
5 May 2011		108.30	111.38	101.64
6 May 2011		103.56	109.80	100.18
9 May 2011		107.93	110.63	101.79
10 May 2011		109.93	111.62	101.89
11 May 2011		107.36	110.40	100.74
12 May 2011		105.73	110.29	100.30
13 May 2011		106.91	109.93	101.39
16 May 2011		104.89	110.21	99.34
17 May 2011		ND	110.96	100.24
18 May 2011		106.34	112.46	100.79
19 May 2011		105.72	112.50	100.65
20 May 2011		106.23	111.91	100.79
23 May 2011		103.89	110.74	99.05
24 May 2011		105.87	110.74	99.22
25 May 2011		107.85	111.42	101.31
26 May 2011		107.73	112.46	101.11
27 May 2011		108.35	113.13	101.25
30 May 2011		NC	ND	ND
31 May 2011		109.61	112.60	102.92
1 June 2011		108.18	112.63	102.33
2 June 2011		108.22	113.44	101.88
3 June 2011		108.24	112.77	101.08
6 June 2011		107.16	111.59	101.10
7 June 2011		107.79	111.65	100.93
8 June 2011		109.24	112.76	100.48
9 June 2011		110.93	113.13	100.70
10 June 2011		109.85	113.14	100.62
13 June 2011		108.79	112.64	99.23
14 June 2011		110.01	112.09	100.61
15 June 2011		106.58	112.15	100.62
16 June 2011		105.39	111.01	99.50
17 June 2011		104.40	111.58	100.68
20 June 2011		103.52	111.40	98.82
21 June 2011		103.82	111.71	99.77
22 June 2011		105.10	110.85	99.68
23 June 2011		101.87	110.46	99.63
24 June 2011		100.38	109.90	99.77
27 June 2011		99.15	109.07	99.84
28 June 2011		101.60	109.83	100.11
29 June 2011		104.16	110.10	100.96
30 June 2011		104.48	108.69	102.10
1 July 2011		104.09	107.61	102.28
4 July 2011		NC	ND	ND
5 July 2011		105.25	108.99	103.03
6 July 2011		105.70	108.83	103.23
7 July 2011		108.50	109.43	104.25
8 July 2011		108.28	109.16	104.19
11 July 2011		107.47	108.32	102.57
12 July 2011		107.60	109.14	102.64
13 July 2011		108.94	110.91	103.31

14 July 2011		108.03	112.55	103.81
15 July 2011		108.25	112.30	103.66
18 July 2011		107.58	112.29	104.13
19 July 2011		108.49	112.35	105.10
20 July 2011		109.34	112.74	105.16
21 July 2011		109.05	113.01	104.79
22 July 2011		109.85	113.29	105.40
25 July 2011		109.33	112.28	105.15
26 July 2011		109.80	112.80	106.30
27 July 2011		108.90	113.02	106.36
28 July 2011		108.68	112.63	106.41
29 July 2011		107.87	111.93	105.77
1 August 2011		108.08	112.65	105.95
2 August 2011		106.49	113.52	104.74
3 August 2011		104.76	113.47	103.21
4 August 2011		100.56	112.94	101.85
5 August 2011		99.79	112.80	99.79
8 August 2011		95.22	111.14	97.32
9 August 2011		ND	112.29	96.39
10 August 2011		96.32	112.25	95.17
11 August 2011		98.20	112.95	95.15
12 August 2011		98.51	112.88	96.38
15 August 2011		100.02	113.44	96.52
16 August 2011		99.85	112.87	95.68
17 August 2011		101.06	113.26	96.40
18 August 2011		98.21	112.53	95.64
19 August 2011		97.76	112.94	95.24
22 August 2011		98.28	112.58	94.89
23 August 2011		99.97	113.22	95.69
24 August 2011		100.10	112.48	95.25
25 August 2011		100.98	112.02	96.05
26 August 2011		101.09	113.36	96.64
29 August 2011		102.46	113.87	96.59
30 August 2011		ND	113.80	97.04
31 August 2011		104.50	113.65	97.72
1 September 2011		104.22	112.06	97.12
2 September 2011		102.66	112.55	96.83
5 September 2011		NC	ND	ND
6 September 2011		101.97	112.27	96.01
7 September 2011		104.59	111.89	96.85
8 September 2011		104.63	111.45	97.18
9 September 2011		102.98	111.32	96.15
12 September 2011		101.68	110.86	94.81
13 September 2011		102.51	110.04	95.59
14 September 2011		102.12	110.17	94.94
15 September 2011		103.95	110.00	95.28
16 September 2011		103.97	109.22	95.40
19 September 2011		101.75	108.44	93.20
20 September 2011		102.04	108.35	93.30
21 September 2011		101.47	108.18	92.69
22 September 2011		97.38	106.62	88.61
23 September 2011		96.47	106.23	86.26
26 September 2011		95.80	105.83	86.96
27 September 2011		98.96	105.10	89.05
28 September 2011		96.70	104.12	85.68
29 September 2011		96.90	104.60	84.82
30 September 2011		94.80	103.14	84.82
3 October 2011		92.02	103.86	83.69
4 October 2011		91.29	103.45	83.62
5 October 2011		93.15	103.99	84.24
6 October 2011		95.77	103.85	85.40
7 October 2011		96.39	103.12	85.98
10 October 2011		98.53	101.98	87.23
11 October 2011		99.16	104.46	86.04
12 October 2011		100.07	104.26	87.13
13 October 2011		100.02	103.95	86.37
14 October 2011		102.69	104.71	86.71
17 October 2011		101.96	104.89	86.37

18 October 2011		102.01	105.09	84.71
19 October 2011		101.03	105.15	85.05
20 October 2011		100.55	104.98	82.95
21 October 2011		101.27	104.55	84.63
24 October 2011		103.24	104.66	86.16
25 October 2011		104.40	106.30	86.34
26 October 2011		ND	105.57	86.43
27 October 2011		104.76	105.51	87.75
28 October 2011		103.98	105.70	88.10
31 October 2011		102.77	105.95	87.79
1 November 2011		101.44	105.62	86.54
2 November 2011		102.71	105.57	87.33
3 November 2011		103.57	104.50	87.79
4 November 2011		104.61	104.16	87.93
7 November 2011		ND	103.58	86.21
8 November 2011		107.94	104.10	86.76
9 November 2011		106.29	102.99	85.91
10 November 2011		106.68	102.31	84.63
11 November 2011		107.69	102.34	84.89
14 November 2011		107.26	100.59	85.37
15 November 2011		107.62	101.39	85.25
16 November 2011		108.16	101.18	85.06
17 November 2011		105.57	100.41	84.52
18 November 2011		104.66	100.12	84.99
21 November 2011		103.63	98.92	83.85
22 November 2011		104.65	98.68	83.97
23 November 2011		103.97	97.98	83.45
24 November 2011		NC	ND	ND
25 November 2011		103.67	98.15	83.02
28 November 2011		105.29	98.29	84.01
29 November 2011		106.59	98.91	84.08
30 November 2011		106.86	98.66	84.69
1 December 2011		105.84	98.39	85.45
2 December 2011		106.39	98.17	85.59
5 December 2011		106.54	97.45	85.39
6 December 2011		106.59	96.99	85.13
7 December 2011		106.39	97.01	85.56
8 December 2011		104.82	97.11	85.22
9 December 2011		104.82	96.40	85.15
12 December 2011		103.72	95.78	84.11
13 December 2011		105.12	95.77	83.57
14 December 2011		102.21	94.94	81.58
15 December 2011		100.19	94.83	81.41
16 December 2011		99.82	94.97	81.97
19 December 2011		100.11	95.06	81.56
20 December 2011		102.55	95.50	81.84
21 December 2011		104.34	95.60	82.46
22 December 2011		104.95	95.69	82.43
23 December 2011		104.98	96.40	82.96
26 December 2011		ND	ND	ND
27 December 2011		105.86	96.90	82.67
28 December 2011		104.89	96.88	82.18
29 December 2011		104.60	97.50	81.91
30 December 2011		103.75	97.67	82.21
2 January 2012		ND	ND	ND
3 January 2012		107.11	97.91	84.34
4 January 2012		108.26	97.64	84.07
5 January 2012		108.00	96.73	83.92
6 January 2012		108.19	96.05	84.19
9 January 2012		107.92	96.78	84.59
10 January 2012		108.66	96.64	85.49
11 January 2012		108.05	96.41	85.87
12 January 2012		106.93	95.34	87.30
13 January 2012		106.52	94.54	87.23
16 January 2012		NC	ND	ND
17 January 2012		107.52	95.29	88.59
18 January 2012		107.22	95.95	88.66
19 January 2012		107.11	96.52	89.33

20 January 2012	105.89	96.90	88.97
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* Average of WTI, Brent, and Dubai spot prices. [Return to table](#)

Top-right panel Commodity Price Outlook

2008:Q1 = 100

Period	Imported oil	Nonfuel
January 2008	100.00	100.00
February 2008	100.34	100.00
March 2008	107.20	100.00
April 2008	115.74	103.21
May 2008	126.91	103.21
June 2008	138.77	103.21
July 2008	145.84	98.04
August 2008	138.80	98.04
September 2008	125.38	98.04
October 2008	107.14	72.68
November 2008	76.21	72.68
December 2008	57.46	72.68
January 2009	48.00	68.62
February 2009	48.03	68.62
March 2009	50.31	68.62
April 2009	55.92	73.98
May 2009	61.75	73.98
June 2009	71.33	73.98
July 2009	74.14	82.75
August 2009	77.97	82.75
September 2009	80.91	82.75
October 2009	80.53	88.73
November 2009	85.96	88.73
December 2009	86.33	88.73
January 2010	88.47	96.08
February 2010	86.63	96.08
March 2010	89.00	96.08
April 2010	92.33	99.88
May 2010	91.66	99.88
June 2010	86.49	99.88
July 2010	86.45	100.57
August 2010	87.62	100.57
September 2010	86.21	100.57
October 2010	89.20	114.17
November 2010	92.12	114.17
December 2010	95.76	114.17
January 2011	101.15	127.91
February 2011	104.45	127.91
March 2011	113.43	127.91
April 2011	125.50	126.91
May 2011	130.32	126.91
June 2011	126.97	126.91
July 2011	125.03	121.32
August 2011	122.52	121.32
September 2011	120.84	121.32
October 2011	117.91	105.86
November 2011	121.76	105.86
December 2011	121.04	105.86
January 2012	121.84	104.42
February 2012	122.45	104.42
March 2012	122.47	104.42
April 2012	122.58	104.95
May 2012	122.77	104.95
June 2012	122.90	104.95
July 2012	123.00	105.47
August 2012	122.98	105.47
September 2012	122.81	105.47
October 2012	122.59	105.81
November 2012	122.35	105.81
December 2012	122.09	105.81

January 2013	121.85	106.30
February 2013	121.51	106.30
March 2013	121.16	106.30
April 2013	120.79	106.77
May 2013	120.40	106.77
June 2013	120.01	106.77
July 2013	119.65	107.09
August 2013	119.27	107.09
September 2013	118.91	107.09
October 2013	118.56	107.30
November 2013	118.26	107.30
December 2013	117.97	107.30

Note: Blue shading represents the forecast period, which begins in January 2012.

Middle-left panel AFE Consumer Prices

12-month percent change

Period	United Kingdom	Euro area	Canada	Japan
January 2010	3.39	0.98	1.85	-0.99
February 2010	2.91	0.87	1.58	-0.89
March 2010	3.34	1.54	1.40	-0.79
April 2010	3.66	1.62	1.85	-0.89
May 2010	3.35	1.68	1.40	-0.69
June 2010	3.29	1.48	1.05	-0.70
July 2010	3.09	1.78	1.93	-0.99
August 2010	3.15	1.59	1.75	-1.00
September 2010	3.07	1.87	1.83	-0.90
October 2010	3.23	1.94	2.35	-0.20
November 2010	3.34	1.91	1.99	-0.30
December 2010	3.72	2.21	2.34	-0.40
January 2011	3.90	2.34	2.33	-0.50
February 2011	4.30	2.44	2.16	-0.50
March 2011	4.00	2.66	3.20	-0.60
April 2011	4.44	2.83	3.37	-0.50
May 2011	4.42	2.73	3.54	-0.40
June 2011	4.23	2.72	3.20	-0.40
July 2011	4.47	2.56	2.75	0.30
August 2011	4.54	2.52	3.00	0.20
September 2011	5.16	2.99	3.34	0.00
October 2011	5.01	3.03	2.89	-0.20
November 2011	4.79	3.04	2.80	-0.50
December 2011	4.19	2.74	2.29	ND

Middle-right panel EME Consumer Prices

12-month percent change

Period	China	Mexico	Brazil
January 2010	1.5	4.46	4.36
February 2010	2.7	4.83	4.77
March 2010	2.4	4.97	5.30
April 2010	2.8	4.27	5.49
May 2010	3.1	3.92	5.31
June 2010	2.9	3.69	4.76
July 2010	3.3	3.64	4.44
August 2010	3.5	3.68	4.29
September 2010	3.6	3.70	4.68
October 2010	4.4	4.02	5.39
November 2010	5.1	4.32	6.08
December 2010	4.6	4.40	6.47
January 2011	4.9	3.78	6.53
February 2011	4.9	3.57	6.36
March 2011	5.4	3.04	6.31
April 2011	5.3	3.36	6.30
May 2011	5.5	3.25	6.44
June 2011	6.4	3.28	6.80
July 2011	6.5	3.55	6.87
August 2011	6.2	3.42	7.40

September 2011	6.1	3.14	7.30
October 2011	5.5	3.20	6.66
November 2011	4.2	3.48	6.18
December 2011	4.1	3.82	6.08

Bottom-left panel Consumer Price Outlook

Four-quarter percent change

Period	Advanced foreign economies	Emerging market economies
2010:Q1	1.10	3.38
2010:Q2	1.24	3.50
2010:Q3	1.33	3.62
2010:Q4	1.70	4.33
2011:Q1	1.99	4.50
2011:Q2	2.40	4.81
2011:Q3	2.40	5.09
2011:Q4	2.29	4.28
2012:Q1	1.88	3.74
2012:Q2	1.65	3.54
2012:Q3	1.70	3.17
2012:Q4	1.32	3.13
2013:Q1	1.21	3.20
2013:Q2	1.18	3.18
2013:Q3	1.15	3.19
2013:Q4	1.14	3.21

Note: Blue shading represents the forecast period, which begins in 2012:Q1.

Bottom-right panel Monetary Policy

- In AFEs, monetary policy will remain accommodative.
 - Continued extraordinary liquidity provision by ECB.
 - Expansion of asset purchases by BoE and BoJ.
- In EMEs, monetary policy will likely be eased somewhat.
 - Though in some cases, continued concerns about inflation may limit scope for easing.

Exhibit 9 U.S. External Sector

Top-left panel Total Foreign Real GDP

Period	Four-quarter percent change	June TB
2011:Q1	4.06	4.05
2011:Q2	3.29	3.48
2011:Q3	3.34	3.58
2011:Q4	2.92	3.62
2012:Q1	2.61	3.45
2012:Q2	2.62	3.63
2012:Q3	2.34	3.56
2012:Q4	2.51	3.57
2013:Q1	2.59	3.59
2013:Q2	2.73	3.61
2013:Q3	2.86	3.62
2013:Q4	2.97	3.62

Note: Blue shading represents the forecast period, which begins in 2011:Q4.

Top-right panel Broad Real Dollar

Period	2009:Q1 = 100	June TB
2009:Q1	100.00	ND
2009:Q2	96.45	ND
2009:Q3	93.77	ND
2009:Q4	91.36	ND
2010:Q1	91.86	ND
2010:Q2	92.61	ND
2010:Q3	91.33	ND

2010:Q4		87.97	ND
2011:Q1		86.81	ND
2011:Q2		84.78	ND
2011:Q3		85.32	84.24
2011:Q4		88.11	83.74
2012:Q1		88.57	83.17
2012:Q2		88.34	82.56
2012:Q3		87.92	81.94
2012:Q4		87.33	81.32
2013:Q1		86.73	80.75
2013:Q2		86.09	80.23
2013:Q3		85.46	79.71
2013:Q4		84.82	79.21

Note: Blue shading represents the forecast period, which begins in 2012:Q1.

Middle-left panel Real Exports

Period	Four-quarter percent change	June TB
2011:Q1	8.93	8.08
2011:Q2	7.29	8.38
2011:Q3	5.95	9.27
2011:Q4	5.28	9.54
2012:Q1	4.71	9.96
2012:Q2	4.94	9.63
2012:Q3	4.89	9.24
2012:Q4	4.80	8.98
2013:Q1	4.68	8.74
2013:Q2	4.84	8.57
2013:Q3	5.02	8.39
2013:Q4	5.16	8.13

Note: Blue shading represents the forecast period, which begins in 2011:Q4.

Middle-right panel Real Imports

Period	Four-quarter percent change	June TB
2011:Q1	9.63	9.49
2011:Q2	4.75	2.53
2011:Q3	2.07	1.15
2011:Q4	3.42	4.94
2012:Q1	2.38	3.99
2012:Q2	2.73	4.24
2012:Q3	3.64	3.07
2012:Q4	3.86	3.98
2013:Q1	3.97	4.41
2013:Q2	4.29	5.32
2013:Q3	3.99	5.49
2013:Q4	4.11	5.71

Note: Blue shading represents the forecast period, which begins in 2011:Q4.

Bottom-left panel Net Exports

Period	Contribution to U.S. real GDP, p.p.	June TB
2011:Q1	-0.42	-0.49
2011:Q2	0.14	0.65
2011:Q3	0.43	1.00
2011:Q4	0.12	0.44
2012:Q1	0.22	0.66
2012:Q2	0.20	0.61
2012:Q3	0.04	0.76
2012:Q4	-0.01	0.59
2013:Q1	-0.04	0.50
2013:Q2	-0.07	0.34
2013:Q3	0.00	0.29
2013:Q4	0.00	0.23

Note: Blue shading represents the forecast period, which begins in 2011:Q4.

* Based on four-quarter percent changes. [Return to table](#)

Bottom-right panel
Current Account Balance

Period	Percent of GDP	June TB
2008:Q1	-4.97	ND
2008:Q2	-4.86	ND
2008:Q3	-4.82	ND
2008:Q4	-4.29	ND
2009:Q1	-2.74	ND
2009:Q2	-2.39	ND
2009:Q3	-2.81	ND
2009:Q4	-2.86	ND
2010:Q1	-3.31	-3.17
2010:Q2	-3.33	-3.31
2010:Q3	-3.29	-3.36
2010:Q4	-3.04	-3.10
2011:Q1	-3.22	-3.52
2011:Q2	-3.32	-2.92
2011:Q3	-2.91	-2.87
2011:Q4	-2.96	-2.51
2012:Q1	-3.01	-2.32
2012:Q2	-2.71	-2.09
2012:Q3	-2.79	-2.06
2012:Q4	-2.90	-1.99
2013:Q1	-3.11	-1.89
2013:Q2	-2.87	-1.91
2013:Q3	-2.92	-1.90
2013:Q4	-3.02	-1.90

Note: Blue shading represents the forecast period, which begins in 2011:Q4.

Exhibit 10
Baseline Financial Conditions

Top-left panel
Long-term Interest Rates

Quarterly average
Percent

Period	10-year Treasury yield	BBB corporate yield	Conforming mortgage rate
2007:Q1	4.76	6.11	6.21
2007:Q2	4.92	6.30	6.36
2007:Q3	4.84	6.54	6.55
2007:Q4	4.41	6.37	6.22
2008:Q1	3.87	6.54	5.87
2008:Q2	4.09	6.84	6.09
2008:Q3	4.05	7.19	6.32
2008:Q4	3.72	9.39	5.84
2009:Q1	3.23	8.96	5.06
2009:Q2	3.65	8.15	5.01
2009:Q3	3.81	6.76	5.15
2009:Q4	3.69	6.13	4.92
2010:Q1	3.87	5.78	4.99
2010:Q2	3.62	5.55	4.83
2010:Q3	2.90	5.07	4.41
2010:Q4	2.97	5.04	4.47
2011:Q1	3.53	5.40	4.83
2011:Q2	3.28	5.15	4.60
2011:Q3	2.48	4.87	4.20
2011:Q4	2.09	4.98	3.98
2012:Q1	1.95	4.85	3.85
2012:Q2	2.10	4.95	4.00
2012:Q3	2.35	5.10	4.15
2012:Q4	2.65	5.20	4.40
2013:Q1	2.95	5.30	4.65
2013:Q2	3.15	5.40	4.85
2013:Q3	3.35	5.45	5.00
2013:Q4	3.50	5.45	5.15

Note: Blue shading represents the forecast period, which begins in 2012:Q1.

Top-right panel Equity Prices

Quarter-end
2007:Q1 = 100

Period	Dow Jones total stock market index	Dec. TB
2007:Q1	100.00	ND
2007:Q2	105.56	ND
2007:Q3	106.61	ND
2007:Q4	102.85	ND
2008:Q1	92.52	ND
2008:Q2	90.73	ND
2008:Q3	82.42	ND
2008:Q4	63.06	ND
2009:Q1	56.31	ND
2009:Q2	65.41	ND
2009:Q3	75.73	ND
2009:Q4	79.79	ND
2010:Q1	84.40	ND
2010:Q2	74.60	ND
2010:Q3	82.91	ND
2010:Q4	92.23	ND
2011:Q1	97.41	ND
2011:Q2	96.94	ND
2011:Q3	81.70	ND
2011:Q4	90.98	91.33
2012:Q1	94.21	91.57
2012:Q2	94.45	92.27
2012:Q3	95.60	93.72
2012:Q4	97.47	95.98
2013:Q1	100.04	98.72
2013:Q2	103.13	101.77
2013:Q3	106.32	105.18
2013:Q4	109.62	108.68

Note: Blue shading represents the forecast period, which begins in 2012:Q1.

Middle-left panel House Price Index

Quarterly average
2007:Q1 = 100

Period	Index	Dec. TB
2007:Q1	100.00	ND
2007:Q2	97.34	ND
2007:Q3	94.50	ND
2007:Q4	91.56	ND
2008:Q1	88.04	ND
2008:Q2	84.12	ND
2008:Q3	80.56	ND
2008:Q4	76.14	ND
2009:Q1	72.68	ND
2009:Q2	73.07	ND
2009:Q3	73.73	ND
2009:Q4	74.04	ND
2010:Q1	74.59	ND
2010:Q2	74.35	ND
2010:Q3	72.20	ND
2010:Q4	71.17	ND
2011:Q1	70.22	ND
2011:Q2	70.09	ND
2011:Q3	69.55	69.36
2011:Q4	68.50	68.95
2012:Q1	67.80	68.66
2012:Q2	67.75	68.50
2012:Q3	67.70	68.38
2012:Q4	67.63	68.33
2013:Q1	67.60	68.33
2013:Q2	67.63	68.35
2013:Q3	67.67	68.37
2013:Q4	67.69	68.38

Note: Blue shading represents the forecast period, which begins in 2011:Q4.

Source: CoreLogic.

Middle-right panel Composite Index of Changes in Standards for Bank Loans

Period	Net percent tightening
2000:Q1	5.30
2000:Q2	7.50
2000:Q3	17.92
2000:Q4	30.15
2001:Q1	43.60
2001:Q2	32.92
2001:Q3	26.55
2001:Q4	40.43
2002:Q1	31.48
2002:Q2	17.71
2002:Q3	18.62
2002:Q4	17.06
2003:Q1	19.76
2003:Q2	8.97
2003:Q3	0.84
2003:Q4	-3.32
2004:Q1	-9.83
2004:Q2	-13.52
2004:Q3	-15.30
2004:Q4	-15.06
2005:Q1	-19.29
2005:Q2	-16.73
2005:Q3	-11.48
2005:Q4	-8.50
2006:Q1	-2.61
2006:Q2	-14.37
2006:Q3	-16.27
2006:Q4	0.45
2007:Q1	7.81
2007:Q2	5.07
2007:Q3	20.28
2007:Q4	53.38
2008:Q1	62.89
2008:Q2	76.99
2008:Q3	83.26
2008:Q4	87.25
2009:Q1	72.75
2009:Q2	53.61
2009:Q3	40.41
2009:Q4	31.47
2010:Q1	3.12
2010:Q2	-10.68
2010:Q3	-11.29
2010:Q4	-4.42
2011:Q1	-11.31
2011:Q2	-24.25
2011:Q3	-22.74
2011:Q4	-6.49
2012:Q1	-7.96

Source: Senior Loan Officer Opinion Survey.

Bottom-left panel Nonfinancial Sector Debt

Ratio to GDP

Period	Private	State and local govts.	Federal gov.	Sum
2004:Q1	1.48	0.20	0.36	2.04
2004:Q2	1.49	0.20	0.36	2.05
2004:Q3	1.50	0.20	0.36	2.06
2004:Q4	1.52	0.21	0.36	2.09
2005:Q1	1.51	0.21	0.37	2.09
2005:Q2	1.54	0.21	0.36	2.11
2005:Q3	1.55	0.20	0.36	2.11

2005:Q4	1.57	0.20	0.36	2.13
2006:Q1	1.58	0.20	0.37	2.15
2006:Q2	1.60	0.20	0.36	2.16
2006:Q3	1.63	0.20	0.36	2.19
2006:Q4	1.65	0.20	0.36	2.21
2007:Q1	1.66	0.20	0.37	2.23
2007:Q2	1.68	0.20	0.35	2.23
2007:Q3	1.70	0.20	0.36	2.26
2007:Q4	1.72	0.20	0.36	2.28
2008:Q1	1.74	0.20	0.37	2.31
2008:Q2	1.74	0.20	0.37	2.31
2008:Q3	1.75	0.20	0.40	2.35
2008:Q4	1.79	0.21	0.45	2.45
2009:Q1	1.81	0.21	0.49	2.51
2009:Q2	1.81	0.21	0.52	2.54
2009:Q3	1.79	0.21	0.54	2.54
2009:Q4	1.75	0.21	0.55	2.51
2010:Q1	1.72	0.21	0.58	2.51
2010:Q2	1.69	0.21	0.60	2.50
2010:Q3	1.67	0.21	0.62	2.50
2010:Q4	1.66	0.21	0.64	2.51
2011:Q1	1.65	0.20	0.65	2.50
2011:Q2	1.64	0.20	0.65	2.49
2011:Q3	1.63	0.20	0.67	2.50

Bottom-right panel Financial Market Stress

Weekly

Period	Probability
8 June 2001	0.20
15 June 2001	0.25
22 June 2001	0.15
29 June 2001	0.09
6 July 2001	0.07
13 July 2001	0.17
20 July 2001	0.18
27 July 2001	0.16
3 August 2001	0.11
10 August 2001	0.13
17 August 2001	0.26
24 August 2001	0.30
31 August 2001	0.27
7 September 2001	0.30
14 September 2001	0.64
21 September 2001	0.93
28 September 2001	0.83
5 October 2001	0.67
12 October 2001	0.58
19 October 2001	0.67
26 October 2001	0.66
2 November 2001	0.74
9 November 2001	0.59
16 November 2001	0.38
23 November 2001	0.31
30 November 2001	0.40
7 December 2001	0.36
14 December 2001	0.38
21 December 2001	0.43
28 December 2001	0.37
4 January 2002	0.35
11 January 2002	0.22
18 January 2002	0.22
25 January 2002	0.19
1 February 2002	0.13
8 February 2002	0.21
15 February 2002	0.16
22 February 2002	0.16
1 March 2002	0.12

8 March 2002	0.12
15 March 2002	0.11
22 March 2002	0.11
29 March 2002	0.14
5 April 2002	0.14
12 April 2002	0.14
19 April 2002	0.14
26 April 2002	0.18
3 May 2002	0.19
10 May 2002	0.20
17 May 2002	0.14
24 May 2002	0.10
31 May 2002	0.10
7 June 2002	0.12
14 June 2002	0.15
21 June 2002	0.19
28 June 2002	0.27
5 July 2002	0.25
12 July 2002	0.31
19 July 2002	0.47
26 July 2002	0.85
2 August 2002	0.77
9 August 2002	0.87
16 August 2002	0.86
23 August 2002	0.84
30 August 2002	0.73
6 September 2002	0.75
13 September 2002	0.72
20 September 2002	0.78
27 September 2002	0.90
4 October 2002	0.91
11 October 2002	0.89
18 October 2002	0.89
25 October 2002	0.85
1 November 2002	0.85
8 November 2002	0.71
15 November 2002	0.58
22 November 2002	0.46
29 November 2002	0.40
6 December 2002	0.39
13 December 2002	0.37
20 December 2002	0.34
27 December 2002	0.31
3 January 2003	0.37
10 January 2003	0.21
17 January 2003	0.21
24 January 2003	0.31
31 January 2003	0.41
7 February 2003	0.36
14 February 2003	0.42
21 February 2003	0.37
28 February 2003	0.30
7 March 2003	0.35
14 March 2003	0.48
21 March 2003	0.47
28 March 2003	0.36
4 April 2003	0.35
11 April 2003	0.22
18 April 2003	0.13
25 April 2003	0.14
2 May 2003	0.10
9 May 2003	0.05
16 May 2003	0.05
23 May 2003	0.07
30 May 2003	0.07
6 June 2003	0.09
13 June 2003	0.08
20 June 2003	0.09
27 June 2003	0.07

4 July 2003	0.07
11 July 2003	0.05
18 July 2003	0.06
25 July 2003	0.07
1 August 2003	0.16
8 August 2003	0.21
15 August 2003	0.20
22 August 2003	0.17
29 August 2003	0.15
5 September 2003	0.11
12 September 2003	0.11
19 September 2003	0.07
26 September 2003	0.08
3 October 2003	0.08
10 October 2003	0.06
17 October 2003	0.09
24 October 2003	0.10
31 October 2003	0.10
7 November 2003	0.09
14 November 2003	0.07
21 November 2003	0.07
28 November 2003	0.05
5 December 2003	0.06
12 December 2003	0.05
19 December 2003	0.04
26 December 2003	0.06
2 January 2004	0.06
9 January 2004	0.04
16 January 2004	0.03
23 January 2004	0.05
30 January 2004	0.05
6 February 2004	0.08
13 February 2004	0.06
20 February 2004	0.04
27 February 2004	0.04
5 March 2004	0.04
12 March 2004	0.05
19 March 2004	0.06
26 March 2004	0.06
2 April 2004	0.11
9 April 2004	0.14
16 April 2004	0.12
23 April 2004	0.13
30 April 2004	0.17
7 May 2004	0.17
14 May 2004	0.13
21 May 2004	0.15
28 May 2004	0.12
4 June 2004	0.09
11 June 2004	0.04
18 June 2004	0.03
25 June 2004	0.03
2 July 2004	0.03
9 July 2004	0.04
16 July 2004	0.03
23 July 2004	0.03
30 July 2004	0.03
6 August 2004	0.05
13 August 2004	0.06
20 August 2004	0.07
27 August 2004	0.06
3 September 2004	0.05
10 September 2004	0.02
17 September 2004	0.02
24 September 2004	0.02
1 October 2004	0.01
8 October 2004	0.01
15 October 2004	0.01
22 October 2004	0.01

29 October 2004	0.01
5 November 2004	0.01
12 November 2004	0.01
19 November 2004	0.01
26 November 2004	0.01
3 December 2004	0.01
10 December 2004	0.01
17 December 2004	0.01
24 December 2004	0.01
31 December 2004	0.01
7 January 2005	0.01
14 January 2005	0.00
21 January 2005	0.01
28 January 2005	0.00
4 February 2005	0.00
11 February 2005	0.00
18 February 2005	0.00
25 February 2005	0.00
4 March 2005	0.00
11 March 2005	0.00
18 March 2005	0.00
25 March 2005	0.00
1 April 2005	0.00
8 April 2005	0.01
15 April 2005	0.01
22 April 2005	0.01
29 April 2005	0.01
6 May 2005	0.01
13 May 2005	0.01
20 May 2005	0.01
27 May 2005	0.01
3 June 2005	0.01
10 June 2005	0.01
17 June 2005	0.01
24 June 2005	0.01
1 July 2005	0.01
8 July 2005	0.02
15 July 2005	0.01
22 July 2005	0.01
29 July 2005	0.01
5 August 2005	0.01
12 August 2005	0.01
19 August 2005	0.02
26 August 2005	0.02
2 September 2005	0.02
9 September 2005	0.02
16 September 2005	0.02
23 September 2005	0.02
30 September 2005	0.02
7 October 2005	0.03
14 October 2005	0.03
21 October 2005	0.02
28 October 2005	0.02
4 November 2005	0.01
11 November 2005	0.02
18 November 2005	0.02
25 November 2005	0.01
2 December 2005	0.01
9 December 2005	0.01
16 December 2005	0.01
23 December 2005	0.01
30 December 2005	0.01
6 January 2006	0.01
13 January 2006	0.00
20 January 2006	0.01
27 January 2006	0.01
3 February 2006	0.01
10 February 2006	0.01
17 February 2006	0.01

24 February 2006	0.01
3 March 2006	0.00
10 March 2006	0.01
17 March 2006	0.01
24 March 2006	0.00
31 March 2006	0.01
7 April 2006	0.01
14 April 2006	0.01
21 April 2006	0.01
28 April 2006	0.00
5 May 2006	0.00
12 May 2006	0.01
19 May 2006	0.02
26 May 2006	0.02
2 June 2006	0.02
9 June 2006	0.01
16 June 2006	0.01
23 June 2006	0.01
30 June 2006	0.01
7 July 2006	0.01
14 July 2006	0.01
21 July 2006	0.01
28 July 2006	0.01
4 August 2006	0.01
11 August 2006	0.01
18 August 2006	0.01
25 August 2006	0.00
1 September 2006	0.00
8 September 2006	0.00
15 September 2006	0.00
22 September 2006	0.00
29 September 2006	0.01
6 October 2006	0.01
13 October 2006	0.00
20 October 2006	0.00
27 October 2006	0.00
3 November 2006	0.00
10 November 2006	0.00
17 November 2006	0.00
24 November 2006	0.00
1 December 2006	0.00
8 December 2006	0.01
15 December 2006	0.01
22 December 2006	0.01
29 December 2006	0.01
5 January 2007	0.01
12 January 2007	0.01
19 January 2007	0.01
26 January 2007	0.00
2 February 2007	0.01
9 February 2007	0.01
16 February 2007	0.01
23 February 2007	0.01
2 March 2007	0.10
9 March 2007	0.15
16 March 2007	0.14
23 March 2007	0.11
30 March 2007	0.13
6 April 2007	0.09
13 April 2007	0.06
20 April 2007	0.07
27 April 2007	0.05
4 May 2007	0.05
11 May 2007	0.04
18 May 2007	0.04
25 May 2007	0.03
1 June 2007	0.03
8 June 2007	0.04
15 June 2007	0.05

22 June 2007	0.04
29 June 2007	0.07
6 July 2007	0.05
13 July 2007	0.05
20 July 2007	0.06
27 July 2007	0.25
3 August 2007	0.55
10 August 2007	0.64
17 August 2007	0.90
24 August 2007	0.82
31 August 2007	0.76
7 September 2007	0.78
14 September 2007	0.83
21 September 2007	0.60
28 September 2007	0.44
5 October 2007	0.29
12 October 2007	0.15
19 October 2007	0.25
26 October 2007	0.43
2 November 2007	0.37
9 November 2007	0.62
16 November 2007	0.75
23 November 2007	0.93
30 November 2007	0.92
7 December 2007	0.93
14 December 2007	0.91
21 December 2007	0.90
28 December 2007	0.86
4 January 2008	0.89
11 January 2008	0.85
18 January 2008	0.89
25 January 2008	0.93
1 February 2008	0.88
8 February 2008	0.92
15 February 2008	0.93
22 February 2008	0.95
29 February 2008	0.92
7 March 2008	0.98
14 March 2008	0.98
21 March 2008	0.95
28 March 2008	0.91
4 April 2008	0.77
11 April 2008	0.59
18 April 2008	0.59
25 April 2008	0.44
2 May 2008	0.25
9 May 2008	0.21
16 May 2008	0.27
23 May 2008	0.33
30 May 2008	0.50
6 June 2008	0.66
13 June 2008	0.78
20 June 2008	0.66
27 June 2008	0.73
4 July 2008	0.72
11 July 2008	0.83
18 July 2008	0.84
25 July 2008	0.72
1 August 2008	0.68
8 August 2008	0.56
15 August 2008	0.60
22 August 2008	0.69
29 August 2008	0.76
5 September 2008	0.57
12 September 2008	0.67
19 September 2008	1.00
26 September 2008	1.00
3 October 2008	1.00
10 October 2008	1.00

17 October 2008	1.00
24 October 2008	1.00
31 October 2008	1.00
7 November 2008	1.00
14 November 2008	1.00
21 November 2008	1.00
28 November 2008	1.00
5 December 2008	1.00
12 December 2008	1.00
19 December 2008	1.00
26 December 2008	1.00
2 January 2009	1.00
9 January 2009	1.00
16 January 2009	1.00
23 January 2009	1.00
30 January 2009	1.00
6 February 2009	1.00
13 February 2009	1.00
20 February 2009	1.00
27 February 2009	1.00
6 March 2009	1.00
13 March 2009	1.00
20 March 2009	1.00
27 March 2009	0.99
3 April 2009	0.99
10 April 2009	0.97
17 April 2009	0.92
24 April 2009	0.91
1 May 2009	0.90
8 May 2009	0.83
15 May 2009	0.80
22 May 2009	0.87
29 May 2009	0.91
5 June 2009	0.82
12 June 2009	0.83
19 June 2009	0.79
26 June 2009	0.75
3 July 2009	0.70
10 July 2009	0.86
17 July 2009	0.89
24 July 2009	0.77
31 July 2009	0.66
7 August 2009	0.75
14 August 2009	0.74
21 August 2009	0.76
28 August 2009	0.67
4 September 2009	0.66
11 September 2009	0.55
18 September 2009	0.56
25 September 2009	0.57
2 October 2009	0.56
9 October 2009	0.51
16 October 2009	0.56
23 October 2009	0.54
30 October 2009	0.59
6 November 2009	0.61
13 November 2009	0.44
20 November 2009	0.36
27 November 2009	0.38
4 December 2009	0.39
11 December 2009	0.30
18 December 2009	0.19
25 December 2009	0.22
1 January 2010	0.19
8 January 2010	0.21
15 January 2010	0.14
22 January 2010	0.17
29 January 2010	0.24
5 February 2010	0.21

12 February 2010	0.29
19 February 2010	0.19
26 February 2010	0.12
5 March 2010	0.08
12 March 2010	0.06
19 March 2010	0.04
26 March 2010	0.04
2 April 2010	0.04
9 April 2010	0.03
16 April 2010	0.02
23 April 2010	0.03
30 April 2010	0.05
7 May 2010	0.45
14 May 2010	0.49
21 May 2010	0.74
28 May 2010	0.81
4 June 2010	0.76
11 June 2010	0.82
18 June 2010	0.59
25 June 2010	0.47
2 July 2010	0.47
9 July 2010	0.41
16 July 2010	0.27
23 July 2010	0.22
30 July 2010	0.16
6 August 2010	0.18
13 August 2010	0.25
20 August 2010	0.39
27 August 2010	0.60
3 September 2010	0.66
10 September 2010	0.65
17 September 2010	0.58
24 September 2010	0.50
1 October 2010	0.50
8 October 2010	0.41
15 October 2010	0.38
22 October 2010	0.34
29 October 2010	0.29
5 November 2010	0.15
12 November 2010	0.17
19 November 2010	0.16
26 November 2010	0.16
3 December 2010	0.27
10 December 2010	0.22
17 December 2010	0.19
24 December 2010	0.10
31 December 2010	0.09
7 January 2011	0.10
14 January 2011	0.06
21 January 2011	0.05
28 January 2011	0.04
4 February 2011	0.04
11 February 2011	0.03
18 February 2011	0.03
25 February 2011	0.05
4 March 2011	0.05
11 March 2011	0.06
18 March 2011	0.14
25 March 2011	0.08
1 April 2011	0.06
8 April 2011	0.06
15 April 2011	0.06
22 April 2011	0.06
29 April 2011	0.06
6 May 2011	0.06
13 May 2011	0.06
20 May 2011	0.09
27 May 2011	0.09
3 June 2011	0.12

10 June 2011	0.18
17 June 2011	0.33
24 June 2011	0.38
1 July 2011	0.33
8 July 2011	0.30
15 July 2011	0.52
22 July 2011	0.50
29 July 2011	0.49
5 August 2011	0.59
12 August 2011	0.96
19 August 2011	0.91
26 August 2011	0.95
2 September 2011	0.91
9 September 2011	0.92
16 September 2011	0.94
23 September 2011	0.94
30 September 2011	0.94
7 October 2011	0.92
14 October 2011	0.87
21 October 2011	0.78
28 October 2011	0.69
4 November 2011	0.74
11 November 2011	0.73
18 November 2011	0.83
25 November 2011	0.86
2 December 2011	0.74
9 December 2011	0.65
16 December 2011	0.67
23 December 2011	0.63
30 December 2011	0.57
6 January 2012	0.43
13 January 2012	0.25

Note: Shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research: March 2001-November 2001, and December 2007-June 2009.

* Probability of being in a stress event. [Return to table](#)

Exhibit 11 Conditions of Large Banking Institutions

Top-left panel 5-year CDS Spreads

Weekly
Percent

Period	Morgan Stanley	Bank of America	Goldman Sachs	Citigroup	Wells Fargo	JP Morgan
8 April 2011	1.36	1.31	1.12	1.21	0.78	0.70
15 April 2011	1.40	1.34	1.15	1.24	0.82	0.76
22 April 2011	1.42	1.35	1.17	1.24	0.81	0.76
29 April 2011	1.44	1.33	1.15	1.23	0.81	0.75
6 May 2011	1.45	1.31	1.20	1.24	0.81	0.76
13 May 2011	1.46	1.36	1.31	1.25	0.84	0.78
20 May 2011	1.46	1.39	1.41	1.26	0.84	0.79
27 May 2011	1.47	1.45	1.50	1.27	0.85	0.78
3 June 2011	1.56	1.52	1.56	1.36	0.90	0.81
10 June 2011	1.67	1.72	1.56	1.52	1.05	0.86
17 June 2011	1.72	1.72	1.50	1.51	1.03	0.84
24 June 2011	1.83	1.83	1.59	1.60	1.10	0.90
1 July 2011	1.60	1.52	1.33	1.32	0.89	0.75
8 July 2011	1.65	1.60	1.39	1.38	0.92	0.82
15 July 2011	1.77	1.77	1.50	1.50	1.02	0.93
22 July 2011	1.70	1.67	1.40	1.41	0.95	0.87
29 July 2011	1.80	1.80	1.52	1.52	1.01	1.00
5 August 2011	1.99	2.08	1.65	1.64	1.14	1.13
12 August 2011	2.67	3.18	2.02	1.92	1.21	1.19
19 August 2011	2.91	3.47	2.15	2.16	1.28	1.27
26 August 2011	3.13	3.30	2.37	2.32	1.31	1.33
2 September 2011	3.08	3.33	2.23	2.27	1.28	1.28
9 September 2011	3.41	3.60	2.54	2.50	1.35	1.37
16 September 2011	3.02	3.31	2.27	2.25	1.20	1.22

23 September 2011	4.41	4.07	3.04	2.80	1.53	1.57
30 September 2011	4.92	4.26	3.30	3.19	1.61	1.62
7 October 2011	4.39	4.02	3.64	2.95	1.58	1.59
14 October 2011	3.97	3.74	3.45	2.49	1.44	1.43
21 October 2011	3.77	3.68	3.27	2.46	1.50	1.46
28 October 2011	3.20	3.17	2.66	2.07	1.32	1.28
4 November 2011	4.04	3.61	3.17	2.42	1.52	1.47
11 November 2011	4.49	3.88	3.52	2.58	1.58	1.54
18 November 2011	4.92	4.19	3.90	2.90	1.65	1.67
25 November 2011	5.41	4.98	4.30	3.27	1.84	1.82
2 December 2011	4.23	4.26	3.20	2.54	1.50	1.49
9 December 2011	4.20	4.11	3.19	2.56	1.47	1.49
16 December 2011	4.29	4.13	3.22	2.78	1.49	1.48
23 December 2011	4.24	4.12	3.22	2.77	1.48	1.47
30 December 2011	4.21	4.13	3.32	2.84	1.47	1.47
6 January 2012	3.88	3.79	3.19	2.75	1.36	1.34
13 January 2012	3.74	3.47	3.01	2.44	1.31	1.35
20 January 2012	3.25	3.07	2.55	2.25	1.16	1.26

Source: Markit.

Top-right panel Stock Prices

Weekly

April 26, 2011 = 100

Period	Wells Fargo	JP Morgan	Citigroup	Goldman Sachs	Morgan Stanley	Bank of America
8 April 2011	109.51	103.81	101.11	105.02	105.41	110.26
15 April 2011	103.51	99.48	98	101.21	104.36	104.84
22 April 2011	ND	ND	ND	ND	ND	ND
29 April 2011	100.81	101.11	101.78	98.52	101.36	100.41
6 May 2011	98.25	99.82	100.22	97.93	97.82	100.66
13 May 2011	97.12	95.63	92.08	92.29	93.53	97.54
20 May 2011	97.37	95.58	90.97	88.07	92.36	94.66
27 May 2011	97.86	94.83	90.88	90.7	93.3	95.57
3 June 2011	93.4	92.12	88.39	88.52	89.6	92.28
10 June 2011	91.4	90.96	84.11	88.91	87.92	88.42
17 June 2011	95.05	90.42	84.95	89.76	88.47	87.44
24 June 2011	94.81	87.52	87.82	85.63	86.09	86.12
1 July 2011	99.72	92.71	95.1	89.38	92.09	90.72
8 July 2011	98.42	90.85	93.21	87.7	86.44	87.6
15 July 2011	94.52	89.15	85.13	85.14	81.73	81.86
22 July 2011	101.33	94.06	89.3	88.63	92.64	82.92
29 July 2011	97.16	90.19	85.06	88.28	86.4	79.47
5 August 2011	88.07	83.85	74.19	81.88	77.76	66.83
12 August 2011	84.28	80.06	66.22	76.18	65.6	58.87
19 August 2011	81.61	76.6	59.39	73.1	62.13	57.06
26 August 2011	85.89	80.74	66.2	73.09	64.51	63.55
2 September 2011	84.52	77.21	63	70.24	61.98	59.44
9 September 2011	82.17	71.52	59.32	67.09	59.33	57.22
16 September 2011	87.15	74.54	64.31	70.53	63.89	59.28
23 September 2011	82.77	65.97	55.42	62.44	53.29	51.72
30 September 2011	84.24	67.15	56.84	62.04	52.47	50.16
7 October 2011	85.71	69.05	54.64	60.81	55.32	48.36
14 October 2011	93.16	71.73	63	63.47	59.1	50.74
21 October 2011	91.89	75.17	67.22	66.98	66.11	52.96
28 October 2011	94.59	82.53	75.79	76.01	75.22	60.26
4 November 2011	89.15	76.42	67.33	68.92	65.13	53.2
11 November 2011	90.03	74.85	65.09	66.7	63.73	50.9
18 November 2011	86.66	68.87	58.32	60.3	55.36	47.37
25 November 2011	82.52	64.07	52.44	58.23	51.66	42.36
2 December 2011	91.51	72.72	62.52	64.05	60.46	46.31
9 December 2011	94.45	74.63	63.85	66.82	63.81	46.96
16 December 2011	91.19	71.73	57.77	59.34	58.36	42.69
23 December 2011	97.54	75.51	60.94	61.77	61.39	45.98
30 December 2011	96.74	74.78	58.39	59.56	58.94	45.65
6 January 2012	101.58	80.11	63.36	61.53	61.94	50.74
13 January 2012	103.93	81.38	68.22	65.18	64.78	54.27
20 January 2012	107.2	84.64	65.78	71.62	71.64	58.05

Source: Bloomberg.

Middle panel Market Equity Ratios

Year-end
Percent

	2007	2008	2009	2010	2011
BofA	10.45	4.12	6.97	6.20	2.76
Wells Fargo	16.10	8.46	10.89	12.58	11.09
Citi	6.60	2.00	5.21	7.29	4.20
JP Morgan	9.25	5.54	8.40	7.87	5.72
Goldman Sachs	7.41	4.36	10.05	9.35	4.83
Morgan Stanley	5.27	2.69	5.30	5.25	3.87

Note: Calculated as ratios of market value of common equity to estimated market value of assets.

Source: Bloomberg.

Bottom-left panel Conditional Value at Risk (CoVar)

CoVaR is an estimate of an extreme loss to the financial system that would be expected to occur if a particular firm suffered from extreme distress.

Bottom-right panel CoVaR

Period	Jan. 2007 = 100
January 2007	100.00
February 2007	94.35
March 2007	152.87
April 2007	134.65
May 2007	150.51
June 2007	154.31
July 2007	174.26
August 2007	281.75
September 2007	263.91
October 2007	245.53
November 2007	351.57
December 2007	300.57
January 2008	330.73
February 2008	319.51
March 2008	353.41
April 2008	275.61
May 2008	236.19
June 2008	275.69
July 2008	381.01
August 2008	283.94
September 2008	349.71
October 2008	763.30
November 2008	961.26
December 2008	707.77
January 2009	760.19
February 2009	776.56
March 2009	574.33
April 2009	615.58
May 2009	582.63
June 2009	540.45
July 2009	458.15
August 2009	418.97
September 2009	392.06
October 2009	439.16
November 2009	439.18
December 2009	361.98
January 2010	374.21
February 2010	412.32
March 2010	296.01
April 2010	290.72
May 2010	568.64
June 2010	545.16
July 2010	543.32
August 2010	462.49
September 2010	415.36
October 2010	400.42

November 2010	394.70
December 2010	342.80
January 2011	328.24
February 2011	307.44
March 2011	456.96
April 2011	339.56
May 2011	344.78
June 2011	407.38
July 2011	362.19
August 2011	752.40
September 2011	754.44
October 2011	694.37
November 2011	615.01
December 2011	543.11

Note: For Bank of America, Morgan Stanley, Goldman Sachs, Citigroup, JP Morgan, Wells Fargo, BONY, and State Street.

Exhibit 12 Risks to Financial Institutions

Top-left panel Alternative Scenario: Severe Euro Stress

- For Europe:
 - Soaring borrowing costs, plunging confidence, and a precipitous decline in GDP.
- For the U.S.:
 - A sharp contraction of GDP.
 - An increase in the unemployment rate to about 11 3/4 percent by the end of 2013.

Top-right panel Effects on Banks

- Banks would experience substantial losses and weaker revenues.
- Aggregate ratio of Tier 1 common equity to risk weighted assets would fall sharply.
- Investors could doubt the solvency of large financial institutions.

Middle panel Liabilities Structure of Large Bank Holding Companies

Percent of total assets

	Wells Fargo	BofA	Citi	JP Morgan	Goldman Sachs	Morgan Stanley
Total equity	10.7	10.4	9.3	8.0	7.5	8.8
Long-term debt	5.2	10.2	11.4	8.5	18.0	19.1
Deposits	68.6	47.0	44.0	47.7	4.4	8.3
Short-term debt	3.1	6.1	7.0	7.5	7.9	6.7
Repo & fed funds	2.6	11.2	11.6	10.5	16.0	17.3
Other short-term liabilities	9.9	15.2	16.7	17.8	46.2	39.7
Memo: Total assets (\$billions)	1,305	2,221	1,936	2,289	949	795

Source: FR Y-9C.

Bottom-left panel Dealers Reporting Increased Attention to Exposure to Other Dealers

Period	Net percent
2010:Q2	55.00
2010:Q3	10.00
2010:Q4	15.00
2011:Q1	25.00
2011:Q2	25.00
2011:Q3	76.19
2011:Q4	90.00

Source: Senior Credit Officer Opinion Survey.

Bottom-right panel Vulnerabilities

- Multiple legal entities and different regulatory regimes pose significant challenges for policymakers.
- Differences in bankruptcy and resolution regimes add to uncertainty.
- Nonbank financial firms could be harmed.

Exhibit 13 (Last) Money Market Funds and Policy Initiatives

Top-left panel Taxable Institutional Money Market Fund Assets

Weekly

Billions of dollars

Period	Prime	Government
10 January 2007	980.27	300.87
17 January 2007	964.06	298.45
24 January 2007	976.95	299.75
31 January 2007	946.57	299.85
7 February 2007	967.20	301.62
14 February 2007	971.22	301.71
21 February 2007	981.52	306.58
28 February 2007	968.59	304.84
7 March 2007	988.61	304.20
14 March 2007	982.84	302.36
21 March 2007	988.00	299.12
28 March 2007	987.54	301.91
4 April 2007	999.33	303.91
11 April 2007	1008.86	304.87
18 April 2007	988.65	306.47
25 April 2007	991.27	307.46
2 May 2007	1004.72	308.39
9 May 2007	1013.51	310.33
16 May 2007	1012.95	320.32
23 May 2007	1017.12	321.43
30 May 2007	1006.73	322.61
6 June 2007	1030.99	325.12
13 June 2007	1032.76	325.56
20 June 2007	1029.56	327.10
27 June 2007	1028.82	332.85
4 July 2007	1040.37	332.06
11 July 2007	1056.43	330.95
18 July 2007	1050.03	330.42
25 July 2007	1055.49	333.04
1 August 2007	1065.54	339.61
8 August 2007	1096.10	346.07
15 August 2007	1100.07	380.54
22 August 2007	1100.57	425.40
29 August 2007	1076.22	438.12
5 September 2007	1099.16	450.86
12 September 2007	1117.64	460.60
19 September 2007	1126.11	462.95
26 September 2007	1151.72	466.34
3 October 2007	1186.31	461.31
10 October 2007	1202.12	459.19
17 October 2007	1216.34	457.61
24 October 2007	1249.11	468.64
31 October 2007	1217.16	478.06
7 November 2007	1254.42	493.31
14 November 2007	1259.63	500.39
21 November 2007	1240.30	518.95
28 November 2007	1234.86	537.01
5 December 2007	1251.21	554.19
12 December 2007	1241.39	567.04
19 December 2007	1219.64	584.50
26 December 2007	1208.93	591.10
2 January 2008	1207.13	595.61
9 January 2008	1242.77	597.66
16 January 2008	1248.30	593.03
23 January 2008	1282.73	610.87
30 January 2008	1291.51	624.66
6 February 2008	1319.53	630.55
13 February 2008	1334.52	642.22
20 February 2008	1327.42	669.23
27 February 2008	1324.00	689.03
5 March 2008	1331.73	698.14

12 March 2008	1313.21	714.48
19 March 2008	1287.26	738.73
26 March 2008	1321.08	748.13
2 April 2008	1306.53	747.44
9 April 2008	1335.50	751.56
16 April 2008	1312.58	735.75
23 April 2008	1328.53	730.15
30 April 2008	1292.29	719.44
7 May 2008	1324.71	722.08
14 May 2008	1341.01	730.42
21 May 2008	1364.80	725.70
28 May 2008	1365.39	721.50
4 June 2008	1410.86	693.38
11 June 2008	1414.72	688.78
18 June 2008	1390.55	674.06
25 June 2008	1391.27	670.11
2 July 2008	1390.61	668.26
9 July 2008	1422.50	678.09
16 July 2008	1411.22	676.61
23 July 2008	1423.60	672.31
30 July 2008	1415.60	675.85
6 August 2008	1422.17	685.33
13 August 2008	1435.70	688.63
20 August 2008	1441.79	684.54
27 August 2008	1366.05	697.44
3 September 2008	1375.74	696.97
10 September 2008	1377.09	694.21
17 September 2008	1184.34	776.02
24 September 2008	1053.08	910.62
1 October 2008	980.73	987.74
8 October 2008	962.42	1038.08
15 October 2008	967.15	1063.04
22 October 2008	973.26	1081.69
29 October 2008	981.17	1093.94
5 November 2008	978.02	1118.25
12 November 2008	995.33	1124.76
19 November 2008	1018.73	1135.10
26 November 2008	1024.01	1160.92
3 December 2008	1030.62	1173.06
10 December 2008	1053.01	1187.40
17 December 2008	1057.73	1179.30
24 December 2008	1091.80	1181.20
31 December 2008	1100.58	1192.12
7 January 2009	1123.30	1203.87
14 January 2009	1153.90	1204.52
21 January 2009	1146.88	1189.65
28 January 2009	1157.36	1198.15
4 February 2009	1167.41	1189.81
11 February 2009	1172.37	1188.82
18 February 2009	1176.87	1163.75
25 February 2009	1180.86	1168.30
4 March 2009	1179.46	1174.95
11 March 2009	1177.17	1165.32
18 March 2009	1165.71	1136.05
25 March 2009	1171.21	1140.26
1 April 2009	1169.77	1129.62
8 April 2009	1183.81	1131.29
15 April 2009	1182.23	1116.53
22 April 2009	1191.45	1113.51
29 April 2009	1199.60	1113.50
6 May 2009	1203.86	1106.66
13 May 2009	1213.86	1109.79
20 May 2009	1216.50	1092.77
27 May 2009	1221.35	1110.87
3 June 2009	1219.24	1097.58
10 June 2009	1223.02	1094.82
17 June 2009	1193.58	1058.64
24 June 2009	1222.57	1071.82
1 July 2009	1211.19	1047.96

8 July 2009	1223.77	1040.77
15 July 2009	1222.57	1028.95
22 July 2009	1243.65	1024.60
29 July 2009	1233.85	1022.12
5 August 2009	1226.23	1001.53
12 August 2009	1227.95	996.83
19 August 2009	1232.14	983.42
26 August 2009	1238.33	987.09
2 September 2009	1237.07	972.17
9 September 2009	1226.89	965.93
16 September 2009	1200.19	947.19
23 September 2009	1210.57	954.86
30 September 2009	1181.54	946.12
7 October 2009	1202.85	940.97
14 October 2009	1199.04	912.22
21 October 2009	1190.56	903.30
28 October 2009	1193.82	906.29
4 November 2009	1179.41	889.37
11 November 2009	1185.84	885.01
18 November 2009	1193.10	885.03
25 November 2009	1190.06	884.92
2 December 2009	1191.58	877.10
9 December 2009	1201.74	876.78
16 December 2009	1175.39	860.20
23 December 2009	1176.95	861.68
30 December 2009	1178.70	885.06
6 January 2010	1187.61	883.80
13 January 2010	1191.42	876.73
20 January 2010	1183.50	847.83
27 January 2010	1174.65	842.87
3 February 2010	1165.87	836.08
10 February 2010	1162.48	839.64
17 February 2010	1148.74	812.38
24 February 2010	1156.87	810.65
3 March 2010	1139.92	794.21
10 March 2010	1133.70	777.46
17 March 2010	1092.87	752.29
24 March 2010	1104.11	743.52
31 March 2010	1083.31	743.51
7 April 2010	1081.63	727.69
14 April 2010	1067.96	700.34
21 April 2010	1053.66	690.19
28 April 2010	1058.34	690.38
5 May 2010	1047.64	684.16
12 May 2010	1038.17	707.08
19 May 2010	1019.91	691.45
26 May 2010	1019.32	694.73
2 June 2010	1008.77	694.15
9 June 2010	1014.78	694.85
16 June 2010	988.95	686.75
23 June 2010	1003.73	690.16
30 June 2010	995.04	700.62
7 July 2010	1015.49	688.64
14 July 2010	1016.02	678.88
21 July 2010	1018.55	663.14
28 July 2010	1026.11	663.15
4 August 2010	1038.17	669.75
11 August 2010	1045.30	676.06
18 August 2010	1054.45	672.95
25 August 2010	1060.87	677.37
1 September 2010	1067.74	665.28
8 September 2010	1076.36	664.87
15 September 2010	1058.40	665.19
22 September 2010	1067.07	652.01
29 September 2010	1066.65	660.20
6 October 2010	1069.86	660.31
13 October 2010	1073.85	653.76
20 October 2010	1071.54	644.34
27 October 2010	1086.30	657.03

3 November 2010	1082.18	655.39
10 November 2010	1087.98	656.34
17 November 2010	1084.02	653.90
24 November 2010	1097.22	655.33
1 December 2010	1096.00	657.28
8 December 2010	1103.67	673.24
15 December 2010	1072.63	667.40
22 December 2010	1066.51	659.37
29 December 2010	1071.26	674.31
5 January 2011	1066.39	660.97
12 January 2011	1080.03	654.33
19 January 2011	1068.55	632.15
26 January 2011	1074.82	630.05
2 February 2011	1056.54	625.90
9 February 2011	1067.90	626.94
16 February 2011	1075.10	627.46
23 February 2011	1079.47	621.44
2 March 2011	1076.25	621.38
9 March 2011	1079.52	622.58
16 March 2011	1062.62	625.33
23 March 2011	1064.02	615.79
30 March 2011	1069.17	624.69
6 April 2011	1090.17	615.53
13 April 2011	1094.12	619.61
20 April 2011	1078.91	603.81
27 April 2011	1102.17	607.85
4 May 2011	1105.75	606.19
11 May 2011	1119.74	611.65
18 May 2011	1116.66	603.85
25 May 2011	1123.47	607.81
1 June 2011	1117.34	595.25
8 June 2011	1125.39	598.46
15 June 2011	1090.66	596.80
22 June 2011	1074.12	601.97
29 June 2011	1031.21	633.67
6 July 2011	1019.78	643.28
13 July 2011	1022.15	658.16
20 July 2011	1005.22	647.32
27 July 2011	994.90	620.98
3 August 2011	946.75	591.21
10 August 2011	958.20	623.48
17 August 2011	945.33	638.85
24 August 2011	929.75	659.47
31 August 2011	932.05	665.77
7 September 2011	938.80	666.50
14 September 2011	931.93	663.43
21 September 2011	912.97	670.97
28 September 2011	915.23	686.53
5 October 2011	904.60	694.96
12 October 2011	903.43	690.52
19 October 2011	904.19	690.86
26 October 2011	904.87	697.79
2 November 2011	893.39	698.70
9 November 2011	902.64	708.92
16 November 2011	900.59	717.83
23 November 2011	906.04	714.99
30 November 2011	892.00	737.32
7 December 2011	901.14	743.86
14 December 2011	904.09	742.19
21 December 2011	896.94	762.34
28 December 2011	893.15	769.43
4 January 2012	889.75	762.14
11 January 2012	908.52	761.22
18 January 2012	908.02	753.52

Source: Investment Company Institute.

Top-right panel
Prime Money Fund Holdings*

Monthly
Percent of assets

Period	France	Europe ex. France	United States	Rest of world
31 January 2011	13.84	35.18	31.63	19.35
28 February 2011	13.59	36.83	31.50	18.08
31 March 2011	13.50	35.84	32.12	18.55
29 April 2011	14.62	36.37	30.46	18.55
31 May 2011	15.28	37.16	29.25	18.31
30 June 2011	14.36	34.58	31.13	19.93
29 July 2011	13.21	33.84	32.58	20.37
31 August 2011	10.24	33.38	34.69	21.69
30 September 2011	6.93	32.84	36.46	23.76
31 October 2011	6.22	32.81	37.55	23.42
30 November 2011	3.48	33.14	37.97	25.41
30 December 2011	2.49	31.20	38.53	27.78

* By location of issuer. [Return to text](#)

Note: Confidential.

Source: SEC.

Middle-left panel Maturity Distribution of Prime MMF European Holdings

Monthly
Billions of dollars

Period	Overnight	1 week	30 days	> 30 days	Sum
December 2010	168.2	116.3	121.3	456.7	862.5
January 2011	216.9	102.7	163.3	402.4	885.3
February 2011	226.0	94.2	135.6	459.0	914.8
March 2011	185.5	118.6	127.4	450.4	881.9
April 2011	217.3	106.0	113.2	507.4	943.9
May 2011	242.3	75.9	112.6	533.4	964.2
June 2011	193.7	88.3	91.1	469.4	842.5
July 2011	214.9	78.0	112.5	370.7	776.1
August 2011	242.1	101.5	94.7	313.1	751.4
September 2011	191.1	106.2	104.5	259.9	661.7
October 2011	187.9	109.3	120.6	230.5	648.3
November 2011	191.8	97.5	88.9	228.1	606.3
December 2011	170.5	98.8	101.0	180.1	550.4

Note: Confidential.

Source: SEC.

Middle-right panel Exposures of Prime U.S. MMFs to France

Percent of fund assets	Number of funds
0	117
0-0.5	22
0.5-3	47
3-5	30
5-10	23
10+	19

Note: Confidential.

Source: SEC.

Bottom panel Policy Initiatives

- The SEC will issue a proposed rule aimed at reducing the susceptibility of money funds to runs.
 - Rules are expected to include a capital buffer and perhaps holdback provisions.
- Task Force on triparty repo reform is expected to issue a final report soon.
 - The industry has not eliminated the market's reliance on intraday credit from clearing banks.
- The FSOC has issued a proposed rule for the designation of systemically important nonbank financial institutions.
- The Comprehensive Capital Analysis and Review is underway.

Appendix 5: Materials used by Ms. Zickler

Material for Briefing on
FOMC Participants' Economic and Policy Projections

Joyce Zickler
 January 24, 2012

Class I FOMC - Restricted Controlled (FR)

Exhibit 1. Central tendencies and ranges of economic projections, 2012-14 and over the longer run

Change in real GDP

Percent

	2007	2008	2009	2010	2011	2012	2013	2014	Longer run
Actual	2.2	-3.3	-0.5	3.1	1.6	-	-	-	-
Upper End of Range	-	-	-	-	-	3.0	3.8	4.3	3.0
Upper End of Central Tendency	-	-	-	-	-	2.7	3.2	4.0	2.6
Lower End of Central Tendency	-	-	-	-	-	2.2	2.8	3.3	2.3
Lower End of Range	-	-	-	-	-	2.1	2.4	2.8	2.2

Unemployment rate

Percent

	2007	2008	2009	2010	2011	2012	2013	2014	Longer run
Actual	4.8	6.9	9.9	9.6	8.7	-	-	-	-
Upper End of Range	-	-	-	-	-	8.6	8.2	7.7	6.0
Upper End of Central Tendency	-	-	-	-	-	8.5	8.1	7.6	6.0
Lower End of Central Tendency	-	-	-	-	-	8.2	7.4	6.7	5.2
Lower End of Range	-	-	-	-	-	7.8	7.0	6.3	5.0

PCE inflation

Percent

	2007	2008	2009	2010	2011	2012	2013	2014	Longer run
Actual	3.5	1.7	1.5	1.3	2.5	-	-	-	-
Upper End of Range	-	-	-	-	-	2.5	2.3	2.1	2.0
Upper End of Central Tendency	-	-	-	-	-	1.8	2.0	2.0	2.0
Lower End of Central Tendency	-	-	-	-	-	1.4	1.4	1.6	2.0
Lower End of Range	-	-	-	-	-	1.3	1.4	1.5	2.0

Core PCE inflation

Percent

	2007	2008	2009	2010	2011	2012	2013	2014
Actual	2.4	2.0	1.7	1.0	1.7	-	-	-
Upper End of Range	-	-	-	-	-	2.0	2.0	2.0
Upper End of Central Tendency	-	-	-	-	-	1.8	2.0	2.0
Lower End of Central Tendency	-	-	-	-	-	1.5	1.5	1.6
Lower End of Range	-	-	-	-	-	1.3	1.4	1.4

Note: Actual fourth-quarter 2011 values for the change in real GDP and for both measures of PCE inflation have not yet been published by the Bureau of Economic Analysis; the plotted values of these variables for 2011 are the median estimates taken from the Federal Reserve Bank of New York's January survey of primary dealers.

Exhibit 2. Overview of FOMC participants' assessments of appropriate monetary policy

Appropriate Timing of Policy Firming

	2012	2013	2014	2015	2016
Number of Participants	3	3	5	4	2

Note: In the upper panel, the height of each bar denotes the number of FOMC participants who judge that, under appropriate monetary policy and in the absence of further shocks to the economy, the first increase in the target federal funds rate from its current range of 0 to 1/4 percent will occur in the specified calendar year.

Appropriate Pace of Policy Firming

Number of Participants With Projected Targets

Target Federal Funds Rate at Year-End (Percent)	2012	2013	2014	Longer run
0.00 - 0.37	14	11	6	
0.38 - 0.62	1	1	2	
0.63 - 0.87		2	1	

0.88 - 1.12	2	1	2	
1.13 - 1.37				
1.38 - 1.62			1	
1.63 - 1.87		1		
1.88 - 2.12		1	1	
2.13 - 2.37				
2.38 - 2.62			3	
2.63 - 2.87			1	
2.88 - 3.12				
3.13 - 3.37				
3.38 - 3.62				
3.63 - 3.87				1
3.88 - 4.12				7
4.13 - 4.37				3
4.38 - 4.62				6

Note: In the lower panel, each shaded circle indicates the value (rounded to the nearest 1/4 percent) of an individual participant's judgment of the appropriate level of the target federal funds rate at the end of the specified calendar year or over the longer run.

Exhibit 3. Scatter Plot of Unemployment and PCE Inflation Projections in the Liftoff Year

Projections

Liftoff Year	Unemployment Rate	PCE Inflation
2012	7.8	2.0
2012	8.2	1.8
2012	8.4	1.8
2013	7.0	2.3
2013	7.8	1.8
2013	8.1	2.0
2014	6.6	2.0
2014	6.7	1.8
2014	7.1	2.0
2014	7.2	2.0
2014	7.4	1.5
2015	6.3	1.7
2015	6.5	1.7
2015	7.0	1.5
2015	7.4	2.0
2016	6.2	1.7
2016	6.5	2.9

Exhibit 4. Economic projections for 2012-2014 and over the longer run (percent)

Change in real GDP

	2012	2013	2014	Longer run
Central Tendency	2.2 to 2.7	2.8 to 3.2	3.3 to 4.0	2.3 to 2.6
<i>November projections</i>	2.5 to 2.9	3.0 to 3.5	3.0 to 3.9	2.4 to 2.7
Range	2.1 to 3.0	2.4 to 3.8	2.8 to 4.3	2.2 to 3.0
<i>November projections</i>	2.3 to 3.5	2.7 to 4.0	2.7 to 4.5	2.2 to 3.0
Memo: Tealbook	2.1	2.4	3.6	2 1/2
<i>November Tealbook</i>	2.5	3.2	3.9	2 1/2

Unemployment rate

	2012	2013	2014	Longer run
Central Tendency	8.2 to 8.5	7.4 to 8.1	6.7 to 7.6	5.2 to 6.0
<i>November projections</i>	8.5 to 8.7	7.8 to 8.2	6.8 to 7.7	5.2 to 6.0
Range	7.8 to 8.6	7.0 to 8.2	6.3 to 7.7	5.0 to 6.0
<i>November projections</i>	8.1 to 8.9	7.5 to 8.4	6.5 to 8.0	5.0 to 6.0
Memo: Tealbook	8.6	8.2	7.8	5 1/4
<i>November Tealbook</i>	8.6	8.1	7.3	5 1/4

PCE inflation

	2012	2013	2014	Longer run
Central Tendency	1.4 to 1.8	1.4 to 2.0	1.6 to 2.0	2.0
<i>November projections</i>	1.4 to 2.0	1.5 to 2.0	1.5 to 2.0	1.7 to 2.0

Range	1.3 to 2.5	1.4 to 2.3	1.5 to 2.1	2.0
<i>November projections</i>	1.4 to 2.8	1.4 to 2.5	1.5 to 2.4	1.5 to 2.0
Memo: Tealbook	1.4	1.3	1.5	2
<i>November Tealbook</i>	1.4	1.4	1.5	2

Core PCE inflation

	2012	2013	2014
Central Tendency	1.5 to 1.8	1.5 to 2.0	1.6 to 2.0
<i>November projections</i>	1.5 to 2.0	1.4 to 1.9	1.5 to 2.0
Range	1.3 to 2.0	1.4 to 2.0	1.4 to 2.0
<i>November projections</i>	1.3 to 2.1	1.4 to 2.1	1.4 to 2.2
Memo: Tealbook	1.5	1.4	1.4
<i>November Tealbook</i>	1.5	1.4	1.4

Note: The changes in real GDP and inflation are measured Q4/Q4

Exhibit 5. Uncertainty and risks in economic projections

Histograms, eight panels.

Uncertainty about GDP growth

Number of participants

	Lower	Broadly similar	Higher
January projections	0	1	16
November projections	0	1	16

Uncertainty about the unemployment rate

Number of participants

	Lower	Broadly similar	Higher
January projections	0	3	14
November projections	0	3	14

Uncertainty about PCE inflation

Number of participants

	Lower	Broadly similar	Higher
January projections	1	6	10
November projections	1	4	12

Uncertainty about core PCE inflation

Number of participants

	Lower	Broadly similar	Higher
January projections	1	7	9
November projections	1	5	11

Risks to GDP growth

Number of participants

	Weighted to downside	Broadly balanced	Weighted to upside
January projections	11	6	0
November projections	11	6	0

Risks to the unemployment rate

Number of participants

	Weighted to downside	Broadly balanced	Weighted to upside
January projections	1	5	11
November projections	0	6	11

Risks to PCE inflation

Number of participants

	Weighted to downside	Broadly balanced	Weighted to upside

January projections	3	11	3
November projections	4	10	3

Risks to core PCE inflation

Number of participants

	Weighted to downside	Broadly balanced	Weighted to upside
January projections	3	11	3
November projections	4	10	3

Appendix 6: Materials used by Mr. English

Material for

FOMC Briefing on Monetary Policy Alternatives

Bill English

January 24-25, 2012

Class I FOMC - Restricted (FR)

December FOMC Statement

1. Information received since the Federal Open Market Committee met in November suggests that the economy has been expanding moderately, notwithstanding some apparent slowing in global growth. While indicators point to some improvement in overall labor market conditions, the unemployment rate remains elevated. Household spending has continued to advance, but business fixed investment appears to be increasing less rapidly and the housing sector remains depressed. Inflation has moderated since earlier in the year, and longer-term inflation expectations have remained stable.
2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee continues to expect a moderate pace of economic growth over coming quarters and consequently anticipates that the unemployment rate will decline only gradually toward levels that the Committee judges to be consistent with its dual mandate. Strains in global financial markets continue to pose significant downside risks to the economic outlook. The Committee also anticipates that inflation will settle, over coming quarters, at levels at or below those consistent with the Committee's dual mandate. However, the Committee will continue to pay close attention to the evolution of inflation and inflation expectations.
3. To support a stronger economic recovery and to help ensure that inflation, over time, is at levels consistent with the dual mandate, the Committee decided today to continue its program to extend the average maturity of its holdings of securities as announced in September. The Committee is maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as appropriate.
4. The Committee also decided to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2013.
5. The Committee will continue to assess the economic outlook in light of incoming information and is prepared to employ its tools to promote a stronger economic recovery in a context of price stability.

[Note: In the January FOMC Statement Alternatives, emphasis (strike-through) indicates strike-through text in the original document, and strong emphasis (bold) indicates bold red underlined text in the original document.]

January FOMC Statement--Alternative A

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** suggests that the economy has been expanding moderately, notwithstanding some ~~apparent~~ slowing in global growth. While indicators point to some **further** improvement in overall labor market conditions, the unemployment rate remains elevated. Household spending has continued to advance, but **growth in** business fixed investment ~~appears to be increasing less rapidly~~ **has slowed**, and the housing sector remains depressed. Inflation has ~~moderated since earlier in the year~~ **been subdued in recent months**, and longer-term inflation expectations have remained stable.
2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee ~~continues to~~ expects ~~a moderate~~ **that, absent further policy action, the** pace of economic growth **would remain modest** over coming quarters and consequently anticipates that the unemployment rate ~~will~~ **would** decline only **very** gradually toward levels that the Committee judges to be consistent with its dual mandate. Strains in global financial markets continue to pose significant downside risks to the economic outlook. The Committee also anticipates that over coming quarters, inflation will ~~settle, run~~ at levels [at or] below those consistent with the Committee's dual mandate. ~~However, the Committee will continue to pay close attention to the evolution of inflation and inflation expectations.~~
3. To support a stronger economic recovery and to help ensure that inflation, over time, is at levels consistent with the dual mandate, the Committee decided today to **purchase up to an additional \$500 billion of agency mortgage-backed securities by the end of January 2013. In addition, the Committee intends to** continue its program to extend the average maturity of its holdings of securities as announced in September. The Committee is **also** maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. **These programs should put downward pressure on longer-term interest rates, provide support to mortgage markets, and help make broader financial conditions more accommodative.** The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those

holdings as appropriate.

OR

3'. To support a stronger economic recovery and to help ensure that inflation, over time, is at levels consistent with the dual mandate, the Committee decided today to **purchase additional agency mortgage-backed securities, initially at a rate of \$40 billion per month. The Committee will adjust the pace of purchases and determine the ultimate size of the program in light of the evolving economic outlook and as needed to foster its objectives. In addition, the Committee intends to** continue its program to extend the average maturity of its holdings of securities as announced in September. The Committee is **also** maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. **These programs should put downward pressure on longer-term interest rates, provide support to mortgage markets, and help make broader financial conditions more accommodative.** ~~The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as appropriate.~~

4. The Committee also decided to keep the target range for the federal funds rate at 0 to 1/4 percent and ~~currently now~~ anticipates that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant ~~this~~ **exceptionally low levels range** for the federal funds rate ~~at least through mid-2013~~ **will be appropriate at least as long as the unemployment rate exceeds [6 1/2] percent, the inflation rate (as measured by the price index for personal consumption expenditures) at a horizon of one to two years is projected to be either below or close to [2] percent, and longer-term inflation expectations continue to be well anchored. On the basis of currently available information, the Committee expects these conditions to prevail at least through 2014.**

5. The Committee will ~~continue to assess the economic outlook in light of incoming information and is prepared to~~ employ its tools **as needed** to promote a stronger economic recovery in a context of price stability.

January FOMC Statement--Alternative B

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** suggests that the economy has been expanding moderately, notwithstanding some ~~apparent~~ slowing in global growth. While indicators point to some **further** improvement in overall labor market conditions, the unemployment rate remains elevated. Household spending has continued to advance, but **growth in** business fixed investment ~~appears to be increasing less rapidly~~ **has slowed**, and the housing sector remains depressed. Inflation has ~~moderated since earlier in the year~~ **been subdued in recent months**, and longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee ~~continues to~~ expects a ~~moderate~~ **pace of** economic growth over coming quarters **to be modest** and consequently anticipates that the unemployment rate will ~~decline only gradually~~ **make only slow progress** toward levels that the Committee judges to be consistent with its dual mandate. Strains in global financial markets continue to pose significant downside risks to the economic outlook. The Committee also anticipates that over coming quarters, inflation will ~~settle, run~~ at levels at or below those consistent with the Committee's dual mandate. [However, the Committee will continue to pay close attention to the evolution of inflation and inflation expectations.]

3. To support a stronger economic recovery and to help ensure that inflation, over time, is at levels consistent with the dual mandate, ~~the~~ **Committee intends to maintain a highly accommodative stance for monetary policy. In particular,** the Committee ~~also~~ decided **today** to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant ~~this~~ **exceptionally low levels range** for the federal funds rate ~~at least through mid-2013~~ **will be appropriate at least as long as the unemployment rate exceeds [7] percent, the inflation rate (as measured by the price index for personal consumption expenditures) at a horizon of one to two years is projected to be either below or close to [2] percent, and longer-term inflation expectations continue to be well anchored. On the basis of currently available information, the Committee expects these conditions to prevail at least through late 2014.**

OR

3'. To support a stronger economic recovery and to help ensure that inflation, over time, is at levels consistent with the dual mandate, ~~the~~ **Committee expects to maintain a highly accommodative stance for monetary policy. In particular,** the Committee ~~also~~ decided **today** to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant ~~exceptionally low levels~~ for the federal funds rate ~~at least through mid-2013~~ **late 2014.**

4. The Committee ~~also~~ decided ~~today~~ to continue its program to extend the average maturity of its holdings of securities as announced in September. The Committee is maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as appropriate **to promote a stronger economic recovery in a context of price stability.**

5. The Committee will ~~continue to assess the economic outlook in light of incoming information and is prepared to~~ employ its tools **to promote a stronger economic recovery in a context of price stability.**

January FOMC Statement--Alternative C

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** suggests that the economic ~~has been expanding~~ moderately, notwithstanding some ~~apparent~~ slowing in global growth **recovery has strengthened somewhat**. While indicators point to some ~~improvement in overall labor market conditions,~~ **Although** the unemployment rate remains elevated, **it has declined recently, and employment continues to increase**. Household spending has ~~continued to~~ advanced **further, but and** business fixed investment ~~appears to be increasing less rapidly and~~ **has continued to expand, but** the housing sector remains depressed. Inflation has moderated ~~since earlier in the~~ **somewhat since the first half of last year**, and longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee ~~continues to~~ expects a ~~moderate~~ **firming in the** pace of economic growth over coming quarters and consequently anticipates that the unemployment rate will ~~decline only gradually~~ toward levels that the Committee judges to be consistent with its dual mandate. ~~Strains in global financial markets continue to pose significant downside risks to the economic outlook.~~ The Committee also anticipates that over coming quarters, inflation will ~~settle, run~~ at levels ~~at or below those~~ consistent with the Committee's dual mandate. ~~However,~~ The Committee will continue to pay close attention to the evolution of inflation and inflation expectations.

3. To support ~~a stronger~~ the economic recovery ~~and to help~~ while ensuring that inflation, over time, is at levels **that are** consistent with the dual mandate, the Committee decided today to ~~continue its~~ **reduce by half the size of the** program to extend the average maturity of its holdings of securities as announced in September **and to complete the program by the end of February**. The Committee is maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as appropriate.
4. The Committee also decided to keep the target range for the federal funds rate at 0 to 1/4 percent and ~~currently~~ **now** anticipates that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant exceptionally low levels for the federal funds rate ~~at least through mid-2013~~ **for an extended period**.
5. The Committee will ~~continue to~~ assess the economic outlook in light of incoming information and is prepared to employ its tools **as appropriate** to promote ~~a stronger economic recovery in a context of~~ **its objectives of maximum employment and** price stability.

December 2011 Directive

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to 1/4 percent. The Committee directs the Desk to continue the maturity extension program it began in September to purchase, by the end of June 2012, Treasury securities with remaining maturities of approximately 6 years to 30 years with a total face value of \$400 billion, and to sell Treasury securities with remaining maturities of 3 years or less with a total face value of \$400 billion. The Committee also directs the Desk to maintain its existing policies of rolling over maturing Treasury securities into new issues and of reinvesting principal payments on all agency debt and agency mortgage-backed securities in the System Open Market Account in agency mortgage-backed securities in order to maintain the total face value of domestic securities at approximately \$2.6 trillion. The Committee directs the Desk to engage in dollar roll transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

[Note: In the January 2012 Directive Alternatives, emphasis (strike-through) indicates strike-through text in the original document, and strong emphasis (bold) indicates bold red underlined text in the original document.]

January 2012 Directive--Alternative A

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to 1/4 percent. The Committee directs the Desk to continue the maturity extension program it began in September to purchase, by the end of June 2012, Treasury securities with remaining maturities of approximately 6 years to 30 years with a total face value of \$400 billion, and to sell Treasury securities with remaining maturities of 3 years or less with a total face value of \$400 billion. **[The Committee also directs the Desk to execute purchases of agency mortgage-backed securities by the end of January 2013 in order to increase the total face value of domestic securities held in the System Open Market Account to approximately \$3.1 trillion.]** **The Committee also directs the Desk to execute purchases of agency mortgage-backed securities in order to increase the total face value of domestic securities held in the System Open Market Account by approximately \$40 billion per month.]** The Committee also directs the Desk to maintain its existing policies of rolling over maturing Treasury securities into new issues and of reinvesting principal payments on all agency debt and agency mortgage-backed securities in the System Open Market Account in agency mortgage-backed securities ~~in order to maintain the total face value of domestic securities at approximately \$2.6 trillion~~. The Committee directs the Desk to engage in dollar roll **and coupon swap** transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

January 2012 Directive--Alternative B

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to 1/4 percent. The Committee directs the Desk to continue the maturity extension program it began in September to purchase, by the end of June 2012, Treasury securities with remaining maturities of approximately 6 years to 30 years with a total face value of \$400 billion, and to sell Treasury securities with remaining maturities of 3 years or less with a total face value of \$400 billion. The Committee also directs the Desk to maintain its existing policies of rolling over maturing Treasury securities into new issues and of reinvesting principal payments on all agency debt and agency mortgage-backed securities in the System Open Market Account in agency mortgage-backed securities in order to maintain the total face value of domestic securities at approximately \$2.6 trillion. The Committee directs the Desk to engage in dollar roll transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

January 2012 Directive--Alternative C

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to 1/4 percent. The Committee directs the Desk to ~~continue~~ **modify** the maturity extension program it began in September ~~so as to~~ purchase, by the end of ~~June~~ **February** 2012, Treasury securities with remaining maturities of approximately 6 years to 30 years with a total face value of ~~\$400~~ **\$200** billion, and to sell Treasury securities with remaining maturities of 3 years or less with a total face value of ~~\$400~~ **\$200** billion. The Committee also directs the Desk to maintain its existing policies of rolling over maturing Treasury securities into new issues and of reinvesting principal payments on all agency debt and agency mortgage-backed securities in the System Open Market Account in agency mortgage-backed securities in order to maintain the total face value of domestic securities at approximately \$2.6 trillion. The Committee directs the Desk to engage in dollar roll transactions as necessary to facilitate settlement