Economic Outlook: Finance, Housing and the Consumer
Federal Reserve Bank of Chicago Annual Economic Outlook Symposium

John E. Silvia, Chief Economist
Friday, December 2, 2011

Where Are We Now?

Five benchmarks for good decision making

Inflation
Interest Rates
Growth
Profits
The Dollar
What We Get Versus What We Expect

Sustained recovery in 2012, but still below historical experience

Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Consumers: Better Returns, Fewer Players
**Consumer Spending**

Subpar recovery suggests deleveraging consumer, cautious credit and slow job gains

**Real Personal Consumption Expenditures**

Bars = CAGR  Line = Yr/Yr Percent Change

Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

**Employment**

Employment will eventually regain its peak, but not quickly

**Employment Cycles**

Percent Change from Cycle Peak

Source: U.S. Department of Labor and Wells Fargo Securities, LLC
Household Wealth

Wealth has rebounded since the recession, driven by gains in financial markets

Household Net Worth

Household Assets

Total

Composition

Household Debt - Consumer & Mortgage

Consumers are reducing their debt, but leverage remains historically high

Source: Federal Reserve Board and Wells Fargo Securities, LLC
Household Finances: Current Income

Debt service has returned to more sustainable rates

Household Debt Service Ratio
As a Percent of Disposable Personal Income

Source: Federal Reserve Board and Wells Fargo Securities, LLC

Household Finances

Consumers are saving at higher rates after the last economic shock

Personal Saving Rate
Disp. Personal Income Less Spending as a % of Disp. Income

Source: U.S. Department of Commerce and Wells Fargo Securities, LLC
Consumers

Confidence improves with income, as does consumption

Confidence

Consumer Confidence by Household Income
1980=100, 3-Month Moving Averages

Consumption

Distribution of Consumption
By Income Quintile - 2010

Source: The Conference Board, U.S. Department of Labor and Wells Fargo Securities, LLC

Consumer Credit

Consumer borrowing has seen a slight pickup, driven by auto and student loans

Consumer Credit

Year-over-Year Percent Change, 3-Month Moving Average

Source: Federal Reserve Board and Wells Fargo Securities, LLC
Income: Rising Returns to Education

Real income has remained relatively flat over the last decade, except for those with a college degree.

Source: Federal Reserve Board and Wells Fargo Securities, LLC

Personal Income

Rising inflation is cutting into consumers’ income.

Source: U.S. Department of Commerce and Wells Fargo Securities, LLC
Housing: Poor Returns, Fewer Players

Structural Challenge: What is the new sustainable pace? Below 1.5 million?

Source: U.S. Department of Commerce and Wells Fargo Securities, LLC
Housing

Home improvements now account for the largest share of residential investment in the economy.

<table>
<thead>
<tr>
<th>Year</th>
<th>New Building</th>
<th>Improvements</th>
<th>Brokers' Commissions</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3-2006</td>
<td>36.9%</td>
<td>23.0%</td>
<td>15.8%</td>
<td>0.9%</td>
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<tr>
<td>Q3-2011</td>
<td>61.6%</td>
<td>46.2%</td>
<td>16.9%</td>
<td>0.1%</td>
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</tbody>
</table>

Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Housing Demographics

Secular Shift?
Households are living in smaller homes with more people since the recession.

Median Home Size vs. Average Household Size

Median Square Footage: 2010 @ 2,168 (Left Axis)
Number of Persons per Household: 2010 @ 2.59 (Right Axis)

Source: U.S. Department of Commerce and Wells Fargo Securities, LLC
Negative Equity Mortgages - By State

<table>
<thead>
<tr>
<th>State</th>
<th>Percent of Mortgages Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon</td>
<td>17.2%</td>
</tr>
<tr>
<td>Washington</td>
<td>17.2%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>19.0%</td>
</tr>
<tr>
<td>Colorado</td>
<td>20.6%</td>
</tr>
<tr>
<td>Utah</td>
<td>20.9%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>21.5%</td>
</tr>
<tr>
<td>Illinois</td>
<td>21.7%</td>
</tr>
<tr>
<td>Ohio</td>
<td>22.3%</td>
</tr>
<tr>
<td>Idaho</td>
<td>23.0%</td>
</tr>
<tr>
<td>Virginia</td>
<td>23.3%</td>
</tr>
<tr>
<td>Maryland</td>
<td>23.6%</td>
</tr>
<tr>
<td>Georgia</td>
<td>30.2%</td>
</tr>
<tr>
<td>California</td>
<td>35.6%</td>
</tr>
<tr>
<td>Michigan</td>
<td>45.1%</td>
</tr>
<tr>
<td>Florida</td>
<td>45.7%</td>
</tr>
<tr>
<td>Arizona</td>
<td>60.4%</td>
</tr>
<tr>
<td>Nevada</td>
<td>66.4%</td>
</tr>
<tr>
<td>US</td>
<td>22.7%</td>
</tr>
</tbody>
</table>

As of Q2 2011

Source: CoreLogic and Wells Fargo Securities, LLC

Negative equity in homes has contributed to foreclosures and reduced labor mobility.

Delinquencies and inventories have come down somewhat from their all-time peaks, but still remain elevated.

Mortgage Delinquency

<table>
<thead>
<tr>
<th>Year</th>
<th>Delinquency Rate</th>
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<tbody>
<tr>
<td>1997</td>
<td>3.0%</td>
</tr>
<tr>
<td>1998</td>
<td>3.0%</td>
</tr>
<tr>
<td>1999</td>
<td>3.0%</td>
</tr>
<tr>
<td>2000</td>
<td>3.0%</td>
</tr>
<tr>
<td>2001</td>
<td>3.0%</td>
</tr>
<tr>
<td>2002</td>
<td>3.0%</td>
</tr>
<tr>
<td>2003</td>
<td>3.0%</td>
</tr>
<tr>
<td>2004</td>
<td>3.0%</td>
</tr>
<tr>
<td>2005</td>
<td>3.0%</td>
</tr>
<tr>
<td>2006</td>
<td>3.0%</td>
</tr>
<tr>
<td>2007</td>
<td>3.0%</td>
</tr>
<tr>
<td>2008</td>
<td>3.0%</td>
</tr>
<tr>
<td>2009</td>
<td>3.0%</td>
</tr>
<tr>
<td>2010</td>
<td>3.0%</td>
</tr>
<tr>
<td>2011</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

Source: Mortgage Bankers Association, National Association of Realtors and Wells Fargo Securities, LLC
Home Prices: Temporary Actions Do Not Provide Permanent Change

Timing of Recovery Will Vary Across Metro Areas

S&P/Case-Shiller Home Price Index – September

<table>
<thead>
<tr>
<th>Yr/Yr % Change</th>
<th>3-Month Annual Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td>-2.55%</td>
</tr>
<tr>
<td>Dallas</td>
<td>-0.80%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>-4.20%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>-5.91%</td>
</tr>
<tr>
<td>New York City</td>
<td>-2.63%</td>
</tr>
<tr>
<td>Washington, DC</td>
<td>0.91%</td>
</tr>
</tbody>
</table>

The steepest declines are behind us, but recovery will be slow in areas with excess supply.

Home Prices

The cost of ownership versus renting has returned to more sustainable levels.

Historical Perspective

S&P Case-Shiller Home Price Index P/E Ratio

Source: S&P Case-Shiller and Wells Fargo Securities, LLC.
Falling prices of existing homes make them more attractive to new construction.

Source: U.S. Department of Commerce, National Association of Realtors and Wells Fargo Securities, LLC

Typical Cyclical Pattern: Commercial and industrial billings has gained momentum due to increased activity in the manufacturing sector.

Source: The American Institute of Architects, U.S. Department of Commerce and Wells Fargo Securities, LLC
The apartment market is firming.

Improvement in the commercial real estate market remains uneven across product categories.

Source: Reis, Inc., PPR, and Wells Fargo Securities, LLC.
Financial: Weaker Returns, Many Players

Inflation

Consumer prices are beginning to pick up on the heels of higher food and housing prices.
John Silvia, Managing Director and Chief Economist
Wells Fargo

Interest Rates

Risk is rising

Long-Term View

Recent History

3-Month LIBOR-OIS Spread

Basis Points

Source: Bloomberg LP and Wells Fargo Securities, LLC

Interest Rates

The European sovereign debt crisis is fueling the rise in LIBOR rates

Source: IHS Global Insight and Wells Fargo Securities, LLC
Corporate Spreads: Positive for Issuance

Spreads have returned to a more normal level; bond issuance is strong.

Aaa and Baa Corporate Bond Spreads
Over 10-Year Treasury, Basis Points

Source: Federal Reserve Board and Wells Fargo Securities, LLC

Debt Issuance: A New Mix

Issuance has swung away from riskier debt.
The recent rally in risk assets was short lived.

Volatility in Treasury debt continues.

Source: Bloomberg LP and Wells Fargo Securities, LLC
Mortgage Origination

The appetite and capacity for mortgage originations in the banking sector are outside the Fed’s control.

Inflation vs. Yields: Negative Real Yields, Three Non-Market Buyers

Inflation expectations exceed nominal returns.

Source: Federal Reserve Board and Wells Fargo Securities, LLC.
Corporate Profits Growth

Profits growth has moderated—typical cyclical pattern

Corporate Profits: Global Growth

Corporate Profits Growth

Year-over-Year Percent Change

Adjusted for Inventory Valuation & Capital Consumption

Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Corporate Profits: Q3 @ 7.9%

Globalization and Corporate Profits

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage of Total Sales Earned Abroad (07-09 Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology</td>
<td>56.9%</td>
</tr>
<tr>
<td>Energy</td>
<td>48.1%</td>
</tr>
<tr>
<td>Materials</td>
<td>44.9%</td>
</tr>
<tr>
<td>Industrials</td>
<td>36.7%</td>
</tr>
<tr>
<td>Consumer Staples</td>
<td>27.5%</td>
</tr>
<tr>
<td>Consumer Discretionary</td>
<td>24.0%</td>
</tr>
<tr>
<td>Financials</td>
<td>18.0%</td>
</tr>
<tr>
<td>Health Care</td>
<td>17.4%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Source: Factset and Wells Fargo Securities, LLC

A significant portion of profits are being earned abroad
Total Loan Charge-Off Rate
Percent of Average Loans at Commercial Banks, SA

0.0% 0.5% 1.0% 1.5% 2.0% 2.5% 3.0% 3.5%
85 87 89 91 93 95 97 99 01 03 05 07 09 11

- Total Loans: Q2 @ 1.68%

Source: Federal Reserve Board and Wells Fargo Securities, LLC

Banking

Charge-off rates are declining as households and businesses repair their balance sheets.

Commercial & Industrial Lending
At Domestically Chartered Banks, 3-Month Annualized Rate

- Commercial & Industrial Loan Growth: Oct @ 15.0%

Source: Federal Reserve Board and Wells Fargo Securities, LLC
Banking

Standards are being relaxed, but demand for loans has fallen sharply in recent months

Net Percentage of Banks Tightening Standards

Source: Federal Reserve Board and Wells Fargo Securities, LLC

Net Percent of Banks Reporting Stronger Demand

Source: Federal Reserve Board and Wells Fargo Securities, LLC

Financing Gap

Many companies are currently able to fund their own capital expenditures

Source: Federal Reserve Board and Wells Fargo Securities, LLC

Source: Federal Reserve Board and Wells Fargo Securities, LLC
Banking Interest Margins

The initial boost to margins from a low fed funds target rate is fading

Net Interest Margin: Q2 @ 3.54

U.S. banks have relatively little bank exposure to the European periphery

Bank Exposure to Peripheral Europe

U.S. Bank Exposure to Select European Countries

Country Exposure to Europe

U.S. Exposure to Europe

Source: Federal Financial Institutions Examination Council and Wells Fargo Securities, LLC

Source: Bank for International Settlements and Wells Fargo Securities, LLC
European Sovereign Debt

Italian bond prices are under pressure.

Banking: Assets to GDP

Size is a relative matter.

Country

United States 57% 45% 40% 35% 30% 25% 20% 15% 10% 5% 0%
United Kingdom 40% 35% 30% 25% 20% 15% 10% 5% 0%
Switzerland 30% 25% 20% 15% 10% 5% 0%
Canada 15% 10% 5% 0%

Institution

Bank of America Corporation 2,265 United States 15%
JPMorgan Chase & Co. 2,118 United States 14%
Citigroup 1,914 United States 13%
Wells Fargo & Company 1,858 United States 11%
U.S. Bancorp 808 United States 2%
PNC Financial Services Group, Inc. 264 United States 2%
Bank of New York Mellon Corporation 247 United States 2%
Royal Bank of Canada 713 Canada 45%
Toronto-Dominion Bank 608 Canada 39%
Bank of Nova Scotia 517 Canada 33%
BMO Financial Group 404 Canada 26%
Canadian Imperial Bank of Commerce 345 Canada 22%
HSBC Holdings Plc 2,455 United Kingdom 109%
Barclays Plc 2,333 United Kingdom 104%
Royal Bank of Scotland Group Plc 2,276 United Kingdom 101%
Lloyds Banking Group Plc 1,954 United Kingdom 98%
Standard Chartered Plc 517 United Kingdom 23%
UBS AG 1,491 Switzerland 269%
Credit Suisse Group AG 1,168 Switzerland 211%

Source: SNL Financial LC, IMF and Wells Fargo Securities, LLC.
High saving/investment rates in Asia should continue to underpin strong economic growth for the foreseeable future.

The nation has entered uncharted waters in fiscal policy.

Source: International Monetary Fund and Wells Fargo Securities, LLC

Source: U.S. Department of Commerce, U.S. Department of the Treasury and Wells Fargo Securities, LLC.
# Outlook Summary

## Wells Fargo U.S. Economic Outlook

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
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<th>Forecast as of: November 22, 2011</th>
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<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
<td>2010</td>
<td></td>
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<tr>
<td>Real Gross Domestic Product¹</td>
<td>-0.4</td>
<td>-3.6</td>
<td>3.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Personal Consumption</td>
<td>-0.7</td>
<td>-2.0</td>
<td>2.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Equipment and Software</td>
<td>-4.1</td>
<td>-16.4</td>
<td>14.6</td>
<td>10.4</td>
</tr>
<tr>
<td>Government Purchases</td>
<td>2.5</td>
<td>1.7</td>
<td>0.7</td>
<td>-1.9</td>
</tr>
<tr>
<td>Consumer Price Index²</td>
<td>3.8</td>
<td>-0.3</td>
<td>1.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Corporate Profits Before Taxes²</td>
<td>-16.4</td>
<td>7.9</td>
<td>32.2</td>
<td>7.9</td>
</tr>
<tr>
<td>10-Year Treasury Note</td>
<td>3.66</td>
<td>3.26</td>
<td>3.22</td>
<td>2.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.28</td>
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</tbody>
</table>

¹ Compound Annual Growth Rate Quarter-over-Quarter
² Year-over-Year Percentage Change

Source: U.S. Department of Commerce, U.S. Department of Labor, Federal Reserve Board and Wells Fargo Securities, LLC

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## Appendix
### Recent Special Commentary

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 12</td>
<td>The Delta Rebalancing: Can a Stimulus Failure Be Offset?</td>
<td>John Silvia, Scott Anderson, Azhar Iqbal, Sarah Watt</td>
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<td>November 15</td>
<td>Aleman &amp; Iqbal: What Do Rio's Initiatives Mean for Growth?</td>
<td>Eugenio Aleman, Azhar Iqbal</td>
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<td>November 16</td>
<td>Has the Fed's Unconventional Approach Been Successful?</td>
<td>John Silvia, Sarah Watt</td>
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<td>November 19</td>
<td>Employment: Beyond the Sound Bites—Reading the Signals III</td>
<td>John Silvia, Kaylyn Swankoski</td>
</tr>
<tr>
<td>November 23</td>
<td>The Deficit Reduction Committee: A Race to the Bottom?</td>
<td>John Silvia, Scott Anderson, Azhar Iqbal, Sarah Watt</td>
</tr>
<tr>
<td>November 30</td>
<td>Employment: Beyond the Sound Bites—Reading the Signals IV</td>
<td>John Silvia, Kaylyn Swankoski</td>
</tr>
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<td>December 1</td>
<td>Employment: Beyond the Sound Bites—Reading the Signals V</td>
<td>John Silvia, Kaylyn Swankoski</td>
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<td>December 2</td>
<td>The Deficit Reduction Committee: A Race to the Bottom?</td>
<td>John Silvia, Scott Anderson, Azhar Iqbal, Sarah Watt</td>
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<tr>
<td>December 5</td>
<td>Overall Q4 from the Bell!</td>
<td>John Silvia</td>
</tr>
<tr>
<td>December 8</td>
<td>Economic Dynamics in Southeast Asia: What's Next?</td>
<td>John Silvia</td>
</tr>
<tr>
<td>December 15</td>
<td>Independent Nations, Interdependent Economies</td>
<td>John Silvia</td>
</tr>
<tr>
<td>December 19</td>
<td>Employment: Beyond the Sound Bites—Reading the Signals VI</td>
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<td>The Deficit Reduction Committee: A Race to the Bottom?</td>
<td>John Silvia, Scott Anderson, Azhar Iqbal, Sarah Watt</td>
</tr>
<tr>
<td>December 27</td>
<td>Housing Data Wrap-Up: October 2011</td>
<td>Tim Quinlan</td>
</tr>
<tr>
<td>December 30</td>
<td>Employment: Beyond the Sound Bites—Reading the Signals VII</td>
<td>John Silvia, Kaylyn Swankoski</td>
</tr>
</tbody>
</table>

### A Sampling of Our Recent Special, Regional & Industry Commentary

- September-02 Is Another Recession Brewing in Germany? Bryson & Kruse
- September-07 Brazil: GDP and Central Bank Autonomy Aleman
- September-07 Housing Data Wrap-Up: September 2011 Vitner, Khan & Seydl
- September-08 Long-Term Unemployment: Costs & Consequences Silvia & Watt
- September-16 Global Chartbook: September 2011
- September-20 Credit Quality Monitor: September 2011 Anderson & Kashmarek
- September-21 "Operation Twist" Gets Underway Bryson
- September-26 Employment: Beyond the Sound Bites—Reading the Signals IV Silvia & Watt
- September-27 Independent Nations, Interdependent Economies Silvia
- September-27 Ireland: Good News from the European Periphery? Bryson
- September-28 Economic Dynamism in Southeast Asia Silvia
- October-02 More QE from the BoE? Bryson
- October-25 Regional Chartbook: Quarter 4, 2011 Vitner, Brown & Seydl
- August-01 Employment: Beyond the Sound Bites—Reading the Signals II Silvia & Watt
- August-02 Real GDP Per Capita Stalled Out In the First Half of 2011 Vitner & Seydl
- August-02 Economic Implications of the Debt Ceiling Compromise Silvia, Vitner, Bullard & Brown
- August-05 What are the Risks of Recession? Vitner
- August-07 S&P Downgrade of Treasury /Fed Credit: Fiscal Imbalances Silvia & Vitner
- August-11 Employment: Beyond the Sound Bites—Reading the Signals III Silvia & Watt
- August-11 Commercial Real Estate Chartbook: Quarter 2 Vitner, Khan & Seydl
- August-19 Even Slower Growth with Significant Downside Risk Silvia
- August-22 Mexican Economy Grows Despite Slowdown in Q2 Aleman
- August-22 Philadelphia Fed Index: Can It Predict a Recession? Silvia, Khan, Iqbal & Watt
- August-23 Are We Headed for Another Global Recession? Bryson, Quinlan & Kruse
- August-23 State Coincident Indicators Highlight A Disturbing Trend Vitner & Brown
- August-24 Will the Renminbi Eventually Rival the Dollar? Bryson
- August-26 Tacking in Treacherous Water: No Full Sail for QE3 Silvia
- August-30 The Evolution of Economic Relationships: The PMI and Growth Silvia, Iqbal & Watt

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