

WELLS
FARGO

SECURITIES

Economics and Finance in a Two-Percent Economy

Philadelphia Council for Business Economics

John E. Silvia, Chief Economist

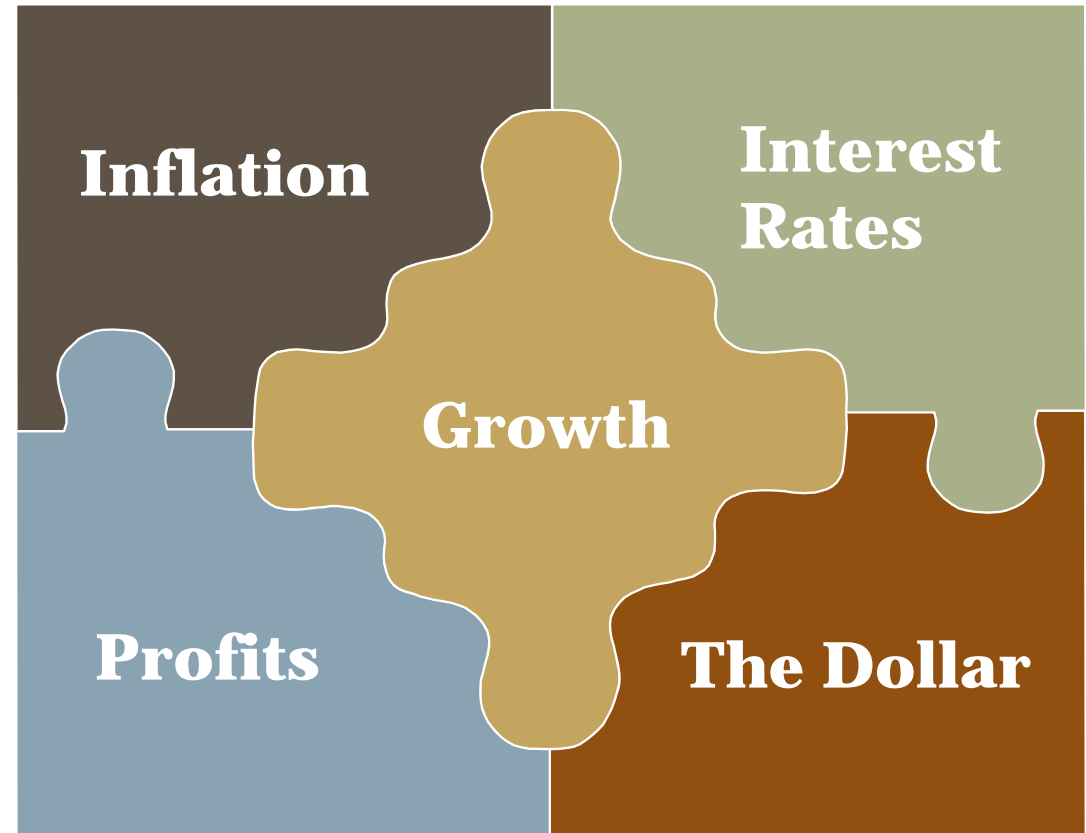
November 2, 2016

Together we'll go far



Where Are We Now?

Five benchmarks for good decision making



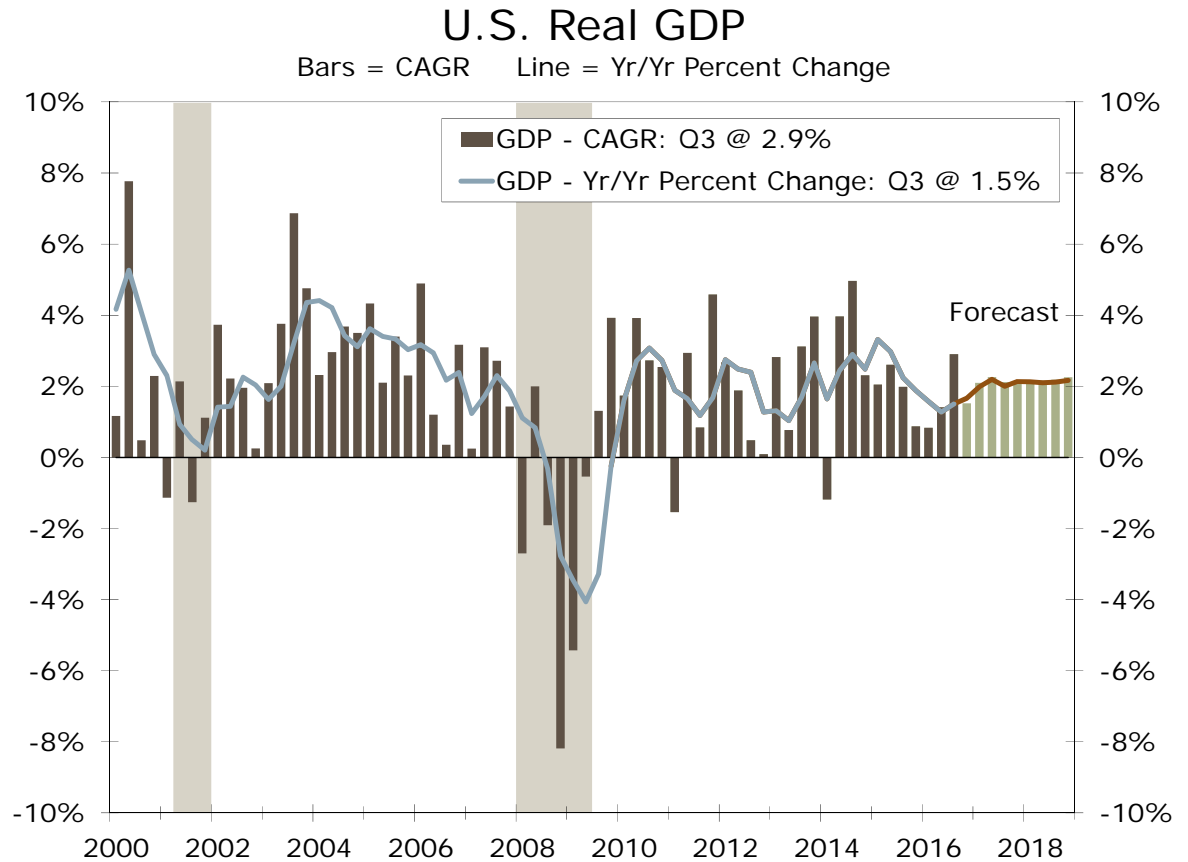
How do we differ from
consensus?

Expectations for the Future

- Sustained trend growth, no recession in 2016
- Employment—cyclical and structural change
- Consumer solid
- Housing improving—single-family picking up
- Unsustainable long-run fiscal policy
- Europe downside risk post-Brexit
- China growth slower for 2016, 2017

Sustained Growth in 2016—Great Divide Between Domestic and Trade

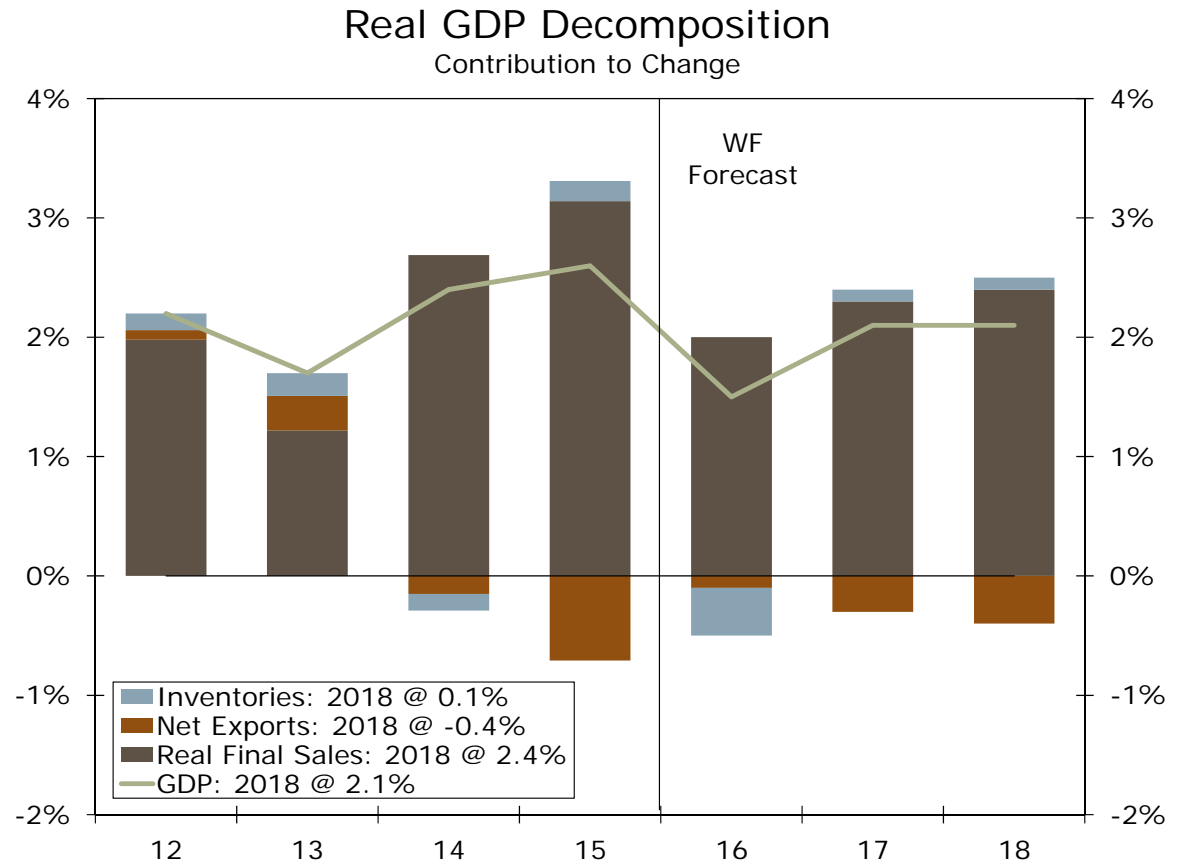
Trend growth at 1.5-2 percent in the year ahead. Consumer and housing lead, but exports will remain a drag.



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

Domestic Strength

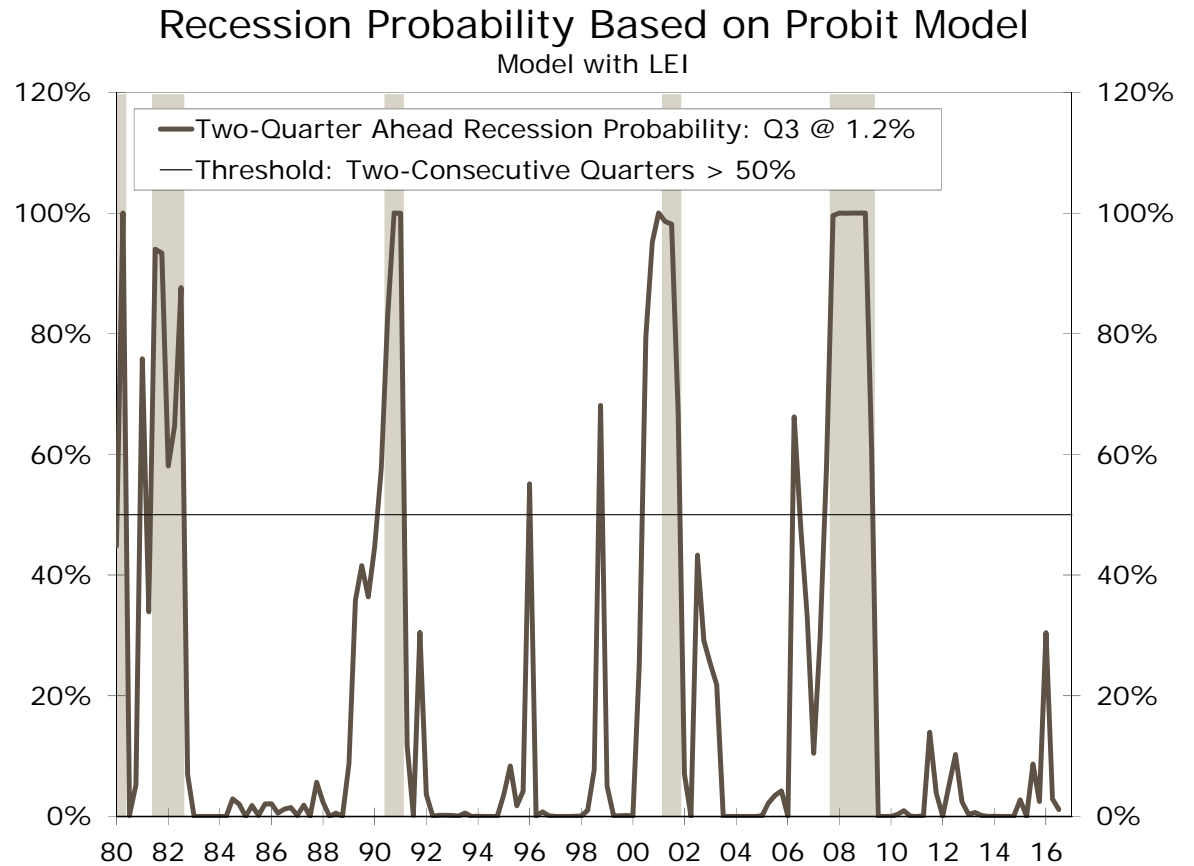
Domestic growth has held up relatively well. We expect trade to be a drag moving forward.



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

Recession in 2016?

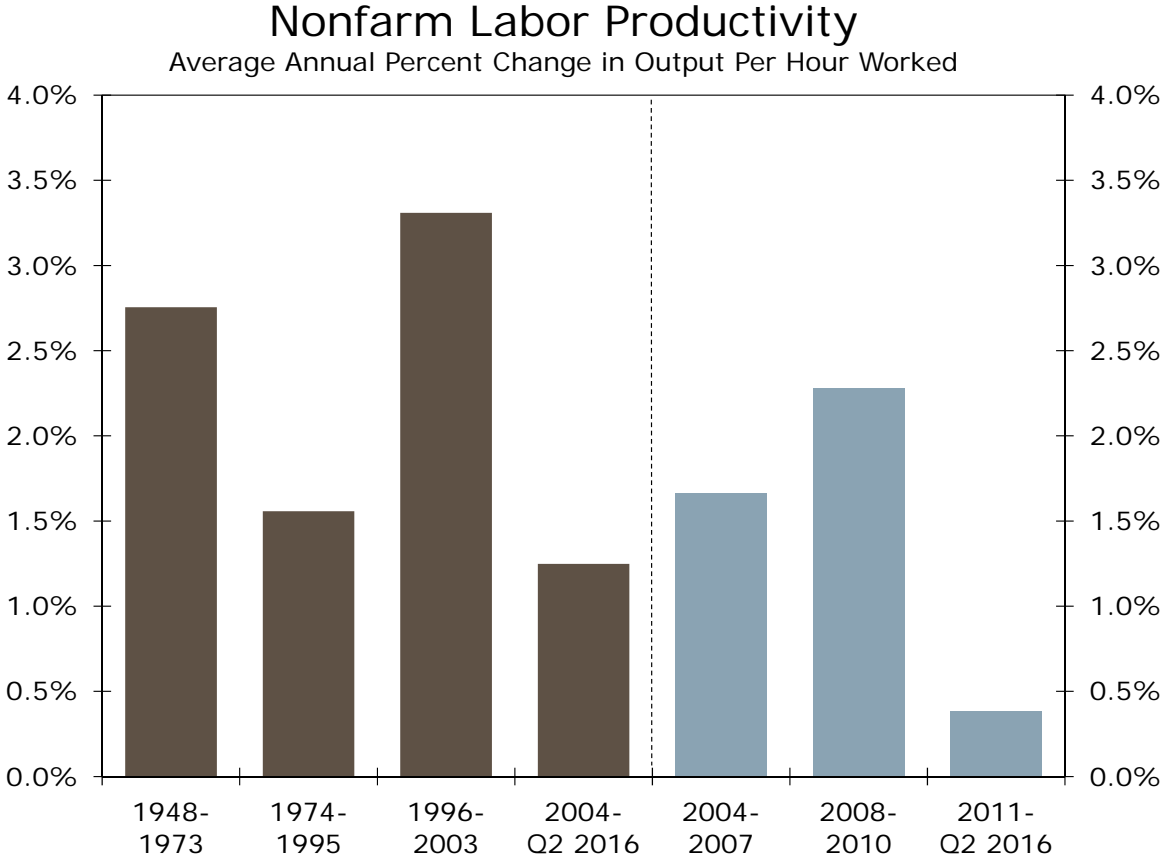
The probability of recession in the next six months is very low, according to our model



Source: Wells Fargo Securities

Potential Growth—Little Help From Productivity

Productivity growth has downshifted over the past cycle

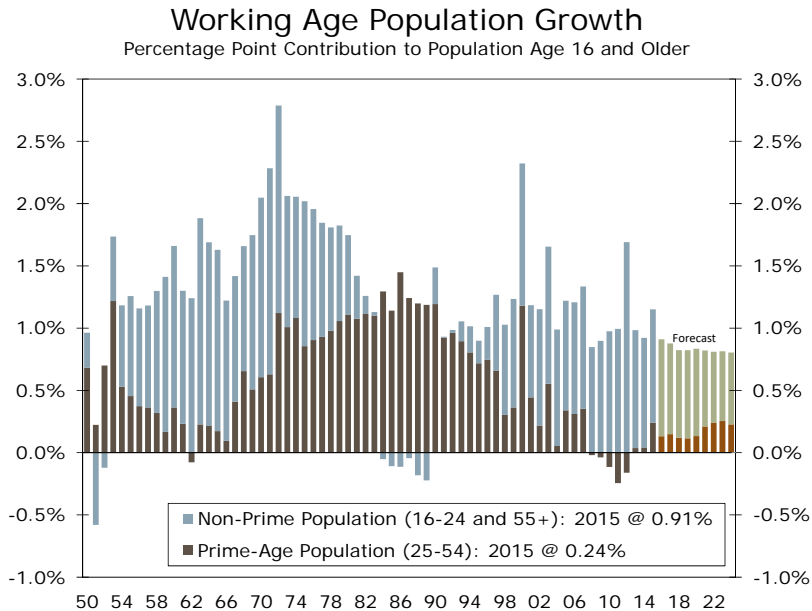


Source: U.S. Department of Labor and Wells Fargo Securities

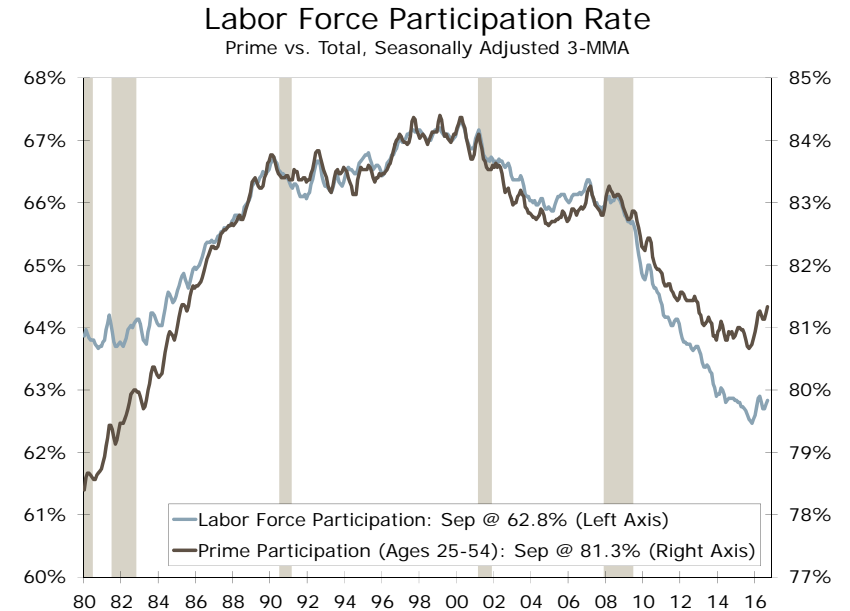
Potential Growth—Little Help from Labor

Labor supply growth is slowing, particularly for prime-age workers. The share of marginally attached workers remains elevated.

Working Age Population



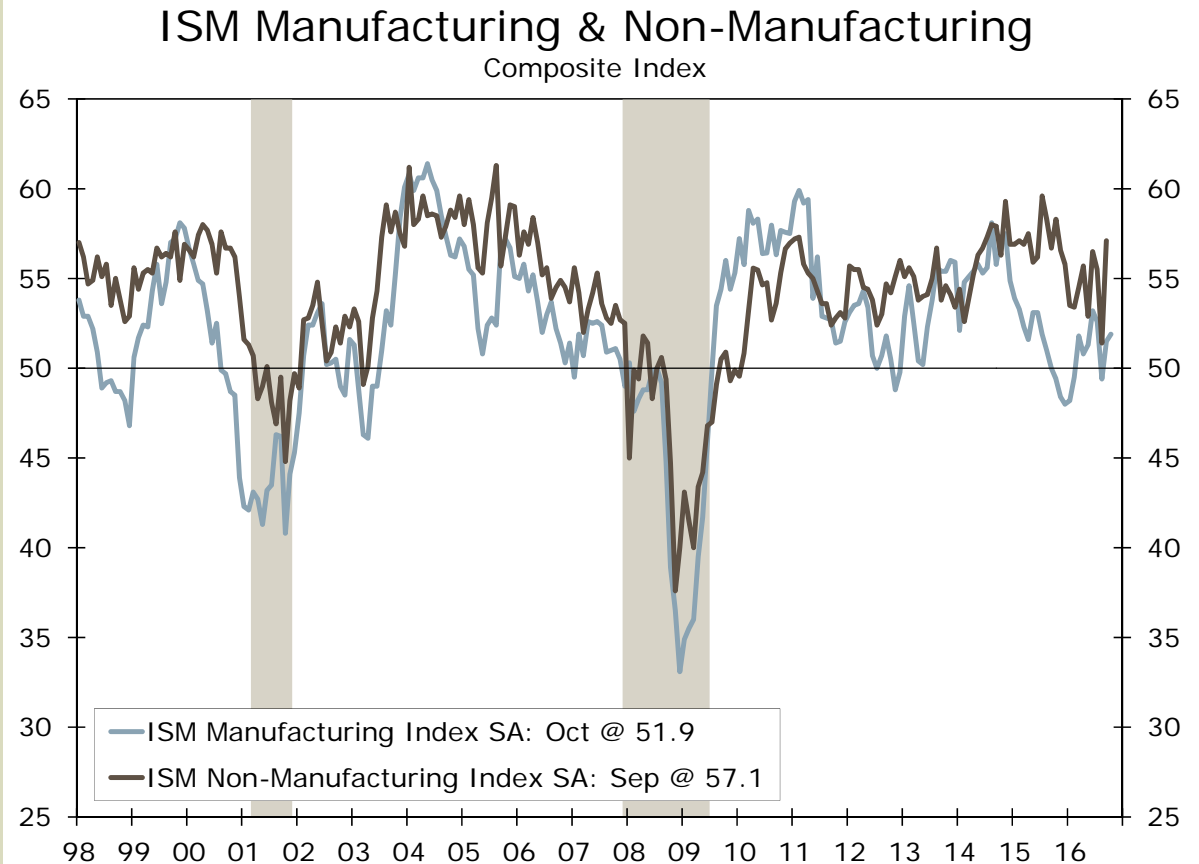
Labor Force Participation



Source: U.S. Department of Labor and Wells Fargo Securities

Manufacturing & Services: A Divide

Indices on business activity suggest continued growth for 2016. Services have been a bulwark, while manufacturing has been impacted by the dollar and collapse in commodities.

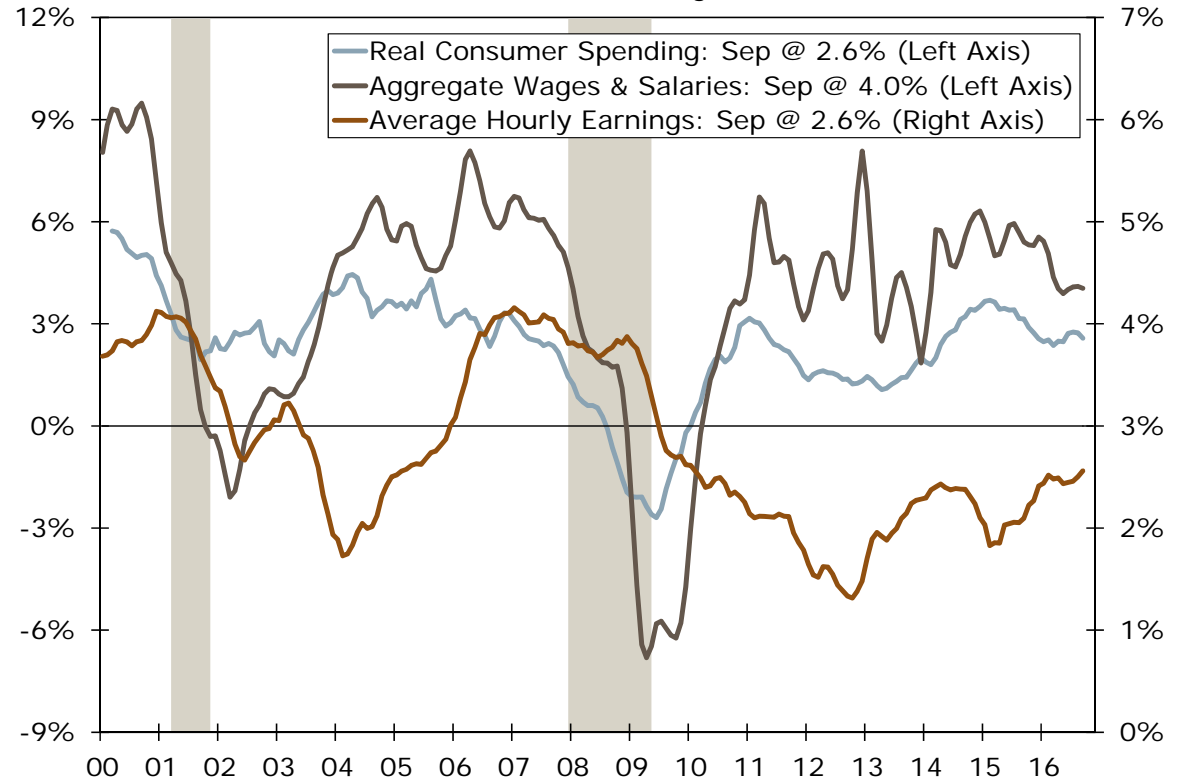


Source: Institute for Supply Management and Wells Fargo Securities

Total income from wages & salaries is best associated with consumer spending—not average hourly earnings alone

Labor Income and Consumer Spending

Year-over-Year Percent Change of 3-MMA

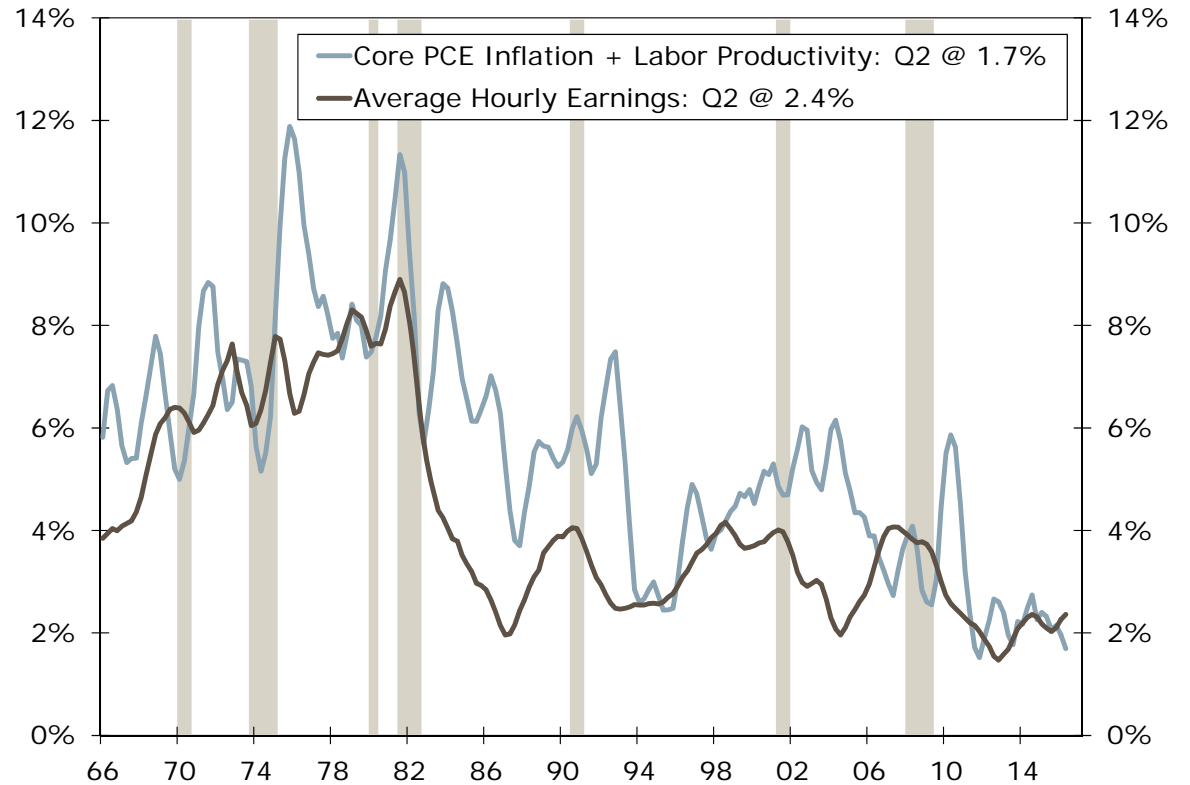


Source: U.S. Department of Labor, U.S. Department of Commerce and Wells Fargo Securities

Low productivity growth will limit the pace of wage growth even as the labor market tightens

Fundamentals of Average Hourly Earnings

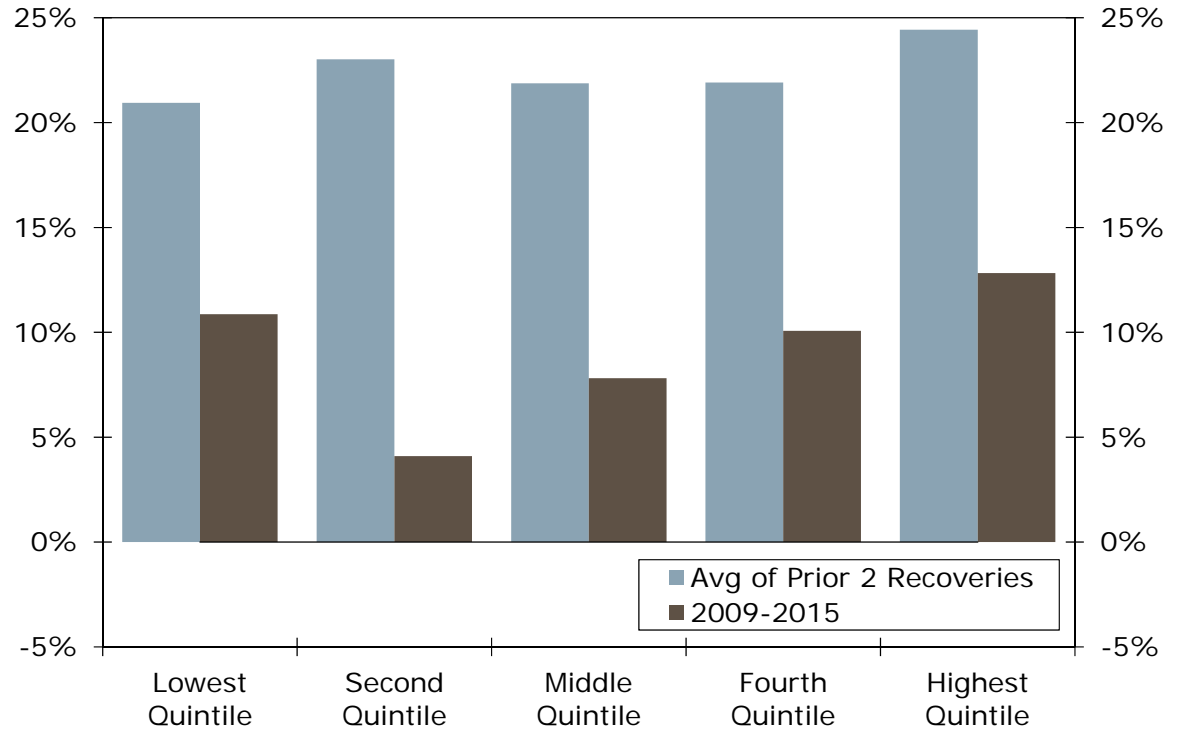
Year-over-Year Percent Change of Four-Quarter Moving Average



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

Income growth has finally begun to turn around but still lags prior recoveries

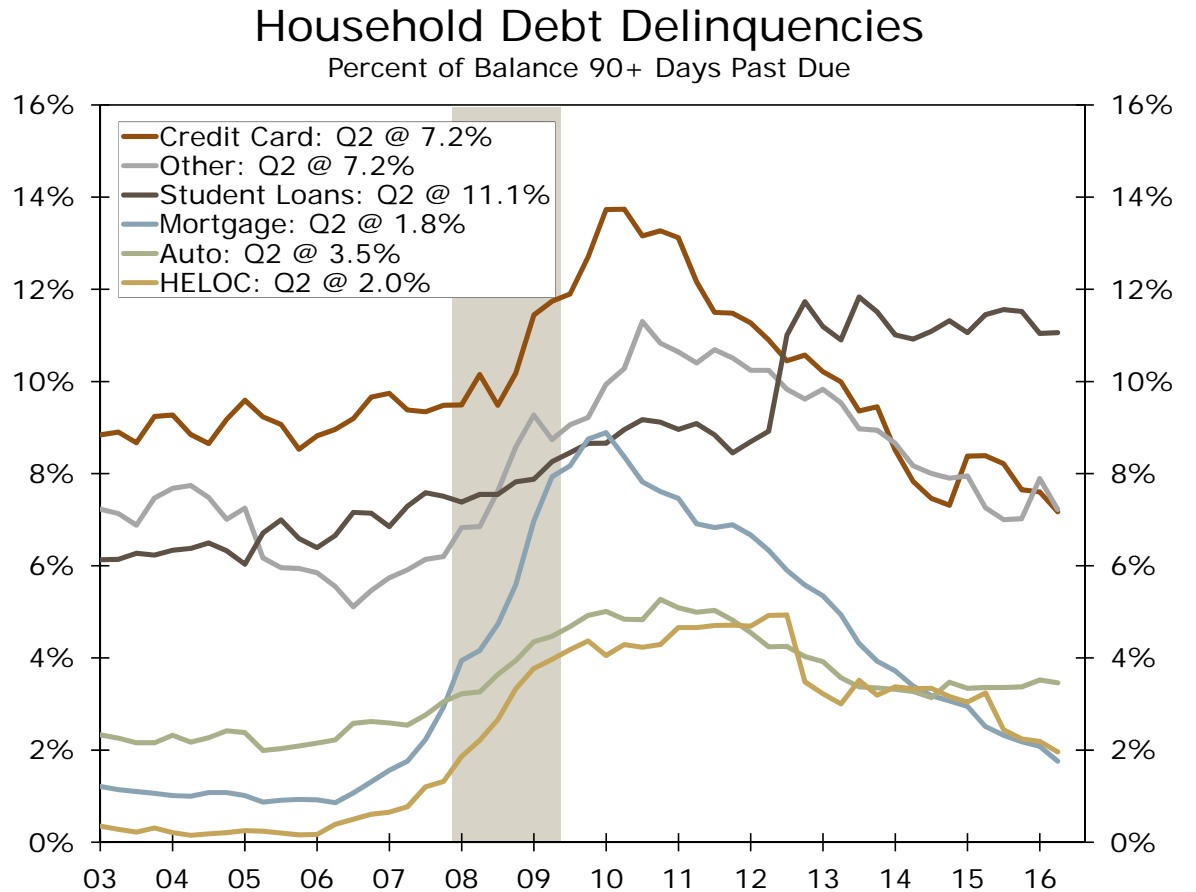
Income Growth During Economic Recoveries
Percent Change 6 Years After Recession End, Before-Tax Income



Source: U.S. Department of Labor and Wells Fargo Securities

Household Debt Delinquencies: Student Loans the Exception

Tighter credit standards and a strengthening economy have helped to improve the credit position of households over the past few years—with the exception of student debt



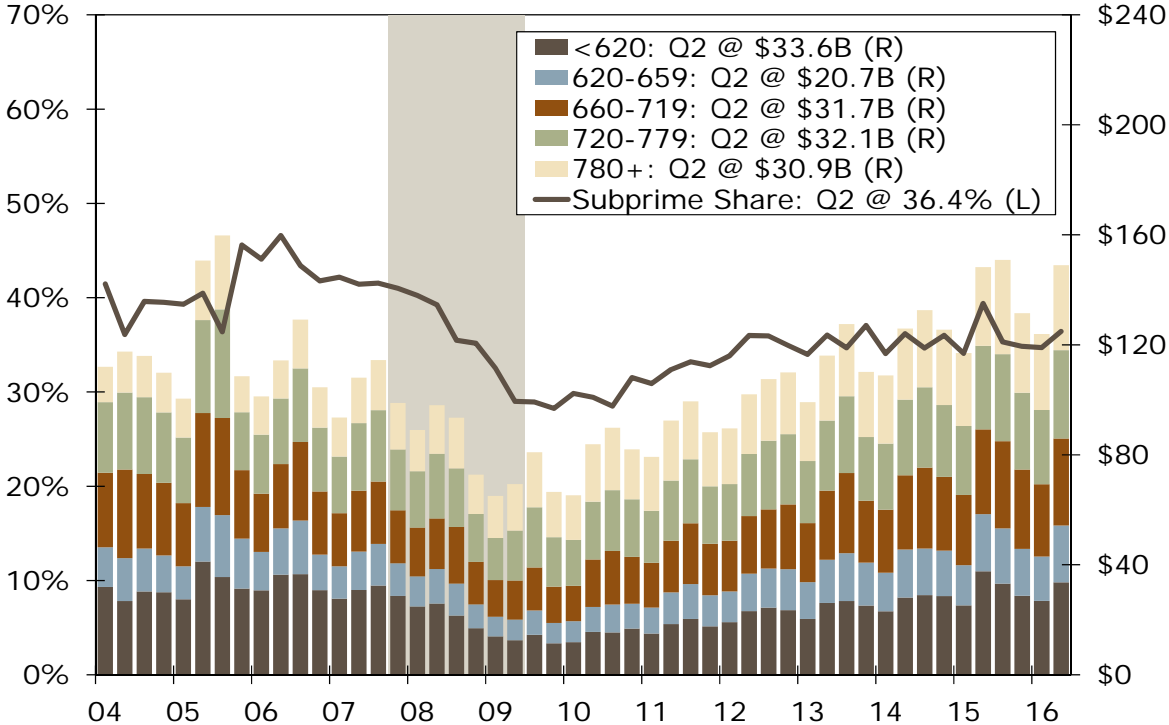
Source: FRBNY and Wells Fargo Securities

Auto Lending: Slippery Slope

The subprime share of auto sales is still below prerecession levels

Auto Loan Origination by Credit Score

Billions of Dollars

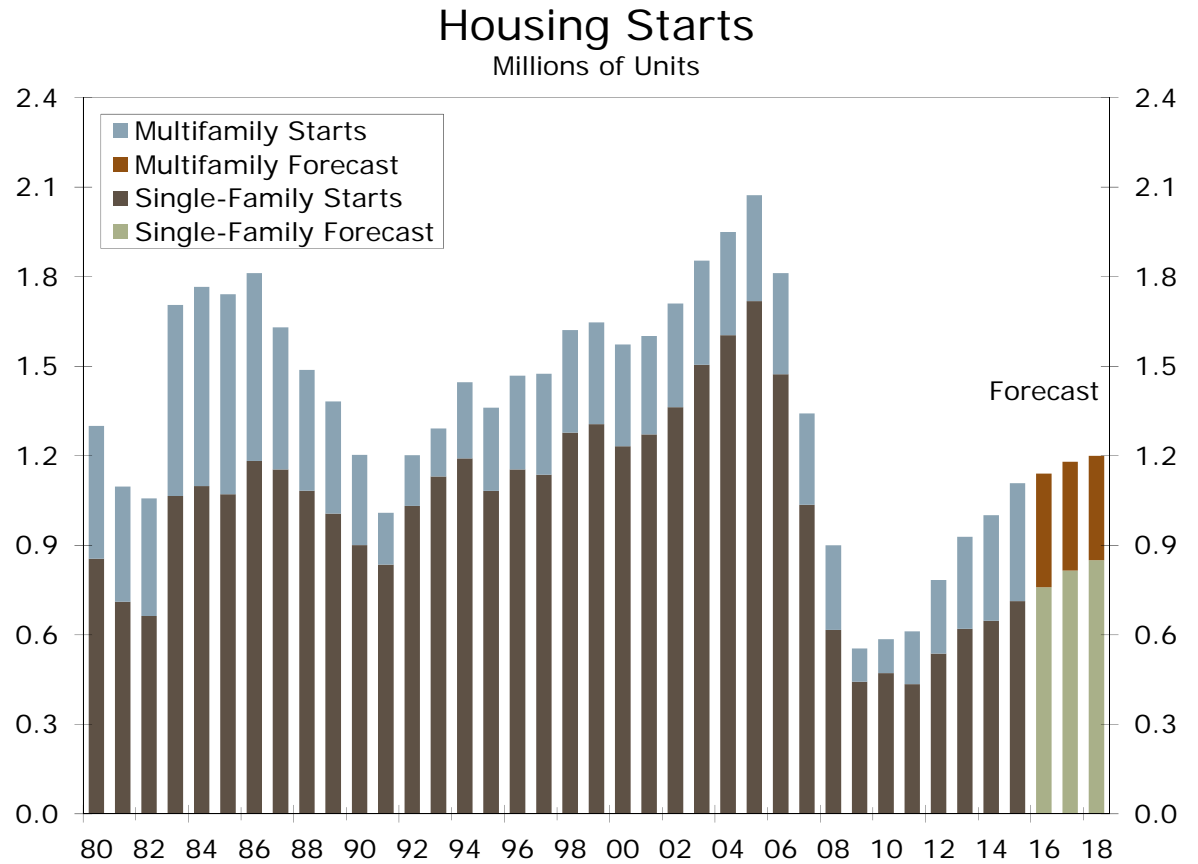


Source: FRBNY and Wells Fargo Securities

Housing: Pickup in Single-Family

Apartment demand remains exceptionally strong but supply is catching up with demand.

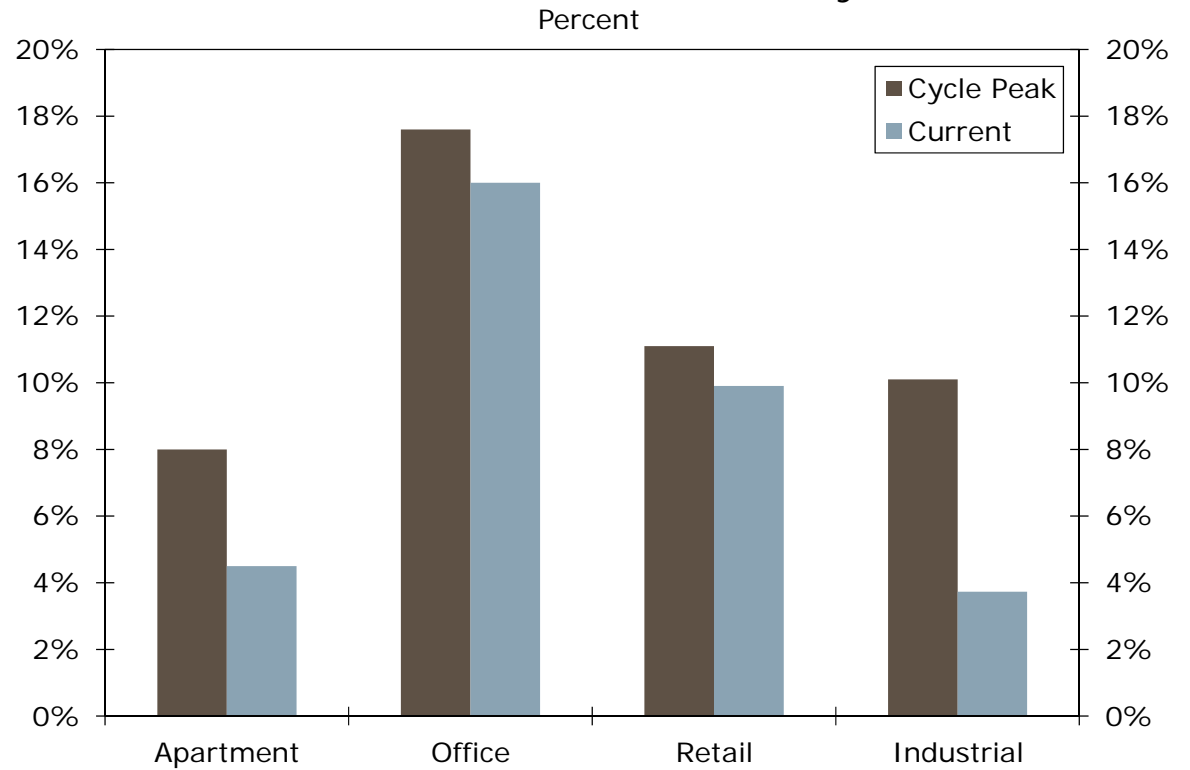
Single-family housing starts are beginning to ramp back up. Gains will be more modest than in past building cycles.



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

Apartment and industrial markets have seen the largest drops in vacancy rates.

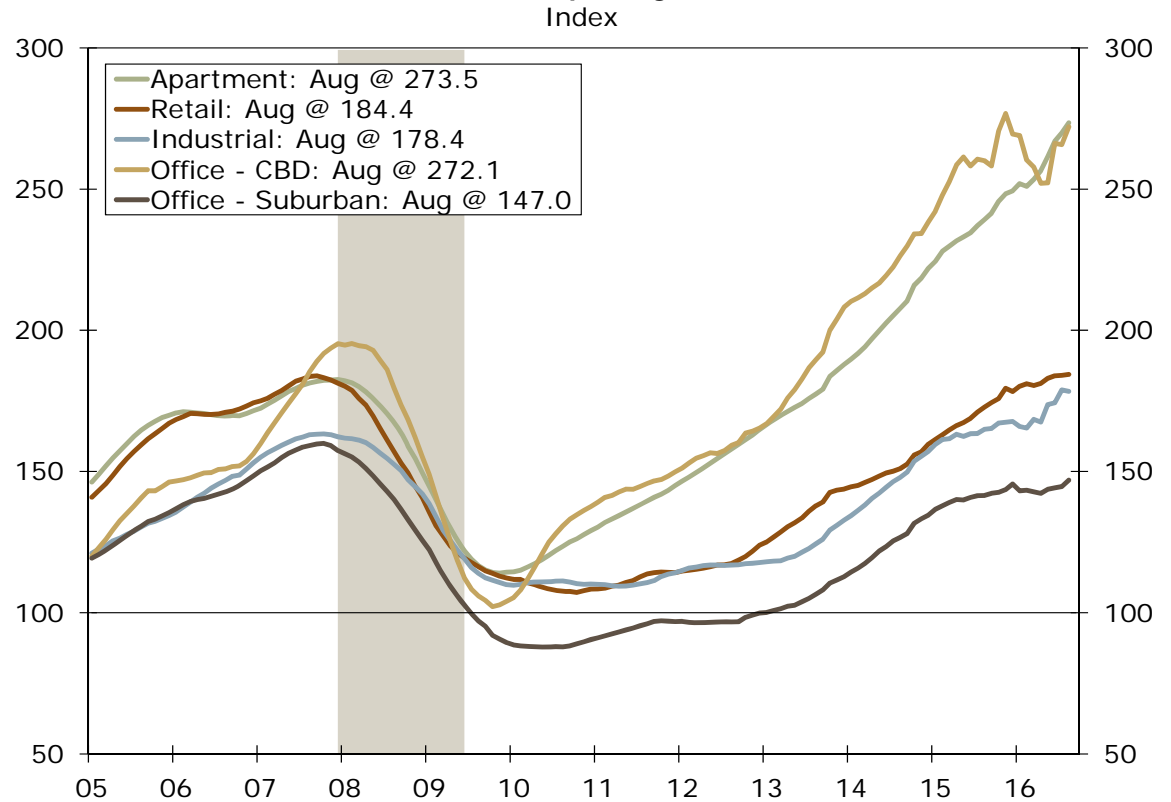
Commercial Real Estate Vacancy Rates



Source: Reis, Inc., CoStar Realty Information, Inc. and Wells Fargo Securities

High valuations have caught the Fed's attention

Commercial Property Price Index



Source: RCA and Wells Fargo Securities

Factory Orders

Mixed signals from the factory sector

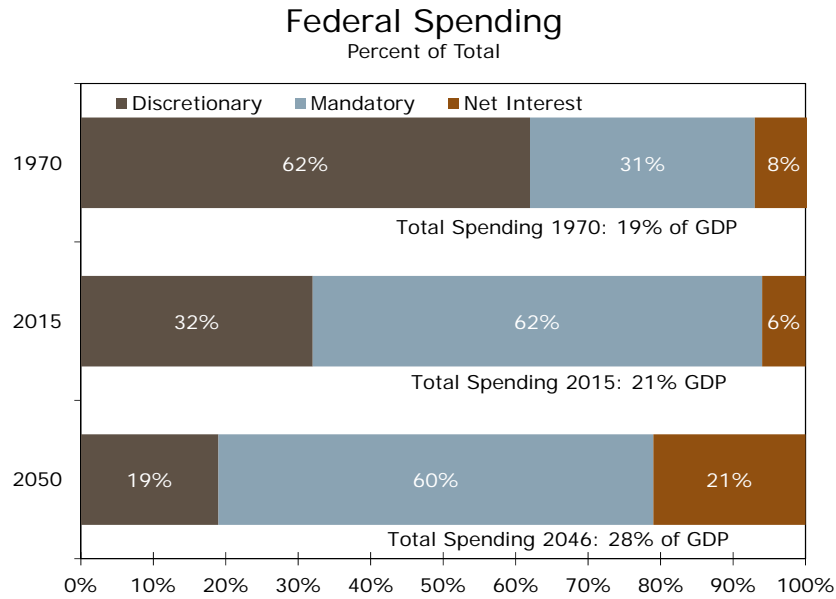
Factory Orders		
Aug 2016	3-Mo. Rate	Yr/Yr Change
Nondurable Goods	0.7%	(2.1%)
Durable Goods	(2.7%)	(1.1%)
Primary Metals	2.5%	(4.2%)
Fabricated Metals	4.2%	4.6%
Machinery	3.1%	(7.9%)
Computers & Electronics	2.4%	2.0%
Electrical Equipment	9.9%	(4.4%)
Motor Vehicles & Parts	7.4%	7.5%
Nondefense Aircraft	(91.6%)	(40.4%)
Shipments	(4.8%)	(5.9%)
Unfilled Orders	3.5%	(0.9%)
Inventories	3.5%	(0.9%)

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

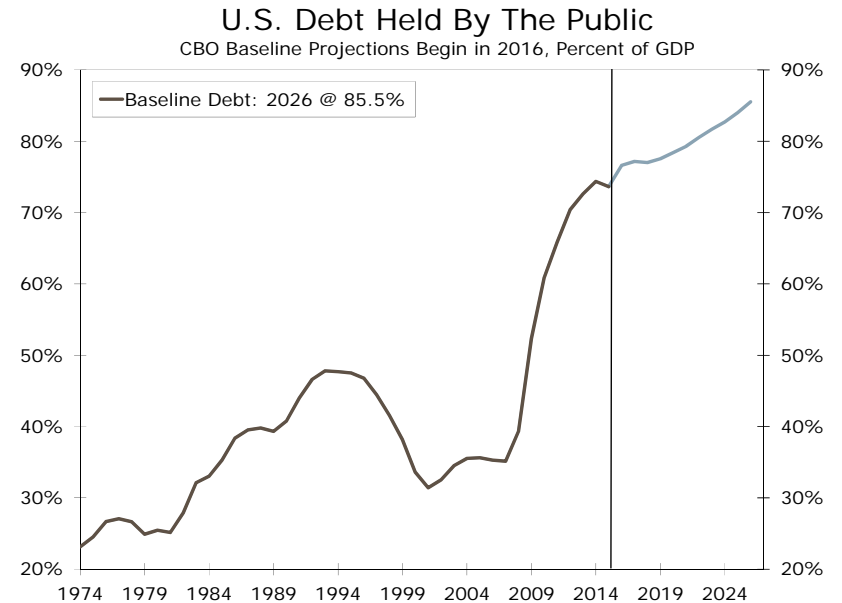
Federal Fiscal Policy

The composition of federal spending has shifted dramatically.
The CBO projects that the debt-to-GDP ratio will surpass 85 percent by 2026.

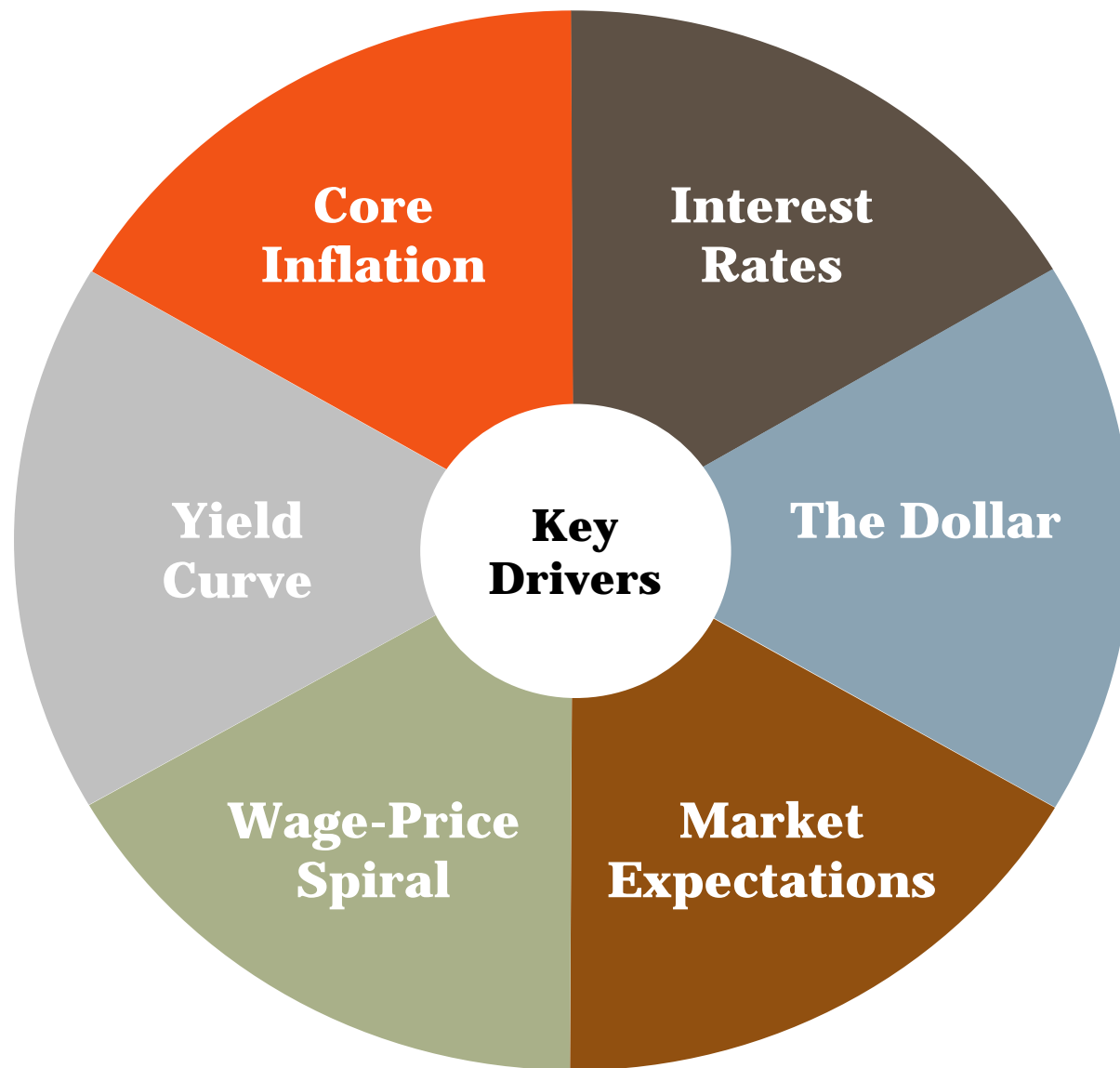
Composition of Federal Spending



Federal Debt Continues to Rise

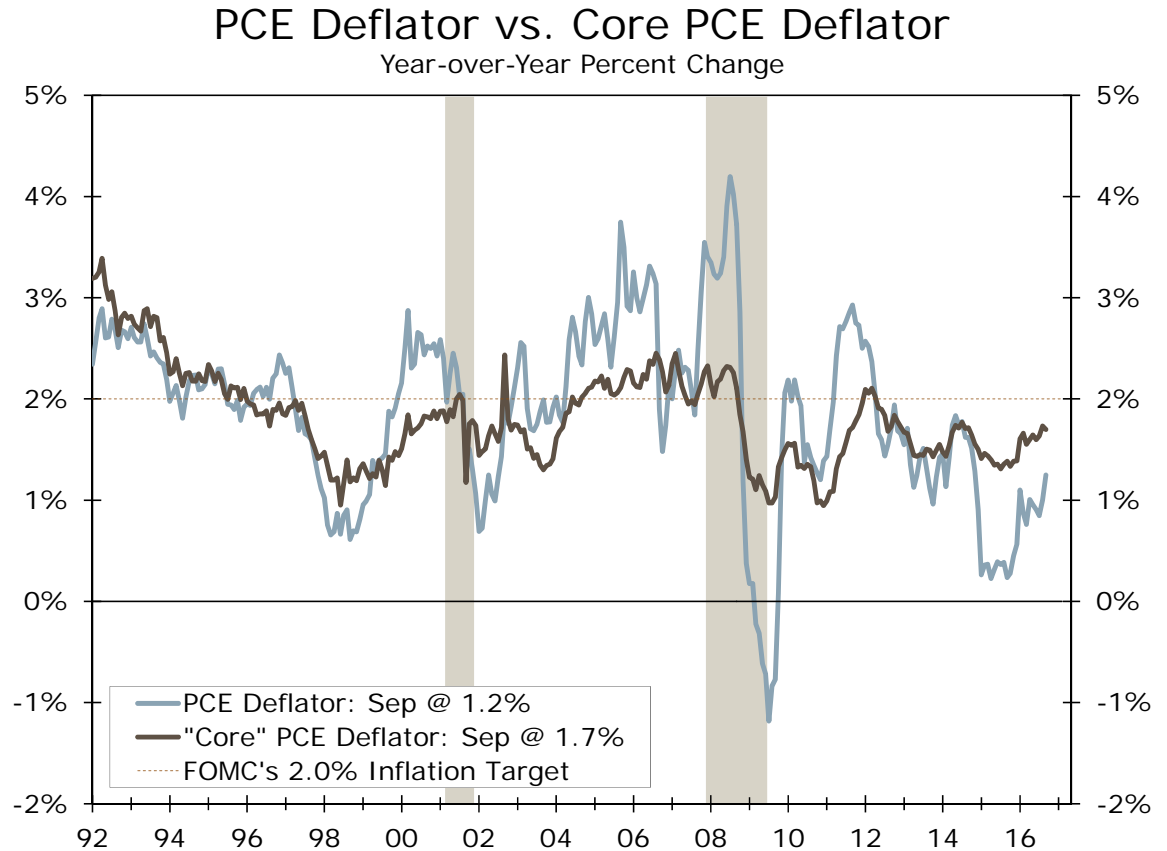


Source: Congressional Budget Office and Wells Fargo Securities



Inflation: Rising—But Less Than Market/FOMC Expect

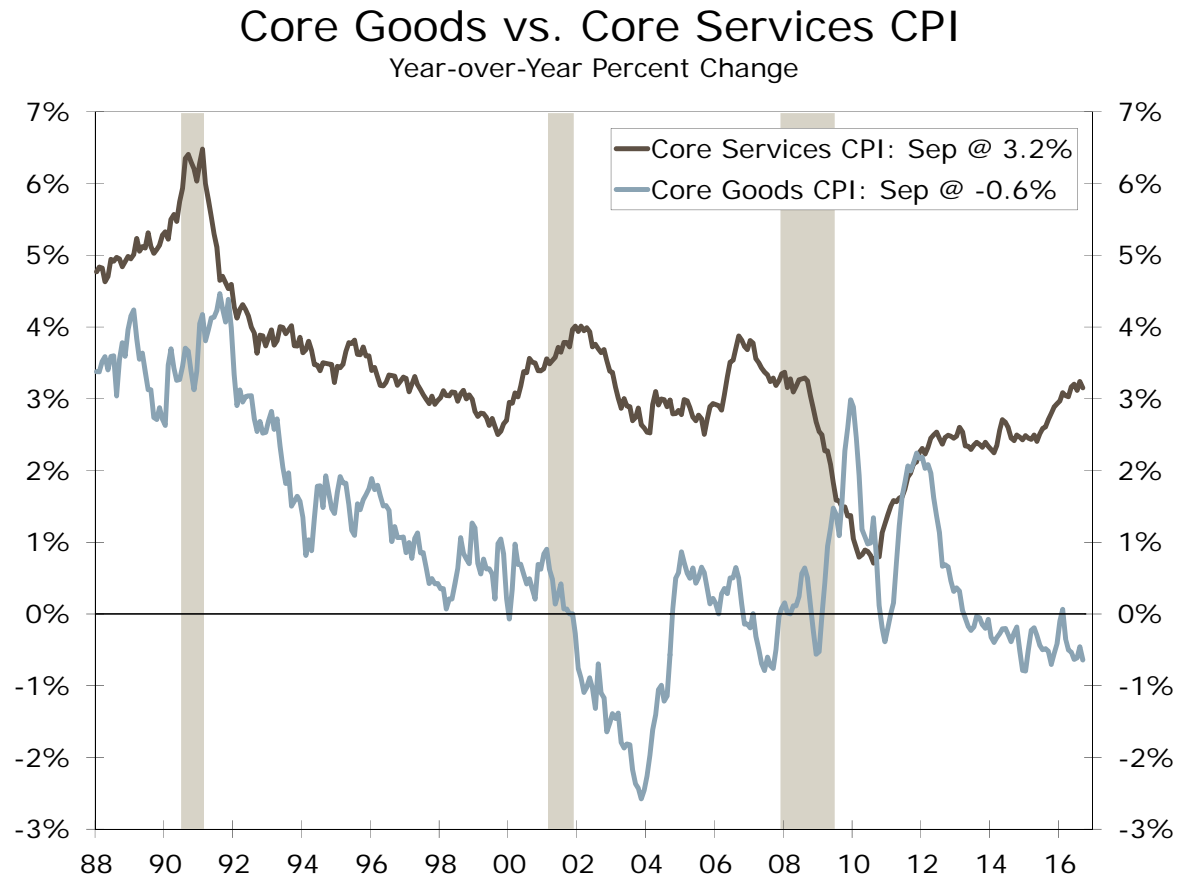
Inflation remains historically low, but we expect to see a pickup in coming quarters – average less than 2% since 1991



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

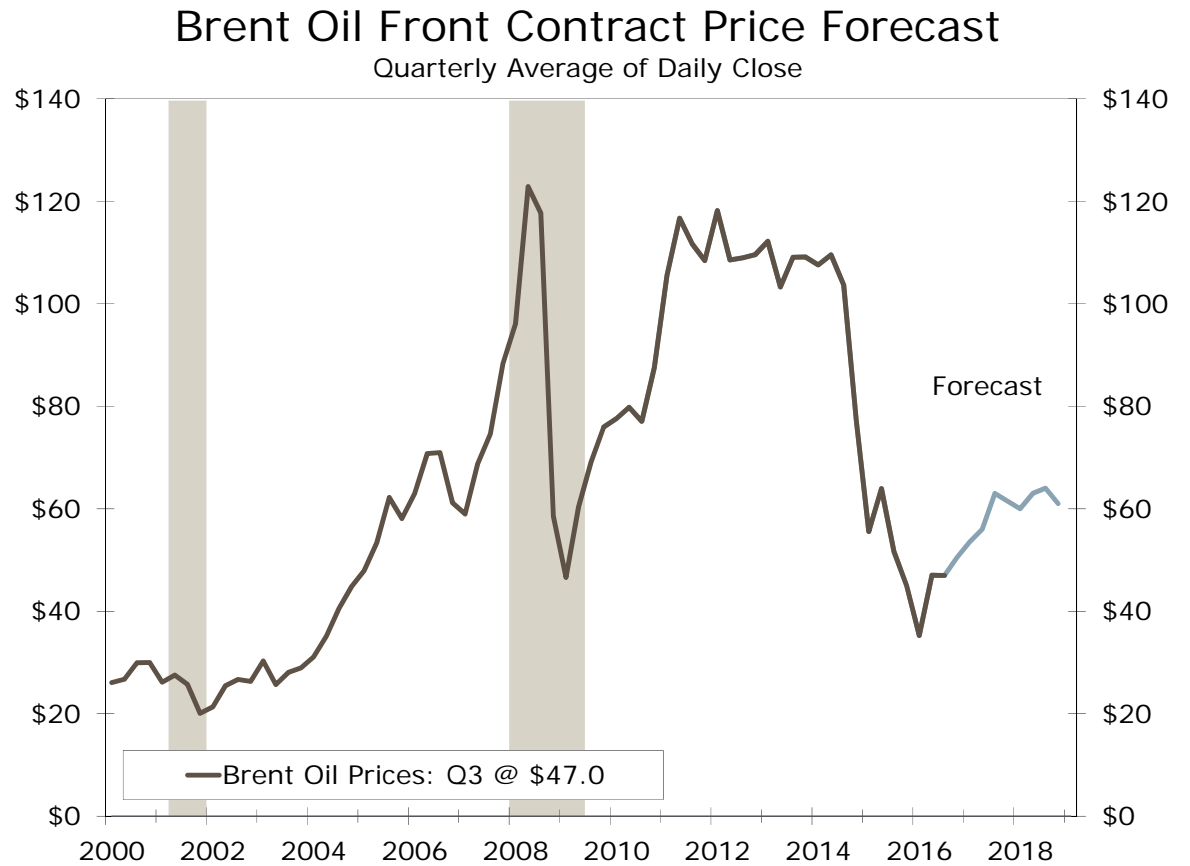
Inflation: A Divide in Goods vs. Services

Inflation for services has been much firmer than for commodities



Source: U.S. Department of Labor and Wells Fargo Securities

We expect a moderate rebound in energy prices over time



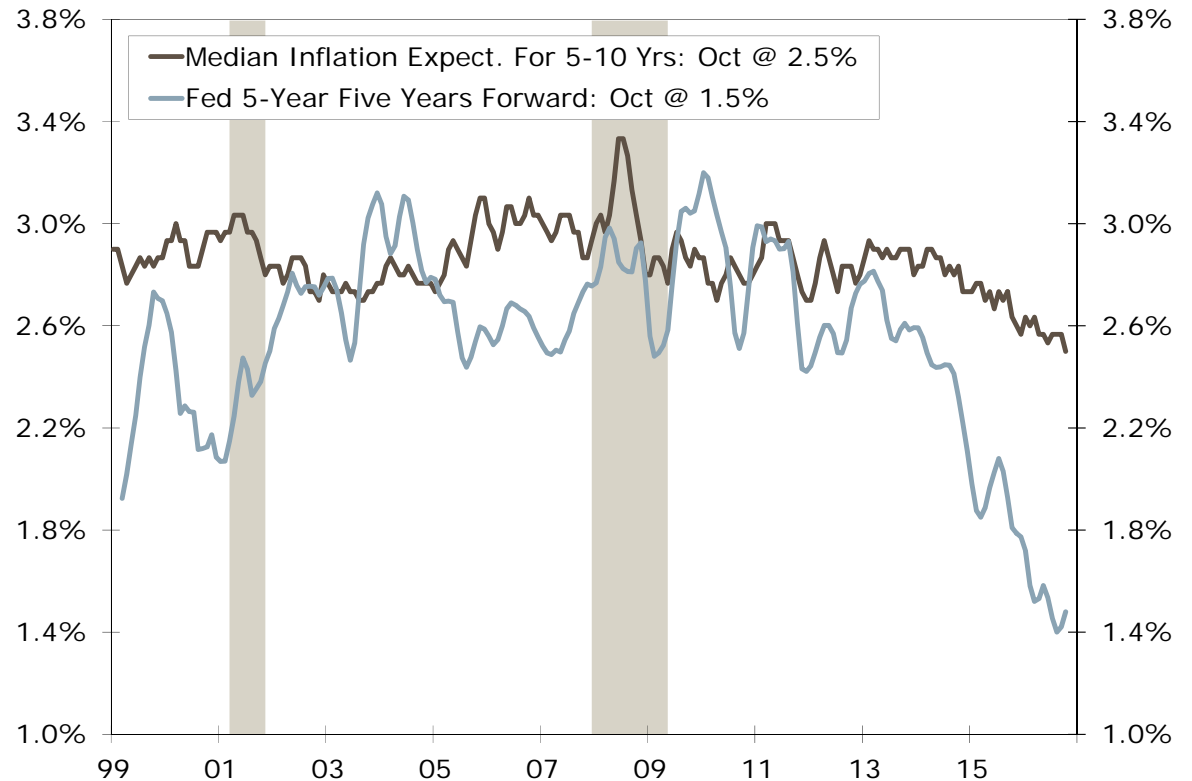
Source: IHS Global Insight and Wells Fargo Securities

Inflation Expectations

Long-term inflation expectations have fallen alongside oil, keeping some FOMC members worried about the future path of inflation

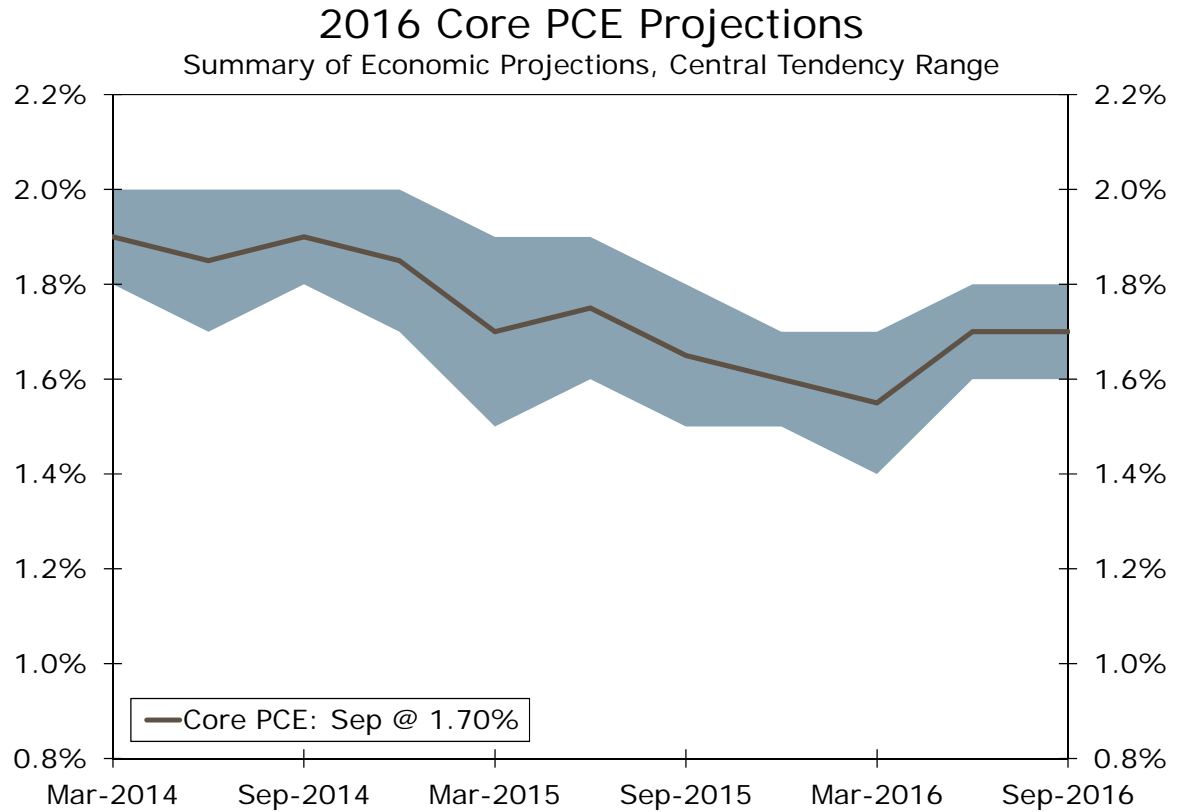
Med. Inflation Expectations 5 to 10-Years Ahead

U. of Mich. Consumer Sentiment, Breakeven Rate of Inflation, 3-MMA



Source: Federal Reserve Board, Bloomberg LP and Wells Fargo Securities

The FOMC's expectations for inflation in 2016 held steady in September



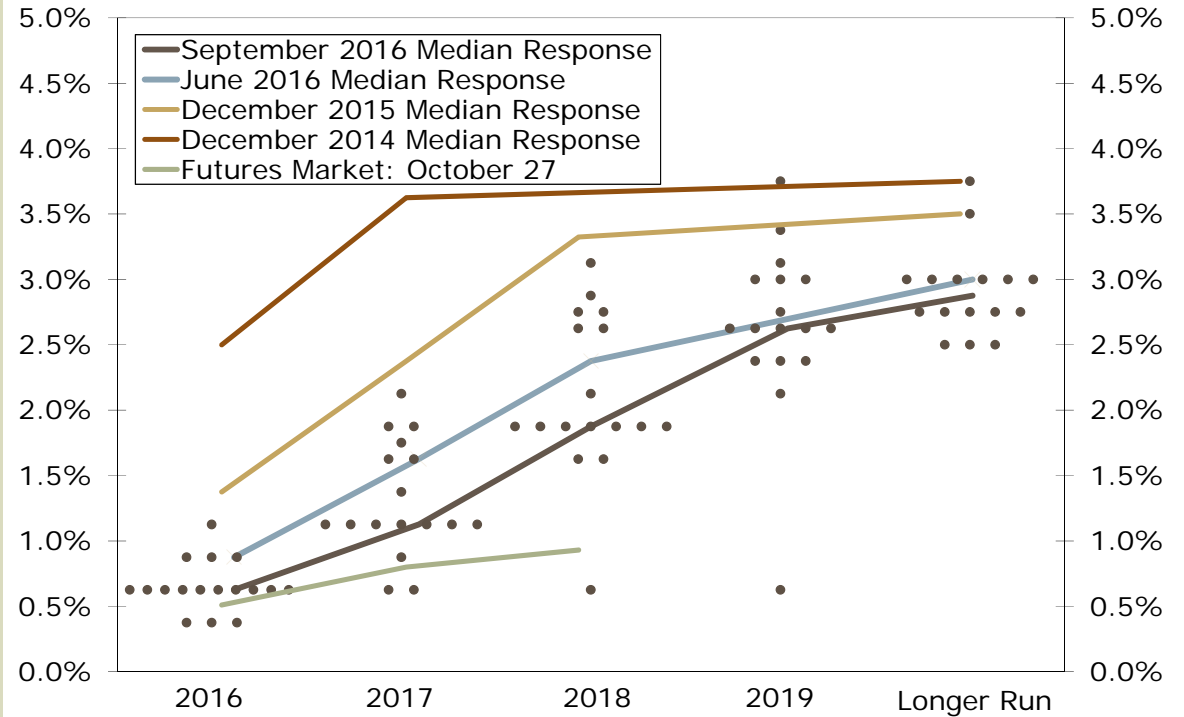
Source: Federal Reserve Board and Wells Fargo Securities

Pace of Policy Firming: We Say One Hike

Normalization is underway, but there remains wide variation between the market and Fed officials themselves about the appropriate path of the fed funds rate

Appropriate Pace of Policy Firming

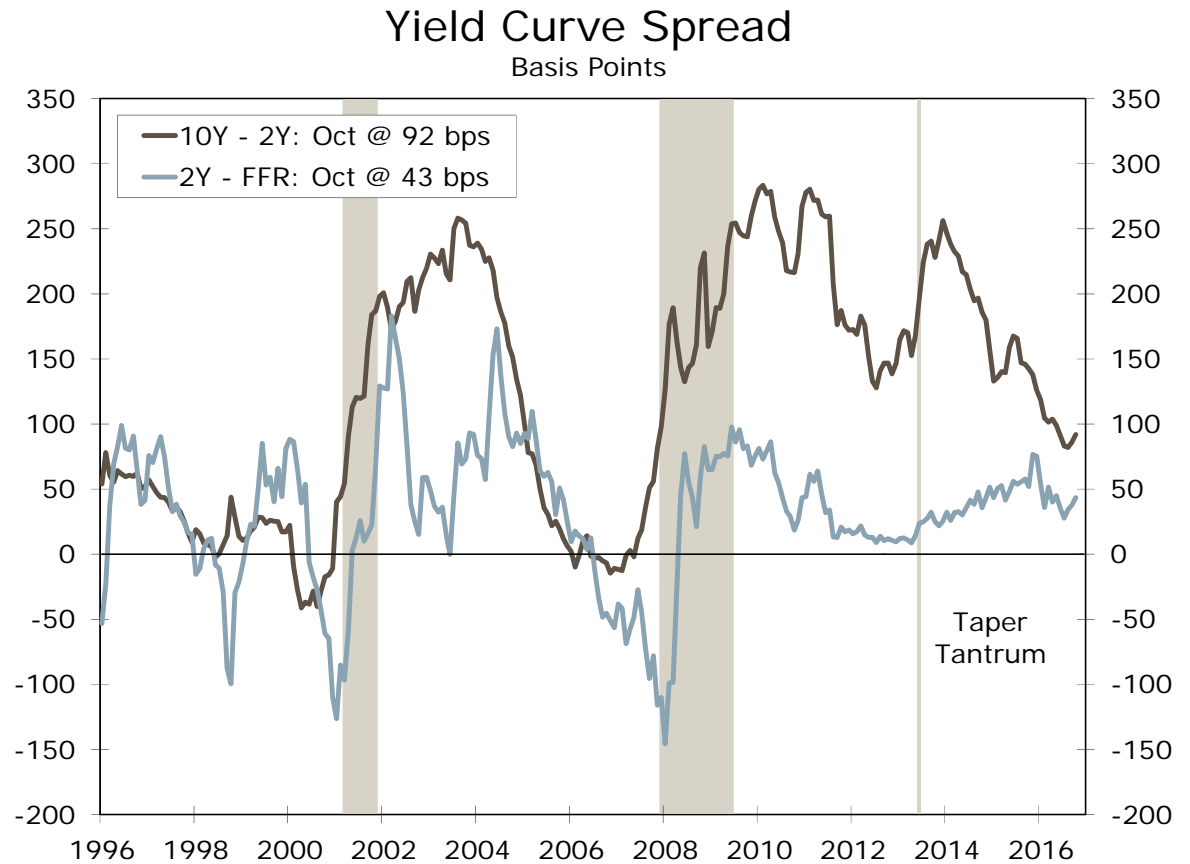
Target Federal Funds Rate at Year-End



Source: Federal Reserve Board, Bloomberg LP and Wells Fargo Securities

Yield Curve

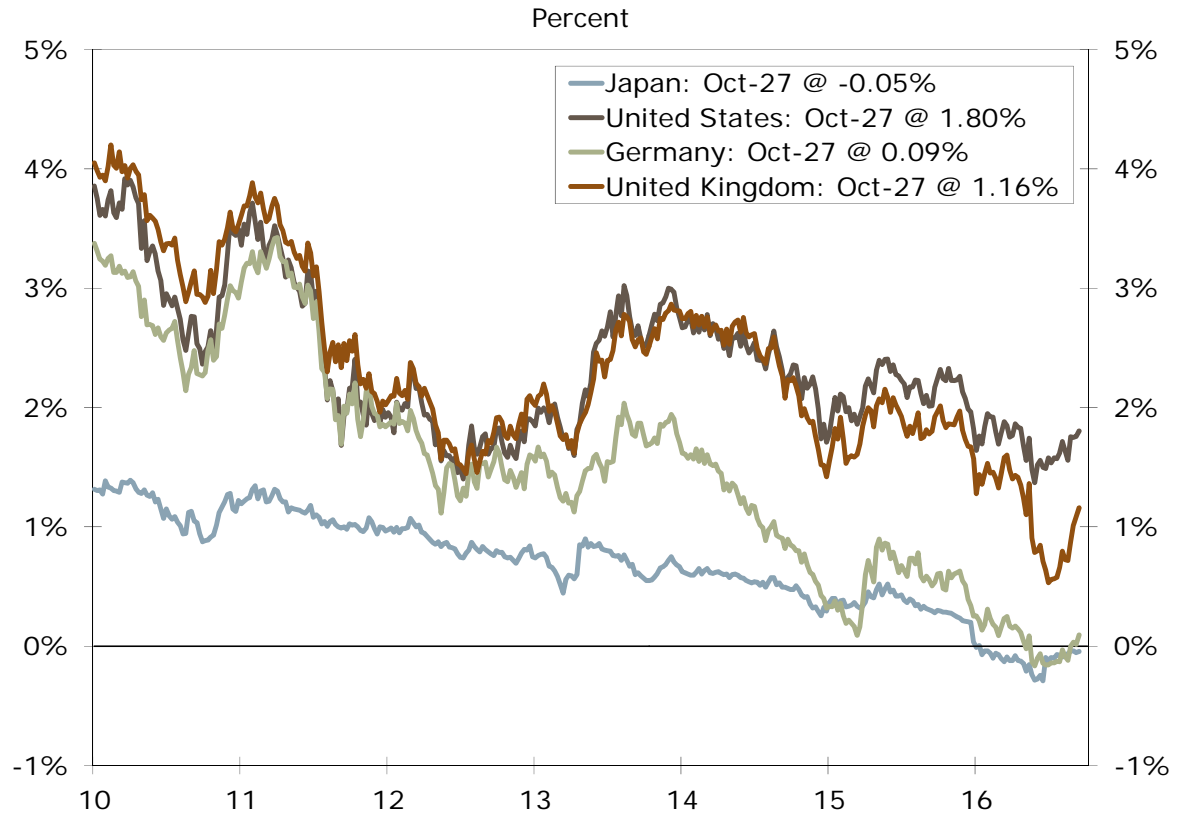
The yield curve has flattened since the Taper Tantrum in 2013



Source: Federal Reserve Board and Wells Fargo Securities

Government bond yields have declined across the globe

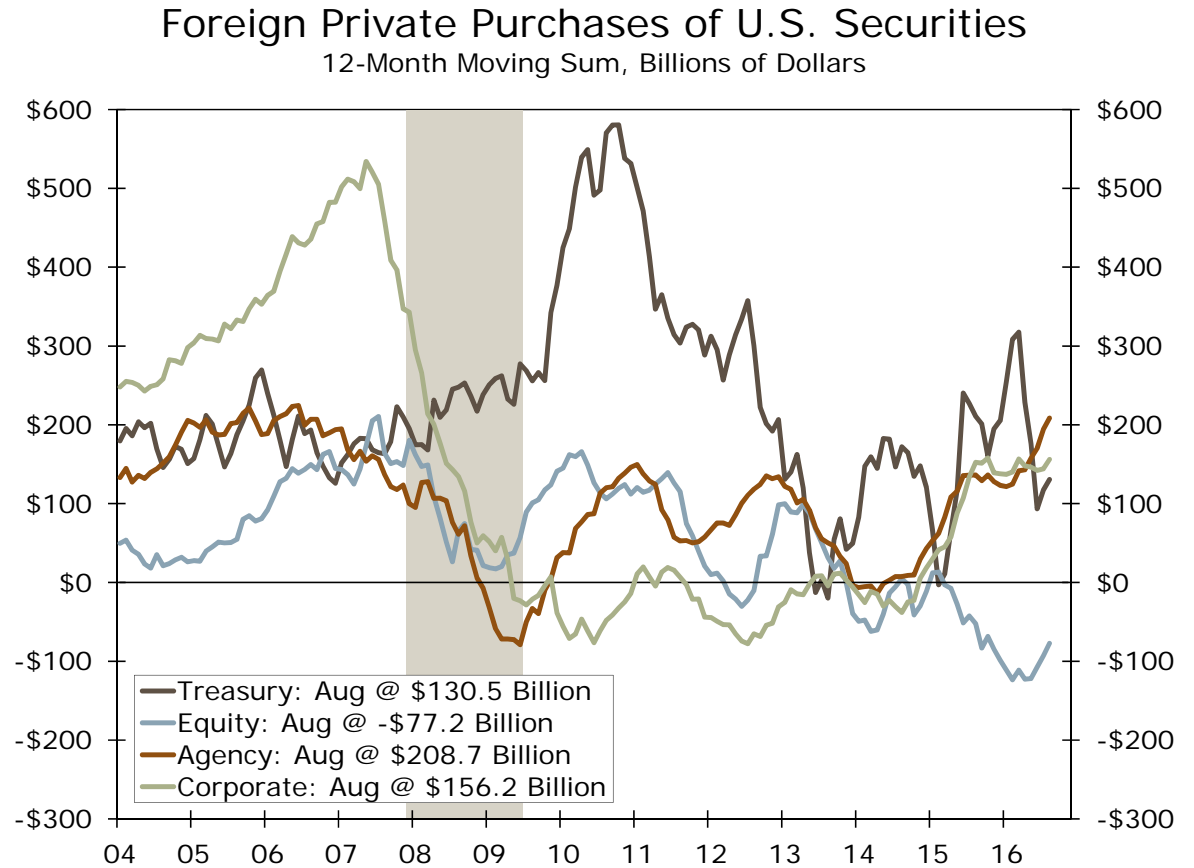
10-Year Government Bond Yields



Source: Federal Reserve Board, IHS Global Insight and Wells Fargo Securities

Foreign Purchases of U.S. Securities: Still Solid

Capital flows and asset allocation by global investors play a strong role in rate determinations



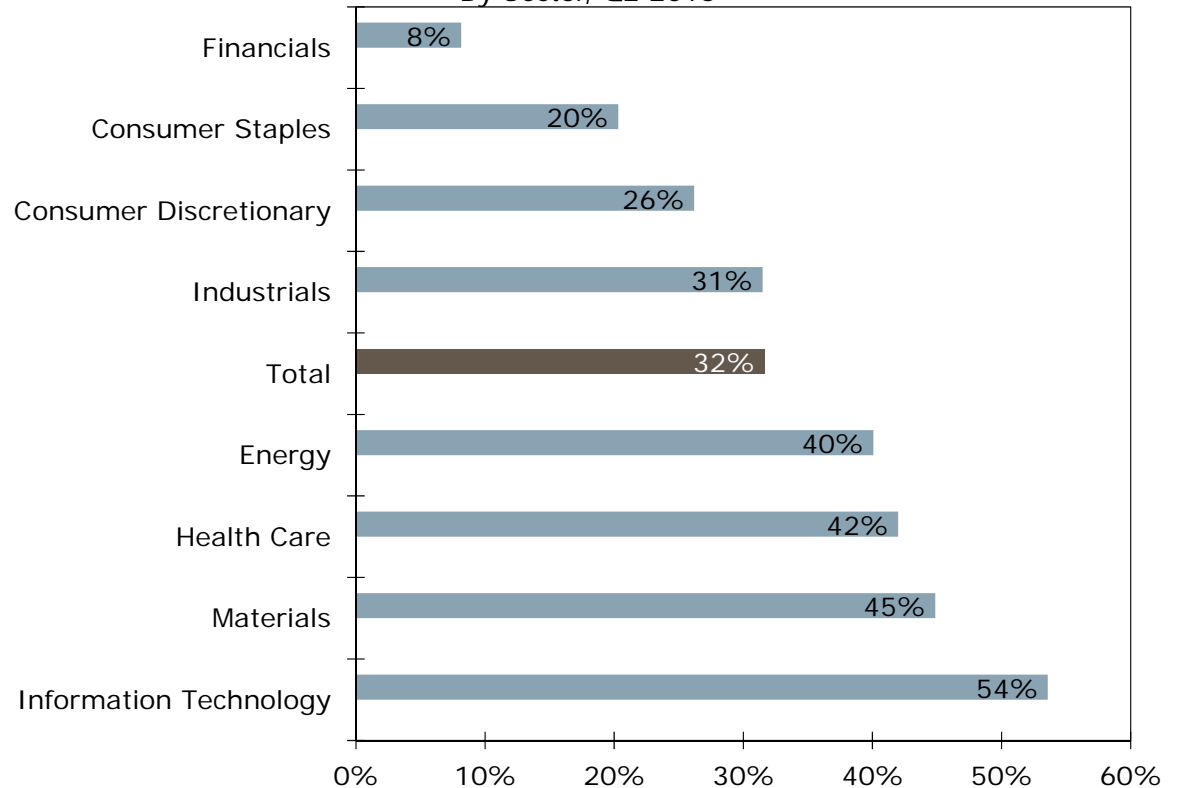
Source: U.S. Department of the Treasury and Wells Fargo Securities

S&P Revenues Earned Abroad

IT and Materials earn the highest share of their revenues abroad, making those industries the most at risk to the stronger dollar—Invoicing in dollars?

Percent of S&P Revenues Earned Abroad

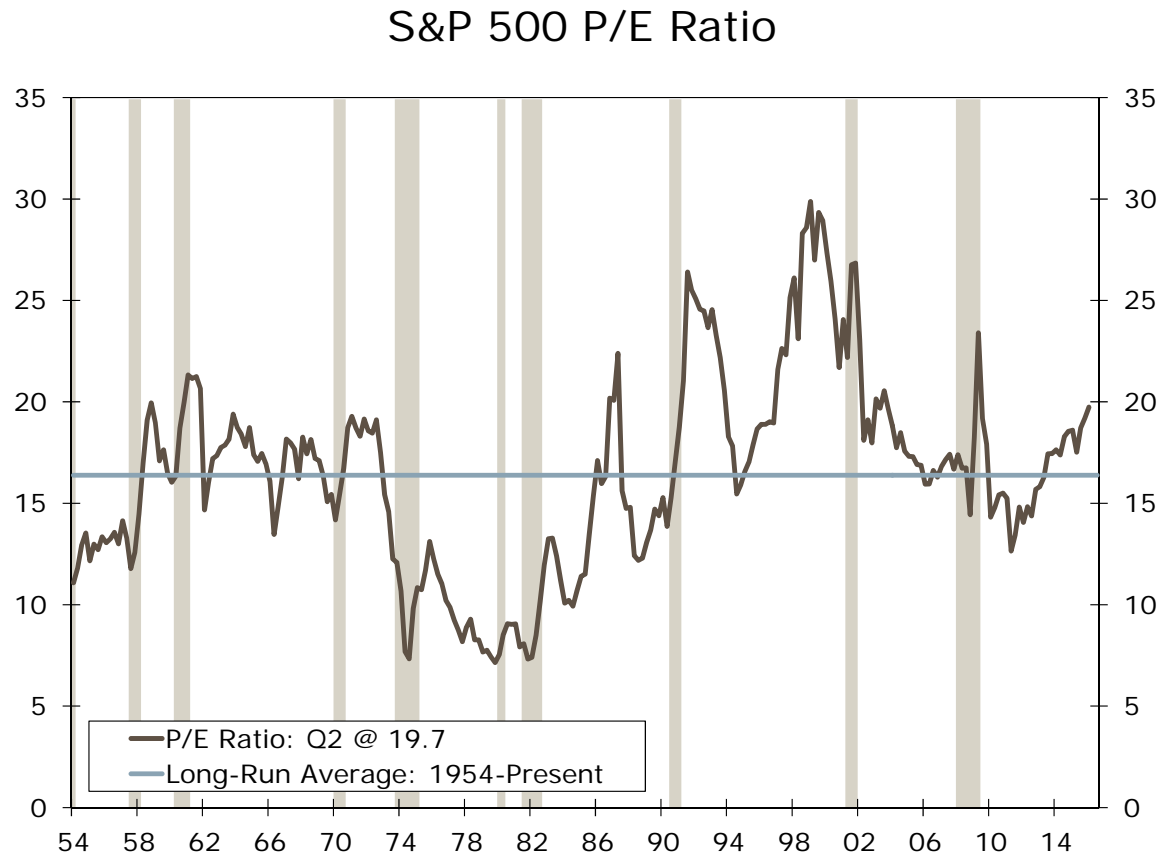
By Sector, Q2 2016



Source: Bloomberg LP and Wells Fargo Securities

S&P 500 P/E Ratio

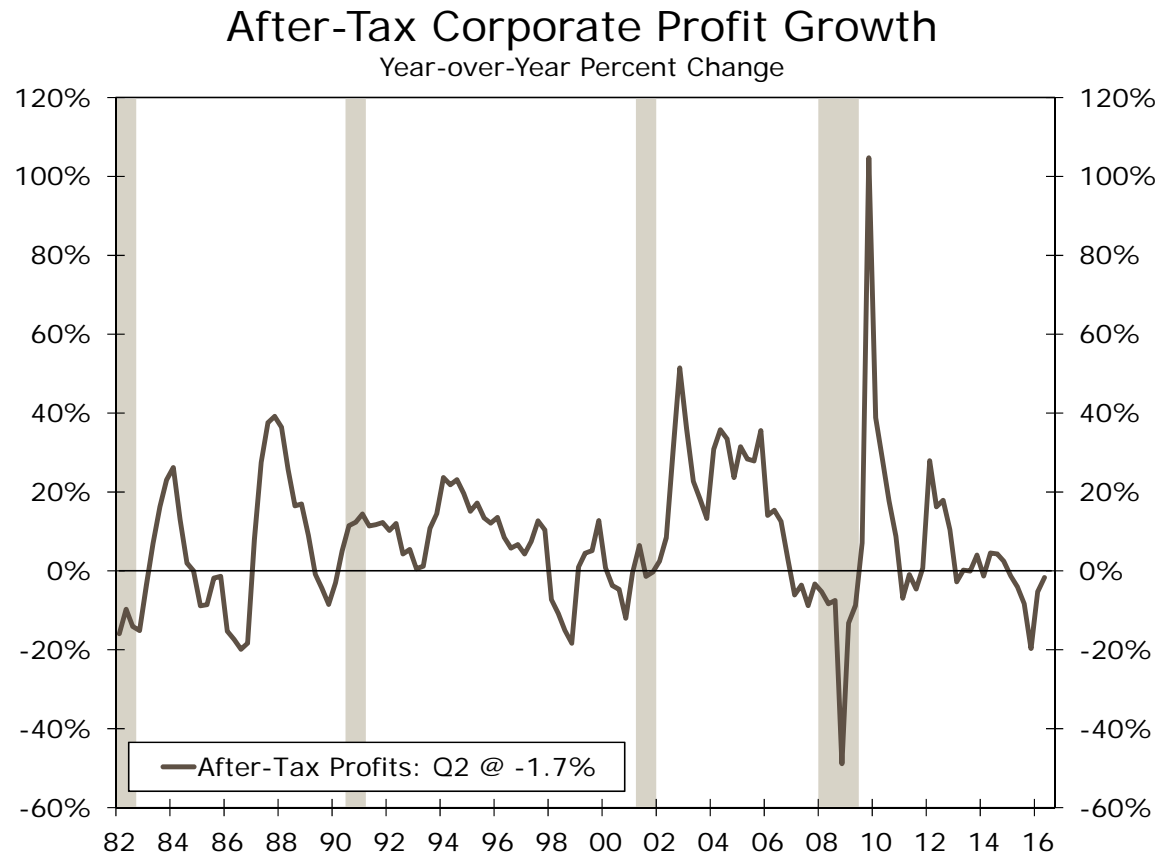
The S&P 500 P/E ratio has risen above its long-run average. Deviations from the average can be persistent



Source: Bloomberg LP and Wells Fargo Securities

Corporate Profit Growth

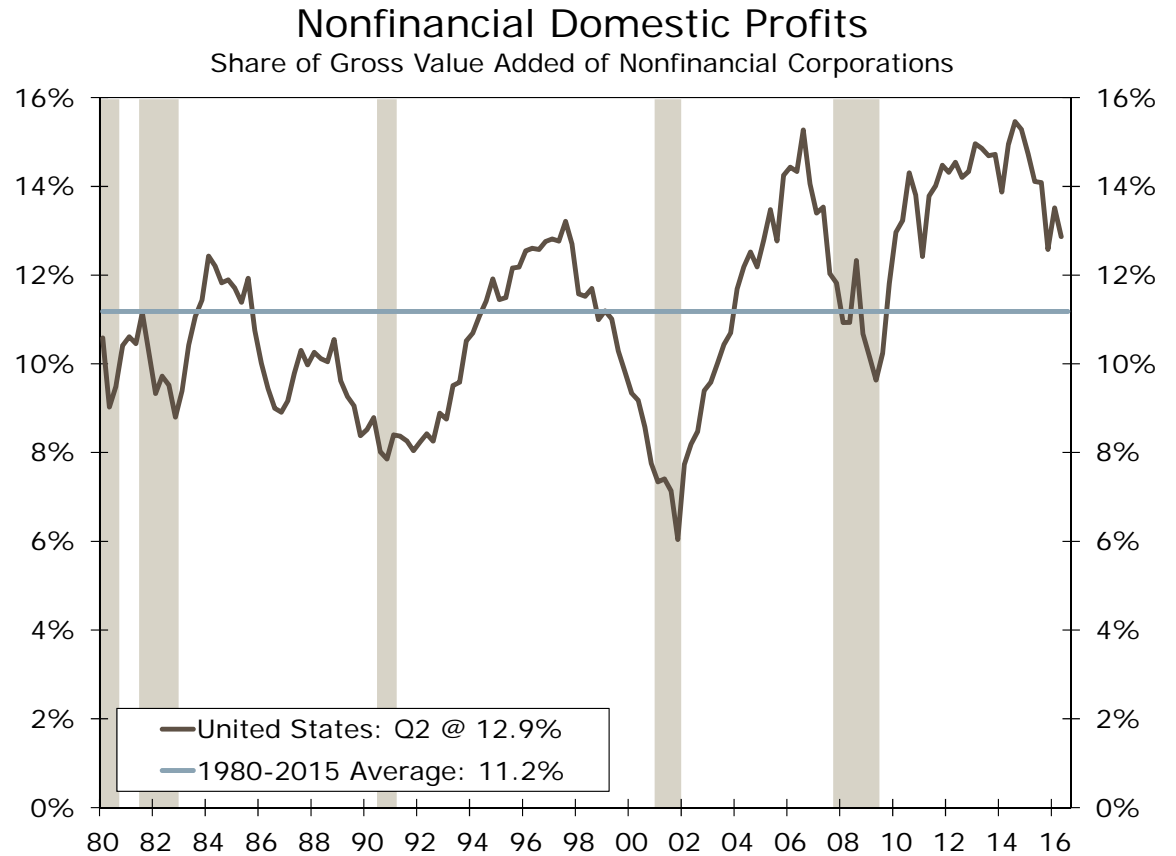
Corporate profit growth has slowed recently—typical mid- to late-cycle slowdown



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

Corporate Profits

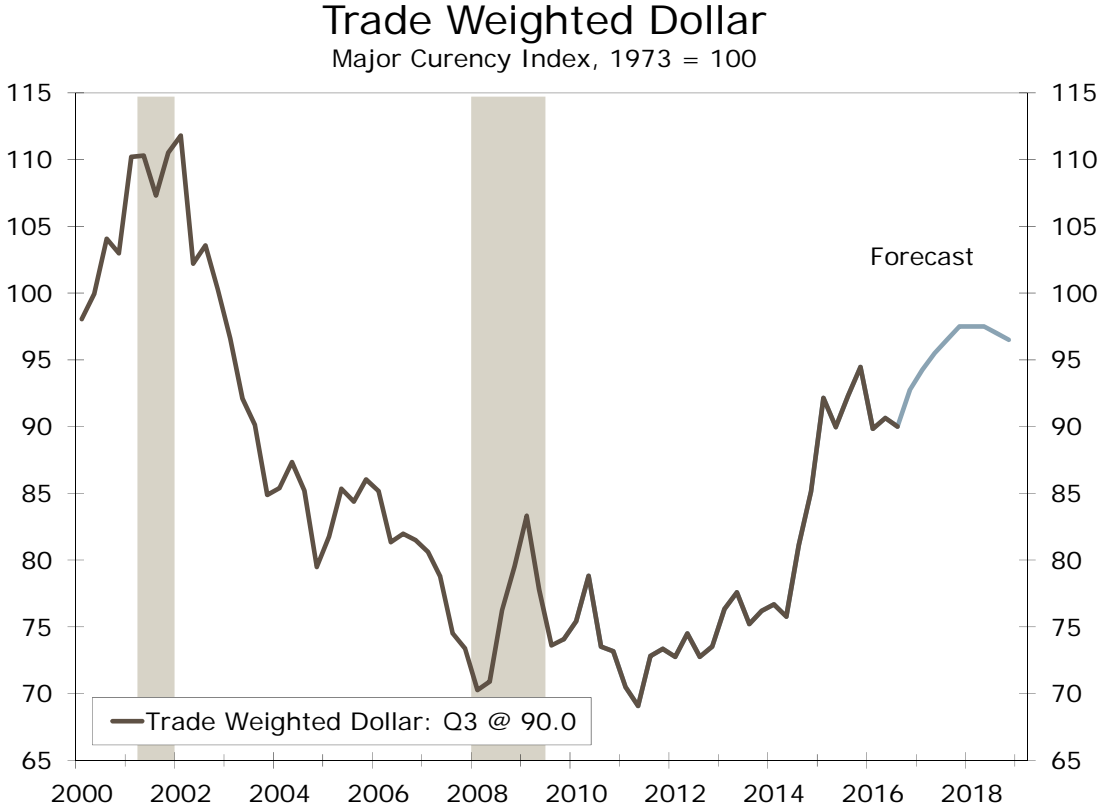
Corporate profits as a share of gross value added remains historically high but is now past its peak



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

Dollar Appreciation

Dollar appreciation should be more modest moving forward

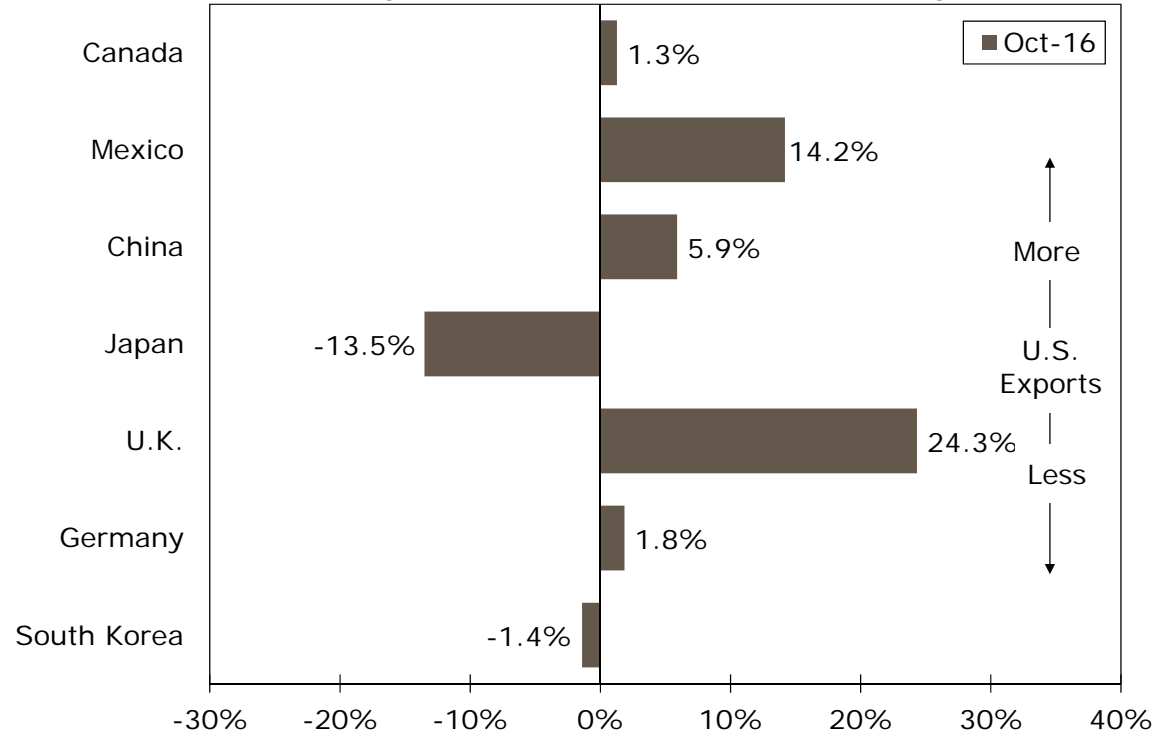


Source: Federal Reserve Board and Wells Fargo Securities

Dollar Appreciation

The dollar has appreciated versus most of our largest trading partners over the past year. That said, dollar appreciation has varied significantly by country.

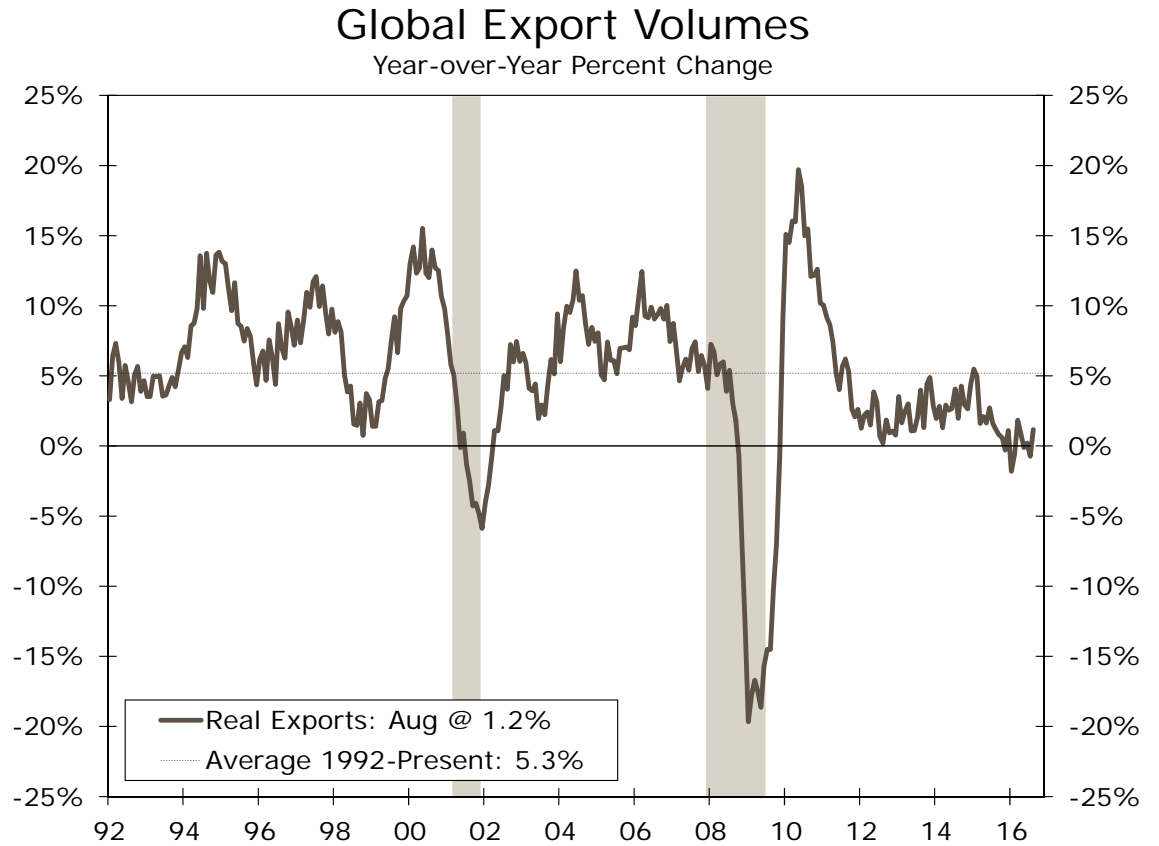
U.S. Dollar Appreciation vs. Top Export Destinations
Top 7 Trading Partners, Year-over-Year Percent Change



Source: Federal Reserve Board and Wells Fargo Securities

Global Exports

Global trade has clearly
downshifted



Source: IHS Global Insight and Wells Fargo Securities

Five Takeaways

Growth

- **Continued moderate growth led by domestic consumer and housing**
-

Inflation

- **Rising, but is the pace slow enough to delay Fed move?**
-

Interest Rates

- **Rising short rates, but flat long rates as capital flows favor the U.S.**
-

Dollar

- **Stronger dollar as rates and growth favor U.S.**
-

Profits

- **A late cycle slowdown**

U.S. Forecast

Wells Fargo U.S. Economic Forecast

	Actual				Forecast								Actual		Forecast		
	2016				2017				2018				2014	2015	2016	2017	2018
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q					
Real Gross Domestic Product ¹	0.8	1.4	2.9	1.5	2.1	2.3	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.6	1.5	2.1	2.1
Personal Consumption	1.6	4.3	2.1	2.7	2.3	2.6	2.5	2.2	2.5	2.5	2.5	2.5	2.9	3.2	2.6	2.5	2.5
Business Fixed Investment	-3.4	1.0	1.1	3.6	3.6	3.7	3.4	3.5	3.4	3.6	3.8	3.7	6.0	2.1	-0.4	3.1	3.5
Equipment	-9.5	-3.0	-2.7	3.2	3.0	2.7	2.2	2.2	2.1	2.2	2.3	2.2	5.4	3.5	-2.6	1.7	2.2
Intellectual Property Products	3.8	9.0	4.0	3.9	3.7	4.3	4.0	4.2	4.2	4.1	4.2	4.0	3.9	4.8	5.0	4.3	4.1
Structures	0.1	-2.1	5.4	5.0	5.0	5.2	5.3	5.6	6.0	6.2	6.4	6.5	10.3	-4.4	-3.2	4.7	5.7
Residential Construction	7.8	-7.8	-6.2	4.0	5.5	5.5	5.0	5.0	4.0	4.0	4.0	4.0	3.5	11.7	4.2	2.7	4.4
Government Purchases	1.6	-1.7	0.5	1.0	1.2	1.0	1.0	0.9	1.2	1.0	0.9	0.9	-0.9	1.8	0.8	0.8	1.0
Net Exports ²	0.0	0.2	0.8	-0.7	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.1	-0.7	-0.1	-0.3	-0.4
Inventories ²	-0.4	-1.2	0.6	0.1	0.2	0.1	0.1	0.2	0.0	0.0	0.0	0.0	-0.1	0.2	-0.4	0.1	0.1
Nonfarm Payroll Change ³	196	146	192	170	165	160	155	150	150	145	145	140	251	229	176	158	145
Unemployment Rate	4.9	4.9	4.9	4.9	4.8	4.7	4.7	4.6	4.5	4.5	4.4	4.4	6.2	5.3	4.9	4.7	4.5
Consumer Price Index ⁴	1.1	1.1	1.1	1.6	2.2	2.2	2.4	2.3	2.4	2.4	2.4	2.4	1.6	0.1	1.2	2.3	2.4
Quarter-End Interest Rates ⁵																	
Federal Funds Target Rate	0.50	0.50	0.50	0.75	0.75	1.00	1.00	1.25	1.25	1.50	1.50	1.75	0.25	0.27	0.56	1.00	1.50
Conventional Mortgage Rate	3.69	3.57	3.46	3.88	3.90	3.91	3.93	3.95	3.97	4.00	4.02	4.16	4.17	3.85	3.65	3.92	4.04
2 Year Note	0.73	0.58	0.77	0.93	1.04	1.23	1.30	1.57	1.64	1.76	1.80	1.92	0.46	0.69	0.75	1.29	1.78
10 Year Note	1.78	1.49	1.60	1.85	1.88	1.91	1.95	1.99	2.02	2.06	2.09	2.24	2.54	2.14	1.68	1.93	2.10

Forecast as of: October 28, 2016

¹ Compound Annual Growth Rate Quarter-over-Quarter

² Percentage Point Contribution to GDP

³ Average Monthly Change

⁴ Year-over-Year Percentage Change

⁵ Annual Numbers Represent Averages

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

Appendix

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Recent Special Commentary

Date	Title	Authors
U.S. Macro		
October-27	Non-Material Millennials	Brown & Pershing
October-27	Long-Term Unemployment: The Labor Market's Achilles' Heel	Silvia, House & Pugliese
October-20	Full Employment in a Low-Participation World	Silvia, House & Pugliese
October-13	Full Employment: Fact of Fiction?	Silvia, House & Pugliese
October-04	Hispanic Labor Market Prospects Improve	Alemán
U.S. Regional		
October-21	Is California's Labor Market Running Hot?	Vitner, Feik & Batcheller
October-21	Texas Employment Conditions: September 2016	Vitner, Feik & Batcheller
October-21	Strong Job Growth Is Pulling Job Seekers Back to Florida	Vitner, Feik & Batcheller
October-21	North Carolina's Labor Market Has Tightened Up	Vitner, Feik & Batcheller
October-20	New York Employment Conditions: September 2016	Vitner, Feik & Batcheller
Global Economy		
October-27	U.K. GDP Surprises to the Upside in Q3	Bryson & Pershing
October-25	Korean GDP Slows a Bit in Q3 but Not as Much as Feared	Quinlan
October-19	Chinese GDP Growth Remains Stable in Q3	Bryson & Pershing
October-18	Time to Worry Anew About Chinese House Prices	Bryson & Pershing
October-17	Singapore GDP Growth: Broad-Based Weakness in Q3	Bryson & Pershing
Interest Rates/Credit Market		
October-26	Household Balance Sheets Continue to Improve	Silvia & Pugliese
October-19	FDIC Quarterly: C&I Loan Delinquencies Tick Higher	Silvia & Pugliese
October-05	None Come to Pass: When Trend Becomes Cycle	Silvia
September-28	Rising Asset Prices Give the Fed Something Else to Worry About	Silvia & Vitner
September-21	Updated Budget Outlook: Modest Net Treasury Issuance	Silvia & Brown
Real Estate		
October-03	Housing Chartbook: October 2016	Vitner, Khan & Batcheller
September-30	Is CRE Retail Demand Sustainable?	Khan, Iqbal & Tysinger
September-22	Will the Potential EB-5 Expiration East CRE Valuations?	Khan
August-11	Commercial Real Estate Chartbook: Q2	Khan, Causey & Tysinger
July-06	International Home Buying: 2016	Vitner, Khan & Batcheller

Wells Fargo Securities Economics Group

Global Head of Research and Economics

Diane Schumaker-Krieg diane.schumaker@wellsfargo.com
Global Head of Research & Economics

Chief Economist

John E. Silvia john.silvia@wellsfargo.com

Senior Economists

Mark Vitner, Senior Economist mark.vitner@wellsfargo.com
Jay H. Bryson, Global Economist jay.bryson@wellsfargo.com
Sam Bullard, Senior Economist sam.bullard@wellsfargo.com
Nick Bennenbroek, Currency Strategist nicholas.bennenbroek@wellsfargo.com
Anika R. Khan, Senior Economist anika.khan@wellsfargo.com
Eugenio J. Alemán, Senior Economist eugenio.j.aleman@wellsfargo.com
Azhar Iqbal, Econometrician azhar.iqbal@wellsfargo.com
Tim Quinlan, Senior Economist tim.quinlan@wellsfargo.com

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Economists

Eric J. Vilorio, Currency Strategist eric.viloria@wellsfargo.com
Sarah House, Economist sarah.house@wellsfargo.com
Michael A. Brown, Economist michael.a.brown@wellsfargo.com
Jamie Feik, Economist jamie.feik@wellsfargo.com

Economic Analysts

Erik Nelson, Currency Analyst erik.f.nelson@wellsfargo.com
Misa Batcheller, Economic Analyst misa.n.batcheller@wellsfargo.com
Michael Pugliese, Economic Analyst michael.d.pugliese@wellsfargo.com
Julianne Causey, Economic Analyst julianne.causey@wellsfargo.com
E. Harry Pershing, Economic Analyst edward.h.pershing@wellsfargo.com

Administrative Assistants

Donna LaFleur, Executive Assistant donna.lafleur@wellsfargo.com
Dawne Howes, Administrative Assistant dawne.howes@wellsfargo.com