October 28, 2016

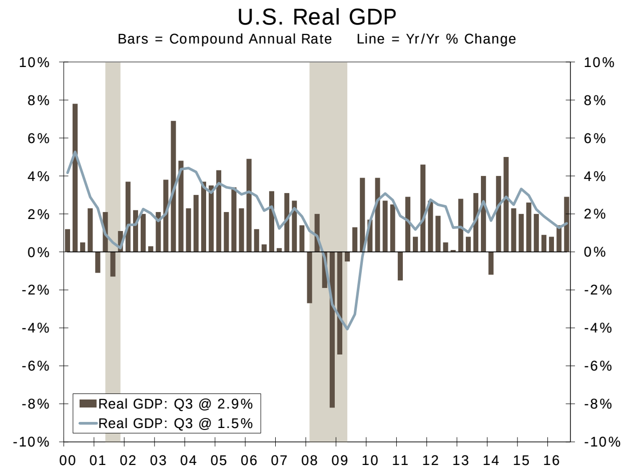
Economics Group

Weekly Economic & Financial Commentary

U.S. Review

Economic Growth Accelerates in Q3

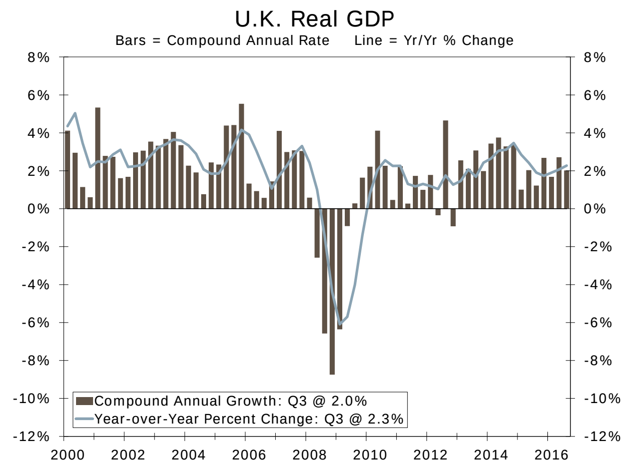
- Gross domestic product rose 2.9 percent in the third quarter after averaging just 1.1 percent over the first two quarters of the year. Consumer spending, greater business investment and net exports all supported growth for the quarter.
- Consumer confidence slipped a bit in October, falling 4.9 points to 98.6. The overall level of the index continues to suggest a modest pace of consumer spending in the fourth quarter.
- Durable goods orders data suggested some slight improvement in the fourth quarter for equipment spending after four consecutive quarters of declines.



Global Review

Brexit Has Not Weakened U.K. Economy, Yet

- The British economy grew at a stronger-than-expected pace in the third quarter, especially in light of the Brexit referendum in June. That said, there are signs of weakness in investment spending. We still expect the economy to slip into a mild recession in coming quarters, although we acknowledge the upside risks to our forecast.
- “Soft” data in the Eurozone have been stronger than expected recently, although it still remains to be seen whether incoming “hard” data will corroborate that story.
- Economic activity in Mexico appears to have strengthened in August.



Wells Fargo U.S. Economic Forecast

	Actual				Forecast				Actual		Forecast		
	2016				2017				2014	2015	2016	2017	2018
	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	2.4	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	2.9	3.2	2.6	2.5	2.5
Inflation Indicators [2]													
PCE Deflator	0.9	1.0	1.0	1.4	1.8	1.8	2.0	2.0	1.5	0.3	1.1	1.9	2.0
Consumer Price Index	1.1	1.1	1.1	1.6	2.2	2.2	2.4	2.3	1.6	0.1	1.2	2.3	2.4
Industrial Production [1]	-1.7	-0.8	1.8	1.7	2.6	2.2	2.3	2.1	2.9	0.3	-0.9	2.0	1.8
Corporate Profits Before Taxes [2]	-6.6	-4.3	-1.3	2.6	2.3	1.8	1.8	1.7	5.9	-3.0	-2.5	1.9	1.7
Trade Weighted Dollar Index [3]	89.8	90.6	90.0	92.8	94.3	95.5	96.5	97.5	78.4	91.1	90.8	95.9	97.1
Unemployment Rate	4.9	4.9	4.9	4.9	4.8	4.7	4.7	4.6	6.2	5.3	4.9	4.7	4.5
Housing Starts [4]	1.15	1.16	1.14	1.17	1.19	1.20	1.22	1.23	1.00	1.11	1.16	1.21	1.27
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	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	4.17	3.85	3.65	3.92	4.04
10 Year Note	1.78	1.49	1.60	1.85	1.88	1.91	1.95	1.99	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] Year-over-Year Percentage Change
[3] Federal Reserve Major Currency Index, 1973=100 - Quarter End
[4] Millions of Units
[5] Annual Numbers Represent Averages

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

Inside

U.S. Review

Economic Growth Accelerates in Q3

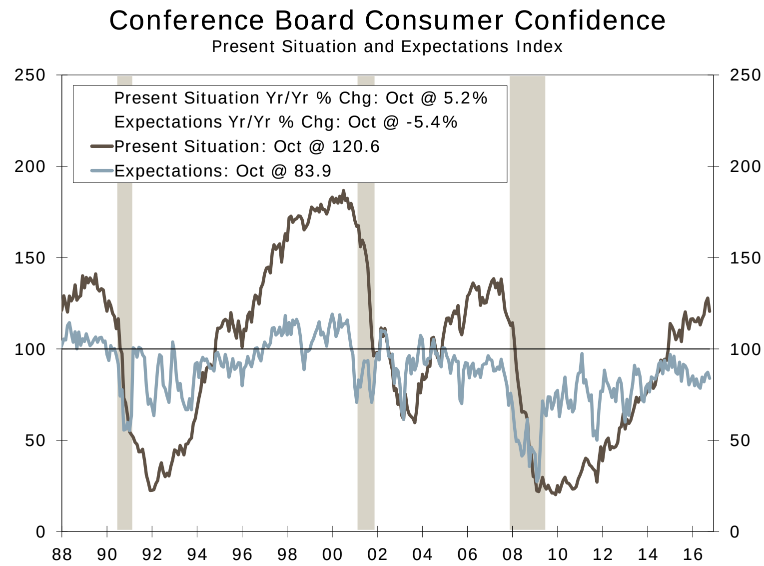
The big headline from this week's economic data was the stronger-than-expected third quarter GDP print, which showed that the economy expanded at a 2.9 percent pace. Consumer confidence fell slightly in October; however, the index level still suggests an ongoing modest pace of consumer spending in Q4. Housing market data related to new home sales and pending home sales both surprised to the upside, which sets up some momentum in the residential space to end the year. Durable goods orders were soft again in September as defense orders fell for the month. Core capital goods orders were also soft suggesting only a slight improvement in equipment investment in the months ahead. Based on this week's data, we have downwardly revised our GDP growth forecast for the fourth quarter to 1.5 percent.

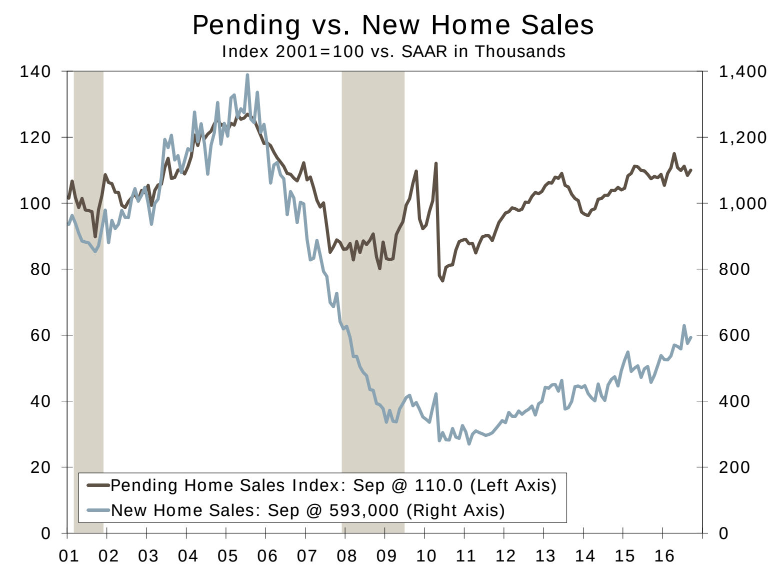
GDP growth bounced back in the third quarter after disappointing readings in the first two quarters of the year. Annualized growth climbed 2.9 percent with consumer spending and net exports leading the way in terms of contributions to headline growth. Equipment and residential investment subtracted from growth in the quarter as nonresidential investment bounced back in to positive territory as the negative effects of oil price declines begin to fade. The pace of inventory building contributed to growth for the first time since the first quarter of 2015. Given the stronger GDP reading for the third quarter, it is our expectation that growth will likely moderate again in the fourth quarter as the boost from trade reverses.

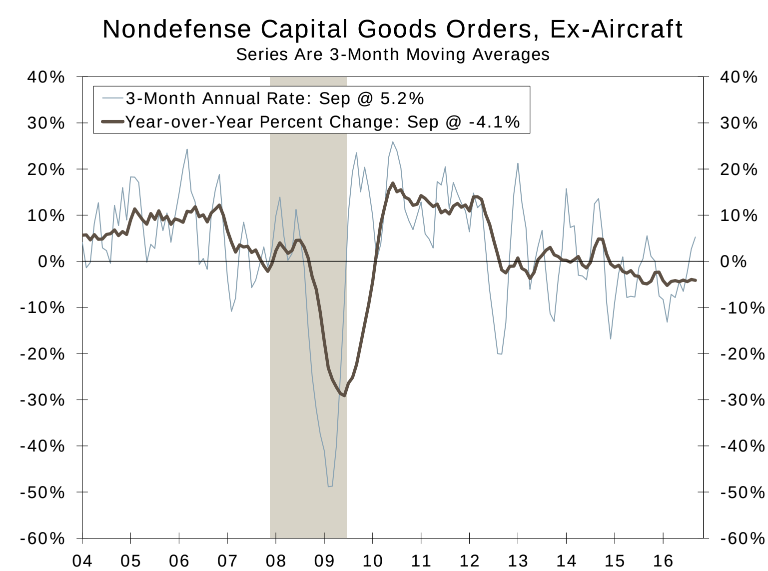
Consumer confidence slipped 4.9 points in October to 98.6. Even with the slight pullback in confidence the overall level is consistent with consumer spending serving as a key support to growth. A bit more concerning to us has been the downward trend in the expectations component of the index which could suggest a downshift in real spending behavior could be on the horizon. With consumer spending serving as the one consistent support to GDP growth over the past few quarters, any downshift in spending could have a dramatic effect on headline GDP growth.

Other news out of the consumer space related to the housing market looked more promising as both pending and new home sales picked up in September following disappointing prints in August. New home sales are now up 2.0 percent on a three-month annualized basis. The issue with both new and existing homes remains very tight inventories, which is keeping many buyers on the sidelines.

Durable goods orders fell 0.1 percent in September while August orders were revised higher. A drop in defense capital goods weighed on the measure with some offsets from stronger transportation goods orders. Core capital goods orders are now showing signs of a bounce-back, suggesting that equipment spending is likely to return to positive territory in the fourth quarter. Even with a slight recovery in equipment investment, we expect the challenges of a stronger dollar and slow global demand to remain headwinds to growth in the industrial sector.







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

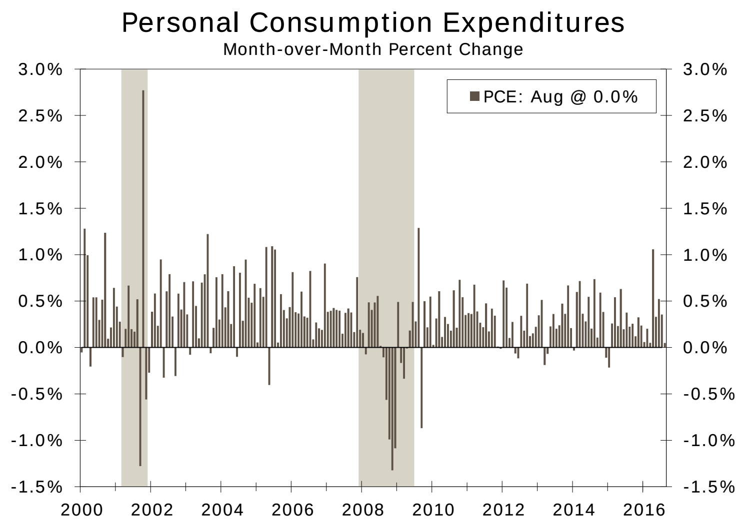
Personal Spending • Monday

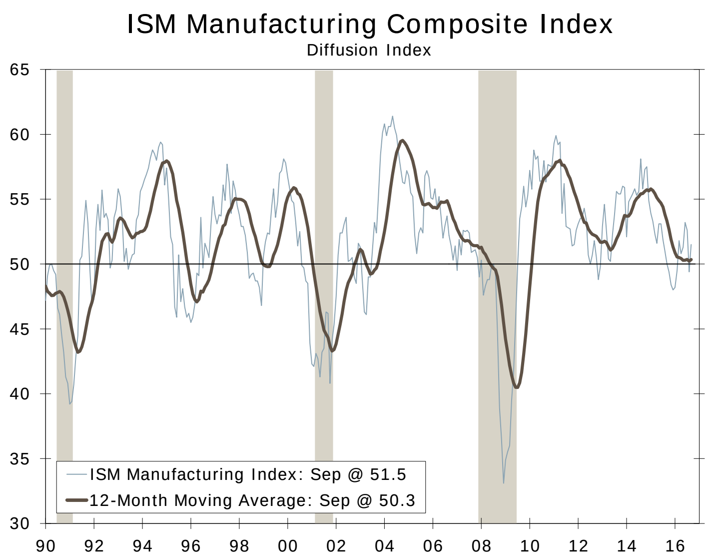
Consumption is the key driver of U.S. economic growth in the current environment, making Monday's report on personal income and spending critical to determining the near-term outlook. The Federal Reserve will be watching closely to gauge whether the consumer is set to spur economic growth enough to warrant a change in rate policy. Personal consumption was a lesser contributor to GDP growth in the third quarter than in the second quarter as income growth has been more subdued. Income growth is vital to sustaining the current economic growth model centered on consumer spending.

The Fed's preferred measure of inflation is also released in this report, giving participants a timely gauge of progress toward the two percent inflation objective. Our call is for the PCE deflator to rise 1.2 percent year over year, narrowing the gap between core PCE growth of 1.7 percent as the oil price drag fades from headline PCE.

Previous: 0.0% **Wells Fargo: 0.2%**

Consensus: 0.5% (Month-over-Month)





ISM Manufacturing • Tuesday

Manufacturing activity rebounded in September, according to last month's report from the ISM. The index returned to positive territory after posting a sub-50 reading in August. Tuesday's report will be the first look at momentum heading into the final quarter of the year and also the last piece of economic data the Fed will see before November's policy decision. Regional Fed surveys for October have been mixed thus far, with Empire Mfg. dropping further into contraction, the Richmond Mfg. improving but remaining negative and the Philly Fed slowing but still positive.

The durable goods orders report suggested a tepid outlook for the fourth quarter, as new orders cooled from a robust showing in August with few unfilled orders in the pipeline. We expect a slight improvement in manufacturing conditions in the fourth quarter as the commodity drag fades, though the sector continues to face sluggish global growth and renewed strength in the dollar.

Previous: 51.5 **Wells Fargo: 51.7**

Consensus: 51.7

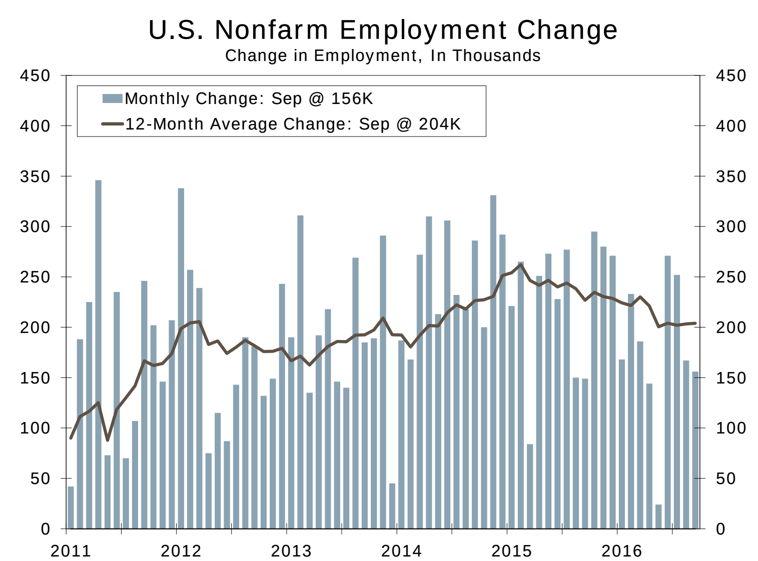
Employment • Friday

The last read on the economy before the Presidential election, Friday's jobs report will help set the tone leading into the final days of campaigning. It will come in too late to sway the vote for the FOMC, but participants will be watching closely for further confirmation that the economy is on solid footing for a December interest rate hike. Last months' jobs report likely met that standard for the Fed, as the economy added 156,000 jobs and the labor force expanded. While some viewed that number as disappointing, our view is that it was in line with trend growth and some slowing should be expected as the economy nears full employment.

Employers likely added 185,000 jobs in October which will also be a solid gain. We will also look closely at labor force growth and wages, as increases in both will support the FOMC's case for a rate hike in the December meeting.

Previous: 156,000 **Wells Fargo: 185,000**

Consensus: 175,000



Source: U.S. Dept. of Commerce, U.S. Dept. of Labor, Institute for Supply Management and Wells Fargo Securities

Global Review

Brexit Has Not Weakened U.K. Economy, Yet

When British citizens voted on June 23 to leave the European Union, many analysts, ourselves included, expected the ensuing uncertainty would cause growth in U.K. economic activity to weaken, if not turn negative. Data released this week confirmed that the British economy did indeed decelerate a bit in the third quarter. As shown on the front page, real GDP in the United Kingdom grew at a sequential rate of 0.5 percent (2.0 percent on an annualized basis) in the third quarter, which represents a modest slowdown from the 0.7 percent rate that was registered in Q2. That said, the outturn was undoubtedly not as weak as many analysts would have expected in the immediate aftermath of the Brexit referendum.

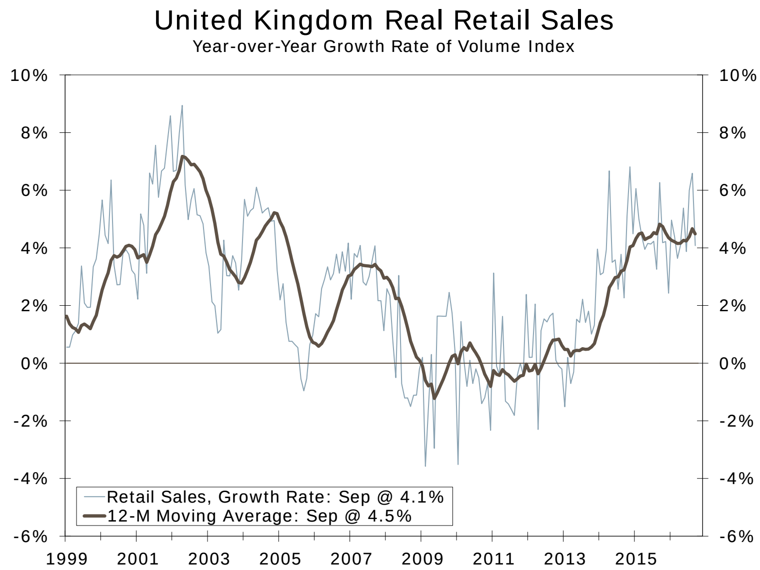
A breakdown of the GDP data into its underlying demand components will not be available for another month, but the preliminary industry breakdown that is available now offers some insights into the underlying drivers of the British economy in Q3. Growth in the third quarter was driven entirely by the service sector, which points to strength in consumer spending. Indeed, monthly data on real retail sales through September shows healthy spending growth (top chart). However, the contraction in the manufacturing sector that occurred in Q3 suggests that investment spending and/or exports likely weakened during the quarter.

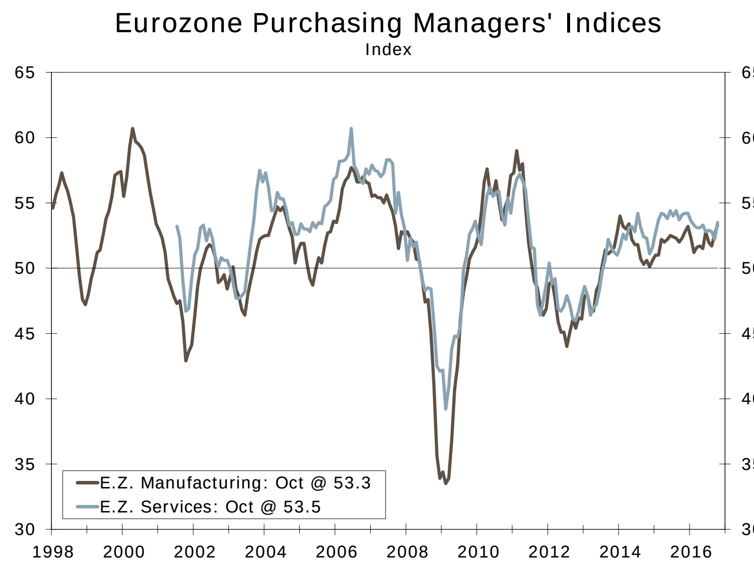
As we wrote recently, we still expect the U.K. economy to slip into a mild and short-lived recession in the next quarter or two (see "Does Recession Still Threaten the U.K. Economy?" which is posted on our website). In short, we believe that the uncertainty regarding the ultimate economic relationship that the United Kingdom will have with the European Union will depress U.K. investment spending in coming quarters.

Speaking of Europe, "soft" data out of the Eurozone this week were mildly encouraging. The "flash" estimate of the manufacturing PMI rose to a two-year high in October, and the comparable index for the service sector was also much stronger than expected. The outturns were corroborated by the German Ifo index of business sentiment, which also rose to a two-year high.

Taken at face value, the "soft" data would suggest that economic activity in the euro area is picking up steam. We would be hesitant to jump to that conclusion just yet, because the "soft" data seem to have overstated the strength of the Eurozone economy in the past year or so. We are hopeful that economic activity in the euro area is indeed accelerating. However, we will await incoming "hard" data on industrial production, retail sales and other spending indicators before jumping to any conclusions.

In Mexico, the year-over-year change in the economic activity index, which is highly correlated with overall GDP growth, rebounded to 2.93 percent in August from 1.23 percent in July (bottom chart). The Mexican economy has been growing between 2 percent and 3 percent over the past few years, and recent data suggest that the underlying run rate continued in the third quarter. Indeed, we forecast that the Mexican economy will continue to grow at roughly that rate for the foreseeable future.





Source: IHS Global Insight, Bloomberg LP and Wells Fargo Securities

Eurozone GDP • Monday

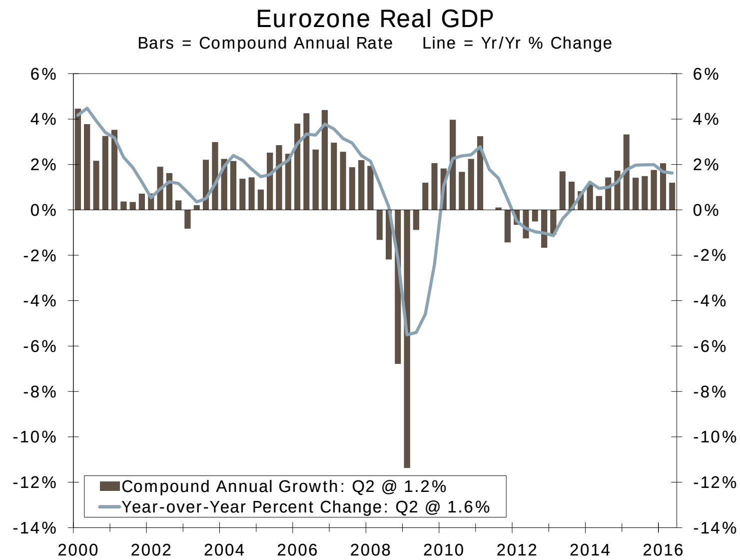
Earlier this week, preliminary estimates of October activity in the manufacturing sector as well as the service sector both came in a bit better than expectations. The manufacturing PMI came in at 53.3, which was the best print since 2014. The service sector PMI also rose to 53.5.

On Monday, we will get the first estimate of third quarter GDP growth for the Eurozone. After increasing 0.3 percent in the second quarter, expectations are for a similar outturn for the third quarter. The result will influence the ECB's thinking on the potential for additional quantitative easing, although inflation is still the more important driver for the ECB.

We expect the ECB to eventually opt to extend quantitative easing, although as ECB President Draghi made clear last week, that will be highly dependent on the outlook for inflation.

Previous: 0.3% **Wells Fargo: 0.3%**

Consensus: 0.3% (Not Annualized)



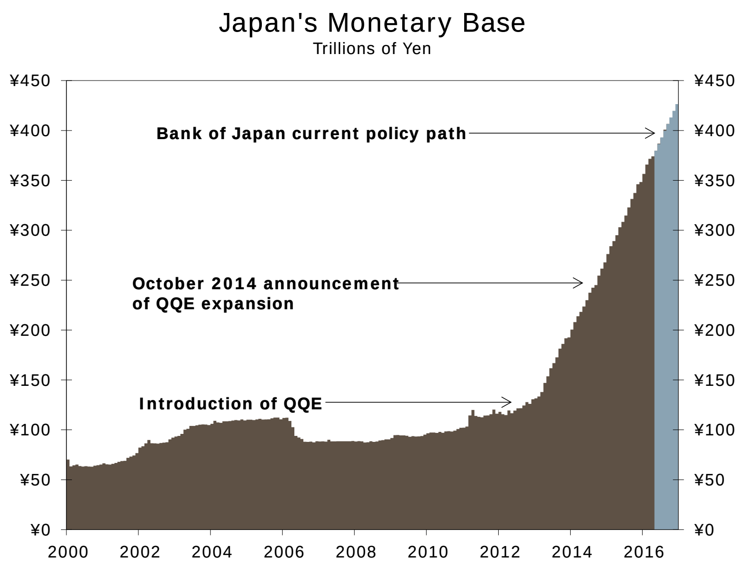
Bank of Japan • Tuesday

At its September meeting, the Bank of Japan (BoJ) offered some unexpected new forward guidance. It said that it would augment its existing policies of quantitative easing and negative interest rates with a new commitment to target an interest rate of zero for its 10-year government bonds while at the same time pledging to overshoot its inflation target of 2.0 percent.

After all the changes in September, we are not expecting any change in monetary policy either in terms of the pace of QE or in the set levels of interest rates. One piece of interesting new information however will be the BoJ's updated inflation forecast. In public comments last week, BoJ Governor Kuroda acknowledged that it might take more than a year for the inflation target to be exceeded. On Tuesday, we will see if his comments are reflected in the official inflation forecast.

Previous: Introduced CPI overshot and 10Y- rate target

Wells Fargo: No Change



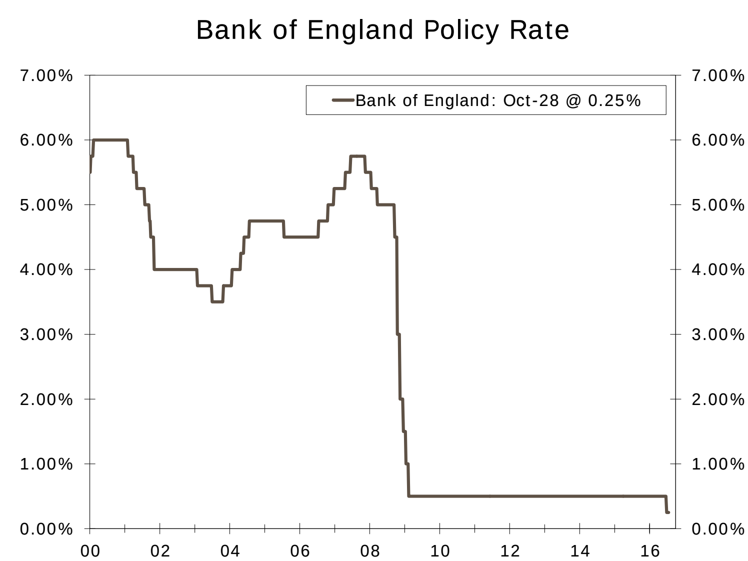
Bank of England • Thursday

GDP data out of the United Kingdom this week reflected a modest slowdown in growth in the third quarter. As discussed in the Global Review section, this was a preliminary look at how the U.K. economy fared in the July to September period—the first three-month stretch that followed the historic June referendum in which the U.K. voted to leave the European Union.

In September, the Bank of England (BoE) said that it could cut rates further by year-end if the economy continued to slow. However, the combination of not-as-bad-as-expected economic data and a steep decline in the value of the British pound has taken away some of the urgency for the BoE to cut immediately. In recent public comments, BoE Governor Carney spoke to the diminished value of sterling and the fact that the currency pass-through effect on prices could lift inflation. On the basis of stronger-than-expected GDP data and the inflation outlook, we expect the BoE to remain on hold at its meeting Thursday, although we acknowledge that it is a close call.

Previous: 0.25% **Wells Fargo: 0.25%**

Consensus: 0.25%



Source: IHS Global Insight, Bloomberg LP and Wells Fargo Securities

Interest Rate Watch

FOMC Preview: Electing to Wait

Since its meeting in September, the FOMC and individual members have been signaling the strong possibility that another rate hike will occur soon. In addition to the "case strengthening" and three hawkish dissents in the post-meeting statement, the minutes indicated that even those who thought to wait in September considered it a "close call."

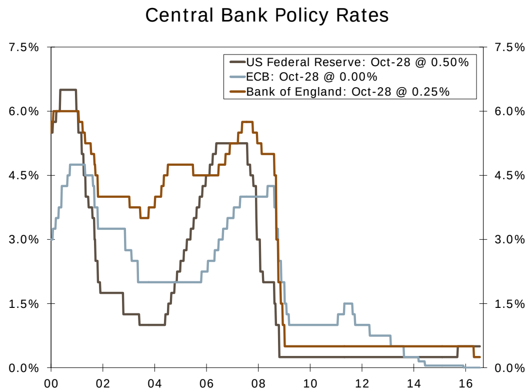
Despite the clear signals that another rate hike is approaching, the FOMC's meeting next week is likely to be a little too soon. First, the announcement will come less than a week ahead of the presidential election. FOMC members will likely want to avoid any action that could be perceived as affecting the outcome. Second, it is tough to see the FOMC move without a chance to explain its timing and updated outlook for future moves, given that it last moved nearly one year ago. Third, while the committee was vague about how much "further evidence" it would need to see for another rate hike, it is doubtful it meant just six weeks' worth of evidence.

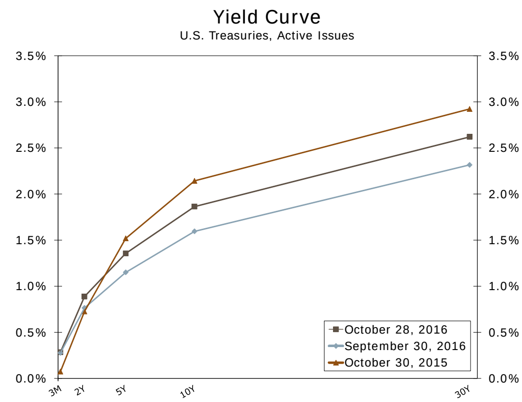
Waiting on Inflation

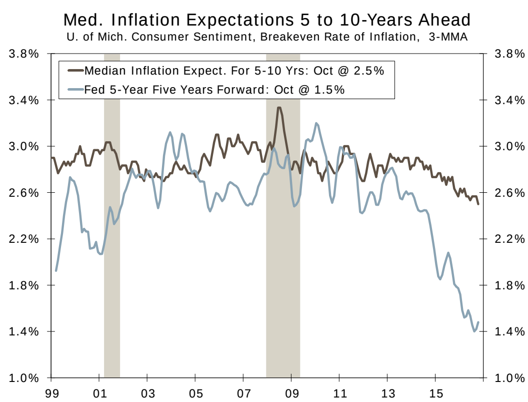
Assuming payroll growth does not collapse over the next two months, a rate hike in December looks nearly certain. Markets look prepared, with the implied probability of a hike in December at 73 percent.

The tougher call may be 2017, as the more dovish members of the committee need to see more progress on inflation. Headline inflation has been picking up following some recovery in energy prices. But, core PCE inflation has been little changed over this year, hovering at 1.6-1.7 percent.

We expect core PCE inflation to gradually move up over the next year, but low inflation expectations may be a source of hesitancy for some Fed officials in raising rates again. Short-term market-based measures of inflation compensation have rebounded over the past two months with the help of higher oil prices, but consumers' views are little changed. In addition, long-term TIPS breakevens, measured by the 5-year five years forward, are still below levels reached this spring, while consumers' long-term expectations remain near all-time lows (bottom chart).







Credit Market Insights

Household Finances Remain Healthy

U.S. economic growth has been powered by personal consumption over the past few quarters. Given this, and being more than seven years into the current expansion, we recently examined household balance sheets for signs of overleverage or financial stress that could weigh on the outlook.

Real per capita net worth has grown steadily and is currently at an all-time high, aided by financial and real estate asset gains since the Great Recession. As a percentage of total assets, deposits are at their highest level since the mid-1990s, suggesting households remain somewhat cautious and are well-positioned to deal with new developments, such as higher interest rates or a slowdown in employment growth.

On the liability side, households remain underleveraged relative to the previous expansion. Household liabilities, as a percentage of both total assets and disposable income, are well below levels seen during the previous expansion. In addition, low rates have kept the household debt service ratio, or the ratio of total required household debt payments to total disposable income, near record lows. Even with the recent consumer spending gains, U.S. household balance sheets remain relatively healthy in the aggregate, particularly when compared to where they were on the eve of the previous recession.

For more, see "Interest Rate Weekly: Household Balance Sheets Continue to Improve" available on our website.

Source: IHS Global Insight, University of Mich., Bloomberg LP and Wells Fargo Securities

Credit Market Data

Mortgage Rates	Current	Week Ago	4 Weeks Ago	Year Ago
30-Yr Fixed	3.47%	3.52%	3.42%	3.76%
15-Yr Fixed	2.78%	2.79%	2.72%	2.98%
5/1 ARM	2.84%	2.85%	2.80%	2.89%

Bank Lending	Current Assets (Billions)	1-Week Change (SAAR)	4-Week Change (SAAR)	Year-Ago Change
Commercial & Industrial	$2,089.2	9.34%	14.20%	8.57%
Revolving Home Equity	$414.1	-5.82%	-5.55%	-5.30%
Residential Mortgages	$1,748.6	38.49%	22.11%	7.79%
Commerical Real Estate	$1,939.6	17.85%	11.20%	11.18%
Consumer	$1,352.8	7.39%	9.44%	8.37%

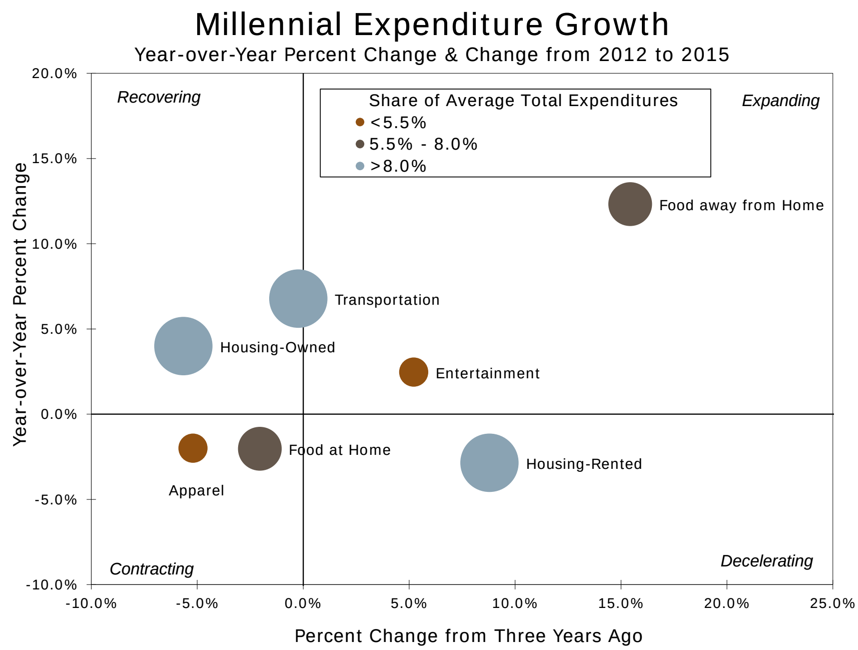
Source: Freddie Mac, Federal Reserve Board and Wells Fargo Securities

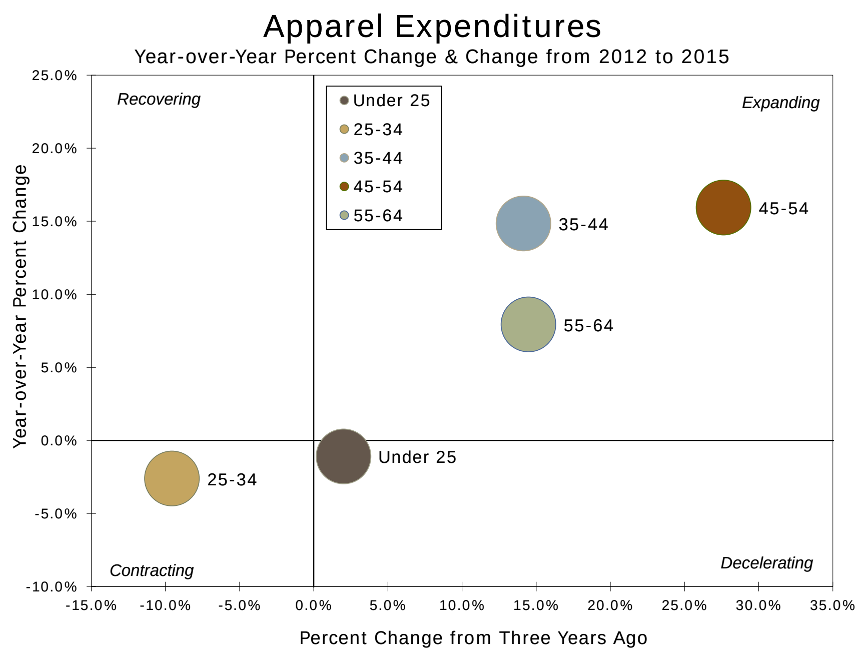
Topic of the Week

Changing Demographic Landscape

Detailed annual consumer spending data released from the U.S. Department of Labor for 2015 indicate that average consumer spending per consumer unit rose 4.6 percent from 2014. Examining expenditures by generation yields more interesting and useful results. In our report *Non-Material Millennials*, Millennials are now the largest demographic, comprising 33 percent of the population as of 2015. Likewise, Millennials are the most diverse generation among the current population, and evidence suggests that increases in a population's diversity results in distinct shifts in tastes and preferences from food consumption patterns to greater demand for multigenerational housing.

When examining the data, the category *food away from home* can immediately be identified as the Millennials' fastest expanding expenditure category. Likewise, it is no surprise that expenditures for *food at home* are decreasing as Millennials substitute dining out for dining in. Another rapidly expanding category of spending for Millennials is on entertainment, which along with *food away from home* provides further evidence in support of survey data, suggesting that the Millennial generation is more focused on experiences rather than owning a large number of physical assets. Another interesting and noticeable generational difference relates to the consumption of *apparel*, which is contracting for Millennials and accelerating for Generation X and Baby Boomers. It is difficult to say for certain how much the overall trends in consumer spending by category are driven by pure demographic change and those driven by cyclical factors. That said, there is clear evidence of increased diversity of the Millennial generation relative to prior age demographics, which suggests a structural change in the tastes and preferences of the population. While more time is needed to draw any strong conclusions on how different spending habits of this generation will be, initial evidence suggests that there are distinct differences that firms in the consumer space should recognize, especially now that Millennials are taking a more prominent role in the macroeconomy.





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

Subscription Info

Wells Fargo's *Weekly Economic & Financial Commentary* is distributed to subscribers each Friday afternoon by e-mail.

To subscribe please visit: www.wellsfargo.com/economicsemail

The *Weekly Economic & Financial Commentary* is available via the Internet at www.wellsfargo.com/economics

Via The Bloomberg Professional Service at WFRE.

And for those with permission at www.wellsfargoresearch.com

Market Data ♦ Mid-Day Friday

U.S. Interest Rates

	Friday 10/28/2016	1 Week Ago	1 Year Ago
3-Month T-Bill	0.28	0.32	0.04
3-Month LIBOR	0.89	0.88	0.32
1-Year Treasury	0.81	0.79	0.42
2-Year Treasury	0.87	0.82	0.70
5-Year Treasury	1.34	1.24	1.47
10-Year Treasury	1.85	1.73	2.10
30-Year Treasury	2.61	2.48	2.88
Bond Buyer Index	3.32	3.28	3.67

Foreign Exchange Rates

	Friday 10/28/2016	1 Week Ago	1 Year Ago
Euro ($/€)	1.094	1.088	1.092
British Pound ($/₤)	1.215	1.223	1.526
British Pound (₤/€)	0.900	0.890	0.716
Japanese Yen (¥/$)	105.370	103.800	121.090
Canadian Dollar (C$/$)	1.338	1.333	1.319
Swiss Franc (CHF/$)	0.993	0.994	0.994
Australian Dollar (US$/A$)	0.759	0.761	0.712
Mexican Peso (MXN/$)	18.708	18.595	16.639
Chinese Yuan (CNY/$)	6.779	6.767	6.359
Indian Rupee (INR/$)	66.779	66.890	64.928
Brazilian Real (BRL/$)	3.180	3.157	3.905
U.S. Dollar Index	98.653	98.695	97.782

Foreign Interest Rates

	Friday 10/28/2016	1 Week Ago	1 Year Ago
3-Month Euro LIBOR	-0.32	-0.32	-0.07
3-Month Sterling LIBOR	0.40	0.40	0.58
3-Month Canada Banker's Acceptance	0.90	0.90	0.82
3-Month Yen LIBOR	-0.02	-0.01	0.08
2-Year German	-0.62	-0.66	-0.35
2-Year U.K.	0.29	0.24	0.54
2-Year Canadian	0.57	0.52	0.55
2-Year Japanese	-0.24	-0.25	0.00
10-Year German	0.17	0.01	0.44
10-Year U.K.	1.26	1.09	1.80
10-Year Canadian	1.24	1.13	1.48
10-Year Japanese	-0.04	-0.05	0.29

Commodity Prices

	Friday 10/28/2016	1 Week Ago	1 Year Ago
WTI Crude ($/Barrel)	49.07	50.85	45.94
Gold ($/Ounce)	1270.25	1266.28	1156.10
Hot-Rolled Steel ($/S.Ton)	497.00	490.00	410.00
Copper (¢/Pound)	219.35	208.85	236.25
Soybeans ($/Bushel)	9.94	9.56	8.91
Natural Gas ($/MMBTU)	3.09	2.99	2.03
Nickel ($/Metric Ton)	10,330	10,087	10,547
CRB Spot Inds.	463.34	459.05	419.43

Source: Bloomberg LP and Wells Fargo Securities

Next Week's Economic Calendar

	Monday	Tuesday	Wednesday	Thursday	Friday
	31	1	2	3	4
U.S. Data	**Personal Income & Spending** August 0.2% & 0.0% September 0.4% & 0.2% (W)	**Construction Spending (MoM)** August -0.7% September 0.2% (W) **ISM Manufacturing** September 51.5 October 51.7 (W)	**FOMC Rate Decision** September 0.50% November 0.50% (W) **Productivity (QoQ)** 2Q -0.6% 3Q 2.0% (W)	**ISM Non-Manufacturing** September 57.1 October 55.7 (W) **Factory Orders** August 0.2% September 0.1% (W)	**Nonfarm Payrolls** September 156K October 185K (W) **Trade Balance** August -$40.7B September -$37.4B (W)
Global Data	**Eurozone** **GDP (YoY)** Previous (Q2) 1.6% **Mexico** **GDP (YoY)** Previous (Q2) 2.5%	**Brazil** **Industrial Production (MoM)** Previous (September) -3.8%	**China** **Caixin PMI: Services** Previous (September) 52.0	**United Kingdom** **Bank of England Rate Decision** Previous 0.25%	**Eurozone** **PMI Services & Composite** Previous (September) 53.5 & 53.7

Note: (W) = Wells Fargo Estimate (C) = Consensus Estimate

Source: Bloomberg LP and Wells Fargo Securities

Wells Fargo Securities Economics Group

Diane Schumaker-Krieg	Global Head of Research, Economics & Strategy	(704) 410-1801 (212) 214-5070	diane.schumaker@wellsfargo.com
John E. Silvia, Ph.D.	Chief Economist	(704) 410-3275	john.silvia@wellsfargo.com
Mark Vitner	Senior Economist	(704) 410-3277	mark.vitner@wellsfargo.com
Jay H. Bryson, Ph.D.	Global Economist	(704) 410-3274	jay.bryson@wellsfargo.com
Sam Bullard	Senior Economist	(704) 410-3280	sam.bullard@wellsfargo.com
Nick Bennenbroek	Currency Strategist	(212) 214-5636	nicholas.bennenbroek@wellsfargo.com
Anika R. Khan	Senior Economist	(212) 214-8543	anika.khan@wellsfargo.com
Eugenio J. Alemán, Ph.D.	Senior Economist	(704) 410-3273	eugenio.j.aleman@wellsfargo.com
Azhar Iqbal	Econometrician	(704) 410-3270	azhar.iqbal@wellsfargo.com
Tim Quinlan	Senior Economist	(704) 410-3283	tim.quinlan@wellsfargo.com
Eric Viloria, CFA	Currency Strategist	(212) 214-5637	eric.viloria@wellsfargo.com
Sarah House	Economist	(704) 410-3282	sarah.house@wellsfargo.com
Michael A. Brown	Economist	(704) 410-3278	michael.a.brown@wellsfargo.com
Jamie Feik	Economist	(704) 410-3291	jamie.feik@wellsfargo.com
Erik Nelson	Currency Analyst	(212) 214-5652	erik.f.nelson@wellsfargo.com
Misa Batcheller	Economic Analyst	(704) 410-3060	misa.n.batcheller@wellsfargo.com
Michael Pugliese	Economic Analyst	(704) 410-3156	michael.d.pugliese@wellsfargo.com
Julianne Causey	Economic Analyst	(704) 410-3281	julianne.causey@wellsfargo.com
E. Harry Pershing	Economic Analyst	(704) 410-3034	edward.h.pershing@wellsfargo.com
Donna LaFleur	Executive Assistant	(704) 410-3279	donna.lafleur@wellsfargo.com
Dawne Howes	Administrative Assistant	(704) 410-3272	dawne.howes@wellsfargo.com

WELLS FARGO SECURITIES