Economics Group

SECURITIES \mathbf{FARGC}

Weekly Economic & Financial Commentary

U.S. Review

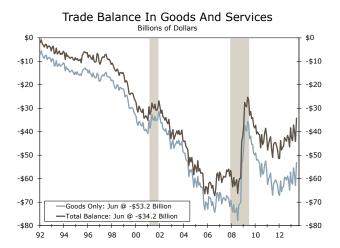
Growth Looking a Little Better

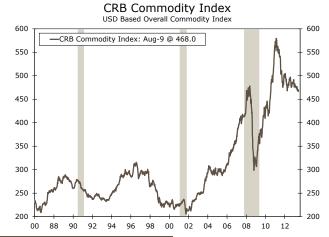
- A large and unexpected narrowing of June's trade deficit, thanks to a pivot away from foreign oil, should provide a sizable revision to Q2 GDP. The ISM Non-Manufacturing Index also posted a larger than anticipated gain, though orders backlogs and export orders worsened in the month.
- Rising interest rates have yet to upend the housing market recovery. Demand for residential mortgages increases as did mortgage applications. Delinquency and foreclosure rates continued to move lower, and relatively loose lending standards persisted for most loan types

Global Review

Better Global News Good For Emerging Markets.

- Emerging market economies and commodity prices have had a rough time during the past year or so as the world economy, including China, has slowed down considerably from very strong rates of growth.
- However, over the past several weeks, better-than-expected numbers coming from the global economy and the U.S. economy are starting to reverse the weakening in overall commodity prices and could help emerging market growth during the next several quarters as well as give some support to commodity-based currencies across the world.





Wells Fargo U.S. Economic Forecast													
		Actual Forecast		Actual		Forecast							
	1Q	20 20	12 3Q	4Q	10	20 20	13 30	40	2010	2011	2012	2013	2014
Real Gross Domestic Product ¹	3.7	1.2	2.8	0.1	1.1	1.7	1.7	2.1	2.5	1.8	2.8	1.4	2.1
Personal Consumption	2.9	1.9	1.7	1.7	2.3	1.8	2.0	2.2	2.0	2.5	2.2	1.9	2.3
Inflation Indicators ²													
PCE Deflator	2.4	1.7	1.6	1.7	1.4	1.1	1.3	1.3	1.7	2.4	1.8	1.3	1.9
Consumer Price Index	2.8	1.9	1.7	1.9	1.7	1.4	1.6	1.5	1.6	3.1	2.1	1.5	2.1
Industrial Production ¹	5.4	2.9	0.3	2.5	4.2	0.6	3.9	4.6	5.7	3.4	3.6	2.6	4.0
Corporate Profits Before Taxes 2	12.8	6.9	6.3	2.7	2.1	5.2	5.3	5.7	25.0	7.9	7.0	4.6	6.4
Trade Weighted Dollar Index ³	72.7	74.5	72.7	73.4	76.2	77.5	77.0	77.8	75.4	70.9	73.5	77.1	79.0
Unemployment Rate	8.3	8.2	8.0	7.8	7.7	7.6	7.5	7.3	9.6	8.9	8.1	7.5	7.1
Housing Starts ⁴	0.71	0.74	0.78	0.90	0.96	0.87	1.02	1.04	0.59	0.61	0.78	0.99	1.12
Quarter-End Interest Rates ⁵													
Federal Funds Target Rate	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Conventional Mortgage Rate	3.95	3.68	3.50	3.35	3.57	4.07	4.50	4.60	4.69	4.46	3.66	4.19	4.95
10 Year Note	2.23	1.67	1.65	1.78	1.87	2.52	2.60	2.70	3.22	2.78	1.80	2.42	3.13

Inside

U.S. Review U.S. Outlook 3 Global Review 4 Global Outlook 5 Point of View 6 Topic of the Week Market Data

Forecast as of: August 7, 2013

Compound Annual Growth Rate Quarter-over-Quarter

² Year-over-Year Percentage Change ³ Federal Reserve Major Currency Index, 1973=100 - Quarter End

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

Together we'll go far

U.S. Review

Surprise to the Upside

After modest growth among key economic statistics released recently, this week's data painted a slightly brighter picture. The trade deficit unexpectedly shrank to \$34.2 billion in June, with both stronger exports and weaker imports contributing to the trade balance's best reading since 2009. Such a sharp narrowing of the trade deficit signals that a substantial upward revision can be expected to Q2 GDP growth, which was initially reported at a 1.7 percent annualized rate. Part of the improvement can be attributed to the United States replacing foreign oil with domestic supply. Although this will likely be the longer term trend as the nation continues to produce more of its own petroleum and related products, a spike in oil prices, among other indicators, suggests that the deficit will widen in July.

The ISM non-manufacturing index rebounded to 56.0 in July, lifting the composite ISM Index to 55.9, the highest level since 2011. Prices and new orders increased substantially, but not all subcomponents fared so well. Orders backlogs and export orders remain in contraction territory, which adds to the pile of data indicating that the trade balance improvement will be short-lived. Although the employment component ticked down for the month, it remains in expansion territory. Initial jobless claims rose slightly, but the four week moving average fell to its lowest level since late 2007. Furthermore, job openings increased in June and the layoff and discharge rate fell. However, businesses have been slow to hire, keeping the job vacancy rate elevated.

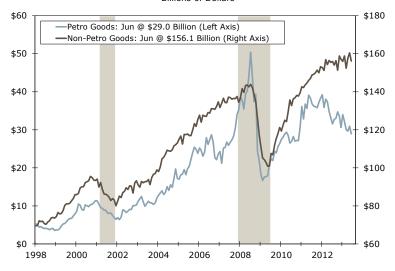
Housing Headwinds So Far Averted

Despite mortgage rates rising considerably in May, the housing market continues to make strides. The Mortgage Bankers Association report this week showed mortgage applications ticked up slightly, thanks to a rise in purchases. In addition, the Senior Loan Officer Opinion Survey pointed to a rise in demand for residential mortgages. Lending standards eased for prime and nontraditional loans, though they tightened in the subprime market. Improving household balance sheets pushed mortgage delinquency rates to a five-year low in Q2, while foreclosure starts and inventories declined further. However, the rise in rates has had a much larger effect on refinancing, which has been falling since May, though the pace of decline slowed this week.

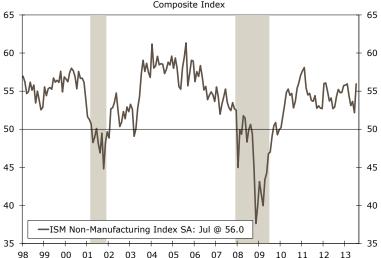
Consumer confidence is helping to boost demand for credit. Bloomberg's Consumer Comfort index jumped to its highest level since early 2008, and consumers took out more nonrevolving loans in June. Although revolving credit slid back for the month, it finished the quarter markedly higher. However, rising stock prices and home values have contributed to higher income earners feeling considerably more confident than lower earners.

Higher rates are not deterring business lending either. Commercial real estate loan demand is growing and lending standards remain firmly in easing territory, though slightly less so than last quarter. Similarly, demand for commercial and industrial loans continues to grow amid relatively loose lending standards.

Imports of Petroleum and Non-Petroleum Goods Billions of Pollars



ISM Non-Manufacturing



Mortgage Applications for Purchase



Source: Mortgage Bankers Association, ISM, U.S. Department of Commerce and Wells Fargo Securities, LLC

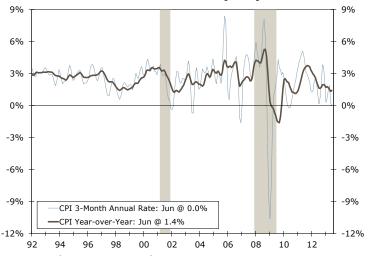
Retail Sales • Tuesday

Retail sales rose a softer than expected 0.4 percent in June with auto sales accounting for a large chuck of the upward momentum. Sales came in flat once the auto sales were excluded. The control group within retail sales, which feeds into the GDP calculation, posted a meager 0.1 percent gain for the month. The control group has been slowly losing momentum since the start of the year suggesting that core consumer spending activity remains soft. We expect July's retail sales report to look roughly the same in terms of the headline print; however, sales are expected to pick-up in categories outside of auto sales. Our expectation is that retail sales rose 0.2 percent for the month and 0.2 percent once auto sales are stripped out. We continue to expect retail sales to maintain more or less the same rate of growth through the third quarter. Given the current pace of job growth we are expecting stronger sales in the fourth quarter of this year.

Previous: 0.4% Wells Fargo: 0.2%

Consensus: 0.4%





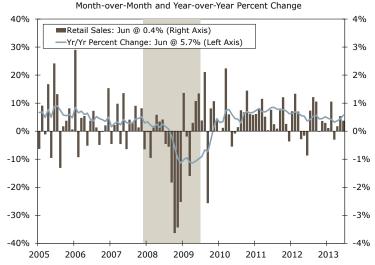
Industrial Production • Thursday

Industrial production rose 0.3 percent in June in a sign that conditions in the factory sector are slowly turning around. Output in the manufacturing sector also rose 0.3 percent for the month boosted in part by stronger motor vehicle production. Utilities output detracted from the overall production measure as more mild weather kept a lid on demand. Our expectation is that industrial production rose 0.2 percent in July, reflecting the stronger gains in the ISM manufacturing and Chicago PMI data for the month. In the months ahead, industrial production should continue to slowly edge higher through the end of the year as demand from both consumers and businesses help to boost output growth. Business spending is expected to accelerate in the second half of the year to around a 5.0 percent pace with consumer spending coming in around the 2.0 percent range.

Previous: 0.3% Wells Fargo: 0.2%

Consensus: 0.3%

U.S. Retail Sales

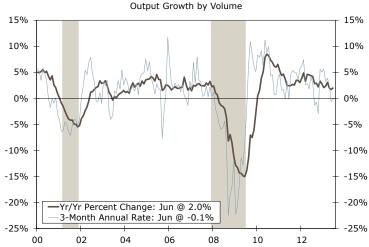


Consumer Price Index • Thursday

Consumer price inflation picked up in June, rising 0.5 percent for the month. A rise in gasoline prices coupled with more broad-based gains in other commodity groups led the headline index higher. Core inflation for the month was a little tamer at 0.2 percent. Given the leveling off of oil prices during July. We expect another month of modest price growth. The headline CPI likely rose 0.3 percent in July with core inflation remaining in check at 0.2 percent for the month. Over the coming months we continue to expect that softer inflation readings observed in the first half of the year will give way to more upward pressure on prices as domestic demand begins to gradually pick up in the second half of the year. Even with this anticipated rise in overall inflation in the second half, we do not think the upward inflation will be a significant concern through the end of the year.

Previous: 0.5% (Month-over-Month) Wells Fargo: 0.3% Consensus: 0.2%

Total Industrial Production Growth



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

Global Review

Better Global News Good For Emerging Markets

Emerging market economies and commodity prices have had rough time during the past year or so as the world economy, including the Chinese economy, has slowed down considerably from very strong rates of growth. However, over the past several weeks better than expected numbers coming from the global economy and the U.S. economy are starting to reverse the weakening in overall commodity prices, which could help emerging market growth during the next several quarters as well as give some support to commodity based currencies across the world.

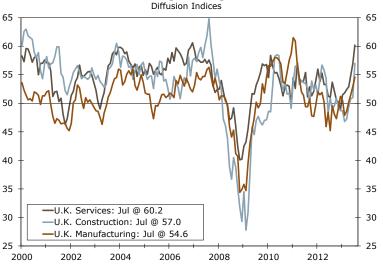
The U.K. economy has been leading the charge in terms of better-than-expected data with several indices on the real economy showing considerable strength. That was the case for July's manufacturing and services PMIs, increasing to 54.6 and 60.2, respectively, while June's industrial production improved 1.1 percent and manufacturing production surged 1.9 percent, the largest industrial and manufacturing production jumps since July of last year. For industrial production, the 1.1 percent increase was the first monthly growth after three consecutive months of zero prints. The PMI readings earlier this week show that the U.K. economy started the third quarter on a very positive note.

But the data that seemed to have moved the market during the week was the strong performance of the Chinese external sector, with year-over-year exports increasing 5.1 percent, while imports rose 10.9 percent. In the case of imports, this was the first year-over-year increase since a 16.8 percent increase in April. What is not very clear is what is happening to the Chinese manufacturing sector as the manufacturing PMI marginally improved to 50.3 in July from a 50.1 reading in June but the HSBC/Markit manufacturing PMI dropped to 47.7 from a 48.2 reading in June. On the positive side, a better than expected increase in industrial production for July, 9.7 percent year over year versus expectations of 8.9 percent, should help reduce this uncertainty, at least for now.

Meanwhile, even the Eurozone economy is starting to look a bit more promising or, perhaps better said, less daunting, as the free fall in which the zone's economy was immersed several quarters ago has all but stopped and there are some signs that may be pointing to a timid recovery. This is the case of Germany where industrial production and factory orders numbers were much better than expected this week, growing 2.4 percent and 3.8 percent, both on a month-over-month basis, respectively. Furthermore, both the PMI manufacturing and service indices for Germany were above the 50-point demarcation line that separates contraction from expansion in July, at 50.7 and 51.3, respectively.

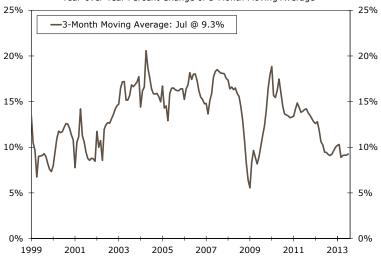
Better global economic news is positive for emerging markets and commodity markets, which have been very weak during the last year or so. Thus, if we continue to see better data points from the United States, China, the United Kingdom, the Eurozone, and Japan then the second half of the year will probably look a bit better for emerging markets than the first half.



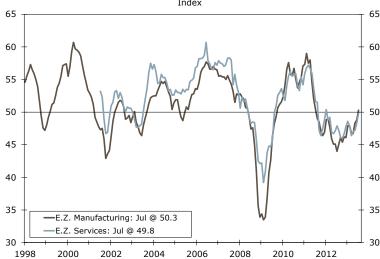


Chinese Industrial Production Index

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



Eurozone Purchasing Managers' Indices



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

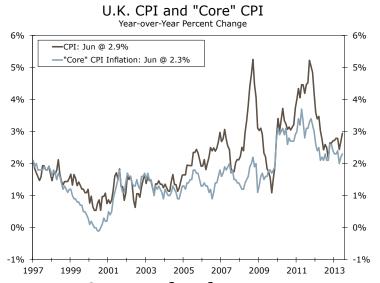
Japanese GDP • Monday

The Japanese economy grew at a 4.1 percent annualized rate in the first quarter. It was probably far too soon for the surge to have been a reflection of Abenomincs – the comprehensive reforms and policy initiatives aimed at boosting growth and ending 15 years of deflation in Japan.

The largest contribution came from consumer spending, which could be tangentially related to improved confidence and optimism associated with the prime minister's plan. On Monday, we will get a first look at second quarter growth figures which should offer a more accurate gauge of the Japanese economy is faring under the new regime. We suspect growth in consumer and business spending combined with increased government outlays will result in a 3.6 percent annualized growth rate in Q2, which puts us roughly in line with consensus expectations.

Previous: 4.1% (CAGR) Wells Fargo: 3.6%

Consensus: 3.6%



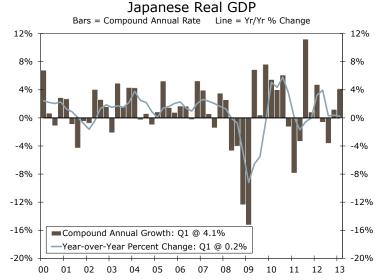
Eurozone GDP • Wednesday

In late 2011, just as the U.S. economy was returning to its pre-recession level of GDP, the recovery in the Eurozone faltered and in the fourth quarter real GDP growth showed the start of a double-dip recession. The Eurozone economy has been shrinking ever since posting six straight quarters of negative GDP growth. Today, the Eurozone economy is 3.3 percent smaller than it was at its peak even as the U.S. economy has long ago turned the corner from recovery to expansion.

When we get second quarter growth figures for the Eurozone on Wednesday, we will learn if economic growth turned positive in the second quarter. After two straight quarters of falling exports, we expect to see a partial reversal in the second quarter. That boost from net exports combined with tepid advances in consumer and business spending might be enough to put Eurozone economic growth figures back in the black.

Previous: -0.2% (Not Annualized) Wells Fargo: 0.1%

Consensus: 0.2%



U.K. CPI • Tuesday

With the publication of the Bank of England's quarterly inflation report this week, newly installed Governor Mark Carney made his first substantial mark on U.K. monetary policy.

Governor Carney issued forward guidance that the central bank's monetary policy committee (MPC) would keep the Bank Rate at 0.50 percent "at least until the headline measure of the unemployment rate has fallen to a threshold of 7 percent" subject to certain conditions related to inflation as well as approval by the U.K. government branches that oversee BoE operations.

The conditions related to inflation suggest that the MPC could back out of the low-rate pledge if it expects headline CPI to come in faster than 2.5 percent for more than 18 months. July CPI numbers are due out on Tuesday of next week and are expected to come in near that threshold.

Previous: 2.9% (Year-over-Year) Wells Fargo: 2.5% Consensus: 2.8%



Source: IHS Global Insight and Wells Fargo Securities, LLC

Interest Rate Watch

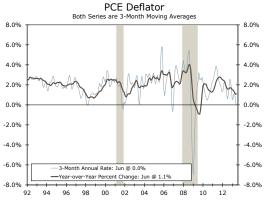
Tapering and a Steeper Yield Curve.

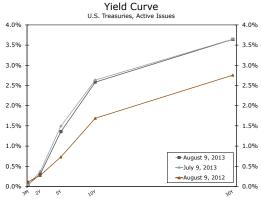
Our expectation is that despite the very low pace of inflation and a modest economic growth outlook, the Fed will begin to taper its securities purchases this fall and likely announce such a move on September 18th after the next FOMC meeting. We also do not expect the Fed to alter the fed funds rate for some time and therefore we are likely to see a steeper yield curve evolve in the U.S. over the next six months as illustrated in the middle graph to the right.

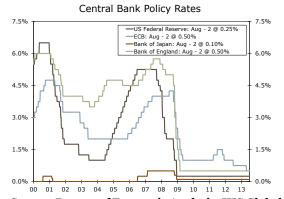
Currently, the low pace of inflation (top graph) would not support the move to taper large-scale asset purchases and therefore sets up another example of the importance to distinguish between a change in nominal versus real interest rates. As the bond market has discounted the initial steps in tapering, we have witnessed a rise in both real and nominal interest rates, and thereby a slight drag on economic growth.

This steeper yield curve with environment of modest growth and low inflation is very unusual. Typically, a steeper yield curve is associated with rising inflation expectations and/or rising expectations for stronger economic growth. Yet, the market does not reflect either of these expectations. Instead, the changes in the pace of expected Fed purchases of longdated Treasury instruments is taking place in the context of moderate growth and low inflation. Therefore, these rate increases are not reflective of the economy but will, instead, be imposed on the economy by the change in Treasury market dynamics as the Fed withdraws its purchases and other public (central bank) or private buyers need to step up to the plate.

Luckily, the decline in Fed purchases will occur at the same time there is a drop in Treasury debt finance as fiscal deficits have dropped off in the current and most likely the following fiscal year. Long-term, however, the federal deficits will rise with entitlement spending and thereby put upward pressure on the yield curve again to the extent investors discount the larger deficits while the Fed continues to leave the Fed funds rate unchanged. There is an ongoing issue with timing as a delayed Fed move on the funds rate accompanied by expected increased Treasury financing would create a very steep yield curve and unusual financial distortions.







Credit Market Insights

Easing Credit Standards Reported, So When Will Lending Accelerate?

banks Although are incrementally loosening standards, lending conditions are still far tighter than they were prior to the recession and are unlikely to return to such easy lending policies. In the Fed's latest Senior Loan Officer Survey for the third quarter, banks reported easing standards for consumer loans including, residential mortgages, credit card and auto loans, although overall, lending conditions remain relatively tight. On the residential side, demand appears to be outpacing banks' willingness to lend, possibly contributing to higher mortgage rates. Consumer credit grew at an annual rate of 6 percent in the second quarter. Once again, most of this increase came from the expansion of nonrevolving credit, where growth has been commonly tied to student loans.

Still there are some signs credit markets are in fact picking up. Auto loans, which are also included in nonrevolving credit, are seeing the greatest loosening in standards, with a net 14.1 percent of banks reporting easing lending conditions in the third quarter. Interest rates on a 48-month new car loan fell to 4.13 percent, which should provide a boost to affordability. Revolving credit also picked up in the second quarter, increasing to a 2.1 percent annual rate. While progress remains slow. incremental increases in lending and policy loosening signals continued momentum for the economic recovery.

Source: Bureau of Economic Analysis, IHS Global Insight, Bloomberg LP and Wells Fargo Securities, LLC $\,$

Mortgago Batos Week 4 Weeks Year						
Mortgage Rates	Current	Ago	Ago	Ago		
30-Yr Fixed	4.40%	4.39%	4.51%	3.59%		
15-Yr Fixed	3.43%	3.43%	3.53%	2.84%		
5/1 ARM	3.19%	3.18%	3.26%	2.77%		
1-Yr ARM	2.62%	2.64%	2.66%	2.65%		
December 1 and 12 and	Current Assets	1-Week Change	4-Week Change			
Bank Lending	(Billions)	(SAAR)	(SAAR)	Year-Ago Change		
Commercial & Industrial	\$1,570.1	-0.40%	7.53%	8.04%		
Revolving Home Equity	\$486.9	-10.18%	-7.72%	-8.61%		
	\$1,601.5	-27.61%	-3.77%	1.70%		
Residential Mortgages	\$1,001.J					
, ,	\$1,444.6	5.39%	7.50%	1.98%		

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

Topic of the Week

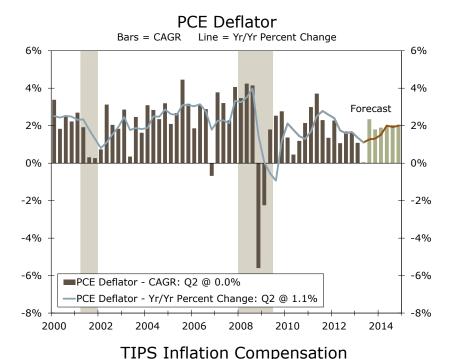
Price Pressures Have Edged Up, Better Positioning the Fed for an Eventual QE Exit

Against the backdrop of sluggish domestic and global demand, moderating inflation has become a growing concern for the financial markets and the Fed. Recently, however, consumer and producer prices have picked up modestly. The gain has in large part been driven by higher energy prices. With this increase, concerns over disinflation and even deflation have subsided somewhat, but still persist as inflation continues to run historically low. So, is the Fed truly in a position to slow monthly securities purchases when inflation is persistently running below its 2 percent objective?

At the start of the second quarter, the Fed's preferred measure of consumer inflation, the headline personal consumption expenditures (PCE) deflator, fell to a three-and-a-half year low of 0.9 percent year over year. Yet over the quarter we have seen a broad, albeit modest, firming in prices. Unrest in the Middle East and consumer expectations that the economy was indeed improving, have pushed oil prices higher and provided some upward pressure on wholesale and consumer energy prices. This has swung monthly changes across most price measures back into positive territory, while core prices have marched steadily higher. Price gains continue to be modest, however, as high unemployment and underemployment has restrained wage growth.

We expect given the pace of employment growth over the past year and the outlook for better growth in the United States and for the global economy over the next few quarters, inflation will move higher over the forecast horizon. Following these supportive fundamentals, inflation expectations have ticked up over the past month. Therefore, we believe concerns over low inflation will not prevent the Fed from beginning to scale back asset purchases as early as September.

For a more detailed analysis of recent inflation trends, see "Inflation Chartbook: August 2013", available on our website.





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

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			
	Thursday	1 Week	1 Year
	8/8/2013	Ago	Ago
3-Month T-Bill	0.04	0.04	0.11
3-Month LIBOR	0.26	0.27	0.44
1-Year Treasury	0.09	0.11	-0.01
2-Year Treasury	0.30	0.32	0.27
5-Year Treasury	1.37	1.49	0.73
10-Year Treasury	2.61	2.71	1.65
30-Year Treasury	3.68	3.75	2.75
Bond Buyer Index	4.70	4.77	3.66

Foreign Exchange Rates						
	Thursday	1 Week	1 Year			
	8/8/2013	Ago	Ago			
Euro (\$/€)	1.336	1.321	1.237			
British Pound (\$/₤)	1.550	1.512	1.566			
British Pound (£/€)	0.862	0.873	0.790			
Japanese Yen (¥/\$)	96.400	99.540	78.430			
Canadian Dollar (C\$/\$)	1.042	1.035	0.994			
Swiss Franc (CHF/\$)	0.921	0.937	0.971			
Australian Dollar (US\$/A\$)	0.907	0.893	1.057			
Mexican Peso (MXN/\$)	12.670	12.824	13.145			
Chinese Yuan (CNY/\$)	6.121	6.130	6.361			
Indian Rupee (INR/\$)	60.861	60.444	55.415			
Brazilian Real (BRL/\$)	2.304	2.304	2.021			
U.S. Dollar Index	81.147	82.336	82.394			

Source: Bloomberg LP and Wells Fargo Securities, LLC

Foreign Interest Rates					
	Thursday	1 Week	1 Year		
	8/8/2013	Ago	Ago		
3-Month Euro LIBOR	0.15	0.15	0.24		
3-Month Sterling LIBOR	0.51	0.51	0.71		
3-Month Canadian LIBOR	1.17	1.17	1.31		
3-Month Yen LIBOR	0.16	0.16	0.20		
2-Year German	0.17	0.15	-0.05		
2-Year U.K.	0.40	0.32	0.13		
2-Year Canadian	1.15	1.19	1.16		
2-Year Japanese	0.11	0.12	0.09		
10-Year German	1.70	1.67	1.42		
10-Year U.K.	2.50	2.40	1.57		
10-Year Canadian	2.50	2.55	1.82		
10-Year Japanese	0.76	0.80	0.80		

Commodity Prices					
	Thursday	1 Week	1 Year		
	8/8/2013	Ago	Ago		
WTI Crude (\$/Barrel)	103.89	107.89	93.35		
Gold (\$/Ounce)	1290.80	1310.11	1612.13		
Hot-Rolled Steel (\$/S.Ton)	642.00	642.00	640.00		
Copper (¢/Pound)	327.30	316.60	342.15		
Soybeans (\$/Bushel)	13.23	13.89	16.05		
Natural Gas (\$/MMBTU)	3.24	3.39	2.93		
Nickel (\$/Metric Ton)	13,903	13,802	15,694		
CRB Spot Inds.	521.73	520.80	510.20		

Next Week's Economic Calendar

	Monday	Tuesday	Wednesday	Thursday	Friday
	12	13	14	15	16
		Import Price Index	PPI	CPI	Housing Starts
æ		June -0.2%	June 0.8%	June 0.5 %	June 836K
Data		July 0.6% (W)	July 0.6% (W)	July 0.3% (W)	July 941K(W)
		Retail Sales		Industrial Production	Building Permits
U.S		June 0.4%		June 0.3%	June 911K
		July 0.2% (W)		July 0.2% (W)	July
	Japan	U.K.	Eurozone	U.K	Eurozone
ata	GDP (QoQ)	CPI (MoM)	GDP (QoQ)	Retail Sales (MoM)	CPI (MoM)
	Previous (Q1) 1.0%	Previous (Jul) -0.2%	Previous (Q1) -0.2%	Previous (Jun) 0.2%	Previous (Jun) 0.1%
Global D	Japan	Germany	Brazil		
310	Industrial Production (MoM)	ZEW Survey (Current Situation) Retail Sales (YoY)		
O	Previous (May) 1.9%	Previous (Jul) 10.6	Previous (May) 4.5%		
	Note: (W) = Wells Fargo Estimate (C) = Consensus Estimate			

Source: Bloomberg LP and Wells Fargo Securities, LLC

Wells Fargo Securities, LLC 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 Bryson, Ph.D.	Global Economist	(704) 410-3274	jay.bryson@wellsfargo.com
Sam Bullard	Senior Economist	(704) 410-3280	sam.bullard@wells fargo.com
Nick Bennenbroek	Currency Strategist	(212) 214-5636	nicholas. bennen broek @wells fargo.com
Eugenio Aleman, Ph.D.	Senior Economist	(704) 410-3273	eugenio.j.aleman@wellsfargo.com
Anika Khan	Senior Economist	(704) 410-3271	anika.khan@wellsfargo.com
Azhar Iqbal	Econometrician	(704) 410-3270	azhar.iqbal@wellsfargo.com
Tim Quinlan	Economist	(704) 410-3283	tim.quinlan@wellsfargo.com
Michael A. Brown	Economist	(704) 410-3278	michael.a.brown@wellsfargo.com
Sarah Watt	Economist	(704) 410-3282	sarah.watt@wellsfargo.com
Michael T. Wolf	Economist	(704) 410-3286	michael.t.wolf@wellsfargo.com
Sara Silverman	Economic Analyst	(704) 410-3281	sara.silverman@wellsfargo.com
Zachary Griffiths	Economic Analyst	(704) 410-3284	zachary.griffiths@wellsfargo.com
Peg Gavin	Executive Assistant	(704) 410-3279	peg.gavin@wellsfargo.com
Cyndi Burris	Administrative Assistant	(704) 410-3272	cyndi.burris@wellsfargo.com

Wells Fargo Securities Economics Group publications are produced by Wells Fargo Securities, LLC, a U.S broker-dealer registered with the U.S. Securities and Exchange Commission, the Financial Industry Regulatory Authority, and the Securities Investor Protection Corp. Wells Fargo Securities, LLC, distributes these publications directly and through subsidiaries including, but not limited to, Wells Fargo & Company, Wells Fargo Bank N.A., Wells Fargo Advisors, LLC, Wells Fargo Securities International Limited, Wells Fargo Securities Asia Limited and Wells Fargo Securities (Japan) Co. Limited. Wells Fargo Securities, LLC. ("WFS") is registered with the Commodities Futures Trading Commission as a futures commission merchant and is a member in good standing of the National Futures Association. Wells Fargo Bank, N.A. ("WFBNA") is registered with the Commodities Futures Trading Commission as a swap dealer and is a member in good standing of the National Futures Association. WFS and WFBNA are generally engaged in the trading of futures and derivative products, any of which may be discussed within this publication. The information and opinions herein are for general information use only. Wells Fargo Securities, LLC does not guarantee their accuracy or completeness, nor does Wells Fargo Securities, LLC assume any liability for any loss that may result from the reliance by any person upon any such information or opinions. Such information and opinions are subject to change without notice, are for general information only and are not intended as an offer or solicitation with respect to the purchase or sales of any security or as personalized investment advice. Wells Fargo Securities, LLC is a separate legal entity and distinct from affiliated banks and is a wholly owned subsidiary of Wells Fargo Securities, LLC is a separate legal entity and distinct from affiliated banks and is a

Important Information for Non-U.S. Recipients

For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Services Authority. The content of this report has been approved by WFSIL a regulated person under the Act. WFSIL does not deal with retail clients as defined in the Markets in Financial Instruments Directive 2007. The FSA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, not will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients. This document and any other materials accompanying this document (collectively, the "Materials") are provided for general informational purposes only.

SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY LOSE VALUE

