24 October 2014 | 16 pages

Developed Markets
Western Europe

Euro Economics Weekly

Will the Euro Area Suffer from Oil Blues?

- **Can the ECB ignore the fall in oil prices?** — this is the key question that needs to be answered to determine the Governing Council's action in coming weeks and months. The ECB has a choice: it can focus on the long-term positive effects of a lower oil price, particularly in terms of activity. But we believe it will be hard to ignore the downward impact of lower commodity prices on near-term inflation rates.

- **Fragility of medium-term inflation expectations** — at a time when inflation expectations are showing signs of becoming dis-anchored, we argue that ignoring the downside risks to economic activity signaled by a lower oil price would be dangerous. It would likely put the ECB in a position where meeting its medium-term price stability mandate would be even harder to achieve, damaging its credibility.

- **Core inflation could fall further** — there are also possible second round effects on core inflation where an extended period of commodity price disinflation also creates negative feedback loops. Hence, we believe that the ECB will react with more stimulus as part of a QE programme, in light of the downward drift in both selling price expectations and demand forecasts that tend to coincide with oil price falls.

Guillaume Menuet
+44-20-7986-1314
guillaume.menuet@citi.com

Ebrahim Rahbari
+44-20-7986-6522
ebrahim.rahbari@citi.com

Michael Saunders
+44-20-7986-3299
michael.saunders@citi.com

Antonio Montilla
+44-20-7986-3282
antonio.montilla@citi.com

Ann O'Kelly
+44-20-7986-3297
ann.okelly@citi.com

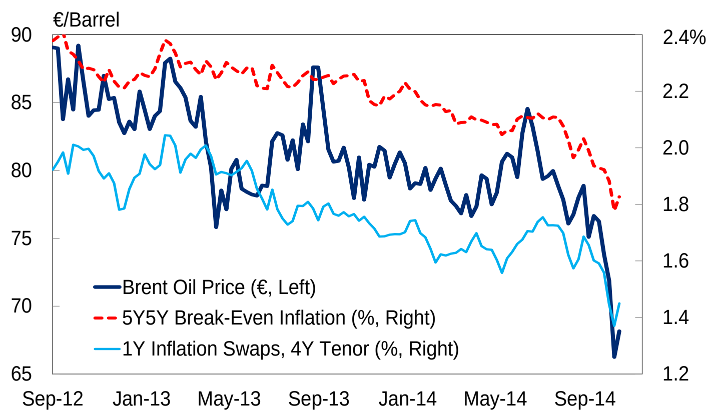
Click to play
Guillaume Menuet

Figure 1. Citi Forecasts

	$/€	Euro Repo	10-yr Bunds	£/€	UK Bank Rate	10-Yr Gilt Bund
4Q 14	1.21	0.05	0.75	0.76	0.50	177
2Q 15	1.15	0.05	1.25	0.73	1.00	178

Source: Citi Research

Figure 2. Euro Area – Brent (€), 5Y5Y Break-Even Inflation and Inflation Swaps (%), 2012-Oct 14



Sources: Bloomberg and Citi Research

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Will the Euro Area Suffer from Oil Blues?

In recent weeks, the price of oil has dropped noticeably, prompting many questions about how the central bank should cope in the face of more imported disinflation. Should it deliver more monetary policy stimulus in the face of a weakening global demand picture or consider the move in commodity prices as a positive factor on households' disposable income and corporate profitability? Could there be second-round effects that would further exacerbate the increasingly fragile anchoring of medium-term inflation expectations? We incorporate the lower oil price trajectory into our forecasts and update our core inflation models. We analyse firms' reaction to swings in oil prices in terms of selling price expectations and demand forecasts. Finally, we present the findings of a vector auto-regression (VAR) model investigating the impact of a shock in oil prices on key macroeconomic variables.

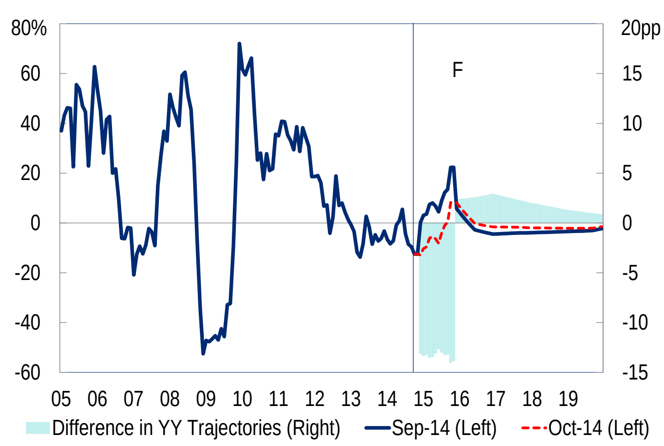
Oil prices have collapsed in recent weeks

Our colleagues from commodity strategy again lowered their Brent forecasts in the last few days, now targeting Brent crude oil prices of $92 for 4Q-14 and 1Q-15 compared to the levels of $102 and $100 they expected in September, representing drops around 10% and 8%, respectively. The commodities team argues that the correction is partly the result of a "*sputtering global economy meaning significantly lower petroleum product demand growth*", but also notes that the "*supply side has also contributed significantly, both from OPEC and non-OPEC sources*".

Citi's euro area inflation forecast is based on oil futures and is benchmarked on the December contracts for the relevant years, from which we interpolate monthly levels to use as inputs to estimate the energy component of euro area HICP. Compared to our last forecast round on September 24, Dec-14 futures Brent prices have fallen by 11.7%, Dec-15 prices by 11.2% and Dec-16 prices by 9.3%.

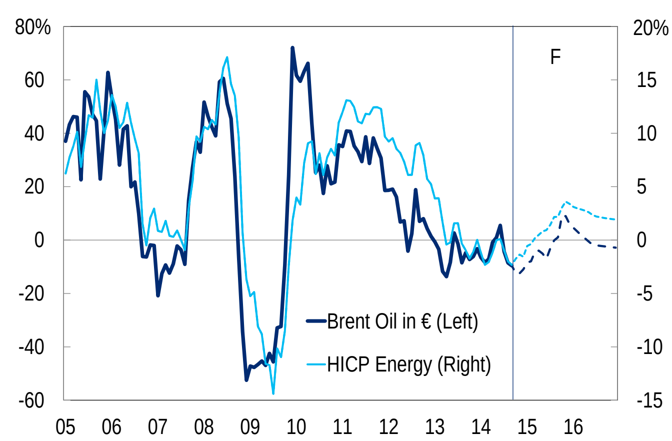
Translated into euros, and based on an unchanged EUR/USD profile compared to the September forecast round, the recent fall in oil futures translates into an average baseline shift of -12pp for 2015, +2.6pp in 2016 and +2.4pp in 2017 (see Figure 3). Assuming a full pass-through of these lower Brent futures into the energy component of the HICP, energy prices would likely increase only by 1.4% (instead of 4.2%) in 2015, 2.3% (instead of 2.4%) in 2016 and 1.7% (instead of 1.4%) in 2017 (see Figure 4). Given the 10.8% weight for the energy component, the contribution of these oil price changes to the headline HICP rate would be -0.3pp in 2015, and negligible (ie within the margin of error) for both 2016 and 2017.

Figure 3. Euro Area — Brent Oil Prices (% YY Change), 2005-2019F



Sources: Bloomberg and Citi Research

Figure 4. Euro Area — Oil Prices and HICP Energy (% YY Change), 2005-2016F



Sources: Eurostat and Citi Research

What are the secondary effects in terms of our core CPI model? Our updated Phillips curve model continues to suggest that there are a number of downside risks to the trajectory of the underlying inflation rate. **First**, the very slow pace at which the output gap is closing could be revised down, in our view, in early November when the European Commission publishes its updated autumn forecasts. **Second**, a positive contribution from a weaker euro trade-weighted exchange rate to inflation is not anticipated to feed through before Q3 2015. Note that this scenario assumes that the euro falls further against the dollar in the next few quarters as investors price in a growing divergence in EA and US monetary policy stances: between a more accommodative ECB focused on re-anchoring medium-term inflation expectations, and a less dovish Federal Reserve set to announce the end of tapering in October. However, since troughing on September 30 at 103.07, the euro area narrow (12 countries) effective exchange rate has appreciated by 0.9%. **Third**, we see risks of more disinflation tailwinds from the lagged effects of falling food and energy prices, anticipating positive contributions from these components into our core inflation equation only in Q2-15 and Q3-15, respectively.

Overall, we agree with the consensus that headline inflation rates will be higher in 2016 than at present, mainly as a consequence of the sizeable drop in the euro exchange rate since the spring of 2014. But we find it hard to share the ECB's optimism with respect to core inflation projections. In September the ECB staff forecasts showed that HICP excluding energy and food would average 0.9% in 2014, rising to 1.2% in 2015 and 1.5% in 2016. For the 2014 forecast to be accurate, core inflation would need to rise to at least 0.9% YY in Q4-14. We think that this is unlikely anticipating a fifth successive quarter of core inflation at 0.7%.

The most likely outcome, in our view, is that the December staff projections will once again lower the trajectory for core inflation, for both 2015 and 2016. We believe that a lower core inflation reading in Q4-14 and a more conservative baseline with respect to the pace of economic activity in a period of falling business confidence will make this probable, despite the positive contribution that a lower exchange rate will have on the GDP trajectory for 2015-16, given the standard lags. We provide below a summary table (see Figure 5) of the sensitivity of key macroeconomic variables to changes in the euro effective exchange rate.

Figure 5. Euro Area — Impact of a 10% appreciation of the euro effective exchange rate on:

	Exports	Imports	GDP	HICP	Exports	Imports	GDP	HICP
	Percentage deviation from baseline (cumulative)				Percentage deviation from baseline (per year)			
Year 1	-1.20	-0.60	-0.20	-0.25	-1.20	-0.60	-0.20	-0.25
Year 2	-1.90	-0.80	-0.50	-0.70	-0.70	-0.20	-0.30	-0.45
Year 3	-1.90	-0.70	-0.75	-1.20	0.00	0.10	-0.25	-0.50

Note: the figures presented above correspond to the average of the Area Wide Model (AWM) and Global VAR (GVAR) used by the ECB. These estimates are presented in "*The changing role of the exchange rate in a globalised economy*", ECB Occasional Paper Series, No 96, September 2008

Sources: European Central Bank and Citi Research

Will the large drop in oil prices lead to a further drop in selling price expectations?

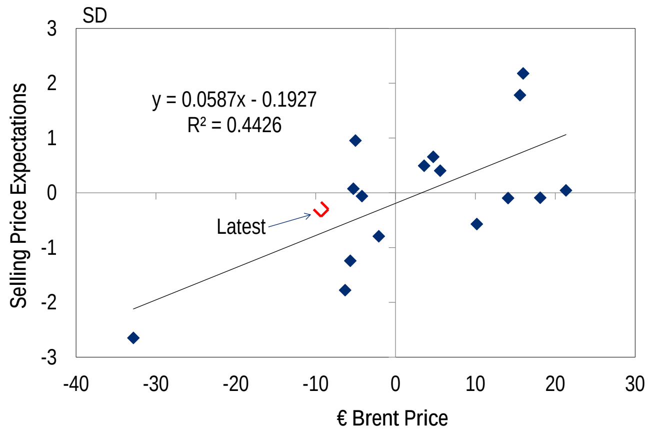
We argued above that the lower Brent price will shave as much as 0.3pp from our euro area HICP inflation rate in 2015 and increases the likelihood of a lower trajectory for core inflation than currently used as a baseline by the ECB. But we want to focus now on the relationship between sentiment surveys and oil prices, to determine whether significant swings in oil prices can impact firms' expectations.

First, we ask whether a large drop in oil prices can lead to a fall in firms' selling price expectations. We compare year-to-date changes in the Brent prices

(expressed in euros), with year-to-date changes in selling price expectations (derived from the industry, services, retail and construction surveys and expressed in standard deviation from long-term averages). Historically, oil prices show some volatility, often rising one year to fall the next. So the current period (2012-14) of three successive years of oil price declines is unusual. Between January 2012 and September 2014, the price of Brent has fallen by €25, while firms' selling prices expectations have declined by around 1.1 standard deviations. We find that there is only one comparable period when oil prices rose for three consecutive years. Between 2009 and 2011, the price of Brent rose by almost €50 and firms' selling price expectations climbed by 2.3 standard deviations.

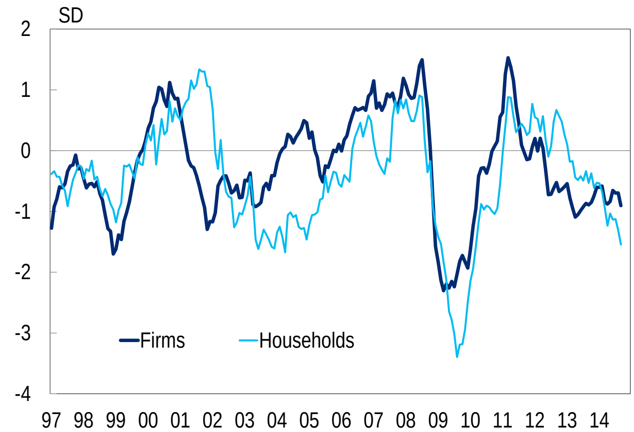
These comparisons suggest that there is a relatively linear relationship between these two variables and that it is applicable to periods of large cumulative price changes. Based on our forecasts that the € Brent oil price will continue to fall into year-end, we estimate that selling price expectations could decline by another 0.3SD in the final quarter of 2014. Similarly, looking ahead to 2015 and assuming that the € Brent oil price increases by around €5 by year-end, firms' selling prices expectations would likely increase by only 0.1SD (see Figure 6).

Figure 6. Euro Area — Brent Prices and Selling Price Expectations (Annual Changes), 1998-2014



Sources: European Commission, Bloomberg and Citi Research

Figure 7. Euro Area — Selling Price Expectations (Standard Deviations from Long-Term Average), 1997-Sep 14

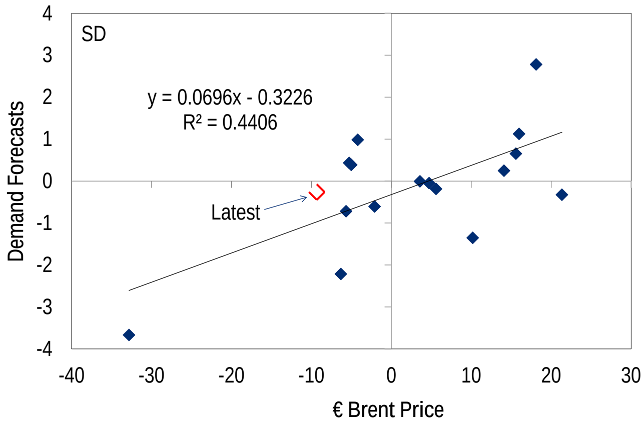


Sources: European Commission, Bloomberg and Citi Research

These estimates suggest that firms are unlikely to change their behaviour in coming quarters, assuming no material change in oil prices (see Figure 7). Lower input costs could therefore be used to increase profit margins, and improve the corporate sector's ability to invest if/when business conditions improve. For the time being, we believe that firms are exercising caution and are therefore more likely to interpret the fall in oil prices as a negative development stemming for a deteriorating demand picture.

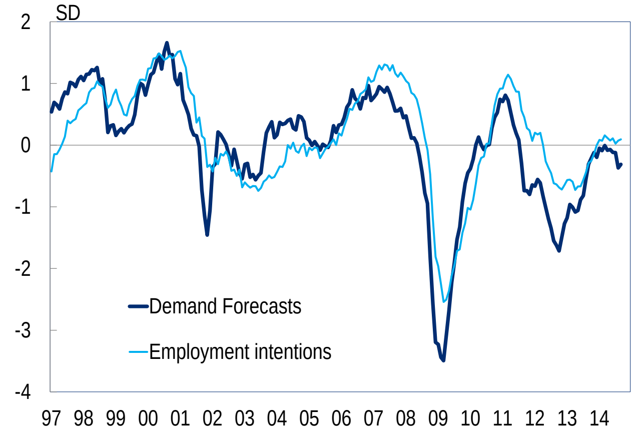
Second, we ask whether in light of a falling Brent oil price, the modest retrenchment in firms' demand forecasts over the last six months could have further to run. We run the same analysis and find a robust relationship between Brent prices and demand forecasts. As can be seen in the scatter plot below (see Figure 8), the red dot is above the best fit line, suggesting that the adjustment in demand forecasts has been less severe than would be implied by the historical relationship. If this scenario of a further drop in demand forecasts were to materialise (we presented some evidence of risks of weaker business confidence in the quarters ahead in a recent Euro Economics Weekly), employment expectations would also likely decline given the close historical relationship between these series (see Figure 9).

Figure 8. Euro Area — Brent Prices and Demand Forecasts (Annual Changes), 1998-2014



Note: Demand Forecasts correspond to production expectations in industry, retail expected business situation in the retail sector and expected demand in services.
Sources: European Commission, Bloomberg and Citi Research

Figure 9. Euro Area — Firms' Demand Forecasts and Employment Expectations (SD from Long-Term Average), 1997-Sep 14



Sources: European Commission, Bloomberg and Citi Research

VAR Estimations

To complete our analysis, we use a VAR approach to investigate in a more systematic manner the impact that a negative shock in oil prices could have on key euro area macroeconomic variables. In particular, we want to focus on the HICP inflation rate, total employment, private consumption, and profits of non-financial corporations.

According to our estimates, a one standard deviation shock to the oil price (equivalent to lowering the Brent price to €66.4 per barrel from an average €77 in Q3 2014) would reduce euro area HICP inflation by 0.8pp after four quarters in our sample period (2000-2014 Q1). The negative effect on inflation would typically last six quarters, after which the HICP inflation rate begins to rise (see Figure 10). The total cumulative effect of the negative oil price shock amounts to 0.7pp after eight quarters. These results are consistent with our earlier survey-based findings on the impact of falling oil prices on firms' selling price expectations.

The VAR model also shows a positive impact on both employment and private consumption, with household spending tending to accelerate more noticeably after two years (see Figure 11). Interestingly, the oil price shock has a negative impact on non-financial corporate profits initially, before turning positive after two years. We believe that this can be explained by the negative implications in terms of global demand expectations normally associated with a fall in the price of oil in a situation of ample supply. The secondary effect is related to the fall in the input costs of production, together with an increase in demand, contributing to higher profits.

Figure 10. Euro Area — Estimated Effects on EA HICP YY Inflation After a 1SD Shock in Brent Oil Prices, 2000-Q1 2014

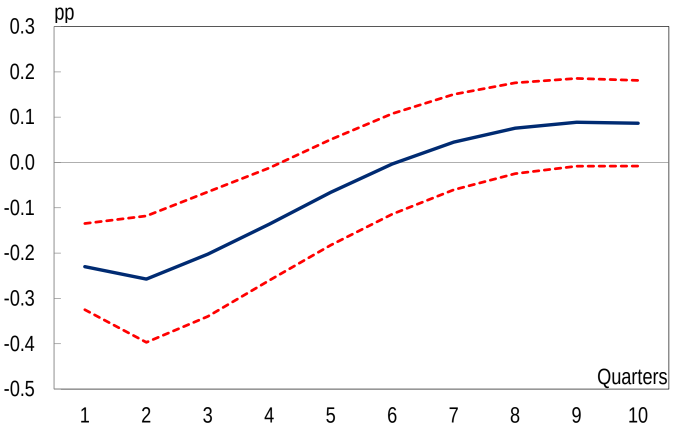
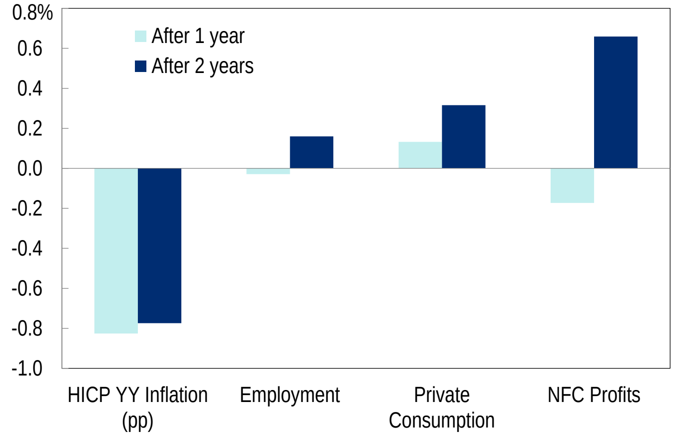


Figure 11. Euro Area — Cumulative Estimate Effects on Selected EA Macro Variables After a 1SD Shock in Brent Oil Prices, 2000-Q1 2014



Note: 1SD shock corresponds to a 14% decline in the level of oil prices. Estimates are based on a five-variable first-order VAR of quarterly oil Brent prices (in euro terms), the EA HICP YY inflation rate, total EA employment, EA real private consumption, and gross operating profits of EA non-financial corporations (in that order). Shocks are identified through a Cholesky decomposition. Figure 10 shows estimated responses of HICP inflation by quarter (dotted lines correspond to (+/- 2SD) confidence intervals), while Figure 11 shows the cumulative impulse responses after four and eight quarters.
Sources: Eurostat and Citi Research

Conclusions

The recent drop in the price of oil has been sizeable and will likely add to the disinflationary tendencies that have been prevalent across the euro area in the last 18 months. These lower commodity price inputs will mechanically lower the euro area inflation trajectory when the ECB releases its next set of staff macroeconomic projections as part of the forecasting round that will also feature the first estimates of GDP and inflation for 2017. While these are likely to show higher inflation rates over the forecast horizon, given the model estimates of a positive effect from the weaker euro area exchange rate, it is doubtful in our view whether the mid-point for 2017 and the Q4-17 point estimate will be close enough to the ECB's medium-term objective of "*below, but close to, 2%"* for the Governing Council to feel comfortable with the current degree of monetary policy accommodation.

Indeed, firms' selling price expectations are likely to weaken further in coming months in response to the lower oil price and concerns about global demand, and recent evidence from the October PMI reports showed that output prices had fallen at their fastest rate since February 2010, with services prices lower for the 35th month. At the same time, market-based inflation expectations are showing little confidence in the ECB's ability to deliver with respect to its price stability mandate. For instance, one-year inflation in four years' time (ie 2018) has been trading below 1.5% since Oct 6 (see Figure 2 on the Front Page).

While the ECB will probably decide to focus for the time being on the long-term positives of a lower oil price in terms of employment, household consumption and non-financial corporate profits, we believe that a growing majority of GC members will argue in favour of more aggressive non-standard measures soon, particularly if the soon-to-be-released amounts of the third covered bond purchase programme show that the ECB is struggling to counteract the decline in the size of its balance sheet. We continue to expect the ECB to embark on a full scale QE at some point in late 2014 or early 2015, announcing that it is altering the composition of its asset purchase programme to incorporate government bonds to attempt to bring inflation closer to 2% over the relevant forecast horizon.

Figure 12. Key Economic Indicators (27 October – 31 October 2014)

Monday 27 October		Forecast	Last
08:30	Netherlands: Producer Confidence, Oct		
08:30	Sweden: Household Lending, Sep	5.7% YY	5.6% YY
09:00	Germany: ifo Business Climate, Oct		
09:00	Euro Area: M3, Sep	2.4% YY	2.0% YY
11:00	UK: CBI Retail Survey, Oct		
Tuesday 28 October		**Forecast**	**Last**
07:00	Germany: Import Prices, Sep	0.0% MM, -1.9% YY	-0.1% MM, -1.9% YY
08:30	Sweden: Riksbank Interest Rate Decision	20bp Cut to 0.05%	0.25%
08:30	Sweden: Producer Prices, Sep		
08:30	Sweden: Trade Balance, Sep		
08:30	Sweden: Retail Sales, Sep	-0.2% MM	1.9% MM
09:00	Italy: Business Confidence, Oct	94.8	95.1
	Spain: Budget Balance, Sep YTD	€-30.9 Billion	Jan-Sep 2013: €-36.5 Billion
Wednesday 29 October		**Forecast**	**Last**
07:45	France: Consumer Confidence, Oct	85	86
08:00	Spain: Retail Sales, Sep	1.9% YY	0.9% YY
08:00	Sweden: Consumer Confidence, Oct	102.8	102.4
	Manufacturing Confidence, Oct	102.9	102.8
09:00	Norway: LFS Unemployment Rate, Sep	3.4%	3.4%
09:00	Norway: Retail Sales Ex Petrol Stations, Sep	0.2% MM	0.6% MM
09:30	UK: Mortgage Approvals, Sep	64.5K MM, -3.6% YY	64.2K MM, 1.0% YY
09:30	UK: Insolvency Statistics, 3Q		
11:00	Ireland: Retail Sales, Sep		
14:00	Belgium: GDP, 3Q Flash	0.0% QQ, 0.7% YY	0.1% QQ, 1.0% YY
18:00	US: FOMC Outcome		
Thursday 30 October		**Forecast**	**Last**
07:00	UK: Nationwide House Prices, Oct		
08:00	Switzerland: KOF Economic Barometer, Oct		
08:00	Spain: GDP, 3Q Flash	0.5% QQ	0.6% QQ
08:00	Spain: HICP, Oct Flash	-0.2% YY	-0.3% YY
08:55	Germany: Unemployment, Oct	15K MM SA, 63K MM NSA	13K MM SA, -94K MM NSA
10:00	Euro Area: Economic Sentiment, Oct	99.3	99.9
13:00	Germany: HICP, Oct Flash	-0.2% MM, 0.8% YY	0.0% MM, 0.8% YY
	National CPI, Oct Flash	-0.2% MM, 0.8% YY	0.0% MM, 0.8% YY
Friday 31 October		**Forecast**	**Last**
00:01	UK: GfK Consumer Confidence, Oct		
07:00	Germany: Retail Sales (ex Cars), Sep	-0.5% MM, 1.8% YY	1.5% MM, 2.4% YY
07:45	France: Consumer Spending, Sep	-0.3% MM, 0.9% YY	0.7% MM, 1.4% YY
07:45	France: Producer Prices, Sep		
09;00	Norway: Registered Unemployment Rate, Oct	2.6%	2.7%
09:00	Norway: Credit Indicator C2, Sep		
09:00	Norway: Norges Bank Daily FX Purchases, Nov	NOK -250M/Day	NOK -250M/Day
09:00	Italy: Unemployment Rate, Sep	12.3%	12.3%
09:30	UK: National Accounts Blue Book, 2014		
09:30	UK: Balance of Payments Pink Book, 2014		
10:00	Italy: HICP, Oct Flash	0.1% YY	-0.1% YY
10:00	Greece: Retail Sales, Aug		
10:00	Euro Area: Unemployment Rate, Sep	11.5%	11.5%
10:00	Euro Area: HICP, Oct Flash	0.4% YY	0.3% YY
	Spain: Current Account, Aug		
During The Weekend			
	North America: Clocks go back one hour (at 2am on Nov 2)		

Sources: National statistical offices, central banks and Citi Research

Figure 13. Economic Indicators – Comments: Euro Area, Germany and Belgium

Euro Area			
Oct 27 09:00 London Time	*M3 Money Supply, Sep*	Forecast: 2.4% YY	Prior: 2.0% YY
	We look for a further improvement in M3 annual growth to 2.4%, corresponding to a 0.2% MM uptick in September. Our forecast would imply the fastest rate of M3 growth since Sep-13. Although we expect that adjusted flows of private sector lending likely turned negative again in September to the tune of €2bn, this will be enough to drive the annual growth in private sector loans to -0.6% YY from -0.9% in August. We anticipate that private sector lending flows will turn positive in 2015, post the AQR, and once economic sentiment recovers sometime in the late spring.		
Oct 30 10:00 London Time	*Economic Sentiment, Oct*	Forecast: 99.3	Prior: 99.9
	The economic sentiment indicator (ESI) compiled by the European Commission is likely to have posted another sizeable drop in October, worth 0.6 point to 99.3. This third successive drop would imply confidence being at its lowest level since December 2013 or -0.2SD below its long-term average. We anticipate the drop in the headline measure to reflect broad-based weakening across sectors, with the exception of the household sector, as the flash sentiment indicator was largely unchanged at -11 (0.2 SD above its l-t average). At the start of 4Q, the expected ESI reading would be the lowest since 4Q-13, pointing to a likely slowdown in the pace of economic activity in the latter part of 2014.		
Oct 31 10:00 London Time	*Unemployment Rate, Sep*	Forecast: 11.5%	Prior: 11.5%
	The jobless rate likely remained stable at 11.5% in September, breaking with the pattern of the past year when the unemployment rate declined by 0.1pp every two months. Despite favourable developments in the euro area periphery, we doubt that these will be enough to compensate for disappointing readings in France and Italy, while Germany is also beginning to show signs of stabilisation in unemployment metrics.		
Oct 31 10:00 London Time	*HICP, Oct Flash*	Forecast: 0.4%	Prior: 0.3% YY
	We look for a 10bp increase in the inflation rate to 0.4% YY in October. Unfavourable base effects (prices fell by 0.21% MM on a seasonally adjusted basis in Oct-12) are likely to push the headline rate upward. The main contributors are likely to be services prices, energy and unprocessed food prices, with largely similar contributions. Going into year-end, we estimate that euro area inflation rates will likely be relatively stable, with the fourth quarter averaging 0.4% YY.		
Germany			
Oct 28 07:45 London Time	*Import Prices, Sep*	Forecast: 0.0% MM, -1.9% YY	Prior: -0.1% MM, -1.9% YY
	We expect the YY rate of import price decline to remain stable in September at -1.9% YY. In August and July, the rate of decline in German import prices widened again after three months where the rate of decline had moderated quite sharply from -3% YY to closer to -1% YY, with declines in the prices of imported energy the main driver. In coming months the weaker exchange rate should put some upward pressure on import prices, but for now weaker commodity prices provide an offset.		
Oct 30 08:55 London Time	*Unemployment, Oct*	Forecast: 15K MM SA, 63K MM NSA	Prior: 13K MM SA, -94K MM NSA
	We expect yet another small uptick in German unemployment in October in seasonally-adjusted terms (still implying a somewhat larger increase in the number of unemployed on a non-seasonally-adjusted nature). The German labour market remains strong, with the unemployment rate still at the lowest level since 1991. But along with some weakness in other indicators, the gradual decline in unemployment seems to have stalled in recent months. Thus, in the six months between November 2013 and April 2014, unemployment fell by 14K per month on average (seasonally adjusted), whereas it has risen by 5K on average in the five months since.		
Oct 30 13:00 London Time	*HICP, Oct Flash* *National CPI, Oct Flash*	Forecast: -0.2% MM, 0.8% YY Forecast: -0.2% MM, 0.8% YY	Prior: 0.0% MM, 0.8% YY Prior: 0.0% MM, 0.8% YY
	We expect German inflation in October to be relatively unchanged, at 0.8% YY for both the national definition and the HICP. German inflation has remained below, but close to 1% inflation since May, as food and energy price increases fell whereas core inflation remained quite stable. We still expect German inflation to pick up gradually over the course of 2015 as the degree of import price declines moderates and domestic price pressures rise modestly.		
Oct 31 07:45 London Time	*Retail Sales (ex Cars), Sep*	Forecast: -0.5% MM, 1.8% YY	Prior: 1.5% MM, 2.4% YY
	August saw a large increase in German retail sales (excluding car sales), even if it was later revised down somewhat (from +2.5% MM to +1.5% MM), leaving retail sales 0.5% QQ above the level in 1Q and almost 2% higher than in August of 2013. However, the increase came in the wake of four declines in the previous five months. Further declines in consumer confidence and a payback from the strong August reading lead us to expect a small decline in September, even though that would still leave retail sales higher by 0.5% in 3Q than in 2Q.		
Belgium			
Oct 29 14:00 London Time	*GDP, 3Q Flash*	Forecast: 0.0% QQ, 0.7% YY	Prior: 0.1% QQ, 1.0% YY
	We anticipate that economic activity was largely unchanged in the third quarter, but would not rule out a small contraction in GDP for the first time since 4Q-12, based on indications of a much softer export picture. Business surveys have been pointing to a slowdown in GDP growth throughout the quarter and our models suggest that the erosion in confidence recorded since June should translate into a drop of around ¼ point in the YY GDP growth rate. Domestic demand is likely to have risen for the seventh successive quarter, albeit marginally (0.1pp) while net trade probably contributed negatively to GDP growth for the second quarter running.		

Sources: National statistical offices, national central banks, Bloomberg, and Citi Research forecasts.

Figure 14. Economic Indicators – Comments: France, Italy, Spain and United Kingdom

France			
Oct 29 07:45 London Time	*Consumer Confidence, Oct*	Forecast: 85	Prior: 86
	We expect that consumer confidence probably declined in October to a four-month low of 85. We doubt that the latest drop in the inflation rate will provide much comfort with respect to disposable income gains. Instead, with the press focusing on the dangers of deflation, households facing a larger tax bill than last year and indications that unemployment rose again in August, we suspect that a growing majority of households will turn less optimistic. The prospect of income tax cuts for lower-income households in 2015 could still support confidence in coming months, but we believe that a more aggressive programme of structural reforms and expenditure cuts will need to be delivered for household sentiment to recover.		
Oct 31 07:45 London Time	*Consumer Spending, Sep*	Forecast: -0.3% MM, 0.9% YY	Prior: 0.7% MM, 1.4% YY
	We forecast a 0.3% MM drop in consumer spending in September. Although the evidence from surveys, ranging from the Retail PMI to the INSEE retail survey, suggests that activity and confidence likely weakened further, we believe that the contraction was contained last month. The debate about the introduction of means-testing for family benefits and some likely payback after the traditional back-to-school outlays are more likely to translate into a much weaker spending picture in the fourth quarter, in our view. Note that the lack of job creation will remain a headwind to a recovery in household spending given the stability in households' savings ratio at a very high level of 15.9% of gross disposable income.		
Italy			
Oct 28 09:00 London Time	*Business Confidence, Oct*	Forecast: 94.8	Prior: 95.1
	We expect business confidence to show a further deterioration in October, following MM declines of 0.3 points in Sept and 3.6 points in August, amid ongoing uncertainties related to the approval of the 2015 Fiscal Budget bill. This will leave the business confidence index below its long-term average, suggesting a very subdued industrial output dynamic in 4Q.		
Oct 31 09:00 London Time	*Unemployment Rate, Sep*	Forecast: 12.3%	Prior: 12.3%
	The unemployment rate probably remained broadly stable in Sept, remaining slightly below the average of the previous six months (of 12.5%). The unemployment rate seems to have stabilised at around these levels, but we do not see it entering a clear downward trend any time soon. Job creation in Italy has been lagging the rest of the euro area periphery, in part due to the large pool of idled workers (under the so-called Cig scheme) included in official employment statistics, but not actually working.		
Oct 31 09:00 London Time	*HICP, Oct Flash*	Forecast: 0.1% YY	Prior: -0.1% YY
	We expect the inflation rate to have picked up to +0.1% YY, the highest rate since Jun-14, and mainly driven by the announced increase in retail gas prices (of 5.4% MM) and electricity bills (1.7% MM). These adjustments are likely to bring the inflation rate in the energy component to -2.1% YY in October (from -4.5% YY in Sept), partly compensating for a further fall in fuel prices. The decline in food prices has probably also eased somewhat in October, adding something to the YY headline rate. We expect Italian inflation to hover around 0% YY until year-end.		
Spain			
Oct 28	*Budget Balance, Sep YTD*	Forecast: €-30.9 Billion	Prior (Jan-Sep 2013): €-36.5 Billion
	We project the YTD central government deficit to show further modest improvements in September relative to the same period of 2013. On a monthly basis, we project a balance of €3.9bn in Sept, up by €0.6bn relative to Sep 2013. This should bring the YTD deficit figure roughly 15% below the Jan-Sep 13 level. We expect the government to broadly meet its 2014 fiscal deficit-to-GDP target of 5.5% of GDP, down from 6.3% of GDP (net of bank recaps) in 2013.		
Oct 29 08:00 London Time	*Retail Sales, Sep*	Forecast: 1.9% YY	Prior: 0.9% YY
	We expect real retail sales to fall back in September (by -1.5% MM), mainly as a payback after the strong pickup in August (of 2.8% MM, largest MM increase since Aug 2012). Yet, we estimate this will translate into the YY growth rate (WDA) rising to +1.9% in Sept (from +0.9% in August) affected by favourable base effects. Overall we estimate real retail sales to have risen by 1.2% QQ in 3Q, after a 1.3% QQ expansion in 2Q.		
Oct 30 08:00 London Time	*GDP, 3Q Flash*	Forecast: 0.5% QQ	Prior: 0.6% QQ
	We estimate real GDP rose by 0.5% QQ (1.6% YY) in 3Q 14, marking the fifth consecutive quarter with positive QQ real GDP growth, and after a 0.6% QQ expansion in 2Q. Real economic growth continues to be driven by a recovery in domestic demand. We expect private consumption to continue rising strongly in 3Q (after 0.7% QQ in 2Q), boosted by some pick-up in real disposable income stemming from net job creation, reduced fiscal tightening, and subdued inflation. Gross fixed capital formation has also likely continued to expand strongly in 3Q (we estimate by 1.3% QQ). On the other hand, rising imports are likely to continue to cap the net exports contribution to real growth.		
Oct 30 08:00 London Time	*HICP, Oct Flash*	Forecast: -0.2% YY	Prior: -0.3% YY
	We expect the decline in the annual HICP inflation rate to ease marginally to -0.2% YY in October, from -0.3% YY in September and -0.5% YY in August. The slight increase is likely to be driven by some easing in the pace of contraction of core inflation (excluding fresh food and energy) in October, driven mostly by prices of services. In addition, we expect food price inflation to have returned to positive territory in October (to 1.4% YY, largest YY rise since Feb 2014), boosted by favourable base effects. On the other hand, a further decline in fuel and electricity prices will likely imply a 1% YY contraction in energy inflation. Overall, we expect inflation to remain close to zero on average in 2014.		
United Kingdom			
Oct 29 09:30 London Time	*Mortgage Approvals, Sep*	Forecast: 64,500 MM, -3.6% YY	Prior: 64,200 MM, 1.0% YY
	The number of mortgage approvals for house purchase has flattened off since late 2013 and we expect these figures will show a slight YY decline – the first such reading since Jan-2013. Nevertheless, there is still substantial pent-up demand for housing, which is likely to keep the housing market reasonably buoyant in coming months.		

Sources: National statistical offices, national central banks, Bloomberg, and Citi Research forecasts.

Figure 15. Economic Indicators – Comments: Sweden and Norway

Sweden			
Oct 27 08:30 London Time	*Household Lending, Sep*	Forecast: 5.7% YY	Prior: 5.6% YY
	Annual lending growth is showing signs of acceleration, although the upturn has been somewhat weaker than expected. Given ongoing gains on the housing market, we see a clear risk that household lending could pick up further ahead. Ongoing signs of faster lending growth likely imply that the Riksbank, the FSA and the government will return their focus to financial stability concerns. Meanwhile, with ongoing very low inflation and the associated risk of falling inflation expectations, we do not reckon that lending growth will become an issue for monetary policy again. Here, we note that the Riksbank's latest forecast assumes a gradual acceleration in household lending to around 6.5% YY in early-2016.		
Oct 28 08:30 London Time	*Riksbank Interest Rate Decision*	Forecast: 20bp Cut to 0.05%	Prior: 0.25%
	Compared to the Riksbank's forecast, core inflation undershot by a massive 0.4pp after being spot on in August. With several board members having expressed very limited tolerance for downward surprises in inflation given already muted price pressures, it will be very difficult for the Riksbank to argue against a near-term interest rate cut, in our view. Hence, we expect the Riksbank to cut the repo rate by 20bp to 0.05% (on par with the ECB's refi rate) at the October monetary policy meeting.		
Oct 28 08:30 London Time	*Retail Sales, Sep*	Forecast: -0.2% MM	Prior: 1.9% MM
	Retail sales recovered in August following weakness during the summer. We note that sales volumes according to the NIER survey stayed elevated also in September. Income growth, labour market and asset prices should support private consumption going forward, in our view. In other words, the 1.1% MM decline in retail sales in July appears to have been temporary. In September, we expect a minor setback following the stronger-than-expected gain in August.		
Oct 29 08:30 London Time	*Consumer Confidence, Oct*	Forecast: 102.8	Prior: 102.4
	Consumer sentiment rebounded in September after a long period with depressed readings. The indicator is now more in line with consumer confidence according to EU, which has increased over the past 3-4 months. Strong income growth, an improving labour market and higher asset prices suggest that consumer confidence should improve further ahead. However, increased uncertainty abroad and weaker global growth prospects pull in the opposite direction. Household inflation is expected to tick slightly higher, but to stay at a low level (was 0% YY in September).		
Oct 29 08:30 London Time	*Manufacturing Confidence, Oct*	Forecast: 102.9	Prior: 102.8
	The Economic Tendency Indicator slipped 1.9 points to 101.1 in September, and being 1.1 points above the historical average, the indicator suggests that growth in the Swedish economy is around a normal level. The manufacturing indicator fell back and accounted for a large part of the decline. We reckon that the recent SEK depreciation may have helped lift manufacturing sentiment, but note that the outlook for manufacturing is dependent on developments in the international business cycle, in particular in Germany. The NIER indicator now signals a decent upturn in the sector, clearly contrasting with the subdued development in hard data.		
Norway			
Oct 29 09:00 London Time	*LFS Unemployment Rate, Aug*	Forecast: 3.4%	Prior: 3.4%
	Although the Labour Forces Survey is very volatile on a monthly basis, the trend is clear; strong employment growth has outpaced growth in labour supply, pushing unemployment lower. This is well in line with Norges Bank's forecast of falling unemployment this year (3.25% this year, down from 3.5% in 2013). We note, though, that Norges Bank tends to put more emphasis on the timelier and less volatile unemployment figures from labour offices.		
Oct 29 09:00 London Time	*Retail Sales Ex Petrol Stations, Sep*	Forecast: 0.2% MM	Prior: 0.6% MM
	Monthly metrics point to ongoing decent consumption growth; households' domestic spending on goods (accounts for a little less than 50% of overall private consumption) gained 0.4% in the three-month period Jun-Aug (vs. 0.9% QQ in 1Q-14 and 0.8% QQ in 2Q). Ahead, improving conditions on the housing market (existing home prices are in an upward trend) and a surprisingly resilient labour market (strong employment growth has outpaced growth in labour supply, pushing unemployment lower) should support private consumption in the near-term. In addition, we note that income growth remains robust, and is running ahead of consumption.		
Oct 31 09:00 London Time	*Registered Unemployment Rate, Oct*	Forecast: 2.6%	Prior: 2.7%
	The registered jobless rate during the first eight months of the year averages 2.74% (in seasonally-adjusted terms), which is well in line with Norges Bank's full-year 2.75% forecast from the September Monetary Policy Report. In line with the seasonal pattern, we expect the registered unemployment rate (on a non-seasonally-adjusted basis) to fall by 0.1pp to 2.6% in October.		
Oct 29 09:00 London Time	*Norges Bank Daily FX Purchases, Nov*	Forecast: NOK -250M/Day	Prior: NOK -250M/Day
	We expect Norges Bank will purchase NOK again in November, probably around the same amount as in October. Although the size of the buying is small, it still represents a complete reversal of the Bank's previous behaviour – has historically acted as a net market seller of NOK against foreign currencies in order to transfer foreign currency to the GPFG.		

Sources: National statistical offices, national central banks, Bloomberg, and Citi Research forecasts

Figure 16. Key Economic Indicators (3 November – 7 November)

During The Week		Forecast	Last
08:00	UK: Halifax House Prices, Oct		
Monday 3 November		**Forecast**	**Last**
07:30	Sweden: Manufacturing PMI, Oct		
08:00	Norway: Manufacturing PMI, Oct		
09:00	Euro Area: Manufacturing PMI, Oct Final		
09:30	UK: Manufacturing PMI, Oct		
	Italy: Budget Balance, Oct		
Tuesday 4 November		**Forecast**	**Last**
08:00	Spain: Unemployment, Oct		
09:30	UK: Construction PMI, Oct		
10:00	Euro Area: Industrial Producer Prices, Sep		
10:00	EU: European Commission's Autumn Economic Forecasts		
Wednesday 5 November		**Forecast**	**Last**
07:30	Sweden: Services PMI, Oct		
08:15	Switzerland: Consumer Prices, Oct		
08:30	Sweden: Services Production, Sep		
08:30	Sweden: Industrial Production, Sep		
09:00	Euro Area: Services PMI, Oct Final		
	Composite PMI, Oct Final		
09:30	UK: Services PMI, Oct		
10:00	Euro Area: Retail Sales, Sep		
Thursday 6 November		**Forecast**	**Last**
06:45	Switzerland: Consumer Confidence, Oct		
07:00	Germany: Incoming Orders, Sep		
08:30	Netherlands: Consumer Prices, Oct		
08:30	Sweden: Average House Prices, Oct		
09:30	UK: Industrial Production, Sep		
12:00	UK: MPC Outcome		
12:45	Euro Area: ECB Outcome – Press Conference at 13:30		
Friday 7 November		**Forecast**	**Last**
00:01	UK: KPMG/REC Report on Jobs, Oct		
06:45	Switzerland: Unemployment, Oct		
07:00	Germany: Industrial Production, Sep		
07:00	Germany: Trade Balance, Sep		
07:30	France: Bank of France Business Sentiment, Oct		
07:45	France: Industrial Production, Sep		
07:45	France: Industrial Investment Survey, Oct		
07:45	France: Trade Balance, Sep		
07:45	France: Budget Balance, Sep		
08:00	Spain: Industrial Production, Sep		
08:15	Switzerland: Retail Sales, Sep		
08:30	Netherlands: Industrial Production, Sep		
09:00	Norway: Industrial Production, Sep		
09:30	UK: Trade Balance – Goods & Services, Sep		

Sources: National statistical offices, central banks and Citi Research

Figure 17. Recent Research

Euro Area - Sovereign Debt Update		
More ECB Speakers Focus on EA Fragility and Risks	European Economics Team	Oct 24, 2014
ECB's Nowotny: Not At Juncture For QE Yet	European Economics Team	Oct 23, 2014
ECB's Coene: "Too Early To Say" on More ECB Measures	European Economics Team	Oct 22, 2014
ECB Has Started to Buy Covered Bonds	European Economics Team	Oct 21, 2014
Finance Ministers of France and Germany Meet in Berlin	European Economics Team	Oct 20, 2014
Euro Area		
Spain - Catalonia Referendum: Will it Happen? If So, What?	Antonio Montilla	Oct 10, 2014
ECB - ECB: 'Let's See' First, But Leaves Door Open To QE	Ebrahim Rahbari	Oct 2, 2014
Global Economic Forecasts - September 2014	Michael Saunders	Oct 1, 2014
Euro Area - ECB Preview: Will all be revealed on Oct 2?	Guillaume Menuet	Sep 25, 2014
European Economic Forecast Highlights, September 2014	Ann O'Kelly	Sep 25, 2014
Italy - Growth and Inflation keep undershooting expectations	Giada Giani	Sep 25, 2014
Euro Area - ECB Cuts Rates and Announces Asset Purchase Programme	Guillaume Menuet	Sep 4, 2014
Euro Area - Euro Area: What Are The Prospects For Fiscal Easing?	Ebrahim Rahbari	Sep 3, 2014
Euro Area - Inflation Hit a New 5-Year Low	Giada Giani	Aug 29, 2014
Euro Area - ECB Preview: Will Draghi Highlight Downside Risks to Inflation?	Guillaume Menuet	Aug 28, 2014
Euro Area - ECB Draghi Notes Fall in Inflation Expectations	Guillaume Menuet	Aug 26, 2014
Euro Area - PMIs Suggest Very Little Room for Economic Rebound in H2 14	Giada Giani	Aug 21, 2014
Euro Area - SPF Survey: Downward Drift In 2014-15 Inflation Expectations	Guillaume Menuet	Aug 14, 2014
Euro Area: NFC Net Borrowing Falling More Slowly	Antonio Montilla	Aug 12, 2014
Euro Economics Weekly		
How Much Will the Weaker Euro Boost Eurozone Growth?	Ebrahim Rahbari	Oct 17, 2014
France: Rejecting Austerity, For Now	Guillaume Menuet	Oct 10, 2014
Greece — Six Crucial Months Ahead	Giada Giani	Oct 3, 2014
Focus On The ECB's Balance Sheet	Ebrahim Rahbari	Sep 26, 2014
H2 GDP Uptick Too Small to Stop ECB QE	Guillaume Menuet	Sep 19, 2014
Euro Area: Housing Sector Close to a Turnaround	Antonio Montilla	Sep 12, 2014
Low-flation Is Here To Stay	Giada Giani	Sep 5, 2014
Is the Period of German Outperformance Over?	Ebrahim Rahbari	Aug 29, 2014
ECB QE: Why, When and How?	Guillaume Menuet	Aug 22, 2014
What's Behind the Periphery Growth Outperformance?	Giada Giani	Aug 15, 2014
How Might Russia Developments Affect The Eurozone Economy?	Ebrahim Rahbari	Aug 1, 2014
France: More Reforms to Jump Start Confidence?	Guillaume Menuet	Jul 25, 2014
Public Debt Sustainability: Has It Really Been Restored?	Giada Giani	Jul 18, 2014
Why Banking Union Matters: Then and Now	Ebrahim Rahbari	Jul 11, 2014
Is The Euro Area Recovery at Risk of Faltering?	Guillaume Menuet	Jul 4, 2014
Weak Pay Trends Imply Further Inflation Undershoot	Giada Giani	Jun 27, 2014
A Great Rotation towards Eurozone Portfolio Assets?	Ebrahim Rahbari	Jun 20, 2014
Labour Market Slack	Giada Giani	Jun 13, 2014
Chief Economist Publications		
Global Economic Outlook and Strategy - September 2014	Willem Buiter	Sep 24, 2014
Scandi and Swiss		
Scandi Economics Update	Tina Mortensen	Oct 24, 2014
Sweden - Fully Financed 2015 Budget Bill	Tina Mortensen	Oct 23, 2014
Norway - Norges Bank: Stable Interest Rate And Neutral Statement	Tina Mortensen	Oct 23, 2014
UK		
UK - Labour Market Data	Michael Saunders	Oct 15, 2014
UK - CPI Inflation Tumbles	Michael Saunders	Oct 14, 2014
UK - Treasury Survey On Economy	Michael Saunders	Oct 10, 2014
UK Economics Weekly		
Will "Low-flation" Persist?	Michael Saunders	Oct 17, 2014
Persistent Political Uncertainties Likely	Michael Saunders	Oct 10, 2014
Still Bullish on UK Growth	Michael Saunders	Oct 3, 2014
Stubborn Fiscal Red Ink	Michael Saunders	Sep 26, 2014

Source: Citi Research

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Research product ("the Product"), please contact Citi Research, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance [E6WYB6412478]. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures. Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

NON-US RESEARCH ANALYST DISCLOSURES
Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets Ltd	Guillaume Menuet; Ebrahim Rahbari; Michael Saunders; Antonio Montilla; Ann O'Kelly

OTHER DISCLOSURES

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Research does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Research to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

Important Disclosures for Bell Potter Customers: Bell Potter is making this Product available to its clients pursuant to an agreement with Citigroup Global Markets Australia Pty Limited. Neither Citigroup Global Markets Australia Pty Limited nor any of its affiliates has made any determination as to the suitability of the information provided herein and clients should consult with their Bell Potter financial advisor before making any investment decision.

Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold//Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). Citigroup Global Markets (Pty) Ltd. is incorporated in the Republic of South Africa (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in the Republic of China through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in Thailand through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 399 Interchange 21 Building, 18th Floor, Sukhumvit Road, Klongtoey Nua, Wattana ,Bangkok 10110, Thailand. The Product is made available in Turkey through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Buyukdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the U.A.E, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different Citi Research ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in United Kingdom by Citigroup Global Markets Limited, which is authorised by the Prudential Regulation Authority (“PRA”) and regulated by the Financial Conduct Authority (“FCA”) and the PRA. This material may relate to investments or services of a person outside of the UK or to other matters which are not authorised by the PRA nor regulated by the FCA and the PRA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in United States by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is authorised by the PRA and regulated by the FCA and the PRA.

Pursuant to Comissão de Valores Mobiliários Rule 483, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company.

Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to Citi Research's Products can be found at https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.

Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations.

The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted.

Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product.

Citi Research generally disseminates its research to the Firm’s global institutional and retail clients via both proprietary (e.g., Citi Velocity and Citi Personal Wealth Management) and non-proprietary electronic distribution platforms. Certain research may be disseminated only via Citi’s proprietary distribution platforms; however such research will not contain changes to earnings forecasts, target price, investment or risk rating or investment thesis or be otherwise inconsistent with the author’s previously published research. Certain research is made available only to institutional investors to satisfy regulatory requirements. Individual Citi Research analysts may also opt to circulate published research to one or more clients by email; such email distribution is discretionary and is done only after the research has been disseminated.

The level and types of services provided by Citi Research analysts to clients may vary depending on various factors such as the client’s individual preferences as to the frequency and manner of receiving communications from analysts, the client’s risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints.

Citi Research product may source data from dataCentral. dataCentral is a Citi Research proprietary database, which includes Citi estimates, data from company reports and feeds from Thomson Reuters. The printed and printable version of the research report may not include all the information (e.g., certain financial summary information and comparable company data) that is linked to the online version available on Citi's proprietary electronic distribution platforms.