4 April 2014 | 16 pages

Developed Markets
Western Europe

Euro Economics Weekly

The Rise of The Output Gap

- Output gap estimates are important for inflation developments and monetary and fiscal policy practice. Unfortunately, they are also very uncertain. In our view, output gaps are likely to be very large in the Eurozone currently — in the order of -4%, a record-high at least since the creation of EMU. With still-subdued growth prospects, even modest potential growth means that output gaps will not be closed for a long time — not even by the end of 2018, according to our forecasts.
- Large and persistent output gaps should keep inflation low and raise the risk of inflation falling further, which could mean deflation in the Eurozone. While that is not our base case, this risk should justify additional monetary easing, such as material purchases of government bonds and private sector assets by the ECB, and should discourage additional austerity.

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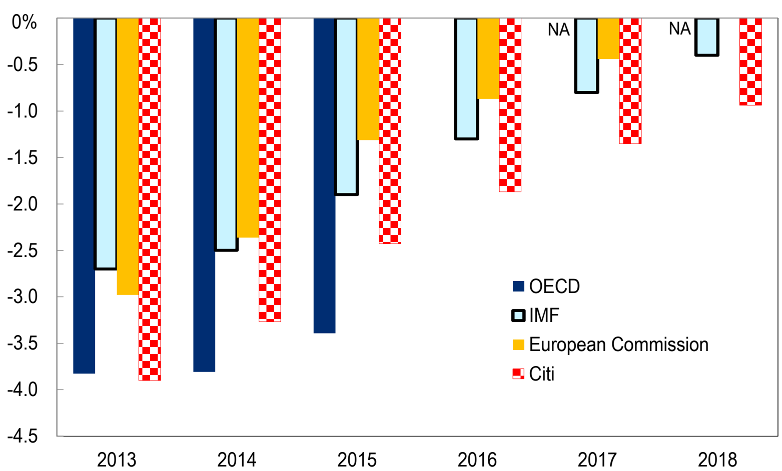
Figure 1. Citi Forecasts

	$/€	Euro Repo	10-yr Bunds	£/€	UK Bank Rate	10-yr Gilt-Bund	SKr/€	SEK Policy Rate	NOK/€	NOK Policy Rate	SFr/€	CHF Policy Rate	CHF Spread vsBunds
3Q 14	1.39	0.10	1.70	0.82	0.50	158	8.83	0.75	8.20	1.50	1.24	0.00	-70
1Q 15	1.40	0.10	1.90	0.81	1.25	163	8.79	0.75	8.01	1.50	1.26	0.00	-80

Sources: Citi Research

Figure 2. Euro Area — Output Gaps (% of Potential GDP), 2013-2018F



Sources: OECD, IMF, European Commission and Citi Research

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

The Rise of the Output Gap

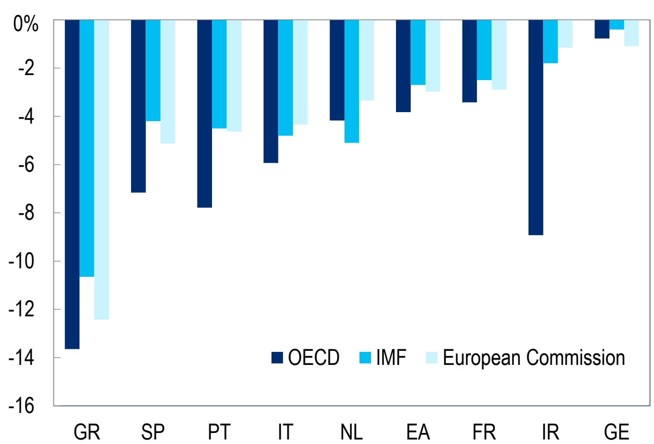
Output gaps are very important, but also very uncertain

We think that output gaps in the euro area are currently highly negative (close to -4%), which will put downward pressure on inflation and justify additional monetary policy easing

The output gap is defined as the difference between actual output and potential output, where potential is understood to be the maximum non-inflationary level of output. Output gap estimates are routinely used to forecast inflation, to assess the appropriateness of monetary and fiscal policy, and are becoming more prominent in the recent ECB press conferences, too. But output gap estimates are notoriously uncertain, as conventional estimation methods are sensitive to a number of assumptions and the arrival of new or revised data. Output gap estimates can thus vary substantially across methodologies as well as over time, as they have in the euro area (EA) recently. Even though we acknowledge this uncertainty, we think that output gaps are likely to be highly negative in the euro area currently, at around -4%, and lower still in a number of the EA periphery countries.

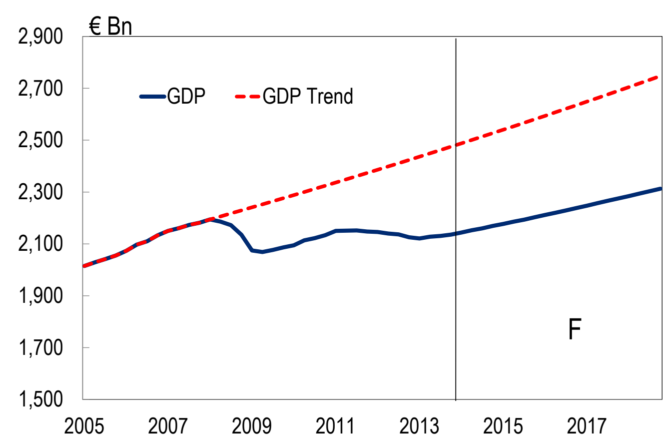
A large negative output gap has a number of implications. First, relatively subdued growth of potential output (we estimate roughly 1.0% pa in 2014-18) and still-modest actual growth (we expect 1.5% pa on average in 2014-18) imply that the output gap will not close for a long time — not until the end of 2018, in our view. Second, a large and persistent output gap would imply that EA inflation should remain very low and could fall further, raising the risk of deflation, as we have noted repeatedly in recent months. Third, a standard Taylor rule suggests that ECB policy rates should be around 100bp lower than they are. While this rule based on our forecasts of inflation, potential growth and actual growth would suggest first ECB rate hikes in early 2016, we think that is too early as the ECB's reaction function has probably changed, in light of forward guidance. Fourth, large negative output gaps probably imply some near-term upside risks to growth and less fiscal consolidation, particularly if the European Commission (EC) widens its output gap estimates, which would imply smaller structural budget deficits.

Figure 3. Selected Countries — Output Gap Estimates (% of Potential Output), 2013



Note: Potential output minus actual output.
Sources: EC, IMF, OECD and Citi Research

Figure 4. Euro Area — Trend and Actual Real GDP (Constant 2005 Euros), 2005-2018F



Sources: Eurostat and Citi Research

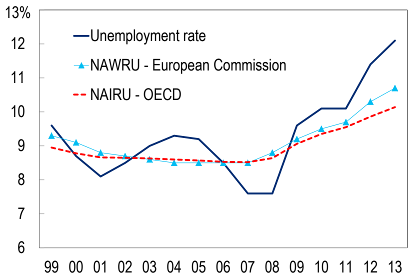
Output gap estimates — useful, but uncertain

Output gaps and potential output need to be estimated and are often revised

Potential output and output gaps need to be estimated. A simple way could be to extrapolate real GDP with a recent trend growth rate and compare it with actual output. Extending EA real GDP from its pre-crisis peak in Q1 2008 at the 95-08 average growth rate of 2.1% pa would imply a difference of 16% in Q4 13. This estimate most likely overstates the output gap, for two reasons. First, output is likely to have been unsustainably high in 2008, i.e. there was probably a negative output

gap. Second, trend growth is probably lower now than it was in 95-08.[1] Conventional output gap estimates by most forecasters (including the EC, IMF and OECD) tend to rely on a stylised production function (PF) which models potential output as a function of trend total factor productivity (TFP), the capital stock and the trend labour input. The trend labour input in turn is the product of the population, the trend labour force participation rate, average hours and the non-inflationary level of employment.

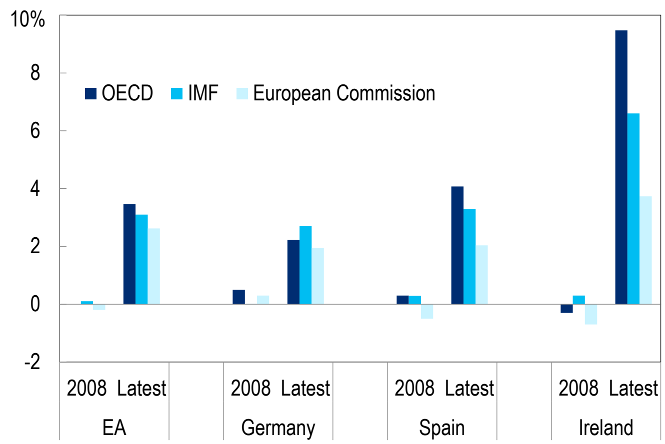
Figure 5. Euro Area — Unemployment, NAWRU and NAIRU (% of Labour Force), 1999-2013



Note: NAIRU and NAWRU are the non-accelerating inflation and the non-accelerating wage rate of unemployment
Sources: EC, OECD, Eurostat and Citi Research

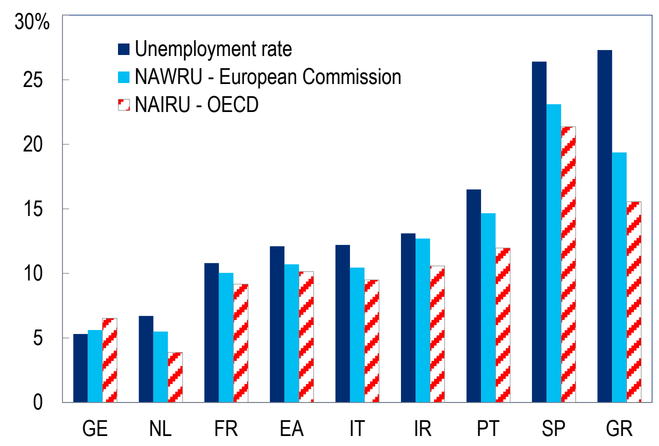
The PF approach allows easy interpretation of potential output and output gaps and is supposed to be somewhat more robust than commonly used purely statistical filters, such as the HP filter, but is still sensitive to a number of assumptions and revised data.[2] Estimates can vary significantly across institutions and over time. For instance, while all major forecasters estimate that EA potential growth has fallen post-crisis, the degree of the fall (and the output gap at the pre-crisis peak) differs widely — the estimates for the output gap in the EA for 2013 range from -2.7% for the IMF to -3% for the EC to -3.8% for the OECD. Such differences are not immaterial — e.g. standard Taylor rules for policy rates with a multiplier of 0.5 on the output gap imply that a 1pp more negative output gap translates into a 50bp lower policy rate. The difference is even larger for some EA countries: for Spain, output gap estimates range from -4.2% for the IMF to -7.2% for the OECD (see Figure 3). Output gap estimates also often get revised substantially. For instance, in 2008 the EC, IMF and OECD all thought that 2007 actual output for the EA as well as for most individual EA countries was close to potential and the output gap was close to zero. By contrast, according to their latest estimates, output gaps in 2007 were positive (i.e. output being above potential) and large — for Ireland, the OECD now believes that the output gap was almost 10% in 2007 (see Figure 6).

Figure 6. Selected Countries — Estimates of 2007 Output Gap Made in 2008 and 2013 (% of Potential Output)



Sources: EC, IMF, OECD and Citi Research

Figure 7. Selected Countries — Unemployment, NAWRU and NAIRU (% of Labour Force), 2013



Note: NAIRU and NAWRU are the non-accelerating inflation and the non-accelerating wage rate of unemployment.
Sources: Eurostat and Citi Research

[1] Using real GDP per capita instead of GDP, which should reflect some – if not all – demographic effects, still leaves a gap of around 11% in Q4.

[2] See e.g. Marcellino, M and Alberto Musso (2010), "Real time estimates of the output gap – Reliability and forecast performance", ECB Working Paper.

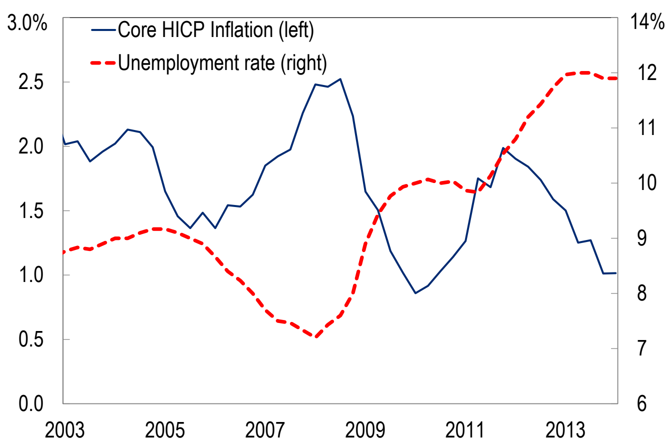
On NAW(I)RUs: How much unemployment is structural?

Most uncertainty about potential output focuses on the structural unemployment rate and trend TFP

The uncertainty (and controversy) in the EA focuses mostly on two drivers of potential output: the structural (un)employment rate and the level of trend TFP. Labour force participation has risen and average hours fallen gradually in recent years, but are generally assumed to be close to trend. Capital accumulation has fallen sharply, but in most PF-based approaches the level of capital input is at its potential by definition. In the US on the other hand, the potential or structural labour force participation rate is the subject of major uncertainty.

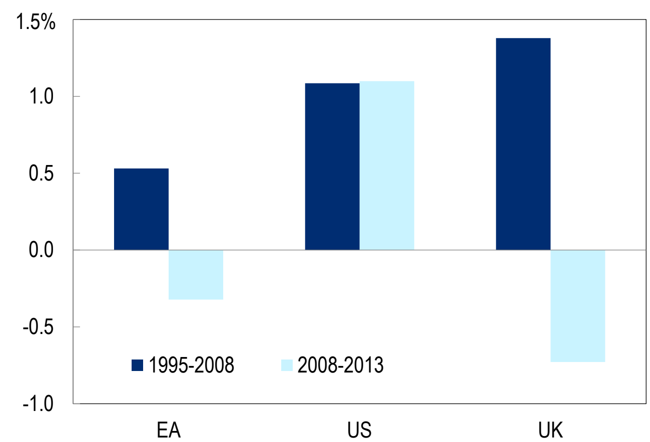
Structural unemployment is usually estimated based on 'Phillips curve'-relationships that relate unemployment 'gaps' (i.e. actual vs structural unemployment) to changes in wage growth or inflation. The logic is that when unemployment is below its structural level, wage growth and inflation should rise. The levels of unemployment that would leave wage growth and inflation unaffected are then called the non-accelerating wage- and the non-accelerating inflation rate of unemployment or NAWRU and NAIRU, respectively (just NAIRU from here). Estimates of the NAIRU have closely tracked actual unemployment rates in the EA since the crisis (see Figure 6). Thus, the OECD and EC estimate the NAIRU in 2013 at 10.1% and 10.7%, compared to 8.6% and 8.8% in 2008.[3] Over the same period, actual unemployment rose from 7.6% to 12.1%, i.e. the OECD and the EC estimate that roughly a third to one half of the increase in unemployment in the EA has been 'structural' (rather than cyclical). In Spain, the EC estimates that almost two thirds of the enormous 18pp increase in unemployment since 2007 has been structural (see Figure 8).

Figure 8. Euro Area — Core HICP Inflation (Pct. YY) and Unemployment Rate (% of Labour Force), 2003-2014



Sources: Eurostat and Citi Research

Figure 9. Selected Countries — Total Factor Productivity Growth (Pct. pa), 1995-2013



Sources: EC and Citi Research

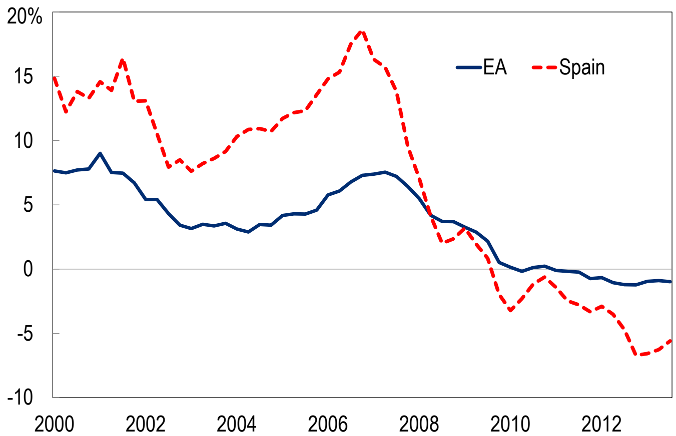
In our view, the increase in the structural unemployment rate has been exaggerated, as the measured responsiveness of inflation and wage growth to inflation has moderated in recent years

There are good reasons why structural unemployment may have risen, including that the long-term unemployed gradually lose skills ('hysteresis') and that some of those who were employed prior to the crisis (e.g. in the construction sector) lack the skills to be employable in the post-crisis economy. While it is difficult to estimate these effects precisely, we are sceptical that they are as large as the current EC/OECD estimates suggest. The reason why the NAIRU estimates have so closely tracked actual unemployment is that they heavily depend on the estimated Phillips curves, which suggest that unless wage growth falls a lot when there is a

[3] And once again, the estimates have changed significantly over time – in 2008, the OECD and EC had estimated the NAWRU/NAIRU for the EA at 7.5% and 7.4%, respectively.

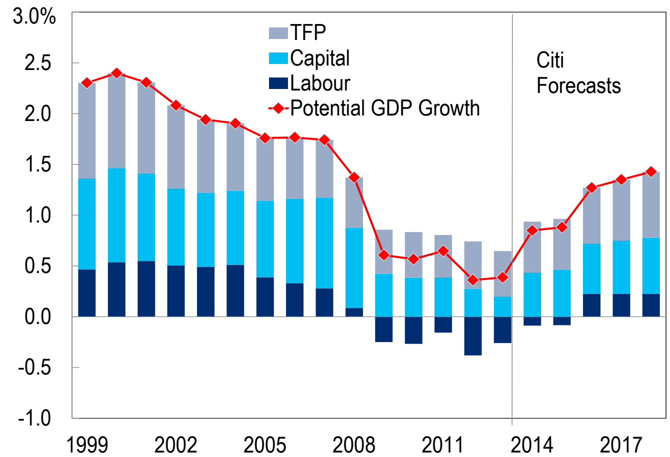
strong increase in unemployment, the increase in unemployment must have been structural. Wage growth and inflation have indeed generally moderated in the EA in recent years (see Figure 8), but until recently less than the estimated Phillips curve coefficients would imply given the large rise in unemployment. In our view, this is because the Phillips curve coefficients had weakened during the sample period over which they are estimated by the EC/OECD (which span multiple decades). Prior to the crisis, this was probably due to inflation having fallen over time, inflation expectations being more anchored, and nominal and real wage and price rigidities more extensive.[4] In addition, in the post-crisis period, compositional changes in employment, which implied that the low-skilled were proportionately more affected by job losses, probably muted the downward pressure of rising unemployment on aggregate wages, while indirect tax increases muted the downward pressure on inflation. An ECB Monthly Bulletin article suggests that these two developments may have lowered the sensitivity of inflation and wage growth to unemployment gaps by one third to one half.[5] Such a fall in the Phillips curve coefficients suggests to us that the rise in the NAIRU may also have been one third to one half less than the OECD/EC estimate, suggesting a NAIRU closer to 9.5% currently, which is still much higher than NAIRUs estimated for the US (5.5% according to the CBO). Note that more recently, the sensitivity of inflation and wages to the output gap may have increased again, as structural reforms increase wage and price flexibility and indirect tax effects fade out.[6]

Figure 10. Euro Area and Spain — Private Sector Real Credit Growth (%YY), 2000–2014



Note: Deflated by HICP inflation.
Sources: ECB and Citi Research

Figure 11. Euro Area — Potential Output Growth (Pct. pa), 1999-2018F



Note: Forecasts are Citi forecasts.
Sources: EC and Citi Research

TFP is probably below potential, too.

Actual TFP growth has been negative in the EA since the crisis — potential TFP growth has probably fallen less, suggesting sizable 'TFP gaps'

TFP growth in the EA has been very poor since the crisis, at -0.3% pa on average in 2008-13 according to the EC, even lower than the already-low TFP performance before the crisis (0.5% pa in 95-08, compared to 1.1% pa in the US). The EC and the IMF have noted that the crisis would be likely to lower potential TFP growth, due to lower spending on R&D and investment and the presence of 'zombie' firms that weigh on productivity growth. Counter-arguments include structural (and notably

[4] See also IMF (2013), "The dog that didn't bark: has inflation been muzzled or was it just sleeping", IMF World Economic Outlook.

[5] See ECB (2012), "Euro area labour markets and the crisis", Occasional Paper Series, October 2012.

[6] See also EC (2014), "Analysing current disinflationary trends in the euro area", European Economic Forecast Winter 2014.

product market) reforms in a number of EA countries, the 'cleansing effect' of recessions and a shift in the composition of output from low-TFP-growth construction towards higher-TFP-growth services.[7] The balance between the two is difficult to assess, but even a sizable positive 'TFP gap' (actual minus trend TFP) at the pre-crisis peak and a moderate weakening of the post-crisis trend suggest sizable EA TFP gaps currently. Under the assumption that the TFP gap accounts for the residual output gap once we have accounted for unemployment gaps — a reasonable approximation given that the other elements of labour input are close to trend — the estimated TFP gaps are 2.0% for the EC and 2.3% for the OECD, roughly two thirds of total output gap estimates. As we are sympathetic to the view that pre-crisis TFP gaps were sizable and initial post-crisis trend growth lacklustre, our own estimate is close to the EC's.

We estimate the output gap to be close to -4%. Output gap estimates that incorporate financial information could be more robust than the standard approaches

Putting the TFP unemployment gaps together implies an output gap of 3.9%, close to the OECD estimate (3.8%), but higher than the EC and IMF. Even though we consider it likely that output gaps are currently highly negative, we noted before that such estimates are very uncertain in real-time and are often revised. In that context, a number of recent papers by researchers at the BIS are of particular interest, as they present a method to calculate output gaps that incorporates financial information (notably real private sector credit growth) and generates much more stable output gap estimates.[8] The economic logic of this approach is that periods of high credit growth could suggest that output is unsustainably high even if inflation remains subdued, as it generally was in the pre-crisis period. Given the subdued credit developments in the EA (see Figure 10), it could be suspected that this approach would suggest even more negative output gaps. However, that is not necessarily the case, as the BIS approach implied more positive output gaps pre-crisis.

What is future potential growth in the euro area?

We estimate potential growth in the euro area currently at 0.7%, rising to 1.2% in 2018

To estimate potential growth, we need to estimate potential growth rates for TFP, the capital stock and labour input. We assume that trend participation rises and average hours worked fall by 0.1% pa in 2014-18, while the working-age population is flat, close to the EC's assumptions. For investment, our forecast implies average annual increases of 2.6%, in line with the 02-07 average. For the NAIRU, we assume that it will level off in 2013 and gradually return to its pre-crisis level from 2015 to 2020 (ie by 0.2pp pa), while for TFP growth we assume that structural reforms will gradually increase potential TFP growth from 0.5% (the pre-crisis average) to 0.7% over four years from 2014. These assumptions imply potential growth rising from 0.7% in 2014 to 1.2% in 2018, still short of the 1.9% pa average potential growth rate in 2001-07. Our potential growth estimates are slightly above those of the EC (which assumes the NAIRU to increase further in 2014-5), but below those of the OECD for 2014-15. We currently expect EA growth to be 1.5% pa on average in 2014-8. Based on these growth forecasts and starting with an output gap of just under 4%, our estimates for potential growth imply that output gaps would not even be closed at the end of 2018 (see Figure 2 on the Front Page).

[7] See ECB (2013), "Potential Output, Economic Slack and the Link to Nominal Developments since the start of the crisis", ECB Monthly Bulletin, November 2013 and Bouis, R. et al (2012), "Implications of Output Gap Uncertainty in Times of Crisis", OECD Economics Department Working Papers.

[8] See Borio, C. et al (2013), "Rethinking potential output: embedding information about the financial cycle", BIS Working Papers and Borio, C. et al (2014), "A parsimonious approach to incorporating economic information in measures of the output gap", BIS Working Papers.

What do such output gaps mean for monetary policy?

Our output gap estimates imply that the ECB refi rate should be at least 100bp lower than it is currently

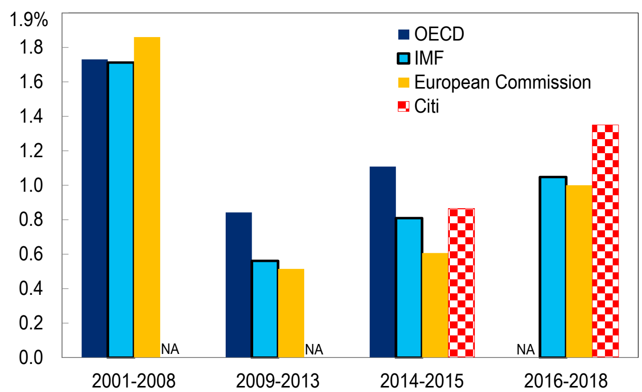
Standard Taylor rules for the ECB probably overestimate how soon the ECB may hike rates, in our view

A simple Taylor rule suggests that the policy rate should be set according to:

Policy rate = neutral rate + b1 x inflation gap + b2 x output gap,

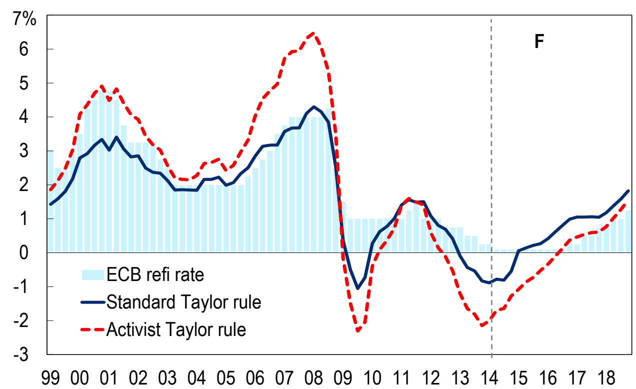
where b1 and b2 are the coefficients of the rule on the inflation gap (inflation minus target) and output gap, respectively. Assuming that the neutral rate for the EA is 2%, the inflation target 1.9% and using the original Taylor coefficients of 0.5 each (which fits the recent history of ECB rate decisions fairly well) together with an output gap of 4% and inflation of 0.5% implies that the current refi rate should be -70bp, around 100bp below the actual refi rate. A more activist rule with a coefficient of one for the output gap — which is commonly used, but does not fit the ECB's recent history quite well — suggests that the current policy rate should be much more negative still. If we combined these rules with our forecasts for potential growth, expected GDP growth and inflation (we expect 1.0% inflation pa on average), they can also produce a path for suggested future policy rates. According to the standard rule, rates would trough now and be above the current refi rate of 0.25% in Q1 2016. That would be too early, compared to our forecast that the ECB will hike rates in late 2016, which is close to when the activist Taylor rule implies positive policy rates.

Figure 12. Euro Area — Potential Growth Estimates (%pa), 2001-2018F



Sources: EC, IMF, OECD and Citi Research

Figure 13. Euro Area — Taylor Rules for Monetary Policy and ECB Refi Rates (%), 1999–2018F



Note: Standard and Activist Taylor rule have output gap coefficients of 0.5 and 1, respectively, and neutral rates of 2% and 2.5%. Sources: ECB and Citi Research

Other things equal, more negative output gaps suggest some upside risk to near-term GDP growth prospects. But for higher growth to come through, demand has to increase. It is then relevant that measures of output gaps also matter for EA *fiscal policy*, as the EU's Excessive Deficit Procedure targets are now specified in terms of structural budget deficits. Structural deficits adjust headline deficits by deducting their cyclical component, which is calculated as the product of the output gap and the semi-elasticity of the budget balance to the output gap, as well as one-offs. The EC estimates the semi-elasticity to be 0.53 for the EA, implying that a 1pp more negative output gap estimate would lower the structural deficit by 0.53pp for an unchanged headline deficit, suggesting 0.5pp less additional austerity, if structural deficit targets are left unchanged. An EC spokesman in fact recently noted that the EC would amend its output gap and structural balance methodology for the upcoming Spring Forecast. A publication this week noted that the impact on output gap estimates for the Eurozone as a whole would be minor, but that effects on Spain could be more material.[9]

[9] See Dalton, M. "EU Governments Agree on Change to Structural Budget Balance Calculation", Wall Street Journal, 20 March 2014 and EC (2014), "New estimates of Phillips curves and structural unemployment in the euro area", Quarterly report on the euro area", April 2014.

Key Economic Indicators (7 April – 11 April 2014)

During The Week		Forecast	Last
	IMF and World Bank Spring Meetings – Seminars and Events throughout the week (Washington, Apr 8-13)		
Monday 7 April		**Forecast**	**Last**
07:00	Germany: Industrial Production (inc. Construction), Feb SWDA	0.4% MM, 4.8% YY	0.8% MM, 5.0% YY
08:00	Spain: Industrial Production, Feb	2.2% YY	1.1% YY
08:15	Switzerland: Consumer Prices, Mar		
09:00	Norway: Manufacturing Production, Feb	0.3% MM	-0.4% MM
09:30	Euro Area: Sentix Investor Confidence, Apr	15.2	13.9
Tuesday 8 April		**Forecast**	**Last**
06:45	Switzerland: Unemployment Rate, Mar		
07:30	France: Bank of France Business Sentiment, Mar	100	98
07:45	France: Trade Balance, Feb		
07:45	France: Budget Balance, Feb		
08:15	Switzerland: Retail Sales, Feb		
09:30	UK: Industrial Production, Feb	0.3% MM, 2.2% YY	0.1% MM, 2.9% YY
	Manufacturing Output, Feb	0.3% MM, 3.2% YY	0.4% MM, 3.3% YY
c. 15:00	IMF's *World Economic Outlook* Released		
Wednesday 9 April		**Forecast**	**Last**
07:00	Germany: Trade Balance, Feb		
07:00	Germany: Insolvencies, Jan		
08:30	Sweden: Riksbank Interest Rate Decision	Unchanged at 0.75%	0.75%
08:30	Netherlands: Industrial Production, Feb		
09:30	UK: Trade Balance – Goods & Services, Feb	£-2.3 Billion	£-2.6 Billion
09:30	UK: Profitability of UK Companies, 4Q		
10:00	Greece: Industrial Production, Feb		
c. 15:00	IMF's *Global Financial Stability Report* Released		
c. 17:30	IMF' *Fiscal Monitor Report* Released		
Thursday 10 April		**Forecast**	**Last**
00:01	UK: RICS House Price Survey, Mar		
07:45	France: Industrial Production, Feb	0.3% MM, -0.3% YY	-0.2% MM, -0.1% YY
	Manufacturing Output, Feb	0.3% MM, 1.2% YY	0.7% MM, 1.4% YY
07:45	France: HICP, Mar	0.5% MM, 0.7% YY	0.6% MM, 1.15 YY
	Consumer Prices, Mar	0.5% MM, 0.6% YY	0.6% MM, 0.9% YY
	CPI Ex Tobacco Index, Mar	126.29	125.71
08:30	Netherlands: HICP, Mar		
08:30	Sweden: Consumer Prices, Mar	0.3% MM, -0.3% YY	0.4% MM, -0.2% YY
	CPIF, Mar	0.4% MM, 0.3% YY	0.5% MM, 0.4% YY
08:30	Sweden: Average House Prices, Mar		
09:00	Norway: Consumer Prices, Mar	0.3% MM, 2.1% YY	0.5% MM, 2.1% YY
	CPI-ATE, Mar	0.4% MM, 2.5% YY	0.6% MM, 2.4% YY
09:00	Euro Area: ECB Monthly Bulletin		
09:00	Italy: Industrial Production, Feb	-0.5% MM	1.0% MM
10:00	Greece: Unemployment, Jan		
10:00	Greece: Consumer Prices, Mar		
11:00	Ireland: Consumer Prices, Mar		
12:00	UK: MPC Outcome		
Friday 11 April		**Forecast**	**Last**
	G-20 Finance Ministers' & Central Bank Governors' Meeting, Washington		
07:00	Sweden: PES Unemployment Rate, Mar	4.3%	4.5%
07:00	Germany: HICP, Mar Final	0.3% MM, 0.8% YY	0.5% MM, 1.0% YY
	National CPI, Mar Final	0.3% MM, 1.0% YY	0.5% MM, 1.2% YY
07:45	France: Current Account, Feb		
08:00	Spain: HICP, Mar Final	-0.2% YY	0.1% YY
08:30	Netherlands: Trade Balance, Feb		
09:30	UK: Construction Output, Feb		

Sources: National statistical offices, central banks and Citi Research

Economic Indicators

Euro Area

Apr 8 07:30 London Time	***Sentix Investor Confidence, Apr***	**Forecast: 15.2**	**Prior: 13.9**

We look for a small fourth successive gain in the Sentix survey aggregate indicator, to 15.2 in April that would represent a three-year high. We doubt that the expectations measure will improve much but see room for more upside in the current conditions measure. Equity markets have rebounded in the final week of March and tensions eased with Russia, while the low euro area March inflation print of 0.5% and dovish statements by some ECB members suggest that the ECB will stay accommodative for an extended period of time.

Germany

Apr 7 11:00 London Time	***Industrial Production (incl Constr.), Feb SWDA***	**Forecast: 0.4% MM, 4.8% YY**	**Prior: 0.8% MM, 5.0% YY**

After three consecutive monthly increases, we expect German IP (including construction) to have another modest increase in February. The increase we expect would in part be driven by another expansion of construction output due to the mild weather, while weather-effects may deduct from energy output. Overall, the positive trend for German industry continues, even if Ukraine and other EM worries have raised a few question marks for future growth. With the expected reading in February, IP would be almost 2% above the 4Q average (which was 0.9% higher than in 3Q).

Apr 11 07:00 London Time	***HICP, Mar Final***	**Forecast: 0.3% MM, 0.8% YY**	**Prior: 0.5% MM, 1.0% YY**
	National CPI, Mar Final	**Forecast: 0.3% MM, 1.0% YY**	**Prior: 0.5% MM, 1.2% YY**

We expect the final readings for German inflation in December to confirm the flash readings for both the national and the harmonised measures. The flash estimate for inflation on the national definition was lower-than-expected, while the HICP defined inflation came in line with expectations. In our view, it is likely that the March level of inflation will be a local trough, with inflation ticking up in April on base effects (due to the different timing of Easter this year).

France

Apr 8 07:30 London Time	***Bank of France Business Sentiment, Mar***	**Forecast: 100**	**Prior: 98**

We expect business sentiment to improve in the industrial sector in March, pencilling in a two-point increase in the aggregate measure to a four-month high, matching the historical average. The manufacturing PMI survey for March showed that the sector had finally moved into expansionary territory, with new orders expanding at their fastest pace since May 2011, boosting production and causing an increase in order backlogs for the first time in eight months. We expect further upside in coming months, once details about the Responsibility Pact are unveiled in mid-April.

Apr 10 07:45 London Time	***Industrial Production, Feb***	**Forecast: 0.3% MM, -0.3% YY**	**Prior: -0.2% MM, -0.1% YY**
	Manufacturing Output, Feb	**Forecast: 0.3% MM, 1.2% YY**	**Prior: 0.7% MM, 1.4% YY**

Industrial production is forecast to rebound in February, ending a two-month sequence of negative prints. We estimate that both the headline and manufacturing output series will expand modestly, although this is unlikely to be sufficient to generate an improvement in the YY rate due to unfavourable base effects. Although industrial confidence has improved in the past few months, limited gains in order books, a modest uptick in capacity utilisation and relatively adequate stock positions suggest that IP growth will recover only gradually into the second quarter.

Apr 10 07:45 London Time	***CPI – EU Harmonised, Mar***	**Forecast: 0.5% MM, 0.7% YY**	**Prior: 0.6% MM, 1.1% YY**
	Consumer Price Index, Mar	**Forecast: 0.5% MM, 0.6% YY**	**Prior: 0.6% MM, 0.9% YY**
	CPI Ex Tobacco Index, Mar	**Forecast: 126.29**	**Prior: 125.71**

The difference in the timing of Easter is likely to push the headline inflation annual rate much lower in March, and we anticipate a return to the October lows for both the EU and national estimates. Food price inflation likely moderated due to warmer-than-usual weather while energy prices likely did not impart much downward momentum to the annual trajectory. Core inflation is also expected to have slowed in March to around 0.7% for the national measure, staying slightly above the low of 0.6% in Jan-14.

Italy

Apr 10 09:00 London Time	***Industrial Production, Feb***	**Forecast: -0.5% MM**	**Prior: 1.0% MM**

After a surprisingly strong January reading, a payback is likely in February industrial activity. The estimated gain in industrial output should reflect the improvements in business surveys, although the manufacturing PMI eased somewhat in February relative to the previous month (to 52.3 from 53.1). Output posted the first quarterly gain of 0.9% QQ in 4Q after two quarterly declines and we think another, albeit smaller, gain is likely to occur in 1Q 14.

Spain

Apr 7 08:00 London Time	***Industrial Production, Feb***	**Forecast: 2.2% YY**	**Prior: 1.1% YY**

Improvements in survey data (manufacturing PMI rose to 52.8 in Mar, 0.5 sd above its long-term average and highest since Apr 2010) suggest industrial production probably bounced back in February (we project by 0.5% MM) after two flat readings in January and December, also thanks to data pointing to a pickup in external demand. We expect this will translate into a YY figure (WDA) in February of +2.2% (vs. +1.1% in January). Going forward, rises in both new and existing orders suggest that further growth of output is likely in the near term. We continue to expect industrial production to expand over 1Q (after a decline of 0.3% QQ in 4Q).

Apr 11 08:00 London Time	***HICP, Mar F***	**Forecast: -0.2%**	**Prior: 0.1%**

According to the flash estimate, HICP inflation fell to -0.2% YY in Mar (lowest since Oct 2009), below our forecast (0.0%) and market expectations (+0.1%), falling from +0.1% YY in Feb and +0.3% YY over the previous three months. We expect the composition to show some further easing in core CPI inflation (excl. fresh food and tobacco), probably to 0.0% YY from 0.2% YY in Feb, on the back of some temporary effects due to the later timing of Easter in 2014 relative to last year and, more fundamentally, due to the past appreciation of the euro and still ample spare capacity. On the other hand, we expect higher fuel prices in March to translate into a less negative YY inflation rate in the energy component (hence a positive contribution to the change in the headline rate). Food prices have probably also contributed to compress headline inflation. We expect HICP inflation to average 0.0% YY over 2014 (vs. 1.5% in 2013, when it was boosted by the 3pp VAT rate hike in Sept-12).

Economic Indicators

Sweden			
Apr 9 08:30 London Time	***Interest Rate Decision***	**Forecast: 0.75%**	**Prior: 0.75%**
	We expect the Riksbank to keep the repo rate unchanged at 0.75%, but to revise its conditional interest rate path for 2015-16 lower (by about 25-30bp) in its April Monetary Policy Update. In other words, the Bank is expected to maintain its near-term easing bias, while indicating initial tightening around 1Q-2Q next year. Very low core CPI, ongoing inflation undershoots vs. Riksbank forecast combined with genuine inflation concern among board members are expected to more than outweigh the strong 4Q GDP outcome, supporting a downward revision to the rate path in April. Although our base case remains for a stable key policy rate throughout the year, another repo rate cut cannot be entirely ruled out. Hence, we reckon the discussion on the board this year will be about whether to ease further rather than about the timing of initial tightening.		
Apr 10 08:30 London Time	***House Prices, Mar***		
	House prices have increased gradually during the last year, and the uptrend looks likely to continue this year; short-term indicators point to ongoing upward near-term pressures. Ahead, we expect house prices gradually to level out next year as the Riksbank starts hiking rates combined with macroprudential measures restraining lending. Key to watch, though, are developments in household lending; in Feb, growth in loans to households held steady at 5.1% YY. With ongoing gains in housing starts (up by 28% YY in 2013), this suggests that the moderate re-acceleration in lending growth last year could become more pronounced this year. However, with focus back on inflation, we do not expect a continued moderate increase in housing and lending will have immediate implications for monetary policy.		
Apr 10 08:30 London Time	***Consumer Prices, Mar*** ***CPIF, Mar***	**Forecast: 0.3% MM; -0.3% YY** **Forecast: 0.4% MM; 0.3% YY**	**Prior: 0.4% MM; -0.2% YY** **Prior: 0.5% MM; 0.4% YY**
	Inflation is currently very low, with CPIF inflation confirmed at 0.4% YY in February (and CPI at -0.2% YY), i.e. 0.15pp below the Riksbank's forecast. The downward surprise reflected to a large extent lower-than-expected energy prices, and with energy prices having eased further in March, these will likely add further downward pressure on inflation in the near-term. For comparison, the Riksbank sees CPI at -0.04% YY and CPIF at 0.49% YY in its February MPR (new forecasts due on April 9).		
Apr 11 07:00 London Time	***PES Unemployment Rate, Mar***	**Forecast: 4.3%**	**Prior: 4.5%**
	Improving short-term indicators and declining unemployment according to the labour market office's statistics strongly support our assessment that unemployment will start to decline this year.		
Norway			
Apr 7 09:00 London Time	***Manufacturing Production, Feb***	**Forecast: 0.3% MM**	**Prior: -0.4% MM**
	Manufacturing production started the year on a weak note, falling 0.4% MM in January, but should be seen as a payback following a whopping 1.7% MM gain in the previous month. Ahead, substantially slower investment growth in the oil sector should impact negatively on parts of the manufacturing sector (suppliers to the oil sector) but we reckon export-oriented industries (primarily the intermediate goods sector) should partly make up for this – the quarterly manufacturing survey points to a marked pick-up in foreign orders in recent quarters, with expectations pointing to further improvement ahead. The weaker NOK should also provide exporters with a helping hand.		
Apr 10 09:00 London Time	***Consumer Prices, Mar*** ***CPI-ATE, Mar***	**Forecast: 0.3% MM; 2.1% YY** **Forecast: 0.4% MM; 2.5% YY**	**Prior: 0.5% MM; 2.1% YY** **Prior: 0.6% MM; 2.4% YY**
	The depreciation of the NOK was behind the jump in inflation in January; core inflation CPI-ATE came to 2.4% YY and was confirmed at this pace in February. Ahead, we continue to expect that a weaker NOK will exert further upward pressure on inflation this year. Still, the outlook remains more uncertain than usual with services and wages trending sideways and low global inflation likely to hold back import prices year.		
United Kingdom			
Apr 8 09:30 London Time	***Industrial Production, Feb*** ***Manufacturing Output, Feb***	**Forecast: 0.3% MM, 2.2% YY** **Forecast: 0.3% MM, 3.2% YY**	**Prior: 0.1% MM, 2.9% YY** **Prior: 0.4% MM, 3.3% YY**
	Surveys suggest that manufacturing output continues to expand quite rapidly and so we expect another solid gain. Figures in line with our forecast would leave industrial production in Jan-Feb up by 0.5% from the 4Q average, and signal continued strong 1Q GDP growth.		
Apr 9 09:30 London Time	***Trade Balance – Goods & Services, Feb***	**Forecast: £-2.3 Billion**	**Prior: £-2.6 Billion**
	The trade deficit fell significantly in 2013, helped by a marked rise in the surplus on services and softer import prices. We expect that import prices will fall a little further in the February data		

Sources: National Statistical Offices, National Central Banks, Bloomberg, and Citi Research forecasts.

Key Economic Indicators (14 April – 18 April 2014)

		Forecast	Last
Monday 14 April		**Forecast**	**Last**
09:00	Italy: Consumer Prices, Mar Final		
10:00	Euro Area: Industrial Production, Feb		
Tuesday 15 April		**Forecast**	**Last**
08:15	Switzerland: Producer & Import Prices, Mar		
08:30	Netherlands: Retail Sales, Feb		
09:30	UK: Consumer Prices, Mar		
09:30	UK: Producer Prices, Mar		
10:00	Euro Area: Trade Balance, Feb		
10:00	Germany: ZEW Economic Expectations, Apr		
Wednesday 16 April		**Forecast**	**Last**
09:00	Norway: Trade Balance, Mar		
09:00	Italy: Trade Balance, Feb		
09:30	UK: LFS Unemployment, Dec-Feb		
	Claimant Count Unemployment, Mar		
10:00	Euro Area: HICP, Mar Final		
10:00	Italy: Current Account, Feb		
	Spain: Trade Balance, Feb		
Thursday 17 April		**Forecast**	**Last**
07:00	Germany: Producer Prices, Mar		
08:30	Netherlands: Unemployment, Mar		
09:00	Euro Area: Balance of Payments, Feb		
14:00	Belgium: Consumer Confidence, Apr		
	Greece: Current Account, Feb		
Friday 18 April		**Forecast**	**Last**
08:30	Netherlands: Consumer Confidence, Apr		
09:00	Italy: Industrial Orders, Feb		
10:00	Italy: Contractual Wages, Mar		
	UK: Good Friday Holiday		

Sources: National statistical offices, central banks and Citi Research

Title	Author	Date
Euro Area — Sovereign Debt Update		
We Reiterate Our Base Case: Final ECB Rate Cut in June	European Economics Team	Apr 4, 2014
Eurogroup Reminds France of Budget Commitments	European Economics Team	Apr 3, 2014
French PM Valls to Prioritise Growth over Deficit Targets	European Economics Team	Apr 2, 2014
French government reshuffle to be announced today?	European Economics Team	Apr 1, 2014
ECB – No Actions Expected Today	European Economics Team	Mar 31, 2014
Euro Area		
ECB - Dovish Draghi Signals Unanimous Commitment To Act	Guillaume Menuet	Apr 3, 2014
Spain - Labour Market Recovery Strengthens In Q1	Giada Giani	Apr 2, 2014
France Macro View - Manuel Valls Tasked To Prioritise Growth Over Deficit Reduction	Guillaume Menuet	Apr 1, 2014
Euro Area - Inflation Falls to 0.5% YY in March	Giada Giani	Mar 31, 2014
ECB - Likely To Stay Put in April Despite Room To Ease	Guillaume Menuet	Mar 28, 2014
European Economic Forecast Highlights - March 2014	Ann O'Kelly	Mar 27, 2014
Euro Area - The Exposure of Euro Area and EU Countries to Russia & Ukraine	European Economics Team	Mar 25, 2014
Italy - Renzi Ready to Embark on Expansionary Fiscal Policy	Giada Giani	Mar 13, 2014
ECB - Happy to Stay Put, but Keeps Bias to Ease	Guillaume Menuet	Mar 6, 2014
Ireland — After the Programme	Michael Saunders	Mar 4, 2014
Euro Economics Weekly		
Italy — Some Short-Term Optimism	Giada Giani	Mar 28, 2014
Euro Economics Weekly - Euro Area: Upside Risks To Q2 GDP	Guillaume Menuet	Mar 21, 2014
The Eurozone Investment Recovery	Ebrahim Rahbari	Mar 14, 2014
Internal Devaluation in the Periphery	Giada Giani	Feb 7, 2014
ECB to Cut: Beware the (Early) Ides of March	Guillaume Menuet	Feb 28, 2014
German Inflation: Lower For a Little Longer	Ebrahim Rahbari	Feb 21, 2014
Could Eurozone Politics Return to the Fore?	Giada Giani	Feb 14, 2014
ERS: An Alternative Solution to OMT?	Guillaume Menuet	Feb 7, 2014
The Euro Area Now and Japan Then: Separated by One Large Shock	Ebrahim Rahbari	Jan 31, 2014
Spain Is Becoming More German	Giada Giani	Jan 24, 2014
Belgium: Politics the Likely Main Wild Card in 2014	Guillaume Menuet	Jan 17, 2014
Germany 2014 Outlook: Recovery And Rebalancing	Ebrahim Rahbari	Jan 10, 2014
2014 Outlook: GDP Risks, Credit Dynamics and Inflation Update	European Economics Team	Jan 6, 2014
Chief Economist Publications		
Global Economic Outlook and Strategy - March 2014	Willem Buiter	Mar 26, 2014
How Could The EM Turmoil Affect The Advanced Economies?	Willem Buiter/Ebrahim Rahbari	Mar 17, 2014
Scandi		
Scandi Economics Update	Tina Mortensen	Apr 4, 2014
Sweden - Riksbank Expected to Lower Conditional Interest Rate Path	Tina Mortensen	Apr 2, 2014
Norway - Norges Bank Confirms Initial Tightening Around Mid-2015	Tina Mortensen	Mar 27, 2014
Switzerland		
Switzerland - SNB Keeps Policy On Hold	Michael Saunders	Mar 20, 2014
UK		
UK - GDP – Interesting Details Behind the Headlines	Michael Saunders	Mar 28, 2014
UK - Retail Sales Surge	Michael Saunders	Mar 27, 2014
UK - YouGov Report Further Drop in Inflation Expectations	Michael Saunders	Mar 27, 2014
UK - Update On Scotland's Fiscal Deficit	Michael Saunders	Mar 19, 2014
UK - Budget Reinforces Strong Growth/Low Inflation Outlook	Michael Saunders	Mar 19, 2014
UK Economics Weekly		
CPI Disinflation and RPI Reflation	Michael Saunders	Mar 28, 2014
Raising UK Growth Forecasts Again	Michael Saunders	Mar 21, 2014
UK Economics Weekly - Policy Continuity and Flexibility	Michael Saunders	Mar 14, 2014
UK — Scottish Independence: Will It Happen? What Would Be The Implications? -	Michael Saunders	Mar 7, 2014
Budget Preview — Building Towards the Election	Michael Saunders	Feb 28, 2014

Source: Citi Research

Appendix A-1

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