

## European Rates Weekly

### Japanese liquidity and demand for foreign bonds

- **The BoJ and Japanese demand for Europe:** We expand our previous analysis of Ministry of Finance foreign portfolio flow data. There are signs that the investors are looking beyond just France: how far beyond will be absolutely central to the trajectory of spreads. We reexamine the changing positive and negative risks.
- **Updated yield forecasts:** We include a summary of our latest monthly yield and spread forecasts, with an accompanying explanation of the main revisions.
- **Sovereign ratings outlook:** We expect very few sovereign ratings changes among advanced economies in the next 2-3 quarters, but anticipate a fairly widespread bias to ratings downgrades in the next 2-3 years.
- **EUR swaps - where is carry most attractive?** The past week has seen a number of dovish comments from ECB officials and weak sentiment readings which have highlighted the increasing likelihood of an ECB rate cut in May. We highlight optimal trading strategies for investors looking to add to front-end carry trades.
- **Gilts & linkers:** Our forecasts show 10yr gilt yields moving moderately higher into a 1.90%-2.15% range and the 10yr gilt-Bund spread widening into a 50-80bp range. We recommend using the recent dip in 5yr break-evens to scale into long positions.
- **Euro inflation:** The near-term outlook for euro break-even inflation spreads depends heavily on developments in commodity markets, particularly oil. However, break-evens look increasingly cheap on a forward basis and could bounce post this week's supply, especially if oil prices stabilize.
- **Covered bonds, LCR and CRD IV:** This week, the European Parliament voted the reform package "to strengthen EU banks". This could imply that covered bonds qualify for Level 1 assets in the new liquidity ratio. However, the finishing line still hasn't been reached and there remains one hurdle that has yet to be addressed.
- **End-April EGBI projections:** Month-end should be supportive for the long end of France and 10yr Finland. The changes should also put flattening pressure on 5s10s Austria and 10s30s Netherlands.
- **Supply:** Within Europe, next week's bond supply of around €6bn comes from Italy and Germany. The US Treasury will issue \$99bn across the 2-, 5- and 7-year sectors next week. The UK DMO will issue £1.3bn of the linker '29 next week.
- **EMU relative value trades:** Selling Jul20s in Austria, Feb18s in Italy or buying Jul17s in the Netherlands vs the surrounding issues offers relative value. We also like switching into Oct15s in Spain.

---

#### Alessandro Tentori

+44-20-7986-9224  
alessandro.tentori@citi.com

#### Robert Crossley

+44-20-7986-9255  
robert.crossley@citi.com

#### Jamie Searle

+44-20-7986-9493  
jamie.searle@citi.com

#### Peter Goves

+44-20-7986-3215  
peter.goves@citi.com

#### Nishay Patel

+44-20-7986-1007  
nishay.patel@citi.com

#### Michael Spies

+49-69-1366-8403  
michael.spies@citi.com

#### Aman Bansal, CFA

+91-22-4277-5021  
aman1.bansal@citi.com

#### Mohit Aggarwal

+91-22-4277-5022  
mohit1.aggarwal@citi.com

---

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

Citi Research is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

**This page is left intentionally blank**

## Contents

Duration Scorecard	5
Tradesheet	6
The BoJ and Japanese demand for Europe	8
Sovereign Ratings Outlook	15
Expected Ratings Issues	16
Global Economic Outlook and Strategy	17
Explanation of Euro Forecast Revisions	19
EUR Swaps: Where is carry most attractive?	20
UK Rates: Updated forecasts	22
Euro Inflation Strategy	24
Covered Bond Strategy	26
End-April EGBI Projections	29
EMU Relative Value Trades	31
Relative Value Tables	32
EMU Relative Value Table – All Maturities	33
EMU Relative Value Table – Max 12Y Maturity	34
EMU Relative Value Table – Min 8yr Maturity	35
UK Relative Value Table	36
Supply Analysis and Forecasts	37
EUR: Coupons & Redemptions (next 3 mths)	39
ESP and ITA Bill Issuance Projections	40
Inflation Forecasts, Carry & Weekly Changes	41
Summary of Recent Publications	43
Appendix A-1	45

Figure 1. Strategy Summary Table

Europe	View	Strategies
<b>Direction</b>	Our 1wk duration scorecard is small short	Small short
<b>Money Market</b>	We expect the first of two ECB cuts in 2013 in May or June.	Receive short-dated forwards (such as EUR 3y1y or 3y2y or 4y1y)
<b>Yield Curve</b>	We are neutral on forward 5s30s steepeners in Europe following recent developments by the BoJ. We would look to re-enter once we get more clarity on the type of flows that emerge out of Japan following recent BoJ action. A few more prints for EUR 10s30s above 65bp would also make us more comfortable about re-entering	Neutral on EUR 3y2yF-5y15yF steepeners for now EUR 30s50s flatteners
<b>Cross-market</b>	We expect inflation/fiscal risks to drive gilt underperformance vs Bunds over the medium-term. Europe continues to outperform the US but the risk/reward remains unattractive for new positions.	Keep short 10yr gilts vs Treasuries. Tighten stop on receive EUR 5y5yF vs USD 5y5yF. Pay 5yr GBP vs EUR
<b>EMU Spreads</b>	The near-term outlook for BTPs remains positive driven by the postponement of political risks and the strong effect on risk appetite of the BOJ actions and anticipation of eventual flows. Medium-term risks remain but sentiment not fundamentals are driving markets in the short term.	Tactical long BTPs vs Bunds.
<b>Swap Spreads</b>	We expect the risk premium embedded in Bunds vs swaps to fade and recommend swap spread tighteners in both 10s and 30s .30yr Bund supply next week should add additional support for 30yr Bund spread tighteners	Sell 10yr Bunds vs swaps Hold short 30yr Bunds vs swaps with a tight stop
<b>Inflation</b>	We have taken profit on our short OATei22 vs 10yr HICPxT position. Euro break-evens look cheap on a forward basis and could bounce post today's supply. Positive carry to 1 June should be supportive. We recommend entering a long position in 5yr UK break-evens following the recent commodity-related dip.	Buy Bunde120 break-even Buy UKT117 break-even Overweight Germany vs France and Italy Sell 5yr, 5yr forward French CPIxT vs euro HICPxT
<b>Volatility</b>	With 1m implied volatility in EUR close to historic lows and our expectation that yields will move higher we recommend buying payers in the 10yr tenor. We also expect gamma to move higher as yields rise.	Buy EUR 3y2y ATMF receivers on dips Buy EUR 1m10y ATMF payer (or vs ATMF+10 payers) Sell EUR 5y30y bpv vs 2y30y and 7y30y bpv
<b>SSA</b>	Spreads between supras and France are likely to continue narrowing. Correlation between KfW and RENTEN to remain high and relatively wide spread differentials in the belly of the curve are likely to attract interest.	Relative value in long Renten vs KfW Long front-end KfW vs France over the medium term Long the belly of EU vs France over the medium term

*For a list of outstanding trade recommendations please see the Tradesheet section of this report*

# Duration Scorecard

Figure 2. Bund Weekly Cheat Sheet: 19<sup>th</sup>-25<sup>th</sup> April

## Bund Directional Scorecard (1wk horizon)

<b>RECOMMENDATION</b>	<b>Short</b>
<b>Conviction level</b>	<b>14%</b>

RXM3 (EOD Thurs) = 145.97

CTD yield = 0.92% 10day del vol = 4.27%

### SIGNAL STRENGTH (+/-2)

<b>MACRO</b>	<b>0.1</b>	<b>Weight = 28%</b>
--------------	------------	---------------------

ECB	2	May still most likely for first of two rate cuts in 2013	7.5%
Fed and BOJ	-2	Ongoing US QE + BOJ actions v supportive for liquidity/risk appetite	7.5%
Inflation	0	Euro inflation falling	2.5%
Growth related data	1	Data likely to continue to point to weakness	5.0%
Citi surprise	2	Surprise index continues to move lower and is firmly negative	2.5%
Middle East / Oil	-1	Oil bouncing but still 6% lower than last week	2.5%

<b>EURO MARKET FACTORS</b>	<b>-0.1</b>	<b>Weight = 33%</b>
----------------------------	-------------	---------------------

Supply	0	V light supply next week (but nearly all Germany)	5.0%
Risk appetite	-1	Sanguine mood continues	5.0%
Positioning	0	Market positioning more balanced	2.5%
Equity	1	Equity markets coming off	5.0%
Sovereign credit	-1	Risks being shrugged off. Peripheral yields heading towards lows	10.0%
FX	0	EUR stalling	5.0%

<b>EVENT RISK</b>	<b>0.1</b>	<b>Weight = 15%</b>
-------------------	------------	---------------------

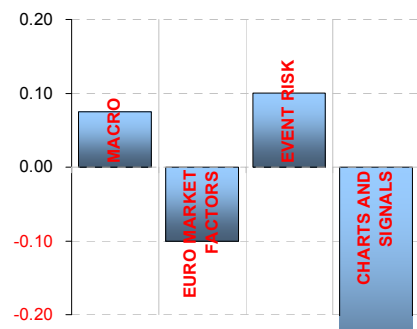
Politics	1	Italian presidential election but it hasn't worried spreads at all so far	10.0%
3yr LTRO	0	Ongoing LTRO repayments less significant	2.5%
Stability mechanisms	0	Spain/Italy still likely to eventually request help in 2013	2.5%

<b>CHARTS AND SIGNALS</b>	<b>-0.4</b>	<b>Weight = 25%</b>
---------------------------	-------------	---------------------

Technical	-2	Bunds within 10bps of 2012 lows.	12.5%
T-Note	-1	Bearish channel since July	7.5%
CFTC	-1	Positioning is net long	2.5%
ARTS	0	Neutral	2.5%

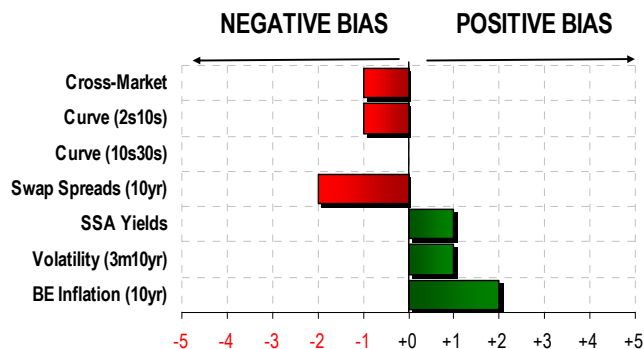
Source: Citi Research

Figure 3. Contribution to Bund Signals



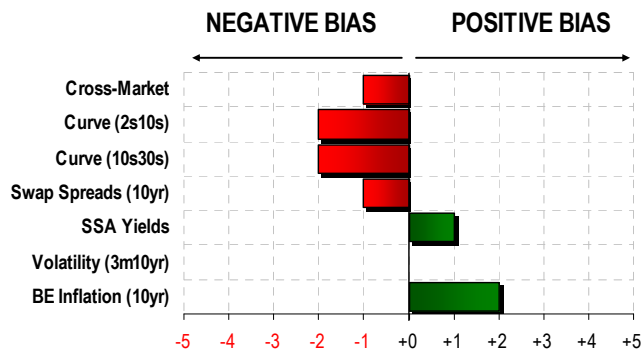
Source: Citi Research

Figure 4. EURO AREA (Near-term Bias)



Source: Citi Research

Figure 5. UK (Near-term Bias)



Source: Citi Research

# Tradesheet

## New Trade

Please see page 22 for the details

### 1. Buy UKTi '17 break-even

Buy UKTi 1.25% 11/17 at -2.44%

Sell UKT 5% 3/18 at 0.65%

Open 309bps. Current 309bps. Target P&L (including carry) 25bps. Stop P&L (including carry) 12.5bps.

Please see page 24 for the details

### 2. Buy BUNDei '20 break-even

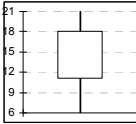
Buy DBRi 1.75% 4/20 at -0.83%

Sell DBR 3.25% 1/20 at 0.59%

Open 142bps. Current 142bps. Target P&L (including carry) 12bps. Stop P&L (including carry) 6bps.

## Record of Our Closed Trades

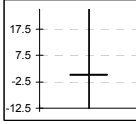
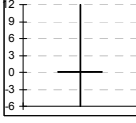
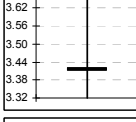
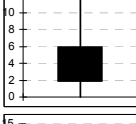
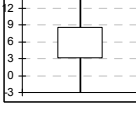
Figure 6. Record of our Closed Trades

Region	Trade	Levels	Rationale	
Europe	Sell OATei22 break-even inflation spread vs	Open 11bp	Taking Profit The Morning Call, 17 April 2013  European Rates Weekly 4 April 2013	
	10yr EUR HICPXT ZC swap	Current 18bp		
	Buy 10yr EUR HICPXT ZC swap at 2%	P&L 7bp		
	Sell OATei22 break-even inflation spread at 1.89%	Target 21bp Stop 6bp		

Source: Citi Research

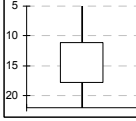
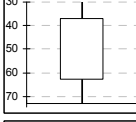
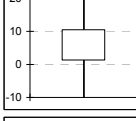
## Record of Our Open Trades

Figure 7. Record of our Open Trades

Region	Trade	Levels	Rationale + Publication Date	
UK	Buy UKTi '17 break-even	Open 309bp	Buy the dip in UK break-evens  European Rates Weekly 18 April 2013	
	Inflation Buy UKTi 1.25% 11/17 at -2.44%	Current 309bp		
	Sell UKT 5% 3/18 at 0.65%	P&L (carry-adj) 0bp		
		Target P&L 25bp (including carry) Stop P&L 12.5bp (including carry)		
Europe	Buy BUNDei '20 break-even	Open 142bp	Break-evens look cheap on a forward basis and could bounce post supply  European Rates Weekly 18 April 2013	
	Inflation Buy DBRi 1.75% 4/20 at -0.83%	Current 142bp		
	Sell DBR 3.25% 1/20 at 0.59%	P&L (carry-adj) 0bp		
		Target P&L 12bp (including carry) Stop P&L 6bp (including carry)		
UK	Pay GBP 10yr, 30yr forward swap	Open 3.42%	Supply burden over the quarter likely to weigh on long-dated forwards  European Rates Weekly 11 April 2013	
	Forwards Pay GBP 10yr, 30yr forward at 3.42%	Current 3.41%		
		P&L -0.01%		
		Target 3.65% Stop 3.32%		
Europe	Buy EUR 1m10y ATMf payer	Open 6bp	EMU risks are receding. Low rates and low vol makes buying payers attractive.  Euro Rates Strategy 11 April 2013	
	Volatility Buy EUR 1m10y ATMf (1.66%) payer at 6bps	Current 2bp		
		P&L -4bp		
		Target 12bp Stop 0bp		
US / UK	Sell 10yr gilts vs Treasuries	Open 3bp	Recent supports for gilts including cash-flows, a break in supply and safe haven flows, are set to reverse.  European Rates Weekly 4 April 2013 Revised: European Rates Weekly 11 April 2013	
	Cross Market Buy UST 1.625% Aug22 at 1.68%	Current 9bp		
	Sell gilt 1.75% Sep22 at 1.71%	P&L 6bp		
		Target 15bp Original Stop -3bp Revised Stop 3bp		

Source: Citi Research

Figure 8. Record of our Open Trades (continued)

<b>Europe</b>	<b>Sell Bund 2.5% Jul44 vs swaps</b>	Open -11bp Current -7bp <b>P&amp;L 4bp</b> Target -1bp Original Stop -16bp Revised Stop -9bp	Attractive entry level with spreads at the bottom of the well established 1yr range. Potential support from long-end EUR receiving flows if ITA yields move much higher.  The Morning Call 27 February 2013 Revised: European Rates Weekly 18 April 2013	
Swap spread	Sell Bund 2.5% Jul44 YYS at -11bp			
<b>Europe</b>	<b>Receive EUR 10y2y vs 12y3y</b>	Open 4bp Current 11bp <b>P&amp;L 7bp</b> Target 25bp Stop -5bp	Cheapness of the sector due to legacy ASW positions. The trade offers a positive roll-down for relatively low volatility  The Morning Call, 23 January 2013	
Curve	Receive EUR 10y2y at 3.1% Pay EUR 12y3y at 3.14%			
<b>Europe</b>	<b>Receive EUR 30s50s</b>	Open 18bp Current 11bp <b>P&amp;L 7bp</b> Target 5bp Stop 22bp	Long-end of EUR swap curve is pricing in more than required de-hedging by Dutch pension funds. CVA activity should support the trade.  European Rates Weekly 11 October 2012	
Curve	Receive EUR 50yr at 2.54% Pay EUR 30yr at 2.36%			
<b>Europe</b>	<b>Receive EUR 1y3yF</b>	Open 136bp Current 81bp <b>P&amp;L 55bp</b> Target 50bp Stop 150bp	ECB rate cut and very high carry should be supportive for this trade  IIRS 13 September 2012	
Duration	Receive EUR 1y3yF at 1.36%			
<b>Europe</b>	<b>Sell EUR 1y3yF ATM straddle and buy ATM-25 receiver</b>	Open 63bp Current 37bp <b>P&amp;L 26bp</b> Target 30bp Stop 73bp	Fwd levels in front-end EUR swaps are too high in an environment where additional policy measures by the ECB are likely to be undertaken  IIRS 9 August 2012	
Volatility	Sell EUR 1y3yF ATM (=1.36%) straddle for 98bp Buy EUR 1y3yF ATM-25 receiver for 35bp			
<b>Europe</b>	<b>Long KfW 1.375% Feb17s vs OAT 5% Oct16s</b>	Open 1bp Current 11bp <b>P&amp;L 10bp</b> Target 20bp Stop -10bp	Spread compression looking overdone and we look for KfW to outperform should the EMU crisis intensify  IIRS 2 August 2012	
Cross Market	Buy KfW 1.375% Feb17 at 0.62% Sell OAT 5% Oct16s at 0.63%			
<b>UK</b>	<b>Sell GBP 2y2y ATM straddle</b>	Open 76bp Current 52bp <b>P&amp;L 24bp</b> Target 0bp Stop 114bp	The fundamental backdrop in the UK supports selling GBP 2y2y vol  IIRS 12 July 2012	
Volatility	Sell GBP 2y2y ATM (1.04%) straddle at 76bps			

Source: Citi Research

# The BoJ and Japanese demand for Europe

Robert Crossley  
+44-20-7986-9255  
[robert.crossley@citi.com](mailto:robert.crossley@citi.com)

The reverberations of the Bank of Japan announcement of quantitative and qualitative monetary easing are still being felt. Japanese investors are traditional satisficers of yield, liquidity, and diversification. While Bunds will always have a place in that, it is France that continues to be the number one alternative. However there are signs that the investors are looking beyond just France: how far beyond will be absolutely central to the trajectory of spreads in Europe in our view.

This article is in two parts. First we examine the recently released Ministry of Finance foreign portfolio flow data, expanding our previous analyses. We then consider the wider significance of the surge in demand for the Netherlands and broaden out into a consideration of related positive risks for peripheral spreads, as well as the changing shape of the negative ones<sup>1</sup>.

## Introduction

Where will the liquidity flow to?

In pursuit of their inflation target of 2% in two years the BOJ will purchase around ¥7.5trillion of coupon-paying JGBs each month<sup>2</sup>. This is expected to increase total assets on their balance-sheet from ¥158trillion at end-2012 to ¥290trillion at end-2014. Given the sheer scale of this liquidity, and the capacity of the Japanese economy to absorb it, expectation of a chunk of it finding its way into foreign bond markets is entirely rational. The question is which ones. To address this question below we start by examining the demand trends in the recently released Ministry of Finance portfolio flow data<sup>3</sup>.

## Summary of what the MoF data shows

Key points from analysis of MoF data

1. **Relative global flows:** Japanese funds have been flowing out of US and Australian government bonds and into European government bonds recently.
2. **Flows into liquid, soft core:** The flows into EGBs have been predominantly into France over the last year, though over the last 3 months flow into the Netherlands has matched that into France.
3. **Specific country demand:** Strong swings in demand for the Netherlands (positive) and Australia (negative) recently. Negative sentiment towards Italy has receded while appetite for France remains high.
4. **Relationships between demand and yield level:** There has been a very close relationship between Japanese portfolio flows and the yield level. This relationship is closest for Bunds but is also very good for Treasuries. Unexpectedly, demand for BTPs has varied positively with the yield level, but there has been a clear inverse relationship for OATs and yield recently.
5. **Consistent demand patterns around fiscal year end:** Over the last five years we have consistently seen a significant fall in demand in April from March in both Treasuries and Bunds. This pattern - of flows into Treasuries in March, and out again in April - was the opposite way round prior to 2008. Although the currency is an important element in this, it is only part of the picture. Although tempting, it is important not to concentrate on it to the exclusion of the other factors.

<sup>1</sup> Citi's recent positioning survey - which includes Japanese investors, as well as hedge funds, and European and UK domestic real money - in OATs, Bunds, BTPs and Bonos - and combines our flow data, may also be of interest in connection with this discussion: *How Are Different Client Types Positioned?*

<sup>2</sup> See [http://www.boj.or.jp/en/announcements/release\\_2013/k130404a.pdf](http://www.boj.or.jp/en/announcements/release_2013/k130404a.pdf) and [http://www.boj.or.jp/en/announcements/release\\_2013/rel130404d.pdf](http://www.boj.or.jp/en/announcements/release_2013/rel130404d.pdf) for details of the program.

<sup>3</sup> The latest data is for the period ending January 2013.



## Analysis of MoF portfolio flow data

### The role of yield and evolving risk appetite

Below we show the relationships between the yield level and flows into OATs and BTPs, as well as Bunds and Treasuries, and examine the longer term data to give an insight into positioning and changing risk appetite for Italy, France, and the Netherlands.

### Will Japanese demand for Italy return?

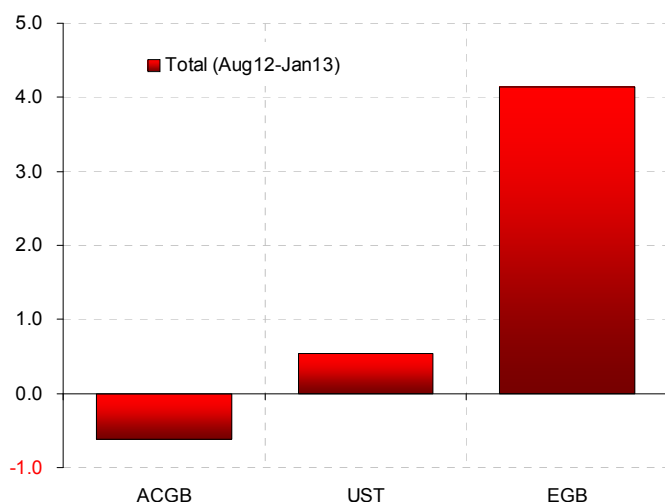
We conclude that the liquid soft core of Europe is likely to retain its attraction, but if Bund or Treasury yields rise the data suggests that this is also likely to attract demand. (We also examine the consistent demand patterns for Bunds and Treasuries around Japanese year end). But probably the most interesting wildcard is if and when demand for Italy will return. We discuss this in the final section.

## (a) The global perspective

### Recent demand for Europe has dwarfed that for Treasuries

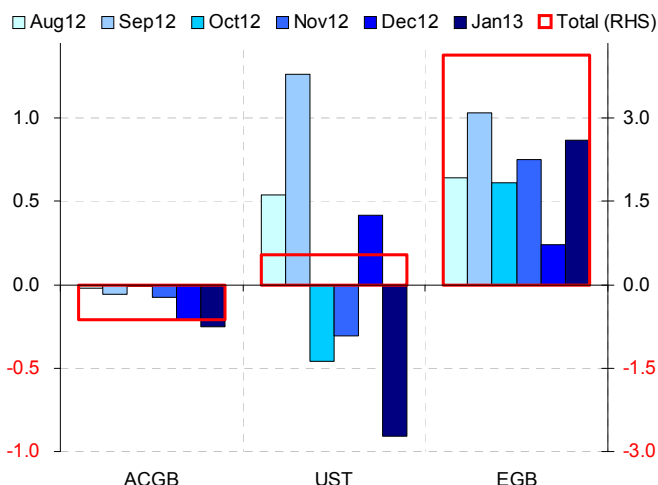
As we highlighted in our previous notes<sup>4</sup>, recent demand for Europe has dwarfed that for Treasuries, and has been much more consistent.

Figure 9. Dominant demand for European bonds over the last 6 months



Source: MoF, Citi Research

Figure 10. Demand for Europe has been consistently positive



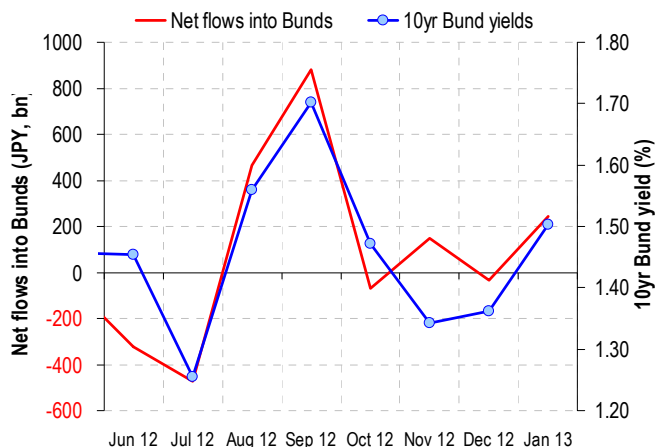
Source: MoF, Citi Research

### Yield and demand for Bunds and Treasuries

One striking feature of the demand is the closeness of the relationship to the yield level. This is closer for Bunds (Figure 11) than for Treasuries (Figure 12), though it will be interesting to see whether the latter divergence is maintained or closed.

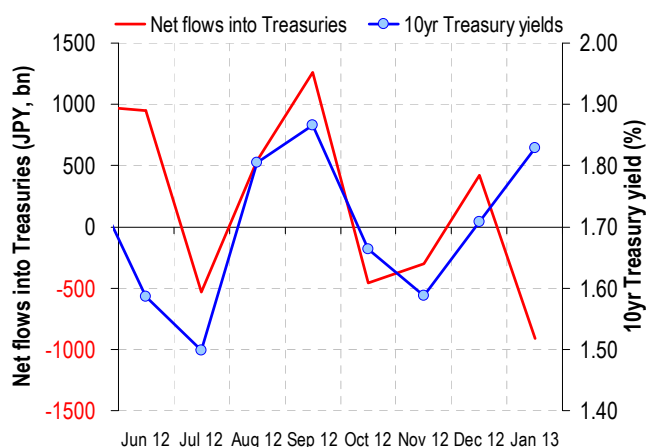
<sup>4</sup> For example, *Global Rates Strategy: Effect on Demand for Foreign Bonds of BOJ Announcement*.

Figure 11. Close relationship between the level of Bund yields and Japanese demand.



Source: MoF, Citi Research

Figure 12. Treasuries exhibit a similar, but weaker, relationship.



Source: MoF, Citi Research

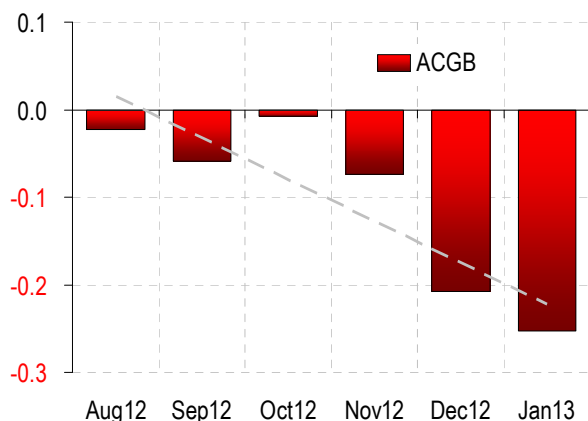
#### Consistent pattern of demand for Treasuries and Bunds around fiscal year end

In the appendix we also look at the consistent pattern of demand for Treasuries and Bunds either side of Japanese fiscal year end over the last five years.

#### Large and accelerating outflows from Australia

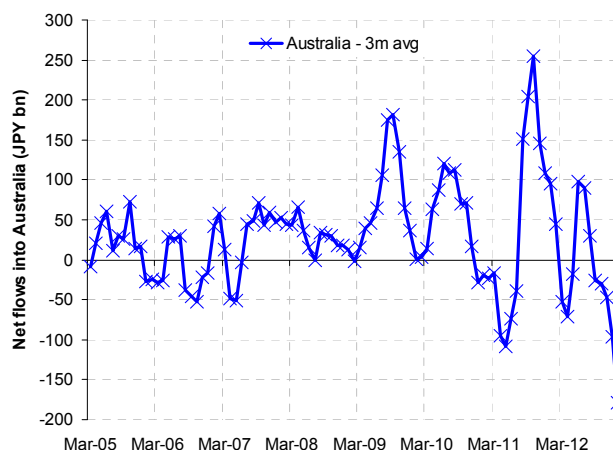
The third main bloc shown in Figure 13 is Australia which as one of the few remaining AAAs and an obvious source of diversification has attracted a great deal of international interest. The (lack of) demand for Australia has accelerated significantly since the beginning of Q3 last year (Figure 13). Figure 14 shows the 3 month average of demand since 2005 to put the size of the recent flows into perspective.

Figure 13. Demand for Australia has been on a downward trend, accelerating since November



Source: MoF, Citi Research

Figure 14. Putting the decreasing demand for Australia into perspective

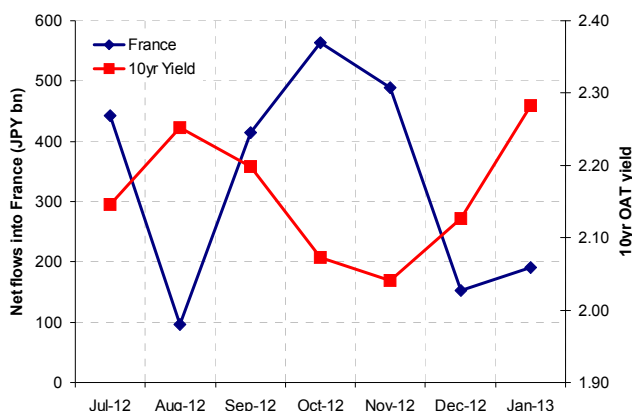


Source: MoF, Citi Research

## (b) The European perspective

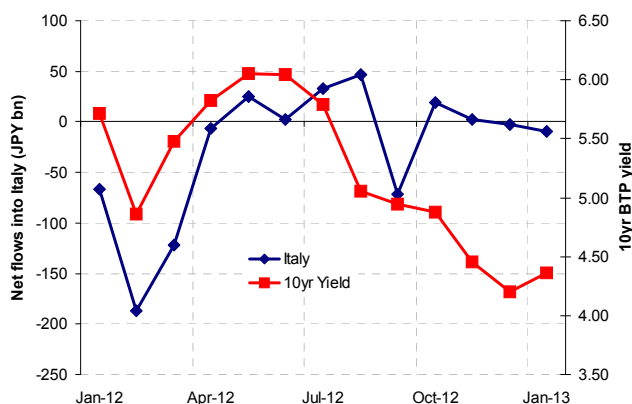
While there has been a positive relationship between the yield level and flows into Bunds recently, we found the opposite for OATs, where there has been an inverse relationship between their yields and demand for French bonds (Figure 15). For Italy, we were surprised to see a positive relationship between the yield level and demand, or rather between yields and the rate of selling, over the last year (Figure 16).

Figure 15. Inverse relationship between yield level and demand for France over recent months.



Source: MoF, Citi Research

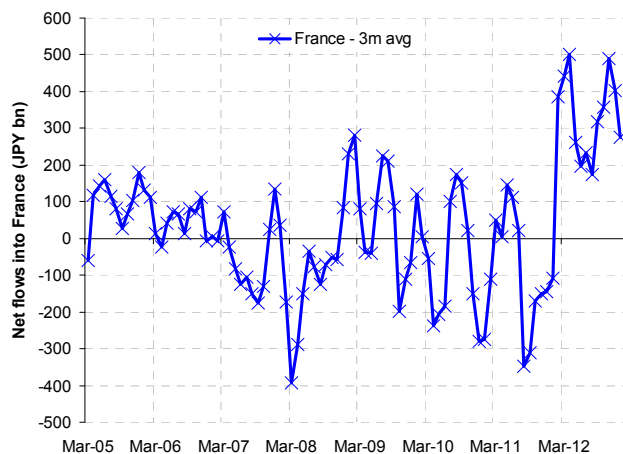
Figure 16. Demand for Italy has been small but has varied with the yield level. We would have expected the opposite.



Source: MoF, Citi Research

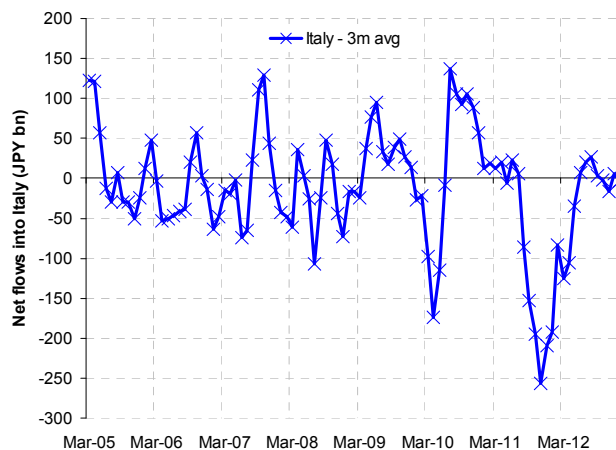
When you look at the long-term history, and how negativity towards Italy has reduced with flows now back to neutral after the previous large swings, and the extent of the recent demand for France.

Figure 17. 3-month average of net flows into France since 2005 puts the recent demand, and importance of Japanese positioning, into context



Source: MoF, Citi Research

Figure 18. 3-month average of net flows into Italy shows how the negative sentiment has receded.



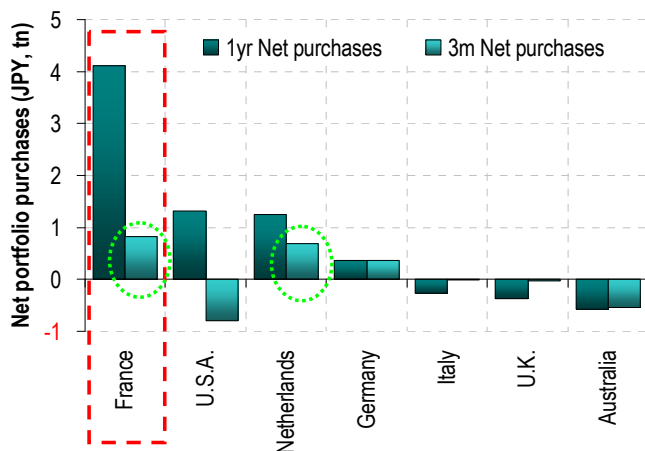
Source: MoF, Citi Research

## The significance of the surge in demand for the Netherlands

**Demand for the Netherlands was as strong as for France over the 3 months to 31 January. But more interesting than its size is the implication of an increased willingness to search out yield in other markets**

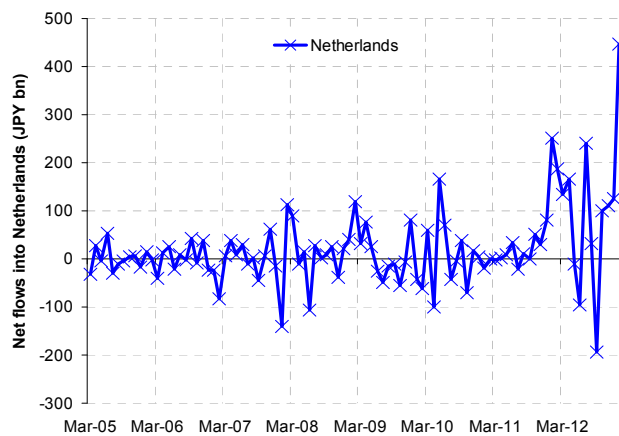
Within Europe, France has been the clear beneficiary of the demand over the last year. Though as Figure 19 (below) also shows, demand for the Netherlands has been equally strong over the 3 months to January. Figure 20 puts this surge in demand for the Netherlands into perspective. But possibly more interesting than its size is the implication of an increased willingness to search out yield in other markets. This could have significant implications for spreads.

Figure 19. France has been the clear beneficiary of the demand over the last year. However, over the 3 months to January, demand for the Netherlands has been equally strong.



Source: Citi Research

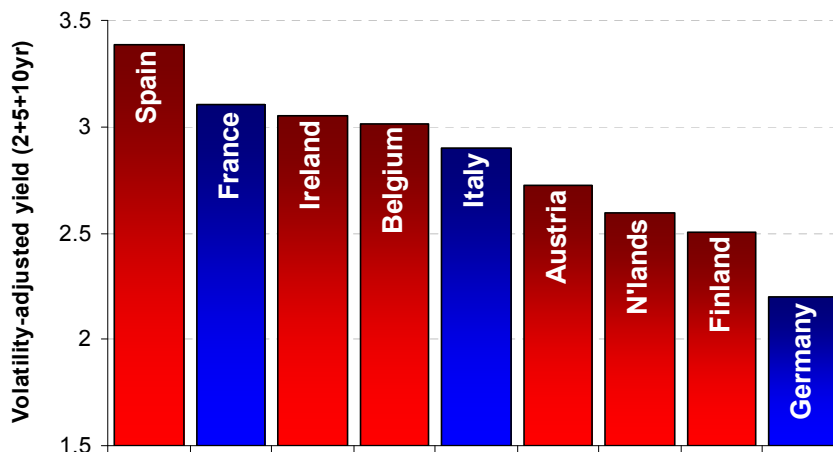
Figure 20. Putting the recent Japanese appetite for the Netherlands into perspective.



Source: Citi Research

Looking at volatility-adjusted yields offers an interesting insight into the relative attractiveness of the various sources of yield on offer in Europe. Germany is at the bottom, as usual, reflecting its unique safe-haven status. And France remains almost at the top. Together with the superior volatility-adjusted yield on offer relative to Germany, the depth and size of the French market affords considerable confidence, greatly enhancing the attractiveness of its yield.

Figure 21. Ranking of volatility-adjusted yields in Europe.



Source: MoF, Citi Research

## Conclusion: the wider implications for Europe (and BTP spreads)

### A significant positive risk for BTPs in the medium term

The three biggest bond markets in Europe are highlighted in Figure 21 (which ranks the volatility-adjusted yields on offer). With the reduction of perceived tail risks there has been a reduction in the differences between volatility-adjusted yields. Italy is now comparable to France in volatility-adjusted yield terms<sup>5</sup>. While there is much more to the attractiveness of a country than simply volatility-adjusted yield, it is not too far-fetched to see the market anticipating a scenario where there is some prospect of continued (relative) political stability in Italy - where austerity continues to be enacted - enough room to avoid being put on a collision course with the ECB, and talk of Japan starting to seriously consider putting money in Italy again. It is easy to see how this idea gaining currency could set spreads alight, well before any eventual reality.

### The main positive and negative risks for Europe

In the same way that the main negative risk for Europe probably consists in the danger of a coincidence of individually ignorable events (e.g., disappointing growth, political or social turmoil, unhelpful official comments) and misjudgment of the rate at which austerity/reform can be implemented; the positive risks probably consist in anticipation of marginal money starting to return to troubled peripherals - especially if that pool of money is large and hungry for yield.

### The pain trade (or should that be the pleasure trade?)

Like the negative risks materializing, this may be some way off (and is definitely not our central scenario), but that doesn't mean we should not be alert to its possibility. Prices are being driven by sentiment and flow, not fundamentals. And it is in everybody's interest to continually find ways to postpone confrontation with those fundamentals. Spreads tightening hard would not be so much a pain trade as a pleasure trade. And that is what makes it dangerous to ignore.

### Respect the risk-on mood. The trend is still your friend, for now

We continue to expect Italy to be eventually forced towards the arms of the OMT, but in the near term we can see the current risk-on tightening move continuing, especially with Bund yields so low, Italian political risks (and Cyprus) being shrugged off by the market, and the effects of the BOJ announcement still being felt. We continue to recommend tactical longs in BTP spreads.

---

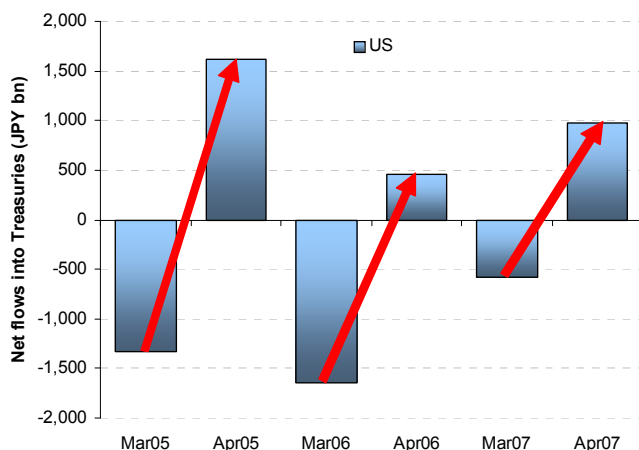
<sup>5</sup> Somewhat surprising if you consider the news from the Italian election and Cyprus, but it is expensive denying the reality.

## Appendix: Demand patterns around Japanese year end

**An observation on the consistent pattern of demand for Treasuries (and Bunds) around Japanese year end**

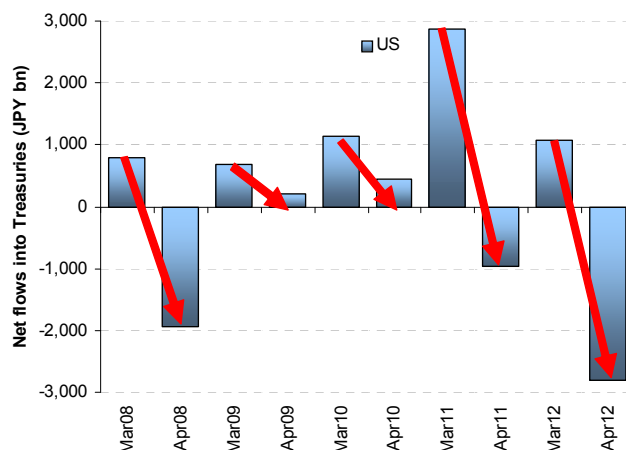
What you do see in both Treasuries and Bunds however is a clear seasonal pattern around Japanese fiscal year end. Pre-crisis there was a clear pattern of selling Treasuries in March and buying in April (Figure 22), but from 08 onwards, the pattern changed to *buying* in March and either selling or significantly reduced demand in the following month (Figure 23).

Figure 22. Pre-crisis there was a clear pattern of selling Treasuries in March and buying in April.



Source: MoF, Citi Research

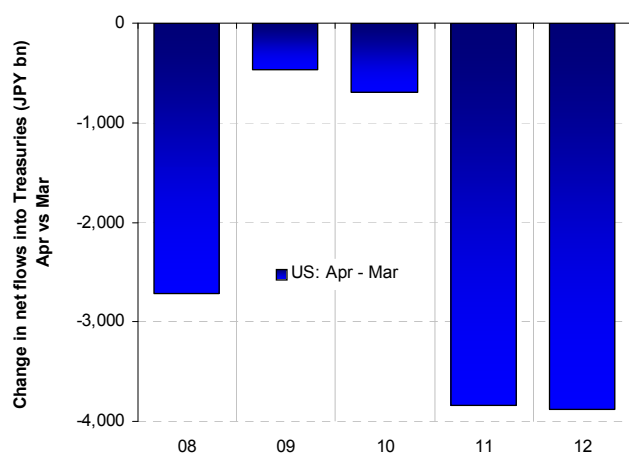
Figure 23. 08 onwards, the pattern changed to buying in March and reduced demand



Source: MoF, Citi Research

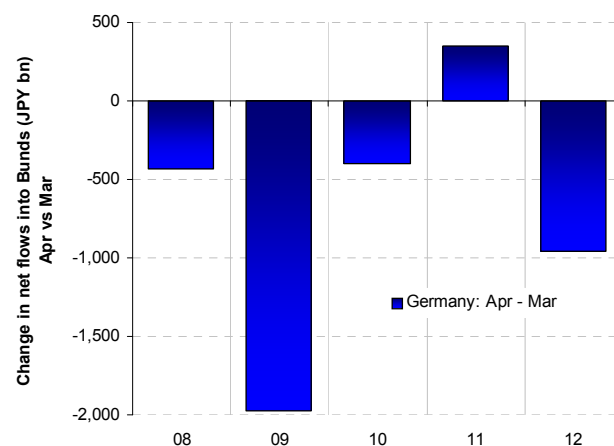
If you look at the change in demand from March to April over the last five years you can clearly see the consistent reduction after year end.

Figure 24. Drop in demand for Treasuries every April compared to March from 2008-2012.



Source: MoF, Citi Research

Figure 25. Drop in demand for Bunds in April compared to March in 4 out of 5 years since 08.



Source: MoF, Citi Research

**Looking at just the currency, although tempting, is likely to be a misleading guide**

Although it is tempting to point out the coincidence with the weakening of the yen from 05-07 and ongoing rally between 2008 and 2012, this is only part of the picture. The absolute and relative return on other assets and proximity to overall profit targets are the other key factors which make looking to the currency to explain everything a misleading guide to the future.

## Sovereign Ratings Outlook

**Michael Saunders**  
(44-20) 7986-3299  
michael.saunders@citi.com

**Robert Crossley**  
(44 20) 7986-9255  
robert.crossley@citi.com

**Peter Goves**  
(44-20) 7986-3215  
peter.goves@citi.com

The [Sovereign Ratings Outlook](#) is a joint product between the Citi economics and rate strategy teams, with input from various other research teams. We aim to forecast the direction and scale of sovereign debt ratings (local currency), as well as any changes in the ratings outlook, for a range of countries. These are our judgments over the ratings outlook, rather than model-determined recommendations. All economic and fiscal forecasts are consistent with those published in Citi's monthly "*Global Economic Outlook and Strategy*" or other research. We do not aim to make a judgment on the financial market implications of ratings changes, except in so far as we expect any such market implications to affect other sovereign ratings.

Given economic updates in this publication and based on rating agency criteria, we highlight our economists' and strategists' main expectations for sovereign ratings over the near (2-3 quarters) and longer (2-4 years) term.

Figure 26. Advanced Economies — Sovereign Long-Term Debt Ratings and Citi Ratings Forecasts

Country	S&P Ratings				Moody's Ratings			
	Current Rating	Current Outlook	Citi Near-term (Up to 9 Months) Forecast Rating	Citi Longterm (Next 2-4 Years) Forecast Rating & Outlook	Current Rating	Current Outlook	Citi Near-term (Up to 9 Months) Forecast Rating	Citi Longterm (Next 2-4 Years) Forecast Rating & Outlook
US	AA+	Neg	AA+ (Neg)	AA ↓	Aaa	Neg	Aaa (Neg W)	Aa1 ↓
Canada	AAA	Stable	AAA	AAA	Aaa	Stable	Aaa	Aaa
Japan	AA-	Neg	AA- (Neg)	A+ ↓	Aa3	Stable	Aa3	A1 ↓
Germany	AAA	Stable	AAA	AA+ ↓	Aaa	Neg	Aaa (Neg)	Aa1 ↓
France	AA+	Neg	AA+ (Neg)	AA ↓	Aa1	Neg	Aa1 (Neg)	Aa2 ↓
Italy	BBB+	Neg	BBB+ (Neg)	SD* ↓↓↓↓	Baa2	Neg	Baa2 (Neg)	C* ↓↓↓↓
Spain	BBB-	Neg	BBB- (Neg)	SD* ↓↓↓↓	Baa3	Neg	Baa3 (Neg)	C* ↓↓↓↓
Austria	AA+	Stable	AA+	AA ↓	Aaa	Neg	Aaa (Neg)	Aa1 ↓
Belgium	AA	Neg	AA (Neg)	AA- ↓	Aa3	Neg	Aa3 (Neg)	A1 ↓
Finland	AAA	Stable	AAA	AA+ ↓	Aaa	Stable	Aaa	Aaa (Neg)
Greece	B-	Stable	B-	SD* ↓↓↓↓	C		C	C*
Ireland	BBB+	Stable	BBB+	BBB+ ↑	Ba1	Neg	Baa3 ↑	Baa2 ↑↑
Netherlands	AAA	Neg	AAA (Neg W)	AA+ ↓	Aaa	Neg	Aaa (Neg W)	Aa1 ↓
Portugal	BB	Stable	BB (Neg)	SD* ↓↓↓↓	Ba3	Neg	Ba3 (Neg)	C* ↓↓↓↓
UK	AAA	Neg	AAA	AA+ (Neg) ↓	Aa1	Stable	Aa1	Aa1 (Neg)
Switzerland	AAA	Stable	AAA	AAA	Aaa	Stable	Aaa	Aaa
Sweden	AAA	Stable	AAA	AAA	Aaa	Stable	Aaa	Aaa
Denmark	AAA	Stable	AAA	AAA	Aaa	Stable	Aaa	Aaa
Norway	AAA	Stable	AAA	AAA	Aaa	Stable	Aaa	Aaa

Note: Arrows denote expected ratings changes from the current rating. (Neg) denotes negative outlook. (Neg W) denotes negative watch. SD means Selective Default. (P) means Provisional. The number of arrows denotes the expected change in ratings notches from the current level. We show a maximum of five arrows even for countries where we expect more than five notches of ratings change. NA Not available. Sources: Moody's, S&P and Citi Research

\* Based Citi economists' longer term (2015-2017) view, Citi expects Greece and Portugal to remain sub-investment grade in coming years, and for Italy and Spain to fall to sub-investment grade ratings, and this may well include a period of "selective default" as determined by the rating agencies around the time of debt restructuring. Following the restructuring, we expect such sovereigns to attain a mid sub-IG rating.

## Expected Ratings Issues

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

Peter Goves  
(44-20) 7986-3215  
peter.goves@citi.com

In terms of fiscal finances, Moody's expects Spain's general government balance to be -6.2% in 2013 (the EC expect -6.7%).

Ongoing political risks likely to be watched closely by rating agencies

Like various EMU sovereigns, we do not expect any immediate change in Portugal's rating

Upgrade by Moody's still our base case over coming quarters

S&P kept the UK's rating at AAA (Negative Outlook)

Moody's focus on budgetary negotiations

### Rating agencies busy affirming the status quo

S&P and Moody's have been busy publishing over recent days, updating views behind their sovereign ratings. We detail the latest drivers behind various EMU sovereigns together with Citi's view on where such ratings are likely to migrate<sup>6</sup>.

**Spain:** Following their Special Comment on 9 Feb, Moody's released their Credit Opinion on the sovereign on 12 April, affirming the Baa3 rating with a Negative Outlook. Moody's base case is for Spain to return to positive growth in 2014 although the *"negative rating outlook reflects Moody's assessment that the risks to the baseline scenario are high and skewed to the downside"* (Credit Opinion 12<sup>th</sup> April). In addition: *"Spain's rating would be downgraded if any of the above risk factors led us to conclude that the Spanish government had either lost, or was very likely to lose, access to private markets"*. As Moody's is clearly focused on medium term economic drivers and, in the near term, market access appears reasonably secure (and has done for several months), Citi does not anticipate any significant downward ratings pressure on the Spanish sovereign in the immediate term.

**Italy:** In their last Issuer Comment, Moody's stated that *"Italy's mixed election outcome is credit negative"*. This was largely due to the political uncertainty that such an outcome was likely to generate. Moody's noted *"Italy's progress on fiscal consolidation has been material"* but countering that, downgrade pressure could emerge if economic prospects deteriorated or if reform implementation stalled. Although we do not expect a downgrade of the Italian sovereign in the immediate term, risks have clearly risen over the medium term. Downgrade pressure is likely to emerge in our view should the political gridlock remain in place longer than expected and/or the resultant government is a weak or temporary one.

**Portugal:** In their latest Credit Analysis (5 April), Moody's affirmed its rating of Portugal at Ba3 Negative Outlook. Moody's continues to acknowledge Portugal's relatively high living standards and its institutional strength. These are balanced by *"considerable uncertainty over the prospects for institutional reform in the euro area and the increasingly poor macroeconomic outlook across the region"*. Moody's also acknowledged on 11 April that *"Portugal's Constitutional Court Ruling Deals Setback to Government's Fiscal Efforts"* in an Issuer Comment so entitled.

**Ireland:** Moody's affirmed the Ba3 rating on Negative Outlook on 12 April. From Citi's point of view, Ireland's fiscal prospects now seem better than previously expected and our economists no longer expect debt structuring involving privately-held Irish government debt in the years ahead. Should Ireland continue to make steady progress towards independent and sustained private market access, then this is likely to be one factor in Moody's upgrading Ireland to Baa3 (investment grade) later this year in our view.

**UK:** S&P has not downgraded the UK and recently affirmed the UK's AAA standard (Negative Outlook). S&P cited the UK's flexibility in terms of monetary and fiscal policy as key credit strengths as well as its ability and willingness to arrest the sovereign's clear economic challenges. We continue to expect S&P to downgrade the UK by one-notch to AA+ given rising debt and likely political tensions, but this will now probably occur in the next year or two rather than in coming quarters.

**US:** The most recent Moody's publication (15 April) was entitled *"After Obama Administration's Budget Proposal, US Credit Trend Is Still Unclear"*. The focus for Moody's is clearly ongoing budgetary negotiations which is likely to be a key driver in its rating of the US. Moody's continues to rate the US at Aaa Negative Outlook.

<sup>6</sup> See "European Rates Weekly", 12 April 2013, Alessandro Tentori et al, Citi.



# Global Economic Outlook and Strategy

Following the latest [Global Economic Outlook and Strategy April 2013](#) from our global economists and market strategists, we highlight Citi's key views.

## Global

**GDP (YoY) 2013F 2.6%**  
**CPI 2013F 2.7%**

Our economists are trimming 0.1% off Citi's 2013 global growth forecast, to 2.6% (at current exchange rates) from 2.7% last month, reflecting slight downgrades to forecasts for the euro area and China. Citi now looks for global growth of 2.6% in 2013 and 3.1% in 2014, rising to 3½%-4% YoY in 2015-17. Our economists' forecasts are a little below the consensus and IMF forecasts.

## US

**GDP (YoY) 2013F 1.9%**  
**CPI 2013F 1.3%**  
**Rates on hold at 0.25% in 2013**

Fiscal drag is checking some of the US recovery's upward momentum, but these effects should wane as the year develops. The Fed is expected to begin to curtail the flow of asset purchases later in the second half but continue buying into 2014. A grand bargain on fiscal consolidation is likely to remain out of reach this year.

## Euro Area

**GDP (YoY) 2013F -0.6%**  
**CPI 2013F 1.6%**  
**Policy rate 4Q 2013F: 0.25%**

The euro area is likely to stay in recession in 1Q and recent comments by ECB Council Members suggest that the ECB will cut the refi rate by 25bp to 0.5% in May. Despite progress in some areas, the sovereign debt and banking crisis persists and is likely to continue to postpone the recovery.

## UK

**GDP (YoY) 2013F 0.4%**  
**CPI 2013F 2.9%**  
**Rates on hold at 0.5% in 2013**

Citi's economic forecasts for the UK are little changed from last month. Available data suggest that UK Q1 growth was around zero, with the economy continuing to underperform official and consensus expectations. Further loosening is likely.

## Japan

**GDP (YoY) 2013F 1.3%**  
**CPI 2013F 0.0%**  
**Rates on hold at 0.1% in 2013**

The BoJ's policy decisions early this month overwhelmed even the most bullish forecasts among market participants. In Citi's view, Governor Kuroda's strategy is to affect expectations by bold easing measures in order to shift the Phillips curve. However, it is uncertain when and how far expectations among the general public will shift as this is an unprecedented experiment of monetary policy. Our economists remain sceptical that the measures taken so far are powerful enough to lift inflation to 2% on a sustained basis.

## China

**GDP (YoY) 2013F 7.7%**  
**CPI 2013F 2.9%**  
**Deposit rate Q4 2013F 3.25%**

Growth in China disappointed in 1Q, due mainly to policy-related consumption weakness which may last throughout the year. Financing conditions remained accommodative and policy neutralization is likely to be delayed amid benign inflation. Our economists have downgraded 2013 growth forecast from 7.8% to 7.7%, with YoY growth accelerating slightly in 2Q and 3Q but heading down in 4Q.

## Australia

**GDP (YoY) 2013F 2.7%**  
**CPI 2013F 2.8%**  
**Policy rate 4Q 2013F: 2.75%**

Recent developments, including disappointing Chinese data, the BOJ's QE announcement and higher unemployment in Australia, suggest the RBA could act on its easing bias provided inflation surprises to the downside of expectations.

Figure 27. Interest Rate and Bond Market Forecasts as of 17 April 2013

		Quarterly Average					
	Current	2Q 13	3Q 13	4Q 13	1Q 14	2Q 14	3Q 14
US							
Policy Rate (Fed Funds) End Quarter	0.25	0.25	0.25	0.25	0.25	0.25	0.25
3-Month Libor	0.28	0.28	0.30	0.34	0.40	0.50	0.60
2 Year Treasury Yield	0.22	0.24	0.30	0.40	0.50	0.63	0.75
5 Year Treasury Yield	0.70	0.78	0.93	1.08	1.28	1.53	1.73
10 Year Treasury Yield	1.72	1.86	2.13	2.38	2.63	2.83	3.00
30 Year Treasury Yield	2.90	3.08	3.40	3.68	3.93	4.13	4.30
2-10 Year Treasury Curve	150	162	183	198	213	220	225
2 Year Swap Spread (Swap Less Govt), bp	15	15	16	19	20	20	20
10 Year Swap Spread (Swap Less Govt), bp	17	17	14	8	3	0	0
30 Year Swap Spread (Swap Less Govt), bp	-7	-6	-10	-15	-18	-23	-28
30 Year Mortgage Yield	3.51	3.58	3.73	3.88	4.10	4.33	4.45
10 Year Breakeven Inflation	240	240	240	240	245	248	243
Euro Area							
Policy Rate	0.75	0.50	0.50	0.25	0.25	0.25	0.25
Overnight Rate (EONIA)	0.07	0.05	0.05	0.03	0.03	0.03	0.03
3-Month (EURIBOR)	0.21	0.10	0.10	0.05	0.05	0.05	0.05
2 Year Schatz Yield	0.01	0.05	0.05	0.00	0.05	0.05	0.05
5 Year Bobl Yield	0.31	0.50	0.50	0.50	0.55	0.60	0.60
10 Year Bund Yield	1.29	1.40	1.40	1.30	1.30	1.40	1.50
30 Year Bund Yield	2.17	2.25	2.25	2.20	2.20	2.25	2.30
2-10 Year Bund Curve	128	135	135	130	125	135	145
10 Year BTP-Bund Spread	310	325	350	425	400	400	400
10 Year Bono-Bund Spread	350	350	380	425	400	400	400
2 Year BTP-Schatz Spread	146	240	240	240	240	240	240
2 Year Bono Schatz Spread	214	250	250	250	250	250	250
10 Year OAT-Bund Spread	55	60	70	90	90	90	90
10 Year Swap Spread (Swap Less Govt.), bp	33	30	20	35	45	45	45
10 Year Breakeven Inflation	175	175	185	185	185	190	195
Japan							
Policy Rate	0.10	0.10	0.10	0.10	0.10	0.10	0.10
3-Month Libor	0.16	0.15	0.15	0.15	0.15	0.15	0.15
2 Year Treasury Yield	0.12	0.10	0.15	0.15	0.15	0.10	0.15
5 Year Treasury Yield	0.27	0.20	0.25	0.30	0.25	0.20	0.30
10 Year Treasury Yield	0.58	0.50	0.60	0.70	0.60	0.50	0.70
30 Year Treasury Yield	1.50	1.40	1.60	1.80	1.60	1.50	1.80
2-10 Year Treasury Curve	46	40	45	55	45	40	55
2 Year Swap Spread (Swap Less Govt.), bp	16	15	17	20	17	15	20
10 Year Swap Spread (Swap Less Govt.), bp	22	15	16	18	16	15	18
UK							
Policy Rate	0.50	0.50	0.50	0.50	0.50	0.50	0.50
3-Month Libor	0.51	0.51	0.51	0.51	0.51	0.51	0.51
2 Year Treasury Yield	0.20	0.25	0.35	0.30	0.30	0.35	0.40
5 Year Treasury Yield	0.66	0.80	1.00	0.95	1.00	1.10	1.20
10 Year Treasury Yield	1.70	1.90	2.15	2.10	2.15	2.30	2.45
30 Year Treasury Yield	3.03	3.25	3.40	3.35	3.40	3.50	3.65
2-10 Year Treasury Curve	150	165	180	180	185	195	205
10 Year Swap Spread (Swap Less Govt.), bp	13	10	5	5	10	20	10
10 Year Breakeven Inflation	311	320	350	335	340	345	345
Australia							
Policy Rate	3.00	2.75	2.75	2.75	2.75	3.00	3.50
3-Month Libor	3.07	2.90	2.90	3.00	3.00	3.20	3.70
2 Year Treasury Yield	2.81	3.00	3.05	3.15	3.20	3.40	3.80
5 Year Treasury Yield	2.94	3.20	3.25	3.40	3.45	3.60	3.95
10 Year Treasury Yield	3.30	3.50	3.65	3.80	3.90	4.00	4.25
2-10 Year Treasury Curve	49	50	60	65	70	60	45
10 Year Swap Spread (Swap Less Govt.), bp	68	60	60	65	70	75	75

Source: Citi Research

# Explanation of Euro Forecast Revisions

## Overview

Robert Crossley  
+44-20-7986-9255  
[robert.crossley@citi.com](mailto:robert.crossley@citi.com)

There are no material economic changes from last month. We expect the first of two ECB cuts in 2013 to come in May (though possibly June), but our conviction on timing has increased since last month given data and official comments. Grexit remains our base case. Developments around Cyprus have increased this probability from 2 months ago in our view.

The most important changes have been non-economic. Both Cyprus and Italian political events have been shrugged off by the market, while the BOJ announcement inspiring another round of liquidity-fuelled optimism. This has been reflected in tighter peripheral spreads, flatter curves, and general expressions of risk appetite. With OMT activation most likely to be a function of market pressure we have pushed our forecast peak for peripheral spreads out to 4Q13 and modified our Bund forecasts accordingly.

## Peripheral spreads

Our BTP and Bono spread forecasts are unchanged at 350 and 380bps respectively in 3Q13, and both now peak at 425bps in 4Q13. We have mechanically pushed our 2Q13 averages down in light of the market mood and its optimistic reaction to events. In outright yield terms for BTPs this translates into quarterly averages of 4.65% for 2Q13, 4.90% for 3Q13, and 5.55% for 4Q13. We still expect the OMT and official machinery to ultimately contain spreads but expect further turmoil, e.g., from the Italian political situation, the fallout from Cyprus, and the implications of weakening growth.

## Bunds

Our 10yr Bund forecasts are unchanged at 1.40 for 2Q13 but 25bps lower at 1.40 in 3Q13 reflecting the likelihood of the resurgence of EMU stress focused on Italian election politics and weak growth coming through. (Even excluding Grexit, our forecast would be well below the consensus growth forecast of 1.0%).

## Oat/Bund

We expect the OAT/Bund spread to drift wider after the recent strong outperformance of France. We see the floor for the spread as 50bps with the pressure from the relative net cash requirement/issuance position in 2013 and fundamentals unchanged. The start of a new fiscal year in Japan is also a significant positive given the demonstrable appetite for OATs. Post BOJ we have also shaved our spread forecasts by 10bps.

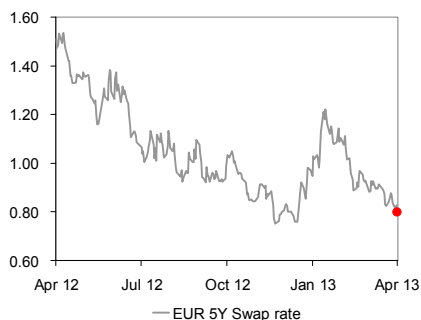
Figure 28. Summary of forecast yields and spreads

	YIELDS				SPREADS			
	Germany	France	Italy	Spain	OAT/Bund	BTP/Bund	Bono/Bund	BTP/Bono
Current	1.30	1.83	4.25	4.66	53	295	336	-41
2Q 13	1.40	2.00	4.65	4.90	60	325	350	-25
3Q 13	1.40	2.10	4.90	5.20	70	350	380	-30
4Q 13	1.30	2.20	5.55	5.55	90	425	425	0
1Q 14	1.30	2.20	5.30	5.30	90	400	400	0
2Q 14	1.40	2.30	5.40	5.40	90	400	400	0

Source: Citi Research, Global Economic Outlook and Strategy, 17 April 2013.

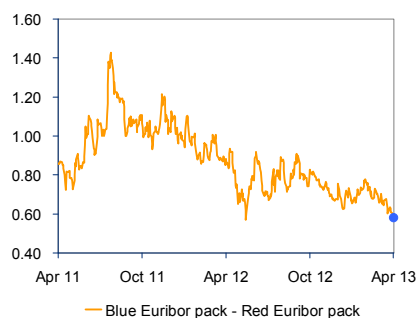
Nishay Patel  
+44-20-7986-1007  
[nishay.patel@citi.com](mailto:nishay.patel@citi.com)

Figure 29. EUR 5yr are close to breaking the 0.75% support level



Source: Citi Research

Figure 30. The Red-Blue Euribor pack has bull-flattened aggressively in the last month



Source: Citi Research

Figure 31. EONIA-Euribor basis has scope to tighten further. This makes receiving the front-end of the euro curve vs EONIA more attractive than Euribor



Source: Citi Research

## EUR Swaps: Where is carry most attractive?

The past week has seen a number of dovish comments from ECB officials and weak sentiment readings which have highlighted the increasing likelihood of an ECB rate cut in May or June. Below we highlight optimal trading strategies for investors looking to add to carry trades. On a separate note, we recommend tightening the stop on our short 30yr Bund spread trade.

### Dovish ECB comments & weak sentiment data...

- There have been a number of dovish remarks from ECB officials in the past week. Below are examples of three examples:
  - Bundesbank President Jens Weidmann suggested [yesterday](#) that the ECB sees room for a rate cut in an interview with the *Wall Street Journal*.
  - The French Central Bank governor Christian Noyer said on [10 April 2013](#) that the ECB will maintain its accommodative monetary policy and keep rates low.
  - The ECB's Asmussen was more downbeat on [9 April](#) where he said that there were more downside risks to eurozone recovery in 2H13 than two months ago. Asmussen added that there is no sign of inflationary pressure at the moment.
- Furthermore, at the ECB press conference for the April meeting Mr. Draghi made clear that the ECB is ready to cut rates if economic sentiment deteriorates further. Last Tuesday's ZEW Survey of Economic Expectations release for April coming in below forecasts (actual 36.3, survey 41.0, prior 48.5) and was the first drop in five months.
- **Citi view:** Looking ahead, we expect investors to pay even closer attention to next week's PMI data (23 April) and IFO reading (24 April). As noted by our economics team in their latest [forecast update](#) for the euro area, they expect a further deterioration in sentiment data in April as well as a further fall in inflation in April. Citi believes that this new information will be sufficient for a 25bp ECB refi rate cut in May.

### ...have prompted further interest in carry rates

- Regular readers will be aware that receiving the front-end of the euro swap curve (e.g. [receiving EUR 3y1y](#))<sup>7</sup> has been our preferred approach to express views on the prospect of further ECB rate cuts and policy rates being low for an extended period. We maintain our recommendation to [receive EUR 3y1y](#).
- On the back of recent comments by ECB officials and weak sentiment readings (discussed earlier) there has been another wave of interest to add to carry trades in recent sessions. More specifically, based on market expectations the probability of a rate cut at the May ECB meeting is very high.
- This has resulted in EUR 5yr swaps moving further lower (Figure 29), the Euribor curve bull-flattening (Figure 30) and 2y2y EONIA-Euribor basis tightening by 3bp to 17bp in recent sessions (Figure 31).
- For investors who still see value in front-end carry trades and essentially expect short-end rates such as EUR 5y to fall further we highlight a few opportunities on the next page. Further, given the scope for the EONIA-Euribor basis spread to tighten further we recommend receiving the front-end of the euro curve vs EONIA (as opposed to Euribor) for investors that can trade these products (Figure 31).

<sup>7</sup> International Interest Rate Strategist, 9 February 12 and 2013 Outlook, 6 December 2012

**Screening for points with attractive carry and vol adjusted carry**

**Trading strategies for front-end carry trades**

- In the two grids below, we display 3month carry for selected points in the front-end of the swap curve (Figure 32) and divide it by 3month realised volatility (Figure 33).
- **Suggested trades:** If you are looking to add to long duration positions in the front-end (or initiate new trades) receiving points such as EUR 4y1y (1yr rate 4yr forward), EUR 3y2y and EUR 18m4y offers good value from a carry perspective (along with other points that are in bold in both Figure 32 and Figure 33).

Figure 32. 3month carry for selected points on the EUR swap grid (bp)

		Tenor			
Start	Carry (bp)	1y	2y	3y	4y
	6m	3	4	6	7
	9m	4	5	6	7
	1y	5	6	7	8
	18m	5	7	8	9
	2y	7	8	9	
	3y	9	10		
	4y	10			

Source: Citi Research

Figure 33. 3month carry divided by 3month realised vol for EUR swaps

		Tenor			
Start	Carry/Vol	1y	2y	3y	4y
	6m	7%	8%	10%	12%
	9m	7%	8%	10%	12%
	1y	8%	10%	11%	13%
	18m	8%	11%	12%	14%
	2y	10%	12%	13%	
	3y	13%	14%		
	4y	16%			

Source: Citi Research

## Update on short 30yr Bund spreads recommendation

**Tighten stop on short 30yr Bunds spread recommendation to -9bp**

**Next week's 30yr Bund supply should be supportive for 30yr swap spread tighteners**

- As noted in last week's [publication](#) we saw good value in selling 30yr Bunds vs swaps (along with other strategies in EUR derivatives). Over the past week, the spread between 30yr Bunds and swaps has tightened to -7bp making the risk-reward of new positions (which target -1bp) unattractive. For investors who still have this trade we suggest revising the stop to -9bp (from -16bp) to lock-in profits. We maintain our original target level of -1bp. Furthermore, as noted in last week's publication we expect short 30yr Bund spread trades to benefit from any concession in the lead up to next Wednesday's 30yr supply (Bund Jul44, €2bn).

- **Trade update:** Raise stop on [short 30yr Bunds vs swaps](#) from -16bps to -9bp

## Appendix: 3month carry for EUR swaps

The grid below displays 3m carry in EUR swaps. Positive values indicate favorable roll-down on long duration positions.

Figure 34. 3month carry for EUR swaps: (annual fixed, semi-annual floating)

Rate Roll	Tenor													
	1y	2y	3y	4y	5y	6y	7y	8y	9y	10y	15y	20y	25y	30y
6m	3.2	4.1	5.7	6.8	7.5	7.6	7.5	7.3	7.0	6.6	4.6	3.3	2.6	2.3
9m	3.7	4.7	6.2	7.3	7.9	7.8	7.7	7.5	7.0	6.6	4.6	3.2	2.6	2.3
1y	4.8	5.9	7.0	7.9	8.2	8.1	7.9	7.4	7.1	6.7	4.6	3.2	2.6	2.3
18m	4.9	6.9	8.1	8.7	8.5	8.3	7.9	7.6	7.0	6.6	4.4	3.1	2.5	2.3
2y	6.8	8.1	8.9	9.0	8.8	8.3	7.9	7.4	6.9	6.4	4.2	3.0	2.4	2.2
3y	9.3	9.8	9.7	9.2	8.6	8.0	7.4	7.0	6.4	5.9	3.6	2.7	2.1	2.0
4y	10.4	9.9	9.2	8.4	7.8	7.2	6.7	6.1	5.5	5.0	2.9	2.1	1.7	1.6
5y	9.2	8.5	7.6	6.9	6.3	5.9	5.3	4.7	4.2	3.8	2.0	1.5	1.2	1.2
7y	6.0	5.5	5.0	4.7	4.0	3.5	3.0	2.6	2.0	1.6	0.7	0.4	0.4	0.5
10y	3.6	2.4	1.9	1.3	1.0	0.3	-0.1	-0.4	-0.5	-0.6	-0.7	-0.6	-0.3	-0.2
12y	0.8	0.2	-0.1	-0.9	-1.3	-1.4	-1.4	-1.5	-1.4	-1.4	-1.2	-0.9	-0.6	-0.5
15y	-3.4	-3.1	-2.9	-2.5	-2.4	-2.2	-2.0	-1.8	-1.8	-1.7	-1.3	-0.8	-0.6	-0.5
20y	-1.0	-0.9	-0.6	-0.8	-0.9	-0.9	-0.8	-0.8	-0.7	-0.6	-0.1	0.1	0.1	0.1
25y	-0.9	-0.4	-0.6	-0.4	-0.3	0.0	0.0	0.2	0.3	0.4	0.5	0.4	0.4	0.4
30y	1.5	0.9	1.0	1.0	1.2	1.0	1.0	1.0	1.0	0.9	0.7	0.6	0.5	0.5

Source: Citi Research

## UK Rates: Updated forecasts

Jamie Searle  
+44-20-7986-9493  
[jamie.searle@citi.com](mailto:jamie.searle@citi.com)

The latest *Global Economic Outlook and Strategy* has been published, including updates to our global yield forecasts. A full set of the rates forecasts can be found on page 18. For the UK, the forecast highlights are:

- 10yr gilt yields moving moderately higher into a 1.90%-2.15% range in 2013
- 10yr gilts underperforming Bunds and moving into a 50-80bp range
- 10yr break-even inflation spreads widening towards 5yr highs

### Gilt yields likely to remain historically depressed

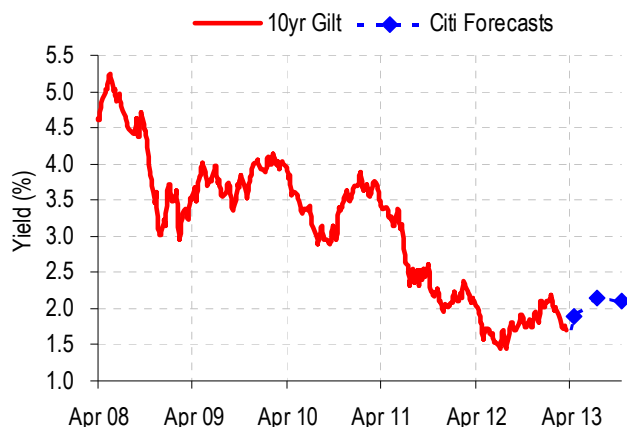
**We have reduced our 10yr gilt yield forecasts**

We have trimmed our gilt yield forecasts by around 20-30bp in the near quarters compared with last month. The downward revision reflects the recent price action and the lowering of our Bund yield forecasts which are benefiting from ongoing liquidity provision from global central banks (most recently the Bank of Japan). It is also an acknowledgment that the considerable inflation and fiscal risks facing the UK are not currently being reflected in the outright level of nominal yields. However, these risks are still likely to play an important role in break-evens (and real yields), the curve and cross-market spreads.

**Gilt yields to rise, but remain historically depressed**

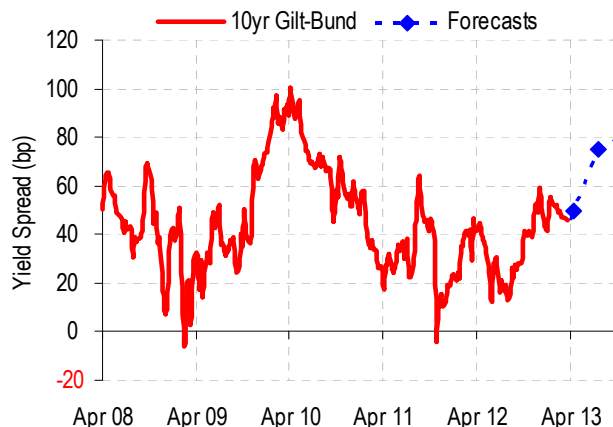
We still believe that gilt yields are likely to move into a moderately higher trading range in the coming quarters (and a near-term sell-off is likely, Figure 35). However, in general terms, gilt yields are likely to be pinned at low levels by the weak growth outlook, policy action (perhaps including further QE and forward rate guidance) and the EMU crisis which we expect to escalate later this year.

Figure 35. Gilt yields likely to move slightly higher...



Source: Citi Research, Bloomberg.

Figure 36. ...but underperform vs Bunds



Source: Citi Research, Bloomberg.

### Inflation/fiscal risks likely to have a greater impact on cross-market spreads than on outright yield levels

**Inflation/fiscal risks together the EMU crisis is likely to drive gilt underperformance vs Bunds**

Inflation and fiscal risks may not be impacting the outright level of nominal yields, at least for now, but their overall impact should not be underestimated. For example, we believe that inflation and fiscal risks, together with a likely escalation in the EMU crisis, at some stage, are likely to drive gilt underperformance vs Bunds. Our forecasts imply a widening in the 10yr gilt-Bund spread from 46bp currently into a range of around 50-80bp in the coming quarters.

### 10yr sector likely to remain the high beta point of the curve

**2s10s likely bear steepen; 10s30s likely to bear flatten**

We also expect inflation/fiscal risks to exert bear steepening pressure on the 2s10s gilt curve, especially with the front-end likely to be anchored by forward rate guidance following Carney's arrival at the Bank of England in July. We target an average 2s10s spread of 180bp in the final quarter of 2013 vs around 150bp currently. Meanwhile 10s30s is likely to bear flatten, albeit only marginally, within a relatively tight range of 135bp-120bp or so.

### Break-evens: buy the dip

**The recent dip in UK break-evens presents a buying opportunity**

One of our core views for 2013 is to "buy the dips" in UK break-even inflation spreads. The recent sharp correction in UK break-evens is such a dip, in our view, and therefore represents a buying opportunity.

**The 2017 break-even looks too low vs the RPI outlook**

The latest official projections from the Office for Budget Responsibility suggest RPI will average 3.3% over the next five years. The break-even inflation spread for the 2017 IL gilt has fallen to 3.10% suggesting some upside potential from a fundamental standpoint. Moreover, the inflation forecasts from our economics team suggest RPI could average as much as 3.8% over the next five years.

**The focus may shift back to inflation later in the year**

Inflation break-evens may also receive a boost in the coming months in anticipation of Carney's arrival at the Bank of England. The latest MPC minutes seemed to say "new remit, what new remit?" and the MPC remain very much in "wait-and-see" mode. However, Carney may well be the trigger for more active "monetary activism" which could prompt renewed weakness in sterling and push inflation expectations higher. Moreover, RPI is likely to have risen to around 4% by the summer (from 3.3% currently) which is also likely to focus minds on inflation risks in the UK.

With this mind, we prefer to fade the recent sharp narrowing in UK break-evens and are entering a long position in IL gilt 2017 break-even. The trade benefits from +11bp carry to 1 July.

### Trade details – buy UKTI17 break-even

Buy UKTI 2017 break-even (UKTI 1.25% 11/17 vs UKT 5% 3/18)

Current level = 309bp, target P&L 25bp (including carry), stop P&L 12.5bp (including carry).



# Euro Inflation Strategy

## Supply and carry support break-even widenings

Jamie Searle  
+44-20-7986-9493  
[jamie.searle@citi.com](mailto:jamie.searle@citi.com)

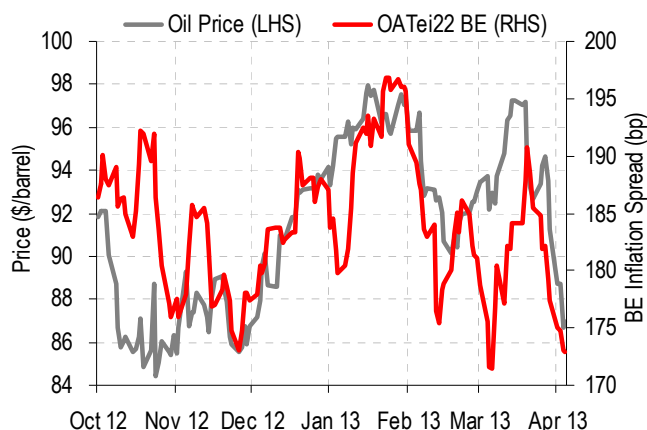
The near-term outlook for euro break-even inflation spreads depends heavily on developments in commodity markets, particularly oil. The sharp fall in oil prices has weighed on break-evens (see Figure 37). However, if oil prices stabilize (or even rebound), which we believe is likely, then there is a good case to be made for near-term break-even widenings. This is largely based on the supply schedule and the historical cheapness of forward break-evens.

### Past precedent suggests break-evens could rebound post supply

Today's French linker auction could mark a turning point in break-evens

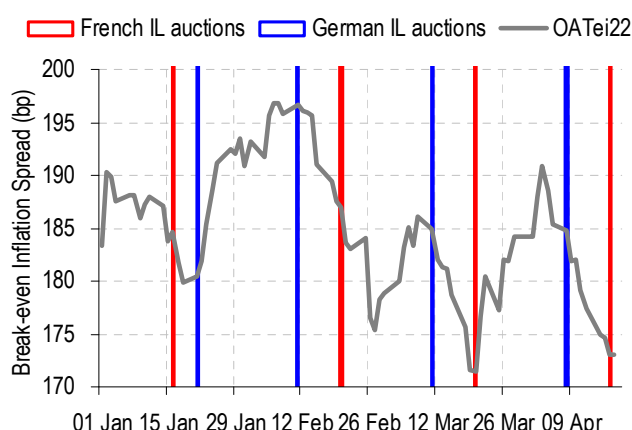
As we have previously highlighted in this publication, the timing of auctions so far in 2013 appears to have coincided with turning points in break-evens (Figure 38). This could partly be a function of the range-bound environment and limited directional impetus from fundamentals. In this environment, it is understandable that supply can exert greater influence on near-term performance. It may also be related to Germany's commitment to issue linkers on a monthly basis in 2013 (except in August and December). The timing of BundEI auctions within each month is unknown (except that it will be on Tuesday), but the pattern in recent months shows a tendency for Germany to issue earlier in the month (compared with France who hold linker auction on the third Thursday of the month). If the pattern of March is repeated, then break-evens look set to rebound following today's linker auction from France which will be the last core auction until May.

Figure 37. Falling oil prices are weighing on euro break-evens



Source: Citi Research, Bloomberg.

Figure 38. Break-even may bounce following this week's supply



Source: Citi Research, Bloomberg.

### Break-evens look historical cheap, especially on a forward basis

Break-even widenings benefit from positive carry

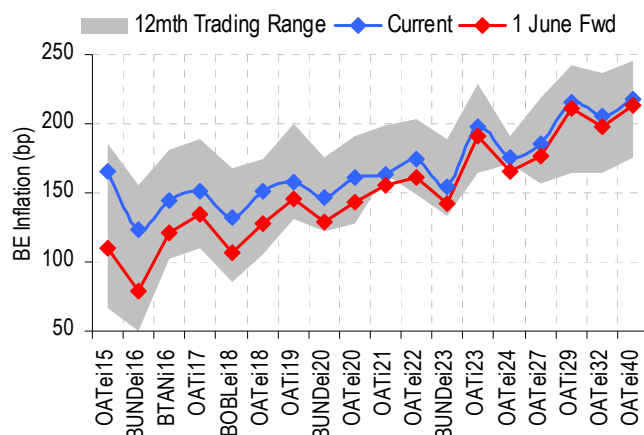
Euro linkers benefit from strong positive carry to 1 June (thanks to the 1.2% monthly rise in euro HICPxT inflation in March). This puts the 1 June forwards at historically attractive levels, especially following the recent narrowing in break-evens.

Figure 39 shows the historical cheapness of 1 June forwards in the context of the one year trading range. Front-end break-evens may well converge towards the forwards over the course of May, as the market offsets the carry, but we are not convinced the forwards will be reached.

The positive carry also offers some protection from any further narrowing pressure from falling oil prices. In the 5yr sector, the break-even carry to 1 June is around 23bp while in the 10yr sector it is 13bp.

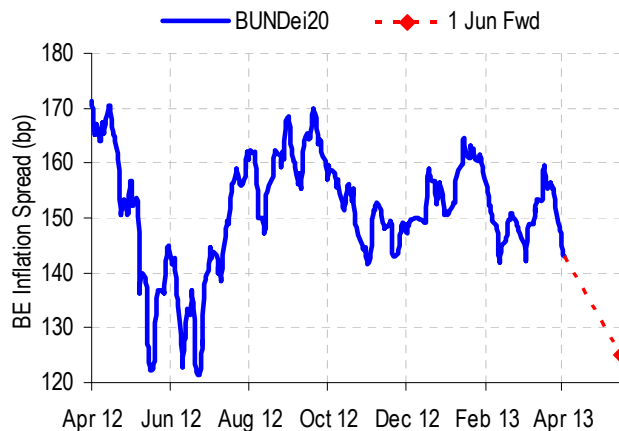


Figure 39. Forward break-evens look historically attractive



Source: Citi Research

Figure 40. The BUNDei20 break-even forward (1 Jun) is near the 1yr lows



Source: Citi Research

## Strategy - tactical widener in 7-10yr euro break-evens

**We prefer to express wideners in the 7-10yr sector**

Based on the observations around supply discussed above, and given the historical cheapness of the forwards, we favour tactical wideners in euro break-evens. Carry is very positive in the front-end, but it also tends to be relatively well priced in this part of the curve. The front-end is also most vulnerable to any further fall in commodity prices. With this in mind, we prefer to position tactical wideners further out in the 7-10yr area.

**For example, BUNDei20 break-even looks historically cheap on a forward basis**

BUNDei20 looks a good candidate. The spot break-even is at the lows of the six-month trading range and the 1 June forward is near the one-year lows (Figure 40). Trade details are below. Note that we express our target/stop in total return terms to capture the positive carry (break-evens are likely to optically decline in May as the positive carry accrues).

**Alternatively, consider buying cash break-evens vs inflation swaps**

An alternative trade is to buy cash break-evens vs inflation swaps. Note that we closed out our sell OATe22 break-even vs 10yr HICPxT recommendation in [The Morning Call](#) of 17 April.

### Trade details – buy BUNDei20 break-even

Buy BUNDei20 break-even (DBRi 1.75% 4/20 vs DBR 3.25% 1/20)

Current level = 142bp, target P&L 12bp (including carry), stop P&L 6bp (including carry).

# Covered Bond Strategy

## Covered Bonds, LCR and CRD IV

Michael Spies  
+49-69-1366-8403  
[michael.spies@citi.com](mailto:michael.spies@citi.com)

This week, the European Parliament voted the CRD reform package “to strengthen EU banks”. We want to focus on potential implications for Basel’s Liquidity Coverage Ratio and its results for French covered bonds.

EP votes for implementation of CRD and CRR

Last Tuesday, the European Parliament not only decided to cap bankers’ bonuses and make banks to set aside more and higher quality capital, but also argued to include covered bonds as Level 1 assets within the Liquidity Coverage Ratio (LCR). This was part of the vote on a regulatory package consisting of a Capital Requirements Regulation (CRR) and the fourth edition of the Capital Requirements Directive (CRD IV). Although the reform has been voted, it still has to be approved by the Council of Ministers from 1 January 2014. The formal implementation should start thereafter. However, most topics have different timeframes.

### Liquidity coverage ratio – easy come, easy go?

Introduction of LCR already postponed

Originally, the LCR should have been introduced in 2015. As it became obvious that this was too ambitious, the regulators decided to implement the new ratio step-wise. In 2015, the LCR doesn’t have to be fulfilled by 100%, but only by 60% with linear annual steps by 10% in order to fulfill LCR by 2019. With the LCR, it should be ensured that financial institutions hold more high-quality liquid assets than total net cash outflows could occur over a 30-day stress period.

Eligibility criteria for LCR have been broadened in January...

The revision of the LCR by Basel at the beginning of the year implied a widening of asset eligibility by easing rating thresholds on the one hand and including former ineligible assets on the other hand. Moreover, a distinction of Level 2 assets (in 2A and 2B) has been introduced. As it can be seen in the graph below, none of these changes would have affected covered bonds except that it would result in a relatively worse standing compared to corporate debt.

Figure 41. Revised LCR

BIS Revised Liquidity Coverage Ratio (January 2013)			CRD IV (Apr. 13)
HQLA	Level 1 (no limit - no haircut)	Coins and bank notes	
		Qualifying marketable securities from sovereigns, central banks, PSEs, multilateral development banks	
		Qualifying central bank reserves	
		Domestic sovereign or central bank debt for non-0% risk weighted sovereigns	
	Level 2A (40% limit - 15% haircut)	Sovereign, central bank, multilateral development banks, PSE assets qualifying for 20% risk weighting	
		Qualifying corporate debt rated AA- or higher	
		Qualifying Covered Bonds rated AA- or higher	
	Level 2B (15% limit - 25% or 50% haircut)	Qualifying RMBS	
		Qualifying Corporate debt rated between A+ and BBB-	
		Common equity shares	

Source: BIS, CRD IV, Citi Research

...to reduce concentration risk

This week’s voted reform follows Basel’s attempt to broaden the class of eligible assets to make the financial institutions “*diversified and high quality liquidity buffer consisting of different asset categories*”. Following these words is what might lift covered bonds up to Level 1 assets (i.e. extreme high liquidity and credit quality), namely:

Some covered bonds are set equal to government bonds,...

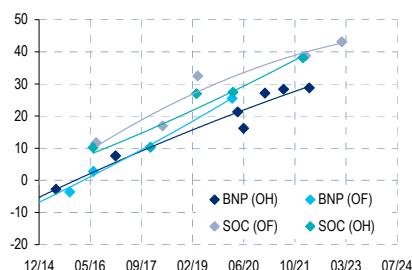
...while others won't be eligible at all

EBA will seal the deal

The criteria which EBA chose can be criticised

Results of revision expected in 2H12

Figure 42. Low differentiation between both segments, yield, bp



Source: Citi Research

*"When making a uniform definition of liquid assets at least government bonds, and covered bonds traded on transparent markets with an ongoing turnover would be expected to be considered assets of extremely high liquidity and credit quality."*<sup>8</sup>

Although this is a very positive statement, Basel's revised LCR and the statement above clearly outlines some constraints for this asset class. We still understand that covered bonds rated below AA- do not qualify for the LCR. Further details of the BIS proposal can also be found in this statement, namely *"traded on transparent markets with an ongoing turnover"*. In order to define ongoing turnover, the European Banking Authority (EBA) comes into play. EBA published a consultation paper in March 2013, highlighting its attempt on a holistic definition of liquidity with respect to LCR. With this comes the attempt to define market liquidity with qualitative and quantitative criteria.

The latter includes several key figures that should be usable for most asset classes. These are trading volume, outstanding volume, transparent pricing information, credit ratings, proven record of price stability, average volume traded and average trade size, bid/ask spread, remaining time to maturity and minimum turnover ratio. Qualitative measures are defined as transparency, wide range of potential buyers, trade via additional platforms and markets and presence of a large number of market makers. Moreover, EBA has some threshold criteria for covered bonds which include UCIT and CRD compliancy, percentage of public placement, issuer characteristics and collateral characteristics.

While many of these characteristics should help covered bonds getting the Level 1 approval, there are some criteria that could hamper this. Historical average bid/ask spreads as well as average volume traded could distort the current (and future) ability to liquidate covered bonds in case of financial distress. Moreover, this might discriminate smaller covered bond markets, irrespective of the credit quality, as average turnover is lower.

EBA is mandated to report their results to the European Commission in the second half of 2013. Until 30 June 2014, the LCR should be implemented in EU regulation by the European Commission.

### Positive implications of CRD IV for French covered bonds

While the above mentioned changes could give covered bonds a further boost in general, it is particular French covered bond issuers and investors that might stand to benefit further. Up to now, the French Obligations à l'Habitat (OH) have not been compliant to CRD IV. It's due to the collateral backing these covered bonds. Formerly, French covered bonds could not have been CRD compliant if the share of guaranteed residential loans was above 35%. This was the case for all OH. Following the new CRD IV framework, however, this asset class will get the same treatment as residential property which results in equal risk weightings for OH and Obligations Foncières (OF). However, the new provisions are not a free lunch for OH. Similar to other covered bond segments, the 80% LTV cap for the underlying loans has to be maintained. Also, the loan-to-income ratio must not exceed 33%.

We welcome the inclusion of guaranteed home loans as CRD eligible assets for covered bonds given the fact commercial property as well as ship loans are already CRD eligible as collateral. However, we don't think that the latest changes in favor of OH will have a remarkable positive impact on the relative spread performance of these bonds.

<sup>8</sup> <http://www.europarl.europa.eu/plenary/en/texts-adopted.html>, Tuesday, 16 April 2013, Texts (Parts 2 and 3)

## Relative value and Norwegian covered bonds

Recent events seem to confirm the trend that covered bonds are unlikely to succumb to potential haircuts in cases of bank restructurings. This is in stark contrast to senior unsecured bank debt. Nevertheless, the performance of both covered and senior unsecured bonds continues to be heavily influenced by the twists and turns of the EMU crisis. Currently, covered bonds are outperforming senior unsecured bonds, and we think this can continue over the medium term. We therefore focussed on relative value between covered bonds and senior unsecured bonds, especially in sovereigns that are perceived to be safe havens. For more information, please see [Covered Bonds Strategy - Covered bonds versus senior bonds: selected opportunities](#)).

One of these safe haven states is Norway and its covered bond market. We continue to prefer Norwegian covered bonds and would overweight them in the context of the overall covered bond market as they still offer a yield pick-up of 15bp-30bp relative to Swedish covered bonds. One reason for this is also that one main topic, i.e. asset encumbrance against the backdrop of a heating housing market made regulators consider restrictions concerning covered bond issuance. This is why we think that the fast growth of the Norwegian covered bond market in the last years may be slowed by the latest proposals of national regulators. Although house prices are soaring, the credit quality of Norwegian cover pools is among the highest in the covered bond market. For more details on Norwegian cover pools, the covered bond law and the macro perspective, please have a look at [Covered Bond Strategy - Norwegian Covered Bonds in Focus](#).

## End-April EGBI Projections

Aman Bansal, CFA  
+91-22-4277-5021  
[aman1.bansal@citi.com](mailto:aman1.bansal@citi.com)

Robert Crossley  
+44-20-7986-9255  
[robert.crossley@citi.com](mailto:robert.crossley@citi.com)

Relative projected changes very  
supportive for France

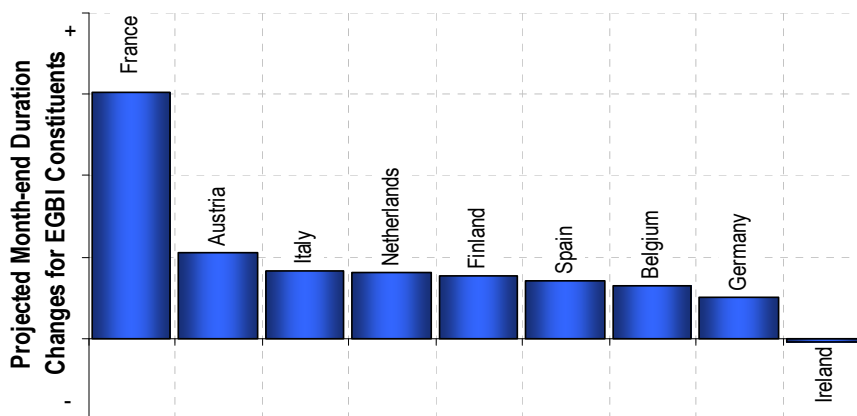
Here we present an updated summary of our analysis published recently ([European Month-end Index Projections](#)). Click [here](#) for the full note.

We project the EGBI to extend by 0.08 at the end of April. This change would be the highest for 3 months, but is in line with the recent April changes. At the EGBI level, we expect support for the 10yr part of the curve and flattening pressure on 2s10s.

### Projected changes very supportive for France

Looking at changes at a country level, France clearly stands out in terms of its weighted-duration increase (Figure 43).

Figure 43. End-April projected weighted duration changes



Source: Citi Research

Strong support for 10yr part of curve in  
Finland

Support on respective domestic curves  
for 30yr France, Netherlands and Austria

Support for 10yr part of German, French  
and Austrian domestic curves

Looking at the curve split, we expect index changes to be supportive for the long – ends of France, Austria, and the Netherlands, and for 10yr Finland. The projected changes are likely to put flattening pressure on all the curves in Figure 44 (except Italy).

Figure 44. Summary of price pressures on individual domestic curves

	2yr	5yr	10yr	30yr	
Germany			↑		Germany
Finland		↓	↑		Finland
France			↑	↑	France
Austria			↑	↑	Austria
Italy		↑			Italy
Netherlands			↓	↑	Netherlands
	2yr	5yr	10yr	30yr	

Source: Citi Research

## Positioning ahead of month-end changes

We recommend two short term risk-on trades<sup>9</sup> which stand to benefit from the anticipated index changes highlighted above.

### 3. Buy 30yr Netherlands vs Germany

The projected index changes should be supportive of the long-end of the DSL curve (Figure 45). The historically wide spread to Germany offers bullish investors attractive levels to initiate tighteners (Figure 46).

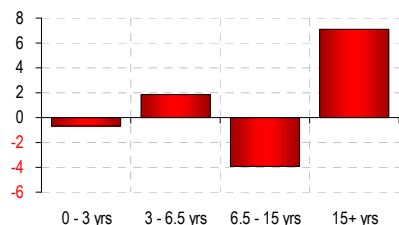
With the 20yr DSL supply out of the way, the spread should be free to benefit from any month-end rebalancing flows.

A less bullish alternative would be a 10s30s steepener in Germany vs the Netherlands. Entry levels are also attractive (Figure 47).

### 4. Netherlands 10s30s flattener

Month-end index changes point to relative support for 30yr Netherlands vs 10yrs. The current steep level of the curve (Figure 48) and the directionality should outweigh the 1bp of negative carry over the next 2 weeks.

**Figure 45. Netherlands: Maturity split of projected index changes (weighted duration)**



Source: Citi Research

**Figure 46. 30yr Netherlands vs Germany**



Source: Citi Research

**Figure 47. Netherlands 10s30s vs Germany**



Source: Citi Research

**Figure 48. Netherlands 10s30s**



Source: Citi Research

<sup>9</sup> From a macro perspective, EMU risks seem to be receding in the short term. Both Cyprus and Italian political events have been shrugged off by the market, while the BoJ liquidity announcement has inspired another round of optimism.

## EMU Relative Value Trades

Mohit Aggarwal

+91-22-4277-5022

[mohit1.aggarwal@citi.com](mailto:mohit1.aggarwal@citi.com)

Selling Jul20s in Austria, Feb18s in Italy or buying Jul17s in the Netherlands vs the surrounding issues present attractive relative value opportunities. We also like switching into Oct15s in Spain.

### The Netherlands: Take advantage of cheapness of Jul17s

*Buy Jul17s vs surrounding issues*

■ Buy 4.5% Jul17 vs 2.5% Jan17 and 4% Jul18 (3m carry: -0.2bp) - Figure 49

### Austria: Fade the richness of Jul20s

*Sell Jul20s vs surrounding issues*

■ Sell 3.9% Jul20 vs 4.35% Mar19 and 3.4% Nov22 (3m carry: -1.2bp) - Figure 50

Figure 49. Netherlands: 2.5% Jan17, 4.5% Jul17, 4% Jul18 microfly (bp)



Source: Citi Research

Figure 50. Austria: 4.35% Mar19, 3.9% Jul20, 3.4% Nov22 microfly (bp)



Source: Citi Research

### Italy: Fade the richness of Feb18s

*Sell Feb18s vs surrounding issues*

■ Sell 4.5% Feb18 vs 4% Feb17 and 4.5% Aug18 (3m carry: +0.6bp) - Figure 51.

### Spain: front-end steepener

*Switch into Oct15s*

■ Switch from 3.8% Jan17 to 3.75% Oct15 at 55bp (3m carry: +4.0bp) - Figure 52.

Figure 51. Italy: 4% Feb17, 4.5% Feb18, 4.5% Aug18 microfly (bp)



Source: Citi Research

Figure 52. Spain: 3.8% Jan17 - 3.75% Oct15 yield spread (bp)



Source: Citi Research

## Relative Value Tables

Regular readers will be familiar with the Relative Value Appendix showing individual bonds from the major EMU/UK markets in the context of their 6-month trading range relative to our fitted curve. We have expanded this approach and summarized the results below.

For example, Figure 53 shows the five cheapest and richest bonds in Germany relative to a fitted yield curve (shown on the left half of the page) and to the euro swap curve (right half of page). The table identifies benchmarks and CTDs and also gives the amount outstanding and initial issue date.

Figure 53. Yield Spread and CAS to Fitted Relative Value Curve (6m History)

GERMANY

Richest

Cheapest

Versus Govt Curve (CAS)				
Rank		ZScore	Issued	
1	2.50 Jan21	-2.42	Nov10	
2	3.25 Jul21	-2.09	Apr11	
3	4.00 Jan18 (OE)	-2.02	Nov07	
4	3.00 Jul20	-1.80	Apr10	
5	3.75 Jan17	-1.34	Nov06	
5	2.00 Feb16	0.97	Jan11	
4	0.50 Oct17	1.15	Sep12	
3	1.50 Feb23 (10y)	1.21	Jan13	
2	0.50 Feb18 (5y)	1.54	Jan13	
1	1.50 Sep22	2.36	Sep12	

Richest

Cheapest

Versus Swap Curve (CAS)				
Rank		ZScore	Issued	
1	2.50 Jan21	-1.17	Nov10	
2	3.25 Jul21	-1.13	Apr11	
3	3.00 Jul20	-1.13	Apr10	
4	2.25 Sep20	-1.09	Aug10	
5	2.25 Sep21	-1.01	Aug11	
5	1.75 Oct15	0.83	Sep10	
4	3.50 Jan16	0.84	Nov05	
3	2.75 Apr16	0.85	Apr11	
2	3.25 Jul15	0.94	May05	
1	2.00 Feb16	1.05	Jan11	

Source: Citi Research

Figure 54 (overleaf) looks at bonds of all maturities. For investors with maturity restrictions we have also provided another set of summary tables (Figure 55 and Figure 57) which looks at bonds shorter than 12 years and longer than 8 years, and uses the same criteria as Figure 54 to highlight the richest and cheapest bonds in these narrower maturity spectrums.

These summary tables should help facilitate efficient screening of bonds and, among other things, provide a selection of starting points when considering switches.



# EMU Relative Value Table – All Maturities

Figure 54. Coupon Adjusted Spread to Fitted Curve and Swap Curve by Country (6m History); All bonds on each curve

	Versus Govt Curve (CAS)					Versus Swap Curve (CAS)				
	Rank		ZScore	Issued		Rank		ZScore	Issued	
GERMANY		<b>Richest</b>					<b>Richest</b>			
	1	2.50 Jan21	-2.42	Nov10		1	2.50 Jan21	-1.17	Nov10	
	2	3.25 Jul21	-2.09	Apr11		2	3.25 Jul21	-1.13	Apr11	
	3	4.00 Jan18 (OE)	-2.02	Nov07		3	3.00 Jul20	-1.13	Apr10	
	4	3.00 Jul20	-1.80	Apr10		4	2.25 Sep20	-1.09	Aug10	
	5	3.75 Jan17	-1.34	Nov06		5	2.25 Sep21	-1.01	Aug11	
	5	2.00 Feb16	0.97	Jan11		5	1.75 Oct15	0.83	Sep10	
	4	0.50 Oct17	1.15	Sep12		4	3.50 Jan16	0.84	Nov05	
	3	1.50 Feb23 (10y)	1.21	Jan13		3	2.75 Apr16	0.85	Apr11	
	2	0.50 Feb18 (5y)	1.54	Jan13		2	3.25 Jul15	0.94	May05	
	1	1.50 Sep22	2.36	Sep12		1	2.00 Feb16	1.05	Jan11	
FRANCE		<b>Richest</b>					<b>Richest</b>			
	1	3.25 Oct21	-1.93	Oct10		1	3.25 Oct21	-2.18	Oct10	
	2	3.50 Apr20	-1.89	Feb10		2	3.75 Apr21	-2.08	Apr05	
	3	3.75 Oct19	-1.71	Oct08		3	3.00 Apr22 (OAT)	-2.05	Feb12	
	4	2.50 Oct20	-1.69	Oct09		4	2.50 Oct20	-2.01	Oct09	
	5	3.75 Apr21	-1.61	Apr05		5	2.25 Oct22 (10y)	-1.97	Oct11	
	5	4.00 Apr55	1.46	Apr04		5	2.50 Jul16	0.53	Jul10	
	4	4.25 Oct23	1.54	Oct06		4	2.25 Feb16	0.66	Feb10	
	3	2.75 Oct27	1.57	Oct11		3	3.25 May45	0.68	May12	
	2	1.00 Jul17	1.68	Jul11		2	3.25 Apr16	0.73	Apr05	
	1	1.75 Feb17	2.03	Feb11		1	0.25 Nov15	2.00	Nov12	
ITALY		<b>Richest</b>					<b>Richest</b>			
	1	5.00 Mar22	-2.41	Sep11		1	4.50 May23 (10y)	-1.82	Mar13	
	2	4.50 Mar26	-1.35	Sep10		2	3.50 Jun18	-1.48	Apr13	
	3	4.50 Feb18 (MFB)	-1.25	Aug07		3	3.00 Jun15	-1.07	Jun10	
	4	4.75 Sep21	-0.95	Mar11		4	4.50 Jul15 (BTS)	-0.99	Jul12	
	5	3.50 Nov17 (5y)	-0.81	Nov12		5	3.75 Aug15	-0.97	Feb05	
	5	4.75 Sep16	1.53	Sep11		5	5.00 Aug34	-0.49	Aug03	
	4	5.00 Mar25	1.63	Mar09		4	2.75 Dec15	-0.43	Dec12	
	3	3.75 Aug16	1.66	Feb06		3	5.00 Aug39	-0.38	Aug07	
	2	3.75 Aug15	1.73	Feb05		2	5.00 Sep40 (30y)	-0.35	Sep09	
	1	4.00 Feb17	1.73	Aug06		1	4.75 Sep28	-0.17	Jan13	
N'LANDS		<b>Richest</b>					<b>Richest</b>			
	1	4.00 Jul18	-1.45	Feb08		1	4.00 Jul19	-0.96	Feb09	
	2	3.75 Jan23	-1.39	Jan06		2	3.50 Jul20	-0.94	Feb10	
	3	4.00 Jul19	-1.32	Feb09		3	3.25 Jul21	-0.81	Mar11	
	4	3.25 Jul21	-1.27	Mar11		4	2.25 Jul22	-0.22	Feb12	
	5	3.50 Jul20	-0.95	Feb10		5	3.75 Jan23	-0.22	Jan06	
	5	4.00 Jul16	0.27	Jul06		5	2.50 Jan17	1.23	Jun11	
	4	2.50 Jan17	0.45	Jun11		4	4.50 Jul17	1.41	Jul07	
	3	4.50 Jul17	1.07	Jul07		3	2.50 Jan33	2.24	Mar12	
	2	4.00 Jan37	1.73	Apr05		2	3.75 Jan42 (30y)	2.28	May10	
	1	1.25 Jan18 (5y)	1.79	Jul12		1	4.00 Jan37	2.41	Apr05	
SPAIN		<b>Richest</b>					<b>Richest</b>			
	1	3.15 Jan16	-4.12	Sep05		1	3.15 Jan16	-1.40	Sep05	
	2	3.25 Apr16	-1.89	Nov10		2	5.85 Jan22 (FBB)	-1.37	Nov11	
	3	5.50 Apr21	-1.49	Jan11		3	4.80 Jan24	-1.37	Sep08	
	4	4.90 Jul40	-1.19	Jun07		4	5.50 Apr21	-1.36	Jan11	
	5	4.50 Jan18 (5y)	-1.11	Nov12		5	4.10 Jul18	-1.36	Feb08	
	5	3.00 Apr15	1.22	Mar10		5	5.75 Jul32	-1.17	Jan01	
	4	4.00 Jul15	1.32	Jan12		4	4.90 Jul40	-1.14	Jun07	
	3	5.75 Jul32	2.40	Jan01		3	4.70 Jul41 (30y)	-1.12	Sep09	
	2	4.20 Jan37	3.33	Jan05		2	3.30 Jul16	-1.11	Apr13	
	1	4.00 Apr20	4.50	Jan10		1	4.20 Jan37	-1.09	Jan05	
BELGIUM		<b>Richest</b>					<b>Richest</b>			
	1	5.50 Sep17	-2.40	Jun02		1	4.25 Sep21	-1.71	Jan11	
	2	3.50 Jun17	-1.26	Mar11		2	4.00 Mar22	-1.65	May06	
	3	3.25 Sep16	-1.25	Jan06		3	4.25 Sep22	-1.64	Jan12	
	4	3.00 Sep19	-0.95	Apr12		4	3.75 Sep20	-1.59	Jan10	
	5	4.00 Mar18	-0.65	Jan08		5	3.00 Sep19	-1.42	Apr12	
	5	1.25 Jun18 (5y)	1.00	Feb13		5	3.25 Sep16	-0.92	Jan06	
	4	4.25 Sep22	1.05	Jan12		4	2.75 Mar16	-0.85	Mar10	
	3	2.75 Mar16	1.16	Mar10		3	4.00 Mar17	-0.84	Jan07	
	2	4.00 Mar19	1.22	Jan09		2	4.25 Mar41 (30y)	-0.75	Apr10	
	1	4.00 Mar22	1.28	May06		1	1.25 Jun18 (5y)	-0.42	Feb13	

Source: Citi Research

# EMU Relative Value Table – Max 12Y Maturity

Figure 55. Coupon Adjusted Spread to Fitted Curve and Swap Curve by Country (6m History); Bonds with a Maximum Maturity of 12yrs

		Versus Govt Curve (CAS)				Versus Swap Curve (CAS)			
		Rank		ZScore	Issued	Rank		ZScore	Issued
GERMANY	Richest	1	2.50 Jan21	-2.42	Nov10	1	2.50 Jan21	-1.17	Nov10
		2	3.25 Jul21	-2.09	Apr11	2	3.25 Jul21	-1.13	Apr11
		3	4.00 Jan18 (OE)	-2.02	Nov07	3	3.00 Jul20	-1.13	Apr10
		4	3.00 Jul20	-1.80	Apr10	4	2.25 Sep20	-1.09	Aug10
		5	3.75 Jan17	-1.34	Nov06	5	2.25 Sep21	-1.01	Aug11
	Cheapest	5	2.00 Feb16	0.97	Jan11	5	1.75 Oct15	0.83	Sep10
		4	0.50 Oct17	1.15	Sep12	4	3.50 Jan16	0.84	Nov05
		3	1.50 Feb23 (10y)	1.21	Jan13	3	2.75 Apr16	0.85	Apr11
		2	0.50 Feb18 (5y)	1.54	Jan13	2	3.25 Jul15	0.94	May05
		1	1.50 Sep22	2.36	Sep12	1	2.00 Feb16	1.05	Jan11
FRANCE	Richest	1	3.25 Oct21	-1.98	Oct10	1	3.25 Oct21	-2.19	Oct10
		2	3.50 Apr20	-1.91	Feb10	2	3.75 Apr21	-2.08	Apr05
		3	3.75 Oct19	-1.73	Oct08	3	3.00 Apr22 (OAT)	-2.07	Feb12
		4	2.50 Oct20	-1.72	Oct09	4	2.50 Oct20	-2.02	Oct09
		5	3.75 Apr21	-1.66	Apr05	5	2.25 Oct22 (10y)	-1.99	Oct11
	Cheapest	5	2.25 Oct22 (10y)	1.30	Oct11	5	2.00 Jul15	0.45	Jun10
		4	3.25 Apr16	1.35	Apr05	4	2.50 Jul16	0.52	Jul10
		3	4.25 Oct23	1.51	Oct06	3	2.25 Feb16	0.65	Feb10
		2	1.00 Jul17	1.65	Jul11	2	3.25 Apr16	0.73	Apr05
		1	1.75 Feb17	2.02	Feb11	1	0.25 Nov15	1.99	Nov12
ITALY	Richest	1	5.00 Mar22	-2.43	Sep11	1	4.50 May23 (10y)	-1.82	Mar13
		2	4.50 Feb18 (MFB)	-1.25	Aug07	2	3.50 Jun18	-1.48	Apr13
		3	4.75 Sep21	-0.95	Mar11	3	3.00 Jun15	-1.07	Jun10
		4	3.50 Nov17 (5y)	-0.82	Nov12	4	4.50 Jul15 (BTS)	-0.99	Jul12
		5	4.50 May23 (10y)	-0.71	Mar13	5	3.75 Aug15	-0.97	Feb05
	Cheapest	5	4.75 Sep16	1.53	Sep11	5	4.75 Aug23	-0.61	Feb08
		4	5.00 Mar25	1.63	Mar09	4	5.50 Nov22 (IK)	-0.60	May12
		3	3.75 Aug16	1.66	Feb06	3	5.50 Sep22	-0.56	Mar12
		2	3.75 Aug15	1.73	Feb05	2	5.00 Mar25	-0.50	Mar09
		1	4.00 Feb17	1.73	Aug06	1	2.75 Dec15	-0.43	Dec12
N'LANDS	Richest	1	4.00 Jul18	-1.45	Feb08	1	4.00 Jul19	-0.96	Feb09
		2	3.75 Jan23	-1.39	Jan06	2	3.50 Jul20	-0.94	Feb10
		3	4.00 Jul19	-1.32	Feb09	3	3.25 Jul21	-0.81	Mar11
		4	3.25 Jul21	-1.24	Mar11	4	2.25 Jul22	-0.22	Feb12
		5	3.50 Jul20	-0.96	Feb10	5	3.75 Jan23	-0.22	Jan06
	Cheapest	5	2.25 Jul22	-0.27	Feb12	5	3.25 Jul15	0.72	Jun05
		4	4.00 Jul16	0.27	Jul06	4	1.25 Jan18 (5y)	1.03	Jul12
		3	2.50 Jan17	0.45	Jun11	3	4.00 Jul16	1.17	Jul06
		2	4.50 Jul17	1.07	Jul07	2	2.50 Jan17	1.23	Jun11
		1	1.25 Jan18 (5y)	1.79	Jul12	1	4.50 Jul17	1.41	Jul07
SPAIN	Richest	1	3.15 Jan16	-4.12	Sep05	1	3.15 Jan16	-1.40	Sep05
		2	3.25 Apr16	-1.89	Nov10	2	5.85 Jan22 (FBB)	-1.37	Nov11
		3	5.50 Apr21	-1.49	Jan11	3	4.80 Jan24	-1.37	Sep08
		4	4.50 Jan18 (5y)	-1.10	Nov12	4	5.50 Apr21	-1.36	Jan11
		5	4.10 Jul18	-1.02	Feb08	5	4.10 Jul18	-1.36	Feb08
	Cheapest	5	4.60 Jul19	0.78	Feb09	5	3.80 Jan17	-1.28	Oct06
		4	4.30 Oct19	0.99	Jun09	4	4.00 Apr20	-1.24	Jan10
		3	3.00 Apr15	1.22	Mar10	3	4.25 Oct16	-1.23	Sep11
		2	4.00 Jul15	1.32	Jan12	2	4.50 Jan18 (5y)	-1.23	Nov12
		1	4.00 Apr20	4.50	Jan10	1	3.30 Jul16	-1.11	Apr13
BELGIUM	Richest	1	5.50 Sep17	-2.38	Jun02	1	4.25 Sep21	-1.72	Jan11
		2	3.25 Sep16	-1.27	Jan06	2	4.00 Mar22	-1.66	May06
		3	3.50 Jun17	-1.21	Mar11	3	4.25 Sep22	-1.65	Jan12
		4	3.00 Sep19	-0.88	Apr12	4	3.75 Sep20	-1.59	Jan10
		5	4.00 Mar18	-0.60	Jan08	5	3.00 Sep19	-1.43	Apr12
	Cheapest	5	1.25 Jun18 (5y)	1.03	Feb13	5	3.50 Jun17	-0.94	Mar11
		4	4.25 Sep22	1.09	Jan12	4	3.25 Sep16	-0.92	Jan06
		3	2.75 Mar16	1.19	Mar10	3	2.75 Mar16	-0.85	Mar10
		2	4.00 Mar19	1.29	Jan09	2	4.00 Mar17	-0.85	Jan07
		1	4.00 Mar22	1.30	May06	1	1.25 Jun18 (5y)	-0.44	Feb13

Source: Citi Research

# EMU Relative Value Table – Min 8yr Maturity

Figure 56. Coupon Adjusted Spread to Fitted Curve and Swap Curve by Country (6m History); Bonds with a Minimum Maturity of 8yrs

	Versus Govt Curve (CAS)				Versus Swap Curve (CAS)			
	Rank		ZScore	Issued	Rank		ZScore	Issued
GERMANY		<b>Richest</b>				<b>Richest</b>		
	1	3.25 Jul21	-2.09	Apr11	1	3.25 Jul21	-1.13	Apr11
	2	4.75 Jul34	-1.13	Jan03	2	2.25 Sep21	-1.01	Aug11
	3	5.50 Jan31	-1.03	Oct00	3	2.00 Jan22 (RX)	-0.98	Nov11
	4	6.25 Jan30	-0.98	Jan00	4	1.75 Jul22	-0.79	Apr12
	5	2.25 Sep21	-0.75	Aug11	5	1.50 Sep22	-0.66	Sep12
	5	3.25 Jul42	0.41	Jul10	5	3.25 Jul42	0.31	Jul10
	4	4.00 Jan37	0.96	Jan05	4	4.75 Jul34	0.38	Jan03
	3	1.75 Jul22	0.96	Apr12	3	4.25 Jul39 (UB)	0.40	Jan07
	2	1.50 Feb23 (10y)	1.21	Jan13	2	4.75 Jul40	0.40	Jul08
	1	1.50 Sep22	2.36	Sep12	1	4.00 Jan37	0.75	Jan05
FRANCE		<b>Richest</b>				<b>Richest</b>		
	1	3.25 Oct21	-2.00	Oct10	1	3.25 Oct21	-2.20	Oct10
	2	3.75 Apr21	-1.66	Apr05	2	3.75 Apr21	-2.08	Apr05
	3	4.75 Apr35	-1.22	Apr03	3	3.00 Apr22 (OAT)	-2.05	Feb12
	4	5.75 Oct32	-1.04	Oct00	4	2.25 Oct22 (10y)	-1.97	Oct11
	5	4.00 Oct38	0.06	Oct05	5	4.25 Oct23	-1.56	Oct06
	5	4.50 Apr41 (30y)	0.89	Apr09	5	4.00 Oct38	-0.49	Oct05
	4	3.50 Apr26	1.23	Apr10	4	4.50 Apr41 (30y)	-0.46	Apr09
	3	2.25 Oct22 (10y)	1.38	Oct11	3	4.00 Apr55	0.14	Apr04
	2	4.00 Apr55	1.41	Apr04	2	4.00 Apr60	0.21	Apr09
	1	4.25 Oct23	1.50	Oct06	1	3.25 May45	0.68	May12
ITALY		<b>Richest</b>				<b>Richest</b>		
	1	5.00 Mar22	-2.41	Sep11	1	4.50 May23 (10y)	-1.82	Mar13
	2	4.50 Mar26	-1.36	Sep10	2	3.75 Aug21	-0.77	Feb06
	3	4.75 Sep21	-0.94	Mar11	3	4.50 Mar26	-0.74	Sep10
	4	4.50 May23 (10y)	-0.70	Mar13	4	4.75 Sep21	-0.69	Mar11
	5	3.75 Aug21	-0.70	Feb06	5	5.00 Mar22	-0.67	Sep11
	5	5.50 Sep22	0.40	Mar12	5	5.75 Feb33	-0.49	Feb02
	4	4.75 Sep28	0.43	Jan13	4	5.00 Aug34	-0.49	Aug03
	3	5.75 Feb33	0.69	Feb02	3	5.00 Aug39	-0.38	Aug07
	2	5.00 Aug34	1.16	Aug03	2	5.00 Sep40 (30y)	-0.35	Sep09
	1	5.00 Mar25	1.63	Mar09	1	4.75 Sep28	-0.17	Jan13
N'LANDS		<b>Richest</b>				<b>Richest</b>		
	1	3.75 Jan23	-1.31	Jan06	1	3.25 Jul21	-0.80	Mar11
	2	3.25 Jul21	-1.13	Mar11	2	2.25 Jul22	-0.21	Feb12
	3	2.50 Jan33	-0.12	Mar12	3	3.75 Jan23	-0.21	Jan06
	3	2.25 Jul22	-0.04	Feb12	3	2.50 Jan33	2.25	Mar12
	2	3.75 Jan42 (30y)	0.08	May10	2	3.75 Jan42 (30y)	2.30	May10
	1	4.00 Jan37	1.91	Apr05	1	4.00 Jan37	2.42	Apr05
		<b>Cheapest</b>				<b>Cheapest</b>		
	3	2.25 Jul22	-0.04	Feb12	3	2.50 Jan33	2.25	Mar12
	2	3.75 Jan42 (30y)	0.08	May10	2	3.75 Jan42 (30y)	2.30	May10
	1	4.00 Jan37	1.91	Apr05	1	4.00 Jan37	2.42	Apr05
SPAIN		<b>Richest</b>				<b>Richest</b>		
	1	5.50 Apr21	-1.49	Jan11	1	5.85 Jan22 (FBB)	-1.37	Nov11
	2	4.90 Jul40	-1.19	Jun07	2	4.80 Jan24	-1.37	Sep08
	3	4.65 Jul25	-1.00	Feb10	3	5.50 Apr21	-1.36	Jan11
	4	5.40 Jan23 (10y)	-0.96	Jan13	4	4.65 Jul25	-1.34	Feb10
	5	4.80 Jan24	-0.39	Sep08	5	5.90 Jul26	-1.32	Mar11
	5	4.70 Jul41 (30y)	-0.14	Sep09	5	5.40 Jan23 (10y)	-1.31	Jan13
	4	5.90 Jul26	-0.05	Mar11	4	5.75 Jul32	-1.17	Jan01
	3	5.85 Jan22 (FBB)	0.16	Nov11	3	4.90 Jul40	-1.15	Jun07
	2	5.75 Jul32	2.40	Jan01	2	4.70 Jul41 (30y)	-1.13	Sep09
	1	4.20 Jan37	3.34	Jan05	1	4.20 Jan37	-1.09	Jan05
BELGIUM		<b>Richest</b>				<b>Richest</b>		
	1	4.00 Mar32	-0.12	Mar12	1	4.25 Sep21	-1.73	Jan11
	2	4.25 Mar41 (30y)	-0.08	Apr10	2	4.00 Mar22	-1.66	May06
	3	5.00 Mar35	-0.03	May04	3	4.25 Sep22	-1.66	Jan12
	4	2.25 Jun23 (10y)	0.00	Jan13	4	2.25 Jun23 (10y)	-1.43	Jan13
	4	4.25 Sep21	0.35	Jan11	4	4.50 Mar26	-1.17	Jun11
	3	4.50 Mar26	0.79	Jun11	3	4.00 Mar32	-1.02	Mar12
	2	4.25 Sep22	0.94	Jan12	2	5.00 Mar35	-0.99	May04
	1	4.00 Mar22	1.27	May06	1	4.25 Mar41 (30y)	-0.75	Apr10
		<b>Cheapest</b>				<b>Cheapest</b>		
	4	4.25 Sep21	0.35	Jan11	4	4.50 Mar26	-1.17	Jun11
	3	4.50 Mar26	0.79	Jun11	3	4.00 Mar32	-1.02	Mar12
	2	4.25 Sep22	0.94	Jan12	2	5.00 Mar35	-0.99	May04
	1	4.00 Mar22	1.27	May06	1	4.25 Mar41 (30y)	-0.75	Apr10

Source: Citi Research

# UK Relative Value Table

Figure 57. Coupon Adjusted Spread to Fitted Curve and Swap Curve by Country (6m History)

ALL

Versus Govt Curve (CAS)				
	Rank		ZScore	Issued
Richest	1	1.75 Jan17	-1.84	Aug11
	2	5.00 Mar18 (5y)	-1.78	May07
	3	1.25 Jul18	-1.05	Feb13
	4	4.50 Dec42 (30y)	-1.03	Jun07
	5	3.75 Sep19	-0.98	Jul09
<hr/>				
Cheapest	5	4.25 Dec55	1.12	May05
	4	3.25 Jan44	1.14	Oct12
	3	4.00 Sep16	1.15	Mar06
	2	4.25 Dec27	1.54	Sep06
	1	4.75 Sep15	1.89	Sep03

Versus Swap Curve (CAS)				
	Rank		ZScore	Issued
Richest	1	1.25 Jul18	-1.17	Feb13
	2	1.75 Jan17	-1.01	Aug11
	3	4.25 Dec40	-1.00	Jun10
	4	4.50 Dec42 (30y)	-1.00	Jun07
	5	5.00 Mar18 (5y)	-0.96	May07
<hr/>				
Cheapest	5	4.00 Mar22 (G )	-0.04	Feb09
	4	4.75 Sep15	0.05	Sep03
	3	4.75 Dec30	0.21	Oct07
	2	5.00 Mar25	0.42	Sep01
	1	4.25 Dec27	0.50	Sep06

2yr - 7yr

Versus Govt Curve (CAS)				
	Rank		ZScore	Issued
Richest	1	1.75 Jan17	-1.84	Aug11
	2	5.00 Mar18 (5y)	-1.78	May07
	3	1.25 Jul18	-1.05	Feb13
	4	3.75 Sep19	-0.98	Jul09
	5	4.75 Mar20	-0.28	Mar05
<hr/>				
Cheapest	5	4.50 Mar19	-0.09	Sep08
	4	1.00 Sep17 (WX)	0.23	Mar12
	3	2.00 Jan16	0.86	Nov10
	2	4.00 Sep16	1.15	Mar06
	1	4.75 Sep15	1.89	Sep03

Versus Swap Curve (CAS)				
	Rank		ZScore	Issued
Richest	1	1.25 Jul18	-1.17	Feb13
	2	1.75 Jan17	-1.01	Aug11
	3	5.00 Mar18 (5y)	-0.96	May07
	4	1.00 Sep17 (WX)	-0.83	Mar12
	5	4.00 Sep16	-0.64	Mar06
<hr/>				
Cheapest	5	3.75 Sep19	-0.57	Jul09
	4	2.00 Jan16	-0.55	Nov10
	3	4.50 Mar19	-0.50	Sep08
	2	4.75 Mar20	-0.40	Mar05
	1	4.75 Sep15	0.05	Sep03

7yr - 15yr

Versus Govt Curve (CAS)					
	Rank		ZScore	Issued	
Richest	1	1.75 Sep22 (10y)	-0.35	Jun12	
	2	3.75 Sep20	-0.18	Jun10	
	3	3.75 Sep21	0.09	Mar11	
	4				
	5				
<hr/>					
Cheapest	5				
	4				
	3	4.00 Mar22 (G )	0.54	Feb09	
	2	5.00 Mar25	1.10	Sep01	
	1	4.25 Dec27	1.54	Sep06	

Versus Swap Curve (CAS)					
	Rank		ZScore	Issued	
Richest	1	3.75 Sep20	-0.33	Jun10	
	2	3.75 Sep21	-0.19	Mar11	
	3	1.75 Sep22 (10y)	-0.05	Jun12	
	4				
	5				
<hr/>					
Cheapest	5				
	4				
	3	4.00 Mar22 (G )	-0.04	Feb09	
	2	5.00 Mar25	0.42	Sep01	
	1	4.25 Dec27	0.50	Sep06	

>15yr

Versus Govt Curve (CAS)				
	Rank		ZScore	Issued
Richest	1	4.50 Dec42 (30y)	-1.03	Jun07
	2	4.25 Dec49	-0.96	Sep08
	3	4.25 Mar36	-0.93	Feb03
	4	4.25 Jun32	-0.82	May00
	5	4.25 Dec46	-0.75	May06
<hr/>				
Cheapest	5	4.25 Sep39	-0.14	Mar09
	4	4.75 Dec30	0.29	Oct07
	3	4.00 Jan60	0.67	Oct09
	2	4.25 Dec55	1.12	May05
	1	3.25 Jan44	1.14	Oct12

Versus Swap Curve (CAS)				
	Rank		ZScore	Issued
Richest	1	4.25 Dec40	-1.00	Jun10
	2	4.50 Dec42 (30y)	-1.00	Jun07
	3	4.25 Sep39	-0.95	Mar09
	4	4.75 Dec38	-0.92	Apr04
	5	4.25 Mar36	-0.83	Feb03
<hr/>				
Cheapest	5	4.50 Sep34	-0.47	Jun09
	4	4.25 Dec55	-0.41	May05
	3	4.00 Jan60	-0.18	Oct09
	2	4.25 Jun32	-0.07	May00
	1	4.75 Dec30	0.21	Oct07

Source: Citi Research

## Supply Analysis and Forecasts

Mohit Aggarwal  
+91-22-4277-5022  
[mohit1.aggarwal@citi.com](mailto:mohit1.aggarwal@citi.com)

Nishay Patel  
+44-20-7986-1007  
[nishay.patel@citi.com](mailto:nishay.patel@citi.com)

### Analysis of upcoming supply

Our regular detailed supply analysis is published separately under the title “*Weekly Supply Monitor*”. Please click [here](#) for the most recent one.

This publication includes 3 main areas:

### Analysis of supply in the coming week and month

- Weekly DV01 of supply in EUR, GBP, and USD – historic and projected
- Maturity split of expected issuance next week in EUR, GBP, and USD
- Gross supply (and DV01) next week and month, by maturity and country
- 4-week issuance calendar incl. buybacks (DV01 and futures equivalents)

### Profile of cash flows

- Coupons by maturity for each of the next 4 weeks in EUR, GBP, and USD
- Total coupons for each of the next 4 weeks, by maturity sector and country
- Coupon payment dates and amounts by country for next 3 months
- Monthly coupon totals for next 3 months

### Coupons...

- Redemptions for each of the next 4 weeks, by maturity sector and country
- Redemption dates and amounts by country for next 3 months
- Monthly redemption totals for next 3 months

### Redemptions...

- Net cash requirement for each of the next 4 weeks for EUR, GBP and USD
- 2013 monthly net cash requirements by maturity for GBP and USD

### Net cash requirements...

### Detailed supply forecasts

- 2013 forecasts by currency and for each EMU-10 country
- Monthly EMU-10 net and gross supply by country and maturity to end-2013
- YTD issuance progress: percentage and vs 3yr average at this stage
- UK gilt remit progress by maturity + syndications

### Supply forecasts

Click [here](#) for link...

Please click [here](#) for the document.

### Provisional auction calendar for the next four weeks

Figure 58. Provisional Auction Calendar for the Next Four Weeks, Gross Issuance (Billions), DV01 (USD Millions)

Date	Country	Nominal Size (Local Ccy, bn)	Issue Details	DV01 \$million/bp	Approx. Number 10yr Futures		
					TYM3 (UST)	G M3 (Gilt)	RXM3 (Bund)
22 Apr (Mon)	US	3 - 3.75	Outright Treasury Coupon Purchases: 31/1/2019 - 31/3/2020		-22k		
23 Apr (Tue)	US	35.0	2-Year		85k		
23 Apr (Tue)	US	0.75 - 1	Outright Treasury Coupon Purchases: 15/8/2023 - 15/2/2031		-16k		
24 Apr (Wed)	Italy	2.8	CTZ (estimated size)				5k
24 Apr (Wed)	Italy	1.0	BTPEi (estimated size)				8k
24 Apr (Wed)	Germany	2.0	Bund 2.5% Jul44 reopening (issue and size confirmed)				41k
24 Apr (Wed)	UK	1.3	01/8% Index-linked Treasury Gilt 2029 (issue and size confirmed)			26k	
24 Apr (Wed)	US	35.0	5-Year		204k		
24 Apr (Wed)	US	1.25 - 1.75	Outright Treasury Coupon Purchases: 15/2/2036 - 15/2/2043		-39k		
25 Apr (Thu)	US	29.0	7-Year		233k		
26 Apr (Fri)	US	2.75 - 3.5	Outright Treasury Coupon Purchases: 15/5/2020 - 15/2/2023		-28k		
<b>Weekly \$DV01 of Issuance</b>				<b>46.1</b>			
<b>Total Number of Futures Contracts</b>					<b>417k</b>	<b>26k</b>	<b>53k</b>

Date	Country	Nominal Size (Local Ccy, bn)	Issue Details	DV01 \$million/bp	Approx. Number 10yr Futures		
					TYM3 (UST)	G M3 (Gilt)	RXM3 (Bund)
29 Apr (Mon)	Belgium	4.0	New OLO 30yr (estimated size and tenors)				82k
29 Apr (Mon)	Italy	6.5	BTP 5yr and 10yr (estimated tenors and size)				38k
29 Apr (Mon)	US	1.25 - 1.75	Outright Treasury Coupon Purchases: 15/2/2036 - 15/2/2043		-39k		
30 Apr (Tue)	UK	1.6	Mini-tender: Index-linked gilt 2062 (issue confirmed, estimated size)			107k	
30 Apr (Tue)	US	4.25 - 5.25	Outright Treasury Coupon Purchases : 30/4/2017 - 31/12/2017		-19k		
02 May (Thu)	France	7.8	OAT 5yr, 10yr and 15yr (estimated tenors and size)				62k
<b>Weekly \$DV01 of Issuance</b>				<b>38.1</b>			
<b>Total Number of Futures Contracts</b>					<b>-59k</b>	<b>107k</b>	<b>182k</b>

Date	Country	Nominal Size (Local Ccy, bn)	Issue Details	DV01 \$million/bp	Approx. Number 10yr Futures		
					TYM3 (UST)	G M3 (Gilt)	RXM3 (Bund)
07 May (Tue)	Germany	1.0	Bundei '23 reopening (estimated date and issue)				8k
07 May (Tue)	Austria	1.4	RAGB 5yr and 10yr (estimated size and tenors)				8k
07 May (Tue)	US	32.0	3-Year		78k		
08 May (Wed)	Germany	5.0	New Bobl-166 Apr18 (maturity and size confirmed)				20k
08 May (Wed)	UK	1.5	01/8% Index-linked Treasury Gilt 2044 (issue confirmed, estimated size)			54k	
08 May (Wed)	US	24.0	10-Year		260k		
09 May (Thu)	Spain	4.0	Bono 2yr and 5yr, Obligaciones 10yr (estimated tenors and size)				17k
09 May (Thu)	US	16.0	30-Year		362k		
<b>Weekly \$DV01 of Issuance</b>				<b>73.3</b>			
<b>Total Number of Futures Contracts</b>					<b>700k</b>	<b>54k</b>	<b>54k</b>

Date	Country	Nominal Size (Local Ccy, bn)	Issue Details	DV01 \$million/bp	Approx. Number 10yr Futures		
					TYM3 (UST)	G M3 (Gilt)	RXM3 (Bund)
13 May (Mon)	Italy	3.8	BTP 2yr and 10yr (estimated tenors and size)				14k
13 May (Mon)	Italy	1.3	CCTeu (estimated size)				5k
14 May (Tue)	Netherlands	2.3	DSL Jan18 reopening (issue confirmed, size €1.5-2.5bn)				9k
14 May (Tue)	UK	4.6	1¼% Treasury Gilt 2018 (issue confirmed, estimated size)			26k	
15 May (Wed)	Germany	5.0	New Schatz Jun15 (maturity and size confirmed)				9k
16 May (Thu)	France	9.5	BTAN, OAT 2yr and 5yr / OATi (estimated tenors and size)				37k
16 May (Thu)	UK	2.5	3¼% Treasury Gilt 2044 (issue confirmed, estimated size)			52k	
<b>Weekly \$DV01 of Issuance</b>				<b>22.3</b>			
<b>Total Number of Futures Contracts</b>					<b>0k</b>	<b>79k</b>	<b>74k</b>

The next release of the tentative outright Treasury operation schedule will be at 2 p.m. on April 30, 2013. Therefore we have only provided details of Fed buybacks upto 30 April. Additional issues expected in May: Spain 10yr (€4bn). Italy 30yr (€4bn). Ireland 5yr and 10yr (€1.3bn). Portugal 10yr (€1.5bn). These are not included in cash flow tables and gross supply charts.

Source: DMOs, Citi estimates

## EUR: Coupons & Redemptions (next 3 mths)

Figure 59. EMU-10 Redemptions over the next three months (€bn)

Redemptions = €164bn											
Redemptions	DEU 39	FRA 39	NLD 16	ITA 44	ESP 15	BEL 0	AUT 0	FIN 6	PRT 0	GRC 0	IRL 5
(Thu) 18-Apr-13											4.6
(Thu) 25-Apr-13		21.6									
(Tue) 30-Apr-13				12.4	14.9						
(Sat) 01-Jun-13				17.2							
(Fri) 14-Jun-13	17.0										
(Mon) 01-Jul-13				14.3							
(Thu) 04-Jul-13	22.0							6.0			
(Fri) 12-Jul-13		17.7									
(Mon) 15-Jul-13			16.0								

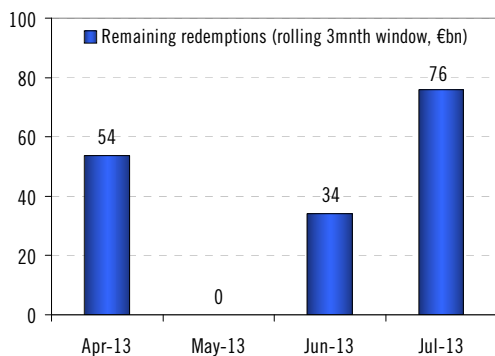
Source: DMOs, Bloomberg, Citi Research

Figure 60. EMU-10 Coupon Payments over the next three months (€bn)

Coupons = €58bn											
Coupons	DEU 13	FRA 20	NLD 6	ITA 9	ESP 4	BEL 1	AUT 2	FIN 1	PRT 1	GRC 0	IRL 2
(Thu) 18-Apr-13											1.2
(Sat) 20-Apr-13							0.3				
(Thu) 25-Apr-13		17.2									
(Tue) 30-Apr-13					4.2						
(Wed) 01-May-13				5.2							
(Wed) 15-May-13				0.5							
(Mon) 20-May-13											0.0
(Thu) 23-May-13							0.0				
(Sat) 25-May-13		0.3									
(Sat) 01-Jun-13				1.3							
(Fri) 14-Jun-13	0.3								0.4		
(Sat) 15-Jun-13				0.9					0.7		
(Sun) 16-Jun-13									0.3		
(Tue) 18-Jun-13							0.1				0.3
(Thu) 20-Jun-13	0.2						0.1				
(Sat) 22-Jun-13						0.2					
(Fri) 28-Jun-13						0.5					
(Mon) 01-Jul-13				0.5							
(Thu) 04-Jul-13	12.0							1.2			
(Fri) 12-Jul-13		2.3									
(Mon) 15-Jul-13			5.7	0.4			1.8				

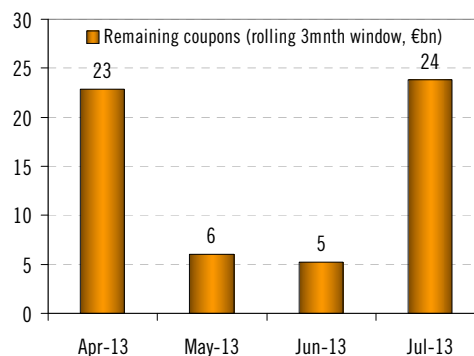
Source: DMOs, Bloomberg, Citi Research

Figure 61. EMU-10 remaining redemptions over the next 3months (€bn)



Source: DMOs, Bloomberg, Citi Research

Figure 62. EMU-10 remaining coupons over the next 3months (€bn)



Source: DMOs, Bloomberg, Citi Research



## ESP and ITA Bill Issuance Projections

This page contains our projections for Spanish and Italian bill supply in 2013.

### Auction calendar for the next four weeks

Figure 63. Provisional Bill Auction Calendar for the Next Four Weeks, Gross Issuance (Billions), DV01 (EUR Million/bp)

Week	Date	Country	Issue Details	Total Size (€bn)
Week 1	23 Apr (Tue)	Spain	3 month (19 July 2013), 9 month (24 Jan 2014) - tenors confirmed, estimated issue and size	4
	26 Apr (Fri)	Italy	6 month (31 Oct 2013; issue confirmed, estimated size)	9
Total Size in Week 1				13.0
Week 3	10 May (Fri)	Italy	3 month (estimated tenor), 12 month (14 May 2014; issue confirmed, estimated size)	10.75
Total Size in Week 3				10.75
Week 4	14 May (Tue)	Spain	6month (22 November 2013), 12 month (new bond) - tenors confirmed, estimated issue and size	5.5
Total Size in Week 4				5.5

Italy announces issue size 3 business days before the auction

Spain announces issue details 1 business day before the auction

Source: DMOs, Citi Research

### 2013 projections for bill supply

Figure 64. 2013 Italy and Spain Bill Supply – Citi Forecast (Euro Billion)

SPAIN	3m	6m	9m	12m	18m	Gross Supply	Redemptions	NCR
Jan	1.3	1.8		3.2	2.5	9	5	3
Feb	1.0	2.9	3.7	3.6		11	9	2
Mar	1.8	2.3	2.6	4.0		11	12	-2
Apr	1.5	1.2	2.5	3.9		9	8	1
May	1.5	1.8	2.5	3.8		10	6	4
Jun	1.3	2.0	2.5	3.5		9	10	
Jul	1.3	2.3	2.5	3.5		10	6	4
Aug	1.3	2.3	2.5	3.0		9	12	-3
Sep	1.3	2.3	2.3	3.0		9	7	2
Oct	1.0	2.0	2.3	2.8		8	4	4
Nov	1.0	2.0	2.3	2.8		8	10	-2
Dec	1.0	2.0	2.3	2.8		8	9	-1
Total	15.1	24.7	27.8	39.8	2.5	110	98	12

ITALY	3m*	6m	9m	12m	18m	Gross Supply	Redemptions	NCR
Jan		9.8		9.8		20	21	-2
Feb		10.1		9.7		20	19	
Mar		9.4		7.8		17	19	-2
Apr	3.0	9.0		8.9		21	17	4
May	3.0	9.0		7.8		20	16	4
Jun		9.0		7.8		17	16	
Jul		9.5		7.8		17	17	
Aug		9.5		8.0		18	21	-4
Sep	3.0	9.0		8.3		20	20	
Oct		9.0		8.3		17	17	
Nov		8.5		7.5		16	16	1
Dec		10.0		7.5		18	19	-2
Total	9.0	111.8		98.8		220	219	1

\*3month bills will be issued only for specific cash needs. In this case, auctions shall be held on the 12 month BOT auction dates

Source: DMOs, Bloomberg, Citi estimates



# Inflation Forecasts, Carry & Weekly Changes

Figure 65. Citi Inflation Forecasts

Month	EUR HICPxT			France CPIxT			UK RPI			US CPURNSA		
	Index Forecast	MoM Change	YoY Change	Index Forecast	MoM Change	YoY Change	Index Forecast	MoM Change	YoY Change	Index Forecast	MoM Change	YoY Change
Mar 13	116.99	1.2	1.7	125.69	0.8	0.9	248.70	0.4	3.3	232.77	0.3	1.5
Apr 13	117.17	0.2	1.4	125.45	-0.2	0.5	249.60	0.4	2.9	232.50	-0.1	1.0
May 13	117.22	0.0	1.6	125.70	0.2	0.8	250.30	0.3	3.3	233.60	0.5	1.6
Jun 13	117.26	0.0	1.7	125.93	0.2	0.9	250.70	0.2	3.7	233.60	0.0	1.8
Jul 13	116.76	-0.4	1.8	125.54	-0.3	1.1	250.30	-0.2	3.4	233.30	-0.1	1.8
Aug 13	116.98	0.2	1.6	125.99	0.4	0.7	251.20	0.4	3.4	233.50	0.1	1.4

Source: Citi Research, Bloomberg

Shaded = Already released

Figure 66. US TIPS Inflation- Linked Carry (based on forecasts above) – One week changes

Bond	RY (%)	Chg (bp)	Carry-adj chg	Carry: RY (bp)			Ref	BE (bp)	Chg (bp)	Carry-adj chg	Carry: BE (bp)			ZC Swap - BE Spread (bp)	Chg (bp)
				1 Jun	1 Jul	1 Aug					1 Jun	1 Jul	1 Aug		
Repo (%)				0.14	0.13	0.13									
TIPS 7/14	-1.76	37	37	32	8	42	US-2.625-07/31/14	194	-39	-27	32	7	40	4	4
TIPS 1/15	-1.44	32	32	25	10	34	US-2.250-01/31/15	166	-34	-25	24	9	32	13	4
TIPS 4/15	-1.39	27	27	22	9	30	US-2.500-04/30/15	163	-28	-21	21	8	28	6	1
TIPS 7/15	-1.80	23	23	17	4	20	US-4.250-08/15/15	208	-24	-18	16	2	18	-3	-1
TIPS 1/16	-1.60	11	11	15	5	18	US-2.625-02/29/16	192	-14	-8	14	3	16	8	-9
TIPS 4/16	-1.52	14	14	14	5	17	US-2.000-04/30/16	186	-17	-12	13	3	15	9	-4
TIPS 7/16	-1.78	9	9	12	3	14	US-4.875-08/15/16	218	-12	-7	11	1	11	1	-8
TIPS 1/17	-1.63	13	13	11	3	13	US-3.125-01/31/17	209	-16	-12	10	1	10	7	-2
TIPS 4/17	-1.55	10	10	10	3	12	US-0.875-04/30/17	207	-13	-9	9	1	9	6	-4
TIPS 7/17	-1.71	7	7	9	2	11	US-4.750-08/15/17	226	-10	-7	8	0	8	6	-6
TIPS 1/18	-1.53	10	10	9	3	11	US-3.500-02/15/18	218	-14	-10	7	1	7	12	-2
TIPS 7/18	-1.57	5	5	8	3	9	US-4.000-08/15/18	229	-9	-7	6	0	6	14	-6
TIPS 1/19	-1.41	2	2	8	3	10	US-2.750-02/15/19	225	-8	-5	6	0	6	14	-7
TIPS 7/19	-1.46	5	5	7	3	8	US-3.625-08/15/19	239	-11	-9	5	0	4	10	-3
TIPS 1/20	-1.27	6	6	7	3	9	US-3.625-02/15/20	230	-13	-11	5	0	4	17	-2
TIPS 7/20	-1.25	3	3	6	3	8	US-2.625-08/15/20	241	-11	-8	4	0	3	13	-4
TIPS 1/21	-1.06	3	3	6	3	8	US-3.625-02/15/21	231	-12	-10	4	0	3	22	-3
TIPS 7/21	-1.03	-3	-3	6	3	8	US-2.125-08/15/21	242	-6	-4	4	0	3	17	-9
TIPS 1/22	-0.85	2	2	5	3	8	US-2.000-02/15/22	234	-12	-10	3	0	3	22	-3
TIPS 7/22	-0.82	-2	-2	5	3	7	US-1.625-08/15/22	242	-8	-7	3	0	2	20	-6
TIPS 1/23	-0.66	1	1	5	3	8	US-2.000-02/15/23	235	-11	-10	3	0	2	25	-3
TIPS 1/25	-0.49	0	0	5	3	7	US-7.625-02/15/25	232	-11	-10	3	-1	2	35	0
TIPS 1/26	-0.39	-3	-3	5	3	7	US-6.000-02/15/26	240	-9	-7	2	-1	1	31	-1
TIPS 1/27	-0.32	-4	-4	4	3	7	US-6.625-02/15/27	241	-8	-7	2	-1	1	32	-0
TIPS 1/28	-0.20	-4	-4	4	3	7	US-6.125-11/15/27	237	-8	-7	2	-1	1	39	1
TIPS 4/28	-0.20	-4	-4	4	3	7	US-5.500-08/15/28	245	-8	-7	2	-1	1	29	2
TIPS 1/29	-0.13	-4	-4	4	3	7	US-5.250-02/15/29	242	-7	-6	2	-1	1	35	2
TIPS 4/29	-0.13	-3	-3	4	3	7	US-5.250-02/15/29	242	-8	-7	2	-1	1	34	3
TIPS 4/32	0.02	-3	-3	4	3	6	US-5.375-02/15/31	238	-9	-8	2	-1	1	44	5
TIPS 2/40	0.36	-4	-4	3	2	5	US-4.625-02/15/40	238	-9	-8	1	-1	0	45	2
TIPS 2/41	0.39	-4	-4	3	2	5	US-4.750-02/15/41	238	-8	-8	1	-1	0	45	2
TIPS 2/42	0.45	-4	-4	2	2	4	US-3.125-02/15/42	241	-9	-8	1	-1	0	42	1
TIPS 2/43	0.48	-5	-5	2	2	4	US-3.125-02/15/43	240	-7	-6	1	-1	0	43	-1

Source: Citi Research, Bloomberg

Figure 67. EUR Inflation- Linked Carry (based on forecasts above)- One week changes

Bond	RY (%)	Chg (bp)	Carry-adj chg	Carry: RY (bp)			Ref	BE (bp)	Chg (bp)	Carry-adj chg	Carry: BE (bp)			ZC Swap - BE Spread (bp)	Chg (bp)
				1 Jun	1 Jul	1 Aug					1 Jun	1 Jul	1 Aug		
Repo (%)				0.08	0.08	0.08									
BTPEi14	-0.18	0	0	103	121	133	BTP 8/14	141	-15	-11	92	100	100	41	-10
OATei15	-1.49	11	11	55	58	56	FFRG 4/15	164	-12	-10	54	57	55	20	-8
BUNDei16	-1.16	13	13	42	45	44	BUND 1/16	120	-16	-14	42	45	45	17	-2
BTANi16	-1.06	12	12	23	14	18	FFRG 4/16	140	-15	-14	22	13	16	30	-6
BTPEi16	1.28	-1	-1	47	56	63	BTP 8/16	108	-12	-10	38	41	40	56	-6
OATi17	-0.97	8	8	18	12	15	FFRG 4/17	149	-14	-13	17	9	11	29	-4
BTPEi17	1.60	-6	-6	37	45	50	BTP 8/17	126	-12	-10	29	30	29	41	-4
BOBLei18	-0.99	13	13	25	27	26	BUND 1/18	125	-18	-17	25	26	25	28	3
OATei18	-0.76	10	10	24	26	26	FFRG 4/18	146	-16	-15	23	24	22	33	1
BTPEi18	2.04	-6	-6	31	38	43	BTP 8/18	114	-10	-9	24	25	23	57	-5
OATi19	-0.65	4	4	13	9	11	FFRG 4/19	154	-11	-10	11	6	7	39	-4
BTPEi19	2.13	-7	-7	27	33	37	BTP 9/19	128	-8	-7	21	21	20	48	-6
BUNDei20	-0.83	5	5	19	20	20	BUND 1/20	142	-12	-11	18	19	18	24	-2
OATei20	-0.45	3	3	19	21	21	FFRG 4/20	157	-9	-9	17	18	17	28	-4
OATi21	-0.21	5	5	10	8	10	FFRG 4/21	159	-12	-11	8	4	5	48	-1
BTPEi21	2.66	-8	-8	22	27	31	BTP 9/20	95	-4	-3	16	16	15	91	14
OATei22	-0.04	4	4	15	17	18	FFRG 4/21	142	-10	-10	13	13	12	54	-1
BUNDei23	-0.48	2	2	13	14	14	BUND 1/22	149	-11	-10	12	12	11	39	-1
OATi23	0.04	5	5	9	7	9	FFRG 10/23	191	-11	-11	7	3	3	28	-1
BTPEi23	2.96	-9	-9	19	23	27	BTP 8/23	127	-0	0	13	13	12	71	-11
OATei24	0.24	2	2	12	14	15	FFRG 10/23	171	-8	-8	10	10	9	35	-3
BTPEi26	3.14	-6	-6	16	20	23	BTP 3/26	124	-4	-4	11	11	10	84	-7
OATei27	0.46	6	6	11	13	13	FFRG 4/26	181	-9	-9	9	9	8	31	-2
OATi29	0.37	6	6	7	6	7	FFRG 4/29	211	-9	-9	5	2	2	23	-3
OATei32	0.61	8	8	9	11	11	FFRG 10/32	202	-9	-9	7	7	6	15	-1
BTPEi35	3.16	-5	-5	10	13	15	BTP 8/34	176	1	1	6	5	4	44	-10
OATei40	0.75	8	8	6	7	8	FFRG 10/38	216	-8	-7	5	4	3	12	-1
BTPEi41	3.32	-4	-4	9	11	13	BTP 9/40	169	-1	-0	5	5	4	59	-8

Source: Citi Research

Figure 68. UK Gilts Inflation- Linked Carry (based on forecasts above)- One Week Changes

Bond	RY (%)	Chg (bp)	Carry-adj chg	Carry: RY (bp)			Ref	BE (bp)	Chg (bp)	Carry-adj chg	Carry: BE (bp)			ZC Swap - BE Spread (bp)	Chg (bp)
				1 Jun	1 Jul	1 Aug					1 Jun	1 Jul	1 Aug		
Repo (%)				0.42	0.42	0.41									
UKTi Jul16	-2.61	21	22	0	-1	-1	UKT 9/16	294	-25	-26	0	0	0	52	5
UKTi Nov17	-2.44	18	15	9	12	13	UKT 3/18	309	-23	-21	8	11	12	26	5
UKTi Apr20	-1.79	11	11	1	2	3	UKT 3/20	287	-21	-21	0	0	0	44	6
UKTi Nov22	-1.48	8	7	6	8	10	UKT 3/22	299	-19	-18	4	5	5	43	5
UKTi Mar24	-1.13	9	7	5	7	9	UKT 3/25	306	-19	-18	3	4	4	33	6
UKTi Jul24	-1.12	11	10	2	3	4	UKT 3/25	305	-21	-21	0	0	-1	41	8
UKTi Nov27	-0.83	8	7	4	6	8	UKT 12/27	311	-18	-17	2	3	3	42	7
UKTi Mar29	-0.65	7	6	4	6	7	UKT 12/30	316	-17	-16	2	2	2	35	7
UKTi Jul30	-0.71	6	6	2	3	4	UKT 6/32	333	-16	-16	0	-1	-1	25	6
UKTi Nov32	-0.57	4	4	3	5	6	UKT 6/32	318	-14	-14	2	2	2	42	5
UKTi Mar34	-0.46	5	4	3	5	6	UKT 9/34	320	-14	-14	1	2	1	39	6
UKTi Jan35	-0.45	6	6	1	2	3	UKT 3/36	328	-14	-14	0	-1	-1	34	7
UKTi Nov37	-0.40	5	4	3	4	5	UKT 12/38	329	-12	-12	1	1	1	35	5
UKTi Mar40	-0.32	5	4	3	4	5	UKT 9/39	327	-12	-12	1	1	0	37	5
UKTi Nov42	-0.31	5	5	2	3	4	UKT 12/42	332	-12	-12	1	1	0	36	6
UKTi Mar44	-0.23	5	5	2	3	4	UKT 1/44	333	-13	-13	1	0	0	34	-3
UKTi Nov47	-0.25	5	5	2	3	4	UKT 12/46	333	-12	-12	0	0	0	36	6
UKTi Mar50	-0.22	6	5	2	3	4	UKT 12/49	332	-13	-13	0	0	0	35	6
UKTi Mar52	-0.20	6	6	2	3	3	UKT 7/52	333	-13	-13	0	0	0	35	7
UKTi Nov55	-0.24	6	6	2	3	3	UKT 12/55	335	-13	-13	0	0	0	35	7
UKTi Mar62	-0.23	6	6	1	2	3	UKT 1/60	333	-14	-14	0	0	-1	36	7

Source: Citi Research

## Summary of Recent Publications

Date	Publication	Topic	Page	Region
16-Apr-13	NOTE	<a href="#">Global Rates Strategy: Japanese liquidity and demand for foreign bonds</a>	-	Global
16-Apr-13	NOTE	<a href="#">European Month-end Index Projections</a>	-	EUR
15-Apr-13	NOTE	<a href="#">European Flow Monitor: Demand - Mind the Gap</a>	-	EUR
12-Apr-13	European Weekly	<a href="#">Positioning in Bunds, BTPs, Bono and OATs</a>	8	EUR
		<a href="#">Derivative trades after recent moves</a>	12	EUR
		<a href="#">UK Rates: Steepening likely into supply</a>	17	UK
		<a href="#">Euro Inflation Strategy</a>	19	EUR
		<a href="#">SSA Strategy</a>	23	EUR
		<a href="#">Covered Bond Strategy</a>	25	EUR
11-Apr-13	NOTE	<a href="#">How Are Different Client Types Positioned?</a>	-	EUR
11-Apr-13	NOTE	<a href="#">Euro Rates Strategy: Derivative trades after recent moves</a>	-	EUR
11-Apr-13	NOTE	<a href="#">Weekly Supply Monitor: Euro, UK and US Supply Outlook</a>	-	EUR
08-Apr-13	NOTE	<a href="#">European Flow Monitor: Liquidity trumping fundamentals</a>	-	EUR
05-Apr-13	NOTE	<a href="#">Global Rates Strategy: Effect on demand for foreign bonds of new BOJ regime</a>	-	Global
05-Apr-13	European Weekly	<a href="#">The changing risk/reward of BTPs</a>	8	EUR
		<a href="#">Euro Government Bonds: Q1 Analysis and Q2 Outlook</a>	15	EUR
		<a href="#">UK Rates Strategy</a>	16	UK
		<a href="#">Euro Inflation Strategy</a>	18	EUR
		<a href="#">SSA Strategy</a>	21	EUR
		<a href="#">Covered Bond Strategy</a>	23	EUR
04-Apr-13	NOTE	<a href="#">Weekly Supply Monitor: Euro, UK and US Supply Outlook</a>	-	Global
04-Apr-13	NOTE	<a href="#">Euro Rates Strategy: Into the ECB</a>	-	EUR
02-Apr-13	NOTE	<a href="#">Euro SSA and Covered Bond Strategy</a>	-	EUR
02-Apr-13	NOTE	<a href="#">European Flow Monitor: Don't just look at Bund yields. Risk is going on.</a>	-	EUR
01-Apr-13	NOTE	<a href="#">Weekly Supply Monitor: Euro, UK and US Supply Outlook</a>	-	EUR
28-Mar-13	NOTE	<a href="#">Observations On Italy: Prospects For BTP Yields In Light Of Recent Moves</a>	-	EUR
27-Mar-13	NOTE	<a href="#">UK Rates Strategy: Updating The Gilt 'Scorecard' Following Recent Developments</a>	-	UK
27-Mar-13	NOTE	<a href="#">Euro Rates Strategy: EMU 10 April Supply Outlook</a>	-	EUR
26-Mar-13	NOTE	<a href="#">European Flow Monitor: Differences in demand are showing up on the curve</a>	-	EUR
22-Mar-13	European Weekly	<a href="#">Risk &amp; Return: Correlation Reloaded</a>	10	EUR
		<a href="#">UK Rates Strategy</a>	12	UK
		<a href="#">Sovereign Ratings Outlook</a>	15	Global
		<a href="#">End-March EGBI Projections</a>	17	EUR

## Notes

# 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

Peter Goves, Strategist, holds a long position in the securities of United Kingdom.

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of France, United Kingdom, Austria, Netherlands, Spain.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from France, United Kingdom, Germany, Austria, Netherlands, Italy, Spain.

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from France, Germany, Austria, Spain.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from France, United Kingdom, Germany, Austria, Netherlands, Italy, Spain in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as investment banking client(s): France, United Kingdom, Germany, Austria, Netherlands, Italy, Spain.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: France, United Kingdom, Germany, Austria, Netherlands, Italy, Spain.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: France, United Kingdom, Germany, Austria, Netherlands, Italy, Spain.

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](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	Alessandro Tentori; Robert Crossley; Jamie Searle; Peter Goves; Nishay Patel; Michael Saunders
Citigroup Global Markets Deutschland AG	Michael Spies
Citigroup Global Markets India Private Limited	Aman Bansal, CFA; Mohit Aggarwal

## OTHER DISCLOSURES

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to Germany, Italy, Spain. (For an explanation of the determination of significant financial interest, please refer to the policy for managing conflicts of interest which can be found at [www.citiVelocity.com](http://www.citiVelocity.com).)

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 Morgan Stanley Smith Barney LLC Customers:** Morgan Stanley & Co. LLC (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Research research report. Ask your Financial Advisor or use [smithbarney.com](http://smithbarney.com) to view any available Morgan Stanley research reports in addition to Citi Research research reports.

Important disclosure regarding the relationship between the companies that are the subject of this Citi Research research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Smith Barney disclosure website at [www.morganstanleysmithbarney.com/researchdisclosures](http://www.morganstanleysmithbarney.com/researchdisclosures).

For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to [www.morganstanley.com/researchdisclosures](http://www.morganstanley.com/researchdisclosures) and [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures).

This Citi Research research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of Citi Research. This could create a conflict of interest.

**The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by.** The Product is made available in **Australia** through Citi Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is made available in **France** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. The Product is made available in **India** by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A., Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under



license. In the event that an error is found in a CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Services Commission and the Financial Supervisory Service. Address is Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. The Product is made available in the **Russian Federation** through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, in respect of any matters arising from, or in connection with, the analysis of 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). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., 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 **Spain** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gasset, 4th Floor, Madrid, 28006, Spain. 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. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangkok, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Büyükdere 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 and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA 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 regulated by Financial Services Authority.

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](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 may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. 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. With the exception of our product that is made available only to Qualified Institutional Buyers (QIBs) and other product that is made available through other distribution channels only to certain categories of clients to satisfy legal or regulatory requirements, Citi Research concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual Citi Research analysts may also opt to circulate research posted on such platforms to one or more clients by email. Such email distribution is discretionary and is done only after the research has been disseminated via the aforementioned distribution channels. Citi Research simultaneously distributes product that is limited to QIBs only through email distribution.

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 Reuters and Datastream.

---

© 2013 Citigroup Global Markets Inc. Citi Research is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

---

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

---