24 October 2013 | 52 pages

Western Europe

# European Rates Weekly

## New LTRO? Mine Everything

- **What a new LTRO would mean for markets:** We analyse the ECB's role in stabilising EGB markets during particular episodes in 2011 and 2012. Looking at 2014, we believe a new LTRO would generate another round of generalised EGB spread compression.
- **EUR volatility: A different approach to the analysis of the skew:** We look at a model based RV measure to compare implied vs. realized vol directionality.
- **Our favourite UK trades:** In light of our latest forecast update, we consider our favourite gilt trades for the medium- and near-term. For the former, we highlight 10yr gilt-Bund wideners and 2s10s steepeners. For the latter, we present two RV flies (buying the Sep19s and selling the Sep23s), both with positive carry.
- **Scope for wider Bund swap spreads:** A number of risk measures indicate a large degree of market optimism. Swap spread wideners offer a relatively cheap way to position for a sudden turn in risk sentiment. We suggest Bund 2yr or 10yr ASW wideners and holding on to long 30yr Bund ASW positions.
- **ECB's AQR and market impact:** The ECB's Comprehensive Assessment will take place over a 12-month period from November 2012. The focus for markets will very likely settle on the debate regarding public vs private backstops.
- **Euro inflation:** We think the potential for further BTPei underperformance is becoming limited and recommend covering BTPei shorts in the auction next week.
- **SSA strategy:** We take a look at core agency and supra spreads to governments as well as prospects for £ SSA supply next year.
- **Covered bonds:** S&P has asked market participants for their opinion on a new proposal to limit the maximum differential between sovereign and covered bond ratings. We present their proposal and the consequences for covered bond ratings.
- **Technical outlook:** Bunds have reached the top of their downward channel and a break out of the channel would be quite bullish. Technicals remain bullish for gilts, but we would recommend fresh longs only after it breaches 111.5.
- **Month-end EGBI projections:** We expect the EGBI changes to be relatively supportive for Germany, France, Spain and Italy.
- **Relative value trades:** We highlight a number of relative value opportunities in the 5-10yr sector of the French, Austrian and Gilt yield curves.
- **Supply:** Within Europe, next week's bond supply comes from Belgium (around €3bn), Italy (around €9bn), Finland (max €1.5bn) and Germany (€4bn).

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**Figure 1. Strategy Summary Table**

| Europe | View | Strategies |
|---|---|---|
| **Direction** | Our duration scorecard for the week ahead is slightly bullish | Trade the range |
| **Money Market** | We expect EONIA 1y/1y1y flatteners to profit from a collapse in excess liquidity and the disproportionate impact that higher O/N fixings would have on the very front-end of the curve. We also like receiving ECB Mar14 EONIA which is likely to benefit from a new LTRO and the small chance of a rate cut. In the UK, the very front-end is lacking direction and may stay that way until the Inflation Report on 13 November. | EONIA 1y/1y1yF flatteners<br>Long ECB Mar14 EONIA<br>Hold long ERZ3 1x2 call spread |
| **Yield Curve** | We expect EUR 10s30s to trade firmly above 60bp over the coming weeks. Over the longer term, we expect BTP 2s10s to steepen given the prospect of new elections before 2015 and next year's increase in gross issuance. In the UK, 10s30s is highly directional and is particularly sensitive to 5yr yields. Current entry levels look attractive for 2s10s steepeners. | UKT 2s10s steepeners<br>Receive EUR 5y5yF vs 15y15yF<br>Sell 10yr OATs vs 5yr and 30yr<br>BTP 2s10s steepener |
| **Cross-market** | Over the longer-term, we still expect Bunds to outperform given diverging economic fundamentals between Europe and the US/UK. Current entry levels for gilt-Bund wideners look attractive. Gilt-USTs are likely to remain highly correlated. | Sell 10yr gilts vs Bunds<br>Sell EUR 2y cross-ccy basis<br>Long Bunds vs UST (add on corrections) |
| **EMU Spreads** | We expect the front-end of Spain to be supported by large cash flows next week, a new LTRO in 2014 and duration extensions in the front-end of the curve. Separately, we continue to hold Belgium vs France. | Hold long 2yr Spain outright<br>Buy 5yr Belgium vs France |
| **Swap Spreads** | We expect Bund spreads to widen across the curve due to a reduction in 2014 issuance by Germany, the prospect of new elections in Italy next year and US debt ceiling concerns. In the UK, we like 5yr (Jul18) swap spreads following recent underperformance. | Buy 2yr Germany vs swaps (or 10yr Germany)<br>Buy 5yr gilt (Jul18) ASW<br>Hold long 30yr Bunds vs swaps (Euribor) |
| **Inflation** | BTPei break-evens have underperformed, as anticipated, and we would look to cover shorts at next week's BTPei23 auction. In the UK, front-end break-evens have held up very well despite the fall in oil prices and a pledge from PM Cameron to scale back green taxes (which are pushing up domestic energy costs). We doubt the rally can last. | Look to cover short in BTPei23 vs Bundei23 break-evens<br>Sell Bundei16 vs Boblei18 break-evens<br>Long 5yr UK break-evens, but only as a medium-term trade<br>Buy Boblei18 break-even vs inflation swap |
| **Volatility** | We expect the forward EUR 2s10s curve to move up to spot based on our expectation that bund yields will be stable over the next year and more LTROs will pin the front-end. The current level of EUR 2y2y & 5y5y implied skews are too steep when compared to previous levels of implied volatility for a range of underlying rates. We prefer short EUR collar positions hedged with USD longs, instead of outright shorts. | Long 2yr EUR single look CMS 2s10s ATMF cap<br>EUR 2y 10s30s conditional bear-steepener<br>Short EUR 5y5y 100bp wide collar vs USD 5y5y 100bp wide collar |
| **SSA** | Supply pressures likely to wane and have less of an impact on the secondary market in Q4. | Trade the range in core agencies vs governments<br>Prefer EU vs other supras and vs France when spread pick-ups allow |
| *For a list of outstanding trade strategies please see the Tradesheet section of this report* | | |

Source: Citi Research Please note: Futures trading involves substantial risk of loss.

# Duration Scorecard

Figure 2. Bund Weekly Cheat Sheet: 25th-31st October

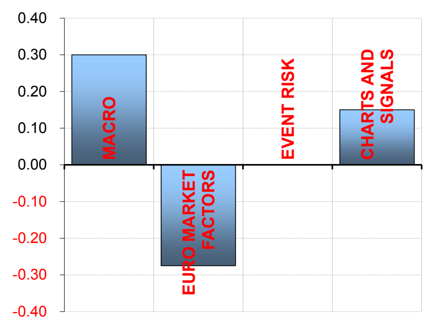
## Bund Directional Scorecard (1wk horizon)

| | | |
|---|---|---|
| RECOMMENDATION | Long | RXZ3 (EOD Thurs) = 141.15 |
| Conviction level | 9% | CTD yield = 1.5%     10day del vol = 5% |

| | SIGNAL STRENGTH (+/-2) | | |
|---|---|---|---|
| **MACRO** | **0.3** | | **Weight = 35%** |
| ECB | 1 | Monetary policy to be accommodative for as long as needed | 7.5% |
| Fed, BoE and BOJ | 1 | Tapering postponed | 7.5% |
| Inflation | 1 | Flash estimate likely to confirm low inflation | 5.0% |
| Growth related data | 0 | General improvement in economic data, but EMU recover still modest | 5.0% |
| Citi surprise | 1 | Significant fall in Citi Economic Surprise Index over last month | 5.0% |
| Middle East / Oil | 1 | Significant fall in WTI future prices | 5.0% |
| **EURO MARKET FACTORS** | **-0.3** | | **Weight = 30%** |
| Supply | -1 | €8.5bn of core supply. No core cash flows | 7.5% |
| Risk appetite | -1 | GRAMI index indicates very low levels of risk aversion | 7.5% |
| Positioning | 0 | Positioning is relatively clean | 2.5% |
| Equity | -1 | Eurostoxx50 close to 5 year high | 5.0% |
| Sovereign credit | -1 | Peripheral spreads close to tightest level in 2 years | 5.0% |
| FX | -1 | EUR effective exchange rate at 2 year high | 2.5% |
| **EVENT RISK** | **0.0** | | **Weight = 18%** |
| Politics | 0 | No political event likely to impact the market in near-term | 7.5% |
| 3yr LTRO | 0 | We expect a new 2yr LTRO by early 2014 | 7.5% |
| Stability mechanisms | 0 | Nothing on the agenda in the near-term | 2.5% |
| **CHARTS AND SIGNALS** | **0.2** | | **Weight = 18%** |
| Technicals | 1 | Bunds at the top of their downward channel | 5.0% |
| T-Note | 1 | Bias towards lower Treasury yields | 5.0% |
| CFTC | 0 | Positioning largely neutral | 2.5% |
| ARTS | 1 | Long | 5.0% |

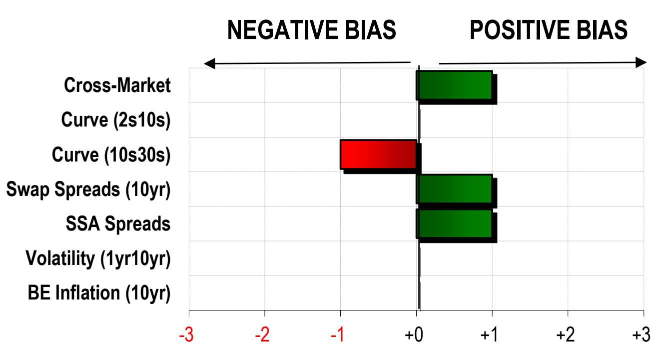
Source: Citi Research

Figure 3. Contribution to Bund Signals




Source: Citi Research

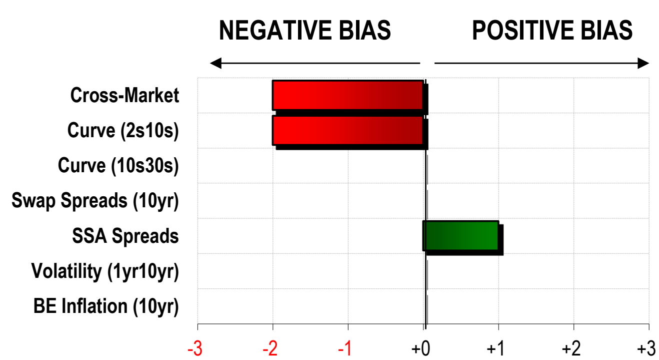
Figure 4. EURO AREA (Near-term Bias)




Source: Citi Research

POSITIVE bias = bullish vs UST, flatter curve, wider swap spreads, tighter SSA spreads, higher implied vol, wider BE inflation

Figure 5. UK (Near-term Bias)




Source: Citi Research

POSITIVE bias = bullish vs Bunds, flatter curve, wider swap spreads, tighter SSA spreads, higher implied vol, wider BE inflation

# Tradesheet

## New Trades

Please see page 19 for the details

1. **Long 2yr Germany vs swaps**

   Buy Bobl-158 (Oct15) YYS

   Open -39bp. Current -39bp. Target -48bp. Stop -35bp.

Please see page 9 for the details

2. **Sell UKT Sep23 vs DBR Aug23**

   Sell UKT 2.25% Sep23 at 2.60%

   Buy DBR 2% Aug23 at 1.75%

   Open 85bp. Current 85bp. Target 140bp. Stop 58bp.

Please see page 9 for the details

3. **UKT Sep23 vs Jan16**

   Sell UKT 2.25% Sep23 at 2.60%

   Buy UKT 2% Jan16 at 0.57%

   Open 203bp. Current 203bp. Target 225bp. Stop 192bp.

Please see page 9 for the details

4. **Buy UKT Sep19 vs Sep17 and Sep22**

   Buy UKT 3.75% Sep19 at 1.72%

   Sell UKT 1% Sep17 at 1.15%

   Sell UKT 1.75% Sep22 at 2.44%

   Open -15bp. Current -15bp. Target -26bp. Stop -9bp. Total carry (3m) +1.7bp.

Please see page 9 for the details

5. **Sell UKT Sep23 vs Sep21 and Mar25**

   Sell UKT 2.25% Sep23 at 2.60%

   Buy UKT 3.75% Sep21 at 2.18%

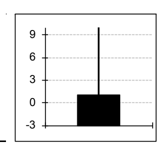
   Buy 5% Mar25 at 2.72%

   Open 30bp. Current 30bp. Target 37bp. Stop 26bp. Total carry (3m) +1.3bp.

## Record of Our Closed Trades

**Figure 6. Record of our Closed Trades**

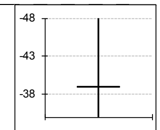
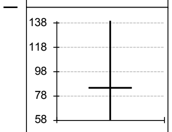
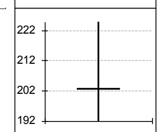
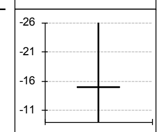
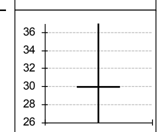
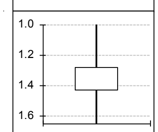
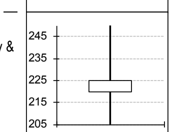
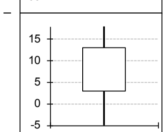
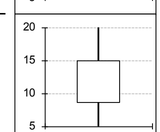
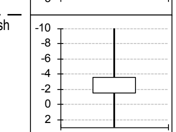
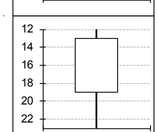
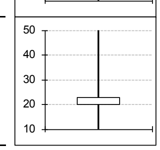
| Region | Trade | Levels | | Rationale |
|---|---|---|---|---|
| Europe | **Buy 2yr Netherlands vs Austria** | Open | 1bp | |
| | | Current | -3bp | Hit Stop 24 October 2013 |
| *Cross Market* | Buy DSL 0.75% Apr15 at 16bp | **P&L** | **-4bp** | |
| | Sell RAGB 3.5% Jul15 at 17bp | Target | 10bp | |
| | | Stop | -3bp | *The Morning Call, 17 July 2013* |




Source: Citi Research

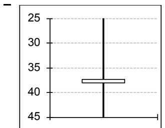
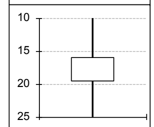
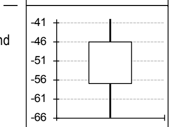
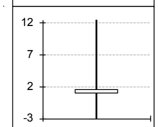
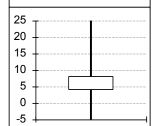
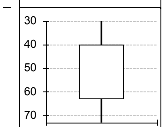
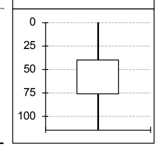
# Record of Our Open Trades

## Figure 7. Record of our Open Trades

| Region | Trade | Levels | | Rationale + Publication Date | |
|---|---|---|---|---|---|
| Europe | **Long 2yr Germany vs swaps** | Open | -39bp | |   |
| | | Current | -39bp | Attractive entry levels and macro factors support spread widening | |
| *Swap spread* | Buy Bobl-158 (Oct15) YYS at -39bp | **P&L** | **0bp** | | |
| | | Target | -48bp | | |
| | | Stop | -35bp | *European Rates Weekly, 24 October 2013.* | |
| Europe / UK | **Sell UKT Sep23 vs DBR Aug23** | Open | 85bp | |   |
| | | Current | 85bp | Entry levels are attractive for medium-term gilt-Bund wideners | |
| *Cross Market* | Sell UKT 2.25% Sep23 at 2.60% | **P&L** | **0bp** | | |
| | Buy DBR 2% Aug23 at 1.75% | Target | 140bp | | |
| | | Stop | 58bp | *European Rates Weekly, 24 October 2013.* | |
| UK | **Sell UKT Sep23 vs Jan16** | Open | 203bp | |   |
| | | Current | 203bp | Bear steepening is likely to resume as UK activity data continues to improve | |
| *Curve* | Sell UKT 2.25% Sep23 at 2.60% | **P&L** | **0bp** | | |
| | Buy UKT 2% Jan16 at 0.57% | Target | 225bp | | |
| | | Stop | 192bp | *European Rates Weekly, 24 October 2013.* | |
| UK | **Buy UKT Sep19 vs Sep17 and Sep22** | Open | -15bp | |   |
| | | Current | -15bp | Attractive RV with positive carry | |
| *Curve* | Buy UKT 3.75% Sep19 at 1.72% | **P&L** | **0bp** | | |
| | Sell UKT 1% Sep17 at 1.15% | Target | -26bp | | |
| | Sell UKT 1.75% Sep22 at 2.44% | Stop | -9bp | *European Rates Weekly, 24 October 2013.* | |
| | | Total carry (3mths) | +1.7bp | | |
| UK | **Sell UKT Sep23 vs Sep21 and Mar25** | Open | 30bp | |   |
| | | Current | 30bp | Attractive RV with positive carry | |
| *Curve* | Sell UKT 2.25% Sep23 at 2.60% | **P&L** | **0bp** | | |
| | Buy UKT 3.75% Sep21 at 2.18% | Target | 37bp | | |
| | Buy 5% Mar25 at 2.72% | Stop | 26bp | *European Rates Weekly, 24 October 2013.* | |
| | | Total carry (3mths) | +1.3bp | | |
| EUR | **Buy Spain 3% Apr15** | Open | 1.43% | |   |
| | | Current | 1.28% | Cash flows, yield-grab, new LTRO, reduced supply to year-end & high carry | |
| *Duration* | Buy Spain 3% Apr15 at 1.43% | **P&L** | **0.2%** | | |
| | | Target | 1% | | |
| | | Stop | 1.65% | *European Rates Weekly, 17 October 2013.* | |
| | | Revised Stop | 1.35% | | |
| EUR | **BTP 2s10s steepener** | Open | 220bp | |   |
| | | Current | 224.8bp | Redemptions to support 2s in 2014. Political uncertainty & long-end issuance to weigh on 10s. | |
| *Curve* | Buy BTP 3.75% Apr16 at 1.98% | **P&L** | **4.8bp** | | |
| | Sell BTP 4.5% May23 at 4.18% | Target | 250bp | | |
| | | Stop | 205bp | *European Rates Weekly, 10 October 2013.* | |
| EUR | **Sell BTPei23 break-even vs Bundei23** | Open | 3bp | |   |
| | | Current | 13bp | Richness of 10yr BTPei break-evens on various metrics and upcoming supply. | |
| *Inflation* | Sell BTPei23 break-even at 133bp | **P&L** | **10bp** | | |
| | Buy Bundei23 break-even at 136bp | Target | 18bp | | |
| | | Stop | -5bp | *European Rates Weekly, 10 October 2013.* | |
| EUR | **Buy Boblei18 break-even vs Bundei16** | Open | 8.6bp | Relatively cheap valuations on the curve favour a tactical break-even steepener. |   |
| | | Current | 15bp | | |
| *Inflation* | Buy Boblei18 break-even at 104.3bp | **P&L** | **6.4bp** | | |
| | Sell Bundei16 break-even at 95.7bp | Updated Target | 20bp | *The Morning Call, 8 October 2013.* | |
| | | Original Target | 15bp | *Updated Target: European Rates Weekly, 10 October 2013.* | |
| | | Stop | 5bp | | |
| EUR | **Buy 30yr Bund vs swaps (YYS)** | Open | -1.5bp | Technical levels, supply projections and upcoming cash flows |   |
| | | Current | -3.6bp | | |
| *Swap Spread* | Buy Bund 2.5% Jul44 vs swaps (YYS) at -1.5bp | **P&L** | **2.1bp** | | |
| | | Target | -10bp | *European Rates Weekly, 19 September 2013* | |
| | | Stop | 3bp | *Revised Stop: The Morning Call, 3 October 2013* | |
| | | Revised Stop | -1.5bp | | |
| UK | **Buy IL gilt Mar24 vs Nov22 and Nov27** | Open | 19bp | |   |
| | | Current | 13bp | Speed of recent cheapening looks overdone, equivalent nominal fly has turned and no further suppy in 2013 | |
| *Inflation* | Buy IL gilt 0.125% Mar24 at -0.13% | **P&L** | **6bp** | | |
| | Sell IL gilt 1.875% Nov22 at -0.42% | Target | 12bp | | |
| | Sell IL gilt 1.255 Nov27 at -0.03% | Stop | 23bp | *UK Inflation Strategy, 2 September 2013* | |
| UK | **Sell 30yr gilt swap spreads vs 10yr** | Open | 20bp | |   |
| | | Current | 23bp | Fiscal risks, supply pressures and the absence of QE to put steepening pressure on the gilt curve. | |
| *Swap spread* | Sell gilt 3.25% Jan44 ASW at 20bp | **P&L** | **3bp** | | |
| | Buy gilt 1.75% Sep22 ASW at 0bp | Target | 50bp | | |
| | | Stop | 10bp | *UK Rates Strategy, 30 July 2013* | |

Source: Citi Research

## Figure 8. Record of our Open Trades (Continued)

| | | | | | |
|---|---|---|---|---|---|
| **Europe**<br>*Inflation* | **Sell OATei24 break-even vs Bundei23**<br>Sell OATei24 break-even at 168bp<br>Buy Bundei23 break-even at 130bp | Open<br>Current<br>**P&L**<br>Target<br>Stop | 38bp<br>37bp<br>**1bp**<br>25bp<br>45bp | Relative outperformance of 10yr OATei break-evens is overdone, especially now that the 25 July coupons have been paid.<br>*European Rates Weekly, 25 July 2013* |  |
| **Europe**<br>*Cross Market* | **Buy 5yr Belgium vs France**<br>Buy OLO 4% Mar18 at 1.15%<br>Sell OAT 4% Apr18 at 0.95% | Open<br>Current<br>**P&L**<br>Target<br>Stop | 19.5bp<br>16bp<br>**4bp**<br>10bp<br>25bp | Tactical long supported by upcoming cash flows.<br>*Euro Rates Strategy, 24 July 2013* |  |
| **Europe**<br>*Inflation* | **Buy Boblei18 break-even vs 5yr HICPxT swap**<br>Buy Boblei18 break-even at 98bp<br>Sell 5yr HICPxT swap at 155bp | Open<br>Current<br>**P&L**<br>Target<br>Stop | -57bp<br>-46bp<br>**11bp**<br>-40bp<br>-66bp | Euro break-evens should be supported by rally in oil and upcoming coupon payments.<br>*The Morning Call, 16 July 2013* |  |
| **Europe**<br>*Money Market* | **Buy ERZ3 1x2 call spread**<br>Buy ERZ3 99.750/.875 1x2 call spread at 1c | Open<br>Current<br>**P&L**<br>Target<br>Stop | 1c<br>1.5c<br>**0.5c**<br>12.5c<br>-3c | Dec Euribor has cheapened 30/35c since May ECB rate cut. However, a cut to the deposit rate would be required for a signifcant rally.<br>*Euribor, 24 June 2013* |  |
| **Europe**<br>*Curve* | **Receive EUR 10y2y vs 12y3y**<br>Receive EUR 10y2y at 3.1%<br>Pay EUR 12y3y at 3.14% | Open<br>Current<br>**P&L**<br>Target<br>Stop | 4bp<br>8bp<br>**4bp**<br>25bp<br>-5bp | Cheapness of the sector due to legacy ASW positions. The trade offers a positive roll-down for relatively low volatility<br>*The Morning Call, 23 January 2013* |  |
| **Europe**<br>*Volatility* | **Sell EUR 1y3yF ATMF straddle and buy ATMF-25 receiver**<br>Sell EUR 1y3yF ATMF (=1.36%) straddle for 98bp<br>Buy EUR 1y3yF ATMF-25 receiver for 35bp | Open<br>Current<br>**P&L**<br>Target<br>Stop | 63bp<br>40bp<br>**23bp**<br>30bp<br>73bp | Fwd levels in front-end EUR swaps are too high when additional policy measures by the ECB are likely to be undertaken<br>*IIRS 9 August 2012* |  |
| **UK**<br>*Volatility* | **Sell GBP 2y2y ATMF straddle**<br>Sell GBP 2y2y ATMF (1.04%) straddle at 76bps | Open<br>Current<br>**P&L**<br>Target<br>Stop | 76bp<br>40bp<br>**36bp**<br>0bp<br>114bp | The fundamental backdrop in the UK supports selling GBP 2y2y vol<br>*IIRS 12 July 2012* |  |

Source: Citi Research Please note: Futures trading involves substantial risk of loss.

# European Rates Strategy Yield Outlook

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Full details can be found in the latest *Global Economic Outlook and Strategy*.

## EMU – LTRO in 2014 likely to drive spread compression

**Core Europe:** We continue to expect 10yr Bund yields to range trade around 1.8% in coming quarters, on the back of a subdued economic environment and loose ECB policy. Although our economists have nudged certain 2014 growth expectations higher this month (+0.1% for Germany, +0.3% for Spain), the overall EMU recovery remains modest and inflationary pressures low.

**EMU Periphery:** Waning supply pressures in Q4 are likely to add to the market's sanguine mood. This may change in Q1 2014, however, when the resurgence of supply and the possibility of resurfacing political tensions in Italy are likely to put widening pressure on spreads. We expect BTP/Bund and Bono/Bund spreads to peak in 1Q14, but the widening is likely to be relatively short-lived and limited by a new LTRO in H1 2014. This should provide impetus for significant tightening in 2014. Our central scenario is for Bono and BTP spreads to move towards 150bp and 175bp by Q4 2014. Risks to our base case include the timing of a new LTRO relative to Fed tapering, the inherent unpredictability of EMU political concerns, and ongoing downgrade risks.

## UK – 10yr gilts expected to range trade into year-end

Our forecasts for gilt yields are unchanged compared with last month. The current level of 10yr yields is close to our estimate of fair value. We expect that 10yr yields will range-trade around current levels into year-end, before slowly heading higher over the course of 2014. The risks to our forecasts are probably skewed towards higher yields given the strength of recent activity surveys and the moderation of previous economic headwinds. The core themes reflected in the forecasts are further underperformance of gilts vs Bunds and renewed bear steepening of 2s10s.

**Figure 9. Interest Rate and Bond Market Forecasts as of 23 October 2013**

| | | Quarterly Average | | | | | |
|---|---|---|---|---|---|---|---|
| | Current | 4Q 13 | 1Q 14 | 2Q 14 | 3Q 14 | 4Q 14 | 1Q 15 |
| **Euro Area** | | | | | | | |
| Policy Rate | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Overnight Rate (EONIA) | 0.08 | 0.10 | 0.15 | 0.10 | 0.10 | 0.10 | 0.10 |
| 3-Month (EURIBOR) | 0.17 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| 2 Year Schatz Yield | 0.18 | 0.20 | 0.15 | 0.15 | 0.20 | 0.20 | 0.30 |
| 5 Year Bobl Yield | 0.81 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.90 |
| 10 Year Bund Yield | 1.83 | 1.80 | 1.80 | 1.80 | 1.80 | 1.90 | 2.00 |
| 30 Year Bund Yield | 2.72 | 2.60 | 2.50 | 2.50 | 2.50 | 2.60 | 2.70 |
| 2-10 Year Bund Curve | 165 | 160 | 165 | 165 | 160 | 170 | 170 |
| 10 Year BTP-Bund Spread | 219 | 225 | 250 | 225 | 200 | 175 | 175 |
| 10 Year Bono-Bund Spread | 243 | 235 | 250 | 220 | 180 | 150 | 150 |
| 2 Year BTP-Schatz Spread | 131 | 130 | 150 | 120 | 100 | 100 | 100 |
| 2 Year Bono Schatz Spread | 107 | 100 | 115 | 85 | 85 | 80 | 80 |
| 10 Year OAT-Bund Spread | 51 | 55 | 70 | 65 | 60 | 50 | 50 |
| 10 Year Swap Spread (Swap Less Govt.), bp | 33 | 35 | 35 | 30 | 30 | 25 | 25 |
| 10 Year Breakeven Inflation | 163 | 165 | 170 | 170 | 170 | 180 | 190 |
| **UK** | | | | | | | |
| Policy Rate | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| 3-Month Libor | 0.52 | 0.52 | 0.52 | 0.55 | 0.60 | 0.65 | 0.70 |
| 2 Year Treasury Yield | 0.45 | 0.45 | 0.50 | 0.55 | 0.65 | 0.80 | 1.00 |
| 5 Year Treasury Yield | 1.51 | 1.55 | 1.65 | 1.80 | 1.90 | 2.10 | 2.35 |
| 10 Year Treasury Yield | 2.69 | 2.80 | 2.85 | 3.05 | 3.15 | 3.25 | 3.40 |
| 30 Year Treasury Yield | 3.54 | 3.60 | 3.65 | 3.75 | 3.85 | 3.90 | 3.95 |
| 2-10 Year Treasury Curve | 224 | 235 | 235 | 250 | 250 | 245 | 240 |
| 10 Year Swap Spread (Swap Less Govt.), bp | -2 | 5 | 5 | 5 | 5 | 10 | 15 |
| 10 Year Breakeven Inflation | 293 | 290 | 295 | 310 | 315 | 330 | 350 |

Source: Citi Research

# EGB: New LTRO? Mine Everything.

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**We analyze in detail the ECB's role in stabilizing EGB markets during particular episodes in 2011 and 2012. Looking at 2014, we believe the announcement of a new LTRO would generate another round of generalized compression in EGB spreads to Bunds.**

Bonds market disequilibrium can reflect a variety of causes. For example:

- Gaps between valuation and fundamentals become unsustainable.
- Worsening of supply dynamics: Increased funding needs (deficit financing), front-loaded redemptions and associated roll-over risk, jump in yield levels (higher coupon payments).
- Worsening of demand dynamics: Credit rating deterioration (index re-composition), change in interest rate level (e.g. money market funds suffer outflow in zero-rates environment), change in bond price volatility (VaR effect).

**Fundamentals as well as demand/supply imbalances can trigger a period of market disequilibrium**

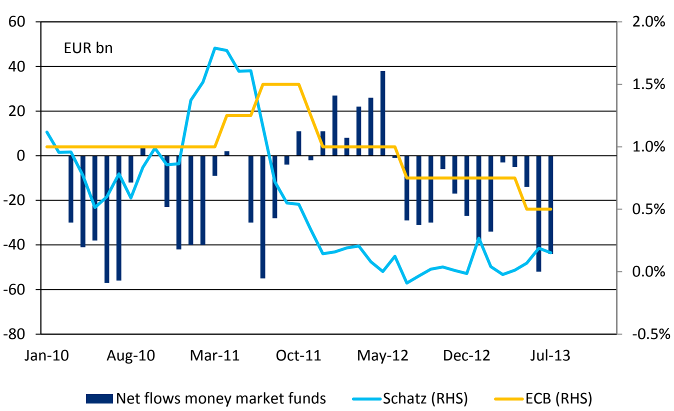
In this note we focus on three different episodes of disequilibrium that have characterized the EGB market in the past 5 years and analyze the stabilization forces/solutions that have been adopted to restore market equilibrium: Schatz with ECB close to zero interest rates, OAT in Q4 2011 and BTP in the 2011/2012 period. Our objective is to identify the sources of disruption and understand under which conditions these can appear in the future, thus presenting a risk to the EGB market.

### Event #1: Schatz with ECB close to zero rates

**Problem: Protracted money market outflows**

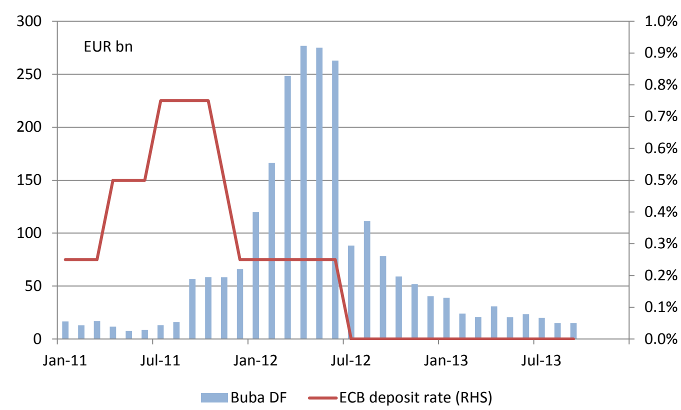
European money market funds have seen a net outflow of EUR 247bn since January 2010 with sustained inflows registered only during the 1st half of 2012 (EUR 21bn, Figure 10). That period was characterized by the two 3y LTROs as well as deteriorating fundamentals, which eventually culminated in a 25bp rate cut by the ECB. During the same period inflows into bond funds summed up to EUR 90bn, while equity funds suffered EUR 18bn of outflows.

**Figure 10. Money market flows as ECB rates approach zero**




Source: EFAMA, Citi Research

**Figure 11. German banks and the ECB's deposit facility**




Source: Bundesbank, Citi Research

**Carry trade with ECB's deposit facility**

The 2012/2013 period is of particular interest, given the sensitivity of Schatz yields to money market flows (the January 2013 spike to 0.27% is in line with a combined EUR 38bn outflow in Dec-12 and Jan-13) as well as German banks' behavior facing the ECB: The deposit facility stood at 0.25% between Dec-11 and Jun-12 with one week German GC averaging 0.07% during that period. As we can see from Figure 11, German banks have deposited on average EUR 225bn between Jan-12 and Jun-12, while this volume has dropped to EUR 72bn in the second half of 2012 as the ECB cut the depo rate to 0%. We suspect that the spread between GC and ECB deposit facility (on average 18bp during the first 6 months of 2012) might have

generated a strong bid for the short-end of core EGBs on top of rate cut expectations and the often used "flight-to-quality" argument. The market has since returned to a higher sensitivity vis-a-vis fundamentals and flows[1] as the ECB has arbitraged away the spread between GC and deposit facility.

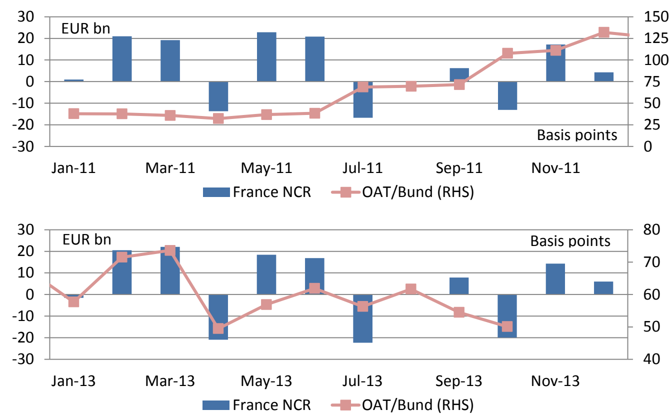
In conclusion, the LTRO program together with a deposit rate at 0.25% has allowed core banks to exploit quasi-arbitrage opportunities in the repo market, thus containing the negative effect of substantial outflows from money market funds.

## Event #2: OAT in Q4 2011

**Problem: Spillover of sovereign risk-premia into AAA markets**

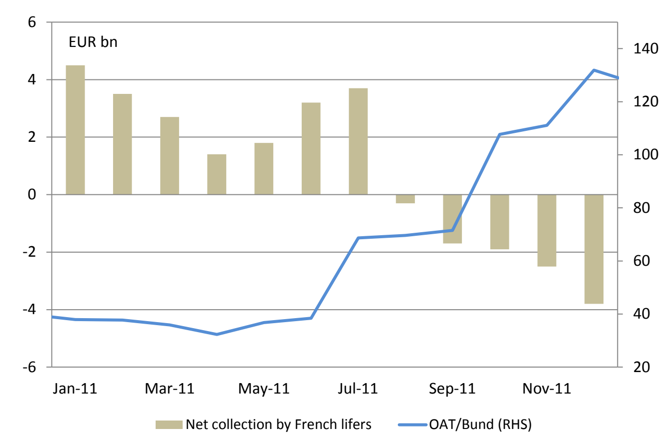
Plenty of words have been spent on the dramatic widening of OAT/Bund spreads in Q4 2011 (from 70bp at the end of Sep-11 to a peak of 190bp in mid Nov-11). That particular market movement has often been associated with a generalized increase in EGB risk premia spilling over from the BTP and the Bono market after ECB's failed attempt to stabilize the situation by purchasing a total of EUR 140-150bn of Italian and Spanish government bonds.

**Figure 12. Supply matters when markets are in equilibrium**




Source: Citi Research

**Figure 13. French retail withdrawing money from life insurance in 2011**




Source: FFSA, Citi Research

Looking at the OAT market more in detail, we can gain some interesting insight into the causes of this specific short-lived deviation from equilibrium:

- France's net cash requirement (NCR) did not matter in 2011, while we can see a much closer relationship between supply and OAT/Bund spreads in 2013.
- A total of EUR 71bn was redeemed from European investment funds between Sep-11 and Dec-11 (of which EUR 30bn from money market and bond funds), highlighting that period's strong risk-off character.
- French retail investors withdrew approximately EUR 10bn from life insurance companies between Sep-11 and Dec-11 (vs inflows of EUR 20.5bn in the first 8 months of 2011).
- Anecdotal information reveals that French insurance companies liquidated not only a part of their BTP and Bono holdings (out of the money) in Q4 2011 in response to the debt crisis, but also trimmed down their OAT portfolios (in the money) in order to compensate for losses on peripheral EGB books. As a result, they were left long cash[2], almost flat peripheral risk and underweight OAT.

[1] Net outflow of EUR 111bn from money markets since the deposit rate cut.

[2] Which they re-invested into OATs during the course of 2012.

**Foreigners to the rescue**

The stabilization mechanism came from markets' ability to self-organize: Japanese investors immediately realized the potential long-term profit of a highly liquid AAA-rates sovereign bond trading at very wide levels in ASW terms (5y OAT was quoted between 20bp and 60bp ASW in Q1 2012[3] vs a current level of -5/-10bp). Also, fast money stopping bearish trades on France and SNB's introduction of a EUR/CHF peg were major reasons for a strong performance in the first 9 months of 2012.

## Event #3: BTP during the 2011/2012 period

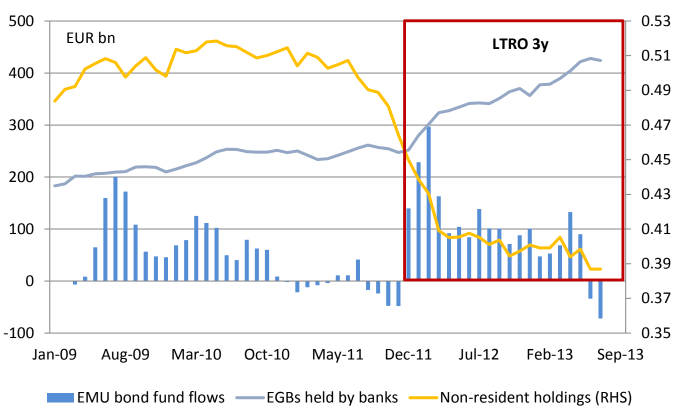
**Problem: A large bond market becomes too volatile**

Another well-known story. Until Q2 2011 the BTP market managed to remain fairly isolated from peripheral events that rocked Greece, Ireland and Portugal. A combination of events triggered four quarters of market disequilibrium that eventually culminated with Mr Coeure having to design the OMT for Mr Draghi:

**The vicious combination of worsening fundamentals, demand deficit and volatility**

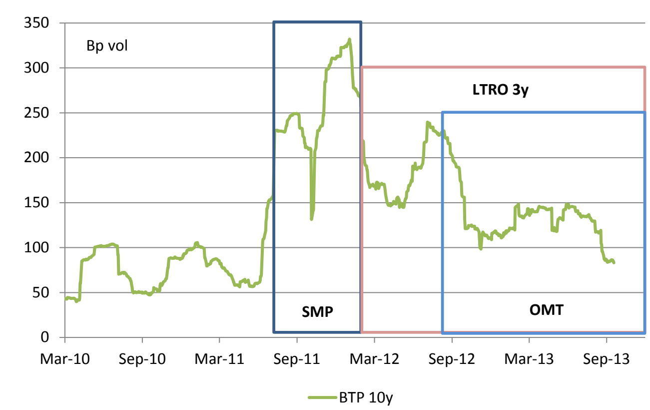
- Worsening of fundamental outlook, worsening of credit outlook (perhaps reflecting Portugal being stripped of IG rating), increased political risk.
- Net outflows from European bond funds (EUR 66bn from Dec-10 to the LTRO announcement in Dec-11) in addition to a rapid decline in non-resident holdings of Italian government bonds (from 51% to 45%, i.e. EUR 75bn, Figure 14) as well as temporary slowdown in domestic purchases.
- Jump in bond volatility, triggering a reduction in VaR limits for both dealers and end-users, thus further reducing secondary market liquidity (Figure 15).

**Figure 14. How does a market become stressed?**




Source: ECB, Bank of Italy, Citi Research

**Figure 15. How to restore market equilibrium?**




Source: Citi Research

**ECB to the rescue**

Stabilization was a three-stage process by which the ECB initially absorbed foreign selling via the SMP, stabilized domestic demand by providing cheap funding conditions to banks and eventually offered an almost zero-cost[4] put option to investors and issuers alike by means of the OMT. Also of interest is the weak role that net supply (or net cash requirement) had in terms of explaining the monthly variations of BTP/Bund spreads during this period.

[3] Germany 5y ASW traded between -90bp and -60bp, while 5y UST ranged -40/-20bp in Q1 2012.

[4] "Almost" because of the conditionality attached to the OMT.

## Conclusion: A new LTRO? Buy everything at spread, steepen curves

**Why a new LTRO?**

The level of expectations with regards to a new LTRO has increased significantly since we started our series of papers[5] on the role that ECB has to play in preventing a disruption of the EGB market equilibrium in 2014 and 2015.

**Net issuance is not expected to be particularly large…**

Looking at long-term supply estimates (Figure 16), we recognize a declining amount of peripheral issuance. During the 2014-2017 period, Eurozone's periphery is expected to issue an amount of bonds – net of redemptions – that declines from EUR 94bn to EUR 60bn. This reflects an improvement in both the GDP trajectory as well as a budget balance over the course of the forecast horizon. According to our estimates, peripheral coupons should cover around EUR 87bn of demand, resulting in a relatively modest EUR +7bn net financing requirement for 2014[6].

**Figure 16. Gross EGB supply net of redemptions (EUR bn)**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|
| Germany | 27 | 25 | 17 | 13 | 18 | 4 |
| France | 97 | 83 | 91 | 95 | 88 | 77 |
| Italy | 13 | 65 | 52 | 34 | 37 | 30 |
| Spain | 56 | 58 | 52 | 42 | 34 | 29 |
| Netherlands | 31 | 20 | 17 | 14 | 11 | 6 |
| Belgium | 24 | 16 | 14 | 11 | 8 | 8 |
| Austria | 11 | 9 | 8 | 7 | 6 | 6 |
| Finland | 5 | 6 | 4 | 3 | 3 | 2 |
| Portugal | -10 | 0 | -10 | -6 | -4 | -4 |
| Ireland | 0 | 3 | 0 | 6 | 5 | 5 |
| EMU 10 | 253 | 283 | 246 | 219 | 205 | 163 |
| Core | 194 | 157 | 152 | 143 | 133 | 102 |
| Periphery | 59 | 126 | 94 | 76 | 72 | 60 |

Source: Citi Research

**Figure 17. The importance of domestic demand**

| BTP | | | | | | | |
|---|---|---|---|---|---|---|---|
| Year | Gross | Redemp | Coupon | NCR | Banks | ECB | Domestic |
| 2011 | 146 | 88 | 47 | 58 | 5 | 99 | 104 |
| 2012 | 148 | 120 | 51 | 28 | 105 | | 105 |
| 2013 | 153 | 117 | 54 | 36 | 67 | | 67 |
| Total | 447 | 325 | 152 | 122 | | | 276 |
| %domestic | 62% | | | | | | |

| Bono | | | | | | | |
|---|---|---|---|---|---|---|---|
| Year | Gross | Redemp | Coupon | NCR | Banks | ECB | Domestic |
| 2011 | 97 | 45 | 22 | 75 | 35 | 44 | 79 |
| 2012 | 98 | 41 | 25 | 73 | 52 | | 52 |
| 2013 | 117 | 60 | 27 | 90 | 58 | | 58 |
| Total | 312 | 146 | 74 | 238 | | | 189 |
| %domestic | 61% | | | | | | |

Source: Citi Research

**…but are we looking at the correct risk measure? Perhaps we should concentrate on rollover risk.**

However, as we have seen in the analysis above, variations in supply measures (gross, net or NCR) are not guaranteed to impact the market one way or the other. For example, the combined net cash requirement for Italy and Spain stood at EUR 39bn in 2011 and declined to -11bn in 2012, while jumping back to +47bn in 2013. For these two issuers, 2014 NCR is estimated at around EUR 27bn. The key supply risk – for any EGB market – can result from the low probability of a "buyers strike" and more importantly a "domestic buyers strike" as was the case in Italy in 2011. The importance of domestic EGB demand is evident in Figure 17. Not only would a new LTRO have an impact on the market through a disequilibrium of new supply vs demand, but also through the rollover assumption that is tacitly assumed when comparing net supply with demand!

**Further contraction of EGB spreads…or even convergence**

From our perspective, a new LTRO would not only allow for a smoother liquidity transition at the expiry of the original 3y LTROs, but would also minimize the risk of potential EGB market disruption resulting from demand/supply disequilibrium. As evidenced by our new forecasts (Bono/Bund and OAT/Bund spreads to head towards 150bp and 50bp in Q4 20214 respectively, see page 9), we expect this measure to have a rather bullish impact on both core and non-core EGB during the course of 2014.

5 "*Some thoughts on a new LTRO*" (European Rates Weekly, 26 September 2013),

6 "*EMU 2014 Supply Projections*" (2 October 2014)

# EUR Volatility

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## A Different Approach to the Analysis of the Skew

In the note "Trading EUR swaption skew" which was released on September 5th we applied a linear two factors model to estimate the fair value of the skew. The chosen factors were the underlying forward rates and the level of ATMF implied volatility. Please refer to the note for more details.

Here we introduce a relative value measure which follows a different methodology. Assume first a simple stochastic volatility framework, i.e. the rate underlying the option and the stochastic volatility are governed by the following two equations respectively:

$$dF = \alpha F^{\beta} dW_1$$

$$d\alpha = \nu \alpha dW_2$$

The two Wiener processes are assumed to be correlated as follows:

$$dW_1 dW_2 = \rho dt$$

The parameters are then obtained by calibrating the model to a set of option prices[7].

Furthermore, observe that the following relationship holds between normal implied volatility and α:

$$\sigma_N \approx \alpha F^{\beta} \qquad [1]$$

Such relationship is exact instantaneously for ATMF options. Finally, by applying the chain rule on [1], after some algebraic manipulation the following approximation is obtained:

$$\partial\sigma_N \approx (\nu\rho + \frac{\beta\sigma_N}{F})\partial F$$

The equation above relates the changes in implied normal vol ( $\partial\sigma_N$ ) to changes in the underlying forward rate ( $\partial F$ ) as implied by the stochastic model calibrated to option prices, that is the implied sensitivity of changes in volatility to changes in the rate is a function of the model parameters, the current implied vol and the underlying forward rate. Such function can then be compared with the regression slope obtained from realized changes of implied vols and rates over a given horizon: if the implied sensitivity is higher than the regression slope, then it could be argued that the market is charging an excessive price on vol directionality with rates (i.e. skew too steep, payer too expensive). The opposite interpretation holds if the implied sensitivity is lower than the regression slope.

In Figure 18 below we show computations for implied sensitivities. Realized sensitivities are exhibited in Figure 19. Finally, Figure 20 shows the differences between implied and realized. Currently, for short/medium expiries the market implied sensitivity on short tenors is pricing significantly higher directionality than it has been realized over the past year. Using the heatmaps below as a guide, we choose to plot the 1y2y skew in Figure 21. The skew has actually flattened somewhat since the peak in late August but it still looks excessively steep. Assuming a 10bp sell-off of the 1y2y swap rate, implied volatility is assumed by the market to increase by 7.3bp vs. 3.5bp that has been realized by the market.

[7] The original paper by Hagan *et al*. (2002), www.wilmott.com/pdfs/021118_smile.pdf, is the best background reading for the approach adopted in this note.

**Figure 18. Model-based implied vol sensitivity**

| | 1y | 2y | 3y | 4y | 5y | 10y | 20y | 30y |
|---|---|---|---|---|---|---|---|---|
| 1m | 1.00 | 0.86 | 0.78 | 0.66 | 0.53 | 0.36 | 0.17 | 0.04 |
| 3m | 0.94 | 0.84 | 0.75 | 0.64 | 0.53 | 0.37 | 0.17 | 0.04 |
| 6m | 0.90 | 0.80 | 0.70 | 0.60 | 0.50 | 0.32 | 0.16 | 0.06 |
| 1y | 0.82 | 0.73 | 0.61 | 0.53 | 0.45 | 0.24 | 0.13 | 0.09 |
| 2y | 0.62 | 0.52 | 0.45 | 0.39 | 0.34 | 0.20 | 0.13 | 0.10 |
| 3y | 0.43 | 0.37 | 0.33 | 0.30 | 0.27 | 0.17 | 0.12 | 0.09 |
| 4y | 0.34 | 0.30 | 0.27 | 0.25 | 0.23 | 0.15 | 0.12 | 0.10 |
| 5y | 0.28 | 0.24 | 0.22 | 0.21 | 0.20 | 0.14 | 0.12 | 0.11 |
| 6y | 0.25 | 0.21 | 0.20 | 0.19 | 0.18 | 0.13 | 0.12 | 0.11 |
| 7y | 0.22 | 0.18 | 0.18 | 0.17 | 0.16 | 0.12 | 0.11 | 0.10 |
| 8y | 0.19 | 0.16 | 0.15 | 0.15 | 0.14 | 0.11 | 0.11 | 0.10 |
| 9y | 0.17 | 0.14 | 0.14 | 0.13 | 0.13 | 0.11 | 0.10 | 0.10 |
| 10y | 0.15 | 0.12 | 0.12 | 0.12 | 0.12 | 0.10 | 0.10 | 0.10 |
| 15y | 0.10 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.07 | 0.07 |
| 20y | 0.08 | 0.07 | 0.07 | 0.07 | 0.07 | 0.08 | 0.06 | 0.05 |

Source: Citi Research

**Figure 19. Realized implied vol sensitivity (Jan 2013 – To date)**

| | 1y | 2y | 3y | 4y | 5y | 10y | 20y | 30y |
|---|---|---|---|---|---|---|---|---|
| 1m | 0.96 | 0.75 | 0.60 | 0.55 | 0.54 | 0.40 | 0.33 | 0.26 |
| 3m | 0.83 | 0.62 | 0.49 | 0.44 | 0.41 | 0.24 | 0.19 | 0.15 |
| 6m | 0.65 | 0.51 | 0.41 | 0.36 | 0.33 | 0.19 | 0.15 | 0.11 |
| 1y | 0.41 | 0.35 | 0.31 | 0.28 | 0.25 | 0.15 | 0.11 | 0.08 |
| 2y | 0.24 | 0.23 | 0.19 | 0.17 | 0.15 | 0.09 | 0.07 | 0.05 |
| 3y | 0.17 | 0.15 | 0.14 | 0.13 | 0.11 | 0.06 | 0.05 | 0.03 |
| 4y | 0.11 | 0.11 | 0.10 | 0.08 | 0.07 | 0.05 | 0.03 | 0.02 |
| 5y | 0.09 | 0.08 | 0.06 | 0.05 | 0.05 | 0.03 | 0.03 | 0.02 |
| 6y | 0.07 | 0.05 | 0.04 | 0.04 | 0.04 | 0.03 | 0.02 | 0.01 |
| 7y | 0.05 | 0.04 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 |
| 8y | 0.03 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 | 0.01 | 0.01 |
| 9y | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| 10y | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| 15y | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 20y | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 |

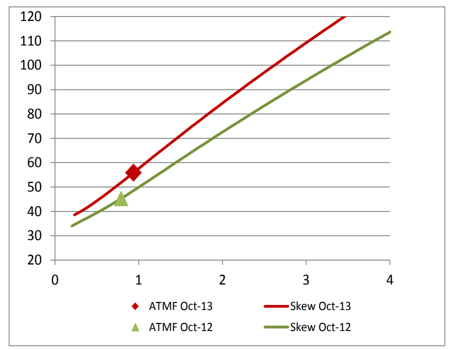
Source: Citi Research

**Figure 20. Difference between implied and realized sensitivity**

| | 1y | 2y | 3y | 4y | 5y | 10y | 20y | 30y |
|---|---|---|---|---|---|---|---|---|
| 1m | 0.04 | 0.11 | 0.18 | 0.10 | -0.01 | -0.04 | -0.16 | -0.23 |
| 3m | 0.12 | 0.21 | 0.26 | 0.20 | 0.12 | 0.12 | -0.02 | -0.11 |
| 6m | 0.25 | 0.29 | 0.29 | 0.24 | 0.17 | 0.13 | 0.01 | -0.05 |
| 1y | 0.41 | 0.38 | 0.30 | 0.26 | 0.20 | 0.09 | 0.02 | 0.01 |
| 2y | 0.37 | 0.29 | 0.26 | 0.22 | 0.19 | 0.11 | 0.07 | 0.05 |
| 3y | 0.26 | 0.22 | 0.19 | 0.18 | 0.17 | 0.11 | 0.08 | 0.06 |
| 4y | 0.23 | 0.19 | 0.18 | 0.17 | 0.16 | 0.11 | 0.09 | 0.08 |
| 5y | 0.19 | 0.16 | 0.16 | 0.16 | 0.15 | 0.11 | 0.10 | 0.09 |
| 6y | 0.18 | 0.16 | 0.15 | 0.15 | 0.14 | 0.10 | 0.10 | 0.09 |
| 7y | 0.17 | 0.15 | 0.14 | 0.14 | 0.13 | 0.10 | 0.09 | 0.09 |
| 8y | 0.16 | 0.13 | 0.13 | 0.12 | 0.12 | 0.09 | 0.09 | 0.09 |
| 9y | 0.14 | 0.11 | 0.11 | 0.11 | 0.11 | 0.09 | 0.09 | 0.09 |
| 10y | 0.12 | 0.10 | 0.10 | 0.10 | 0.10 | 0.08 | 0.09 | 0.08 |
| 15y | 0.09 | 0.07 | 0.07 | 0.08 | 0.08 | 0.07 | 0.07 | 0.06 |
| 20y | 0.07 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.05 | 0.04 |

Source: Citi Research

**Figure 21. EUR 1y2y skew**




Source: Citi Research

# UK Rates – Our favourite trades

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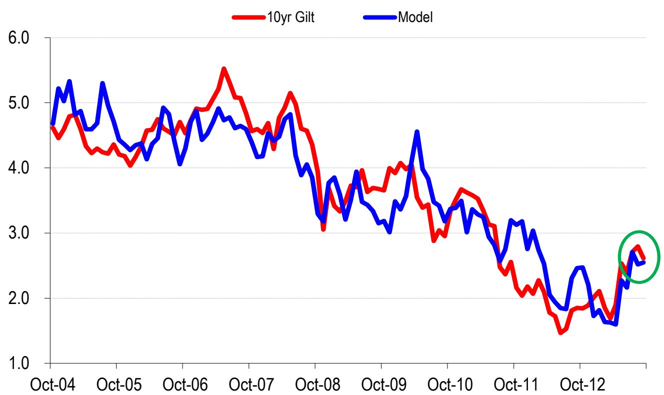
The UK market remains highly sensitive to developments in the US, and gilts even managed to out-rally Treasuries this week immediately following the weaker-than-expect payrolls report for September. For now, the near-term momentum appears to be for lower gilt yields. Indeed, various technical indicators are bullish, although gilts are beginning to find resistance near current levels (see page 33).

**We are not inclined to chase the rally**

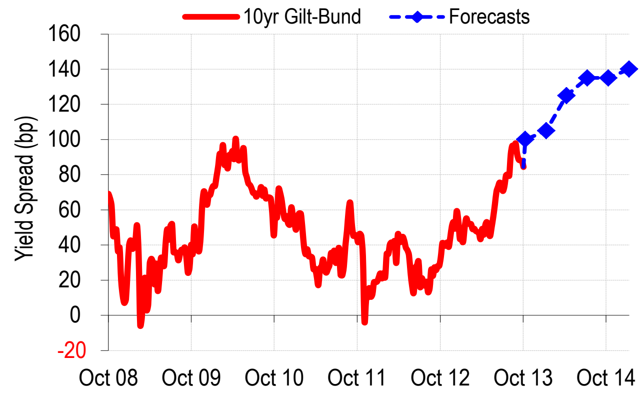
We are not inclined to chase the rally. Our fundamental model - built on inputs for domestic growth, inflation, risk factors and market sentiment - suggests that 10yr gilts are close to fair value based on current information (Figure 22). The front-end also looks well priced to us (with the first hike in H2 2015). As this week's MPC minutes indicated, the Bank of England is likely to modify its forecasts at the Inflation Report (13 November) to show the jobless rate falling more quickly, and in doing so move some way towards validating current market pricing.

**Figure 22. Citi gilt fair value model vs actual**




Source: Citi Research

**Figure 23. Potential for further widening in 10yr gilt-Bund**




Source: Citi Research, Bloomberg.

**We expect 10yr gilts to range-trade into year-end and drift higher in 2014**

Our base case - as reflected in our latest yield forecasts (see page 9) – is that 10yr gilt yields broadly range-trade around the 2.80% level as we head into year-end. We then expect yields to drift higher over the course of 2014.

**The risks to our forecasts are probably skewed towards higher yields given the consensus for growth still looks too low**

The risks to our forecasts are probably skewed towards even higher yields. Our economics team is forecasting growth of 3% in 2014, well above consensus expectations of 2.2%. They expect the recovery to strengthen (and broaden) thanks to the credit easing measures already in place (including "Help to Buy") and as previous headwinds fade. The exact timing of the first rate hike remains highly uncertain, but yields are likely to drift higher as it slowly comes into view.

## Our favourite trades for the medium-term

**Medium-term trades: sell 10yr gilts vs Bunds and 2s10s steepeners**

Two core themes that jump out from our latest yields forecasts are further underperformance of gilts vs Bunds and bear steepening of 2s10s (at least in the first half of 2014).

**Entry levels look attractive**

The recent rally presents attractive entry levels for these medium-term core themes, in our view.

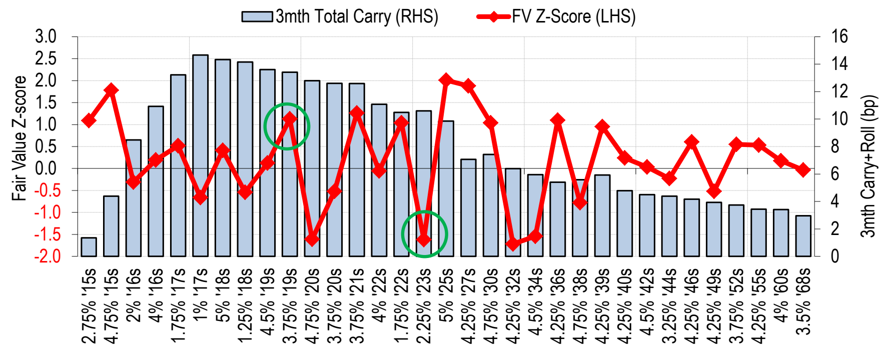
- **Trade 1:** Sell UKT 2.25% Sep23 vs buy DBR 2% Aug23. Current level = 85bp, target 140bp, stop 58bp.
- **Trade 2:** Sell UKT 2.25% Sep23 vs buy UKT 2% Jan16. Current level = 203bp, target 225bp, stop +192bp.

## Relative value and carry

**The greatest carry gains can be made by extending from 2015-16 maturities into 2017-18 maturities.**

In the context of our range-bound view to year-end, seeking out relative value trades is productive for the near-term. A useful starting point is our gilt fair value model. In Figure 24, we show the three-month Z-score of the spread of each bond to the fitted curve. An important overlay is the carry, shown by the bars in the chart, especially when considering broader flies or curve trades. As shown, the greatest carry gains can be made by extending from 2015-16 maturities into 2017-18 maturities. The peak of the carry curve is the 1% Sep17s.

**Figure 24. 3mth Z-scores (spread vs fitted curve) vs 3mth total carry**




Source: Citi Research

## Our favourite trades for the near-term (with positive carry)

**The Sep19s looks cheap on the curve while the Sep23s looks rich**

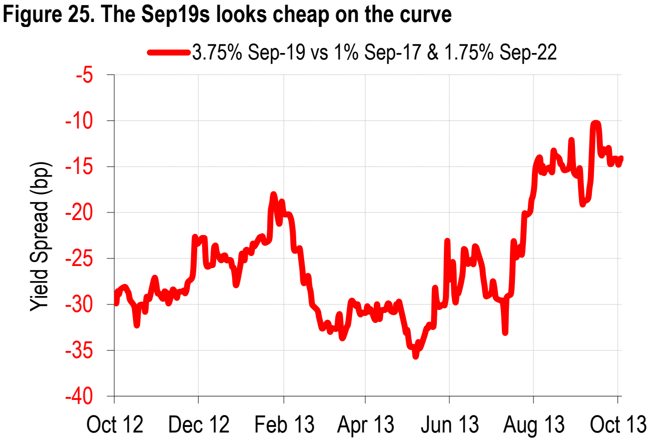
One bond that stands out as cheap from the Z-scores, relative to surrounding issues, is the 3.75% Sep19s. This is probably related to the approach of the new Jul19 which will be auctioned for the first time on 21 November and then re-opened on 12 December. However, the underperformance of the bond has probably gone far enough, in our view, and buying is likely to emerge soon.

- **Trade 3:** Buy UKT 3.75% Sep19 vs 1% Sep17 and 1.75% Sep22. Current level = -15bp, target = -26bp, stop = -9bp. Total carry (3mths) = +1.7bp.

One bond that stands out as rich is the 2.25% Sep23. In the fly detailed below, the Sep23 has outperformed recently vs both the short- and long-wing.

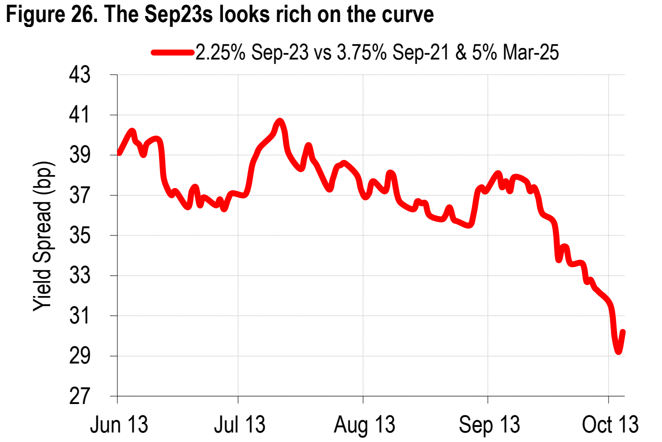
- **Trade 4:** Sell UKT 2.25% Sep23 vs 3.75% Sep21 and 5% Mar25. Current level = +30bp, target = +37bp, stop = +26p. Total carry (3mths) = +1.3bp.

**Figure 25. The Sep19s looks cheap on the curve**




Source: Citi Research, Bloomberg.

**Figure 26. The Sep23s looks rich on the curve**




Source: Citi Research, Bloomberg.

# Why we expect Bund swap spreads to widen

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**A number of risk measures indicate a large degree of market optimism. Swap spread wideners offer a relatively cheap way to position for a sudden turn in risk sentiment. We suggest Bund 2yr or 10yr ASW wideners and holding on to long 30yr Bund ASW positions.**

With policy rates on hold, and likely to remain so, swap spreads are likely to be largely driven by risk appetite (especially with regard to the EMU periphery), supply and excess liquidity.

We expect swap spreads to widen (moderately) across the curve over the next 6months. This is based on our view that Italy will hold new elections in the Spring, S&P will downgrade Italy by 1 notch in the next 9months, Germany will experience a €22bn decline in issuance in 2014 vs 2013 and the prospect of further standoffs in the US concerning the debt ceiling.

## Cheap protection for risk off

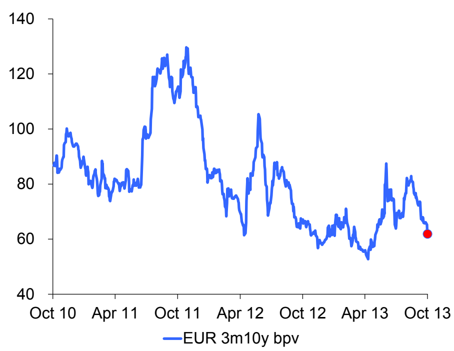
We acknowledge that the drivers identified above are much more of a 2014 story. However, we think current levels offer a good opportunity to scale into swap spread wideners. This is primarily due to three reasons:

- First, a number of risk measures indicate a large degree of market optimism: BTP-Bund and Bono-Bund spreads are historically tight and yields are at lows, 3m10y bpv is low and Citi's GRAMI[8] is at the lows. The market looks vulnerable to a sudden change in sentiment

**Figure 27. BTP/Bono yields: close to 3yr lows**

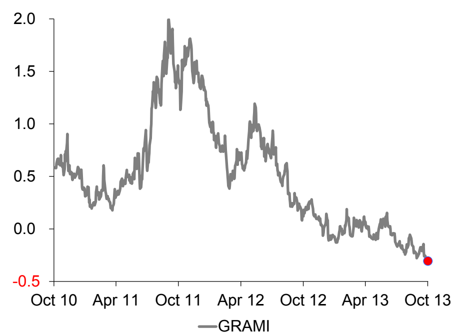

Source: Citi Research

**Figure 28. 3m10y bpv approaching 3yr lows**



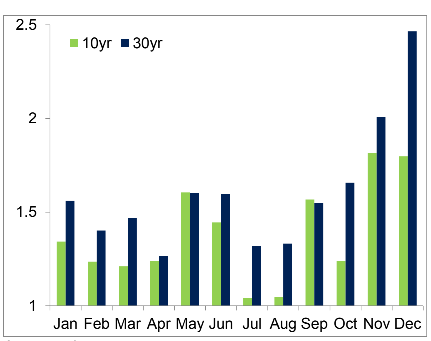

Source: Citi Research

**Figure 29. GRAMI at 3yr lows**




Source: Citi Research

**Figure 30. Average daily changes in 10yr and 30yr Bund spreads since 2008 (adjusted for benchmark rolls)**




Source: Citi Research

- Secondly, as we approach year-end liquidity is likely to fall as a number of market participants reduce the size of their balance sheet. In turn, this is likely to increase the scope for relatively larger moves. Thus, any risk-off episode is likely to be exaggerated. As shown in Figure 30, the average daily changes in 10yr and 30yr swap spreads since 2008 have been higher in November and December than other months.

- Thirdly, the favourable carry profile on swap spread wideners across the Bund curve makes them a relatively cheap way to benefit from a risk-off theme versus other comparable trades such as shorting peripheral markets and buying gamma.

[8]Global risk aversion macro index. Bloomberg ticker is CIGMRAM Index

## Supports for spread wideners across the curve

**We appreciate that some investors may be more sensitive to carry or even not able to express trades in all maturities. Therefore, in addition to the macro factors (identified earlier), we highlight further supports for swap spread wideners across the curve.**

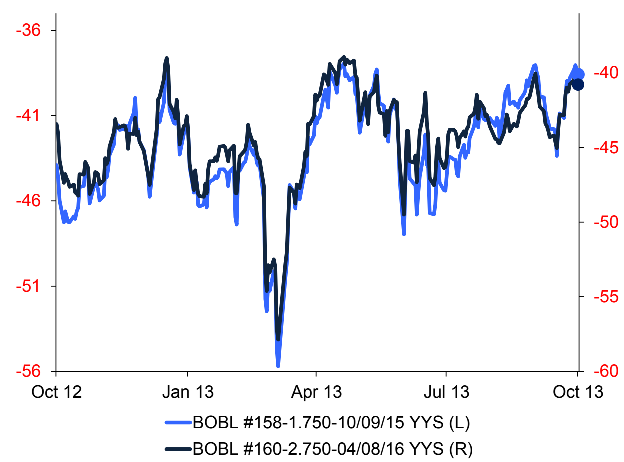
### 2yr sector: RV

- **RV:** swap spread wideners look optically attractive (e.g. Schatz vs Euribor is at the top end of the two year trading range). Zooming into the last year shows bonds such as Bobl-158 and Bobl-160 YYS are currently trading at levels from which they have previously turned.

**Figure 31. Front-end ASW levels are historically tight**


Source: Citi Research

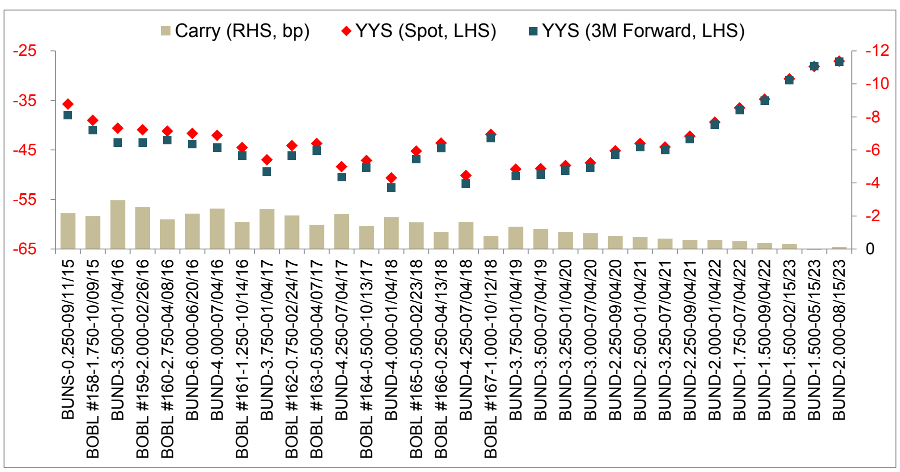
**Figure 32. 2yr ASW is currently at levels at which we have previously retraced from**




Source: Citi Research

- Although 2yr swap spread wideners incur small negative carry (less than 1bp every month) we expect the size of potential moves to easily outweigh this.

**Figure 33. Germany: current YYS, 3m YYS forward & total carry on swap spread wideners**




Source: Citi Research

**New Trade:**
**Buy Bobl-158 vs swaps (YYS)**
**Open -39bp. Target -48bp. Stop -35bp**

- **Trading strategy:** We believe that the RV profile for buying Schatz vs swaps provides an attractive way to positioning for a sudden change in sentiment (or even if you expect EUR excess liquidity to fall further). Our preferred bonds to express swap spread wideners are Bobl-158 and Bobl-160.

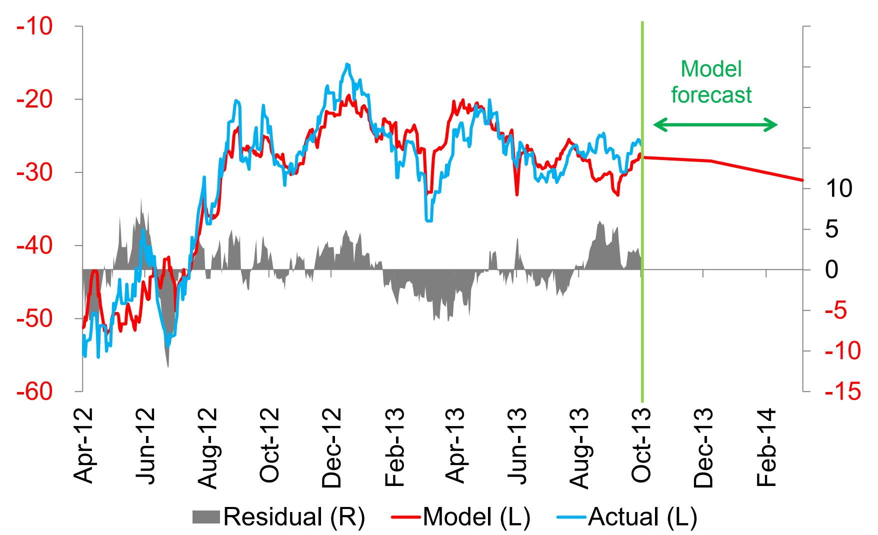
**Figure 34. 10yr EONIA Basis Spread (bp)**


Source: Citi Research

## 10yr: model estimate and projections

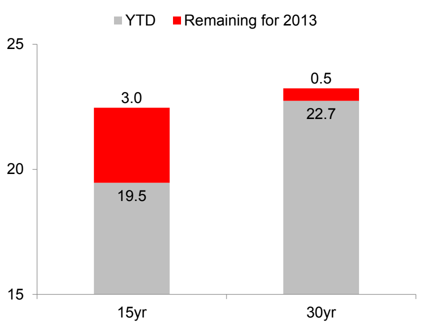
- We believe that there have been two main drivers of 10yr Bund spreads over the last 18months: peripheral yields (mainly in Italy due to the political situation) and EONIA basis spreads (a result of expectations of ECB policy rates and excess liquidity). Modeling 10yr Bund spreads using these two factors highlights a fairly strong relationship (adjusted R2 = 88%) - Figure 35.
- As shown in Figure 35 below, we think 10yr Bund spreads are around 2bps too tight to fair value. More importantly, based on our projections for these two factors we see scope for 10yr Bund spreads (2% Aug23) to widen by 6bps from current levels to end 1Q14.
- **Trading strategy – position for gradual widening:** Model estimates and our projections point to wider 10yr Bund spreads (to the tune of 6bps from current levels). The current level of 10yr Euribor-EONIA spreads points towards expressing Bund spread wideners vs Eonia rather than Euribor (Figure 34). Furthermore, the carry profile on 10yr ASW wideners is virtually flat over a 3month period (Figure 33).

**Figure 35. Model based estimate for 10yr Bund spreads and forecasts (using 10yr benchmarks)**




Source: Citi Research

**Figure 36. EMU Core issuance: 15yr & 30yr supply YTD and remaining for 2013**

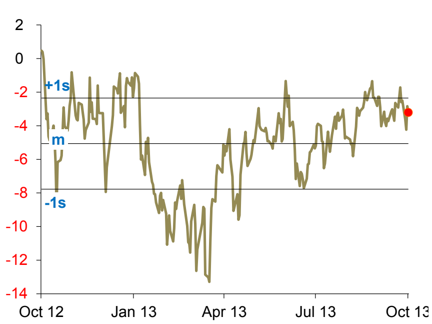



Source: Citi Research, DMOs

## 30yr: supply pressures are largely absent to year-end

- **Supply:** Following this week's 30yr Bund supply there will be no 30yr issuance from Germany until 2014. Furthermore, our supply estimates suggest that there is only €0.5bn of 30yr issuance in core markets remaining this year (from Finland next week). With this in mind, we do not expect supply pressure to put tightening pressure on 30yr Bund spreads.
- **Trading strategy – hold wideners to year-end:** Given the absence of supply pressures in the long-end of core markets we expect the main drivers of 30yr Bund ASW to be relative value and macro support.
- We continue to favour holding long 30yr Bund ASW positions (initiated on *19 September 2013*) to year-end. For those looking to enter 30yr ASW wideners we recommend scaling in between -1bp and -2bp.

**Figure 37. Bund 30yr ASW**




Source: Citi Research

# EGB Strategy – The ECB's AQR and markets

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**This week, the ECB announced details of its upcoming comprehensive assessment of the major euro area banks. This will begin in November 2013 and last for 12 months, concluding before the Single Supervisory Mechanism comes into force. We briefly outline the CA and then assess market implications for EMU government bonds and covered bonds. Many details have yet to be worked out and the press release this morning was broadly in line with what we expected the CA to include. The near-term market implications are therefore probably limited in our view, with longer term implications likely to be a function of central bank credibility.**

## The details

**The three parts of the comprehensive assessment**

**Comprehensive assessment:** As a step towards preparing for the Single Supervisory Mechanism (SSM), the ECB is to conduct its Comprehensive Assessment from November 2013. The assessment will last for 12 months and will be carried out in collaboration with national competent authorities. It will include roughly 130 credit institutions in the euro area. The assessment has three parts:

- Supervisory risk assessment covering areas such as liquidity, leverage and funding
- Asset quality review (AQR) involving asset adequacy, non-performing exposures and collateral valuation
- Stress test to examine banks' balance sheet resiliency in times of stress with forward looking views on shock absorption capacity

The purpose is threefold: to enhance information transparency, to identify and implement necessary corrective actions as required and to build confidence. The assessment is based on a capital adequacy framework of an 8% ratio based on risk weighted assets (derived from the AQR). This is composed of a 4.5% common equity tier 1 standard, plus 2.5% capital conversion buffer, plus 1% extra to take into account banks' systemic importance to the wider financial system. Further details of the CRD IV implementation can be found in our recent *Euro SSA and Covered Bond Monthly - The evolving regulatory landscape and the market outlook** and our economists' *Will the ECB's Comprehensive Assessment' of Banks be the Euro Area's TARP Moment?.*

### EMU market impact and the question of credibility

**Credibility will be central regarding the longer-term market impact for EMU government bonds**

We believe the near-term impact of this announcement is probably limited - core EMU markets have rallied slightly on the morning of the press release (10yr Bund yields 2bp lower) and European equities were down -0.5% depending on the index. The longer-term market implications regarding the ECB's role will of course largely depend on the outcome of the assessment itself, especially in terms its credibility. In relation to the bank-sovereign relationship, issues relating to periphery markets and spreads will largely depend on the extent of bank capital adequacy and crucially whether back-stops fall on government or private sector balance sheets.

**Full independence:** We believe the credibility of ECB policy in this regard is central to the EMU market outlook. In our view, there are details which we see as supportive for such credibility in today's press release. First, the ECB said it would conduct its comprehensive assessment in full independence and that the AQR will have a strong governance structure. Second, the ability for the ECB, following the conclusion of the assessment, to enforce corrective measures is also paramount. This is important because ECB credibility, regarding policies such as the OMT and the LTROs, has been instrumental in fostering market confidence and alleviating strains in periphery financial markets, in our view.

**Question of public and private backstops and direct recaps for banks**

**SSA impact and backstops:** We agree that there has been much progress by way of capital injections in the euro area and the removal of legacy assets from bank balance sheets. Spain serves to illustrate this point regarding the political commitment to involve bailout facilities to carry out Spain's own banking sector recap package. The important detail for markets will probably remain the extent to which backstops fall on public sector balance sheets vs private sector creditors (equity and bond holders) in the future. As our economists note, the debate about euro area resolution arrangements and the application of bail-in rules also remains far from settled (*Euro Area - ECB AQR: More Detail, but not on Public Backstop*). Markets will simply have to wait and see how the precise mechanics of this unfolds in the year ahead.

For the moment, principles have been laid out in EcoFin meetings earlier this year. Here, it was stated that the use of bailout facilities and the direct re-capitalisation tool are to be used as a last resort, after certain conditions are met and after the use of private sector and national government resources (*European Rates Weekly*). These principles were laid out in EcoFin meetings in July and re-iterated today in the ECB press release "*capital shortfalls identified for viable banks should, first and foremost, be made up with private sources of capital' and that 'if private sources of capital are insufficient or not readily available, public backstops might need to be drawn upon, in compliance with national practices and European rules, with the overriding goal of ensuring financial stability. As concluded by the European Council in June this year*"

**Next steps…**

**Going forward…what next?** In the immediate future, the process of portfolio selection will begin in November 2013. Regarding the stress test component, the ECB has indicated that "*The ECB and EBA have agreed to perform the next EU-wide stress testing exercise in close cooperation. They will agree on, and communicate, further details on the stress test, the methodology and the scenarios to be used and the correspondent capital thresholds in due course*". The ECB has also indicated that there will be an aggregated disclosure of outcomes together with any recommendations for supervisory measures. This outcome is said to be published prior to the ECB assuming its supervisory role in November 2014.

## Covered bond market impact – time will tell

**Asset quality review and stress test can affect covered bonds**

**Covered bond impact:** For covered bonds the impact will depend mostly on the outcome of the asset quality review as well as the configuration of the stress test. So far, what is known is that the asset quality review is broad and inclusive, comprising credit and market exposures as well as assets without a liquid market or close comparators (Level 3 assets). Moreover, the review will be risk-based and will concentrate on elements of banks' balance sheets that are perceived to be most risky or non-transparent. Cover assets are usually not seen as the most risky assets. However, valuations of cover assets can differ while transparency on and comparability of asset quality is generally limited. Hence, a harmonized review on that can only be welcomed.

**Adjusting risk weights has already been done in some European countries**

**The question on risk weights:** The ECB also mentions that the results of the asset quality review may lead to adjustments in the risk-weights, where justified. Adjusting risk weights as extraordinary risk measures is not something new. For covered bonds, risk weights on residential mortgages are an important factor. It is especially the Scandinavian markets (Sweden and Norway) where higher risk weights for residential mortgages have been introduced. The goal of such measures is to decrease lending volumes in the residential market (as it has been/is heating up). This however has the consequence that the need for secured refinancing is reduced and covered bond supply decreases. The ECB assessment doesn't provide enough

details to conclude which areas could be affected. The risk weights for covered bonds have been reconfirmed recently within the CRR. However, the CRR also notes that the EBA (perhaps in collaboration with the ECB in the future) has to review the preferential treatment of covered bonds on a periodic scale.

**A common definition of NPLs is welcomed**

**Covered bonds and asset quality:** The ECB also plans to examine all asset classes, including non-performing loans, restructured loans and sovereign exposures. The latter should be less of a problem for covered bondholders as the public sector covered bond market has a substantial market volume in Germany, Austria and France only. In covered bond programs issued from these countries the exposure to lower rated sovereigns decreased steadily or has been non-existent (in most cases). The problem of non-performing loans and restructured loans is twofold. On the one hand, the definition of NPLs is different on a country basis at current stages. This exacerbates the ability to compare NPL ratios of banks and cover pools. On the other hand, the treatment of non-performing loans differs between national covered bond laws. In many jurisdictions, loan that are in arrears for more than 60 or 90 days need to be removed or are not part of coverage tests. Some juridical frameworks do not foresee the removal or exclusion of such loans. The ECB mentions that the AQR will be conducted with harmonized definitions, for example the simplified definition in the recent proposal of the European Banking Authority (EBA) for non-performing exposures. This should help to compare this key ratio and increase transparency in cover pools again.

**Not enough clarity on the configuration of the stress test**

**Stress tests:** Moreover, the stress test will probably affect covered bonds indirectly. The results of the asset quality review should build the ground for a European-wide stress test of banks. However, so far, no details on the stress test have been published. The configuration  will not only be a result of the AQR but also of private (e.g. recapitalization) and public national backstops which should be put into place before the assessment is completed. Hence we think that the sharpness of such stress tests will be affected by the ability of European politics to put into place such backstops. However, the ECB doesn’t explicitly state which backstops it means by name and doesn’t mention supranational backstops. That said, the implication for covered bond issuers (and therefore indirectly for covered bonds) can be assessed only when more details on the stress test are published.

**Many covered bond issuers will soon be overseen by the ECB**

Moreover, the ECB published a list of banks subject to the assessment and the eventual transfer of them from the national supervisor to the ECB. The list is set together by several rules:

- The total value of their assets exceeds €30 billion.
- The ratio of total assets to GDP of the participating Member State of establishment exceeds 20 per cent, unless the total value of their assets is below EUR 5 billion.
- The institution is among the three largest credit institutions in a participating Member State.

Hence, the number of banks supervised by the ECB can differ (although a 10% margin has already been built in). At current stage, there would be a transfer of at least 50% of covered bond issuers from the respective countries. This is most pronounced In Ireland, Italy and Portugal, where all active benchmark covered bond issuers would be subject to ECB supervisory in the future.

## Conclusion – macro factors continue to dominate our yield outlook

In general, harmonization of banking standards and the commitment to conduct this comprehensive assessment is constructive step forward. However, many details have yet to be worked out, making it difficult to discern long-term implications for government bond markets. We agree that there has been much progress regarding improving the quality of EMU bank balance sheets, which has been supportive for various government bond markets. For spread products and covered bonds, enhanced transparency and the introduction of a level playing field for European banks is also a positive in our view, especially to the extent that it facilitates better clarity on asset quality and cover pools. The road ahead is certainly long given both the scope of this review and the 12 month timeframe for conducting it. For now however, the near-term impact of todays' announcement is probably limited. In our view, broader macro factors will continue to dominate the tone for core EMU markets and given the subdued growth and inflation outlook, we continue to look for 10yr Bunds to trade around the 1.8% level in the quarters ahead, as detailed in Citi's *Global Economic Outlook and Strategy*.

# Euro inflation: cover shorts in BTPei

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**We recently recommended a short position in BTPei23 break-even vs Bundei23. The trade has been helped by anticipation of Monday's BTPei23 auction. Looking at the various drivers of BTPei break-evens, and given the move that has already taken place, we think the potential for further BTPei underperformance is becoming limited. With this in mind, we recommend covering BTPei shorts in the auction next week.**

## Factors driving BTPei break-evens

We recently discussed the richness of BTPei break-evens vs Bundei (see *European Rates Weekly*, 11 October) and recommended fading the move in the 10yr sector. The trade has been helped by anticipation of Monday's BTPei23 auction. As shown in Figure 38, the BTPei23-Bundei23 break-even inflation box has widened by 10bps over the last two weeks.

**Risk-on sentiment should be supportive for BTPei break-evens**

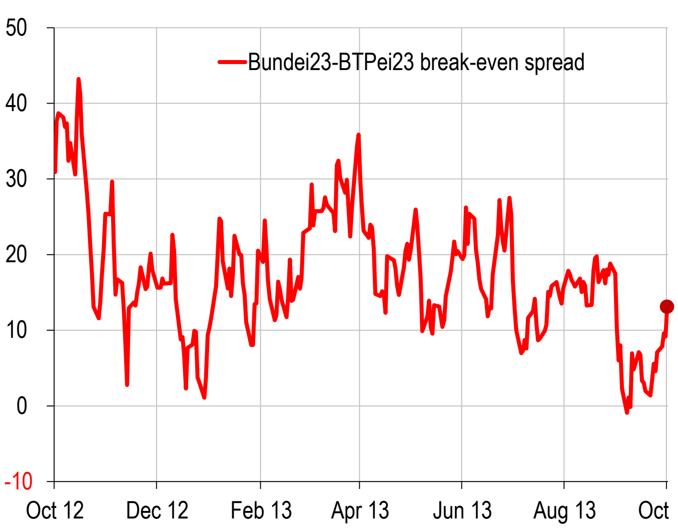
However, looking ahead, we identify two factors which are likely to offer support to BTPei break-evens. First, the political deadlock in the US has been resolved, at least for now. Furthermore, Citi, and the consensus, have pushed QE tapering expectations back to around March 2014 (see *Global Economic Outlook and Strategy*, 23 October). This has given a boost to risk assets globally. The resulting risk-on tone should be supportive for BTPei.

Second, there are various near-term supports for nominal BTP yields, including the risk-on mood and month-end index changes (page 34). There are also €5.5bn of BTP coupons and €17.8bn of redemptions settling next week. From a technical standpoint as well, the uptrend in BTPs remains strong. If recent correlations were to reassert themselves (see below), then a rally in BTP yields should be supportive for BTPei break-evens.

**Until the last couple of weeks, BTPei break-evens have tended to widen with a rally in nominal yields**

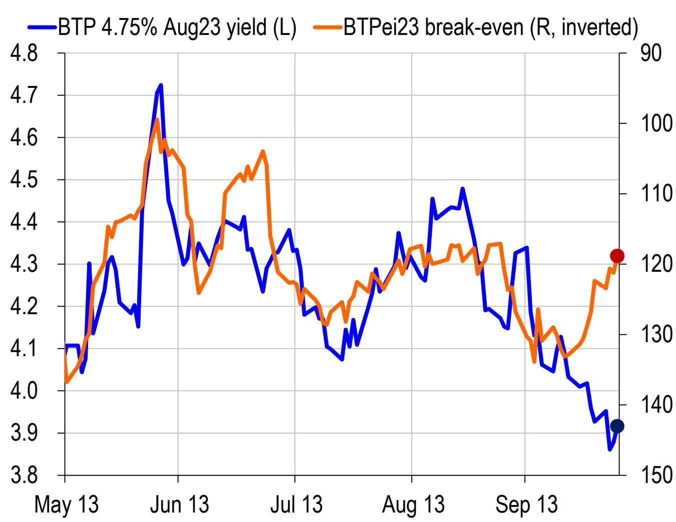
At first, this sounds somewhat counter-intuitive. Normally, break-evens are expected to narrow in a nominal rally, and vice versa, reflecting the relative stability of real yields vs nominal yields. However, as we have discussed previously (see *European Rates Weekly*, 3 October), BTPei have not followed this dynamic over recent months. Instead, BTPei break-evens have tended to widen with a rally in nominal yields (see Figure 39, note that the break-even axis is inverted).

**Figure 38. Bundei23-BTPei23 break-even inflation box**




Source: Citi Research, Bloomberg

**Figure 39. BTPei23 break-evens vs nominal yield**

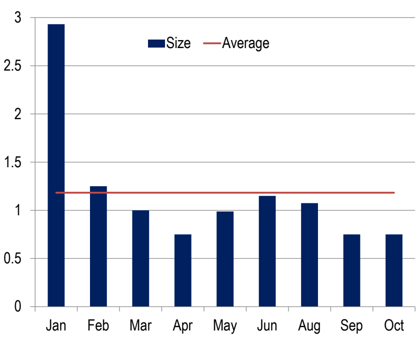



Source: Citi Research, Bloomberg

**Supply pressure may be temporarily weighing on BTPei**

Figure 39 also shows that there has been a breakdown in this relationship over the last two weeks. It is possible that this might be the beginnings of a 'normalisation' of the break-even vs nominal yield relationship. However, it is equally plausible that the recent failure of BTPei break-evens to widen is related to supply pressure, both in the form of Monday's regular BTPei auction and the upcoming BTP Italia issuance. We would put more weight on the latter, and consequently believe that there is potential for BTPei break-evens to recover following Monday's auction.

**Figure 40. BTPei auction sizes YTD**




Source: Citi Research, Tesoro

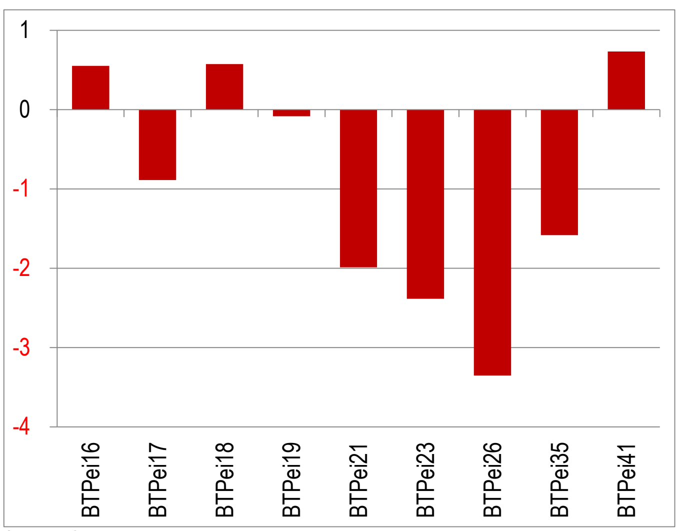
## Reduced supply pressure

BTPei break-evens may also be given a boost in the coming weeks from reduced supply pressure into year-end. Once this auction is out of the way, there will be only one more BTPei supply in 2013. Moreover, auction sizes have been falling since the summer (Figure 40). This may be related to the upcoming issuance of a new BTP Italia. It is noteworthy that previous issues of BTP Italia have met with very strong demand (the issuance in April saw an uptake of €17bn). While there might be switches out of BTPei into the new BTP Italia, this is most likely to be prevalent in the short-end and the 10yr sector is likely to remain relatively unaffected.

## Cover BTPei shorts in the auction

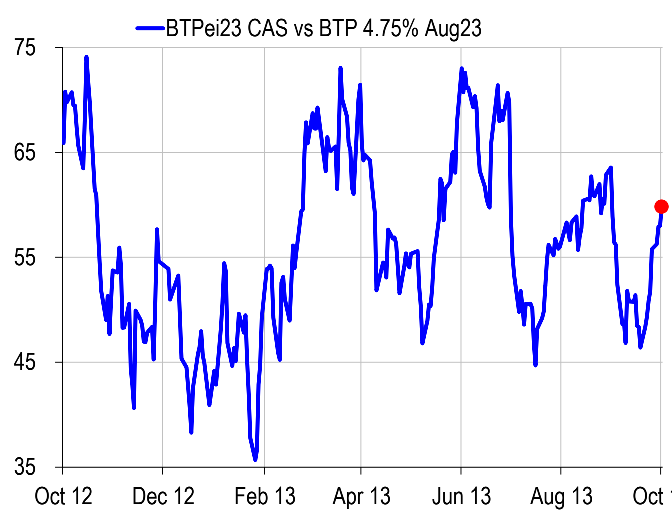
The Tesoro announced late yesterday that they will re-open BTPei23 for €0.5-0.75bn on Monday. This has resulted in some cheapening of the 10yr sector on the curve (Figure 41). BTPei23 has also cheapened vs the reference conventional on a coupon-adjusted spread (CAS) basis over the last few days (Figure 42).

**Figure 41. BTPei break-evens: 1-day change**




Source: Citi Research, Bloomberg

**Figure 42. BTPei23 CAS vs the reference conventional**




Source: Citi Research

For all the reasons discussed above – the risk-on tone, a likely rally in BTP nominal yields and reduced supply pressure into year-end – we see potential for 10yr BTPei break-evens to recover lost ground following Monday's auction.

With this in mind, and given the superior carry on offer, we prefer BTPei over BTPs to express near-term longs in belly of the Italian curve. We also recommend covering the short in BTPei23 break-evens (vs Bundei23) at Monday's auction.

**Trade update: Cover short BTPei23 vs Bundei23 in next week's auction.**

**Open 3bps. Target 18bps. Current 12bps**

# SSA Strategy – RV and current themes

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## Market outlook in brief

**Spreads remain firm:** Over October so far, there has been around €15bn in euro denominated supra supply and €10bn in euro denominated agency supply. As has been the case on many occasions in the SSA market, pick-ups in supply need not inhibit spread performance, and the lack of significant disturbance in secondary spreads is testament to a strong technical backdrop. We see little reason in the current environment for demand for AAA paper, which can often with interesting spreads to core EMU government bonds, to remain anything but firm. Spreads are therefore likely to remain low in Q4, especially given the waning supply pipeline, with the distinct prospect of ASW levels nudging tighter still in our view.

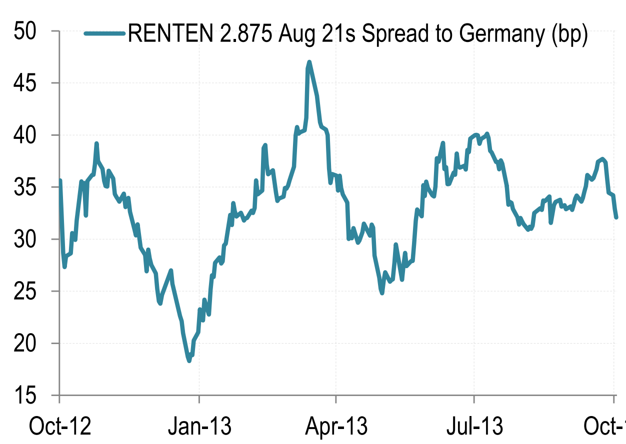
Below we detail some current market trends and where we see pockets of relative value as well as themes in the sterling market, where infrastructure guarantees may prompt new supply later in 2014.

### (1) Core agencies remain locked in a range to governments

**Many agency spreads to governments remain about their mid-ranges**

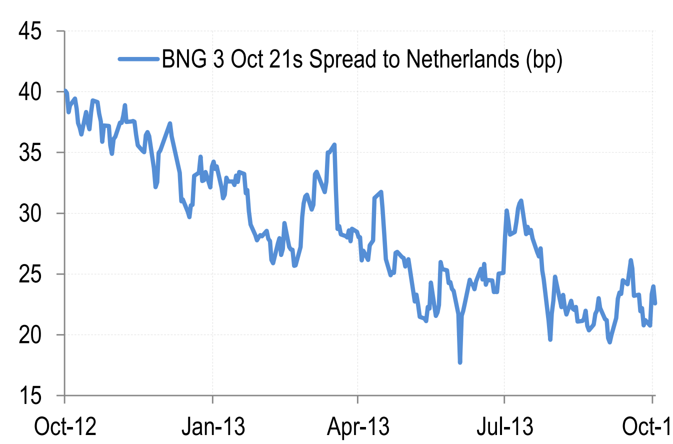
We have repeatedly advocated trading the range between core agencies and their reference government bonds. One classic range trade has been between German agencies, such as RENTEN, and Bunds. RENTEN is rated AAA/Aaa in with Germany and trades tight to peers. In general, the belly of the spread curve to Germany currently offers around 30bp-40bp depending on the agency bond. However, as can be seen from the history in Figure 43, this is about mid-range in terms of its 1yr trading history, suggesting the need to hunt for value elsewhere. Another example is in the Dutch agencies (Figure 44). Having enjoyed a decent rally in late 2012, they too have been in a rather tight range to DSLs, currently offering a pick-up of around 10bp-30bp depending on the agency and sector.

**Figure 43. German Agencies to Germany (bp)**




Source: Citi Research

**Figure 44. Dutch Agencies to the Netherlands (bp)**




Source: Citi Research

### (2) Supras vs France – some cheapening in EU

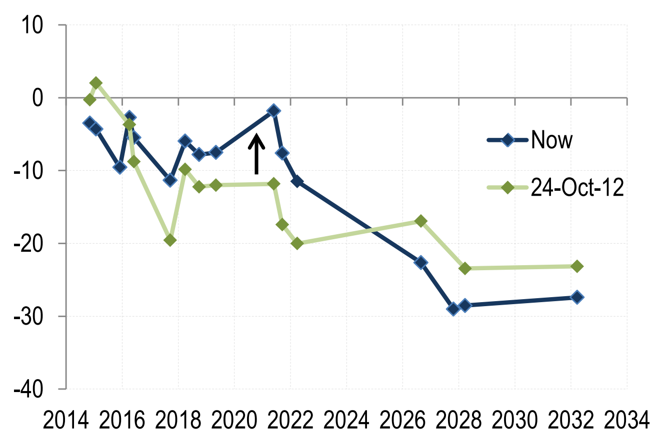
**Supranational spreads to governments have cheapened in some cases**

Another lens through which to view the SSA market is the spread curve between supranationals and EMU sovereigns such as France. Although it might not be obvious from recent trading patterns, viewed over a longer period, the EU has shown a degree of cheapening relative to the OAT curve. This has been driven in part by the scarcity of EU bonds (no issuance at all this year) and the strong performance of France (seen recently with 10yr OAT-Bunds spreads breaching the 50bp level).

**EU vs France relative value**

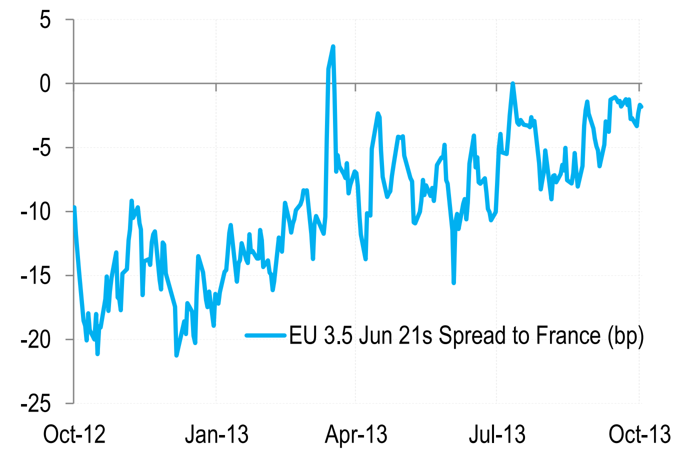
This trend is more pronounced in the belly of the curve (Figure 45). Over the last year, EU has traded as much as 20bp inside France, whereas in some cases, this spread is now approaching zero. Given that the EU simply has much less debt other supranationals (at around €55bn in total debt outstanding) and maintains its AAA/Aaa rating, we would recommend moving into EU vs OATs when liquidity and entry points permit.

**Figure 45. EU spread curves to France (now and 1yr ago, bp)**




Source: Citi Research

**Figure 46. History of 8yr EU to France – spreads approaching zero (bp)**

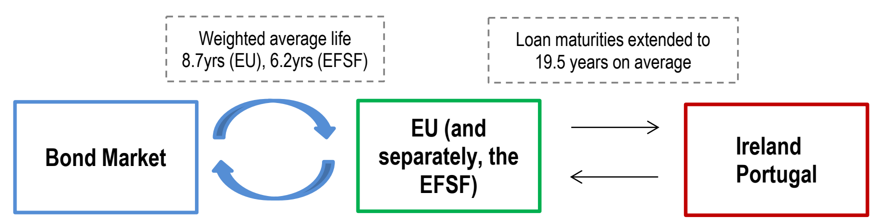



Source: Citi Research

**EU to remain an active issuer, rolling over EFSM debt until all assistance loans have been repaid**

Once such time would be in the primary market – and it is here where opportunities are probably best sought. Looking ahead, the EU has indicated an issuance programme of €2.6bn in Q1 and €2.1bn in Q2 for next year to complete its EFSM assistance packages to Ireland (€27.7bn disbursed) and Portugal (€22.1bn disbursed). Note that loans made under the Troika programmes, to Ireland and Portugal, have had their maturities extended from around 12.5yrs to 19.5yrs. The bond market effect of this is essentially to keep the EU as an active issuer given the need roll its debt until all loans are repaid (Figure 47)

**Figure 47. EU (and EFSF) bonds will continue to be rolled in the bond market until all assistance loans to sovereigns have been repaid.**




Source: Citi Research

## (3) £ SSA supply and the UK infrastructure guarantee scheme

**Prospect of new £ SSA supply next year**

Away from the euro market, the UK government this week announced its agreement with energy companies regarding a £16bn contract for the Hinkley Point C power station, which it said would be operational from 2023. Earlier in the year, the government announced £10bn in UK guarantees for the project. This is part of the total £40bn financial guarantees which are available for certain infrastructure programmes in the UK (Infrastructure Act). Many details are still pending, but the market relevance is clearly the prospect of new £ SSA supply later next year. Under the scheme, an SPV will issue debt backed in full by the UK government and hence benefit from the UK rating.

# Covered Bond Strategy

## S&P to limit covered – sovereign differential

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**S&P has asked market participants for their opinion on a new proposal to limit the maximum differential between sovereign and covered bond ratings. We present their request for comment and the consequences for covered bond ratings.**

Currently, it seems to be en vogue at rating agencies to request for comments on changes to the respective covered bond rating methodologies. While Moody's response deadline was last week already, S&P asked for opinions on a stronger link between sovereign rating and structured finance ratings in general until November 14th 2013. As reported in one of our earlier publications (European Rates Weekly - Moving towards an LTRO) Moody's changes to their methodology tries to consider the European regulators' attempt to introduce a resolution regime which gives point to a "soft" decoupling of the covered bond rating from senior unsecured rating. The bottom line would be several upgrades in the covered bond space.

**Should the differential between covered and sovereign rating be lower?**

S&P worries less about the implications of the resolution regime – at least not now – and more about the question of how many notches ratings of single jurisdiction structured finance transactions can be higher than the foreign currency rating on the sovereign. S&P comes to the conclusion that amendments are necessary, as there is historical evidence that sovereign defaults are accompanied by a deterioration in the asset performance which underlies the securitizations. Hence S&P will define a rating differential depending on the sensitivity of the asset type and the country risk. For covered bonds, further factors will be refinancing risk resulting from asset-liability mismatches and the question of whether the issuing bank is located in the European Monetary Union (EMU) or not.

**In general the potential uplift has decreased…**

In general, the potential uplift for covered bonds over the sovereign rating has decreased. The amount of the decrease is mainly determined by the country risk sensitivity of covered bonds. For mortgage backed covered bonds, the sensitivity to country risk is seen as "moderate". Hence, a four notch uplift is in general possible. For public sector backed covered bonds, the sensitivity to country risk is seen as "high". This implies that generally a two notch uplift is possible. In both cases, this is a decrease of two notches of potential uplift.

**…but will be better the lower refinancing risk is**

In order to determine the appropriate maximum differential between the rating of a specific covered bond program and the sovereign bond rating, S&P assumes the inability for the issuer to access financial markets over twelve months due to a sovereign default. Hence, the uplift over a sovereign can be determined by the capability of the issuer to survive the one-year period of lacking market access. The probability is lower for securities where refinancing is necessary in order to meet bullet payments and there are no risk mitigating factors in place to bridge the distressed time. Consequently, the more risk mitigating features are used, the higher is the potential uplift for such covered bonds. S&P acknowledges that such mitigating factors can be the issuer's possibility of using a soft bullet option or other liquidity facilities. If covered bonds were not exposed to asset liability mismatch at all, the maximum rating differential as described above could be reached. If, however, issuers cannot rely on such features, S&P would assume a maximum rating differential of no more than two notches.

**Differentiation between EMU and non-EMU covered bond programs**

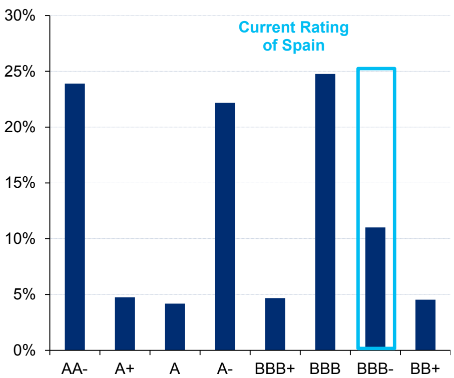
Apart from these new measures, S&P also introduces a differentiation between covered bonds issued from entities within the EMU and entities outside of the EMU. For covered bonds from outside the monetary union, S&P grants covered bonds a one-notch uplift above the issuer credit rating if the issuer is higher than or equally rated as the sovereign but the covered bond rating would still be subject to a cap of two notches above the sovereign rating. If the issuing entity is rated below the

sovereign, covered bonds will be rated at the lower of the sovereign's rating and the maximum rating elevation assigned based on the application of the asset liability mismatch criteria.

**Systemic support is assumed to be higher in the monetary union**

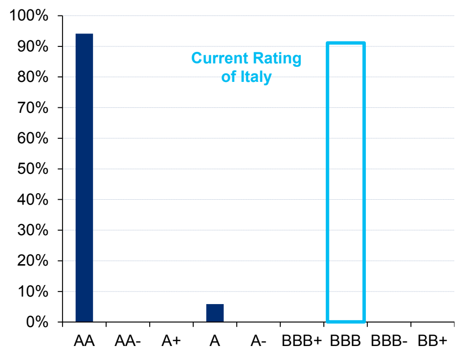
Covered bonds from entities in the EMU would be assigned a rating equal to the lower of a two-notch rating uplift above the sovereign and the maximum rating elevation assigned by the asset liability mismatch criteria. Hence, the covered bond rating will be determined regardless of the bank's rating. The reason for the differentiation is that S&P assumes strong support for covered bonds as it is a systemically important funding tool for European banks. Hence, risks of liquidity mismatches might not become viable within the EMU as support (in this case by the ECB) is assumed to be higher for covered bond issuing entities than in non-EMU countries for covered bonds.

**Figure 48. S&P ratings of Spanish covered bonds (volume weighted)**



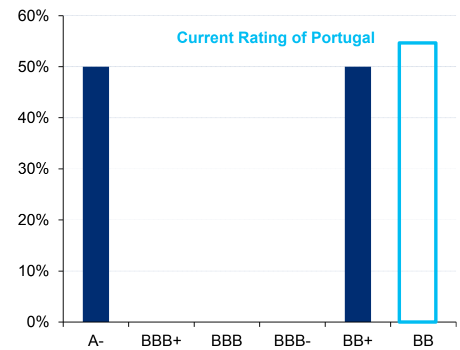

Source: Bloomberg, Citi Research

**Figure 49. S&P ratings of Italian covered bonds (volume weighted)**




Source: Bloomberg, Citi Research

**Figure 50. . S&P ratings of Portugues covered bonds (volume weighted)**




Source: Bloomberg, Citi Research

**Several downgrades to be expected …**

The consequence of the changes to the rating methodology at S&P would be several downgrades of covered bonds from Spanish, Italian and Portuguese issuers. For Italy, S&P expects nearly 95% of covered bonds to be downgraded by two notches. Given that only Unicredit and Mediobanca are rated this suggests that Unicredit OBG would be downgraded by two notches to A+. Note that Italian banks usually issue soft bullet covered bonds. In Portugal, where soft bullet structures are also the norm, results are equally straightforward, where Banco BPI mortgage covered bonds should be downgraded by one notch from A- to BBB+. In Spain, highly rated covered bonds should on average be more affected as the Spanish market doesn't foresee soft bullet structures (apart from most multi-cédulas) or liquidity facilities. According to S&P, the majority of single and multi cédulas will face a downgrade by two notches on average.

**…especially in Spanish single-cédulas**

The table below shows that on a single-name basis, there are at least four covered bond programs which are expected to be downgraded by four notches. But at current stage there would also be five programs where the ratings are within the two notch differential and hence not be affected. With respect to Multi-cédulas, predictability becomes more difficult. Usually, in case of multi-cédulas, soft-bullet options are part of the transaction structure. The extension period can differ but is mostly two to three years, in a special case three years longer than the last maturing bond of the program (AYT Global covered bond program – legal final maturity is 2030). Hence, we cannot clearly say how S&P builds in this extension period and if a higher differential between covered and sovereign ratings will be the result, but we expect this to happen. However, one can say for sure that there are several multi-cédulas with a current uplift of more than four notches. Hence, such

bonds should be downgraded even if one assumes that asset liability mismatch is zero (the numbers of notches is seen in the column "Expected downgrade by … notches").

**Figure 51. Expected changes to covered bond ratings in the Spanish market**

| Issuer | Current rating | Sovereign Rating | Current uplift | Built-in option for extension? | Expected downgrade by … notches |
|---|---|---|---|---|---|
| BBVA (CH) | BBB | BBB- | 1 | No | - |
| BBVA (CT) | A- | BBB- | 3 | No | 1 |
| Banco Popular Espanol | BBB+ | BBB- | 2 | No | - |
| Bankia | BBB | BBB- | 1 | No | - |
| Bankinter | A | BBB- | 4 | No | 2 |
| Barclays | AA- | BBB- | 6 | No | 4 |
| Caixabank | AA- | BBB- | 6 | No | 4 |
| Catalunya Bank | BBB | BBB- | 1 | No | - |
| Deutsche Bank | AA- | BBB- | 6 | No | 4 |
| Ibercaja Banco | A | BBB- | 4 | No | 2 |
| Kutxbank | AA- | BBB- | 6 | No | 4 |
| NCG Banco | BBB+ | BBB- | 2 | No | - |
| **Issuer** | **Current rating** | **Sovereign Rating** | **Current uplift** | **Built-in option for extension?** | **Downgrade by at least … notches** |
| AYTCED 4.75 04/12/2018 | A+ | BBB- | 5 | Yes, 3y | 1 |
| AYTCED 4.5 04/12/2013 | AA- | BBB- | 6 | Yes, 8y | 2 |
| AYTCED 4 07/04/2014 | A+ | BBB- | 5 | Yes, 3y | 1 |
| AYTCED 4 07/04/2014 | A+ | BBB- | 5 | Yes, 3y | 1 |
| AYTCED 4 18/11/2014 | A+ | BBB- | 5 | Yes, 8y | 1 |
| AYTCED 4.25 18/11/2019 | A- | BBB- | 3 | Yes, 3y | - |
| AYTCED 4 20/12/2016 | A- | BBB- | 3 | Yes, 16y | - |
| AYTCED 4.25 29/07/2014 | A+ | BBB- | 5 | Yes, 16y | 1 |
| AYTCED 4.5 02/12/2019 | A | BBB- | 4 | Yes, 11y | - |
| AYTCED 3.75 25/05/2015 | AA- | BBB- | 6 | Yes, 15y | 2 |
| CEDTDA 4.5 26/11/2013 | A | BBB- | 4 | Yes, 3y | - |
| CEDTDA 4.375 03/03/2016 | A- | BBB- | 3 | Yes, 3y | - |
| CEDTDA 4 23/10/2018 | A- | BBB- | 3 | Yes, 3y | - |
| PITCH 5.125 20/07/2022 | A- | BBB- | 3 | Yes, 3y | - |

Source: S&P, Citi Research

## Conclusion

**Downgrade pressure persists**

With the new request for comment, S&P links covered bond ratings stronger than before to the credit quality of the sovereign. As it has been the case at Moody's, peripheral covered bonds are affected most. Currently, the uplift for peripheral covered bonds under the S&P approach is higher compared to Moody's. That said, several downgrades should be expected if S&P adopts the current proposal into its covered bond rating methodology. However, we do not expect to see covered bonds being downgraded below the Sovereign and – in the case of Spain – slide into sub-investment grade.

# Technical update

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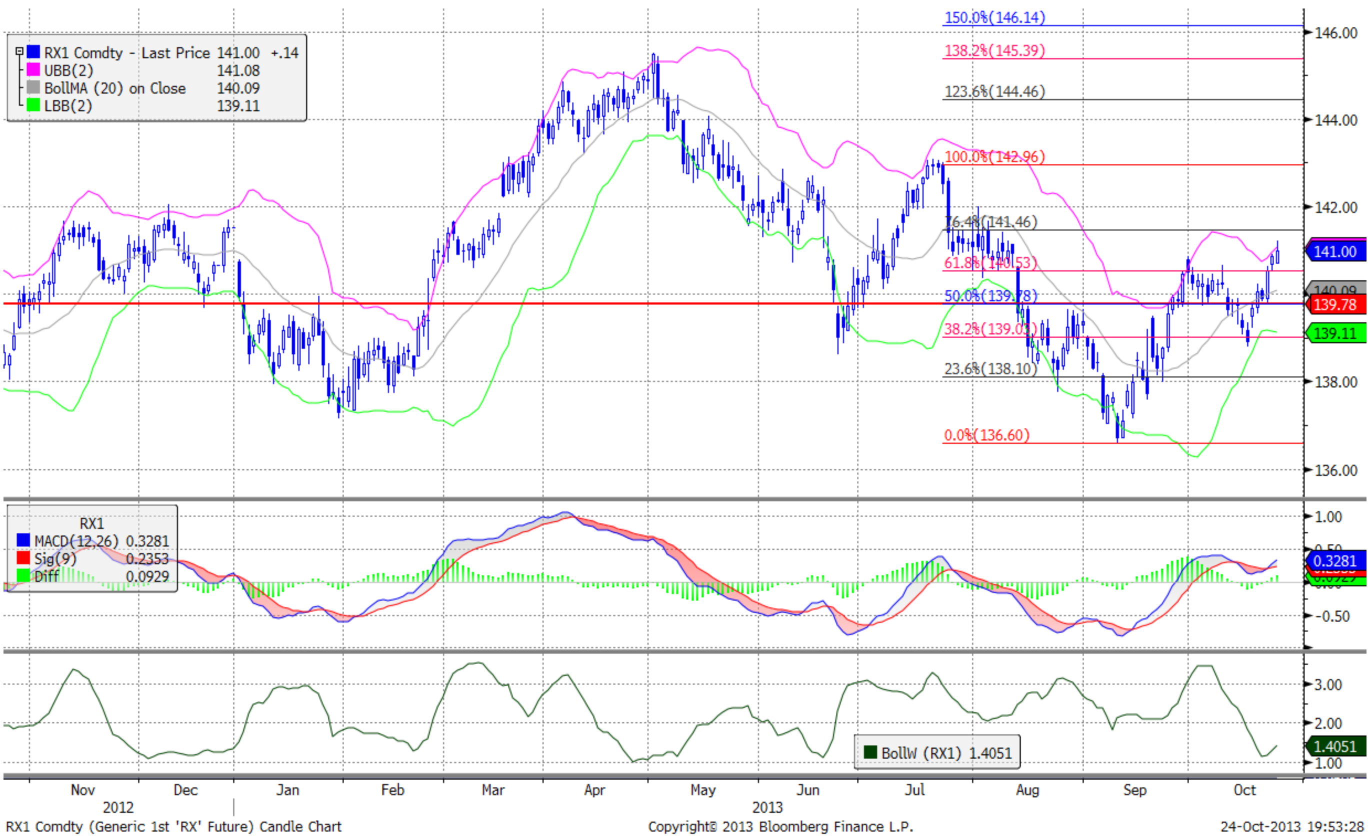
## Bunds at the top of the downward channel

Figure 52 shows a daily candlestick chart of continuous 10yr Bund futures. A white candle indicates that the closing level is above the opening level, and a blue candle indicates that the closing level is below the opening level. Wicks (or shadows) on both ends indicate the intraday range.

Following the rally over the last three days, Bunds have now reached the top of their downward channel. Various technical metrics remain bullish and suggest that there might be a breakout. This channel was formed in May on a weekly chart and a break would be quite significant from a technical perspective. However, if Bunds fail to break this channel in the weekly close, it would be quite bearish as Bunds will continue in the downward channel.

**Figure 52. 10yr continuous Bund futures with Fibonacci levels, MACD (12,26) and 20 day Bollinger Bands**



Source: Bloomberg

**Resistance:** The first resistance is around 141.5, which is the 76.4% retracement level of the July-August sell-off and has acted as a resistance in the past. If this level is broken, the next resistance will be in the 143 region from where the sell-off started in July (on a roll-adjusted basis).

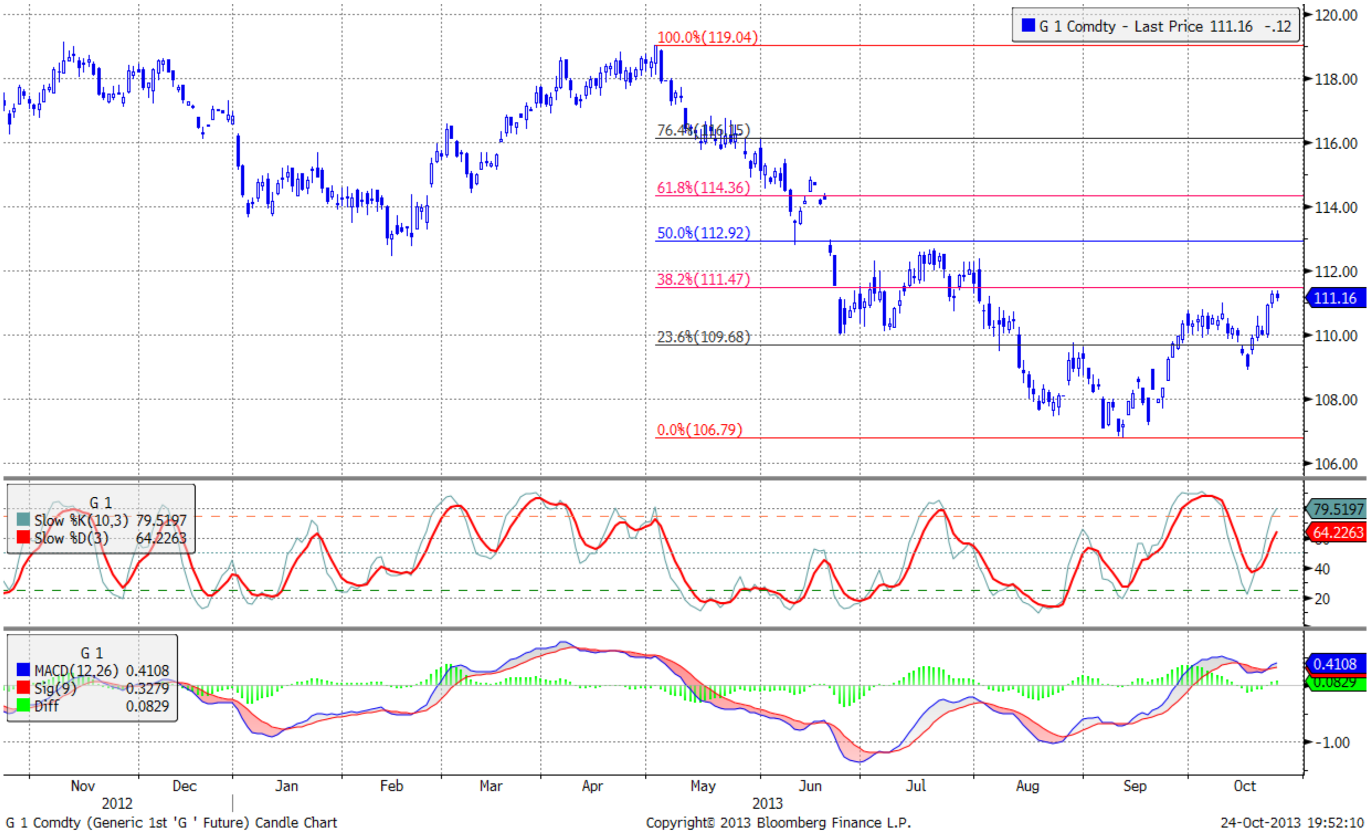
**Support:** The first major support is 139.8, which is also the 50% retracement of the July–September sell-off. The next support is in the 138.1 region, which is the 23.6% retracement level and has acted as a support in the past.

The key level to watch out for a break out of the channel on a weekly closing basis is 140.91 for this week and 140.75 for the next week.

## Gilts – watch out for a break of 111.5

Following the rally over the last week, gilts have now reached the resistance at 111.5. Technical indicators like MACD and stochastic oscillator remain firmly bullish but we would wait for a break of 111.5 to enter into long positions in the near-term (Figure 53).

**Figure 53. 10yr continuous gilt futures with Fibonacci levels, slow stochastic and MACD (12,26)**




Source: Bloomberg

**Resistance:** The first resistance level is the 38.2% retracement of the May-August sell-off at 111.5. If this level is broken, the next major resistance is seen in the 112.7-112.9 region, which is also the 50% retracement level.

**Support:** We see the first support around 109.68, which is the 23.6% retracement level and has acted as a support in the past. The next support is in the 107.9 area, which is the lowest closing level on a weekly basis, and has acted as a strong support in the past.

# End-October EGBI Projection

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**This is a summary of EGBI projections published earlier this week. Click *here* for the full note.**

We project the EGBI to extend by 0.06 at the end of October. This change is around the median for the last 5 years and in line with the past October changes. At the EGBI level, the changes should be supportive for the 10yr and 30yr sectors and put flattening pressure on 2s10s.

## Projected changes supportive for the ‘big 4’ EGB markets

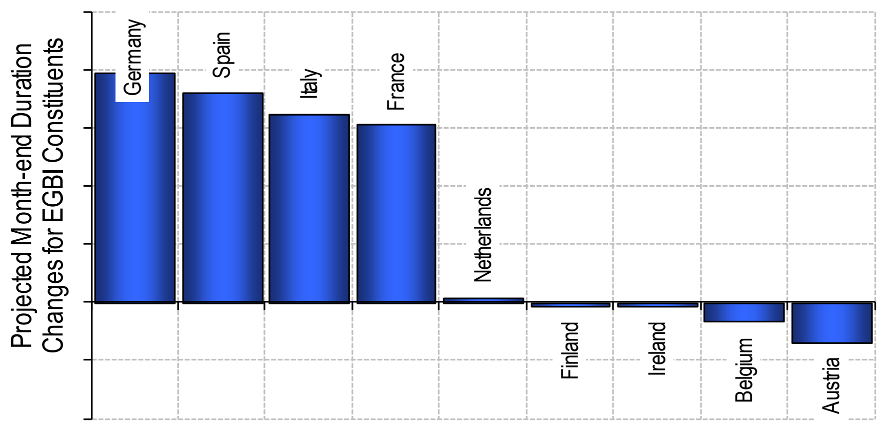
**Projected changes supportive for Germany, France, Spain and Italy**

- Within the EGBI, we expect Germany, France, Spain and Italy to extend the most at the end of October (Figure 54). The Austrian and Belgian indices are likely to undergo a mild contraction on a weighted duration basis.

**Significant extension in Austrian index in unweighted terms**

- At a country level, we expect the Austrian index to extend by its largest amount in 9 months (a 5yr z-score of 2.5). This might result in domestic portfolios being left short duration at the end of the month and prompt curve extension trades. Month-end could, therefore, put flattening pressure on the Austrian yield curve.

**Figure 54. End-October weighted duration change at a country level**




Source: Citi Research

## Support on individual curves

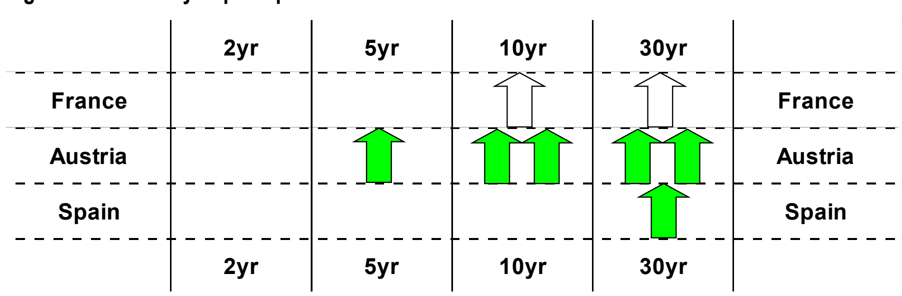
**- Support for long-end Austria and Spain**

**- Flattening pressure on 10s30s Spain**

**- Flattening pressure on 2s10s Austria**

- Figure 55 shows pressures on individual country curves from the projected index changes (price terms). From the curve split, we expect index changes to be supportive for the 10-30yr sector of Austria and 30yr Spain. The changes should also put flattening pressure on 10s30s Spain and 2s10s Austria.

**Figure 55. Summary of price pressures on individual domestic curves**




Source: Citi Research

# Relative Value Trades

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**We highlight a number of relative value opportunities in the 5-10yr sector of the French, Austrian and Gilt yield curves.**

## France: fade the richness of Oct16s

*Sell Oct16s vs surrounding issues*

- Sell 5% Oct16 vs 2.25% Feb16 and 4.25% Oct17 (3m carry: 0.8bp) - Figure 56
- Sell 5% Oct16 vs 3% Oct15 and 3.75% Apr17 (3m carry: 2bp) - Figure 57

Figure 56. France: 2.25% Feb16, 5% Oct16, 4.25% Oct17 microfly (bp)


Source: Citi Research

Figure 57. France: 3% Oct15, 5% Oct16, 3.75% Apr17 microfly (bp)


Source: Citi Research

## Austria: 6s9s, 7s9s flatteners

*Switch into Apr22s*

- Switch from 1.95% Jun19 to 3.65% Apr22 for 67bp (3m carry: -0.8bp) - Figure 58

*Switch into Nov22s*

- Switch from 3.9% Jul20 to 3.4% Nov22 for 49bp (3m carry: -0.9bp) - Figure 59

## UK: take advantage of cheapness of Sep19s

*Buy Sep19s vs surrounding issues*

- Buy 3.75% Sep19 vs 1% Sep17 and 1.75% Sep22 (3m carry: +2bp) - Figure 60

Figure 58. Austria: 3.65% Apr22 – 1.95% Jun19 yield spread (bp)


Source: Citi Research

Figure 59. Austria: 3.4% Nov22 – 3.9% Jul20 yield spread (bp)


Source: Citi Research

Figure 60. UK: 1% Sep17, 3.75% Sep19, 1.75% Sep22 microfly (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 61 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 61. Yield Spread and CAS to Fitted Relative Value Curve (6m History)**

GERMANY

**Versus Govt Curve (CAS)**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | **0.50 Feb18** | **-2.16** | Jan13 | 17 |
| | 2 | **4.25 Jul18 (OE)** | **-2.08** | May08 | 21 |
| | 3 | **1.50 Feb23** | **-2.05** | Jan13 | 18 |
| | 4 | **1.75 Jul22 (RX)** | **-1.94** | Apr12 | 24 |
| | 5 | **1.50 Sep22** | **-1.91** | Sep12 | 18 |
| | 5 | **4.75 Jul40** | **0.84** | Jul08 | 16 |
| | 4 | **3.25 Jan20** | 1.00 | Nov09 | 22 |
| | 3 | **3.00 Jul20** | **1.60** | Apr10 | 22 |
| | 2 | **2.50 Jan21** | **2.23** | Nov10 | 19 |
| Cheapest | 1 | **2.25 Sep20** | **2.87** | Aug10 | 16 |

**Versus Swap Curve (CAS)**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | **1.50 Sep22** | -0.58 | Sep12 | 18 |
| | 2 | **1.75 Jul22 (RX)** | -0.57 | Apr12 | 24 |
| | 3 | **1.50 Feb23** | -0.39 | Jan13 | 18 |
| | 4 | **4.25 Jul18 (OE)** | -0.37 | May08 | 21 |
| | 5 | **2.00 Jan22** | -0.28 | Nov11 | 20 |
| | 5 | **1.00 Oct18 (5y)** | 1.40 | Sep13 | 9 |
| | 4 | **4.75 Jul34** | 1.48 | Jan03 | 20 |
| | 3 | **4.25 Jul39 (UB)** | **1.68** | Jan07 | 14 |
| | 2 | **4.75 Jul40** | **1.69** | Jul08 | 16 |
| Cheapest | 1 | **4.00 Jan37** | **1.78** | Jan05 | 23 |

Source: Citi Research

Figure 62 (overleaf) looks at bonds of all maturities. For investors with maturity restrictions we have also provided another set of summary tables (Figure 63 and Figure 64) which looks at bonds shorter than 12 years and longer than 8 years, and uses the same criteria as Figure 62 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 62. Coupon Adjusted Spread to Fitted Curve and Swap Curve by Country (6m History); All bonds on each curve**

## GERMANY

| Versus Govt Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) | Versus Swap Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 0.50 Feb18 | -2.16 | Jan13 | 17 | Richest | 1 | 1.50 Sep22 | -0.58 | Sep12 | 18 |
| | 2 | 4.25 Jul18 (OE) | -2.08 | May08 | 21 | | 2 | 1.75 Jul22 (RX) | -0.57 | Apr12 | 24 |
| | 3 | 1.50 Feb23 | -2.05 | Jan13 | 18 | | 3 | 1.50 Feb23 | -0.39 | Jan13 | 18 |
| | 4 | 1.75 Jul22 (RX) | -1.94 | Apr12 | 24 | | 4 | 4.25 Jul18 (OE) | -0.37 | May08 | 21 |
| | 5 | 1.50 Sep22 | -1.91 | Sep12 | 18 | | 5 | 2.00 Jan22 | -0.28 | Nov11 | 20 |
| | 5 | 4.75 Jul40 | 0.84 | Jul08 | 16 | | 5 | 1.00 Oct18 (5y) | 1.40 | Sep13 | 9 |
| | 4 | 3.25 Jan20 | 1.00 | Nov09 | 22 | | 4 | 4.75 Jul34 | 1.48 | Jan03 | 20 |
| | 3 | 3.00 Jul20 | 1.60 | Apr10 | 22 | | 3 | 4.25 Jul39 (UB) | 1.68 | Jan07 | 14 |
| | 2 | 2.50 Jan21 | 2.23 | Nov10 | 19 | | 2 | 4.75 Jul40 | 1.69 | Jul08 | 16 |
| Cheapest | 1 | 2.25 Sep20 | 2.87 | Aug10 | 16 | Cheapest | 1 | 4.00 Jan37 | 1.78 | Jan05 | 23 |

## FRANCE

| Versus Govt Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) | Versus Swap Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 1.75 Feb17 | -2.69 | Feb11 | 20 | Richest | 1 | 4.00 Oct38 | -1.61 | Oct05 | 24 |
| | 2 | 3.75 Apr17 | -2.56 | Apr06 | 35 | | 2 | 4.75 Apr35 | -1.61 | Apr03 | 21 |
| | 3 | 4.25 Oct17 | -2.38 | Oct06 | 28 | | 3 | 2.25 Oct22 | -1.58 | Oct11 | 24 |
| | 4 | 5.00 Oct16 | -2.20 | Oct00 | 29 | | 4 | 5.00 Oct16 | -1.51 | Oct00 | 29 |
| | 5 | 1.00 Jul17 | -1.95 | Jul11 | 18 | | 5 | 4.50 Apr41 | -1.51 | Apr09 | 24 |
| | 5 | 1.00 Nov18 (5y) | 1.23 | Nov12 | 17 | | 5 | 3.75 Oct19 | -0.50 | Oct08 | 32 |
| | 4 | 4.25 Apr19 | 1.24 | Apr03 | 31 | | 4 | 2.25 Feb16 | -0.28 | Feb10 | 29 |
| | 3 | 0.25 Nov15 (2y) | 1.77 | Nov12 | 21 | | 3 | 1.00 Nov18 (5y) | -0.26 | Nov12 | 17 |
| | 2 | 3.00 Oct15 | 1.92 | Oct04 | 33 | | 2 | 0.25 Nov15 (2y) | 0.15 | Nov12 | 21 |
| Cheapest | 1 | 3.75 Oct19 | 2.45 | Oct08 | 32 | Cheapest | 1 | 3.00 Oct15 | 0.45 | Oct04 | 33 |

## ITALY

| Versus Govt Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) | Versus Swap Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 4.75 Sep16 | -1.39 | Sep11 | 16 | Richest | 1 | 2.75 Dec15 | -2.19 | Dec12 | 16 |
| | 2 | 4.75 Jun17 | -1.27 | Jun12 | 15 | | 2 | 3.00 Nov15 (2y) | -2.14 | Nov10 | 17 |
| | 3 | 4.50 May23 (10y) | -0.93 | Mar13 | 18 | | 3 | 3.75 Apr16 (BTS) | -2.11 | Apr11 | 16 |
| | 4 | 4.75 May17 | -0.83 | Feb12 | 14 | | 4 | 4.75 Sep16 | -2.06 | Sep11 | 16 |
| | 5 | 4.75 Sep44 (30y) | -0.74 | Mar13 | 7 | | 5 | 2.25 May16 | -2.05 | Apr13 | 15 |
| | 5 | 3.75 Aug21 | 2.21 | Feb06 | 28 | | 5 | 3.75 Aug21 | -1.32 | Feb06 | 28 |
| | 4 | 5.00 Mar22 | 2.34 | Sep11 | 18 | | 4 | 4.00 Feb37 | -1.30 | Aug05 | 25 |
| | 3 | 4.50 Feb20 | 2.61 | Feb04 | 23 | | 3 | 4.50 Mar24 | -1.27 | Aug13 | 11 |
| | 2 | 4.75 Sep21 | 2.65 | Mar11 | 25 | | 2 | 2.75 Nov16 | -1.24 | Sep13 | 9 |
| Cheapest | 1 | 4.25 Mar20 | 2.86 | Sep09 | 24 | Cheapest | 1 | 3.75 May21 | 0.41 | Oct13 | 5 |

## N'LANDS

| Versus Govt Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) | Versus Swap Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 2.50 Jan17 | -1.16 | Jun11 | 16 | Richest | 1 | 2.50 Jan17 | -0.51 | Jun11 | 16 |
| | 2 | 2.50 Jan33 | -1.05 | Mar12 | 10 | | 2 | 3.75 Jan42 (30y) | -0.46 | May10 | 14 |
| | 3 | 3.75 Jan23 | -0.76 | Jan06 | 11 | | 3 | 1.25 Jan18 | -0.41 | Jul12 | 15 |
| | 4 | 1.25 Jan18 | -0.71 | Jul12 | 15 | | 4 | 4.00 Jan37 | -0.35 | Apr05 | 13 |
| | 5 | 4.00 Jul19 | -0.42 | Feb09 | 14 | | 5 | 0.00 Apr16 | -0.30 | Jan13 | 13 |
| | 5 | 4.50 Jul17 | 0.33 | Jul07 | 15 | | 5 | 3.75 Jan23 | 0.15 | Jan06 | 11 |
| | 4 | 3.25 Jul21 | 0.38 | Mar11 | 16 | | 4 | 3.50 Jul20 | 0.16 | Feb10 | 15 |
| | 3 | 2.25 Jul22 | 0.39 | Feb12 | 15 | | 3 | 3.25 Jul21 | 0.23 | Mar11 | 16 |
| | 2 | 4.00 Jul18 | 0.44 | Feb08 | 15 | | 2 | 1.75 Jul23 (10y) | 0.24 | Mar13 | 14 |
| Cheapest | 1 | 3.75 Jan42 (30y) | 0.59 | May10 | 14 | Cheapest | 1 | 2.25 Jul22 | 0.44 | Feb12 | 15 |

## SPAIN

| Versus Govt Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) | Versus Swap Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 4.70 Jul41 (30y) | -5.92 | Sep09 | 12 | Richest | 1 | 3.75 Oct15 (2y) | -2.07 | Sep12 | 15 |
| | 2 | 4.90 Jul40 | -2.53 | Jun07 | 13 | | 2 | 3.15 Jan16 | -2.04 | Sep05 | 21 |
| | 3 | 5.15 Oct44 | -2.20 | Oct13 | 4 | | 3 | 3.25 Apr16 | -2.01 | Nov10 | 21 |
| | 4 | 3.80 Jan17 | -1.67 | Oct06 | 21 | | 4 | 3.80 Jan17 | -1.95 | Oct06 | 21 |
| | 5 | 4.80 Jan24 | -1.49 | Sep08 | 15 | | 5 | 3.30 Jul16 | -1.90 | Apr13 | 16 |
| | 5 | 5.15 Oct28 | 0.65 | Jul13 | 5 | | 5 | 4.90 Jul40 | -1.08 | Jun07 | 13 |
| | 4 | 4.20 Jan37 | 0.90 | Jan05 | 16 | | 4 | 4.70 Jul41 (30y) | -1.07 | Sep09 | 12 |
| | 3 | 3.15 Jan16 | 1.12 | Sep05 | 21 | | 3 | 4.20 Jan37 | -1.04 | Jan05 | 16 |
| | 2 | 3.30 Jul16 | 1.13 | Apr13 | 16 | | 2 | 5.15 Oct28 | -0.67 | Jul13 | 5 |
| Cheapest | 1 | 5.50 Apr21 | 1.59 | Jan11 | 24 | Cheapest | 1 | 5.15 Oct44 | 0.20 | Oct13 | 4 |

## BELGIUM

| Versus Govt Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) | Versus Swap Curve (CAS) | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 4.25 Mar41 | -2.63 | Apr10 | 12 | Richest | 1 | 3.75 Jun45 (30y) | -1.22 | Sep13 | 4 |
| | 2 | 1.25 Jun18 (5y) | -1.60 | Feb13 | 12 | | 2 | 1.25 Jun18 (5y) | -0.54 | Feb13 | 12 |
| | 3 | 4.00 Mar17 | -1.04 | Jan07 | 11 | | 3 | 4.25 Mar41 | -0.44 | Apr10 | 12 |
| | 4 | 4.00 Mar32 | -0.99 | Mar12 | 8 | | 4 | 5.50 Sep17 | -0.41 | Jun02 | 8 |
| | 5 | 4.25 Sep22 | -0.74 | Jan12 | 15 | | 5 | 4.00 Mar17 | -0.39 | Jan07 | 11 |
| | 5 | 3.50 Jun17 | 0.51 | Mar11 | 13 | | 5 | 4.25 Sep21 | -0.25 | Jan11 | 15 |
| | 4 | 4.00 Mar22 | 0.59 | May06 | 14 | | 4 | 4.00 Mar22 | -0.24 | May06 | 14 |
| | 3 | 2.75 Mar16 | 0.73 | Mar10 | 10 | | 3 | 3.25 Sep16 | -0.16 | Jan06 | 13 |
| | 2 | 5.00 Mar35 | 1.01 | May04 | 18 | | 2 | 3.00 Sep19 | -0.14 | Apr12 | 9 |
| Cheapest | 1 | 3.00 Sep19 | 1.67 | Apr12 | 9 | Cheapest | 1 | 2.75 Mar16 | -0.03 | Mar10 | 10 |

Source: Citi Research

# EMU relative value table – max 12yr maturity

**Figure 63. 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)

**GERMANY**

| | Rank | Bond | ZScore | Issued | Size (€bn) | | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 0.50 Feb18 | -2.16 | Jan13 | 17 | Richest | 1 | 1.50 Sep22 | -0.58 | Sep12 | 18 |
| | 2 | 4.25 Jul18 (OE) | -2.08 | May08 | 21 | | 2 | 1.75 Jul22 (RX) | -0.57 | Apr12 | 24 |
| | 3 | 1.50 Feb23 | -2.05 | Jan13 | 18 | | 3 | 1.50 Feb23 | -0.39 | Jan13 | 18 |
| | 4 | 1.75 Jul22 (RX) | -1.94 | Apr12 | 24 | | 4 | 4.25 Jul18 (OE) | -0.37 | May08 | 21 |
| | 5 | 1.50 Sep22 | -1.91 | Sep12 | 18 | | 5 | 2.00 Jan22 | -0.28 | Nov11 | 20 |
| | 5 | 1.50 May23 | 0.23 | May13 | 18 | | 5 | 0.25 Apr18 | 0.60 | Apr13 | 17 |
| | 4 | 3.25 Jan20 | 1.00 | Nov09 | 22 | | 4 | 0.50 Apr17 | 0.60 | Apr12 | 18 |
| | 3 | 3.00 Jul20 | 1.60 | Apr10 | 22 | | 3 | 2.00 Aug23 (10y) | 0.68 | Sep13 | 10 |
| | 2 | 2.50 Jan21 | 2.23 | Nov10 | 19 | | 2 | 2.75 Apr16 | 0.77 | Apr11 | 18 |
| Cheapest | 1 | 2.25 Sep20 | 2.87 | Aug10 | 16 | Cheapest | 1 | 1.00 Oct18 (5y) | 1.40 | Sep13 | 9 |

**FRANCE**

| | Rank | Bond | ZScore | Issued | Size (€bn) | | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 1.75 Feb17 | -2.69 | Feb11 | 20 | Richest | 1 | 2.25 Oct22 | -1.58 | Oct11 | 24 |
| | 2 | 3.75 Apr17 | -2.56 | Apr06 | 35 | | 2 | 5.00 Oct16 | -1.51 | Oct00 | 29 |
| | 3 | 4.25 Oct17 | -2.38 | Oct06 | 28 | | 3 | 3.00 Apr22 | -1.46 | Feb12 | 33 |
| | 4 | 5.00 Oct16 | -2.20 | Oct00 | 29 | | 4 | 3.25 Oct21 | -1.41 | Oct10 | 35 |
| | 5 | 1.00 Jul17 | -1.95 | Jul11 | 18 | | 5 | 3.75 Apr21 | -1.37 | Apr05 | 34 |
| | 5 | 1.00 Nov18 (5y) | 1.23 | Nov12 | 17 | | 5 | 3.75 Oct19 | -0.50 | Oct08 | 32 |
| | 4 | 4.25 Apr19 | 1.24 | Apr03 | 31 | | 4 | 2.25 Feb16 | -0.28 | Feb10 | 29 |
| | 3 | 0.25 Nov15 (2y) | 1.77 | Nov12 | 21 | | 3 | 1.00 Nov18 (5y) | -0.26 | Nov12 | 17 |
| | 2 | 3.00 Oct15 | 1.92 | Oct04 | 33 | | 2 | 0.25 Nov15 (2y) | 0.15 | Nov12 | 21 |
| Cheapest | 1 | 3.75 Oct19 | 2.45 | Oct08 | 32 | Cheapest | 1 | 3.00 Oct15 | 0.45 | Oct04 | 33 |

**ITALY**

| | Rank | Bond | ZScore | Issued | Size (€bn) | | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 4.75 Sep16 | -1.39 | Sep11 | 16 | Richest | 1 | 2.75 Dec15 | -2.19 | Dec12 | 16 |
| | 2 | 4.75 Jun17 | -1.27 | Jun12 | 15 | | 2 | 3.00 Nov15 (2y) | -2.14 | Nov10 | 17 |
| | 3 | 4.50 May23 (10y) | -0.93 | Mar13 | 18 | | 3 | 3.75 Apr16 (BTS) | -2.11 | Apr11 | 16 |
| | 4 | 4.75 May17 | -0.83 | Feb12 | 14 | | 4 | 4.75 Sep16 | -2.06 | Sep11 | 16 |
| | 5 | 5.25 Aug17 | -0.52 | Feb02 | 24 | | 5 | 2.25 May16 | -2.05 | Apr13 | 15 |
| | 5 | 3.75 Aug21 | 2.21 | Feb06 | 28 | | 5 | 3.50 Dec18 (5y) | -1.34 | Sep13 | 7 |
| | 4 | 5.00 Mar22 | 2.34 | Sep11 | 18 | | 4 | 3.75 Aug21 | -1.32 | Feb06 | 28 |
| | 3 | 4.50 Feb20 | 2.61 | Feb04 | 23 | | 3 | 4.50 Mar24 | -1.27 | Aug13 | 11 |
| | 2 | 4.75 Sep21 | 2.65 | Mar11 | 25 | | 2 | 2.75 Nov16 | -1.24 | Sep13 | 9 |
| Cheapest | 1 | 4.25 Mar20 | 2.86 | Sep09 | 24 | Cheapest | 1 | 3.75 May21 | 0.41 | Oct13 | 5 |

**N'LANDS**

| | Rank | Bond | ZScore | Issued | Size (€bn) | | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 2.50 Jan17 | -1.16 | Jun11 | 16 | Richest | 1 | 2.50 Jan17 | -0.51 | Jun11 | 16 |
| | 2 | 3.75 Jan23 | -0.76 | Jan06 | 11 | | 2 | 1.25 Jan18 | -0.41 | Jul12 | 15 |
| | 3 | 1.25 Jan18 | -0.71 | Jul12 | 15 | | 3 | 0.00 Apr16 | -0.30 | Jan13 | 13 |
| | 4 | 4.00 Jul19 | -0.42 | Feb09 | 14 | | 4 | 1.25 Jan19 (5y) | -0.25 | Jun13 | 8 |
| | 5 | 1.75 Jul23 (10y) | -0.23 | Mar13 | 14 | | 5 | 4.00 Jul16 | -0.21 | Jul06 | 13 |
| | 5 | 0.00 Apr16 | 0.28 | Jan13 | 13 | | 5 | 3.75 Jan23 | 0.15 | Jan06 | 11 |
| | 4 | 4.50 Jul17 | 0.33 | Jul07 | 15 | | 4 | 3.50 Jul20 | 0.16 | Feb10 | 15 |
| | 3 | 3.25 Jul21 | 0.38 | Mar11 | 16 | | 3 | 3.25 Jul21 | 0.23 | Mar11 | 16 |
| | 2 | 2.25 Jul22 | 0.39 | Feb12 | 15 | | 2 | 1.75 Jul23 (10y) | 0.24 | Mar13 | 14 |
| Cheapest | 1 | 4.00 Jul18 | 0.44 | Feb08 | 15 | Cheapest | 1 | 2.25 Jul22 | 0.44 | Feb12 | 15 |

**SPAIN**

| | Rank | Bond | ZScore | Issued | Size (€bn) | | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 3.80 Jan17 | -1.67 | Oct06 | 21 | Richest | 1 | 3.75 Oct15 (2y) | -2.07 | Sep12 | 15 |
| | 2 | 4.80 Jan24 | -1.49 | Sep08 | 15 | | 2 | 3.15 Jan16 | -2.04 | Sep05 | 21 |
| | 3 | 4.25 Oct16 | -0.88 | Sep11 | 21 | | 3 | 3.25 Apr16 | -2.01 | Nov10 | 21 |
| | 4 | 4.30 Oct19 | -0.85 | Jun09 | 19 | | 4 | 3.80 Jan17 | -1.95 | Oct06 | 21 |
| | 5 | 5.40 Jan23 | -0.62 | Jan13 | 17 | | 5 | 3.30 Jul16 | -1.90 | Apr13 | 16 |
| | 5 | 4.60 Jul19 | 0.32 | Feb09 | 18 | | 5 | 5.40 Jan23 | -1.47 | Jan13 | 17 |
| | 4 | 3.25 Apr16 | 0.51 | Nov10 | 21 | | 4 | 4.80 Jan24 | -1.42 | Sep08 | 15 |
| | 3 | 3.15 Jan16 | 1.13 | Sep05 | 21 | | 3 | 3.75 Oct18 (5y) | -1.42 | Jul13 | 13 |
| | 2 | 3.30 Jul16 | 1.14 | Apr13 | 16 | | 2 | 4.40 Oct23 (10y) | -1.30 | May13 | 15 |
| Cheapest | 1 | 5.50 Apr21 | 1.60 | Jan11 | 24 | Cheapest | 1 | 4.65 Jul25 | -1.25 | Feb10 | 14 |

**BELGIUM**

| | Rank | Bond | ZScore | Issued | Size (€bn) | | Rank | Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 1.25 Jun18 (5y) | -1.51 | Feb13 | 12 | Richest | 1 | 1.25 Jun18 (5y) | -0.53 | Feb13 | 12 |
| | 2 | 4.00 Mar17 | -0.96 | Jan07 | 11 | | 2 | 5.50 Sep17 | -0.41 | Jun02 | 8 |
| | 3 | 4.25 Sep22 | -0.49 | Jan12 | 15 | | 3 | 4.00 Mar17 | -0.38 | Jan07 | 11 |
| | 4 | 3.75 Sep20 | -0.48 | Jan10 | 18 | | 4 | 2.25 Jun23 (10y) | -0.36 | Jan13 | 12 |
| | 5 | 2.25 Jun23 (10y) | -0.45 | Jan13 | 12 | | 5 | 4.00 Mar18 | -0.34 | Jan08 | 11 |
| | 5 | 4.00 Mar18 | 0.39 | Jan08 | 11 | | 5 | 4.25 Sep21 | -0.24 | Jan11 | 15 |
| | 4 | 3.50 Jun17 | 0.57 | Mar11 | 13 | | 4 | 4.00 Mar22 | -0.23 | May06 | 14 |
| | 3 | 2.75 Mar16 | 0.73 | Mar10 | 10 | | 3 | 3.25 Sep16 | -0.15 | Jan06 | 13 |
| | 2 | 4.00 Mar22 | 0.74 | May06 | 14 | | 2 | 3.00 Sep19 | -0.13 | Apr12 | 9 |
| Cheapest | 1 | 3.00 Sep19 | 1.81 | Apr12 | 9 | Cheapest | 1 | 2.75 Mar16 | -0.03 | Mar10 | 10 |

Source: Citi Research

# EMU relative value table – min 8yr maturity

**Figure 64. 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)

**GERMANY**

| | Rank | Govt: Bond | ZScore | Issued | Size (€bn) | | Rank | Swap: Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 1.50 Feb23 | -2.05 | Jan13 | 18 | Richest | 1 | 1.50 Sep22 | -0.58 | Sep12 | 18 |
| | 2 | 1.75 Jul22 (RX) | -1.94 | Apr12 | 24 | | 2 | 1.75 Jul22 (RX) | -0.57 | Apr12 | 24 |
| | 3 | 1.50 Sep22 | -1.91 | Sep12 | 18 | | 3 | 1.50 Feb23 | -0.39 | Jan13 | 18 |
| | 4 | 2.00 Aug23 (10y) | -1.25 | Sep13 | 10 | | 4 | 2.00 Jan22 | -0.28 | Nov11 | 20 |
| | 5 | 2.00 Jan22 | -0.70 | Nov11 | 20 | | 5 | 1.50 May23 | 0.24 | May13 | 18 |
| | 5 | 3.25 Jul42 | 0.15 | Jul10 | 15 | | 5 | 3.25 Jul42 | 1.27 | Jul10 | 15 |
| | 4 | 4.00 Jan37 | 0.23 | Jan05 | 23 | | 4 | 4.75 Jul34 | 1.48 | Jan03 | 20 |
| | 3 | 1.50 May23 | 0.23 | May13 | 18 | | 3 | 4.25 Jul39 (UB) | 1.68 | Jan07 | 14 |
| | 2 | 4.25 Jul39 (UB) | 0.41 | Jan07 | 14 | | 2 | 4.75 Jul40 | 1.69 | Jul08 | 16 |
| Cheapest | 1 | 4.75 Jul40 | 0.84 | Jul08 | 16 | Cheapest | 1 | 4.00 Jan37 | 1.78 | Jan05 | 23 |

**FRANCE**

| | Rank | Govt: Bond | ZScore | Issued | Size (€bn) | | Rank | Swap: Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 2.25 Oct22 | -1.94 | Oct11 | 24 | Richest | 1 | 4.00 Oct38 | -1.61 | Oct05 | 24 |
| | 2 | 4.75 Apr35 | -1.67 | Apr03 | 21 | | 2 | 4.75 Apr35 | -1.61 | Apr03 | 21 |
| | 3 | 3.00 Apr22 | -1.24 | Feb12 | 33 | | 3 | 2.25 Oct22 | -1.58 | Oct11 | 24 |
| | 4 | 4.00 Oct38 | -1.18 | Oct05 | 24 | | 4 | 4.50 Apr41 | -1.51 | Apr09 | 24 |
| | 5 | 4.00 Apr55 | -0.91 | Apr04 | 15 | | 5 | 3.00 Apr22 | -1.46 | Feb12 | 33 |
| | 5 | 4.25 Oct23 (OAT) | 0.05 | Oct06 | 33 | | 5 | 5.75 Oct32 | -1.22 | Oct00 | 25 |
| | 4 | 2.75 Oct27 | 0.12 | Oct11 | 16 | | 4 | 4.25 Oct23 (OAT) | -1.15 | Oct06 | 33 |
| | 3 | 1.75 May23 (10y) | 0.35 | May12 | 26 | | 3 | 2.75 Oct27 | -1.09 | Oct11 | 16 |
| | 2 | 3.50 Apr26 | 0.54 | Apr10 | 30 | | 2 | 1.75 May23 (10y) | -1.07 | May12 | 26 |
| Cheapest | 1 | 3.25 May45 (30y) | 1.13 | May12 | 7 | Cheapest | 1 | 3.50 Apr26 | -0.94 | Apr10 | 30 |

**ITALY**

| | Rank | Govt: Bond | ZScore | Issued | Size (€bn) | | Rank | Swap: Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 4.50 May23 (10y) | -0.93 | Mar13 | 18 | Richest | 1 | 5.50 Sep22 | -1.76 | Mar12 | 20 |
| | 2 | 4.75 Sep44 (30y) | -0.74 | Mar13 | 7 | | 2 | 5.50 Nov22 (IK) | -1.74 | May12 | 21 |
| | 3 | 4.75 Sep28 | -0.73 | Jan13 | 14 | | 3 | 5.00 Aug34 | -1.70 | Aug03 | 21 |
| | 4 | 4.75 Aug23 | -0.34 | Feb08 | 25 | | 4 | 4.50 May23 (10y) | -1.70 | Mar13 | 18 |
| | 5 | 5.50 Nov22 (IK) | -0.32 | May12 | 21 | | 5 | 5.00 Mar22 | -1.68 | Sep11 | 18 |
| | 5 | 4.50 Mar24 | 0.72 | Aug13 | 11 | | 5 | 5.00 Sep40 | -1.55 | Sep09 | 21 |
| | 4 | 5.00 Aug39 | 0.76 | Aug07 | 19 | | 4 | 4.75 Sep44 (30y) | -1.54 | Mar13 | 7 |
| | 3 | 5.00 Mar25 | 1.12 | Mar09 | 22 | | 3 | 5.00 Aug39 | -1.49 | Aug07 | 19 |
| | 2 | 4.50 Mar26 | 1.17 | Sep10 | 21 | | 2 | 4.00 Feb37 | -1.30 | Aug05 | 25 |
| Cheapest | 1 | 5.00 Mar22 | 2.34 | Sep11 | 18 | Cheapest | 1 | 4.50 Mar24 | -1.27 | Aug13 | 11 |

**N'LANDS**

| | Rank | Govt: Bond | ZScore | Issued | Size (€bn) | | Rank | Swap: Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 2.50 Jan33 | -1.12 | Mar12 | 10 | Richest | 1 | 3.75 Jan42 (30y) | -0.46 | May10 | 14 |
| | 2 | 3.75 Jan23 | -0.76 | Jan06 | 11 | | 2 | 4.00 Jan37 | -0.35 | Apr05 | 13 |
| | 3 | 1.75 Jul23 (10y) | -0.26 | Mar13 | 14 | | 3 | 2.50 Jan33 | -0.21 | Mar12 | 10 |
| | 3 | 4.00 Jan37 | 0.00 | Apr05 | 13 | | 3 | 3.75 Jan23 | 0.15 | Jan06 | 11 |
| | 2 | 2.25 Jul22 | 0.39 | Feb12 | 15 | | 2 | 1.75 Jul23 (10y) | 0.24 | Mar13 | 14 |
| Cheapest | 1 | 3.75 Jan42 (30y) | 0.49 | May10 | 14 | Cheapest | 1 | 2.25 Jul22 | 0.44 | Feb12 | 15 |

**SPAIN**

| | Rank | Govt: Bond | ZScore | Issued | Size (€bn) | | Rank | Swap: Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 4.70 Jul41 (30y) | -5.91 | Sep09 | 12 | Richest | 1 | 5.85 Jan22 (FBB) | -1.60 | Nov11 | 19 |
| | 2 | 4.90 Jul40 | -2.52 | Jun07 | 13 | | 2 | 5.40 Jan23 | -1.47 | Jan13 | 17 |
| | 3 | 5.15 Oct44 | -2.20 | Oct13 | 4 | | 3 | 4.80 Jan24 | -1.42 | Sep08 | 15 |
| | 4 | 4.80 Jan24 | -1.49 | Sep08 | 15 | | 4 | 4.40 Oct23 (10y) | -1.30 | May13 | 15 |
| | 5 | 5.40 Jan23 | -0.62 | Jan13 | 17 | | 5 | 4.65 Jul25 | -1.25 | Feb10 | 14 |
| | 5 | 5.75 Jul32 | -0.04 | Jan01 | 15 | | 5 | 4.90 Jul40 | -1.08 | Jun07 | 13 |
| | 4 | 4.65 Jul25 | 0.24 | Feb10 | 14 | | 4 | 4.70 Jul41 (30y) | -1.07 | Sep09 | 12 |
| | 3 | 5.90 Jul26 | 0.47 | Mar11 | 10 | | 3 | 4.20 Jan37 | -1.04 | Jan05 | 16 |
| | 2 | 5.15 Oct28 | 0.65 | Jul13 | 5 | | 2 | 5.15 Oct28 | -0.67 | Jul13 | 5 |
| Cheapest | 1 | 4.20 Jan37 | 0.90 | Jan05 | 16 | Cheapest | 1 | 5.15 Oct44 | 0.20 | Oct13 | 4 |

**BELGIUM**

| | Rank | Govt: Bond | ZScore | Issued | Size (€bn) | | Rank | Swap: Bond | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richest | 1 | 4.25 Mar41 | -1.97 | Apr10 | 12 | Richest | 1 | 3.75 Jun45 (30y) | -1.20 | Sep13 | 4 |
| | 2 | 2.25 Jun23 (10y) | -0.44 | Jan13 | 12 | | 2 | 4.25 Mar41 | -0.43 | Apr10 | 12 |
| | 3 | 4.25 Sep22 | -0.42 | Jan12 | 15 | | 3 | 2.25 Jun23 (10y) | -0.36 | Jan13 | 12 |
| | 4 | 3.75 Jun45 (30y) | -0.27 | Sep13 | 4 | | 4 | 4.50 Mar26 | -0.34 | Jun11 | 8 |
| | 4 | 4.00 Mar32 | -0.17 | Mar12 | 8 | | 4 | 4.25 Sep22 | -0.31 | Jan12 | 15 |
| | 3 | 4.50 Mar26 | 0.32 | Jun11 | 8 | | 3 | 4.00 Mar32 | -0.25 | Mar12 | 8 |
| | 2 | 4.00 Mar22 | 0.77 | May06 | 14 | | 2 | 5.00 Mar35 | -0.25 | May04 | 18 |
| Cheapest | 1 | 5.00 Mar35 | 1.09 | May04 | 18 | Cheapest | 1 | 4.00 Mar22 | -0.23 | May06 | 14 |

Source: Citi Research

# UK relative value table

**Figure 65. Coupon Adjusted Spread to Fitted Curve and Swap Curve by Country (6m History)**

## Versus Govt Curve (CAS)

**ALL**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | 2.25 Mar14 | -2.48 | Mar09 | 35 |
| | 2 | 4.75 Mar20 | -1.79 | Mar05 | 33 |
| | 3 | 4.25 Jun32 | -1.62 | May00 | 35 |
| | 4 | 1.00 Sep17 | -1.16 | Mar12 | 31 |
| | 5 | 4.25 Dec49 | -1.15 | Sep08 | 19 |
| | 5 | 4.25 Mar36 | 1.53 | Feb03 | 23 |
| | 4 | 3.75 Sep19 | 1.67 | Jul09 | 28 |
| | 3 | 2.75 Jan15 | 1.70 | Nov09 | 29 |
| | 2 | 5.00 Mar25 (G ) | 1.97 | Sep01 | 33 |
| Cheapest | 1 | 5.00 Sep14 | 1.99 | Jul02 | 41 |

**2yr - 7yr**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | 4.75 Mar20 | -1.80 | Mar05 | 33 |
| | 2 | 1.00 Sep17 | -1.17 | Mar12 | 31 |
| | 3 | 3.75 Sep20 | -1.01 | Jun10 | 24 |
| | 4 | 2.00 Jan16 | -0.87 | Nov10 | 32 |
| | 5 | 4.00 Sep16 | -0.28 | Mar06 | 35 |
| | 5 | 1.25 Jul18 (5y) | -0.01 | Feb13 | 34 |
| | 4 | 1.75 Jan17 | 0.60 | Aug11 | 27 |
| | 3 | 4.50 Mar19 | 0.83 | Sep08 | 35 |
| | 2 | 5.00 Mar18 (WX) | 0.92 | May07 | 34 |
| Cheapest | 1 | 3.75 Sep19 | 1.66 | Jul09 | 28 |

**7yr - 15yr**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | 2.25 Sep23 (10y) | -0.93 | Jun13 | 16 |
| | 2 | 4.00 Mar22 | -0.62 | Feb09 | 37 |
| | 3 | 3.75 Sep21 | -0.25 | Mar11 | 28 |
| | 4 | | | | |
| | 5 | | | | |
| | 5 | | | | |
| | 4 | | | | |
| | 3 | 4.25 Dec27 | 0.34 | Sep06 | 29 |
| | 2 | 1.75 Sep22 | 0.74 | Jun12 | 28 |
| Cheapest | 1 | 5.00 Mar25 (G ) | 1.96 | Sep01 | 33 |

**>15yr**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | 4.25 Jun32 | -1.65 | May00 | 35 |
| | 2 | 3.50 Jul68 | -1.28 | Jun13 | 10 |
| | 3 | 4.25 Dec49 | -1.17 | Sep08 | 19 |
| | 4 | 4.75 Dec38 | -1.14 | Apr04 | 25 |
| | 5 | 4.25 Dec40 | -0.71 | Jun10 | 24 |
| | 5 | 4.75 Dec30 | 0.56 | Oct07 | 29 |
| | 4 | 4.25 Dec55 | 0.57 | May05 | 23 |
| | 3 | 3.25 Jan44 (30y) | 0.64 | Oct12 | 19 |
| | 2 | 3.75 Jul52 | 0.84 | Sep11 | 20 |
| Cheapest | 1 | 4.25 Mar36 | 1.50 | Feb03 | 23 |

## Versus Swap Curve (CAS)

**ALL**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | 3.50 Jul68 | -1.31 | Jun13 | 10 |
| | 2 | 4.25 Dec49 | -0.64 | Sep08 | 19 |
| | 3 | 3.75 Jul52 | -0.60 | Sep11 | 20 |
| | 4 | 1.00 Sep17 | -0.59 | Mar12 | 31 |
| | 5 | 4.25 Dec55 | -0.58 | May05 | 23 |
| | 5 | 4.75 Dec30 | 1.16 | Oct07 | 29 |
| | 4 | 4.25 Dec27 | 1.24 | Sep06 | 29 |
| | 3 | 5.00 Mar25 (G ) | 1.37 | Sep01 | 33 |
| | 2 | 3.75 Sep19 | 1.43 | Jul09 | 28 |
| Cheapest | 1 | 5.00 Sep14 | 1.78 | Jul02 | 41 |

**2yr - 7yr**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | 1.00 Sep17 | -0.59 | Mar12 | 31 |
| | 2 | 4.00 Sep16 | -0.57 | Mar06 | 35 |
| | 3 | 1.75 Jan17 | -0.48 | Aug11 | 27 |
| | 4 | 2.00 Jan16 | -0.35 | Nov10 | 32 |
| | 5 | 1.25 Jul18 (5y) | 0.18 | Feb13 | 34 |
| | 5 | 5.00 Mar18 (WX) | 0.18 | May07 | 34 |
| | 4 | 4.75 Mar20 | 0.40 | Mar05 | 33 |
| | 3 | 3.75 Sep20 | 0.63 | Jun10 | 24 |
| | 2 | 4.50 Mar19 | 1.08 | Sep08 | 35 |
| Cheapest | 1 | 3.75 Sep19 | 1.42 | Jul09 | 28 |

**7yr - 15yr**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | 2.25 Sep23 (10y) | 0.33 | Jun13 | 16 |
| | 2 | 4.00 Mar22 | 0.48 | Feb09 | 37 |
| | 3 | 3.75 Sep21 | 0.66 | Mar11 | 28 |
| | 4 | | | | |
| | 5 | | | | |
| | 5 | | | | |
| | 4 | | | | |
| | 3 | 1.75 Sep22 | 0.88 | Jun12 | 28 |
| | 2 | 4.25 Dec27 | 1.24 | Sep06 | 29 |
| Cheapest | 1 | 5.00 Mar25 (G ) | 1.36 | Sep01 | 33 |

**>15yr**

| | Rank | | ZScore | Issued | Size (€bn) |
|---|---|---|---|---|---|
| Richest | 1 | 3.50 Jul68 | -1.31 | Jun13 | 10 |
| | 2 | 4.25 Dec49 | -0.64 | Sep08 | 19 |
| | 3 | 3.75 Jul52 | -0.60 | Sep11 | 20 |
| | 4 | 4.25 Dec55 | -0.59 | May05 | 23 |
| | 5 | 4.00 Jan60 | -0.54 | Oct09 | 19 |
| | 5 | 4.25 Sep39 | 0.49 | Mar09 | 19 |
| | 4 | 4.50 Sep34 | 0.80 | Jun09 | 26 |
| | 3 | 4.25 Jun32 | 0.89 | May00 | 35 |
| | 2 | 4.25 Mar36 | 0.91 | Feb03 | 23 |
| Cheapest | 1 | 4.75 Dec30 | 1.16 | Oct07 | 29 |

Source: Citi Research

# 4 Week Auction Calendar: US, EMU-10, UK

Mohit Aggarwal

Nishay Patel

**This is an excerpt from our *Weekly Supply Monitor* latest published today. For further details (upcoming coupon payments, redemptions and longer term supply forecasts) please see the original note.**

**Figure 66. 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 TYZ3 (UST) | G Z3 (Gilt) | RXZ3 (Bund) |
|---|---|---|---|---|---|---|---|
| 28 Oct (Mon) | Belgium | 3.0 | OLO 4% Mar18, 3% Sep19, 2.25% Jun23 (issue confirmed, estimated size) | | | | 17k |
| 28 Oct (Mon) | Italy | 2.3 | CTZ Jun15 (issue confirmed, size €1.75-2.25bn) | | | | 4k |
| 28 Oct (Mon) | Italy | 0.8 | BTPei '23 (issue confirmed, size €0.5-0.75bn) | | | | 6k |
| 28 Oct (Mon) | US | 32.0 | 2-Year | | 80k | | |
| 28 Oct (Mon) | US | 4.25 - 5.25 | Outright Treasury Coupon Purchases: 31/10/2017 - 30/6/2018 | | -22k | | |
| 29 Oct (Tue) | Finland | 1.5 | RFGB 1.125% Sep18, 2.625% Jul42 (issue confirmed, size upto €1.5bn) | | | | 15k |
| 29 Oct (Tue) | US | 35.0 | 5-Year | | 210k | | |
| 29 Oct (Tue) | US | 1.25 - 1.75 | Outright Treasury Coupon Purchases: 15/2/2036 - 15/8/2043 | | -34k | | |
| 30 Oct (Wed) | Italy | 6.0 | BTP 5yr and 10yr (estimated tenor and size) | | | | 37k |
| 30 Oct (Wed) | Germany | 4.0 | Bund 2% Aug23 reopening (issue and size confirmed) | | | | 32k |
| 30 Oct (Wed) | US | 29.0 | 7-Year | | 239k | | |
| 31 Oct (Thu) | US | 0.75 - 1 | Outright Treasury Coupon Purchases : 15/11/2024 - 15/2/2031 | | -15k | | |
| | | | **Weekly $DV01 of Issuance** | **54.1** | | | |
| | | | **Total Number of Futures Contracts** | | **459k** | **0k** | **111k** |

| Date | Country | Nominal Size (Local Ccy, bn) | Issue Details | DV01 $million/bp | Approx. Number 10yr Futures TYZ3 (UST) | G Z3 (Gilt) | RXZ3 (Bund) |
|---|---|---|---|---|---|---|---|
| 05 Nov (Tue) | Austria | 1.3 | RAGB 5yr and 10yr (estimated size and tenors) | | | | 8k |
| 05 Nov (Tue) | UK | 1.5 | 0¼% Index-linked Treasury Gilt 2052 (issue confirmed, estimated size) | | | 61k | |
| 06 Nov (Wed) | Germany | 4.0 | Bobl 167-Oct18 reopening (issue and size confirmed) | | | | 17k |
| 07 Nov (Thu) | Spain | 3.0 | Bono 2yr, 5yr and 15yr (estimated tenors and size) | | | | 18k |
| 07 Nov (Thu) | France | 7.0 | OAT 5yr, 10yr and 15yr (estimated tenors and size) | | | | 61k |
| | | | **Weekly $DV01 of Issuance** | **26.2** | | | |
| | | | **Total Number of Futures Contracts** | | **0k** | **61k** | **104k** |

| Date | Country | Nominal Size (Local Ccy, bn) | Issue Details | DV01 $million/bp | Approx. Number 10yr Futures TYZ3 (UST) | G Z3 (Gilt) | RXZ3 (Bund) |
|---|---|---|---|---|---|---|---|
| 12 Nov (Tue) | Germany | 1.0 | Bundei '23 (estimated issue and date) | | | | 8k |
| 12 Nov (Tue) | Netherlands | 2.0 | DSL 1.75% Jul23 reopening (issue confirmed, size €1.5-2.5bn) | | | | 16k |
| 12 Nov (Tue) | US | 30.0 | 3-Year | | 75k | | |
| 13 Nov (Wed) | Italy | 4.5 | BTP 5yr and 15yr (estimated tenors and size) | | | | 21k |
| 13 Nov (Wed) | Italy | 1.5 | CCTeu (estimated size) | | | | 6k |
| 13 Nov (Wed) | Germany | 5.0 | New Schatz Dec15 (issue and size confirmed) | | | | 9k |
| 13 Nov (Wed) | US | 24.0 | 10-Year | | 267k | | |
| 14 Nov (Thu) | UK | 2.2 | 4¼% Treasury Stock 2036 (issue confirmed, estimated size) | | | 39k | |
| 14 Nov (Thu) | US | 16.0 | 30-Year | | 372k | | |
| | | | **Weekly $DV01 of Issuance** | **72.9** | | | |
| | | | **Total Number of Futures Contracts** | | **714k** | **39k** | **61k** |

| Date | Country | Nominal Size (Local Ccy, bn) | Issue Details | DV01 $million/bp | Approx. Number 10yr Futures TYZ3 (UST) | G Z3 (Gilt) | RXZ3 (Bund) |
|---|---|---|---|---|---|---|---|
| 19 Nov (Tue) | UK | 3.8 | 2¼% Treasury Gilt 2023 (issue confirmed, estimated size) | | | 33k | |
| 21 Nov (Thu) | Spain | 3.0 | Obligaciones 2yr, 5yr and 10yr (estimated tenors and size) | | | | 14k |
| 21 Nov (Thu) | France | 7.5 | BTAN, OAT 2yr and 5yr / OATi (estimated tenors and size) | | | | 30k |
| 21 Nov (Thu) | UK | 4.7 | New conventional gilt maturing on 22 July 2019 (maturity confirmed, estimated size) | | | 23k | |
| 21 Nov (Thu) | US | 13.0 | 10-Year TIPS (re-opening) | | 159k | | |
| | | | **Weekly $DV01 of Issuance** | **28.9** | | | |
| | | | **Total Number of Futures Contracts** | | **159k** | **56k** | **44k** |

The next release of the tentative outright Treasury operation schedule will be at 3 p.m. on October 31, 2013. Therefore we have only provided details of Fed buybacks upto 31 October.

Source: DMOs, Citi estimates

# EUR: Coupons & Redemptions (next 3 mths)

**Figure 67. EMU-10 Redemptions over the next three months (€bn)**

| | Redemptions = €160bn | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Redemptions | DEU 39 | FRA 43 | NLD 16 | ITA 38 | ESP 16 | BEL 0 | AUT 1 | FIN 0 | PRT 0 | GRC 0 | IRL 7 |
| (Fri) 25-Oct-13 | | 21.1 | | | | | | | | | |
| (Thu) 31-Oct-13 | | | | | 16.2 | | | | | | |
| (Fri) 01-Nov-13 | | | | 17.8 | | | | | | | |
| (Fri) 13-Dec-13 | 15.0 | | | | | | | | | | |
| (Sun) 15-Dec-13 | | | | 20.0 | | | | | | | |
| (Sat) 04-Jan-14 | 24.0 | | | | | | | | | | |
| (Sun) 12-Jan-14 | | 21.7 | | | | | | | | | |
| (Wed) 15-Jan-14 | | | 15.7 | | | | 1.3 | | | | 6.8 |

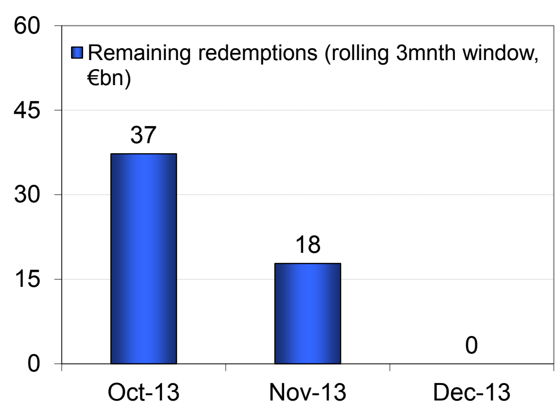
Source: DMOs, Bloomberg, Citi Research

**Figure 68. EMU-10 Coupon Payments over the next three months (€bn)**

| | Coupons = €48bn | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Coupons | DEU 11 | FRA 17 | NLD 4 | ITA 9 | ESP 6 | BEL 0 | AUT 1 | FIN 0 | PRT 0 | GRC 0 | IRL 0 |
| (Fri) 25-Oct-13 | | 16.3 | | | | | | | 0.4 | | |
| (Thu) 31-Oct-13 | | | | | 5.5 | | | | | | |
| (Fri) 01-Nov-13 | | | | 5.5 | | | | | | | |
| (Fri) 15-Nov-13 | | | | 0.7 | | | | | | | |
| (Fri) 22-Nov-13 | | | | | | | 0.3 | | | | |
| (Mon) 25-Nov-13 | | 0.2 | | | | | | | | | |
| (Sun) 01-Dec-13 | | | | 1.4 | | | | | | | |
| (Fri) 13-Dec-13 | 0.0 | | | | | | | | | | |
| (Sun) 15-Dec-13 | | | | 0.9 | | | | | | | |
| (Wed) 01-Jan-14 | | | | 0.4 | | | | | | | |
| (Sat) 04-Jan-14 | 10.6 | | | | | | | | | | |
| (Sun) 12-Jan-14 | | 0.5 | | | | | | | | | |
| (Wed) 15-Jan-14 | | 0.5 | 3.9 | 0.4 | | | 0.6 | | | | 0.3 |
| (Mon) 20-Jan-14 | | | | | | | | | | | 0.02 |

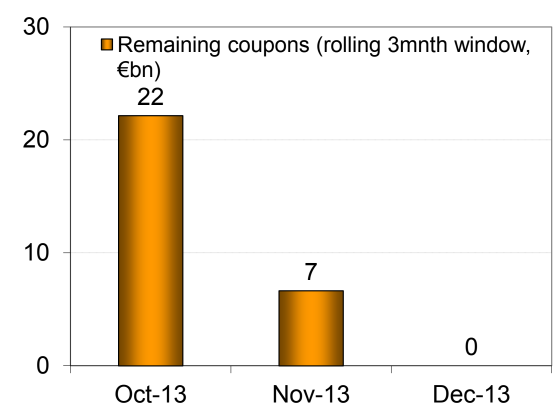
Source: DMOs, Bloomberg, Citi Research

**Figure 69. EMU-10 remaining redemptions over the next 3months (€bn)**




Source: DMOs, Bloomberg, Citi Research

**Figure 70. 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 71. 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 | 29 Oct (Tue) | Italy | 6 month (30 April 2014; issue confirmed, estimated size) | 9.75 |
| | | | **Total Size in Week 1** | **9.75** |
| Week 3 | 12 Nov (Tue) | Italy | 12 month (14 November 2014; issue confirmed, estimated size) | 9.8 |
| | | | **Total Size in Week 3** | **9.8** |
| Week 4 | 19 Nov (Tue) | Spain | 6month (16 May 2014) and 12month (new bill) - tenors confirmed, estimted size | 5.2 |
| | | | **Total Size in Week 4** | **5.2** |

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 72. 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 | 0.9 | 1.3 | 2.2 | 4.6 | | 9 | 8 | 1 |
| May | 0.9 | 1.2 | 2.6 | 3.3 | | 8 | 6 | 2 |
| Jun | 1.1 | 1.1 | 2.6 | 4.0 | | 9 | 10 | -1 |
| Jul | 0.9 | 1.9 | 3.0 | 2.9 | | 9 | 5 | 3 |
| Aug | 1.1 | 1.4 | 3.1 | 3.0 | | 9 | 11 | -3 |
| Sep | 0.8 | 1.7 | 2.8 | 3.8 | | 9 | 8 | 1 |
| Oct | 0.7 | 1.0 | 2.8 | 4.5 | | 9 | 8 | 1 |
| Nov | 1.0 | 1.4 | 2.6 | 3.8 | | 9 | 11 | -2 |
| Dec | 1.0 | 1.4 | 2.6 | 3.8 | | 9 | 9 | |
| **Total** | **12.4** | **19.4** | **30.5** | **44.4** | **2.5** | **109** | **102** | **7** |

| ITALY | 3m* | 6m | 9m | 12m | Flexible BOT | 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 | 9.2 | | 8.9 | | 21 | 18 | 3 |
| May | | 9.2 | | 7.0 | 3.0 | 19 | 16 | 4 |
| Jun | | 9.2 | | 7.0 | | 16 | 16 | |
| Jul | | 9.8 | | 7.0 | 2.5 | 19 | 11 | 9 |
| Aug | | 9.8 | | 8.6 | | 18 | 18 | |
| Sep | | 8.6 | | 9.8 | 3.0 | 21 | 20 | 2 |
| Oct | | 9.8 | | 9.8 | | 20 | 18 | 1 |
| Nov | | 9.8 | | 9.8 | | 20 | 16 | 4 |
| Dec | | 10.0 | | 9.8 | | 20 | 25 | -5 |
| **Total** | **3.0** | **114.5** | | **104.8** | **8.5** | **231** | **218** | **13** |

Source: DMOs, Bloomberg, Citi estimates

# Inflation Forecasts, Carry & Weekly Changes

**Figure 73. Citi Inflation Forecasts**

| Month | EUR HICPxT Index Forecast | EUR HICPxT MoM Change | EUR HICPxT YoY Change | France CPIxT Index Forecast | France CPIxT MoM Change | France CPIxT YoY Change | UK RPI Index Forecast | UK RPI MoM Change | UK RPI YoY Change | US CPURNSA Index Forecast | US CPURNSA MoM Change | US CPURNSA YoY Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aug 13 | 116.53 | 0.1 | 1.2 | 125.90 | 0.4 | 0.7 | 251.00 | 0.5 | 3.3 | 233.88 | 0.1 | 1.5 |
| Sep 13 | 117.11 | 0.5 | 1.0 | 125.60 | -0.2 | 0.7 | 251.90 | 0.4 | 3.2 | 234.10 | 0.1 | 1.2 |
| Oct 13 | 117.34 | 0.2 | 1.0 | 125.94 | 0.3 | 0.9 | 252.40 | 0.2 | 2.8 | 234.00 | -0.0 | 1.2 |
| Nov 13 | 117.28 | -0.1 | 1.1 | 125.80 | -0.1 | 1.0 | 253.00 | 0.2 | 3.0 | 233.70 | -0.1 | 1.5 |
| Dec 13 | 117.69 | 0.3 | 1.1 | 126.23 | 0.3 | 1.0 | 254.60 | 0.6 | 3.2 | 233.30 | -0.2 | 1.6 |
| Jan 14 | 116.46 | -1.0 | 1.2 | 126.07 | -0.1 | 1.4 | 253.10 | -0.6 | 3.0 | 234.50 | 0.5 | 1.8 |

Source: Citi Research, Bloomberg *Shaded = Already released*

**Figure 74. US TIPS Inflation-linked Carry (based on forecasts above) – One week changes**

| Bond | RY (%) | Chg (bp) | Carry-adj chg | Carry: RY (bp) 1 Nov | Carry: RY (bp) 1 Dec | Carry: RY (bp) 1 Jan | Ref | BE (bp) | Chg (bp) | Carry-adj chg | Carry: BE (bp) 1 Nov | Carry: BE (bp) 1 Dec | Carry: BE (bp) 1 Jan | ZC Swap - BE Spread (bp) | Chg (bp) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Repo (%)* | | | | *0.10* | *0.09* | *0.09* | | | | | | | | | |
| TIPS 1/15 | -1.03 | 2 | 2 | 0 | 1 | -12 | US-2.250-01/31/15 | 121 | -6 | -6 | 0 | 0 | -14 | 11 | -5 |
| TIPS 4/15 | -1.00 | 3 | 2 | 0 | 1 | -10 | US-2.500-04/30/15 | 124 | -6 | -6 | 0 | 0 | -12 | 0 | -5 |
| TIPS 7/15 | -1.28 | 2 | 2 | 0 | -1 | -11 | US-4.250-08/15/15 | 155 | -4 | -4 | 0 | -2 | -14 | 12 | -5 |
| TIPS 1/16 | -1.11 | 1 | 1 | 0 | 0 | -7 | US-2.625-02/29/16 | 150 | -3 | -3 | 0 | -1 | -10 | 11 | -6 |
| TIPS 4/16 | -1.02 | -13 | -13 | 0 | 0 | -6 | US-2.000-04/30/16 | 147 | 12 | 12 | 0 | -1 | -9 | 9 | -21 |
| TIPS 7/16 | -1.25 | -16 | -16 | 0 | 0 | -7 | US-4.875-08/15/16 | 178 | 14 | 14 | 0 | -2 | -10 | 6 | -22 |
| TIPS 1/17 | -1.01 | 0 | -0 | 0 | 0 | -4 | US-3.125-01/31/17 | 173 | -1 | -1 | 0 | -2 | -8 | 8 | -6 |
| TIPS 4/17 | -0.86 | 1 | 1 | 0 | 1 | -3 | US-0.875-04/30/17 | 168 | -2 | -3 | 0 | -1 | -7 | 11 | -4 |
| TIPS 7/17 | -0.99 | -6 | -7 | 0 | 0 | -4 | US-4.750-08/15/17 | 187 | 4 | 3 | 0 | -2 | -8 | 12 | -9 |
| TIPS 1/18 | -0.77 | -0 | -1 | 0 | 1 | -2 | US-3.500-02/15/18 | 185 | -2 | -3 | 0 | -2 | -7 | 12 | -2 |
| TIPS 4/18 | -0.63 | -1 | -1 | 0 | 1 | -1 | US-0.625-04/30/18 | 180 | -2 | -2 | 0 | -1 | -6 | 15 | -3 |
| TIPS 7/18 | -0.76 | -11 | -12 | 0 | 1 | -2 | US-4.000-08/15/18 | 194 | 8 | 8 | 0 | -2 | -7 | 17 | -12 |
| TIPS 1/19 | -0.52 | 0 | -0 | 0 | 1 | -1 | US-2.750-02/15/19 | 192 | -5 | -5 | 0 | -1 | -6 | 18 | 1 |
| TIPS 7/19 | -0.50 | -1 | -1 | 0 | 1 | -1 | US-3.625-08/15/19 | 204 | -5 | -5 | 0 | -2 | -6 | 17 | 1 |
| TIPS 1/20 | -0.27 | -6 | -6 | 0 | 1 | 0 | US-3.625-02/15/20 | 191 | 0 | -0 | 0 | -1 | -5 | 28 | -4 |
| TIPS 7/20 | -0.24 | -6 | -7 | 0 | 1 | 0 | US-2.625-08/15/20 | 206 | -0 | -0 | 0 | -1 | -5 | 23 | -4 |
| TIPS 1/21 | -0.02 | -7 | -8 | 0 | 2 | 1 | US-3.625-02/15/21 | 196 | 0 | -0 | 0 | -1 | -5 | 31 | -4 |
| TIPS 7/21 | 0.02 | -11 | -11 | 0 | 2 | 1 | US-2.125-08/15/21 | 209 | 2 | 2 | 0 | -1 | -4 | 26 | -6 |
| TIPS 1/22 | 0.19 | -8 | -8 | 0 | 2 | 1 | US-2.000-02/15/22 | 205 | -0 | -0 | 0 | -1 | -4 | 30 | -3 |
| TIPS 7/22 | 0.21 | -9 | -9 | 0 | 2 | 1 | US-1.625-08/15/22 | 214 | -0 | -0 | 0 | -1 | -4 | 27 | -3 |
| TIPS 1/23 | 0.35 | -9 | -9 | 0 | 2 | 1 | US-2.000-02/15/23 | 210 | -0 | -0 | 0 | -1 | -4 | 31 | -3 |
| TIPS 7/23 | 0.36 | -7 | -8 | 0 | 2 | 1 | US-2.500-08/15/23 | 215 | -1 | -1 | 0 | -1 | -4 | 31 | -3 |
| TIPS 1/25 | 0.53 | -7 | -8 | 0 | 2 | 2 | US-7.625-02/15/25 | 207 | -1 | -1 | 0 | -1 | -4 | 42 | -3 |
| TIPS 1/26 | 0.63 | -4 | -4 | 0 | 2 | 2 | US-6.000-02/15/26 | 213 | -4 | -4 | 0 | -1 | -4 | 39 | 0 |
| TIPS 1/27 | 0.71 | -5 | -5 | 0 | 2 | 2 | US-6.625-02/15/27 | 215 | -3 | -3 | 0 | -1 | -4 | 40 | -0 |
| TIPS 1/28 | 0.80 | -7 | -7 | 0 | 2 | 2 | US-6.125-11/15/27 | 214 | -1 | -1 | 0 | -1 | -4 | 43 | -3 |
| TIPS 4/28 | 0.77 | -7 | -8 | 0 | 2 | 2 | US-5.500-08/15/28 | 225 | 0 | -0 | 0 | -1 | -3 | 31 | -3 |
| TIPS 1/29 | 0.84 | -7 | -7 | 0 | 2 | 2 | US-5.250-02/15/29 | 223 | -0 | -0 | 0 | -1 | -3 | 36 | -3 |
| TIPS 4/29 | 0.83 | -7 | -7 | 0 | 2 | 2 | US-5.250-02/15/29 | 224 | 0 | -0 | 0 | -1 | -3 | 34 | -3 |
| TIPS 4/32 | 0.95 | -9 | -10 | 0 | 1 | 2 | US-5.375-02/15/31 | 222 | 2 | 2 | 0 | -1 | -3 | 43 | -5 |
| TIPS 2/40 | 1.26 | -5 | -5 | 0 | 1 | 1 | US-4.625-02/15/40 | 222 | -1 | -2 | 0 | -1 | -2 | 48 | -1 |
| TIPS 2/41 | 1.28 | -10 | -10 | 0 | 1 | 1 | US-4.750-02/15/41 | 222 | 4 | 4 | 0 | -1 | -2 | 49 | -6 |
| TIPS 2/42 | 1.33 | -6 | -6 | 0 | 1 | 1 | US-3.125-02/15/42 | 227 | 0 | -0 | 0 | -1 | -2 | 45 | -2 |
| TIPS 2/43 | 1.34 | -6 | -6 | 0 | 1 | 1 | US-3.125-02/15/43 | 228 | 0 | 0 | 0 | -1 | -2 | 43 | -2 |

Source: Citi Research, Bloomberg

Figure 75. EUR Inflation-linked Carry (based on forecasts above) – One week changes

| Bond | RY (%) | Chg (bp) | Carry-adj chg | Carry: RY (bp) 1 Dec | 1 Jan | 1 Feb | Ref | BE (bp) | Chg (bp) | Carry-adj chg | Carry: BE (bp) 1 Dec | 1 Jan | 1 Feb | ZC Swap - BE Spread (bp) | Chg (bp) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Repo (%)* | | | | *0.11* | *0.11* | *0.13* | | | | | | | | | |
| OATei15 | -1.19 | 4 | 4 | 24 | 30 | 21 | *FFRG 4/15* | 144 | -4 | -4 | 23 | 29 | 18 | 18 | -1 |
| BUNDei16 | -0.67 | -3 | -3 | 19 | 25 | 21 | *BUND 1/16* | 85 | 1 | 1 | 18 | 25 | 20 | 21 | -4 |
| BTANi16 | -0.86 | -4 | -7 | -11 | -4 | -12 | *FFRG 4/16* | 127 | 1 | 3 | -12 | -6 | -15 | 29 | -6 |
| BTPei16 | 1.11 | -7 | -8 | 22 | 34 | 36 | *BTP 8/16* | 78 | -1 | -1 | 16 | 21 | 92 | 62 | -2 |
| OATi17 | -0.65 | -4 | -6 | -7 | -2 | -7 | *FFRG 4/17* | 132 | -3 | -1 | -9 | -5 | -12 | 33 | -0 |
| BTPei17 | 1.54 | -6 | -7 | 18 | 27 | 30 | *BTP 8/17* | 92 | -4 | -4 | 11 | 15 | 86 | 53 | 2 |
| BOBLei18 | -0.49 | -5 | -5 | 11 | 14 | 12 | *BUND 1/18* | 100 | -1 | -1 | 10 | 12 | 9 | 30 | -1 |
| OATei18 | -0.34 | -11 | -12 | 10 | 14 | 12 | *FFRG 4/18* | 127 | 3 | 3 | 8 | 10 | 6 | 32 | -4 |
| BTPei18 | 1.85 | -7 | -8 | 15 | 23 | 25 | *BTP 8/18* | 94 | -2 | -2 | 9 | 11 | 60 | 57 | 1 |
| OATi19 | -0.26 | -6 | -8 | -4 | 0 | -3 | *FFRG 4/19* | 147 | -4 | -3 | -6 | -4 | -9 | 35 | 1 |
| BTPei19 | 1.92 | -8 | -9 | 13 | 19 | 22 | *BTP 9/19* | 118 | -1 | -1 | 7 | 9 | 6 | 39 | 1 |
| BUNDei20 | -0.27 | -9 | -9 | 8 | 11 | 9 | *BUND 1/20* | 124 | 2 | 2 | 6 | 8 | 5 | 24 | -2 |
| OATei20 | 0.00 | -10 | -10 | 8 | 11 | 10 | *FFRG 4/20* | 147 | -1 | -1 | 6 | 7 | 4 | 23 | 1 |
| OATi21 | 0.17 | -10 | -11 | -3 | 1 | 0 | *FFRG 4/21* | 155 | -1 | -0 | -5 | -3 | -7 | 41 | -2 |
| BTPei21 | 2.47 | -2 | -3 | 10 | 16 | 18 | *BTP 9/21* | 114 | -7 | -7 | 5 | 6 | 4 | 59 | 7 |
| OATei22 | 0.36 | -13 | -13 | 6 | 9 | 9 | *FFRG 4/21* | 137 | 1 | 1 | 4 | 5 | 2 | 49 | -1 |
| BUNDei23 | 0.08 | -12 | -12 | 5 | 8 | 7 | *BUND 1/22* | 133 | 2 | 2 | 4 | 4 | 2 | 43 | -2 |
| OATi23 | 0.45 | -13 | -14 | -2 | 2 | 1 | *FFRG 10/23* | 188 | 0 | 1 | -4 | -3 | -7 | 23 | -1 |
| BTPei23 | 2.71 | 0 | -0 | 9 | 14 | 16 | *BTP 8/23* | 120 | -7 | -7 | 4 | 5 | 32 | 68 | 7 |
| OATei24 | 0.63 | -15 | -16 | 5 | 8 | 8 | *FFRG 10/23* | 170 | 2 | 2 | 3 | 3 | 1 | 28 | -2 |
| BTPei26 | 2.96 | 1 | 1 | 7 | 12 | 14 | *BTP 3/26* | 127 | -8 | -9 | 3 | 4 | 2 | 77 | 9 |
| OATei27 | 0.83 | -15 | -15 | 5 | 7 | 7 | *FFRG 4/26* | 185 | 2 | 2 | 2 | 2 | 0 | 24 | -1 |
| OATi29 | 0.78 | -15 | -16 | -1 | 2 | 1 | *FFRG 4/29* | 211 | 2 | 3 | -3 | -3 | -6 | 20 | -1 |
| OATei32 | 0.98 | -16 | -16 | 4 | 6 | 6 | *FFRG 10/32* | 206 | 4 | 3 | 2 | 2 | 0 | 9 | -3 |
| BTPei35 | 2.96 | -1 | -2 | 5 | 7 | 9 | *BTP 8/34* | 178 | -10 | -10 | 1 | 1 | 18 | 38 | 11 |
| OATei40 | 1.08 | -17 | -17 | 3 | 4 | 4 | *FFRG 4/41* | 221 | 5 | 4 | 1 | 1 | -1 | 1 | -3 |
| BTPei41 | 3.28 | -3 | -3 | 4 | 7 | 8 | *BTP 9/40* | 160 | -4 | -5 | 1 | 1 | -1 | 62 | 6 |

Source: Citi Research

Figure 76. UK Gilts Inflation-linked Carry (based on forecasts above) – One week changes

| Bond | RY (%) | Chg (bp) | Carry-adj chg | Carry: RY (bp) 1 Dec | 1 Jan | 1 Feb | Ref | BE (bp) | Chg (bp) | Carry-adj chg | Carry: BE (bp) 1 Dec | 1 Jan | 1 Feb | ZC Swap - BE Spread (bp) | Chg (bp) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Repo (%)* | | | | *0.43* | *0.42* | *0.42* | | | | | | | | | |
| UKTi Jul16 | -2.13 | -8 | -8 | 2 | 3 | 4 | *UKT 9/16* | 286 | 3 | 3 | 0 | 1 | 1 | 41 | -4 |
| UKTi Nov17 | -1.79 | -9 | -11 | 6 | 7 | 8 | *UKT 3/18* | 308 | 1 | 3 | 4 | 2 | 2 | 12 | -15 |
| UKTi Nov19 | -1.19 | -10 | -12 | 5 | 6 | 8 | *UKT 9/19* | 294 | 1 | 2 | 3 | 1 | 1 | 29 | -2 |
| UKTi Apr20 | -1.03 | -15 | -16 | 3 | 5 | 7 | *UKT 3/20* | 287 | 5 | 5 | 0 | 0 | 0 | 31 | -6 |
| UKTi Nov22 | -0.66 | -13 | -14 | 4 | 6 | 7 | *UKT 3/22* | 296 | 2 | 2 | 2 | 1 | 0 | 36 | -2 |
| UKTi Mar24 | -0.37 | -12 | -13 | 4 | 5 | 7 | *UKT 3/25* | 312 | 1 | 1 | 1 | 0 | 0 | 20 | -2 |
| UKTi Jul24 | -0.35 | -11 | -11 | 2 | 4 | 6 | *UKT 3/25* | 310 | 0 | 0 | 0 | -1 | -1 | 29 | -1 |
| UKTi Nov27 | -0.20 | -10 | -11 | 3 | 4 | 6 | *UKT 12/27* | 322 | 1 | 1 | 1 | 0 | -1 | 29 | -1 |
| UKTi Mar29 | -0.09 | -10 | -11 | 3 | 4 | 5 | *UKT 12/30* | 326 | 1 | 1 | 0 | 0 | -1 | 24 | -2 |
| UKTi Jul30 | -0.13 | -10 | -10 | 2 | 3 | 5 | *UKT 6/32* | 336 | 1 | 1 | 0 | -1 | -1 | 22 | -8 |
| UKTi Nov32 | -0.09 | -9 | -10 | 2 | 3 | 5 | *UKT 6/32* | 332 | -0 | 0 | 0 | -1 | -1 | 30 | -1 |
| UKTi Mar34 | -0.05 | -9 | -9 | 2 | 3 | 4 | *UKT 9/34* | 336 | -0 | 0 | 0 | -1 | -2 | 26 | -1 |
| UKTi Jan35 | -0.02 | -8 | -9 | 1 | 3 | 4 | *UKT 3/36* | 336 | -0 | -0 | -1 | -1 | -2 | 29 | -1 |
| UKTi Nov37 | -0.04 | -8 | -8 | 2 | 3 | 4 | *UKT 12/38* | 340 | -1 | -1 | 0 | -1 | -1 | 29 | 0 |
| UKTi Mar40 | -0.02 | -7 | -7 | 2 | 2 | 3 | *UKT 9/39* | 341 | -2 | -2 | 0 | -1 | -2 | 26 | 3 |
| UKTi Nov42 | -0.04 | -6 | -7 | 2 | 2 | 3 | *UKT 12/42* | 346 | -2 | -2 | 0 | -1 | -2 | 25 | 2 |
| UKTi Mar44 | 0.00 | -7 | -7 | 1 | 2 | 3 | *UKT 1/44* | 349 | -2 | -2 | 0 | -1 | -2 | 21 | 1 |
| UKTi Nov47 | -0.03 | -6 | -6 | 1 | 2 | 3 | *UKT 12/46* | 348 | -3 | -3 | 0 | -1 | -2 | 24 | 2 |
| UKTi Mar50 | -0.03 | -6 | -6 | 1 | 2 | 2 | *UKT 12/49* | 347 | -3 | -3 | 0 | -1 | -2 | 23 | 2 |
| UKTi Mar52 | -0.01 | -6 | -6 | 1 | 2 | 2 | *UKT 7/52* | 347 | -3 | -3 | 0 | -1 | -2 | 23 | 2 |
| UKTi Nov55 | -0.05 | -7 | -7 | 1 | 2 | 2 | *UKT 12/55* | 348 | -2 | -2 | 0 | -1 | -2 | 23 | 2 |
| UKTi Mar62 | -0.06 | -7 | -7 | 1 | 1 | 2 | *UKT 1/60* | 348 | -2 | -2 | 0 | -1 | -2 | 22 | 2 |
| UKTi Mar68 | -0.06 | -7 | -7 | 1 | 1 | 1 | *UKT 7/68* | 350 | -3 | -3 | 0 | -1 | -2 | 20 | 3 |

Source: Citi Research

# Summary of Recent Publications

| Date | Publication | Topic | Page | Region |
|---|---|---|---|---|
| 23-Oct-13 | NOTE | EMU End-October Inflation-linked Index Projection | - | EUR |
| 23-Oct-13 | NOTE | Rates Strategy: ECB's Comprehensive Assessment & EMU fixed income markets | - | EUR |
| 22-Oct-13 | NOTE | European End-October Month-end Index Projections | - | EUR |
| 21-Oct-13 | NOTE | European Flow Monitor: Rebound in demand for the core; led by Germany | - | EUR |
| 17-Oct-13 | European Weekly | ECB: What if excess liquidity goes to zero? | 8 | EUR |
| | | EMU: Trades for upcoming cash flows | 11 | EUR |
| | | Sovereign bond rating methodology | 14 | EUR |
| | | UK Rates: 10s30s surprisingly well behaved | 19 | UK |
| | | EUR Vol: A Look at the 20y Vol Term Structure | 21 | EUR |
| 17-Oct-13 | NOTE | Weekly Supply Monitor: Euro, UK and US Supply Outlook | - | Global |
| 16-Oct-13 | NOTE | Rates Strategy: Refinements to Moody's methodology enhances transparency | - | EUR |
| 14-Oct-13 | NOTE | European Flow Monitor: Growing demand for Finland | - | EUR |
| 10-Oct-13 | European Weekly | UFR: Missing the Point | 8 | EUR |
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| 10-Oct-13 | NOTE | Weekly Supply Monitor: Euro, UK and US Supply Outlook | - | Global |
| 7-Oct-13 | NOTE | Flow Monitor: Divergence in the core: Germany losing out to the rest of the core | - | EUR |
| 3-Oct-13 | European Weekly | Bunds: When Does Inflation Matter? | 8 | EUR |
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| | | Inflation: fade the rally in BTPei break-evens | 15 | EUR |
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## Notes

## Notes

# Appendix A-1

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