European Rates Weekly

Will Banks Offer Bonds to the ECB?

- **Will Banks Offer Bonds to the ECB?** European banks hold High Quality Liquid Assets for regulatory purposes. At the same time, they are/were sizeable investors in the EGB markets, with domestic holdings of 24% of Citi's EGBI. As we move into QE, what are the odds that banks will offer paper in exchange for Mr Draghi's cash?

- **A long March to QE:** QE was meant to be supportive for EMU spreads. Over the medium term, we still think it will be. However, fragile sentiment given event risk from Greece probably means a softer tone in the periphery will continue for now. March now seems a long time away.

- **How 'open-ended' is QE really?** We compare the market size of eligible bonds for QE with assumed QE purchases based on the capital key. For some countries, including Germany, there won't be much left to buy in any future extension of QE.

- **UK - have gilts joined the EMU periphery?** Bond markets are being driven more by flow and the scarcity of yield than fundamentals. This helps to explain the recent high correlation between gilts and the EMU periphery. Yield-grab in the UK is also supported by LDI. This could propel further gilt-Bund narrowing and flatter curves.

- **UK inflation – it's déjà vu all over again:** We revisit the 10s30s break-even inflation curve which, just like last summer, has corrected steeper having temporarily dislocated from the level of break-evens. We also look ahead to next week's IL24 auction and identify relative value opportunities on the real yield curve.

- **EUR vol:** The now expanded asset purchase program and potential further cuts of the depo facility rate argue for a material risk of EUR short swap rates diving deeply into negative territory later this year. Strategy: Buy EUR 1y1y - 0.10% receiver, for 4 cents (ref: +0.045% ATMF).

- **QE implications for European supras:** The ECB will purchase €5.9bn per month in a market which is expected to shrink. We look at eligible debt outstanding, net supply developments and the repercussions for secondary market levels.

- **Covered bond supply and investor dynamics:** January 2015 supply was slightly lower than in the previous years. This might also have been a main driver for "real investors" being more involved in new deals than the less dominating ECB.

- **EMU/UK RV:** We highlight four relative value trade opportunities in the sub-10yr sector of the Italian, French and gilt yield curves.

- **Supply:** EGB supply next week comes from Finland (up to €1bn), France (estimated €9.5bn) and Spain (estimated €5bn). There is no UST supply scheduled for next week. In the UK, the DMO will issue £1.2bn of the IL24 next Wednesday.

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

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ECB: Will Banks Offer Bonds?

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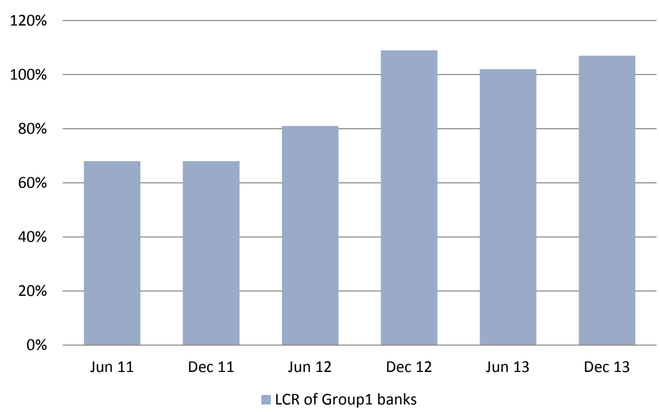
European banks hold high-quality liquid assets (HQLA) for regulatory purposes. At the same time, they are/were very sizeable investors in the EGB markets, with domestic holdings of around 24% of Citi's EGBI. As we move into QE, what are the odds that banks will offer paper in exchange of Mr Draghi's cash?

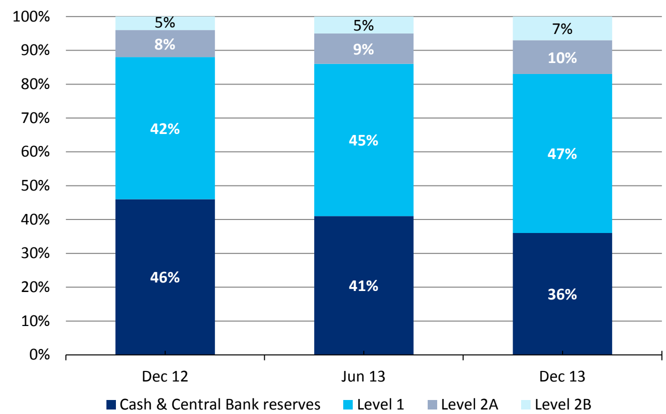
With the LCR going live in Oct-15 (60% implementation, final 100% implementation in Jan-18), the majority of European banks are already well on track to comply with this liquidity ratio. Latest data show that at the end of 2013, the average LCR of European banks was well above the 2018 threshold of 100% (Figure 1). For internationally active banks with Tier 1 capital in excess of EUR 3bn, the overall LCR shortfall stood at EUR 18.4bn subject to the 60% threshold applicable as of Oct-15. We expect that during the past 12 months the LCR shortfall continued to decrease steadily and will eventually vanish until the end of this year.

Figure 1. European banks are ready for LCR-implementation



Source: EBA, Citi Research

Figure 2. LCR composition through time



Source: EBA, Citi Research

Furthermore, the latest available numbers on the composition of liquidity buffers (end 2013) show a gradual shift away from cash and central bank reserves (Figure 2) and into Level 1 assets, i.e. sovereign and SSA, but also into lower credits defined as Level 2A (covered & corporate bonds) and Level 2B assets (ABS). The EBA stresses "that sovereign bonds and covered bonds have affected the LCR most. Indeed, banks that significantly increased their LCR bought sovereign and covered bonds while their central bank reserves decreased. As a result, compared with December 2012, central bank liquidity has been less of a factor in the improvement of the LCR of EU banks."[1]

Contrary to technical reserves in the insurance and pension funds world, cash is a perfect substitute – perhaps even a superior one – for banks' HQLA. Therefore, it is entirely possible that bank ALMs decide to offer bonds to the ECB once the QE program is up and running and fill the resulting LCR-shortfall with cash.

The decision to hit ECB's bid is essentially a function of

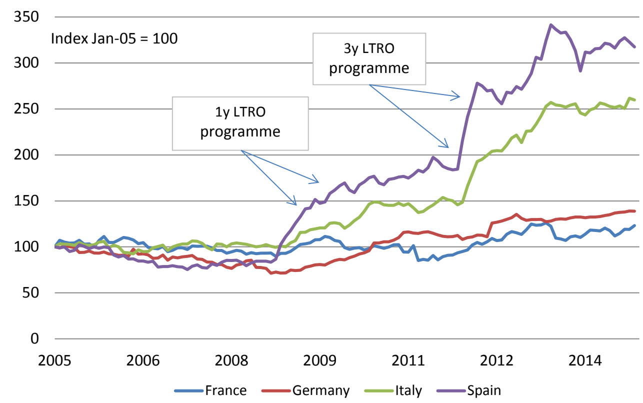
- The type of asset held in LCR, keeping in mind that cash is a 0%RW asset, and;
- The spread to ECB's deposit rate or more broadly the OIS ASW spread.

Unfortunately, we do not possess official data about the size of sovereign holdings in LCR, but we can get a flair of the approximate size of government bond holdings

[1] EBA (2014), "Basel III monitoring exercise"

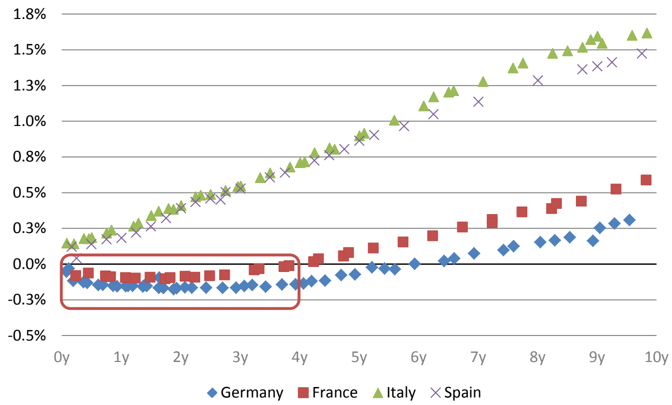
from EBA and ECB sources: The net direct exposure of banks' AFS-books stood at around EUR 275bn in 2013 in the four largest countries (France 44bn, Germany 51bn, Italy 133bn and Spain 44bn). On the other hand, Eurozone's banks hold approximately EUR 1.345 trillion in domestic EGBs at the end of 2014 (France 193bn, Germany 250bn, Italy 417bn and Spain 283bn, Figure 3), i.e. 24% of Citi's EGBI market value.

Figure 3. Domestic EGB holdings – European banks



Source: ECB, Citi Research

Figure 4. Core banks are indifferent between bonds and cash



Source: Citi Research

There are two points, we're trying to make here:

1) Holdings of EGBs across European banks are sizeable.

2) Not all banks, however, might have an incentive to hit the ECB.

This last point merits further attention, as it might have a consequence on the shape of the single yield curves within EMU. Looking at Figure 4, we note how German sovereigns are trading close to the deposit rate up to 4 years, while French bonds actually trade at comparable levels only up to 2-2.5y. On the other hand, non-core banks are most likely to stick to their current LCR holdings, at least as long as they cannot substitute loans for EGBs in their AFS books and cannot find a better yielding assets (in the same risk-weighting category) than their own domestic government bond. The deposit rate is important as banks would have to deposit the cash resulting QE back to the ECB at -20bp.

Looking at the size of the market, there is a combined outstanding volume of about EUR 695bn of German and French bonds in the two sectors of the curve discussed above. Taking into account ECB's self-imposed 25%-issue limit, the total volume on offer from French and German banks could amount to around EUR 175bn (roughly 20% more in market value terms). Of course, this number stands against the large volumes that the ECB needs to find in the market in order to complete their ambitious program and the results of our analysis in terms of the outstanding market values that would still be eligible after completion of ECB's QE1[2].

The importance of our analysis is evident in the broader context of the duration decision that NCBs might have to make when buying their respective sovereign bonds (assuming the decision about market and country risk is at their own discretion). We've highlighted the key differences between a QE-program designed around notional amounts and one designed around market risk in recent

[2] Citi Euro Rates (2015), "How open-ended is QE really?"

publications[3]. In a nutshell, the "trick" is to bypass Art.123 and concentrate QE's firepower towards non-core markets, thus lowering the average nominal and – hopefully – real lending costs in EMU. Figure 5 is just one way of constructing such a portfolio without having to finance single EMU-member states.

Figure 5. An example of dv01-based QE

Issuer	Cap Key (%)	Notional (bn)	Mod Dur	dv01 (mm)	Target Dur	Target dv01 (mm)	Incremental dv01
Austria	3.0%	6	7.8	5	3	2	**-3**
Belgium	3.8%	11	7.8	9	6	7	**-2**
Finland	1.9%	1	6.5	1	3	0	0
France	21.5%	232	7.4	171	5	116	**-56**
Germany	27.3%	238	7.1	170	4	95	**-75**
Ireland	1.8%	2	5.4	1	6	1	0
Italy	18.7%	200	6.7	134	12	240	**106**
Netherlands	6.1%	18	7.2	13	5	9	**-4**
Portugal	2.6%	2	5.5	1	6	1	0
Spain	13.4%	89	6.3	56	12	107	**51**
Total	100.0%	800	7.0	557	7.0	557	0

Source: Citi Research. *Capital keys reflect capital contribution of EMU-10 to the ECB.*

Strategy & Trade Ideas

We maintain our view that the ECB should implement a strategy of buying core EGBs with an average duration that is lower than EGBI's and buying non-core EGBs with a higher duration. Core banks are likely to be one source of liquidity at the front-end of their curves, while we're not sure that the insurance and pension industry will have strong incentives to play such a role.

[3] Citi Euro Rates (2015), "QE announced: What happens now?"

EGBs: A long March to QE

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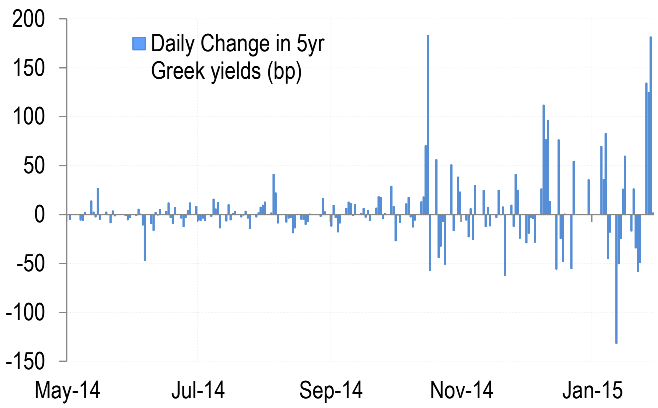
The tone in the European government bond market has been decidedly softer this week, with developments in Greece seemingly eclipsing the otherwise positive effects of ECB QE. However, actual bond purchases aren't set to begin until March – which given the prospect of near-term event risk – seems rather a long time away. Although over the medium-term, €60bn a month of bond buying is likely to tighten EMU spreads in our view, we don't rule out a slightly softer tone over the near-term.

Wasn't QE meant to support EMU spreads?

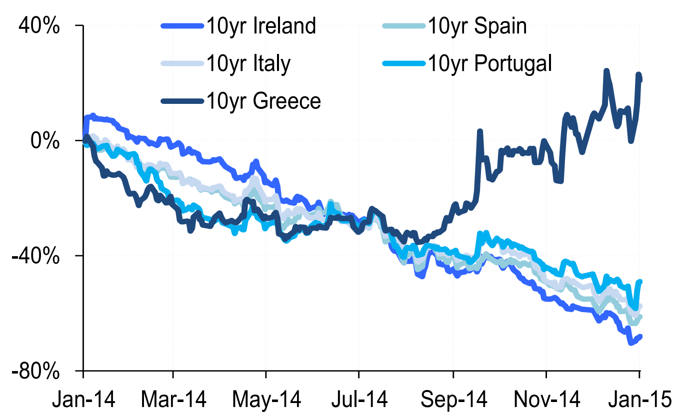
Event risk from Greece: The pick-up in volatility in Greek yields has been notable. This week alone, 5yr Greek yields are cumulatively 452bp higher, with a 182bp move higher yesterday (Figure 6). The tone in the periphery has also been slightly softer, but we would continue to note that contagion so far remains relatively limited (Figure 7). We discuss this in more detail in our recent *Euro Rates Strategy - Greece: Uncertainty remains, but so do ECB supports*.

Figure 6. The pick-up in volatility in Greece (daily 5yr yield changes, bp)



Source: Citi Research

Figure 7. Percentage change in 10yr yields over the last 12m



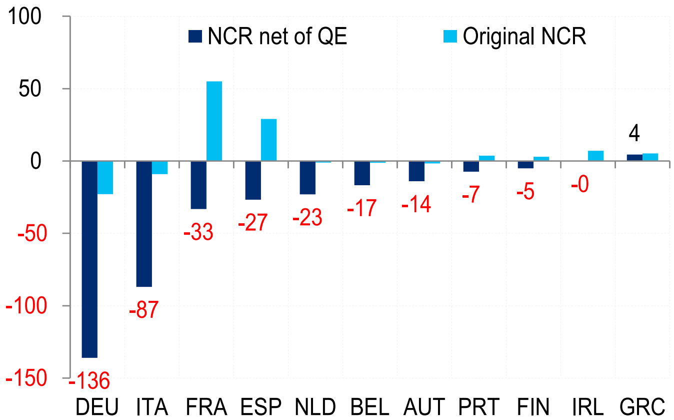
Source: Citi Research

True, there has been some anecdotal evidence of selling flows, but overall we believe spread moves reflect various factors in addition to the clear event risk emanating from Greece:

- **Supply:** First is the return of supply - which in core markets has unfortunately seen weak auctions on 30yr+ bonds outside the criteria of ECB QE.
- **Risk appetite:** Second, a slightly weaker environment this week is not specific to the EMU periphery alone when one considers moves in the euro stoxx index in the equity market and the iTraxx indices in credit.
- **The extent of rally already:** Third, the lack of significant rally in the week after the ECB announces the largest outright bond buying programme in its history must be placed in the context of the significant move lower in yields that had already occurred.

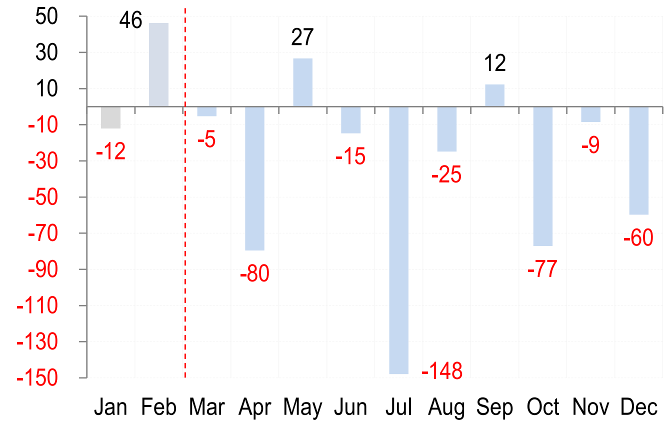
QE and EMU markets – purchases start in March: Over the medium term, we continue to expect tighter spreads and flatter credit curves given actual purchases by the ECB which begin in March. In terms of the impact on supply alone, the €400bn or so of EMU government purchases this year drastically alters the NCRs of each sovereign. Indeed, it makes most NCRs negative over 2015 with significant changes in the profiles of Germany, Italy, France and Spain (Figure 8). At the overall EMU-11 level, only two months now have a positive NCR after ECB QE purchases are taken into account (Figure 9). Further details can be found on page 10.

Figure 8. How QE affects net cash requirements in 2015 (€bn)



Source: Citi Research

Figure 9. Monthly EMU-11 NCR taking into account ECB QE (€bn)



Source: Citi Research

Reasons to remain cautious on Greece

Headline and event risk: However, in the meantime, the intrinsically political, and rather unpredictable, set of event risk emanating from Greece is likely to continue to weigh on market sentiment - and with it the wider environment of European risk appetite in our view. Ever since the failed parliamentary votes to elect a new Greek President failed in December, we have been cautious on the Greek market and this is how we remain (*Greece: Failed Presidential Poll Reinforces Political Uncertainty*).

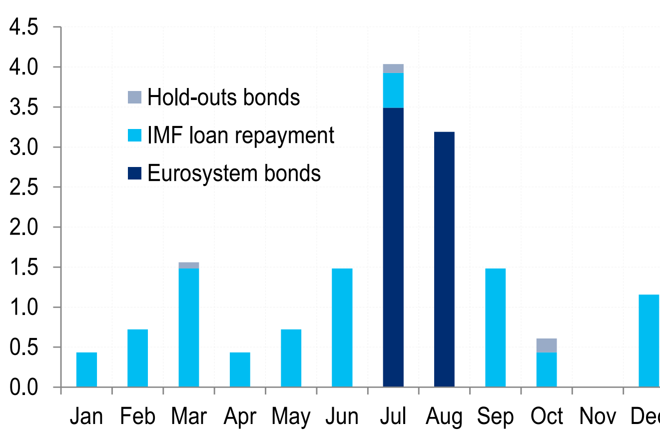
Banking sector and equity market: As noted by our equity analysts, Greek banks remain dependent on central bank funding to the tune of around €56bn at the end of December (15% of total assets) and deposit outflows have been gathering attention (*Athens Banks Day - The Best of Greece 2015 Field Trip, Day 2*). The policy uncertainty at present and the actual intentions to halt privatization and increase the minimum wage (*Europe - Sovereign Debt Update*) are clear idiosyncratic factors which help explain the sell-off both in Greek equity and debt markets (Figure 10).

Funding requirement and dependency on official funding: In terms of the funding requirement this year Greece has around €6.7bn of maturing debt held at the ECB under its SMP programme and around €8.6bn in IMF loan maturities. The maturity profile is shown in Figure 11. Without market access, successful Troika negotiations are important for official support to meet the funding requirement.

Figure 10. The sell-off in Greek equity and debt

Source: Citi Research, Bloomberg

Figure 11. Greece's bond debt maturities in 2015, €bn



Source: Citi Research, Citi Economics, Bloomberg

Tensions in Troika negations likely to remain elevated: Although the Greek PM has stated "*there will neither be a catastrophic clash, nor will continued kowtowing be accepted*" (Bloomberg reports), the euro area authorities focus on structure reforms and Syriza's focus on anti-austerity measures (*Europe - Sovereign Debt Update*) mean that Troika negotiations are likely to be lengthy. As already apparent, this is likely to be accompanied with a relatively high degree of headline risk. The current EFSF programme ends on 28th February, having already been extended for 2 months. We note that the actual EFSF loans have a relatively high weighted average maturity of over 30yrs (*Euro SSA Strategy - A closer look at EFSF guarantee structures for bondholders*). Hence debt relief – in whatever guise it may come – could involve swapping IMF loans for new ESM aid and/or some form of credit line. Either way, in any event of a *new* assistance programme it would likely be the ESM that is involved, not the EFSF.

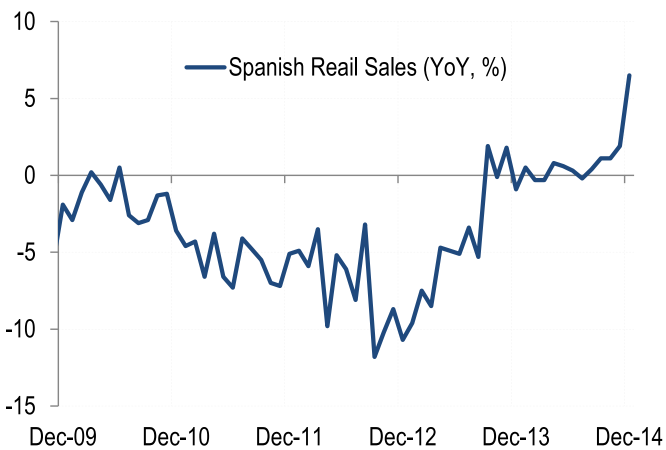
Rating agencies – S&P now puts Greece on negative watch: The policy uncertainty is likely to weigh on near-term economic performance and do little to sooth liquidity/refinance risk as already noted by the rating agencies. S&P yesterday put its B rating of Greece on "negative watch" in an unscheduled rating action. Moody's has already noted that the "*Election Outcome is Credit Negative Because It Prolongs Financing, Liquidity and Economic Growth Risks*" in a commentary piece so entitled (Moody's Investor Service, 26th January).

Premature to stay that volatility subsides: All in all, we therefore remain cautious on Greece. Although debt relief is mostly likely to focus on official loans (given they form the vast majority of Greece's debt), we believe it is premature to call for a subsidence in Greek yield volatility. Spill-over effects – as well as the other drivers analysed above – may affect the wider periphery, but overall, we continue to believe wider/significant contagion to be relatively limited.

Should dips be bought in the periphery now?

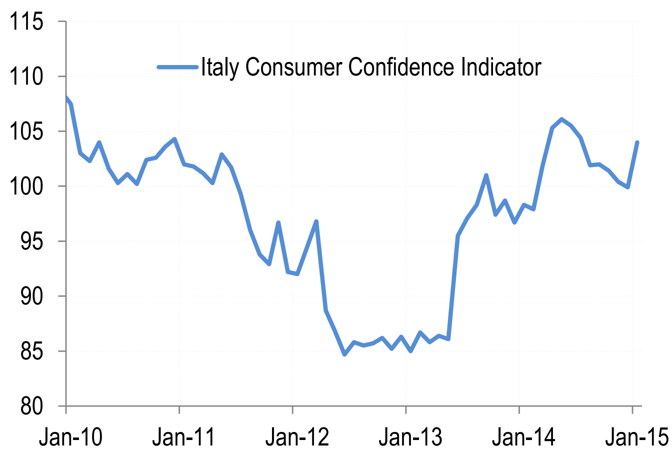
Don't miss the ongoing fundamental positives: This therefore leads to the question: should the dips in periphery be bought? For us, this is currently a function of volatility tolerance as ultimately we believe ECB buying will driver spreads tighter. We would also not ignore the ongoing fundamental improvements and positive data surprises that may not have caught the headlines in quite the same way they might have done in other circumstances.

Figure 12. Spanish retail sales rise strongly in December (YoY, %)



Source: Citi Research, Bloomberg

Figure 13. Strong rise in Italian confidence data in January



Source: Citi Research, Bloomberg

Spain and Italy: For one, there was a rapid rise in Spanish retail sales this week which rose to 6.7% YoY for the December reading (Figure 12). This was the largest YoY increase since the start of the series in 2003. Second, amid the various confidence data released recently, there has been a healthy rise in Italian indictors, with consumer confidence up to 104.0 (expected 100, previous 99.7, Figure 13). Although there are clearly other drivers dominating the market tone, fundaments must also be taken into account for a more strategic investor horizon.

Conclusion: balancing ECB supports & near-term event risk

To conclude, the outlook is therefore largely dependent on ECB QE intervention over the medium term and the near-term event risk emanating from Greece (*Euro Rates Strategy - Greece: Uncertainty remains, but so do ECB supports*.) Overall, we remain cautious on the Greek market and expect Troika negotiations to be lengthy. Together with the impact this is likely to have on wider risk appetite and the return of supply, a slightly softer tone in the periphery cannot be ruled out in the days and weeks ahead. However, ultimately ECB supports remain in place and the significant impact QE has on monthly sovereign NCRs are likely to be very supportive of periphery markets over the medium term.

How 'open-ended' is QE really?

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In this article, we look at how many European Government Bonds are available for the ECB to buy (using the limits announced) compared with what they intend to buy between March 2015 and September 2016. For some countries, including Germany, there won't be much left to buy in any future extension of QE, and certainly not according to the capital key. This raises doubts over the 'open-endedness' of QE.

Eligible bonds vs QE purchases

The table below compares the market size of eligible government bonds for QE (25% of 2-30yr) with assumed QE purchases based on the capital key. This is just a snapshot based on current market prices, although we do adjust for estimated net supply within the 2-30yr bucket over the QE period (Figure 14).

Figure 14. Eligible bonds (€bn)

		A			B	C = A + B	25% of C	
Country	**0-2yrs**	**2-30yrs**	**30yr+**	**Total (€bn)**	**Net supply 2-30yr in QE***	**Total 2-30yr during QE**	**Eligible outstanding (€bn)**	**Eligible market value (€bn)**
Germany	323	**782**	7	1112	120	903	226	**276**
France	254	**1058**	39	1351	167	1225	306	**378**
Netherlands	72	**242**	5	319	4	246	62	**75**
Italy	366	**1235**	7	1607	90	1325	331	**396**
Spain	165	**540**	1	706	130	670	168	**207**
Belgium	45	**251**	5	301	-4	247	62	**80**
Austria	25	**160**	3	188	0	160	40	**50**
Finland	12	**67**	0	79	2	69	17	**20**
Ireland	10	**84**	0	95	12	97	24	**30**
Portugal	13	**79**	0	92	3	82	20	**24**
Greece	0	**34**	0	34	12	46	12	**7**
Total	**1284**	**4533**	**68**	**5885**	**538**	**5071**	**1268**	**1543**

Source: Citi Research, Bloomberg.* *Gross supply in 2-30yrs until Sep 2016 net of bonds dropping below 2yrs of maturity.*

For EMU-11, we estimate that there will be around €1.5trn eligible bonds (market value) of which the ECB will buy around €800bn (Figure 15). This implies around €750bn of eligible bonds remaining at the end of September 2016. However, for some countries, including Germany, there won't be much left to buy in any future extension of QE, and certainly not according to the capital key (Figure 16).

Figure 15. Eligible bonds vs assumed QE purchases (snapshot of market value, €bn)

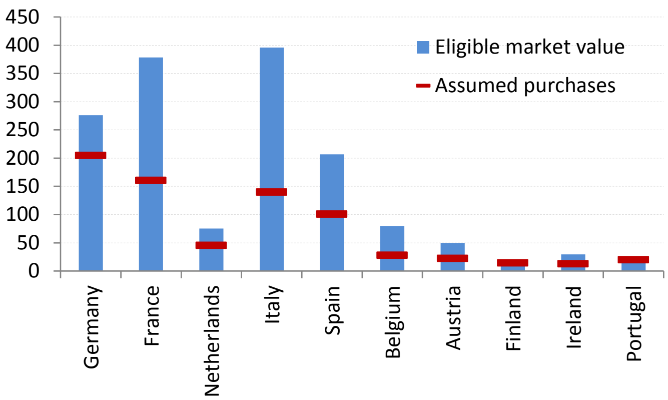
Country	**Capital keys**	**Assumed QE purchases***	**Eligible market value (25% of 2-30yrs)**	**Excess eligible amount**	**Total market value****	**Issuer Limit (33% of mkt value)**
Germany	25.6%	215	**276**	**61**	1316	434
France	20.1%	169	**378**	210	1792	591
Netherlands	5.7%	48	**75**	**28**	400	132
Italy	17.5%	147	**396**	249	1929	637
Spain	12.6%	106	**207**	101	935	308
Belgium	3.5%	29	**80**	50	386	127
Austria	2.8%	23	**50**	**26**	237	78
Finland	1.8%	15	**20**	**5**	96	32
Ireland	1.6%	13	**30**	**16**	123	41
Portugal	2.5%	21	**24**	**3**	122	40
Greece	2.9%	2	**7**	6	22	7
Total	**96.9%**	**788**	**1543**	**755**	**7358**	**2428**

Source: Citi Research, Bloomberg. * *Assuming €43bn/month of government bond purchases. We expect Greek purchases of around €1-2bn, the rest of EMU-11 according to the capital key **Adjusted for issuance/redemptions during QE. Capital keys reflect capital contribution of only Eurozone to the ECB.*

This raises doubts over exactly how 'open-ended' QE is in reality. The ECB could change the terms of QE or simply buy other assets (see *Euro Economics Weekly - QE(1) Is Here — What Else Could The ECB Do?*). But, this does suggest that QE, in the current form, is unlikely to be extended beyond September 2016.

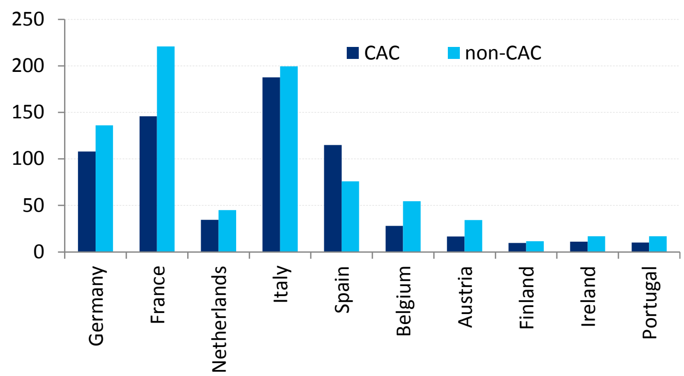
Figure 17 shows the split of eligible bonds with and without collective action clause (CAC). Note that Mr Draghi referred to CAC during Q&A session specifying that "*The 25% limit, by the way, is the one foreseen in order not to be a blocking minority in the collective action clause assemblies, basically, bond holders' assemblies, and it's the basis for us to be able to say, there is going to be pari passu.*"

Figure 16. Potential QE buying vs eligible bonds (€bn)



Source: Citi Research, Bloomberg

Figure 17. Split of eligible bonds over QE period with and without CAC (outstanding amount, €bn)



Source: Citi Research, Bloomberg

For an analysis of how various local markets reacted to a QE announcement by major central banks for a context to the ECB announcement, please have a look at *Reactions to QE announcements around the world*.

Net cash requirement adjusted for QE

Figure 18 shows EMU-11 net cash requirement over 2015, adjusted for assumed ECB purchases. The QE adjustment makes the net cash requirement negative for all the EMU-11 issuers in 2015, except Greece. Germany stands out as having the most supportive cash flow profile at -€136bn, followed by Italy (-€87bn).

Figure 18. EMU-11 net cash requirement for 2015 adjusted for QE purchases (€bn)*

	A	B	A - B	C	A - B - C	D	A - B - C - D
Country	**Gross Supply**	**Coupons**	**Net Supply**	**Redemptions**	**NCR**	**Assumed Purchases**	**NCR net of QE**
DEU	159	27	132	155	-23	113	-136
FRA	214	41	173	118	56	89	-33
NLD	48	9	39	37	2	25	-23
ITA	243	56	187	197	-10	77	-87
ESP	142	29	113	84	29	56	-27
BEL	33	11	21	22	-1	15	-17
AUT	18	7	11	13	-2	12	-14
FIN	10	2	8	5	3	8	-5
IRL	14	4	9	2	7	7	-0
PRT	14	4	9	6	4	11	-7
GRC	6	1	5	0	5	1	4
EMU-11	**900**	**191**	**709**	**639**	**70**	**415**	**-345**

Source: Citi Research, DMOs, Bloomberg. **2015 purchases are estimated at €430bn across the whole EMU-19, €415bn of which are assumed to be in EMU-11*

On a monthly basis, the resulting net cash requirement (NCR, assuming country purchases in line with the capital keys) is very supportive for Bunds for most of 2015 (Figure 19). In contrast, the NCR is very unsupportive for France in four months in 2015 and for Italy in three months.

Figure 19. Net cash requirement of EMU-11 on a monthly basis (€bn, absolute changes greater than €10bn highlighted)*

Month	DEU	FRA	ITA	ESP	NLD	BEL	AUT	FIN	PRT	IRL	GRC	EMU-11
Jan	**-15**	6	-3	-10	-9	5	0	4	6	4	0	**-12**
Feb	-4	**21**	3	**11**	9	4	4	0	0	-1	-1	**46**
Mar	**-16**	**12**	**15**	0	1	**-15**	-2	-1	-0	-1	2	-5
Apr	**-15**	**-23**	**-11**	**-19**	-10	1	-0	-1	-1	-1	-0	**-80**
May	-1	9	**12**	5	2	1	-0	-1	-1	-1	2	**27**
Jun	**-15**	**12**	**-20**	9	2	-0	-0	-1	-2	-0	0	**-15**
Jul	**-28**	**-30**	**-32**	**-24**	**-16**	2	**-15**	-7	-0	0	1	**-148**
Aug	1	-9	**-14**	1	-3	-2	-1	3	-1	-1	-0	**-25**
Sep	**-10**	**10**	**15**	7	1	**-13**	2	-1	-0	0	1	**12**
Oct	**-13**	**-31**	**-11**	**-13**	0	1	-1	0	-7	-2	-0	**-77**
Nov	1	-7	-9	5	0	1	-0	-1	-0	3	-0	-9
Dec	**-21**	-2	**-30**	1	-3	-2	-1	-1	-1	-1	-0	**-60**
Total	**-136**	**-33**	**-87**	**-27**	**-23**	**-17**	**-14**	**-5**	**-7**	**-0**	**4**	**-345**

Source: Citi Research, DMOs, Bloomberg. **€43bn/month, split across countries by capital key*

Have gilts joined the EMU periphery?

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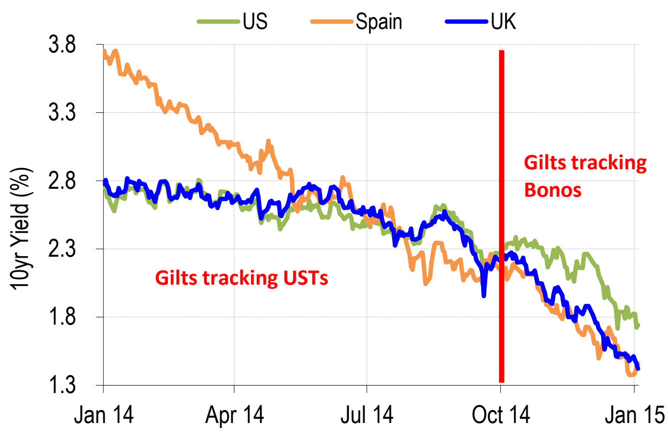
Global rates markets have been highly correlated in the rally. But, it is notable that over the last three months 10yr gilts are 25bp richer to both Bunds and Treasuries and just 5bp richer to Spain. The strong correlation to Spain over the last few months, and the de-coupling from Treasuries, is illustrated in Figure 20. Over this period, 10yr UK-Spain yield has also traded in a historically tight trading range of 30bp with an average differential of 6bp (Figure 21). It would seem, then, that gilts have converged with EMU periphery markets. Can this last?

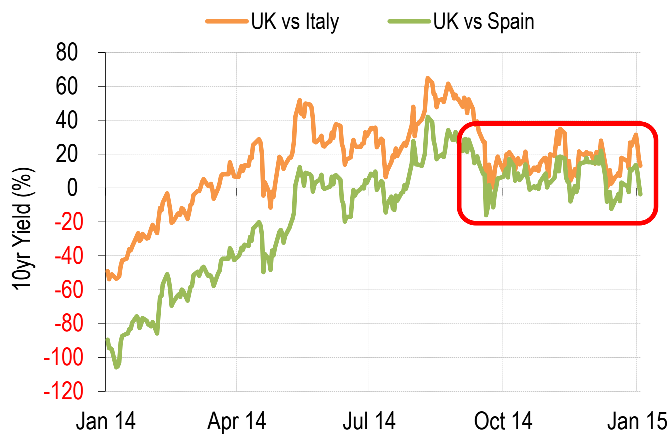
In recent years, gilts have been driven by very different factors to the EMU periphery. This is likely to again be the case over the medium-term. However, current market dynamics could result in a much closer relationship in the near-term.

Figure 20. Gilts have de-coupled from USTs & coupled with Bonos



Source: Citi Research, Bloomberg.

Figure 21. Historically tight range between gilts and EMU periphery



Source: Citi Research, Bloomberg.

Competing for the attention of the yield hungry

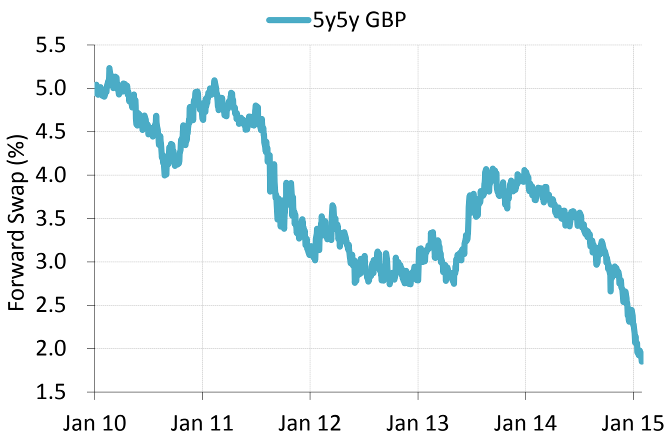
Bond yields are arguably not being driven by fundamentals or traditional drivers of valuations. Rather, yields are being driven by flow and the scarcity of yield. The announcement by the ECB that they will expand QE purchases to €60bn/month, largely euro sovereign bonds, from March is the dominant driver at the moment. Yield is already sparse among core curves. Investors constrained to euro-denominated assets are increasingly looking to extend further out along the curve and into periphery markets to pick-up yield. For those unconstrained by the currency, selling core euro government bonds (either due to the lack of yield or due to fears of further euro depreciation) and buying gilts and Treasuries is also likely to grow as a theme. Indeed, this is what the ECB is hoping for. In this context, it is easy to make the connection between the EMU periphery markets and gilts; they are competing for the attention of the yield hungry.

The flattening juggernaut

The intensity of the yield-grab environment can also be seen in the flatness of the gilt curve. While the rally in gilts has been partly driven by a reassessment of the likely path of policy rates over the coming years, the curve has still bull-flattened. The rapid decline in the 5y5y GBP swap rates illustrates the strong performance of long-end yields (Figure 22). Yield-grab in the UK context is being supported by ongoing LDI demand for the long-end. Pension fund deficits may be ballooning again as yields fall, but hedging flows are likely to remain prevalent as schemes adjust to a lower-for-longer yield environment.

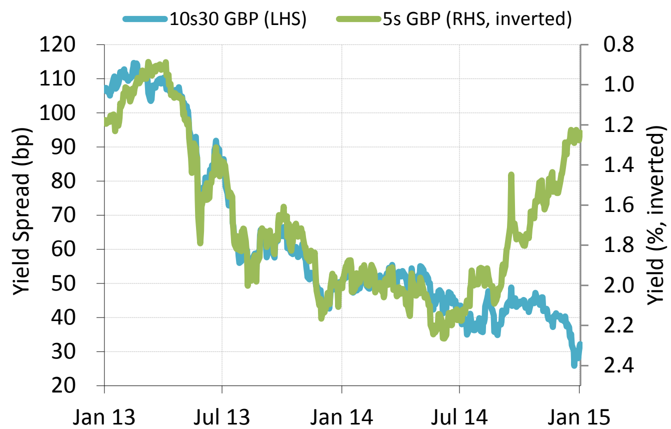
This LDI 'stop-in' is one contributor to the relative flatness of the 10s30s curve. Historically, 10s30s has been reliably directional with the front-end. However, as rate hike expectations have been pushed back and front-end yields have fallen, 10s30s has not steepened as it might normally be expected to (Figure 23). Again, this highlights the strength of the yield-grab at a global level, reinforced by domestic demand considerations.

Figure 22. Forward yields continue to fall sharply



Source: Citi Research, Bloomberg.

Figure 23. The 10s30s curve has lost its usual directionality



Source: Citi Research, Bloomberg.

Will it ever end?

The yield-grab environment appears to be well established and has been enhanced by the ECB's version of QE which went further than widely anticipated. This means even more money chasing even less yield. Long-end yields look fundamentally mispriced, but that doesn't matter in such an environment. However, it does suggest that when the market turns, it could be sharp and sudden. The near-term catalyst for a sell-off, however, is not immediately obvious. Inflation is falling and UK policy rates seem set to be on hold for another year. BoE Governor Carney is already making noises that the front-end has gone too far, but the market may not be so interested given the flip-flopping of last year. It will probably take unexpectedly strong domestic wage growth or an early lift-off from the Fed to put the UK market in bearish mode. In the absence of such drivers, the yield-grab rally is likely to dominate.

How to position

We ask whether gilts have joined the EMU periphery with our tongues in our cheeks. However, the recent price action does further highlight how involved gilts are in the ECB-inspired yield-grab. The risk-reward of fading this seems poor:

- **2s10s curve:** While bear-steepeners seem popular in some quarters, we still believe that the risk-reward favours further flattening (beyond the forwards).
- **Vs Bunds:** We are wary of fading the recent outperformance of gilts vs Bunds. Once QE gets underway, further spread compression seems likely in the absence of a catalyst for higher long-end yields.
- **Vs Treasuries:** Over the longer-term gilts are likely to be most closely correlated with Treasuries. The domestic yield-grabbers are helping gilts to outperform Treasuries for now, but over time we expect the differential to close to around flat as Treasuries increasingly benefit from reallocation flows out of the Eurozone.

UK Inflation: It's déjà vu all over again

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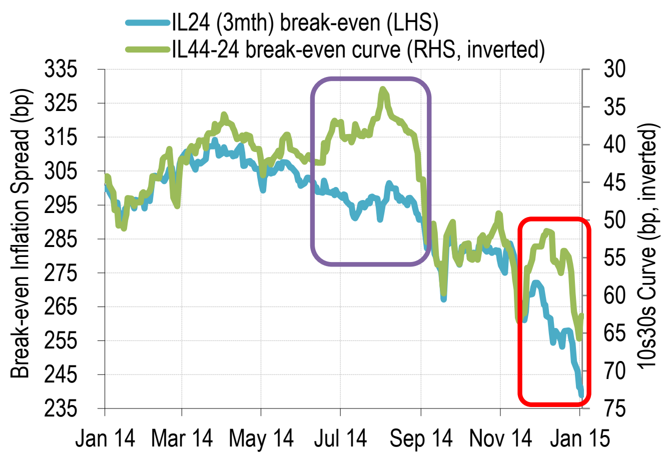
In the *Global Inflation Strategy* publication earlier this month, we discussed the flatness of the UK 10s30s break-even curve relative to the level of break-evens. In particular, we wondered if this was a case of déjà vu, which we now revisit.

The dislocation earlier this month appeared to be driven by the same factors as a similar episode last July; namely the strong bull-flattening of the nominal curve and heavy supply in linkers. Just like last summer, the 10s30s break-even curve has now re-steepened to the tune of 10bp. An update is shown in Figure 24. This largely removes the tactical opportunity to position for a re-steepening of the break-even inflation curve, which is now likely to resume its usual directionality.

10yr breaks offer value ahead of next week's auction

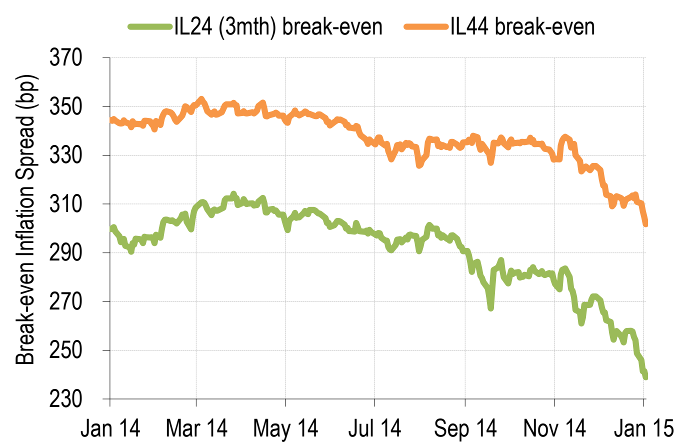
The near-term performance of the curve may be influenced by next week's auction of IL24 (4 February). 10yr break-evens may remain under pressure ahead of this supply, especially if nominal yields continue to rally. However, we note that oil prices appear to have stabilized (for the time being) and the steepness of the break-even curve may spur demand for the IL24s. The drop in the 10yr break-even of 20bp in the last two weeks certainly looks a little overdone, in our view. Once the IL24 auction is out of the way, there will then be a break of just over a month before linker issuance resumes on the 12 March with the IL37.

Figure 24. 10s30s break-even curve vs 10yr breaks



Source: Citi Research, Bloomberg.

Figure 25. 10yr breaks continue to fall sharply



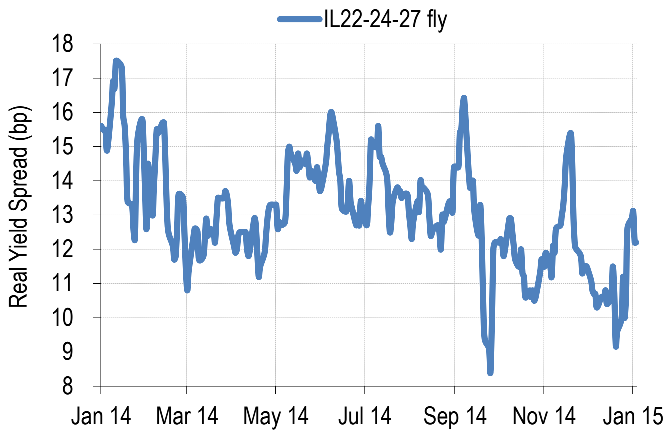
Source: Citi Research, Bloomberg.

Relative value in the IL24

Ahead of the auction, the IL24 does appear to have cheapened on the real yield curve. Figure 26 overleaf shows the IL22-24-27 real yield fly. While not at the highest historical levels, the fly has cheapened by around 3bp in the last couple of weeks. Any further concession ahead of the auction is likely to provide a good buying opportunity, in our view.

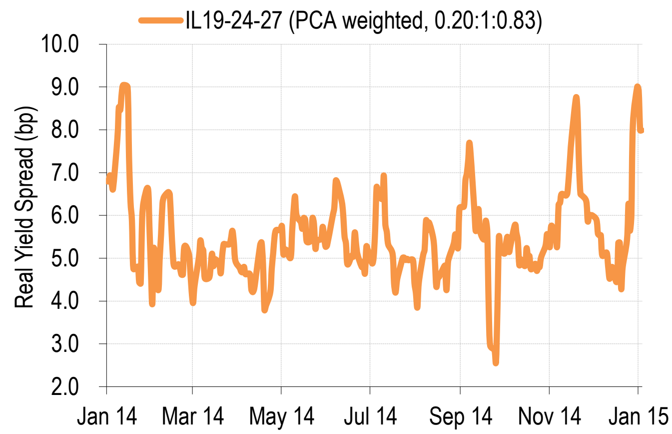
A scan of the best PCA weighted real yield flies also suggests that the IL19-24-27 fly (Figure 27, z-score 2.2) and the IL19-24-29 fly (Z-score 1.9) offer good value. This confirms that there is some cheapness in the IL24 ahead of the auction.

Figure 26. IL22-24-27 real yield fly



Source: Citi Research, Bloomberg.

Figure 27. IL19-24-27 real yield fly using PCA weights



Source: Citi Research, Bloomberg.

Conclusion – IL24 only medium linker supply in Q1

The IL24 auction on Wednesday is the only medium linker supply this quarter. 10yr real yields are historically rich, but have cheapened a little ahead of the auction. In contrast, 10yr linker asset-swaps are historically cheap, but have richened a little ahead of the auction. Break-evens continue to fall sharply, but are likely to attract interest at these levels, in our view, especially given the steepness of the break-even curve. Relative value considerations are also supportive for the auction.

Swaptions & Negative Strikes

A Quick Intro for the Layman

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EUR rates after QE: With Schatz trading around -18bp and EURIBOR 1M having fixed in negative territory, what are the chances of QE driving (font-end) rates in the Eurozone into negative territory? In our view, if resulting asset inflation will not lead to sustained ripple effects on real growth and CPI inflation, with additionally cuts of the depo rate potentially still occurring, there is a material risk for rates to dive *deeply* into negative territory at the front-end.

In turn, trading of swaption receivers (on short swap tenors) with negative strikes would become a common occurrence in the interest rate marketplace.

We reason below that despite various headlines warning about the complexities brought about by negative rates, this is not the case with respect to option pricing and trading.

Negative Swiss swap rates: will EUR swap rates get there?

In Switzerland spot swap rates are currently negative up to nine year maturity as shown in Figure 28. The front-end dropped below zero in mid-December with the rally having accelerated after SNB cut the depo rate to -0.75% two weeks ago.

Figure 28. Outcome of SNB policy: “Deeply” negative CHF forwards

	1y	2y	3y	4y	5y	6y	7y	8y	9y	10y	15y	20y	25y	30y
spot	-0.83	-0.69	-0.68	-0.63	-0.54	-0.40	-0.27	-0.16	-0.05	0.05	0.41	0.67	0.81	0.91
1m	-0.82	-0.68	-0.67	-0.62	-0.52	-0.39	-0.26	-0.14	-0.03	0.06	0.42	0.68	0.82	0.91
3m	-0.81	-0.68	-0.66	-0.60	-0.49	-0.36	-0.23	-0.11	0.00	0.09	0.45	0.70	0.83	0.93
6m	-0.80	-0.67	-0.65	-0.57	-0.45	-0.31	-0.18	-0.06	0.04	0.13	0.48	0.72	0.85	0.95
1y	-0.76	-0.65	-0.60	-0.49	-0.34	-0.20	-0.07	0.04	0.13	0.22	0.55	0.78	0.90	0.98
2y	-0.76	-0.57	-0.44	-0.26	-0.11	0.02	0.13	0.23	0.31	0.39	0.70	0.88	0.98	1.06
3y	-0.57	-0.33	-0.13	0.02	0.16	0.27	0.36	0.43	0.50	0.57	0.84	0.99	1.07	1.14
4y	-0.25	0.04	0.19	0.32	0.42	0.50	0.57	0.63	0.69	0.74	0.98	1.09	1.16	1.21
5y	0.18	0.38	0.48	0.56	0.63	0.69	0.74	0.80	0.85	0.90	1.09	1.17	1.23	1.27
7y	0.62	0.76	0.81	0.85	0.90	0.94	0.99	1.04	1.08	1.12	1.24	1.29	1.33	1.36
10y	0.93	1.03	1.08	1.13	1.18	1.22	1.26	1.29	1.32	1.34	1.37	1.40	1.43	1.44
15y	1.42	1.48	1.50	1.51	1.51	1.51	1.50	1.49	1.49	1.48	1.49	1.50	1.50	1.51
20y	1.45	1.47	1.46	1.46	1.45	1.46	1.46	1.47	1.48	1.48	1.50	1.50	1.51	1.51
25y	1.45	1.49	1.50	1.51	1.51	1.51	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52
30y	1.49	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53

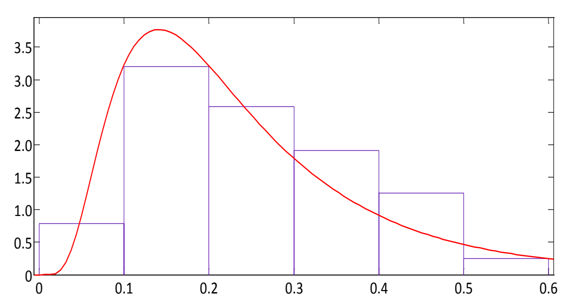
Source: Citi Research

As a result CHF forwards on 1y swap are negative up to four year maturity. For instance CHF 1y1y is trading at -0.76%.

In the meantime EUR 1y1y par swap rate is hovering around +4bp. We model the distribution of the historical realizations of the rate over the past year in Figure 29: for now, the lognormal density provides a decent fit (better -but less tractable- fits are, of course, possible).

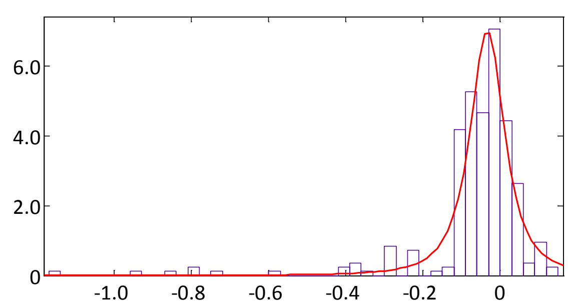
In Figure 30 we look at CHF 1y1y over the same period: it is optically obvious that lognormal shaped densities, even if shifted to allow for negative values, do not adequately fit the distribution: on the other hand, t- distributions (in essence, normal distributions but with heavier tails) seem to do the job.

Figure 29. EUR 1y1y historical density (2014 – To Date) vs. lognormal distribution: a good fit



Source: Citi Research

Figure 30. CHF 1y1y historical density (2014 – To Date) nicely fitted by a. t-distribution



Source: Citi Research

In the scenario where EUR rates, say at the front-end, decisively move into negative territory, rates distributions are likely to morph from (shifted) lognormal to normal-type ones : the point, we briefly address below, is that either case can be managed effortlessly by the market.

Option pricing and negative forwards: no big deal, just tweak the standard tools

The Black model is clearly inadequate to deal with negative rates. Firstly, the model assumes a lognormal distribution for the level of rates, which is defined for positive rates only[4].

In its original formulation, the industry standard for working with interest rate options, the SABR model[5], does not handle negative forward rates either; in fact, in the equation governing the dynamics of the underlying rate, the forward is raised to the power of the beta parameter[6]. If beta is equal to 1, the distribution of interest rates is lognormal and cannot therefore allow for non-positive rates (exactly like in the Black case mentioned above). Similarly, for 0 < beta < 1, the expression that computes the implied vol in the SABR model (equation 2.17, in the quoted Hagan's paper) runs in essentially the same computational problems faced by the plain Black formula.

Alternatively, for the case beta = 0, negative rates can be modelled using SABR via a straightforward derivation of a normal volatility: this can be achieved by just setting beta equal to zero and epsilon to 1 in the formula A.67a in the Hagan paper.

We don't think the latter approach is a popular choice among practitioners: one interpretation is that perhaps the market is inclined to believe that a flat beta gives a wrong volatility dynamics as EUR rates look set to become less volatile in rally (and vice versa).

A more common practice is to tweak the SABR model in the following manner: a "shift" or "displacement" is added in the equation governing the dynamics of the underlying rate[7]. The displacement can be thought of as the trader's view on *the strike below which receivers are worthless*. In the case of beta equal to 1, the tweak is trivial as the shift can be entered in the original SABR formula for the implied volatility (equation 2.17, mentioned above). The derivation of the implied volatility formula for other *positive* values of beta is just a bit more involved but broadly follows the same logic.

Other approaches, which we do not review here, and look at occasionally relevant arbitrage issues regarding the SABR model, do exist[8].

Conclusion and trade idea

With the deposit facility rate currently at -0.20%, current level of excess liquidity still allows for a relatively wide depo/EONIA spread (EONIA fixed at -0.029% yesterday). However, the expanded asset purchase program which has been announced at the ECB press conference last week should inject more than EUR 1trn liquidity in the system by September 2016. As a result, EONIA should move slowly but surely closer to the deposit facility rate over the following months.

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[4] http://mathworld.wolfram.com/LogNormalDistribution.html

[5] *Hagan et al., 2002. Managing smile risk*

[6] $dF_t = \alpha_t F^\beta dW_t$

[7] $dF_t = \alpha_t F^\beta dW_t$ is changed to $dF_t = \alpha_t(F + \text{displacement})^\beta dW_t$, where the displacement is the absolute value of the negative rate which is assumed by the trader as the effective lower bound.

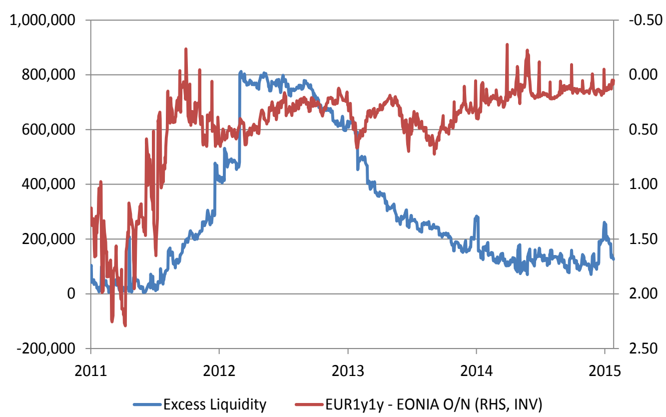
[8] e.g. *Andreasen and Huge, 2011. ZABR - Expansion for the masses*

Moreover, we cannot rule out additional deposit rate cuts: it is worthwhile reiterating that when Draghi stated last September that the *ECB had reached the policy lower bound*, he was referring to the Refi rate. As result of QE and potential further cuts of the depo facility rate, we believe there is a material risk of short swap rates to dive deeply into negative territory later this year (1y year swap vs 3s now trading around +3bp).

At historically low level of rates a further rally should be played via options, rather than outright through swaps, we believe.

Strategy: Buy EUR 1y1y - 0.10% receiver, for 4 cents (ref: +0.045% ATMF).

Figure 31. EUR short swap rates likely to turn negative with further depo cuts, as excess liquidity increases



Source: Citi Research

Figure 32. Terminal BE rate for EUR ATMF 1y1y receiver is -6bp.

	1y	2y	3y	4y	5y	7y	10y	15y	20y	25y	30y
1m	0.00%	0.10%	0.13%	0.18%	0.25%	0.40%	0.64%	0.90%	1.05%	1.12%	1.16%
3m	-0.02%	0.08%	0.12%	0.17%	0.24%	0.39%	0.62%	0.87%	1.01%	1.07%	1.11%
6m	-0.04%	0.07%	0.12%	0.17%	0.24%	0.39%	0.60%	0.84%	0.97%	1.04%	1.07%
9m	-0.05%	0.07%	0.12%	0.18%	0.25%	0.40%	0.61%	0.84%	0.96%	1.02%	1.05%
1y	-0.06%	0.07%	0.12%	0.19%	0.26%	0.42%	0.61%	0.83%	0.95%	1.00%	1.03%
2y	-0.04%	0.10%	0.17%	0.24%	0.33%	0.48%	0.64%	0.84%	0.93%	0.97%	1.00%
3y	0.01%	0.16%	0.24%	0.33%	0.41%	0.55%	0.69%	0.86%	0.93%	0.96%	0.98%
4y	0.08%	0.24%	0.34%	0.42%	0.50%	0.62%	0.73%	0.88%	0.93%	0.96%	0.98%
5y	0.18%	0.35%	0.44%	0.52%	0.59%	0.68%	0.77%	0.90%	0.93%	0.96%	0.98%
7y	0.41%	0.55%	0.61%	0.66%	0.71%	0.76%	0.82%	0.91%	0.93%	0.95%	0.97%
8y	0.49%	0.60%	0.65%	0.70%	0.73%	0.77%	0.81%	0.89%	0.91%	0.93%	0.96%
9y	0.55%	0.64%	0.68%	0.71%	0.73%	0.77%	0.80%	0.87%	0.89%	0.91%	0.93%
10y	0.59%	0.65%	0.68%	0.70%	0.72%	0.75%	0.78%	0.83%	0.86%	0.89%	0.91%
15y	0.62%	0.63%	0.65%	0.66%	0.66%	0.67%	0.66%	0.73%	0.78%	0.80%	0.80%
20y	0.51%	0.51%	0.51%	0.52%	0.52%	0.53%	0.55%	0.64%	0.70%	0.70%	0.69%

Source: Citi Research

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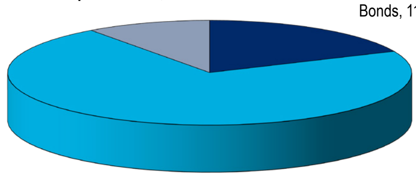
European SSA Strategy

Supra Supply and ECB QE

Supra market will be important for ECB QE: The ECB QE announcement and particularly the "known unknown" continue to be highly debated. In particular: what exactly is meant by the inclusion in QE of "certain agencies". One reading could be taken from the ECB's own categorization as outlined in "***What is an "agency" for the ECB and its QE progamme?***" This will consequently also have implications on the monthly amount of government bond purchases. What's more certain is the 12% of the additional purchases allocated to "European institutions". We therefore focus on the European supranational issuers, their outstanding debt, supply dynamics for 2015 and QE implications for secondary markets.

12% of the additional purchases: "*The Governing Council decided that purchases of securities of European institutions (which will be 12% of the additional asset purchases, and which will be purchased by NCBs) will be subject to loss sharing.*"[9] Note, the plan to purchase €60bn per month already encompasses the ABS and covered bond purchase programs (which have been around €11bn per month). For the upcoming months, we don't expect a significant drop in private asset purchases but only a slight decrease. Hence, we forecast monthly public asset purchases to total €49bn of which 12% should account for European supranational debt, i.e. €5.9bn per month (Figure 34).

Figure 33. €60bn a month breakdown scenario



Source: Citi Research

Figure 34. Assumed QE breakdown by asset class, €bn

	19 Month Total	Month	Week
QE	1140	60	14.3
ABS & Covered bonds	205.2	10.8	2.6
Supranationals	112	5.9	1.4
Governments & Agencies	822.6	43.3	10.3

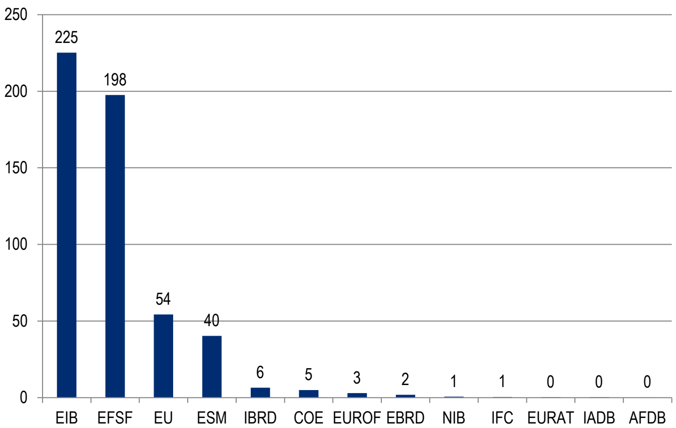
Source: Bloomberg, Citi Research

Supranational debt – eligible volume: The ECB will only focus on euro denominated debt issued by "*certain international or supranational institutions located in the euro area*". Following the technical annex, FRN bonds will also be eligible for purchases under QE while debt with maturities of less than two years and more than 30 years will be excluded. Following Chapter 6 in guideline ECB/2011/14 (which is explicitly mentioned within the technical annex), the ECB doesn't exclude bonds according to a minimum bond volume. Eventually, with these limitations, the list of ECB defined supranationals and its outstanding volume boils down to few names the ECB can buy. The following graphs display the total amount of euro denominated bonds by issuer, specified under the list IG6 which defines supranational issuers for the ECB. According to these calculations, the total market outstanding is ~€536bn (Figure 35). However, if one corrects for the tenor of eligible purchases of more than two years and less than 30 years while excluding supras

[9] https://www.ecb.europa.eu/press/pressconf/2015/html/is150122.en.html

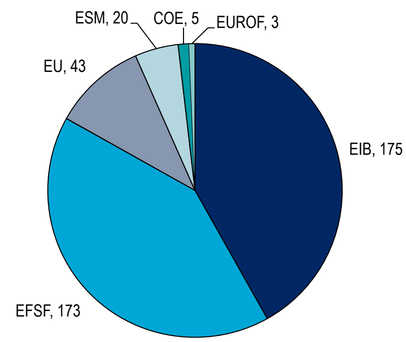
which are not categorized as such by the ECB, the amount of eligible supra bonds outstanding boils down to ~€419bn (Figure 36).

Figure 35. Euro denominated outstanding debt of IG6 listed supranational issuers, €bn



Source: ECB, Bloomberg, Citi Research

Figure 36. Euro denominated outstanding debt with maturities between 2 and 30 years, excluding non-EA IG6 listed supranational issuers, €bn



Source: ECB, Bloomberg, Citi Research

ECB to buy ~€112bn out of €419bn eligible euro supras: Moreover, we expect the purchase limitations per issuer (33%) and issue (25%) to count for supras as well. Taking into account 2015 gross supply projections, redemptions as well as the reduction of bonds dropping below the 2 years of maturity during the next months, the following table gives an overview on the outstanding amount of eligible supra debt for ECB purchases for the full year of 2015. If we assume that the ECB starts its program at the beginning of March 2015, the full-year amount of supra debt purchases should total €59bn.

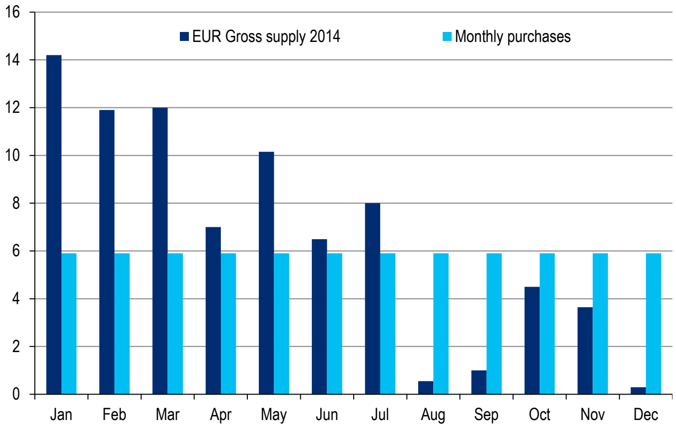
Figure 37. What is the eligible amount of supra debt for 2015?

Supra issuer	Euro debt outstanding				Gross supply 2015 - Redemptions 2015 (B)	Bonds dropping below 2yrs until end of 2015 (C)	Net supply 2-30yrs at end of 2015 (A + B - C = D)	Eligible volume subject to 25% limit per bond as at end of 2015 (0.25 * D)
	0-2yrs	2-30yrs (A)	30yr+	Total				
EIB	49	**175**	1	225	1	10	166	41
EFSF	25	**173**	0	198	2	24	151	38
EU	12	**43**	0	54	-2	1	40	10
ESM	20	**20**	0	40	-1	0	19	5
Total	106	**410***	1	517	-1	35	375	94

Source: Bloomberg, Citi Research; this deviates from €419bn as we only look at the main supras

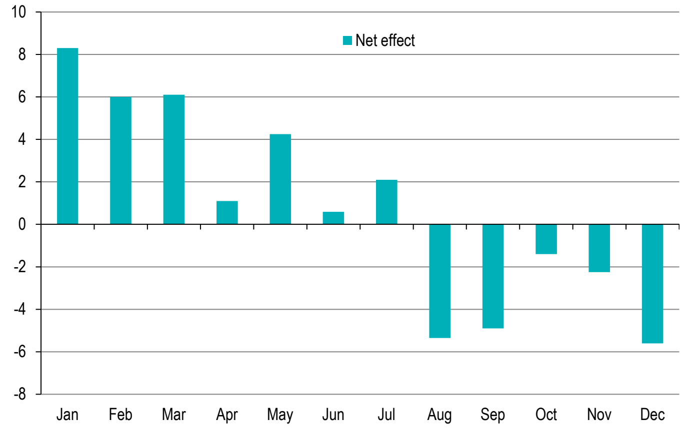
Is €5.9bn per month doable? Since 2011, the euro supra market had grown steadily, largely due to the activity of the EFSF and ESM. In 2015, as suggested by the table above, net supply will be slightly negative for the first time since the financial crisis. Hence, market participants will face even a higher challenge to grasp paper and/or even higher prices for such high quality debt. Looking at 2014 euro supra issuance per month and comparing this with the planned amount of monthly ECB purchases, it can be seen quite clearly that there are several months where the ECB will eventually take more from the market than supply recorded in the primary market (Figure 38 and Figure 39).

Figure 38. € supra issuance 2014 versus ECB purchase plan, €bn



Source: Bloomberg, ECB, Citi Research

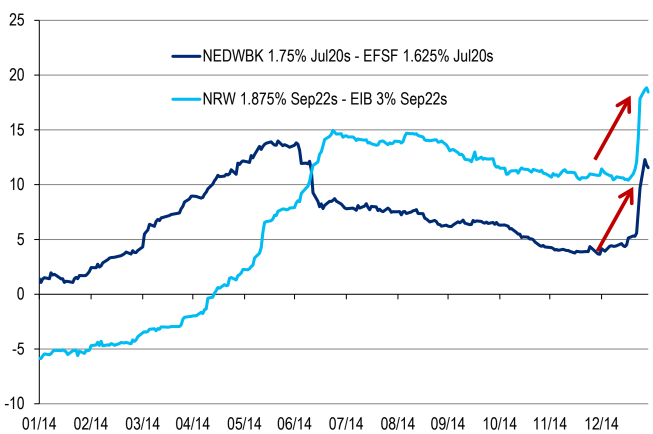
Figure 39. Net effect, €bn



Source: Citi Research

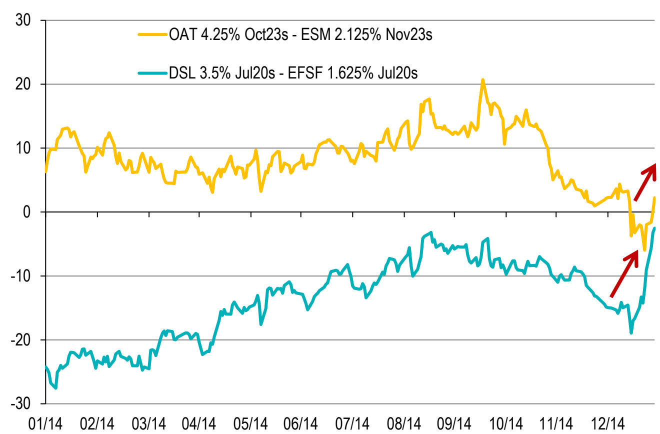
Effects for secondary markets: Supra bonds sharply re-priced after the QE announcement last week. On the one hand, this led to substantial outperformance versus QE ineligible SSA bonds issued by specific agencies or sub-sovereigns which seems to be the only public asset class left which the ECB won't buy (at least for now). In both cases, we don't think that this is a mean-reverting trade but rather think that this is justified given the ECB technicalities. Yet, moving into the non-QE backed SSA names will nonetheless provide investors with a small pick-up. On the other hand, spreads between supras and government bonds retraced strongly during the last days after a constant underperformance since October 2014 due to the expectations of a "sovereign only" QE program. In some specific cases – like OAT versus ESM in Figure 41 – we think that the spread correction can continue.

Figure 40. Yield spread between QE eligible supras and ineligible agencies, bp



Source: Citi Research

Figure 41. Yield spread: Supra debt versus sovereign bond markets, bp



Source: Citi Research

Conclusion: Similar to challenges in the ***covered bond*** and ***government bond*** market, the ECB will probably be able to find sufficient outstanding bonds in the supra space to achieve its purchase targets. Yet, given the programs' technicalities and markets' supply dynamics, investors should expect the supra market to be dominated by the ECB in the upcoming months.

Covered Bond Strategy

January Supply, ECB QE and Investor Dynamics

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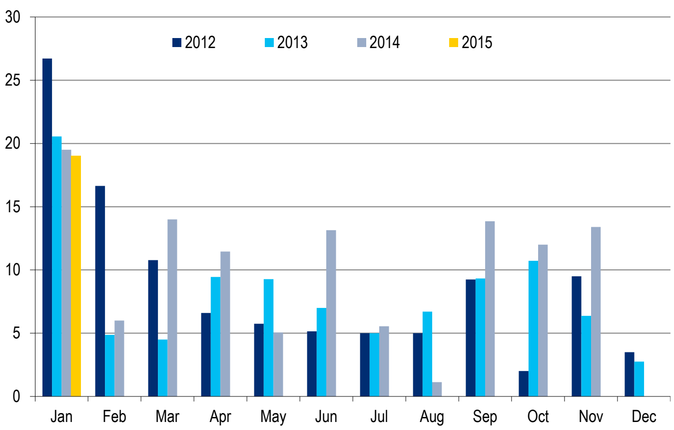
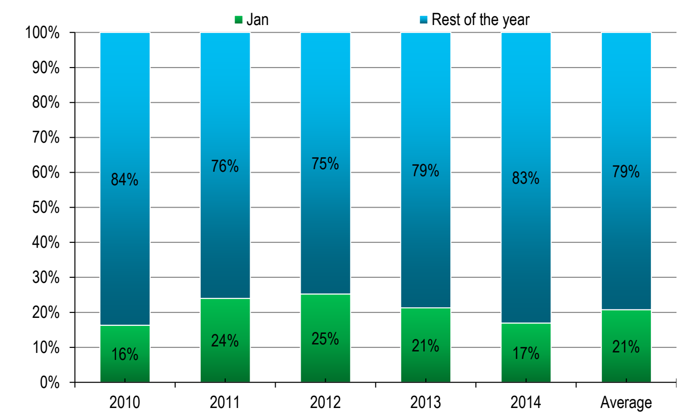
January 2015 recorded 22 new transactions in the euro benchmark covered bond market and five new GBP deals plus one respective additional tap in both markets. In the euro market, this sums up to a total volume of €19bn and £3.4bn, respectively. This means that issuers of GBP covered bonds already placed more than 50% of FY14 issuance to the market during the first weeks of 2015 which fits to our expectation of higher supply in GBP and USD covered bond markets in 2015 (*Euro SSA and Covered Bond 2015 Outlook*).

Figure 42. Historical issuance of euro benchmark covered bonds per month, €bn



Source: Citi Research

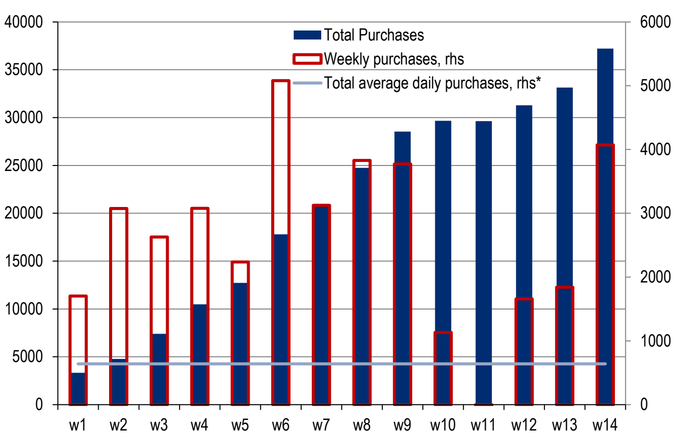
Figure 43. Seasonal issuance patterns in the euro benchmark covered bond market, %



Source: Citi Research

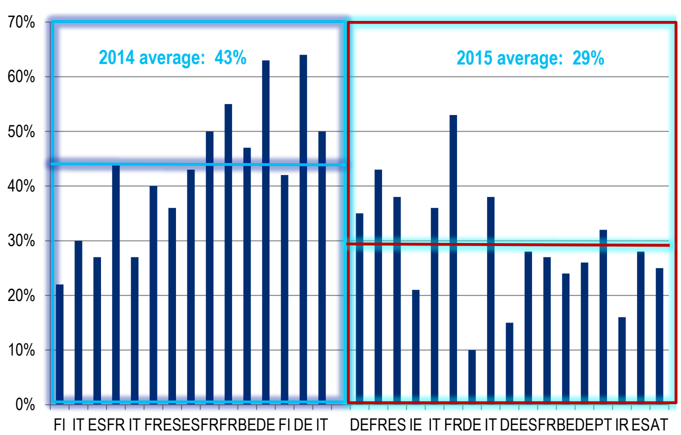
Yet, in the euro market, the issuance volume has so far been rather disappointing if one takes into account the historically attractive funding levels. While the number of new deals has been rather stable compared to last year (where we counted for 21 new deals in January), the overall volume came down from €19.5bn last year and from the 5yr average of €27.7bn (Figure 42). Extrapolating January issuance by looking at seasonal patterns (during the last five years, 21% of full-year issuance was placed in January on average), total 2015 supply would only add up to €90.5bn, merely €21bn shy of our FY gross issuance expectation (Figure 43).

Figure 44. ECB purchases under CBPP3 since inception, €mn



Source: ECB, Citi Research; *excluding all trading days and the purchase break up in Dec14/Jan15

Figure 45. CBPP3: Central bank allocation in covered bond deals in 2014 and 2015, EA covered bonds only

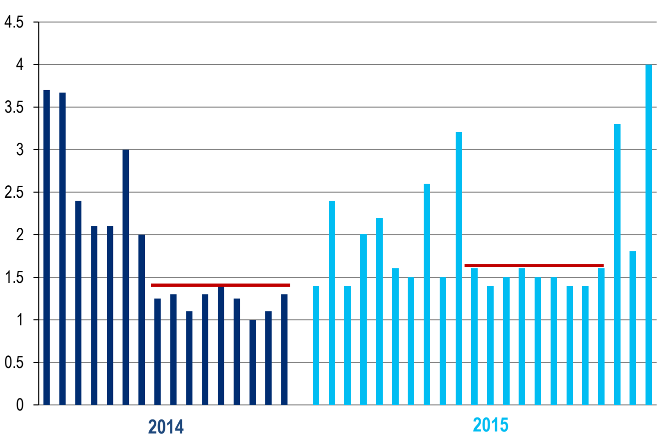


Source: The Cover, CBR, Bloomberg, Citi Research

Central bank allocation dropped in 2015: For the ECB, the primary market activity year-to-date has generally been playing into their hands as 70% of all deals were eligible for ECB purchases under CBPP3. This is very much in line with the share of EA covered bonds of total new issuance last year after the inception of the purchase program. Hence, the ECB was able to increase further its total CBPP3 purchases to €37.2bn. The most interesting development in our opinion, however, is the dropping share of central bank allocation in primary market deals. At the same time, investors' interest for covered bonds increased since the beginning of the year. Yet, despite the lower central bank share in the latest deals, we clearly don't see this as a sign of a substantial decrease in covered bond purchases in the upcoming months due to additional QE alternative assets. Given the lack of supply in sovereign and supra bond markets as outlined above, we think that the ECB has no other choice than also sticking to the covered bond market.

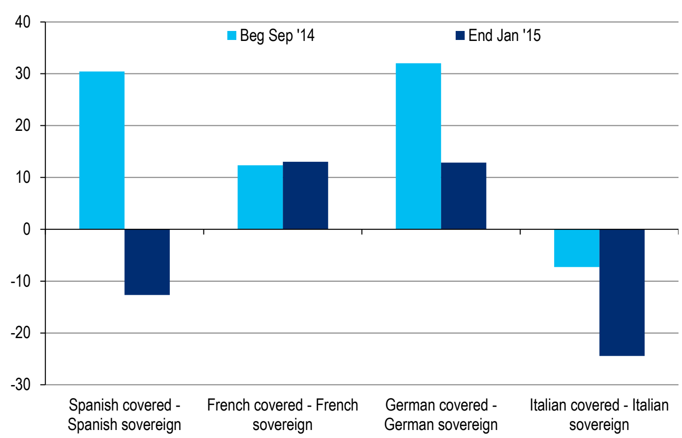
Why are "real" investors back? Lower central bank allocation does not go in hand with lower B/C ratios (Figure 46); it's rather the opposite which shows the comeback of "real" investors into covered bonds during the last weeks. In our opinion, this is mostly a function of covered bond spreads to government bonds. As markets increasingly priced in a QE program during the last weeks, covered bonds became increasingly attractive and hence investors flocked back into secured paper. At current stage, covered bond spreads to government bond markets are back at pre-CBPP3 levels in some countries, increasingly removing one-sided central bank distortions and putting a level playing field to both markets' relative valuations. However, current spread levels between both markets are not back to pre CBPP3 levels in all countries. As shown in Figure 47, in peripheral markets but also in core markets like Germany, covered bonds are still trading relatively rich. In the French (and to a certain extent in the Dutch market) spreads to government bonds are already back at levels recorded four months ago or are even trading cheaper.

Figure 46. Covered bond B/C ratios



Source: Bloomberg, CBR, The Cover, Citi Research

Figure 47. 5yr yield spreads before CBPP3 and after QE announcement, bp



Source: Bloomberg, Citi Research: Bloomberg B-VAL curves

Conclusion: Primary market volumes rather surprised to the downside in January which led to lower than expected supply. Yet, net supply developed positively in January. This is to be seen positively as we firstly expect this to be the exception for many months ahead while secondly the ECB QE program will bring back additional demand for covered bonds from rates product investors.

Tradesheet

Recommended Trades

Figure 48. Open Trades

Trade	Entry date	Entry level	Dv01 (EUR k)	PC1	Live	Target	Stop	Carry 3m (bp)	Carry 3m (EUR k)	PnL (bp)	PnL (EUR k)
Buy Bund Jul28 vs RFGB Jul28	15-Jan-15	17.7	15	Neutral	17.7	25.0	10.0	0.1	2	0.0	0
Buy Ireland Jun19 vs OAT May19	08-Jan-15	35.0	25	Neutral	28.8	20.0	43.0	4.9	123	6.2	154
Pay EUR 5y5y/15y15y	11-Dec-14	45.0	25	Long	46.2	70.0	35.0	6.4	160	1.2	31
Sell EUR 5y5y ATMF payer (PnL)	11-Dec-14	0.0	15	Long		800.0	-100.0	0.2	3	38.5	578
Pay 2y1y GBP vs USD	11-Dec-14	-46.0	12.5	Neutral	-36.0	15.0	-75.0	5.0	63	10.0	125
Buy Bono Apr20 vs BTP Mar20	11-Dec-14	-5.0	25	Neutral	-3.8	-18.0	1.0	-1.5	-38	-1.2	-31
Buy Bund Aug24 vs UKT Sep24	11-Dec-14	119.0	12.5	Neutral	111.1	160.0	98.0	-1.7	-21	-7.9	-98
Buy DSL Jul20 vs BNG Sep20	05-Dec-14	18.0	15	Long	19.2	30.0	10.0	1.6	24	1.2	18
Buy Bono Jan17 vs ICO Jan17	05-Dec-14	11.0	10	Long	10.6	20.0	5.0	1.1	11	-0.4	-4
Sell IL Mar24 real yield vs TIPS Jan24	04-Dec-14	135.0	12.5	Neutral	112.4	100.0	153.0		0	22.6	283
Buy IL Mar24 breakeven vs 10yr RPI	04-Dec-14	37.0	25	Neutral	39.5	20.0	45.0		0	-2.5	-62
Buy RAGB Jul20 vs OLO Sep20	04-Dec-14	4.0	20	Neutral	1.1	15.0	-1.0	-1.0	-20	-2.9	-58
EUR HICPxT 5s10s flattener (PnL)	03-Dec-14	0.0	25	Neutral		20.0	-10.0		0	9.1	226
Buy UKT Jul68 vs Jan44	23-Oct-14	-0.7	50	Short	-2.6	-4.5	1.2	-0.8	-40	1.9	94
Buy CCTeu Jun17 z-spread vs BTP Jun17	06-Aug-14	15.0	25	Neutral	9.7	0.0	25.0	-0.9	-23	5.3	132
Pay GBP 1y1y vs 3y1y	24-Apr-14	132.0	25	Long	61.8	50.0	170.0	-4.0	-100	70.2	1756
Please refer to original publications for details											
Book PnL										**146.1**	**3041**
Book Dv01 (PC1 weighted, EUR k)			**60**								
Book 3m carry								**12**	**199**		

Source: Citi Research

Closed Trades

Figure 49. Closed trades this week

Trade	Close Date	Entry level	Dv01 (EUR k)	PC1	Closing Level	Target	Stop	Carry 3m (bp)	Carry 3m (EUR k)	PnL (bp)	PnL (EUR k)
Buy KfW 0.375% Apr17 vs OLO 4% Mar17	Time stop 29/01/2015	0.0	15	Short	2.5	-6.0	3.0	0.7	11	-2.5	-37
Buy DSL Jan42 vs RAGB Jun44	Time stop 29/01/2015	14.0	15	Neutral	14.7	24.0	8.0	0.1	2	0.7	11
Buy OAT Apr20 vs EIB Jul20	Hit Stop 27/01/2015	1.0	20	Long	-4.1	10.0	-5.0	2.8	56	-5.1	-102
Pay EUR 5y10y 3s6s basis	Hit Stop 21/01/2015	7.5	50	Neutral	5.0	15.0	5.0	1.3	63	-2.5	-125

Source: Citi Research

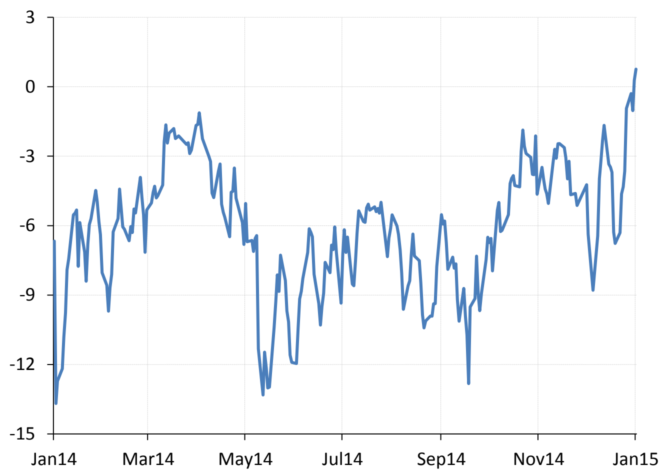
Relative Value Trades

We highlight four relative value trade opportunities in the 1-9yr sector of the Italian, French, and gilt yield curves.

Italy: take advantage of cheapness of May19s and richness of Nov22s

- Buy 2.5% May19 vs 4.5% Feb18 and 4% Sep20 (3m carry: -0.1bp) - Figure 50
- Sell 5.5% Nov22 vs 4.75% Sep21 and 4.5% Mar24 (3m carry: 0.9bp) - Figure 51

Figure 50. Italy: 4.5% Feb18, 2.5% May19, 4% Sep20 microfly (bp)



Source: Citi Research

Figure 51. Italy: 4.75% Sep21, 5.5% Nov22, 4.5% Mar24 microfly (bp)

Source: Citi Research

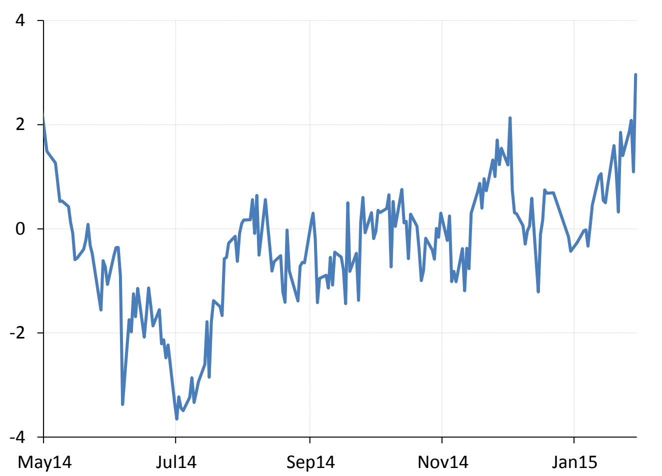
France: take advantage of cheapness of Feb17s

- Buy 1.75% Feb17 vs 0.25% Nov16 and 3.75% Apr17 (3m carry: 0bp) - Figure 52

UK: fade the richness of Sep19s

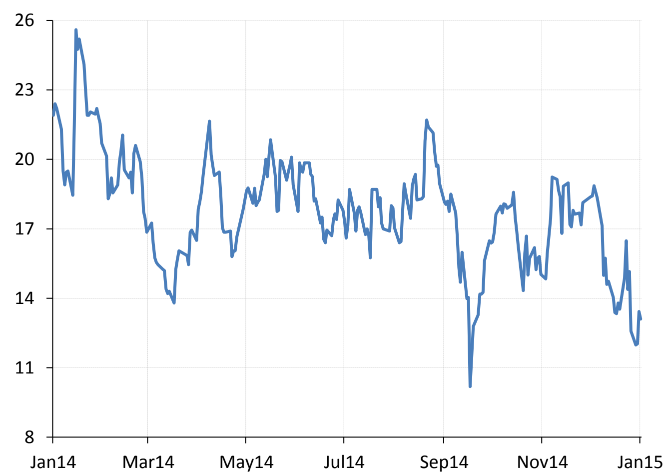
- Sell 3.75% Sep19 vs 1% Sep17 and 3.75% Sep21 (3m carry: 1bp) - Figure 53

Figure 52. France: 0.25% Nov16, 1.75% Feb17, 3.75% Apr17 microfly (bp)



Source: Citi Research

Figure 53. UK: 1% Sep17, 3.75% Sep19, 3.75% Sep21 microfly (bp)



Source: Citi Research

Euro Relative Value Screen – All Maturities

Figure 54. Coupon adjusted spread (CAS) to fitted curve and swap curve by country (6m history) - all bonds on each curve

GERMANY

	Versus Govt Curve (CAS)						Versus Swap Curve (CAS)				
	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	2.00 Aug23	-2.50	Sep13	18	Richest	1	3.25 Jul42	-3.94	Jul10	15
	2	1.00 Feb19	-2.44	Jan14	16		2	2.50 Jul44	-3.89	Apr12	16
	3	0.50 Apr19	-2.44	May14	16		3	4.25 Jul39	-3.89	Jan07	14
	4	1.75 Feb24	-1.87	Jan14	18		4	4.75 Jul40	-3.83	Jul08	16
	5	2.50 Jul44	-1.61	Apr12	16		5	2.50 Aug46	-3.69	Feb14	9
	5	0.25 Apr18	1.61	Apr13	17		5	0.50 Apr17	-0.92	Apr12	18
	4	2.25 Sep21	1.68	Aug11	16		4	0.50 Oct17	-0.86	Sep12	16
	3	4.25 Jul39	1.74	Jan07	14		3	4.00 Jan18	-0.81	Nov07	20
	2	2.00 Jan22	2.05	Nov11	20		2	4.25 Jul17	-0.71	May07	19
Cheapest	1	2.50 Jan21	2.26	Nov10	19	Cheapest	1	0.00 Apr20	-0.02	Jan15	5

FRANCE

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	3.50 Apr26	-2.47	Apr10	30	Richest	1	4.75 Apr35	-3.63	Apr03	22
	2	1.75 Nov24	-1.67	Jun14	30		2	5.75 Oct32	-3.61	Oct00	26
	3	4.00 Apr55	-1.42	Apr04	15		3	4.00 Oct38	-3.59	Oct05	24
	4	2.50 May30	-1.26	May14	22		4	2.50 May30	-3.47	May14	22
	5	3.75 Apr21	-1.17	Apr05	36		5	4.50 Apr41	-3.44	Apr09	24
	5	4.25 Oct18	1.69	Oct07	28		5	4.25 Oct17	-0.25	Oct06	33
	4	4.50 Apr41	2.04	Apr09	24		4	4.00 Apr18	-0.21	Apr07	28
	3	1.75 May23	2.06	May12	29		3	1.00 Jul17	-0.10	Jul11	21
	2	4.00 Oct38	2.61	Oct05	24		2	3.75 Apr17	-0.02	Apr06	37
Cheapest	1	4.75 Apr35	2.70	Apr03	22	Cheapest	1	1.75 Feb17	0.24	Feb11	28

ITALY

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	4.50 Feb18	-2.86	Sep07	25	Richest	1	4.75 Sep44	-2.97	Mar13	15
	2	3.50 Jun18	-2.69	Apr13	20		2	5.00 Sep40	-2.91	Sep09	21
	3	5.50 Sep22	-2.56	Mar12	20		3	3.50 Mar30	-2.83	May14	14
	4	4.75 Sep44	-2.46	Mar13	15		4	5.00 Aug39	-2.78	Aug07	19
	5	5.50 Nov22	-2.22	May12	21		5	4.75 Sep28	-2.70	Jan13	18
	5	4.00 Sep20	1.67	Mar10	25		5	4.75 Jun17	-0.86	Jun12	16
	4	3.75 Mar21	1.68	Sep10	24		4	4.75 May17 (BTS)	-0.79	Feb12	14
	3	4.25 Mar20	1.82	Sep09	24		3	1.15 May17	-0.73	May14	15
	2	5.00 Aug34	1.88	Aug03	22		2	4.00 Feb17	-0.70	Aug06	25
Cheapest	1	4.00 Feb37	2.97	Aug05	26	Cheapest	1	1.05 Dec19	-0.57	Dec14	7

N'LANDS

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	3.75 Jan23	-1.58	Jan06	11	Richest	1	3.75 Jan42	-3.80	May10	15
	2	3.75 Jan42	-1.22	May10	15		2	2.50 Jan33	-3.66	Mar12	10
	3	3.50 Jul20	-1.09	Feb10	15		3	4.00 Jan37	-3.56	Apr05	14
	4	4.00 Jul19	-1.02	Feb09	14		4	2.75 Jan47	-3.39	Feb14	6
	5	0.50 Apr17	-0.90	Jan14	15		5	2.00 Jul24	-3.16	Mar14	15
	5	4.00 Jan37	0.67	Apr05	14		5	4.50 Jul17	-1.41	Jul07	15
	4	2.50 Jan33	1.37	Mar12	10		4	1.25 Jan18	-1.40	Jul12	15
	3	2.25 Jul22	1.59	Feb12	15		3	0.50 Apr17	-1.12	Jan14	15
	2	4.00 Jul18	2.06	Feb08	15		2	4.00 Jul18	-0.87	Feb08	15
Cheapest	1	2.75 Jan47	5.73	Feb14	6	Cheapest	1	0.00 Apr18	-0.67	Jan15	3

SPAIN

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	4.50 Jan18	-2.59	Nov12	19	Richest	1	5.15 Oct44	-3.00	Oct13	7
	2	5.15 Oct44	-1.24	Oct13	7		2	4.70 Jul41	-2.97	Sep09	12
	3	0.50 Oct17	-0.86	Sep14	10		3	4.90 Jul40	-2.91	Jun07	13
	4	3.75 Oct18	-0.84	Jul13	19		4	4.20 Jan37	-2.81	Jan05	17
	5	4.80 Jan24	-0.28	Sep08	15		5	5.15 Oct28	-2.67	Jul13	14
	5	4.30 Oct19	2.02	Jun09	21		5	4.00 Oct64	0.00	Sep14	1
	4	2.75 Oct24	2.40	Jun14	24		4	5.50 Jul17	0.10	Mar02	20
	3	3.80 Jan17	2.60	Oct06	21		3	2.10 Apr17	0.22	Nov13	22
	2	4.20 Jan37	3.04	Jan05	17		2	3.80 Jan17	0.71	Oct06	21
Cheapest	1	5.75 Jul32	3.17	Jan01	16	Cheapest	1	1.60 Apr25	1.19	Jan15	9

BELGIUM

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	4.25 Sep21	-2.32	Jan11	15	Richest	1	3.00 Jun34	-3.42	Mar14	6
	2	3.75 Sep20	-2.03	Jan10	18		2	4.25 Mar41	-3.35	Apr10	14
	3	3.00 Jun34	-1.65	Mar14	6		3	5.00 Mar35	-3.34	May04	19
	4	5.00 Mar35	-1.35	May04	19		4	4.00 Mar32	-3.33	Mar12	8
	5	5.50 Sep17	-1.07	Jun02	8		5	3.75 Jun45	-3.26	Sep13	5
	5	3.00 Sep19	1.17	Apr12	12		5	1.25 Jun18	-0.86	Feb13	12
	4	4.00 Mar17	1.38	Jan07	11		4	5.50 Sep17	-0.48	Jun02	8
	3	4.00 Mar32	1.65	Mar12	8		3	4.00 Mar18	-0.43	Jan08	11
	2	2.25 Jun23	2.11	Jan13	14		2	3.50 Jun17	-0.22	Mar11	13
Cheapest	1	4.00 Mar19	3.53	Jan09	12	Cheapest	1	4.00 Mar17	0.55	Jan07	11

Source: Citi Research

Euro Relative Value Screen – Sub-12yr

Figure 55. Coupon adjusted spread (CAS) to fitted curve and swap curve by country (6m history) - bonds with a maximum maturity of 12yrs

GERMANY

	Versus Govt Curve (CAS)						Versus Swap Curve (CAS)				
	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	2.00 Aug23	-2.50	Sep13	18	Richest	1	1.75 Feb24	-3.52	Jan14	18
	2	1.00 Feb19	-2.44	Jan14	16		2	1.50 May24	-3.52	May14	18
	3	0.50 Apr19	-2.44	May14	16		3	1.00 Aug24	-3.29	Sep14	18
	4	1.75 Feb24	-1.87	Jan14	18		4	2.00 Aug23	-3.28	Sep13	18
	5	1.50 May23	-1.59	May13	18		5	1.50 May23	-3.12	May13	18
	5	3.00 Jul20	1.58	Apr10	22		5	0.50 Apr17	-0.92	Apr12	18
	4	0.25 Apr18	1.61	Apr13	17		4	0.50 Oct17	-0.86	Sep12	16
	3	2.25 Sep21	1.68	Aug11	16		3	4.00 Jan18	-0.81	Nov07	20
	2	2.00 Jan22	2.05	Nov11	20		2	4.25 Jul17	-0.71	May07	19
Cheapest	1	2.50 Jan21	2.26	Nov10	19	Cheapest	1	0.00 Apr20	-0.02	Jan15	5

FRANCE

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	3.50 Apr26	-2.44	Apr10	30	Richest	1	3.50 Apr26	-3.15	Apr10	30
	2	1.75 Nov24	-1.66	Jun14	30		2	1.75 Nov24	-2.93	Jun14	30
	3	3.75 Apr21	-1.17	Apr05	36		3	2.25 May24	-2.83	Nov13	28
	4	4.25 Oct23 (OAT)	-0.99	Oct06	33		4	4.25 Oct23 (OAT)	-2.67	Oct06	33
	5	2.25 May24	-0.65	Nov13	28		5	1.75 May23	-2.58	May12	29
	5	1.75 Feb17	1.27	Feb11	28		5	4.25 Oct17	-0.25	Oct06	33
	4	4.25 Apr19	1.40	Apr03	31		4	4.00 Apr18	-0.21	Apr07	28
	3	4.00 Apr18	1.57	Apr07	28		3	1.00 Jul17	-0.10	Jul11	21
	2	4.25 Oct18	1.70	Oct07	28		2	3.75 Apr17	-0.02	Apr06	37
Cheapest	1	1.75 May23	2.06	May12	29	Cheapest	1	1.75 Feb17	0.24	Feb11	28

ITALY

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	4.50 Feb18	-2.86	Sep07	25	Richest	1	4.50 Mar26	-2.33	Sep10	21
	2	3.50 Jun18	-2.70	Apr13	20		2	5.00 Mar25	-2.20	Mar09	22
	3	5.50 Sep22	-2.56	Mar12	20		3	3.75 Sep24	-2.10	Mar14	20
	4	5.50 Nov22	-2.22	May12	21		4	4.50 Mar24 (IK)	-2.02	Aug13	23
	5	5.00 Mar22	-1.72	Sep11	21		5	2.50 Dec24	-2.01	Sep14	16
	5	3.75 May21	1.49	Oct13	18		5	4.75 Jun17	-0.86	Jun12	16
	4	4.50 Feb20 (MFB)	1.54	Mar04	23		4	4.75 May17 (BTS)	-0.79	Feb12	14
	3	4.00 Sep20	1.67	Mar10	25		3	1.15 May17	-0.73	May14	15
	2	3.75 Mar21	1.68	Sep10	24		2	4.00 Feb17	-0.70	Aug06	25
Cheapest	1	4.25 Mar20	1.82	Sep09	24	Cheapest	1	1.05 Dec19	-0.57	Dec14	7

N'LANDS

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	3.75 Jan23	-1.58	Jan06	11	Richest	1	2.00 Jul24	-3.16	Mar14	15
	2	3.50 Jul20	-1.09	Feb10	15		2	1.75 Jul23	-2.95	Mar13	16
	3	4.00 Jul19	-1.02	Feb09	14		3	3.75 Jan23	-2.79	Jan06	11
	4	0.50 Apr17	-0.90	Jan14	15		4	2.25 Jul22	-2.49	Feb12	15
	5	4.50 Jul17	-0.73	Jul07	15		5	3.25 Jul21	-2.32	Mar11	16
	5	2.00 Jul24	-0.09	Mar14	15		5	4.50 Jul17	-1.41	Jul07	15
	4	0.00 Apr18	0.27	Jan15	3		4	1.25 Jan18	-1.40	Jul12	15
	3	1.25 Jan19	0.60	Jun13	15		3	0.50 Apr17	-1.12	Jan14	15
	2	2.25 Jul22	1.59	Feb12	15		2	4.00 Jul18	-0.87	Feb08	15
Cheapest	1	4.00 Jul18	2.06	Feb08	15	Cheapest	1	0.00 Apr18	-0.67	Jan15	3

SPAIN

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	4.50 Jan18	-2.59	Nov12	19	Richest	1	5.90 Jul26	-2.28	Mar11	14
	2	0.50 Oct17	-0.86	Sep14	10		2	4.65 Jul25	-2.08	Feb10	14
	3	3.75 Oct18	-0.84	Jul13	19		3	2.75 Oct24	-1.92	Jun14	24
	4	4.80 Jan24	-0.29	Sep08	15		4	3.80 Apr24	-1.79	Jan14	21
	5	2.75 Apr19	-0.26	Jan14	22		5	4.80 Jan24	-1.76	Sep08	15
	5	4.85 Oct20	1.49	Jul10	18		5	4.10 Jul18	-0.03	Feb08	19
	4	4.65 Jul25	1.61	Feb10	14		4	5.50 Jul17	0.10	Mar02	20
	3	4.30 Oct19	1.99	Jun09	21		3	2.10 Apr17	0.22	Nov13	22
	2	2.75 Oct24	2.40	Jun14	24		2	3.80 Jan17	0.71	Oct06	21
Cheapest	1	3.80 Jan17	2.60	Oct06	21	Cheapest	1	1.60 Apr25	1.19	Jan15	9

BELGIUM

	Rank		ZScore	Issued	Size (€bn)		Rank		ZScore	Issued	Size (€bn)
Richest	1	4.25 Sep21	-2.32	Jan11	15	Richest	1	4.50 Mar26	-3.21	Jun11	9
	2	3.75 Sep20	-2.03	Jan10	18		2	2.60 Jun24	-2.92	Jan14	16
	3	5.50 Sep17	-1.07	Jun02	8		3	2.25 Jun23	-2.75	Jan13	14
	4	3.50 Jun17	-0.81	Mar11	13		4	4.25 Sep22	-2.69	Jan12	15
	5	1.25 Jun18	-0.16	Feb13	12		5	4.00 Mar22	-2.55	May06	14
	5	2.60 Jun24	1.09	Jan14	16		5	1.25 Jun18	-0.86	Feb13	12
	4	3.00 Sep19	1.17	Apr12	12		4	5.50 Sep17	-0.48	Jun02	8
	3	4.00 Mar17	1.38	Jan07	11		3	4.00 Mar18	-0.43	Jan08	11
	2	2.25 Jun23	2.11	Jan13	14		2	3.50 Jun17	-0.22	Mar11	13
Cheapest	1	4.00 Mar19	3.53	Jan09	12	Cheapest	1	4.00 Mar17	0.55	Jan07	11

Source: Citi Research

Euro Relative Value Screen – 8yr+

Figure 56. Coupon adjusted spread (CAS) 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	Bond	ZScore	Issued	Size (€bn)		Rank	Bond	ZScore	Issued	Size (€bn)
Richest	1	2.00 Aug23	-2.50	Sep13	18	Richest	1	3.25 Jul42	-3.94	Jul10	15
	2	1.75 Feb24	-1.87	Jan14	18		2	2.50 Jul44	-3.89	Apr12	16
	3	2.50 Jul44	-1.61	Apr12	16		3	4.25 Jul39	-3.89	Jan07	14
	4	1.50 May23	-1.59	May13	18		4	4.75 Jul40	-3.83	Jul08	16
	5	1.50 Feb23	-1.00	Jan13	18		5	2.50 Aug46	-3.69	Feb14	9
	5	1.00 Aug24	0.62	Sep14	18		5	2.00 Aug23	-3.28	Sep13	18
	4	1.50 May24	0.81	May14	18		4	6.25 Jan30	-3.21	Jan00	9
	3	4.00 Jan37	1.25	Jan05	23		3	1.50 May23	-3.12	May13	18
	2	3.25 Jul42	1.60	Jul10	15		2	1.50 Feb23	-2.97	Jan13	18
Cheapest	1	4.25 Jul39	1.74	Jan07	14	Cheapest	1	0.50 Feb25	-1.11	Jan15	5

FRANCE

	Rank	Bond	ZScore	Issued	Size (€bn)		Rank	Bond	ZScore	Issued	Size (€bn)
Richest	1	3.50 Apr26	-2.44	Apr10	30	Richest	1	4.75 Apr35	-3.63	Apr03	22
	2	1.75 Nov24	-1.66	Jun14	30		2	5.75 Oct32	-3.61	Oct00	26
	3	4.00 Apr55	-1.32	Apr04	15		3	4.00 Oct38	-3.59	Oct05	24
	4	2.50 May30	-1.28	May14	22		4	2.50 May30	-3.47	May14	22
	5	4.25 Oct23 (OAT)	-0.99	Oct06	33		5	4.50 Apr41	-3.44	Apr09	24
	5	3.25 May45	0.42	May12	14		5	4.00 Apr55	-2.86	Apr04	15
	4	1.75 May23	2.06	May12	29		4	2.25 May24	-2.83	Nov13	28
	3	4.50 Apr41	2.06	Apr09	24		3	4.25 Oct23 (OAT)	-2.67	Oct06	33
	2	4.00 Oct38	2.65	Oct05	24		2	1.75 May23	-2.58	May12	29
Cheapest	1	4.75 Apr35	2.73	Apr03	22	Cheapest	1	4.00 Apr60	-2.52	Apr09	11

ITALY

	Rank	Bond	ZScore	Issued	Size (€bn)		Rank	Bond	ZScore	Issued	Size (€bn)
Richest	1	4.75 Sep44	-2.00	Mar13	15	Richest	1	4.75 Sep44	-2.97	Mar13	15
	2	5.00 Mar25	-1.57	Mar09	22		2	5.00 Sep40	-2.91	Sep09	21
	3	4.50 Mar26	-0.97	Sep10	21		3	3.50 Mar30	-2.83	May14	14
	4	3.75 Sep24	-0.78	Mar14	20		4	5.00 Aug39	-2.78	Aug07	19
	5	4.50 May23	-0.73	Mar13	18		5	4.75 Sep28	-2.70	Jan13	18
	5	5.00 Aug39	0.89	Aug07	19		5	3.75 Sep24	-2.10	Mar14	20
	4	2.50 Dec24	1.32	Sep14	16		4	4.50 Mar24 (IK)	-2.02	Aug13	23
	3	5.75 Feb33	1.54	Feb02	15		3	2.50 Dec24	-2.01	Sep14	16
	2	5.00 Aug34	1.90	Aug03	22		2	4.75 Aug23	-1.93	Feb08	25
Cheapest	1	4.00 Feb37	3.00	Aug05	26	Cheapest	1	4.50 May23	-1.91	Mar13	18

N'LANDS

	Rank	Bond	ZScore	Issued	Size (€bn)		Rank	Bond	ZScore	Issued	Size (€bn)
Richest	1	2.75 Jan47	-6.13	Feb14	6	Richest	1	3.75 Jan42	-3.80	May10	15
	2	3.75 Jan42	-2.48	May10	15		2	2.50 Jan33	-3.66	Mar12	10
	3	1.75 Jul23	-0.45	Mar13	16		3	4.00 Jan37	-3.56	Apr05	14
	3	2.50 Jan33	-0.27	Mar12	10		3	2.75 Jan47	-3.39	Feb14	6
	2	2.00 Jul24	-0.02	Mar14	15		2	2.00 Jul24	-3.16	Mar14	15
Cheapest	1	4.00 Jan37	0.05	Apr05	14	Cheapest	1	1.75 Jul23	-2.95	Mar13	16

SPAIN

	Rank	Bond	ZScore	Issued	Size (€bn)		Rank	Bond	ZScore	Issued	Size (€bn)
Richest	1	5.15 Oct44	-1.21	Oct13	7	Richest	1	5.15 Oct44	-3.00	Oct13	7
	2	4.80 Jan24	-0.28	Sep08	15		2	4.70 Jul41	-2.97	Sep09	12
	3	5.90 Jul26	-0.14	Mar11	14		3	4.90 Jul40	-2.91	Jun07	13
	4	5.40 Jan23	-0.11	Jan13	17		4	4.20 Jan37	-2.81	Jan05	17
	5	4.70 Jul41	-0.06	Sep09	12		5	5.15 Oct28	-2.67	Jul13	14
	5	4.90 Jul40	1.32	Jun07	13		5	4.80 Jan24	-1.76	Sep08	15
	4	4.65 Jul25	1.61	Feb10	14		4	4.40 Oct23	-1.61	May13	20
	3	2.75 Oct24	2.40	Jun14	24		3	5.40 Jan23	-1.45	Jan13	17
	2	4.20 Jan37	3.05	Jan05	17		2	4.00 Oct64	0.00	Sep14	1
Cheapest	1	5.75 Jul32	3.17	Jan01	16	Cheapest	1	1.60 Apr25	1.19	Jan15	9

BELGIUM

	Rank	Bond	ZScore	Issued	Size (€bn)		Rank	Bond	ZScore	Issued	Size (€bn)
Richest	1	5.00 Mar35	-1.30	May04	19	Richest	1	3.00 Jun34	-3.42	Mar14	6
	2	3.00 Jun34	-0.77	Mar14	6		2	4.25 Mar41	-3.35	Apr10	14
	3	3.75 Jun45	-0.62	Sep13	5		3	5.00 Mar35	-3.34	May04	19
	4	4.50 Mar26	0.56	Jun11	9		4	4.00 Mar32	-3.33	Mar12	8
	4	0.80 Jun25	0.78	Jan15	5		4	4.50 Mar26	-3.21	Jun11	9
	3	2.60 Jun24	1.13	Jan14	16		3	2.60 Jun24	-2.92	Jan14	16
	2	4.00 Mar32	1.72	Mar12	8		2	2.25 Jun23	-2.75	Jan13	14
Cheapest	1	2.25 Jun23	2.11	Jan13	14	Cheapest	1	0.80 Jun25	-0.93	Jan15	5

Source: Citi Research

UK Relative Value Screen

Figure 57. Coupon adjusted spread (CAS) to fitted curve and swap curve by maturity (6m history)

ALL

Versus Govt Curve (CAS)

	Rank		ZScore	Issued	Size (€bn)
Richest	1	3.50 Jul68	-5.19	Jun13	14
	2	3.50 Jan45	-3.63	Sep14	0
	3	4.50 Mar19	-3.55	Sep08	36
	4	4.25 Dec46	-2.46	May06	21
	5	4.25 Dec49	-2.37	Sep08	20
	5	4.25 Dec40	0.37	Jun10	25
	4	4.00 Jan60	0.53	Oct09	21
	3	2.25 Sep23	0.78	Jun13	27
	2	4.25 Jun32	1.70	May00	35
Cheapest	1	1.75 Jan17	2.02	Aug11	29

Versus Swap Curve (CAS)

	Rank		ZScore	Issued	Size (€bn)
Richest	1	4.50 Mar19	-3.00	Sep08	36
	2	3.75 Sep21	-2.93	Mar11	28
	3	4.00 Mar22	-2.92	Feb09	38
	4	1.75 Jul19	-2.85	Nov13	30
	5	2.00 Jul20	-2.80	Sep14	0
	5	4.50 Dec42	0.52	Jun07	26
	4	4.25 Sep39	0.56	Mar09	20
	3	3.50 Jan45	0.59	Jun14	12
	2	4.25 Dec40	0.62	Jun10	25
Cheapest	1	3.25 Jan44	0.64	Oct12	27

2yr - 7yr

Versus Govt Curve (CAS)

	Rank		ZScore	Issued	Size (€bn)
Richest	1	4.50 Mar19 (WX)	-3.56	Sep08	36
	2	4.75 Mar20	-2.20	Mar05	33
	3	3.75 Sep20	-1.82	Jun10	24
	4	3.75 Sep19	-1.63	Jul09	28
	5	5.00 Mar18	-1.61	May07	35
	5	2.00 Jul20	-0.57	Sep14	0
	4	2.00 Jul20	-0.57	Sep14	16
	3	2.00 Jul20	-0.44	Jan15	0
	2	1.25 Jul18	-0.19	Feb13	34
Cheapest	1	1.00 Sep17	-0.06	Mar12	32

Versus Swap Curve (CAS)

	Rank		ZScore	Issued	Size (€bn)
Richest	1	4.50 Mar19 (WX)	-3.00	Sep08	36
	2	3.75 Sep21	-2.93	Mar11	28
	3	1.75 Jul19 (5y)	-2.85	Nov13	30
	4	2.00 Jul20	-2.80	Sep14	0
	5	4.75 Mar20	-2.77	Mar05	33
	5	1.25 Jul18	-2.62	Feb13	34
	4	3.75 Sep19	-2.51	Jul09	28
	3	5.00 Mar18	-2.16	May07	35
	2	1.00 Sep17	-1.78	Mar12	32
Cheapest	1	2.00 Jul20	-1.21	Jan15	0

7yr - 15yr

Versus Govt Curve (CAS)

	Rank		ZScore	Issued	Size (€bn)
Richest	1	2.75 Sep24	-2.29	Mar14	27
	2	2.75 Sep24 (10y)	-2.26	Nov14	0
	3	5.00 Mar25 (G)	-2.22	Sep01	35
	4				
	5				
	5				
	4				
	3	4.25 Dec27	-0.97	Sep06	31
	2	1.75 Sep22	0.05	Jun12	29
Cheapest	1	2.25 Sep23	0.75	Jun13	27

Versus Swap Curve (CAS)

	Rank		ZScore	Issued	Size (€bn)
Richest	1	4.00 Mar22	-2.92	Feb09	38
	2	2.75 Sep24 (10y)	-2.50	Nov14	0
	3	1.75 Sep22	-2.50	Jun12	29
	4				
	5				
	5				
	4				
	3	4.25 Dec27	-2.27	Sep06	31
	2	2.75 Sep24	-2.11	Mar14	27
Cheapest	1	5.00 Mar25 (G)	-2.10	Sep01	35

>15yr

Versus Govt Curve (CAS)

	Rank		ZScore	Issued	Size (€bn)
Richest	1	3.50 Jul68	-5.37	Jun13	14
	2	3.50 Jan45	-3.77	Sep14	0
	3	4.25 Dec46	-2.50	May06	21
	4	4.25 Dec49	-2.42	Sep08	20
	5	3.50 Jan45	-2.38	Jun14	12
	5	3.75 Jul52	-0.25	Sep11	22
	4	4.50 Sep34	0.26	Jun09	30
	3	4.25 Dec40	0.35	Jun10	25
	2	4.00 Jan60	0.47	Oct09	21
Cheapest	1	4.25 Jun32	1.69	May00	35

Versus Swap Curve (CAS)

	Rank		ZScore	Issued	Size (€bn)
Richest	1	4.75 Dec30	-1.67	Oct07	32
	2	4.25 Jun32	-0.28	May00	35
	3	4.50 Sep34	0.23	Jun09	30
	4	3.50 Jan45	0.32	Sep14	0
	5	4.25 Dec55	0.34	May05	24
	5	4.50 Dec42	0.52	Jun07	26
	4	4.25 Sep39	0.56	Mar09	20
	3	3.50 Jan45	0.59	Jun14	12
	2	4.25 Dec40	0.62	Jun10	25
Cheapest	1	3.25 Jan44 (30y)	0.64	Oct12	27

Source: Citi Research

4 Week Auction Calendar: Euro, UK and US

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

Figure 58. Auction calendar for the next four weeks (provisional): gross issuance (local currency, billions) and DV01 (USD million/bp)

Date	Country	Nominal Size (Local Ccy, bn)	Issue Details	DV01 $million/bp	Approx. Number 10yr Futures TYH5 (UST)	G H5 (Gilt)	RXH5 (Bund)
04 Feb (Wed)	Finland	1.0	RFGB 0.375% Sep20 (issue confirmed, size upto €1bn)				4k
04 Feb (Wed)	UK	1.2	0.125% Index-linked Treasury Gilt 2024 (issue and size confirmed)			17k	
05 Feb (Thu)	France	9.5	OAT >7yr (estimated size)				82k
05 Feb (Thu)	Spain	5.0	Bono 5yr and 10yr (estimated tenors and size)				26k
			Weekly $DV01 of Issuance	**19.5**			
			Total Number of Futures Contracts		**0k**	**17k**	**111k**

Date	Country	Nominal Size (Local Ccy, bn)	Issue Details	DV01 $million/bp	Approx. Number 10yr Futures TYH5 (UST)	G H5 (Gilt)	RXH5 (Bund)
10 Feb (Tue)	Austria	1.1	RAGB 5yr and 20yr (estimated tenors and size)				8k
10 Feb (Tue)	Netherlands	2.5	DSL 0.25% Jan20 re-opening (issue confirmed, size €2-3bn)				9k
10 Feb (Tue)	Germany	2.0	Bundei (estimated size)				14k
10 Feb (Tue)	US	24.0	3-year		74k		
11 Feb (Wed)	Germany	5.0	New Schatz Mar17 (issue and size confirmed)				7k
11 Feb (Wed)	US	24.0	10-year		251k		
12 Feb (Thu)	Ireland	1.0	Ireland 0.8% Mar22 (estimated issue and size)				7k
12 Feb (Thu)	Italy	8.0	BTP 0.75% Jan18, new Apr22 and 30yr (estimated issue and size)				49k
12 Feb (Thu)	UK	2.2	3.5% Treasury Gilt 2045 (issue confirmed, estimated size)			48k	
12 Feb (Thu)	US	16.0	30-year		345k		
			Weekly $DV01 of Issuance	**76.1**			
			Total Number of Futures Contracts		**670k**	**48k**	**94k**

Date	Country	Nominal Size (Local Ccy, bn)	Issue Details	DV01 $million/bp	Approx. Number 10yr Futures TYH5 (UST)	G H5 (Gilt)	RXH5 (Bund)
16 Feb (Mon)	Belgium	3.5	OLO 5yr, 10yr and 30yr (estimated tenors and size)				32k
18 Feb (Wed)	Germany	4.0	Bund Feb25 re-opening (issue and size confirmed)				27k
19 Feb (Thu)	France	10.7	OAT 2yr-7yr, index-linked OAT (estimated size)				37k
19 Feb (Thu)	Spain	5.3	Bono 3yr, 5yr and 30yr (estimated tenors and size)				24k
19 Feb (Thu)	US	9.0	30-Year TIPS		101k		
			Weekly $DV01 of Issuance	**26.5**			
			Total Number of Futures Contracts		**101k**	**0k**	**120k**

Date	Country	Nominal Size (Local Ccy, bn)	Issue Details	DV01 $million/bp	Approx. Number 10yr Futures TYH5 (UST)	G H5 (Gilt)	RXH5 (Bund)
24 Feb (Tue)	Italy	3.5	New CTZ Feb17 (estimated size)				5k
24 Feb (Tue)	Italy	1.3	BTPei (estimated size)				9k
24 Feb (Tue)	US	26.0	2-year		80k		
25 Feb (Wed)	Germany	4.0	Bobl Apr20 re-opening (issue and size confirmed)				14k
25 Feb (Wed)	US	13.0	2-Year FRN (re-opening)		40k		
25 Feb (Wed)	US	35.0	5-year		181k		
26 Feb (Thu)	Italy	8.0	BTP 1.05% Dec19 and new BTP Jun25 (estimated issue and size)				43k
26 Feb (Thu)	Italy	2.5	CCTeu Dec20 (estimated size)				9k
26 Feb (Thu)	US	29.0	7-year		214k		
			Weekly $DV01 of Issuance	**54.0**			
			Total Number of Futures Contracts		**515k**	**0k**	**80k**

Additional issues expected in February: Austria (10yr). This issue is not included in the table above as the timing of this supply event has not been announced.

Source: DMOs, Citi Research

EMU: Coupons & Redemptions (Next 3mths)

Figure 59. EMU-11 Bond redemptions over the next three months (€bn)

Redemptions	Redemptions = €180bn										
	DEU 51	FRA 20	NLD 13	ITA 51	ESP 32	BEL 11	AUT 0	FIN 0	PRT 0	GRC 0	IRL 2
(Sat) 31-Jan-15					21.0						
(Sun) 01-Feb-15				21.0							
(Wed) 18-Feb-15											2.2
(Fri) 27-Feb-15	17.0										
(Sun) 01-Mar-15				12.4							
(Fri) 13-Mar-15	15.0										
(Sat) 28-Mar-15						11.4					
(Tue) 31-Mar-15					10.5						
(Fri) 10-Apr-15	19.0										
(Wed) 15-Apr-15			13.0	17.3							
(Sat) 25-Apr-15		20.2									

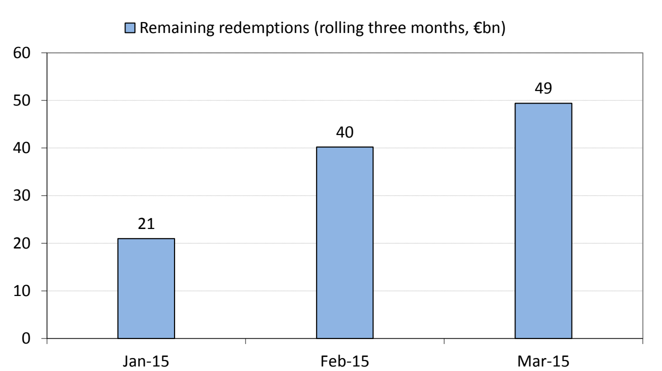
Source: DMOs, Bloomberg, Citi Research *This table is on a calendar-date basis*

Figure 60. EMU-11 Coupon payments over the next three months (€bn)

Coupons	Coupons = €61bn										
	DEU 4	FRA 17	NLD 0	ITA 19	ESP 8	BEL 6	AUT 2	FIN 1	PRT 2	GRC 1	IRL 2
(Sat) 31-Jan-15					8.2						
(Sun) 01-Feb-15				7.9							
(Sun) 15-Feb-15	0.6								0.9		
(Wed) 18-Feb-15											0.1
(Fri) 20-Feb-15							0.3				
(Sun) 22-Feb-15	0.2										
(Mon) 23-Feb-15	0.1										
(Tue) 24-Feb-15	0.1									0.6	
(Wed) 25-Feb-15		1.1									
(Thu) 26-Feb-15	0.3										
(Fri) 27-Feb-15	0.4										
(Sun) 01-Mar-15				7.9							
(Wed) 11-Mar-15	0.0										
(Fri) 13-Mar-15	0.0										0.6
(Sun) 15-Mar-15				1.9			1.4				0.0
(Wed) 18-Mar-15											0.3
(Fri) 20-Mar-15											0.2
(Sat) 28-Mar-15						6.1					
(Tue) 31-Mar-15					0.3						
(Tue) 07-Apr-15	0.1										
(Wed) 08-Apr-15	0.5										
(Fri) 10-Apr-15	0.4										
(Sun) 12-Apr-15	0.1										
(Mon) 13-Apr-15	0.0										
(Wed) 15-Apr-15	0.7		0.2	0.4				0.8	0.6		
(Fri) 17-Apr-15										0.1	
(Sat) 18-Apr-15											0.9
(Mon) 20-Apr-15							0.3				
(Wed) 22-Apr-15				0.4							
(Thu) 23-Apr-15				0.2							
(Sat) 25-Apr-15		16.0									
(Mon) 27-Apr-15				0.0							

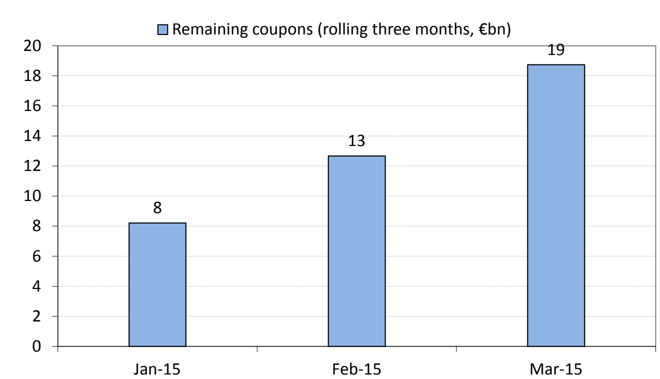
Source: DMOs, Bloomberg, Citi Research *This table is on a calendar-date basis*

Figure 61. EMU-11 remaining redemptions over the next 3 months (€bn)



Source: DMOs, Bloomberg, Citi Research *This chart is on a calendar-date basis*

Figure 62. EMU-11 remaining coupons over the next 3 months (€bn)



Source: DMOs, Bloomberg, Citi Research *This chart is on a calendar-date basis*

ESP and ITA Bill Issuance Projections

This page contains our projections for Spanish and Italian bill supply in 2015.

Auction calendar for the next four weeks

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

Week	Date	Country	Issue Details	Total Size (€bn)
Week 2	11 Feb (Wed)	Italy	12 month (12 February 2016) - issue confirmed, estimated size	8
			Total Size in Week 2	**8.0**
Week 3	17 Feb (Tue)	Spain	6month (21 Aug 2015) and 12month (19 Feb 2016) - issue confirmed, estimated size	4.5
			Total Size in Week 3	**4.5**
Week 4	24 Feb (Tue)	Spain	3month (15 May 2015) and 9month (20 Nov 2015) - issue confirmed, estimated size	3
	25 Feb (Wed)	Italy	6 month (31 Aug 2015) - issue confirmed, estimated size	8.5
			Total Size in Week 4	**11.5**

Italy announces issue size 3 business days before the auction
Spain announces issue details 1 business day before the auction

Source: DMOs, Citi Research

This table is on a calendar-date basis

2015 projections for bill supply

Figure 64. 2015 Italy and Spain Bill Supply – Citi Forecast (Euro Billion)

SPAIN	3m	6m	9m	12m	18m	Gross Supply	Redemptions	NCR
Jan	0.6	0.9	2.0	5.0		8	7	1
Feb	1.0	1.0	2.0	3.5		8	9	-1
Mar	1.0	1.0	2.0	3.5		8	9	-1
Apr	1.0	1.0	2.0	3.5		8	8	-0
May	1.0	1.0	3.0	3.5		9	8	
Jun	1.0	1.0	3.0	4.0		9	9	
Jul	1.0	1.0	2.0	4.0		8	10	-2
Aug	1.0	1.0	2.0	3.5		8	9	-1
Sep	1.0	1.0	3.0	4.0		9	8	1
Oct	1.0	1.0	3.0	3.0		8	7	1
Nov	1.0	1.0	3.0	3.5		9	8	1
Dec	1.0	1.0	3.0	3.0		8	8	
Total	**11.6**	**11.9**	**30.0**	**44.0**		**97**	**100**	**-2**

ITALY	3m*	6m	9m	12m	Flexible BOT	Gross Supply	Redemptions	NCR
Jan		7.0		8.4		15	16	-1
Feb		8.5		8.0		17	16	1
Mar		8.0		7.5		16	15	
Apr		7.5		7.5		15	14	1
May		7.5		7.5		15	13	2
Jun		8.0		7.5		16	15	1
Jul		7.0		7.0		14	14	1
Aug		7.5		7.5		15	16	-1
Sep		7.5		9.0		17	17	-1
Oct		7.0		8.0		15	16	-1
Nov		6.0		6.5		13	14	-2
Dec		6.5		5.5		12	14	-2
Total		**88.0**		**89.9**		**178**	**179**	**-1**

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

Source: DMOs, Bloomberg, Citi Research

This table is on a calendar-date basis

Inflation Forecasts, Carry & Weekly Changes

Figure 65. 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
Dec 14	117.01	-0.1	-0.2	125.81	0.1	-0.0	257.50	0.2	1.6	234.81	-0.6	0.8
Jan 15	115.38	-1.4	-0.5	124.86	-0.8	-0.1	255.60	-0.7	1.2	234.20	-0.3	0.1
Feb 15	115.73	0.3	-0.5	125.65	0.6	-0.0	256.60	0.4	0.9	234.90	0.3	0.1
Mar 15	116.96	1.1	-0.4	126.42	0.6	0.1	257.20	0.2	0.9	236.40	0.6	0.0
Apr 15	117.16	0.2	-0.3	126.43	0.0	0.2	258.20	0.4	1.0	236.90	0.2	-0.1
May 15	117.10	-0.1	-0.3	126.59	0.1	0.3	259.00	0.3	1.2	237.40	0.2	-0.2

Source: Citi Research, Bloomberg

Shaded = Already released

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

Bond	RY (%)	Chg (bp)	Carry-adj chg	Carry: RY (bp) 2 Mar	Carry: RY (bp) 1 Apr	Carry: RY (bp) 1 May	*Reference Conventional*	BE (bp)	Chg (bp)	Carry-adj chg	Carry: BE (bp) 2 Mar	Carry: BE (bp) 1 Apr	Carry: BE (bp) 1 May	ZC Swap - BE Spread (bp)	Chg (bp)
Repo (%)				*0.12*	*0.13*	*0.13*									
TIPS 4/16	-0.06	-18	-8	-56	-86	-64	*US-2.000-04/30/16*	34	17	7	-57	-89	-68	-4	-2
TIPS 7/16	-0.64	-16	-7	-50	-78	-63	*US-4.875-08/15/16*	98	11	1	-51	-80	-68	8	10
TIPS 1/17	-0.45	-16	-10	-36	-55	-42	*US-3.125-01/31/17*	97	12	5	-38	-58	-48	16	8
TIPS 4/17	-0.34	-17	-12	-31	-46	-35	*US-0.875-04/30/17*	93	12	6	-33	-50	-41	17	8
TIPS 7/17	-0.67	-17	-12	-29	-45	-36	*US-4.750-08/15/17*	137	10	4	-31	-49	-42	10	10
TIPS 1/18	-0.41	-17	-12	-23	-35	-26	*US-3.500-02/15/18*	130	10	5	-26	-40	-34	12	9
TIPS 4/18	-0.26	-18	-14	-21	-31	-22	*US-0.625-04/30/18*	119	11	7	-23	-35	-29	18	6
TIPS 7/18	-0.46	-18	-14	-20	-30	-23	*US-4.000-08/15/18*	141	8	4	-22	-34	-29	19	9
TIPS 1/19	-0.27	-18	-15	-17	-25	-19	*US-2.750-02/15/19*	138	7	3	-19	-30	-25	17	9
TIPS 4/19	-0.16	-18	-15	-15	-23	-16	*US-1.625-04/30/19*	131	7	3	-18	-27	-23	20	8
TIPS 7/19	-0.30	-18	-15	-15	-23	-17	*US-3.625-08/15/19*	152	7	3	-18	-27	-23	17	8
TIPS 1/20	-0.15	-18	-16	-13	-20	-14	*US-3.625-02/15/20*	141	6	3	-16	-24	-20	22	7
TIPS 7/20	-0.19	-18	-16	-12	-18	-13	*US-2.625-08/15/20*	158	5	3	-14	-22	-19	16	5
TIPS 1/21	-0.04	-18	-16	-11	-16	-11	*US-3.625-02/15/21*	149	5	2	-13	-20	-17	21	4
TIPS 7/21	-0.07	-17	-15	-10	-15	-10	*US-2.125-08/15/21*	159	3	1	-12	-18	-16	19	4
TIPS 1/22	0.03	-18	-16	-9	-13	-9	*US-2.000-02/15/22*	152	4	1	-11	-17	-14	23	2
TIPS 7/22	0.01	-17	-16	-8	-12	-8	*US-1.625-08/15/22*	159	2	0	-10	-16	-14	24	2
TIPS 1/23	0.08	-17	-15	-8	-11	-8	*US-2.000-02/15/23*	155	2	0	-10	-15	-13	25	1
TIPS 7/23	0.06	-17	-15	-7	-11	-7	*US-2.500-08/15/23*	161	2	-0	-9	-14	-12	25	-0
TIPS 1/24	0.14	-16	-15	-7	-10	-7	*US-2.750-02/15/24*	156	1	-1	-9	-13	-12	28	-0
TIPS 7/24	0.09	-15	-14	-7	-9	-6	*US-2.375-08/15/24*	164	-0	-2	-8	-13	-11	25	1
TIPS 1/25	0.16	-16	-14	-7	-10	-6	*US-7.625-02/15/25*	154	0	-2	-9	-13	-12	33	-0
TIPS 1/26	0.22	-15	-14	-6	-9	-6	*US-6.000-02/15/26*	159	-0	-2	-8	-12	-11	32	-0
TIPS 1/27	0.30	-14	-13	-6	-8	-5	*US-6.625-02/15/27*	156	-0	-2	-7	-11	-10	37	-1
TIPS 1/28	0.33	-15	-14	-5	-7	-4	*US-6.125-11/15/27*	158	1	-1	-7	-10	-9	37	-3
TIPS 4/28	0.32	-13	-12	-5	-8	-5	*US-5.500-08/15/28*	164	-1	-2	-7	-11	-9	30	-2
TIPS 1/29	0.35	-14	-13	-5	-7	-4	*US-5.250-02/15/29*	164	0	-1	-6	-10	-9	34	-3
TIPS 4/29	0.36	-14	-13	-5	-7	-5	*US-5.250-02/15/29*	163	0	-1	-7	-10	-9	33	-3
TIPS 4/32	0.44	-14	-14	-4	-6	-4	*US-5.375-02/15/31*	159	0	-1	-6	-9	-8	41	-5
TIPS 2/40	0.54	-13	-12	-3	-4	-2	*US-4.625-02/15/40*	171	-2	-3	-4	-6	-6	33	-4
TIPS 2/41	0.54	-12	-12	-3	-4	-2	*US-4.750-02/15/41*	168	-3	-4	-4	-6	-5	36	-2
TIPS 2/42	0.59	-12	-12	-2	-3	-2	*US-3.125-02/15/42*	169	-4	-4	-3	-5	-5	35	-1
TIPS 2/43	0.58	-12	-12	-2	-3	-2	*US-3.125-02/15/43*	172	-3	-4	-3	-5	-5	31	-2
TIPS 2/44	0.57	-12	-12	-2	-3	-2	*US-3.625-02/15/44*	173	-3	-4	-3	-5	-5	31	-1

Source: Citi Research, Bloomberg

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

Bond	RY (%)	Chg (bp)	Carry-adj chg	Carry: RY (bp) 2 Mar	1 Apr	1 May	*Reference Conventional*	BE (bp)	Chg (bp)	Carry-adj chg	Carry: BE (bp) 2 Mar	1 Apr	1 May	ZC Swap - BE Spread (bp)	Chg (bp)
Repo (%)				*-0.03*	*-0.03*	*-0.04*									
BUNDei16	1.10	24	26	-4	-129	-98	*BUND 1/16*	-127	-23	-24	-3	-126	-94	-2	0
BOBLei18	-0.12	19	21	-5	-50	-41	*BUND 1/18*	-5	-21	-22	-4	-49	-40	-6	-9
BUNDei20	-0.44	12	13	-3	-32	-27	*BUND 1/20*	38	-16	-17	-3	-32	-27	-58	-67
BUNDei23	-0.64	9	9	-2	-20	-17	*BUND 1/22*	72	-12	-12	-2	-20	-17	-40	-56
BUNDei30	-0.52	-2	-2	-1	-11	-9	*BUND 1/30*	109	-12	-13	-2	-12	-10	-89	-115
OATei18	-0.34	13	15	-5	-46	-39	*FFRG 4/18*	30	-16	-17	-5	-46	-39	-20	-36
OATei20	-0.49	9	10	-3	-31	-26	*FFRG 4/20*	60	-12	-13	-4	-31	-27	-8	-25
OATei22	-0.49	11	12	-2	-22	-19	*FFRG 4/21*	69	-13	-14	-3	-23	-20	-24	-51
OATei24	-0.38	11	12	-2	-17	-14	*FFRG 10/23*	82	-13	-13	-2	-18	-15	-13	-43
OATei27	-0.31	7	7	-1	-14	-11	*FFRG 4/26*	103	-11	-11	-2	-15	-13	-40	-70
OATei30	-0.21	3	3	-1	-10	-8	*FFRG 5/30*	122	-9	-9	-2	-12	-10	-56	-83
OATei32	-0.16	2	2	-1	-11	-9	*FFRG 10/32*	123	-8	-8	-2	-12	-11	-66	-99
OATei40	0.04	7	7	-1	-7	-6	*FFRG 4/41*	132	-13	-13	-1	-8	-7	-50	-83
BTANi16	-0.39	13	16	2	-56	-10	*FFRG 4/16*	28	-11	-14	3	-55	-9	84	88
OATi17	-0.52	9	11	1	-33	-7	*FFRG 4/17*	42	-11	-12	1	-32	-7	69	60
OATi19	-0.65	9	10	0	-18	-5	*FFRG 4/19*	67	-12	-13	0	-19	-5	53	36
OATi21	-0.69	3	4	0	-12	-3	*FFRG 4/21*	89	-5	-5	0	-13	-4	28	4
OATi23	-0.56	11	11	0	-10	-2	*FFRG 10/23*	100	-12	-13	0	-11	-4	26	2
OATi29	-0.31	6	6	0	-6	-1	*FFRG 4/29*	121	-11	-12	0	-7	-3	4	-33
BTPei16	0.78	29	31	-5	-96	-74	*BTP 8/16*	-47	-27	-29	-7	-100	-81	159	143
BTPei17	0.52	34	36	-4	-59	-46	*BTP 8/17*	-6	-30	-32	-5	-62	-52	115	107
BTPei18	0.40	34	35	-3	-42	-33	*BTP 8/18*	20	-29	-31	-5	-46	-38	90	86
BTPei19	0.47	34	35	-2	-33	-26	*BTP 9/19*	30	-27	-29	-4	-37	-31	92	79
BTPei21	0.59	24	25	-1	-23	-17	*BTP 9/21*	58	-19	-20	-3	-27	-23	72	54
BTPei23	0.71	26	26	-1	-18	-13	*BTP 8/23*	76	-24	-25	-3	-21	-19	63	49
BTPei24	0.77	24	24	-1	-16	-12	*BTP 9/24*	81	-22	-23	-2	-19	-17	53	34
BTPei26	0.94	18	18	-1	-14	-10	*FFRG 5/30*	8	-24	-24	-1	-15	-12	135	101
BTPei35	1.13	-4	-3	0	-8	-6	*BTP 8/34*	131	-15	-16	-2	-11	-10	17	-4
BTPei41	1.37	-6	-6	0	-6	-4	*BTP 9/40*	127	-15	-16	-1	-9	-8	26	-10
SPGBEI19	0.28	34	35	-2	-31	-25	*SPAG 10/19*	48	-25	-26	-4	-34	-29	114	114
SPGBEI24	0.48	18	18	-1	-16	-12	*SPAG 4/24*	91	-15	-15	-2	-19	-17	72	54

Source: Citi Research

Figure 68. UK Gilts Inflation-linked Carry (based on forecasts above) – One week changes

Bond	RY (%)	Chg (bp)	Carry-adj chg	Carry: RY (bp) 2 Mar	1 Apr	1 May	*Reference Conventional*	BE (bp)	Chg (bp)	Carry-adj chg	Carry: BE (bp) 2 Mar	1 Apr	1 May	ZC Swap - BE Spread (bp)	Chg (bp)
Repo (%)				*0.43*	*0.43*	*0.44*									
UKTi Jul16	-1.21	21	20	8	17	27	*UKT 9/16*	157	-20	-21	8	18	28	42	-9
UKTi Nov17	-1.40	12	15	-1	-35	-26	*UKT 9/17*	196	-13	-16	-2	-36	-28	43	-6
UKTi Nov19	-1.30	12	14	-1	-19	-14	*UKT 9/19*	221	-16	-18	-2	-21	-17	36	-3
UKTi Apr20	-1.20	14	14	2	5	7	*UKT 3/20*	217	-19	-20	1	3	4	33	-2
UKTi Nov22	-1.12	9	10	0	-12	-8	*UKT 3/22*	228	-16	-17	-1	-14	-11	44	-1
UKTi Mar24	-0.99	6	7	0	-9	-6	*UKT 3/25*	239	-15	-16	-1	-11	-9	29	-5
UKTi Jul24	-1.00	8	7	2	3	5	*UKT 3/25*	240	-17	-17	0	1	2	40	1
UKTi Nov27	-0.96	3	3	0	-7	-5	*UKT 12/27*	256	-13	-14	-1	-9	-8	38	-1
UKTi Mar29	-0.91	3	4	0	-6	-4	*UKT 12/30*	267	-12	-13	-1	-8	-7	27	-4
UKTi Jul30	-0.94	6	6	1	2	3	*UKT 12/30*	270	-15	-15	0	0	0	36	2
UKTi Nov32	-0.96	4	4	0	-5	-3	*UKT 6/32*	281	-12	-13	-1	-7	-6	31	0
UKTi Mar34	-0.91	4	4	0	-5	-3	*UKT 9/34*	285	-12	-13	-1	-6	-6	26	-1
UKTi Jan35	-0.94	4	4	1	2	2	*UKT 3/36*	293	-12	-12	0	0	0	23	-0
UKTi Nov37	-0.92	5	5	0	-4	-3	*UKT 12/38*	295	-13	-14	-1	-6	-5	26	2
UKTi Mar40	-0.91	5	5	0	-4	-2	*UKT 12/40*	299	-13	-13	-1	-5	-5	20	0
UKTi Nov42	-0.93	4	5	0	-3	-2	*UKT 12/42*	300	-12	-13	-1	-5	-4	22	1
UKTi Mar44	-0.89	5	5	0	-3	-2	*UKT 1/44*	301	-13	-13	-1	-4	-4	19	0
UKTi Nov47	-0.92	4	4	0	-3	-2	*UKT 12/46*	301	-12	-13	-1	-4	-4	21	1
UKTi Mar50	-0.91	4	4	0	-3	-2	*UKT 12/49*	299	-12	-13	-1	-4	-4	20	0
UKTi Mar52	-0.90	4	5	0	-2	-2	*UKT 7/52*	300	-13	-13	-1	-4	-3	18	1
UKTi Nov55	-0.92	4	5	0	-2	-2	*UKT 12/55*	299	-13	-13	-1	-4	-3	21	2
UKTi Mar58	-0.89	4	4	0	-2	-1	*UKT 1/60*	297	-12	-13	-1	-3	-3	21	1
UKTi Mar62	-0.90	4	4	0	-2	-1	*UKT 1/60*	298	-13	-13	-1	-3	-3	20	1
UKTi Mar68	-0.91	4	4	0	-2	-1	*UKT 7/68*	300	-12	-12	0	-3	-3	19	1

Source: Citi Research

Summary of Recent Publications

Date	Publication	Topic	Page	Region
27-Jan-15	NOTE	Euro Rates Strategy: How 'open-ended' is QE really?	-	EUR
26-Jan-15	NOTE	European Flow Monitor: Strong demand for core EGB and gilts ahead of the ECB	-	EUR
26-Jan-15	NOTE	Euro Rates Strategy: Greece: Uncertainty remains, but so do ECB supports	-	EUR
23-Jan-15	NOTE	Euro SSA Strategy: What is an "agency" for the ECB and its QE programme?	-	EUR
22-Jan-15	European Weekly	ECB: Here Come the Details	3	EUR
		Buy Buy EMU Spreads	5	EUR
		Euro inflation – thumbs up to QE	8	EUR
		EUR Vol: Draghi's QE to Push Vol Lower	11	EUR
		SSAs and ECB QE – Draghi delivers	13	EUR
		Covered Bond Strategy: Implications of QE	16	EUR
22-Jan-15	NOTE	Weekly Supply Monitor: Euro, UK and US Supply Outlook	-	Global
22-Jan-15	NOTE	Covered Bonds: Higher Country Ceilings Up Peripheral Covered Bond Ratings	-	EUR
21-Jan-15	NOTE	Euro IL Index Changes: Month-end changes supportive for German real yields	-	EUR
20-Jan-15	NOTE	Euro SSA Strategy: A closer look at EFSF guarantee structures for bondholders	-	EUR
20-Jan-15	NOTE	Euro Rates Strategy: Reactions to QE announcements around the world	-	EUR
20-Jan-15	NOTE	Covered Bond Strategy: Unhedged CHF Exposure in Austrian Cover Pools	-	EUR
19-Jan-15	NOTE	European Flow Monitor	-	EUR
19-Jan-15	NOTE	EMU Month-end Index Projections	-	EUR
16-Jan-15	NOTE	Covered Bond Strategy: EEPK Withdraws All Covered Bond Ratings	-	EUR
15-Jan-15	European Weekly	Back to Good Old Rate Cuts?	3	EUR
		EGBs: market drivers beyond the ECB	4	EUR
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		Euro inflation: why is QE not being priced?	7	EUR
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		European SSA Strategy	12	EUR
		Covered Bond Strategy: Netherlands	15	EUR
15-Jan-15	NOTE	Weekly Supply Monitor: Euro, UK and US Supply Outlook	-	Global
15-Jan-15	NOTE	Alert: Euro Rates Strategy - Bund technicals bullish into the ECB	-	EUR
15-Jan-15	NOTE	Alert: European Rates Strategy - Take profit on Mar ECB @-7 ¾ bp	-	EUR
14-Jan-15	NOTE	Covered Bonds: Netherlands: Covered Bond Law Update and RV Opportunities	-	EUR
12-Jan-15	NOTE	European Flow Monitor: New Year Demand for Austria, Germany and France	-	EUR
12-Jan-15	NOTE	Rates Strategy Presentations: Where is the carry now?	-	EUR
12-Jan-15	NOTE	Euro Inflation Strategy: Significant Concession For Bundei30	-	EUR

Appendix A-1

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