

# European Credit Derivatives Brief

## Not your usual quiet summer

- **ECB QE and hedging demand drive flows in options markets** — August ended with very bullish pricing, after a month where investor hedging demand was the main determinant of option flows. Implied volatilities tracked the direction of indices, as the sell-off in early August was reflected in bearish pricing mid-month, with elevated implied volatilities and payer skews. However, improving sentiment over the end of August and early September, largely driven by the prospect of ECB QE, has caused the current, historically low implied- realized ratios across credit indices, as well as the outperformance of credit vol vs. other asset classes.
- **Tranches came back onto investors' agendas, although the ultimate conclusion of the story wasn't drastically different** — The trend over the past few years has consistently been the outperformance of equity vs. senior tranches. Despite a brief reversal following the BES affair, we continue to see higher correlations and lower dispersions causing equity tranches to outperform, though there has been a pick-up in two-way flows on super senior. The introduction of new iTraxx Crossover tranches may provide a boost to trading volumes for the market, as yield-seeking investors are likely to look at long-risk trades, particularly in equity and mezz tranches.

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**Aritra Banerjee**

+44-20-3569-4544

aritra2.banerjee@citi.com

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## Index Options

Figure 1. 3m Implied/Realised Volatilities

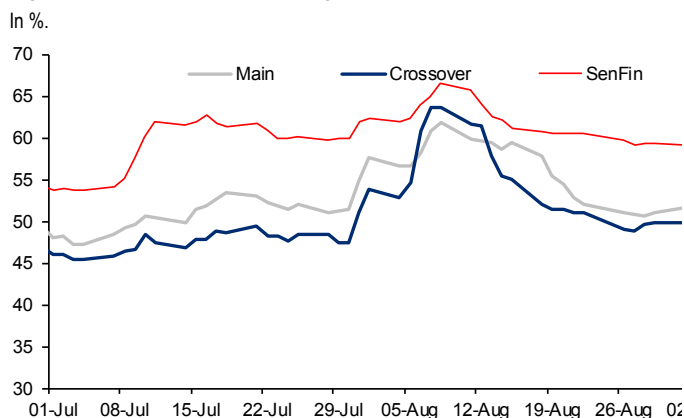
	3m Imp / real vol ratio	1w chg	1m chg
Main	1.26	0.1	-0.2
Crossover	1.11	0.1	-0.2
SenFin	1.02	0.1	-0.0

Source: Citi Research, Markit

■ **Hedging demand drove options flows in August.** Both realised and implied volatilities rose strongly with the sell-off in the first half of August, as concerns over positive US data flow speeding up the pace of Fed tightening, and simmering geopolitical tensions drove an unwind of long positions. Investors, mainly banks and real money, sought hedges via out-of-the-money payers and payer spreads on Main and Crossover. Mid-month, this drove indicators of short-term volatility to stretched levels; with both implied volatilities and payer skews, particularly on Crossover, looking elevated. Market sentiment improved in the latter half of the month, as dovish statements from Draghi at Jackson Hole boosted expectations of QE. Implied and realised volatilities fell significantly as real money accounts took off hedges. Some fast money also looked to sell strangles and outright payers to take advantage of the bearish pricing, pushing 3m ATM Implied volatilities across indices lower by 10-15% (Figure 2). Despite some increased demand for OTM payers from real money following weak European manufacturing and confidence data, we currently see very bullish pricing. With low implied to realized volatility ratios across indices (Figure 1), and the likely pick-up in index activity going into the roll, not to mention the uncertainty surrounding the prospect of ECB QE, we think this looks a cheap time to add hedges or to trade volatility outright.

■ **Expectations over European QE boosted demand for Senior Financials receivers.** Accounts looking for ECB action were vindicated by the meeting on 4 September. Investors who had been looking to play the tightening potential went long OTM Senior Financials receivers, which caused a flattening in receiver skews (Figure 3). Despite some profit-taking in the aftermath of the meeting, we didn't really see a collapse of ATM implied volatilities or of the receiver skew. From a vol point of view, selling receivers on Senior Financials to buy low-priced hedges in Main looks an attractive trade. However, with the market looking uncertain about the scale and implications of European QE, not to mention an upcoming index roll, and a new ISDA contract, we wouldn't sell receivers just yet.

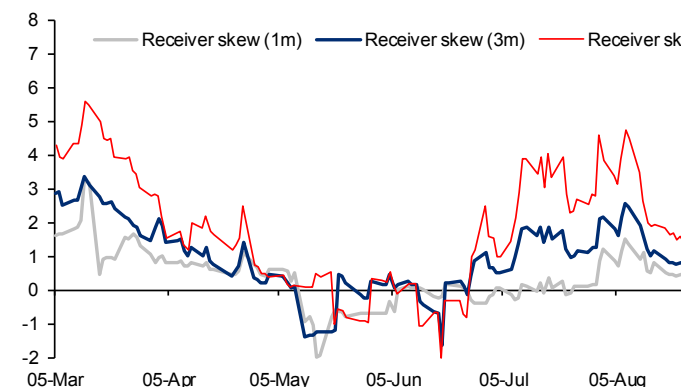
Figure 2. 3m ATM implied volatility



Source: Citi Research, Markit

Figure 3. Senior Financials Receiver Skew, in %

Implied volatility difference between payer options with 50% delta and with 75% delta.

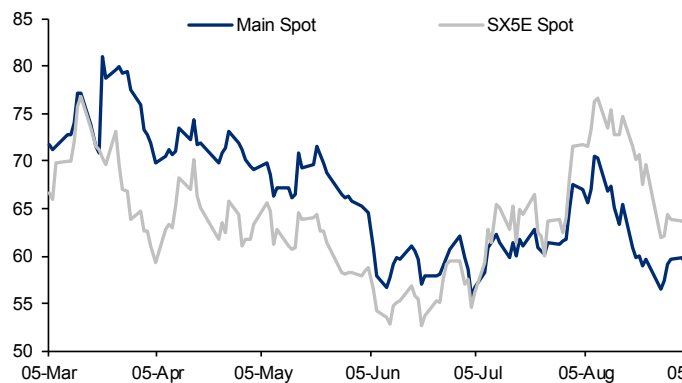


Source: Citi Research, Markit

- **Credit, for once, seems not to be the most expensive vol market.** Even after the ECB, we currently see very low implied volatilities in credit options, especially in comparison with other vol markets. At the time of writing, 1m and 3m implied to realised volatility ratios across indices are close to parity, a situation which has historically been rare in the credit volatility space. Recent price action in credit vol has been markedly different from other asset classes, especially against equities, as European QE prospects have proven bullish for credit vs. equity (Figure 5).
- **We have said it before, but there are still no signs of abatement in the growth of the credit options market.** August, typically a quiet month, was very active across all indices in the options space. We have seen almost 10x the amount of option notional traded this month across indices compared with August last year. Notional traded volumes this year are already 75% above last year's, with the pick-up in activity from real money and bank trading desks comfortably offsetting a drop-off from CVA desks.

Figure 4. iTraxx Main vs. SX5E- Level

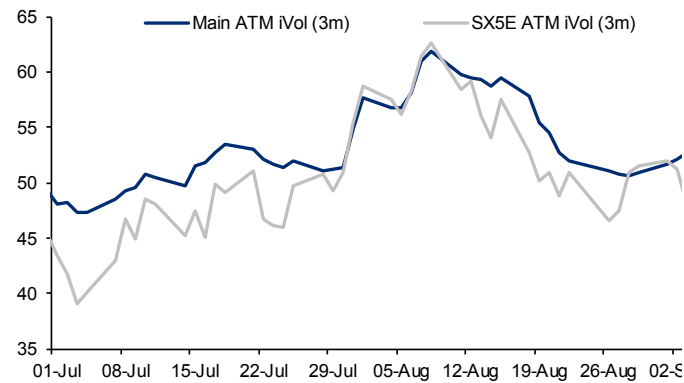
LHS: Main (bp); RHS: SX5E.



Source: Citi Research

Figure 5. Implied vol (ATM, 3m)

LHS: Main; RHS: SX5E. In %.



Source: Citi Research

## Index Tranches

**Figure 6. S9 1m delta-hedged performance**

From a protection seller's point of view, as % of notional on each instrument.

	7y	10y
Series 9	Jun-15	Jun-18
0-3%	-0.21%	0.75%
3-6%	-0.19%	-0.24%
6-9%	-0.13%	0.08%
9-12%	-0.05%	0.07%
12-22%	-0.02%	0.03%
22-100%	-0.01%	-0.05%
Ref**	0.09%	0.47%

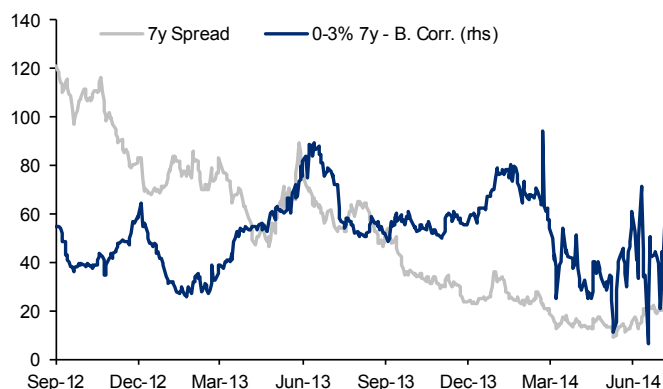
Source: Citi Research, Markit

■ **We thought that BES would change everything, but it didn't.** The tranche market over the past couple of years has generally been quiet, and trading flows have been one directional, hedge funds have been sellers of equity protection, with the occasional real money investor selling mezz protection also; pushing implied correlations up to current levels. The BES story briefly reversed the trend of equity outperformance vs. senior, as hedge funds cut their long risk positions on equity in July. However, equity spreads completely reversed underperformance across August upon the resolution of the BES affair, and implied correlations on both 7y and 10y jumped (Figure 7, Figure 8). Going long risk on 7y 0-3% across the past month would have returned 1.91% on a non-delta hedged basis. Indeed, even delta-hedged returns would have been positive on pretty much any of the S9 10y tranches (Figure 6), with the exception of Super Senior.

■ **This reflects that we are finally seeing some two-way flow on super senior tranches.** Despite the underperformance, we maintain our view that super senior tranches are the [most attractive long risk trade out there](#). The base correlation curve on S9 is elevated in comparison to 3m ago, strikingly-so for the 7y (Figure 9). This lends support to our view that the entry point for going long risk S9 10y 22-100 tranche looks attractive.

**Figure 7. 7y - index spread & equity tranche correlation**

LHS: index spread (bp). RHS: equity tranche correlation (%).



Source: Citi Research, Markit

**Figure 8. 10y - index spread & equity tranche correlation**

LHS: index spread (bp). RHS: equity tranche correlation (%).

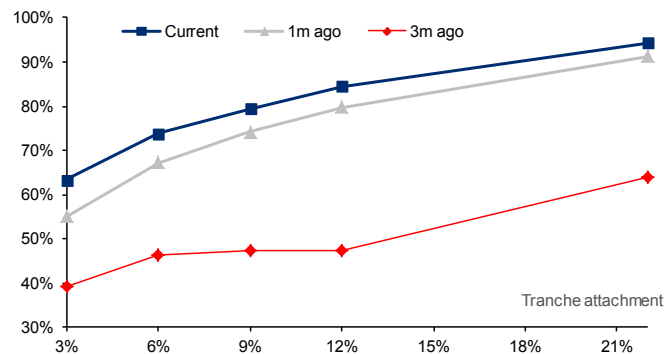


Source: Citi Research, Markit

■ **And what of Crossover tranches?** New Crossover tranches are likely to be highly attractive for yield-starved investors. Currently, trading volumes on Main tranches are practically non-existent outside S9 (where over 92% of tranche market volumes trade). Given the wide spreads on offer, we expect trading volumes on Crossover tranches to very quickly leapfrog everything in Europe but Main S9. Yield-seeking fast-money accounts are likely to look at long risk trades on equity tranches. We also expect some demand to go long risk on non-equity tranches from other hedge funds and real money accounts who already use the IG tranches. Eventually, high yield and distressed buyers will likely get involved with equity tranches, just as they do in CDX HY.

**Figure 9. S9 7y Base correlation surface**

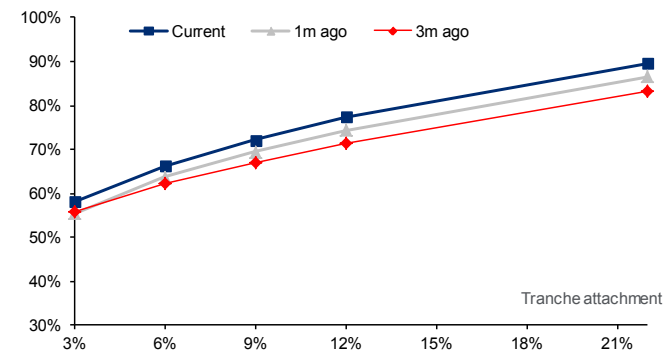
X-axis: tranche attachment point (%). Y-axis: Base correlation (%).



Source: Citi Research, Markit

**Figure 10. S9 10y Base correlation surface**

X-axis: tranche attachment point (%). Y-axis: Base correlation (%).



Source: Citi Research, Markit

## Analytics, Past Trade Ideas & Publications

### Analytics – Available at Citi Velocity

<b>Options</b>	<a href="#">iTraxx Volatility Report</a> <a href="#">CDX Volatility Report</a> <a href="#">European Cross-Asset Volatility Report</a> <a href="#">Volatility P&amp;L Report – Credit Indices</a>	<b>Tranches</b>	<a href="#">iTraxx Series 9 Tranche Report</a> <a href="#">iTraxx Series 19 Tranche Report</a> <a href="#">iTraxx Series 21 Tranche Report</a>
<b>Curves</b>	<a href="#">iTraxx Curve P&amp;L Report</a>	<b>Indices</b>	<a href="#">Main Report</a> <a href="#">Crossover Report</a> <a href="#">CDS Indices Positioning Report</a> <a href="#">CDS Indices Trading Volumes Report</a>
<b>Returns</b>	<a href="#">European Credit Derivatives Returns</a>		

### Recent Trade Ideas

Options -	<a href="#">Sell Xover receivers</a>	1-Aug-14
Tranches -	<a href="#">Long risk super senior tranches</a>	21-Jul-14
Options -	<a href="#">Main receiver 1x2s</a>	13-Jun-14
Options -	<a href="#">Main bearish risk reversal</a>	13-Jun-14
Curves -	<a href="#">5s10s Senior Fin flattener</a> (J. Faith)	30-May-14
Options -	<a href="#">European vs. US credit vol</a>	28-May-14
Tranches -	<a href="#">Sell 0-3% Jun-15 S9 protection: outright, vs. CDX IG 5y or vs. SX5E</a>	21-May-15
Indices -	<a href="#">Sub/Senior Financials compression</a> (J. Faith)	20-May-15
Curves -	<a href="#">5s10s Main Flatteners</a>	25-Apr-14
Options -	<a href="#">Main 70-75 May Receiver 1x2</a>	2 Apr 2014
Options -	<a href="#">Buy SenFin vs. Sell CDX IG straddles</a>	18 Mar 2014
Single names vs. Index	<a href="#">Releveraging Trade</a> (H. Lorenzen)	24 Feb 2014
Tranches vs. Options -	<a href="#">Sell protection and monetize the positive convexity by selling straddles</a>	20 Feb 2014
Tranches -	<a href="#">Buy 9-100% S9 Jun-18 protection, delta-hedged</a>	20 Feb 2014
Tranches -	<a href="#">Sell 3-6% S9 Jun-18 protection, delta-hedged</a>	20 Feb 2014
Options vs. Curves -	<a href="#">Flatteners vs. OTM payers</a>	13 Feb 2014
Options -	<a href="#">Sell Main vol, buy SenFin vol</a>	21 Jan 2014
Tranches -	<a href="#">More mezz, less seniors - 3-6% vs. super senior</a>	15 Jan 2014
Options -	<a href="#">SenFin vs. Xover Recs</a>	9 Jan 2014
Options -	<a href="#">Payer spread vs. index long</a>	9 Jan 2014
Options -	<a href="#">Sell 1m Main straddles</a>	9 Jan 2014
Options -	<a href="#">Sell Crossover Receiver</a>	9 Jan 2014
Options -	<a href="#">Sell strangles and go on holidays: Position for spreads to stay in the recent range in mid-January</a>	9 Dec 2013
Tranches -	<a href="#">Sell S9 Jun-18 6-9% protection vs. Xover 5y S20</a>	15 Nov 2013
Tranches -	<a href="#">Sell S9 Jun-18 22-100% protection vs. light delta</a>	15 Nov 2013
Indices -	<a href="#">Long risk Senior Fins. vs. short risk Main</a>	5 Nov 2013
Options -	<a href="#">Crossover receiver ladders</a>	23 Oct 2013

“European Credit Derivatives Views & Trades” Investor Presentation

Teach-in presentations: [Options](#) / [Tranches](#) / [Indices](#)

### Other publications

<a href="#">An Algorithm-driven Relative Value Signal: A simple method to monetize credit versus equity relative value</a> (A. Basu)	14-Aug-14
<a href="#">Time For Action On The CDS Legal Front: All You Wanted To Know But Were Afraid To Ask About The Switch To The New CDS Contracts</a>	13-Aug-14
<a href="#">Trading volumes in European credit</a>	5-Aug-14
<a href="#">iTraxx Roll - Potential Changes: Crossover to be expanded to 75 names</a>	1-Aug-14
<a href="#">Smart Ways to Sell Credit Volatility</a> (A. Basu)	24 Jul 2014
<a href="#">2014 CDS Definitions getting closer II: Update on protocol and CoCo supplement</a>	11-Jul-14
<a href="#">Hedging the tail – Why real money should consider all options</a> (with H. Lorenzen)	1 Jul 2014
<a href="#">Lazy longs for July</a>	23 Jun 2014
<a href="#">Where do we expect iTraxx rolls to trade?</a>	19 Mar 2014
<a href="#">Our preferred carry trades in indices, options and tranches</a>	11 Mar 2014
<a href="#">New 2014 CDS Definitions - What's new? What's changing? Why? When? How?</a>	26 Feb 2014
<a href="#">iTraxx Roll - Potential Changes: Crossover number of constituents will increase to 60 names</a>	10 Feb 2014
2014 European Credit Outlook: <a href="#">Strategy</a> // <a href="#">Positioning and Trades</a>	13 Jan 2014
<a href="#">Global Structured Credit Outlook: A Rockier Ride</a> (R Roy, A Basu, K Malhotra, R Brauchler)	20 Dec 2013
<a href="#">2013 Trading Volumes in European Credit: CDS Indices, Single Name CDS and IG Bonds</a>	5 Dec 2013
<a href="#">Credit Options - What did investors do in 2013? What will they do in 2014?</a> (2013 European Credit Conference Presentation)	4 Dec 2013
<a href="#">Credit Index Options 1-0-1: Launching our option pricing tool @ CitiVelocity</a> (2013 European Credit Conference Presentation)	2 Dec 2013
<a href="#">Europe Returns: Assessing value across flow and structured credit assets</a>	22 Nov 2013

Please click the links to see the complete trade ideas and rationales and pricing at time of recommendation.  
Source: Citi Research.

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