

# New Crossover Tranches

## Our take on pricing, supply-demand and potential trades

- **Tranches on the Crossover Series 22 index will start trading on Monday 20th October** – Initially, we expect only tranches in the 5y index to trade; with liquidity in 3y tranches potentially developing if the liquidity in the 5y tranches takes off.
- **Four tranches: Equity (0-10%), junior mezz (10-20%), senior mezz (20-35%) and super senior (35-100%)** – Indicative pricing in 5y tranches in Figure 1.

Figure 1. EXPECTED Crossover S22 5y (Dec-19) tranche pricing

Tranche	Spread	Upfront*	Delta
0-10%	2305	57.5%	1.6
10-20%	769	12.4%	1.9
20-35%	425	-3.7%	1.5
35-100%	106	-18.9%	0.6
Index	374	-5.8%	

Source: Citi Research, Markit. \* 500bp coupon. Spreads in bp.

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- **Crossover tranches will provide a way to take both pure default risk as well as “high yield market risk”** – The recent weakness in the high yield market is driven, to a large extent, by investors’ fear of more “jump to distress” stories. Crossover senior tranches will allow investors to take high yield risk with limited exposure to idiosyncratic stories.
- **Investors will also be able to source attractively priced hedges** – Either to large systemic high yield weakness or to an increase in the number of distress situations with the general high yield market not selling off much.
- **Expect initial flows to be from non-high yield/distressed investors, already seasoned in the synthetic tranche market, selling mezzanine protection** – Dealers will likely need to find sellers of both super senior and equity tranches.
  - **It shouldn’t be hard to find sellers of super senior protection** given the momentum in investment grade super senior tranches as well as the potential traction on Crossover super senior tranches with CLO AAA investors. **However, it is not unlikely to imagine high yield investors using the super senior tranche as a tail hedge to their cash bond book**, but we don’t think this will happen right after the launch of Crossover tranches, given that high yield investors will need some time to get comfortable with them.
  - **Placing the equity tranche (i.e. finding protection sellers) could be harder and would likely require involving high yield accounts** – who may not be fast movers given that they are not seasoned tranche investors.

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

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Figure 2. Weekly average tranche trading volumes, in \$bn

	2014	2013	2012
CDX HY *	0.5	0.3	0.4
iTraxx Main **	3.7	3.2	6.3

Source: Citi Research, DTCC. \* Series 15, 17, 19, 21. \*\* Series 9, 17, 19, 21.

**Tranches on the Crossover Series 22 5y index will start trading on Monday 20<sup>th</sup> October.** With the recent expansion of Crossover to 75 names, the index is now large and diversified enough to accommodate synthetic tranches – or that’s what dealers think anyway. We expect interest and liquidity in this product to pick up, in-line with the activity we have seen in CDX HY tranches for the past few years – Figure 2 shows average weekly trading volumes for the past 3 years both in CDX HY and iTraxx Main.<sup>1</sup>

**The pre-launch feedback and interest we are getting from investors in Crossover tranches is very encouraging.** Tight spreads always make levered instruments attractive. Moreover, the recent weakness and dispersion in the high yield market is the perfect environment to start trading Crossover tranches given that they will provide a way to trade both pure default risk as well as “high yield market risk” (i.e. exposure to high yield risk with limited exposure to idiosyncratic risk). The weakness in the high yield market is driven, to a large extent, by investors’ fear of more “jump to distress” stories like Phones 4u – Crossover senior tranches will allow investors to take high yield risk with limited exposure to idiosyncratic stories.

The pick-up in [tranche trading volumes](#) we’ve seen this year, both in standard and bespoke synthetic tranches will be an additional tail-wind for the new Crossover tranches.

**The timing of the launch is very tricky,** with the high yield market going through a tough time. It would have been easier to launch Crossover tranches back in March when investors couldn’t get enough high yield risk. The hurdle for liquidity to pick up may be a bit higher now, but trading opportunities will likely be higher as well.

**Most investors we’ve seen believe the product will attract risk takers looking for high spread and high beta instruments.** A few others have expressed concerns about whether Crossover tranches are a clear signal the bull market is coming to an end (*à-la* TABX tranches<sup>2</sup> back in 2007). We still think the market has plenty of room to perform, so we align ourselves with those who think Crossover tranches will provide another instrument for investors to try and reach target returns in a world where that is almost impossible without any structural or financial leverage. Crossover tranches have already traded in “bespoke” format recently, with demand from institutional clients as well as small private clients.

**Mechanics – simple, like all other synthetic index tranches.** They will be traded on an upfront + fixed coupon format (like all other synthetic credit products); the most senior tranche will be quoted in spread terms (with the usual CDSW / QCDS screens to convert spreads in upfronts and vice-versa)<sup>3</sup>. All tranches will trade with a 500bp fixed coupon, similar to the index one. Initial / variation margin mechanics will apply, like in other credit synthetic products; however, investors will be able to trade them on a fully funded format on CLN type of arrangement (we expect this to be the case for small private clients or clients without the ability to trade in swap format).

<sup>1</sup> Market-wide available data on standard index tranche volumes is only available, as far as we know, via DTCC. We always hesitate to read too much into DTCC’s volumes for tranches (and options) given that the reported volumes are, we believe, not delta-adjusted (and 1bn of equity risk is not exactly the same as 1bn of super senior risk). For tranches, the data aggregate total volumes on each series, regardless of tranche seniority and tenor. Although this lack of granularity means we may miss some important trends, the data is still informative. These volumes also exclude bespoke trades, which likely represent a significant portion of current trading activity.

<sup>2</sup> Synthetic tranches on an index of US subprime mortgage backed securities. Sounds top of the market, doesn’t it? ... It was.

<sup>3</sup> To convert the quoted spread of the super senior tranche (20-100%) into upfront terms, a 500bp fixed coupon and a 40% recovery rate will be used.

**There will be only four tranches** – catering to different client types:

- **One equity tranche (0-10%)** which will provide exposure to the index first default losses; its pricing will be mostly driven by the widest names in the index. We expect high yield and distressed accounts to eventually be the main players in this tranche, given their single name fundamental focus and expertise. This tranche will generally trade “distressed” (i.e. high upfront) and we expect it to suffer substantial dislocations whenever one of the index constituents “jumps to distress” *à-la* Phones 4u.
- **Two mezzanine tranches (10-20% and 20-35%)** with default subordination but still with very attractive spreads. These tranches should become popular ways for adding high yield risk among the non-high yield focused investors: we expect traditional players in the investment grade synthetic tranche market to be active in these tranches, as well as real money investors looking for “off-benchmark” high spread longs without too much single name idiosyncratic risk. Crossover mezz tranches should compete with other high spread products like AT1 or non-financial hybrids to fill the “off-benchmark” buckets of investment grade investors.
- **One super senior tranche (35-100%)** with little idiosyncratic risk, trying to compete with other highly subordinated (but still paying around 100bp) instruments such as AAA CLOs. This tranche will also likely be the first port of call for investors looking to hedge the high yield market.

**The synthetic tranche market has become mostly a long-only market**, with different investors taking risk in each part of the capital structure and dealers looking to complete the capital structure (i.e. find risk takers in all the tranches) in order to mitigate regulatory and internal capital charges. The number of investors trading relative value in tranches (like in the good old days prior to the financial crisis) is limited, as it is the number of investors using tranches as hedging vehicles. We expect the same dynamics to play out in Crossover tranches: pricing will be mostly driven by the different demand to take risk on each tranche.

**Maturity-wise, we expect trading to start in the 5y tenor only** (which is where we focus on this report). Dealers can certainly trade tranches in the 3y Crossover index, but we suspect that the limited liquidity on the index itself will make that hard initially. We provide indicative pricing on the 3y tranches on the last section of this report.

## Pricing, flows and trades – What to expect

**We expect the mezz and super senior tranches to initially outperform, until the equity tranche finds a clearing level and a natural investor base**

Indicative spreads and upfronts for the four tranches which will be traded are included in Figure 3 – note that these are our expectations only, based on where the index constituents currently trade and our expectations for the supply/demand dynamics (a.k.a. “implied correlation” in tranche jargon) – take them as very indicative only: our main purpose here is not to predict where the prices will be but to review what are the main supply-demand dynamics we expect once the tranches are launched. For reference purposes, Figure 4 and Figure 5 show current prices in both US high yield synthetic tranches as well as European investment grade synthetic tranches.

Figure 3. EXPECTED Crossover S22 5y (Dec-19) tranche pricing

Tranche	Spread	Upfront*	Delta
0-10%	2305	57.5%	1.6
10-20%	769	12.4%	1.9
20-35%	425	-3.7%	1.5
35-100%	106	-18.9%	0.6
Index	374	-5.8%	

Source: Citi Research, Markit. \* 500bp coupon. Spreads in bp.

Figure 4. CDX HY S21 5y (Dec-18) tranche pricing

Tranche	Spread	Upfront*	Delta
0-5%	5912	83%	1.5
5-10%	1796	41%	3.7
10-15%	899	15%	3.2
15-25%	413	-3%	1.9
25-35%	183	-13%	1.0
35-100%	57	-17%	0.4
Index	328		

Source: Citi Research, Markit. \* 500bp coupon. Spreads in bp.

Figure 5. iTraxx Main S9 10y (Jun-18) tranche pricing

Tranche	Spread	Delta
0-3%	1000	10.7
3-6%	278	5.0
6-9%	154	3.0
9-12%	86	1.8
12-22%	46	1.0
22-100%	18	0.4
Index	60	

Source: Citi Research, Markit. Spreads in bp.

**The Crossover 0-10% equity tranche should trade with a large upfront (plus 500bp running coupon) given how thin it is.** With 75 credits and a weight of 1.33% on each of them, a default with a 20% recovery would generate a loss of 1.07% (= 1.33% x 80%) in the index and of 10.7% (= 1.07% index loss / 10% tranche width) in the equity tranche. In other words, if an investor sells equity tranche protection and receives 57.5% on day one, he could pay for more than 5 instantaneous defaults with 20% recovery and still break even (5 x 10.7% = 53.3%). Defaults on day one would be the worst case scenario for the equity protection seller as he would not receive the full coupons going forward. If the defaults happen at maturity, the investor will pocket an additional 25% (5 years of 5% coupons) and have available 82.5% (= 57.5% + 25%) to pay for any default losses – 7 defaults would generate 74.6% losses and 8 defaults would generate 85.3%. The simple maths above work for defaults with 20% recovery; in the next section we look at different recoveries.

The junior mezz (10-20%) and senior mezz (20-35%) tranches will generate equivalent spreads around 7% and 4% respectively. Finally, we expect the super senior tranche (20-100%) to trade around 106bp. All these spreads are based on the index trading at 374bp.

**We expect the initial flows to be from non-high yield/distressed investors, already seasoned in the synthetic tranche market, selling mezzanine protection (10-20% and 20-35%).** Dealers will eventually need to find sellers of both super senior and equity tranches.

**The recent trend of investors favoring super senior longs in investment grade tranches suggests to us that dealers should not have trouble finding sellers of Crossover super senior protection.** These investors will potentially be hedge funds looking at the potential returns of super senior tranches on the required margins to be posted. We also expect real money accounts such as pension funds and some asset managers to be attracted to the super senior Crossover tranches. Finally, AAA CLO investors will also be shown Crossover super senior tranches as they trade at not very different levels than AAA CLOs.

Figure 6. IRR on a Crossover equity tranche (0-10%) PO note with an illustrative price of 35%

Defaults	20% Recovery	40% Recovery
0	22%	22%
1	20%	20%
2	17%	18%
3	14%	16%
4	10%	14%
5	6%	11%
6	1%	8%
7	-6%	5%
8	-15%	1%
9	-34%	-4%
10		-10%

Source: Citi Research.

#### Crossover tranches for hedging?

Anyone looking to sell equity tranche protection will likely need to be very much involved already in the underlying credits in the index, in particular the widest ones: Norske, Quick, Hema, Matalan ... - see Figure 11. As a consequence, we think **it will be hard for dealers to place the equity tranche until they manage to involve high yield accounts** (which is what actually happens in CDX HY tranches). We expect many of the high yield investors to potentially prefer to trade the equity tranche in a "bond" format (i.e. paying the "bond" price upfront, receiving a coupon going forward and having the notional of the trade reduced every time there is a default).

Thus, **we think dealers will offer the equity tranche both in standard as well as "Zero Coupon" or "Principal Only" (PO) format**. In a PO equity note, the investor pays something upfront, say 35% and, at maturity, receives the initial notional (100%) minus any losses on the tranche – for more details see slides 101-102 of our [teach-in](#). See Figure 6 for illustrative IRRs of a PO note on the equity tranche.

**All in all, we expect the mezz and super senior tranches to initially outperform, until the equity tranche finds a clearing level and a natural investor base**. However, if market makers agree with our analysis they may open the equity tranche wide ("to model") on day one, limiting the potential upside one could have in mezz and senior tranches.

We may be too bullish on the high yield market and **it may turn out that investors look at the Crossover tranche market to hedge**, but we struggle to see investors buying either equity or mezz protection outright to hedge – we think they will stay in the index or options space when looking for hedges.

- On tranches, they may look at buying super senior protection outright as a macro systemic high yield hedge or buying 20-35% protection vs. selling 10-20% (or even 0-10%) protection as a bearish relative value trade; these would be **proper blow-up hedges**, not hedges for a minor widening with a few names "jumping to distressed".
- Investors who want to **position for a few names underperforming significantly with the general market not selling off a lot** would likely look at buying index protection to sell mezz or super senior protection.

## Crossover tranches: The details

### Attachments, detachments and losses

With 75 equally weighted credits, the weight of each name in the index is 1.33%. Figure 7 shows the losses, both in the index and in the equity tranche, from one default with different recovery rates. For example, with a 20% recovery rate, the index loss would be 0.8% ( = credit weight 1.07% x ( 1 – recovery 20%) ); that would generate a loss on the equity tranche equal to 10.7% ( = index loss 1.07% / tranche width 10% ).

Figure 8 shows the number of defaults needed to “hit” and “wipe out” each tranche for different recovery rates. For example, with a 20% recovery rate it would take 9 defaults to hit the 10-20% tranche, 18 to hit the 20-35% tranche and 32 to hit the 35-100% tranche.

Figure 7. Default settlement losses caused by one default in the index and equity tranche

Recovery	Index loss	0-10% tranche loss
0%	1.3%	13.3%
10%	1.2%	12.0%
20%	1.1%	10.7%
30%	0.9%	9.3%
40%	0.8%	8.0%
50%	0.7%	6.7%
60%	0.5%	5.3%
70%	0.4%	4.0%
80%	0.3%	2.7%

Source: Citi Research.

Figure 8. Number of defaults to hit and wipe-out Crossover tranches for different recoveries

No. defaults to:	Recovery: 0%		Recovery: 20%		Recovery: 40%	
	Hit	Wipe out	Hit	Wipe out	Hit	Wipe out
0-10%		7.5		9.4		12.5
10-20%	7.5	15.0	9.4	18.8	12.5	25
20-35%	15.0	26.3	18.8	32.8	25.0	43.8
35-100%	26.3		32.8		43.8	

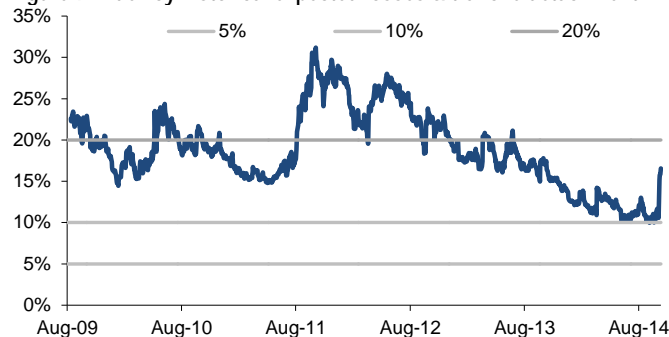
Source: Citi Research.

Number of defaults to hit a tranche = attachment / [ (1/75) x ( 1 – recovery) ]

Number of defaults to wipe-out a tranche = detachment / [ (1/75) x ( 1 – recovery) ]

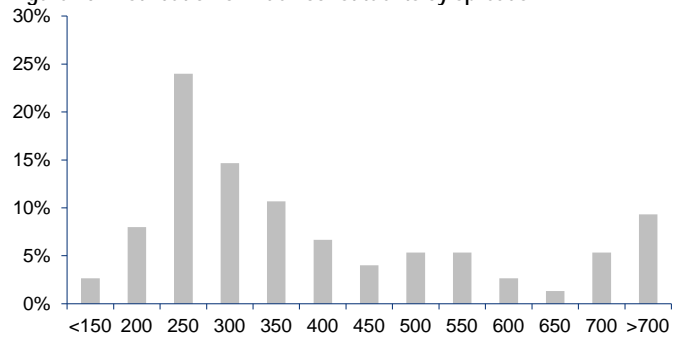
The index historical expected losses are shown in Figure 9. With current index spreads at 374bp, the current expected loss is around 14-15%.

Figure 9. Index 5y historical expected losses & tranche detachment



Source: Citi Research, Markit.

Figure 10. Distribution of index constituents 5y spreads



Source: Citi Research, Markit.

Figure 11. Widest names in Crossover S22

	Name	5y spread
1	Norske Skogindustrie	2483
2	Financiere Quick	937
3	Matalan Finance Plc	846
4	Hema Bondco I B.V.	793
5	Premier Foods Financ	749
6	Unilabs Subholding A	746
7	Care Uk Health & Soc	739
8	Stretford 79 Plc	690
9	Lock Lower Holding A	678
10	Selecta Group B.V.	664

Source: Citi Research, Markit. Indicative mid spreads.

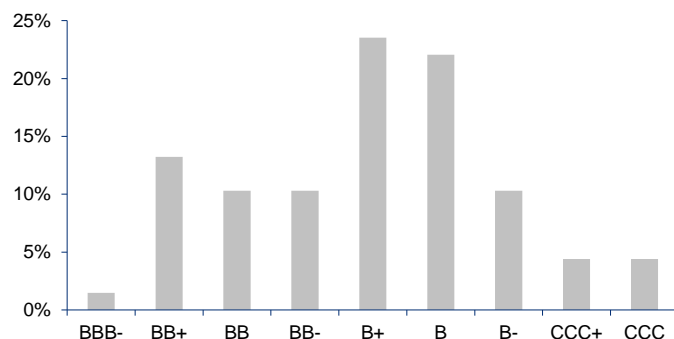
## The index: Crossover 5y Series 22

The expansion of the Crossover index from 60 to 75 credits in the recent roll involved the inclusion of 19 credits which didn't have liquid CDS but had recently issued plenty of debt – see our [recent roll report](#). Most of these credits trade between 500 and 900bp (on the 5y tenor) and have created a sizable bucket of “wide” credits in the Crossover index, as the 5y spread distribution in Figure 10 shows. Out of the 10 widest names in the current index (Figure 11), nine are “new entrants”. Norske remains the widest credit in the index, by far.

Figure 12 shows the current rating distribution of the index constituents and Figure 13 compares the 5y spread distribution of Crossover S22 and CDX HY S21 (the latest CDX HY series with traded tranches). Although Crossover has a bucket of “wide” credits, there is only one credit in Crossover (Norske) trading above 1,000bp vs. 6/7 in CDX HY. The bucket of distressed credits in CDX HY would make a 0-10% tranche in CDX HY trade much wider – CDX HY S21 Dec-18 (i.e. with a 1y shorter maturity than Crossover S22) would currently trade close to 62% upfront (+5% running) as Figure 4 showed.

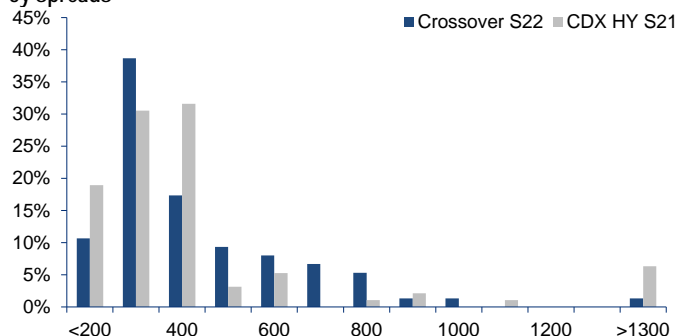
We argued above that placing the equity (i.e. finding protection sellers) risk in Crossover tranches could be hard and would involve high yield accounts – the main reason for that is the likely fear of non-traditional high yield investors to take equity risk given the potential of some of the Crossover constituents to “jump to distressed” taking the rating distribution closer to the one in CDX HY. Even high yield accounts seem to currently be reassessing their views on the likelihood of further “jump to distress” stories *à-la* Phones 4u.

Figure 12. Crossover S22 rating distribution



Source: Citi Research, Markit, Bloomberg.

Figure 13. Crossover S22 vs. CDX HY S21 distribution of constituents 5y spreads



Source: Citi Research, Markit.



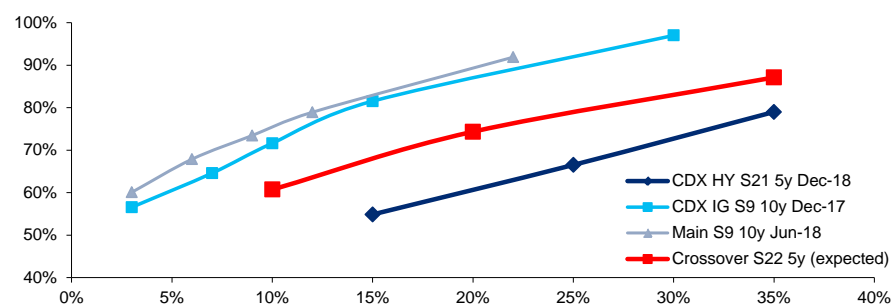
## Implied correlations: supply & demand

We've left the "geeky" bit for the end. If you are a non-traditional tranche investor and you got this far, don't be put off by what follows. "Correlations" are just the way we tranche-geeks use to talk about supply and demand: **higher correlations represent more demand to sell equity protection (or to buy senior protection) – that's all.**

When coming up with our indicative spreads and upfronts for the Crossover tranches, we had to figure out where the supply / demand should be. We did that by looking at where implied correlations were in the tranches that already trade: both in high yield portfolios (CDX HY) and investment grade ones (iTraxx Main and CDX IG) – see Figure 14. **Crossover is a high yield index, but doesn't have the "distressed" bucket that CDX HY has, which means the demand to sell equity tranche protection will likely be higher than in CDX HY (i.e. higher implied equity correlation); however, it will unlikely be as high as in investment grade equity portfolios (i.e. lower implied equity correlation than in iTraxx Main or CDX IG).** Thus, we assumed that the implied correlation in Crossover would be half-way between the one in CDX HY and the one in iTraxx Main and CDX IG. Nothing sophisticated here – flows will determine where Crossover tranche pricing ends up; remember, correlations don't drive prices, it is just our way of thinking about supply/demand dynamics given where tranches trade.

Figure 14. Correlation skew vs. attachment point for different tranching indices

Y-axis: base correlation, X-axis: attachment point.



Source: Citi Research, Markit.

With the implied correlations for Crossover tranches in Figure 14 and the current index and single name spreads, we priced the different Crossover tranches. The results for 5y Crossover tranches are in Figure 15, which includes spreads, upfronts, expected losses (i.e. full upfronts), risky durations, deltas as well as tranche sensitivities such as Index01 (MtM if the index widens 1bp) and Correlation01 (MtM if implied correlation increases 1%).

Figure 15. Indicative Crossover S22 5y tranches prices and sensitivities

Using the base correlation skew on Figure 14.

Maturity	Tranche	Coupon (bp)	Exp. Loss	Upfront	Risky Dur.	Running spread	Index01	Delta	Correlation01
20-Dec-19	0-10%	500	73.4%	57.45%	3.18	2,305	0.08%	1.6	0.54%
20-Dec-19	10-20%	500	35.3%	12.35%	4.59	769	0.09%	1.9	0.24%
20-Dec-19	20-35%	500	20.8%	-3.68%	4.90	425	0.07%	1.5	0.00%
20-Dec-19	35-100%	500	5.1%	-18.88%	4.79	106	0.03%	0.6	-0.12%
	Index	500	17.3%	-5.82%	4.62	374	0.05%	1.0	

Source: Citi Research, Markit. Exp. Loss = full upfront. Index01 and Correlation01 in % of tranche notional.



Figure 16 shows similar indicative pricing for 3y Crossover S22 tranches, using the same correlation as for the 5y tranches above.

Figure 16. Indicative Crossover S22 3y tranches prices and sensitivities

Using the base correlation skew on Figure 14.

Maturity	Tranche	Coupon (bp)	Exp. Loss	Upfront	Risky Dur.	Running spread	Index01	Delta	Correlation01
20-Dec-17	0-10%	500	48.0%	35.71%	2.45	1,957	0.09%	2.9	0.42%
20-Dec-17	10-20%	500	13.6%	-1.83%	3.09	441	0.06%	1.9	0.03%
20-Dec-17	20-35%	500	6.8%	-9.02%	3.17	215	0.04%	1.3	-0.04%
20-Dec-17	35-100%	500	1.6%	-13.95%	3.11	52	0.02%	0.5	-0.06%
	Index	500	8.2%	-7.01%	3.05	270	0.03%	1.0	

Source: Citi Research, Markit. Exp. Loss = full upfront. Index01 and Correlation01 in % of tranche notional.

# Analytics, Past Trade Ideas & Publications

## Analytics – Available at Citi Velocity

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Curves	<a href="#">iTraxx Curve P&amp;L Report</a>	Indices	<a href="#">Main Report</a> // <a href="#">Crossover Report</a> <a href="#">What's moved? Report</a> <a href="#">CDS Indices Positioning Report</a> <a href="#">CDS Indices Trading Volumes Report</a>
Returns	<a href="#">European Credit Derivatives Returns</a>		

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Options	<a href="#">Main Receiver 1x2s</a>	23-Sep-14
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Curves	<a href="#">Short risk 5y Xover vs. long risk 10y SenFin</a>	18-Sep-14
Options	<a href="#">Sell Xover vol vs. buy SenFin vol</a>	15-Aug-14
Options	<a href="#">Sell Xover receivers</a>	1-Aug-14
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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 (J. Faith)</a>	30-May-14
Options	<a href="#">European vs. US credit vol</a>	28-May-14
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Indices	<a href="#">Sub/Senior Financials compression (J. Faith)</a>	20-May-15
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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 (H. Lorenzen)</a>	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

**Risks:** When buying calls and puts (or receivers and payers) the maximum loss is the premium paid. When selling calls (or receivers), the maximum potential loss would occur as the index spread decreases but is limited by the index spread being floored at zero. For puts (or payers), the maximum potential loss (amount below the strike) would eventuate should the index price fall to zero. Sector index options are cash settled. The above calculations do not include any additional fees or transaction costs. Note that ratio writing would leave the writer uncovered in one leg of the trade.

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## Other publications

<a href="#">iTraxx Roll: Expected spreads and preferred trades: Sell the S21-22 roll in Financials and Crossover</a>	2-Oct-14
<a href="#">Cross Asset Volatility: Credit versus Rates: Use credit options to position for the coming rate hike (A. Basu)</a>	24-Sep-14
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<a href="#">We love the roll</a>	29-Aug-14
<a href="#">An Algorithm-driven Relative Value Signal: A simple method to monetize credit versus equity relative value (A. Basu)</a>	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
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<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
<a href="#">2014 European Credit Outlook: Strategy // Positioning and Trades</a>	13 Jan 2014

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

## Trade Recommendations Summary

Not opening/closing any trades.

Figure 17. Open trades – Summary and P&L

Trade Description	Leg	Format	Direct.	Notnl.	Upfront	Spread	Coupon	Upf.	Spread	Total
Sell 1m Main straddles *** 09-Jan-14	Sell 1m Main straddles	Price	Buy	1.00	0.00%			1.42%		1.42%
									<b>Total</b>	<b>1.42%</b>
Payer spread vs. index long *** 09-Jan-14	Buy 3m 25-60% pay spread	Price	Buy	1.00	0.00%			-0.52%		-0.52%
	Sell index prot.	Price	Buy	1.00	0.00%			1.26%		1.26%
									<b>Total</b>	<b>0.74%</b>
SenFin vs. Xover Recs *** 09-Jan-14	Buy 3m SenFin Recs	Price	Buy	1.00	0.00%			0.75%		0.75%
	Sell 3m Xover Recs	Price	Buy	0.29	0.00%			-1.24%		-0.37%
									<b>Total</b>	<b>0.38%</b>
Releveraging trade 24-Feb-14	Basket of low spread/leverage CDS	Prot.	Buy	1.00	-3.14%	35	100	-3.26%	33	-0.44%
	Main NonFins	Prot.	Sell	0.50	-1.54%	67	100	-1.65%	68	0.22%
									<b>Total</b>	<b>-0.23%</b>
iTraxx Main 5s10s flattener 25-Apr-14	Main S21 5y	Prot.	Buy	1.36	-1.42%	71	100	-1.87%	60	-1.23%
	Main S21 10y	Prot.	Sell	1.00	1.48%	117	100	0.41%	105	1.53%
									<b>Total</b>	<b>0.29%</b>
Series 9 Jun-15 0-3% 21-May-14	Series 9 Jun-15 0-3%	Prot.	Sell	1.00	-0.75%	430	500	-0.25%	464	1.44%
									<b>Total</b>	<b>1.44%</b>
3-6% vs. Crossover 12-Jun-14	Sell 3-6% S21 Main prot.	Prot.	Sell	1.00	6.50%	236	100	6.83%	253	0.00%
	Buy S21 Xover prot.	Prot.	Buy	1.00	-12.13%	234	500	-10.92%	247	-0.43%
									<b>Total</b>	<b>-0.43%</b>
Long risk super senior 21-Jul-14	S9 22-100% Jun-18	Prot.	Sell	1.00	-0.35%	16	25	-0.27%	18	-0.03%
	S9 Index Jun-18	Prot.	Buy	0.20	-4.46%	58	175	-4.29%	58	-0.04%
									<b>Total</b>	<b>-0.07%</b>
10y SenFin vs. 5y Xover 18-Sep-14	10y SenFin S21	Prot.	Sell	1.00	-0.60%	93	100	-0.49%	95	-0.06%
	5y Xover S21	Prot.	Buy	0.45	-11.27%	242	500	-10.92%	247	0.03%
									<b>Total</b>	<b>-0.03%</b>
10y iBoxx vs. 5y Main NonFin 18-Sep-14	7-10y iBoxx € NonFin	Prot.	Sell	1.00	-0.93%	87	100	-0.78%	89	-0.09%
	5y Main NonFin	Prot.	Buy	0.65	-1.93%	59	100	-1.65%	68	0.35%
									<b>Total</b>	<b>0.26%</b>
Main Oct Receiver 1x2 23-Sep-14	60bp receiver	Price	Buy	1.00	0.15%			0.09%		-0.06%
	55bp receiver	Price	Sell	2.00	0.05%			0.01%		0.07%
									<b>Total</b>	<b>0.02%</b>
Sell S21-22 SenFin roll 06-Oct-14	S21 SenFin 5y	Prot.	Buy	1.00	-2.06%	56	100	-1.89%	59	0.16%
	S22 SenFin 10y	Prot.	Sell	1.00	-1.89%	63	100	-1.71%	66	-0.17%
									<b>Total</b>	<b>-0.01%</b>
Sell S21-22 SubFin roll 06-Oct-14	S21 SubFin 5y	Prot.	Buy	1.50	-0.83%	82	100	-0.57%	88	0.38%
	S22 SubFin 10y	Prot.	Sell	1.00	2.24%	145	100	2.59%	152	-0.35%
									<b>Total</b>	<b>0.03%</b>
Sell S21-22 Crossover roll 06-Oct-14	S21 Crossover 5y	Prot.	Buy	1.35	-11.55%	234	500	-10.92%	247	0.81%
	S22 Crossover 10y	Prot.	Sell	1.00	-7.63%	332	500	-6.76%	350	-0.84%
									<b>Total</b>	<b>-0.03%</b>

Source: Citi Research. Spreads and coupons in bp. \* P&L expressed as % of the leg with notional equal to 1. \*\* Over the last month. Prices as of COB yesterday. \*\*\* We track the trade P&L by using an initial 0% upfront and a current upfront equal to the trade P&L in %. DH = delta hedged. As of COB 8-Oct-14.

Figure 18. Open and closed trades summary statistics

Number	Open	Closed*	Percentage	Open	Closed*
In profit	8	22	In profit	57%	71%
In loss	6	9	In loss	43%	29%
	14	31			

Source: Citi Research. \* Since 1-Jun-13. Excluding the trade ideas opened in the current publication.

## Representative Market Conditions

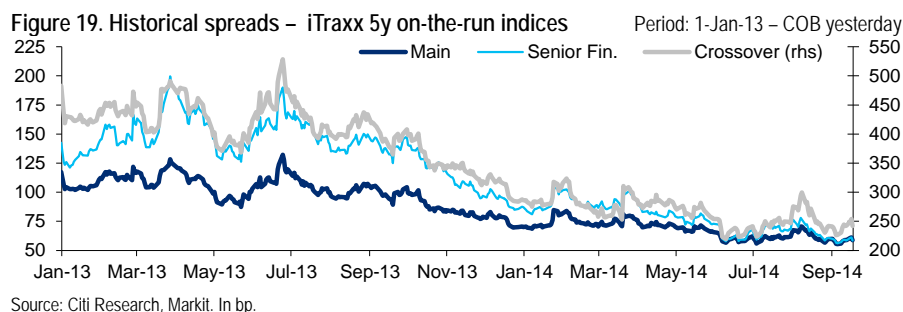


Figure 20. Recently closed trades – Summary and P&L

Trade Description	Leg	Format	Direct.	Notnl.	Upfront	Spread	Coupon	Upfront	Spread	Total
3-6% vs. super senior	Main S9 3-6% Jun-18	Prot.	Sell	1.00	-5.50%	366	500	-5.34%	367	0.34%
Open: 14-Jan-14	Main S9 22-100% Jun-18	Prot.	Buy	9.00	0.03%	26.625	25	0.12%	28	0.60%
Close: 19-Feb-14									<b>Total</b>	<b>0.94%</b>
Main vs. SenFin vol ***	Sell Feb 70 Main straddles, DH	Price	Buy	1.00	0.00%			-0.02%		-0.02%
Open: 21-Jan-14	Buy Feb 80 SenFin straddles, DH	Price	Buy	0.50	0.00%			0.02%		0.01%
Close: Expired									<b>Total</b>	<b>-0.01%</b>
Senior tranche short ***	Buy Jun-18 S9 9-12% prot., DH	Price	Buy	0.03	0.00%			0.26%		0.01%
	Buy Jun-18 S9 12-22% prot., DH	Price	Buy	0.10	0.00%			0.24%		0.02%
Open: 20-Feb-14	Buy Jun-18 S9 22-100% prot., DH	Price	Buy	0.78	0.00%			-0.05%		-0.04%
Close: 20-May-14									<b>Total</b>	<b>-0.01%</b>
Mezz tranche long ***	Sell Jun-18 S9 3-6% prot., DH	Price	Buy	1.00	0.00%			-0.55%		-0.55%
Open: 20-Feb-14										
Close: 20-May-14									<b>Total</b>	<b>-0.55%</b>
Main May Rec 1x2s	Main May 75bp Rec	Price	Buy	1.00	0.24%			0.16%		-0.08%
Open: 2-Apr-14	Main May 70bp Rec	Price	Sell	2.00	0.10%			0.02%		0.16%
Close: 20-May-14									<b>Total</b>	<b>0.09%</b>
Flattener vs. OTM payer ***	3s5s flattener Main	Price	Buy	1.00	0.00%			0.36%		0.36%
Open: 13-Feb-14	Sell 3m 120bp Main payer	Price	Buy	0.75	0.00%			0.12%		0.09%
Close: 27-May-14									<b>Total</b>	<b>0.44%</b>
Senior Fin vs. CDX IG straddle	SenFin Jun-14 90bp straddle	Price	Buy	1.00	0.97%			0.79%		-0.18%
Open: 18-Mar-14	CDX IG Jun-14 65bp straddle	Price	Sell	1.90	0.51%			0.19%		0.61%
Close: 27-May-14									<b>Total</b>	<b>0.43%</b>
Equity tranche vs. straddle ***	Sell Jun-18 S9 equity prot., DH	Price	Buy	1.00	0.00%			-1.48%		-1.48%
Open: 20-Feb-14	Sell 1m Main straddles, DH	Price	Buy	0.50	0.00%			0.33%		0.16%
Close: 21-Jul-14									<b>Total</b>	<b>-1.31%</b>
Main vs. CDX IG ***	Sell 3m Main DH straddles	Price	Buy	1.00	0.00%			-0.05%		-0.05%
Open: 28-May-14	Buy 3m CDX IG DH straddles	Price	Sell	1.00	0.00%			-0.07%		0.07%
Close: 21-Jul-14									<b>Total</b>	<b>0.02%</b>
Main July Rec 1x2s	Main July 60bp Rec	Price	Buy	1.00	0.13%			0.00%		-0.13%
Open: 13-Jun-14	Main July 55bp Rec	Price	Sell	2.00	0.04%			0.00%		0.09%
Close: 16-Jul-14									<b>Total</b>	<b>-0.04%</b>
Sell Xover Receiver	Xover Aug 250bp Rec	Price	Sell	1.00	0.14%			0.00%		0.14%
Open: 1-Aug-14										
Close: Expired									<b>Total</b>	<b>0.14%</b>
Xover vs. SenFin vol ***	Sell 6m Xover DH straddles	Price	Buy	1.00	0.00%			0.50%		0.50%
Open: 15-Aug-14	Buy 6m SenFin DH straddles	Price	Sell	4.00	0.00%			-0.04%		0.15%
Close: 28-Aug-14									<b>Total</b>	<b>0.65%</b>

Source: Citi Research. Spreads and coupons in bp. \* P&L expressed as % of the leg with notional equal to 1. \*\*\* We track the trade P&L by using an initial 0% upfront and a final upfront equal to the trade P&L in %.

**Notes:** The list of open trades reflects our current views; we have no plans to provide regular coverage or updates to these trades. P&L on trade ideas includes carry and roll costs but not trading commissions/costs. Results should not, and cannot, be viewed as an indicator of future performance.

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