European Credit Derivatives

Trade Ideas

Abel Elizalde
+44-20-3569-4446
abel.elizalde@citi.com

- **Long risk Main vs. Crossover via indices and receiver options** – We expect investment grade to outperform high yield going forward as the economy and corporate fundamentals continue deteriorating and liquidity in capital markets remains elevated.

Figure 1. Long risk Main vs. Short risk Crossover – via indices

Index	Spread (bp)	Protection	Notional (€m)	Upfront (€m)	Annual Carry (€)
Main Series 18 5y	115.5	Sell	400	3.1	4.0
Crossover Series 18 5y	453	Buy	-100	1.9	-5.0
			Total	**4.9**	**-1.0**

Source: Citi Research, Markit. Indicative mid spreads as of open 12 Feb.

Buying Main receivers vs. selling Crossover receivers is a way of trading this theme which should appeal to investors fearing a systemic sell-off where Main substantially underperforms Crossover.

Figure 2. Long risk Main vs. Short risk Crossover – via May receiver options

Index	Type	Strike	Expiry	Price	Position	Notional (€m)	Upfront (€m)	Delta (€m)
iTraxx Main S18 5y	Receiver	130	15-May	77c	Buy	365	-2.81	-193
iTraxx Crossover S18 5y	Receiver	500	15-May	200c	Sell	-100	2.00	48
						Total	**-0.81**	

Source: Citi Research. Indicative prices as of Open 12 Feb.

- **Long risk 3-6% vs. short risk 0-3% - Jun-15 iTraxx Series 9 tranches** – We believe this trade provides an attractive way to position for absence of systemic tail-events in an environment where idiosyncratic single name stories start becoming more frequent, periphery credits underperform and investors run out of options in their search for yield.

Figure 3. Tranche trade details

Tranche	Index	Upfront	Coupon (bp)	Protection	Notional (€m)	Upfront (€m)	Coupon (€m)
0-3%	Main S9	26.875%	500	Buy	5	-1.33	-0.25
3-6%	Main S9	-0.75%	500	Sell	12	-0.06	0.60
					Total	**-1.38**	**0.35**

Source: Citi Research, Markit. Indicative prices as of open 12 Feb.

We cannot identify a short term catalyst which will take away the complacency which, in our view, is being priced into credit markets. There are a few catalysts that could do so (e.g. Spanish downgrade, aggressive restructuring in Cyprus), but it is not clear that central bank actions after such an event could not avoid the feared aggressive widening. We could well continue in this situation for months.

In the medium to long term, we agree with our economists that more sovereign restructurings will happen. We also agree with them on the fact that the periphery will be supported but will economically continue deteriorating at a rapid pace. In our view, central banks will continue providing liquidity and avoiding tail risks, but that would be all additional liquidity could do. As our economists have recently described it "saving the euro is not the same as ending the euro crisis and achieving a return to normal growth" (*Global Economic Outlook and Strategy*, 23 Jan 13). We fear that the marginal impact of additional liquidity on the macro picture and on corporate fundamentals may be much lower than investors anticipate. In our view, markets will slowly start pricing the deteriorating macro and corporate fundamentals picture. However, this may be a slow process rather than a sudden blow-up.

We expect: curves flattening, investment grade outperforming high yield, US outperforming Europe and Core outperforming Periphery corporates

Short term, we prefer to identify relative value pairs which were driven to extreme levels by the impact of liquidity in 2012, and which should reverse in a deteriorating macro environment. We expect: curves flattening, investment grade outperforming high yield, US outperforming Europe and Core outperforming Periphery corporates. In other words, we expect spread decompression in general, i.e. investors moving up in quality and tight names outperforming wide names. We reviewed all of these topics in our *European credit outlook 2013* (3 Jan).

Long risk Main vs. short risk Crossover – via indices and options

Our first trade idea (long risk Main vs. short risk Crossover) looks to position for investment grade to outperform high yield via both iTraxx indices and receiver options. The entry point in the index trade looks very attractive and we would recommend investors to enter this trade now unless they fear that the likelihood of a systemic sell-off is high, in which case we would recommend positioning using receiver options – here the investor is not subject to the relative performance of Main and Crossover in a large widening.

Long risk 3-6% tranches vs. short risk 0-3% tranches (Jun-15 iTraxx Series 9).

Our second trade idea involves going long risk 3-6% vs. short risk 0-3% tranches (Jun-15 iTraxx Series 9). We look to position for both an increase in (negative) idiosyncratic risks, which should cause the equity to underperform, as well as for real money investors targeting the Jun-15 3-6% tranche (currently paying above 475bp) as a long risk trade. Given that iTraxx Series 9 contains 19 periphery credits[1], we expect an underperformance of the periphery to contribute to equity tranches underperforming – provided the underperformance of periphery credits isn't accompanied by break-up fears.

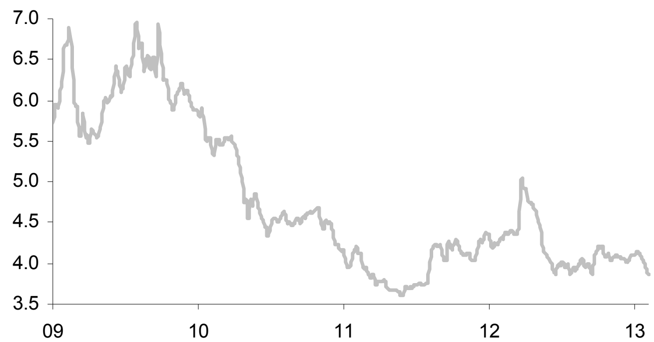
Both trades would benefit from a deteriorating macro outlook, which causes the widest credits (high yield and periphery) to underperform and triggers a series of (credit negative) idiosyncratic surprises, and would likely suffer from another round of systemic fears.

[1] See *European credit outlook 2013*, 3 Jan 13, and *Global Economic Outlook and Strategy*, 23 Jan 13.

Long risk Main vs. short risk Crossover

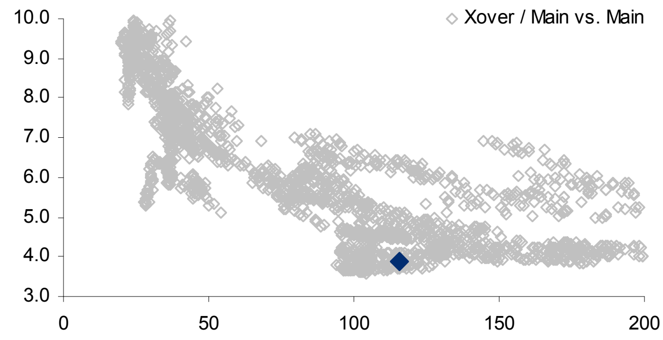
- **We expect investment grade to outperform high yield** going forward as the economy and corporate fundamentals continue deteriorating and liquidity in capital markets remains elevated.
- **Going long risk Main vs. short risk Crossover via indices is an attractive way of positioning for this view, with an attractive entry point** (Figure 4 and Figure 5). We recommended this trade in our *European credit outlook* and the entry point has barely moved.
- **Buying Main receivers vs. selling Crossover receivers** is an alternative way of trading this theme which should appeal to investors fearing a systemic sell-off where Main substantially underperforms Crossover.

Figure 4. iTraxx Crossover vs. Main: spread ratio
5y spread ratio.



Source: Citi Research. 5 days moving average.

Figure 5. Crossover / Main spread ratio vs. Main spread
Y-axis: ratio of 5y on the run spreads. X-ratio: Main 5y spread, bp.



Source: Citi Research. Daily data since Jan-14.

In our *European credit outlook 2013* (3 Jan) we made the case for investment grade to outperform high yield going forward. Two of our central views for 2013 are (i) that economic and corporate fundamentals deteriorate further, and (ii) that liquidity in capital markets will remain ample, albeit susceptible to pullbacks in risk appetite.

But who benefits the most? In our view, bankruptcies and leveraged loan default rates suggest smaller corporates are disproportionately affected by the weak environment. While we expect bond default rates to remain low in 2013, high yield companies are the next step up the ladder. Large caps (mostly in investment grade space) benefit from better access to capital markets, multiple banking relationships, greater diversification and more implicit government support.

Trading-wise, going **long risk Main vs. short risk Crossover** on a “zero-carry” basis is a good alternative to position for this theme using liquid CDS indices; with current spreads in Main and Crossover at 115.5 and 453bp respectively that means selling 3.9 units of Main protection for each unit of Crossover protection bought. Figure 6 shows the details of this trade using a 4x notional ratio.

Figure 6. Long risk Main vs. Short risk Crossover – via indices

Index	Spread (bp)	Coupon (bp)	Upfront (%)	Protection	Notional (€m)	Upfront (€m)	Annual Carry (€)
iTraxx Main Series 18 5y	115.5	100	0.77%	Sell	400	3.1	4.0
iTraxx Crossover Series 18 5y	453	500	-1.87%	Buy	-100	1.9	-5.0
					Total	**4.9**	**-1.0**

Source: Citi Research, Markit. Indicative mid spreads as of open 12 Feb.

As Figure 4 and Figure 5 show, this trade has historically performed better when spreads tightened than when they widened (from levels similar to the current ones); essentially, if the spread ratio increases, Crossover underperforms and the trade is in the money. Figure 5 shows how the spread ratio between Crossover and Main, currently slightly below 4x, has historically been larger for tighter spreads.

Systemic sell-off likely? Execute the trade via receiver options

The risk of going long risk Main vs. Crossover via indices is that any large sell-off this year is a systemic one with financials underperforming corporates and investment grade corporates underperforming high yield corporates, i.e. with Main largely underperforming Crossover. Most of the widening catalysts that come up in our discussions with investors are systemic in nature; we conclude from this that systemic events are still high on investors' risks agenda. When Main spreads reached 180bp in June last year, the spread ratio between Crossover and Main moved to 3.8x; similarly, when Main spreads widened above 180bp in 2011, the ratio was 3.6x.

Although the upside-downside of this trade is currently attractive from a historical perspective at an index level (Figure 5), **investors concerned about a large underperformance of Main vs. Crossover in a large widening should consider positioning via options: buying Main receivers vs. buying Crossover receivers**. We look at this trade next.

Buy Main Receivers vs. Sell Crossover Receivers

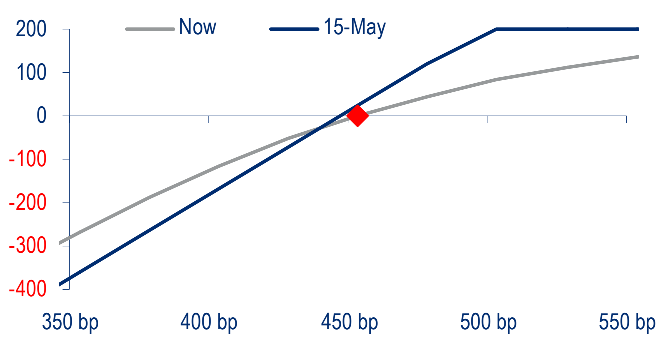
In Figure 7 we recommend investors to use receivers with strikes around 10% higher than current spread levels, in order for the trade to have a flat exposure for large spread widenings. The trade involves buying Main 130bp strike receivers and selling Crossover 500bp strike receivers, all with 15-May expiry. We size the trade such that the delta of the Main receivers bought (-193m) is 4x the delta of the Crossover receiver sold (48m). This results in a trade cost of 81 cents (of the Crossover option notional).

Figure 7. Long risk Main vs. Short risk Crossover – via May receiver options

Index	Type	Strike	Expiry	Price	Position	Notional (€m)	Upfront (€m)	Delta (€m)
iTraxx Main S18 5y	Receiver	130	15-May	77c	Buy	365	-2.81	-193
iTraxx Crossover S18 5y	Receiver	500	15-May	200c	Sell	-100	2.00	48
						Total	**-0.81**	

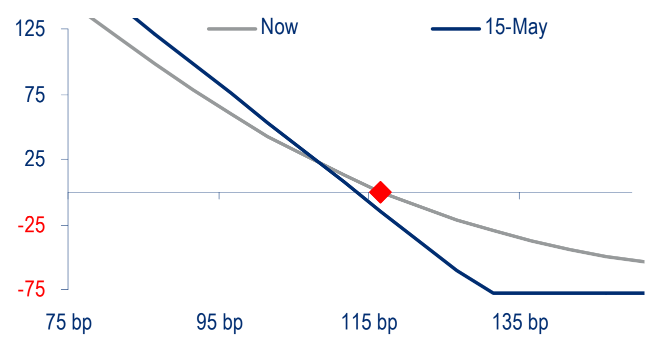
Source: Citi Research. Indicative prices as of Open 12 Feb.

Figure 8. Crossover 500bp receiver sold
P&L in cents of option notional.



Source: Citi Research.

Figure 9. Main 130bp receiver bought
P&L in cents of option notional.



Source: Citi Research. Note that in the trade idea we are buying 4x Main options for each Crossover option sold.

Volatility-wise, it can be shown that the ratio of Crossover to Main implied volatility is close to its two year average. Thus, the entry point is neither good nor bad from a technical point of view, which makes the fundamental rationale we outlined above the main reason for executing the trade in options.

The trade P&L at expiry of the options is shown in Figure 10 for different spreads on each index. For comparison purposes, Figure 11 shows the P&L of the index trade (at the options' expiry) - selling 4 units of Main protection for each unit of Crossover protection bought. We do like both trades, but realise the options trade may suit those investors worried about a systemic tail-event where Main substantially outperforms Crossover.

Figure 10. Option Trade - Trade P&L at expiry for different index spreads

In cents of the Crossover option notional.

								Main					
	Spread		92 bp	97 bp	102 bp	107 bp	112 bp	117 bp	122 bp	127 bp	132 bp	137 bp	142 bp
		Change	-25 bp	-20 bp	-15 bp	-10 bp	-5 bp	0 bp	5 bp	10 bp	15 bp	20 bp	25 bp
	329 bp	-125 bp	**-95**	-177	-260	-343	-426	-508	-591	-674	-736	-736	-736
	354 bp	-100 bp	1	**-82**	-165	-248	-330	-413	-496	-579	-641	-641	-641
	379 bp	-75 bp	96	13	**-69**	-152	-235	-318	-400	-483	-546	-546	-546
	404 bp	-50 bp	192	109	26	**-57**	-139	-222	-305	-388	-450	-450	-450
	429 bp	-25 bp	287	205	122	39	**-44**	-126	-209	-292	-354	-354	-354
Crossover	454 bp	0 bp	383	300	217	135	52	**-31**	-114	-196	-259	-259	-259
	479 bp	25 bp	479	396	313	230	148	65	**-18**	-101	-163	-163	-163
	504 bp	50 bp	561	478	395	312	230	147	64	**-19**	-81	-81	-81
	529 bp	75 bp	561	478	395	312	230	147	64	-19	**-81**	-81	-81
	554 bp	100 bp	561	478	395	312	230	147	64	-19	-81	**-81**	-81
	579 bp	125 bp	561	478	395	312	230	147	64	-19	-81	-81	**-81**

Source: Citi Research.

Figure 11. Index Trade - Trade P&L for different index spreads at the expiry of the options in Figure 7

In cents of the Crossover index notional.

								Main					
	Spread		92 bp	97 bp	102 bp	107 bp	112 bp	117 bp	122 bp	127 bp	132 bp	137 bp	142 bp
		Change	-25 bp	-20 bp	-15 bp	-10 bp	-5 bp	0 bp	5 bp	10 bp	15 bp	20 bp	25 bp
	329 bp	-125 bp	**-66**	-154	-243	-331	-419	-506	-593	-680	-766	-852	-938
	354 bp	-100 bp	42	**-47**	-135	-223	-311	-399	-486	-572	-659	-745	-831
	379 bp	-75 bp	147	59	**-30**	-118	-206	-293	-380	-467	-553	-639	-725
	404 bp	-50 bp	251	162	74	**-14**	-102	-189	-276	-363	-450	-536	-622
	429 bp	-25 bp	353	264	176	88	**-0**	-88	-175	-261	-348	-434	-520
Crossover	454 bp	0 bp	453	364	276	188	100	**12**	-75	-162	-248	-334	-420
	479 bp	25 bp	551	462	374	286	198	111	**23**	-63	-150	-236	-322
	504 bp	50 bp	647	559	470	382	294	207	120	**33**	-53	-139	-225
	529 bp	75 bp	742	653	565	477	389	302	215	128	**41**	-45	-131
	554 bp	100 bp	835	746	658	570	482	395	308	221	134	**48**	-38
	579 bp	125 bp	926	838	749	661	573	486	399	312	226	140	**54**

Source: Citi Research.

In a systemic sell-off where Main underperforms Crossover, we would likely end up in the shaded cells in Figure 10 and Figure 11, where the options trade should outperform the index trade.

Using different strikes and expiries for the options will change the initial cost of the trade and the exact payout on each spread scenario; the general characteristics of the trade will, however, be very similar.

Long risk 3-6% vs. short risk 0-3% Jun-15 iTraxx Series 9 Tranches

- **Position for absence of systemic tail-events in an environment where idiosyncratic single name stories start becoming more frequent, periphery credits underperform and investors run out of options in their search for yield**.
- If central bank actions have reduced the probability of tail risks, the tranche market hasn't fully priced it yet and equity tranches should be wider (vs. the index and other tranches) than currently are.
- Short dated junior mezzanine tranches will soon, in our view, attract investors' attention when looking for attractive longs.

Figure 12. Tranche trade details

Tranche	Index	Upfront	Coupon (bp)	Par spread (bp)	Protection	Notional (€m)	Upfront (€m)	Coupon (€m)	12 m time value (€m)
0-3%	Main S9	26.875%	500	1,833	Buy	5	-1.33	-0.25	-0.95
3-6%	Main S9	-0.75%	500	479	Sell	12	-0.06	0.60	0.95
						Total	**-1.38**	**0.35**	**0.00**

Source: Citi Research, Markit. Indicative prices as of open 12 Feb.

Equity tranches should be wider (vs. the index and other tranches) than currently are, i.e. risk should be moving from mezzanine and senior to equity tranches. If central bank actions have reduced the probability of tail risks, the tranche market hasn't fully priced it yet. In a scenario where systemic risks do not resurface, because central banks inject liquidity as needed, but the economy deteriorates, especially in southern Europe, we would expect Series 9 tranche correlations to be lower than their current levels, which are close to all time highs as Figure 14 shows. Correlations have just started to fall in iTraxx tranches, and we think they should continue to do so as investors realise idiosyncratic surprises will be more frequent going forward and periphery credits start to underperform (as we expect[2]; iTraxx Series 9 contains 19 periphery credits).

Short dated junior mezzanine tranches will soon, in our view, attract investors' attention when looking for attractive longs. There are very few other instruments which, like Jun-16 3-6%, pay above 400bp and have less than 2.5y maturity. Figure 13 shows the 2y spread (Mar-15) of the ten widest credits in the index; only Monte dei Paschi trades above 475bp. As Figure 15 shows, the spread of Jun-15 3-6% is similar to Dec-17 S18 Crossover. The tranche can withstand more than 6 defaults with 40% recovery before suffering a direct default loss.[3]

Figure 13. Widest credits in Main S9
Spreads in bp.

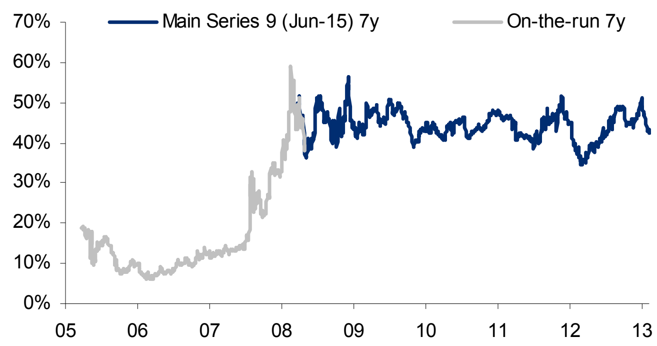
	Ticker	2y spread
1	MONTE	579
2	OTE	438
3	PEUGOT	413
4	BESPL	330
5	UCGIM	238
6	ISPIM	228
7	DSGILN	221
8	BBVASM	219
9	SANTAN	209
10	PORTEL	204

Source: Citi Research, Markit. EOB 11 Feb.

[2] See *European credit outlook 2013*, 3 Jan 13, and *Global Economic Outlook and Strategy*, 23 Jan 13.

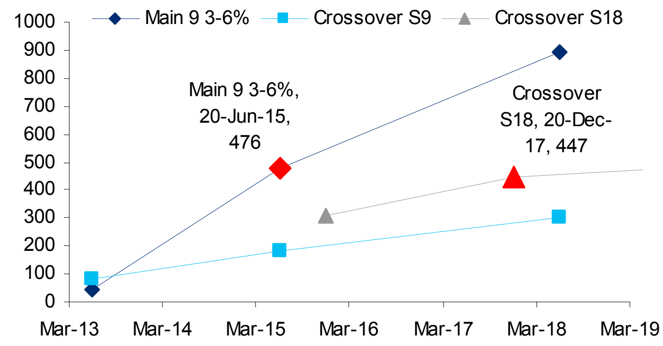
[3] One default with 40% recovery would generate an index loss of 0.48% (= (1-40%) / 125). We would need 6.25 defaults for index losses to reach 3% (= 3% / 0.48%).

Figure 14. Equity tranche implied correlation
In %.



Source: Citi Research, Markit.

Figure 15. Current spreads across the curve: 3-6% vs. Crossover
Par spreads in bp.



Source: Citi Research, Markit. Mid spreads as of COB 8 Feb.

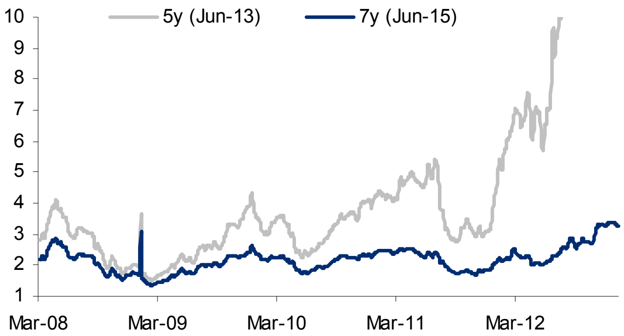
Based on our views above on Jun-15 0-3% and 3-6% tranches, we believe going long risk 0-3% vs. short risk 3-6% tranches represents a good opportunity to position for absence of systemic tail-events in an environment where idiosyncratic single name stories start becoming more frequent and investors run out of options in their search for yield.

Inline with the long risk Main vs. short risk Crossover trade idea we discussed before, we see the main risk of this trade to be another sovereign-led systemic sell-off accompanied by break-up fears and investors rushing to add tail-hedges. In that scenario, we expect the 3-6% to underperform the equity tranche as the index expected losses increase (from the current 1.75%) above 3%.

We argued above that an underperformance of periphery credits should benefit this trade. However, we should clarify which type of underperformance we are referring to, because there are some which will work against the trade. The type of periphery underperformance we are looking at with this trade is one where periphery credits suffer from the tough economic conditions in their respective countries, not one caused by investors fearing periphery countries will leave the Euro and trigger credit events in all their corporates and banks. We believe that any restructuring, provided it doesn't come accompanied by explicit break-up threats (from either the restructuring country or any core countries) should benefit this trade if, as Draghi promised, the ECB and politicians do "whatever it takes" to save the euro.

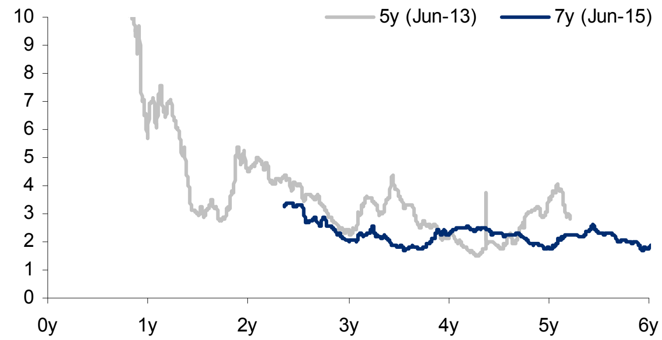
In order to analyse the current entry point of this trade, Figure 16 and Figure 17 show both tranches' historical expected loss ratio. They show the expected loss of 0-3% divided by the expected loss of 3-6% - an increasing ratio indicates that the 0-3% is underperforming the 3-6% tranche. The ratio for the Jun-15 tranches increased during 2012, but it has barely moved in 2013. Figure 17 shows that the Jun-15 expected loss ratio is currently slightly below where the Jun-13 expected loss ratio was when the remaining maturity was similar (i.e. two years ago). In fact, the Jun-13 ratio has generally been above the current Jun-15 ratio since 2010, i.e. during a few of the sovereign-led sell-offs we have experienced in the last 2 years.

Figure 16. Ratio of 0-3% / 3-6% expected losses
Expected loss = full upfront = upfront + coupon x duration.



Source: Citi Research, Markit. 5 days moving average.

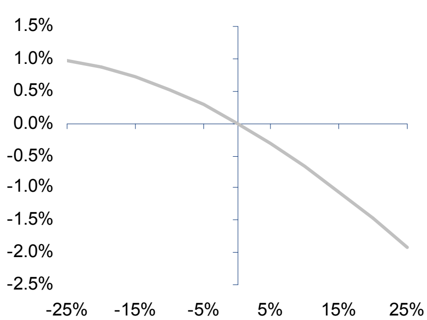
Figure 17. Ratio of 0-3% / 3-6% expected losses vs. years to maturity
Expected loss = full upfront = upfront + coupon x duration.



Source: Citi Research, Markit. 5 days moving average.

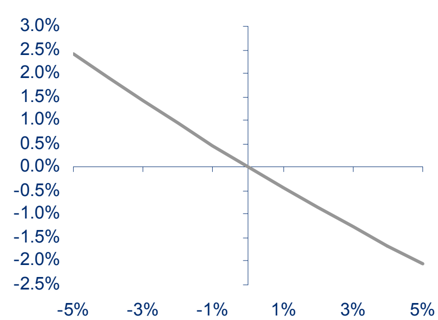
As Figure 12 shows, for each unit of 0-3% protection bought, we sell 2.4 units of 3-6% protection; neither 3.3 units as the current expected loss ratio would indicate nor 1.8 units as the ratio of their deltas would suggest. Using a 1.8 ratio leaves the trade with a limited spread exposure but with a substantially negative time value. Using a 3.3 ratio generates a very positive time value, but at the expense of an aggressively long risk spread exposure. We size the trade such that the 12m time value is close to zero, which still leaves us long risk spreads. Figure 18, Figure 19 and Figure 20 show the sensitivities of the trade with respect to spread changes (net long risk), correlation changes (short correlation) and defaults. The trade would make money if we have up to 7 defaults instantaneously; at maturity, the trade would be in the money if the index experiences between 1 and 8 defaults (always assuming 40% recovery rates).

Figure 18. Trade MtM vs. spread changes
Y-axis: MtM as % of 0-3% notional. X-axis: % changes in all single name spreads.



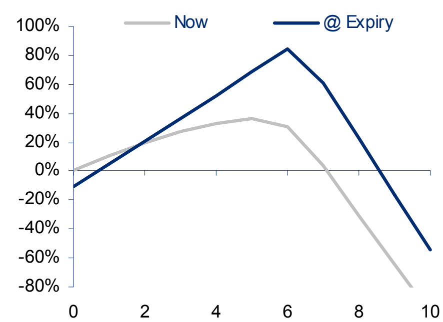
Source: Citi Research.

Figure 19. Trade MtM vs. correlation changes
Y-axis: MtM as % of 0-3% notional. X-axis: % additive correlation changes.



Source: Citi Research.

Figure 20. Trade MtM vs. defaults
BY-axis: MtM as % of 0-3% notional. X-axis: number of defaults (starting with widest name).



Source: Citi Research.

Appendix A-1

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