13 March 2013 | 14 pages

Global

The Credit Index Call

The US-Europe Bifurcation Trade Using Options

- **Credit indices roll this month** — In the US indices, there are few changes, with 2 substitutions in CDX IG, and only 1 in CDX HY. Our estimates show that the steep credit curves are the main contributors to the roll through the maturity extension.

- **Equity outperformance continues** — Equity indices continue to outperform credit indices and we believe that the low credit spreads are preventing large moves tighter while equity continues to surge higher.

- **Tranche markets are all about levered longs** — Investors are favoring levered long positions using junior tranches in both European and US indices, given the current environment of low yields, low volatility and benign default expectations. We raise a cautionary flag in this context given the increasing risks of LBO activity in the US and underperformance by periphery names in Europe, both of which would increase idiosyncratic risks.

- **Volatility is low and getting lower** — We caution investors against pure long volatility (i.e. delta hedged) trades given the mean reverting nature of implied to realized volatility ratios. These ratios are currently close to cyclical tights and should be higher going forward, which would hurt pure long volatility positions.

- **Long US, short Europe in options** — We recommend going long US, short Europe using June receiver options given our macro view of a growth bifurcation between US and Europe. The trade is attractive because the investor gets paid to get into the trade as compared to the negative carry of a long-short position using the indices themselves.

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Market Outlook

Nothing seems to be able to stop the market juggernaut from resolutely moving upwards. The unresolved Italian elections were swept aside in a day or two and improving macro data out of the US (in particular, employment numbers) continue to add positive momentum to the markets. While we expect the positive momentum to continue in the short term, it would be worth while to be cautious for the medium term, given the debate in Europe around the nature of the bailout for Cyprus, the German elections in September, and the sudden surge in belligerence out of North Korea, which could well prove to be a new “black swan” event.

Credit Indices – Time to Roll

Figure 1. US Indices Very Close to Post-Lehman Lows

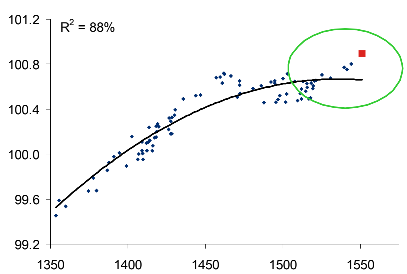
		Post-Lehman		All Time	
Index	11-Mar	Date	Spread	Date	Spread
CDX IG	79.50	1/11/2010	75.79	2/22/2007	28.88
CDX HY	398.65	2/8/2011	382.31	2/22/2007	208.52
iTraxx Main	104.32	1/11/2010	65.30	6/5/2007	20.09
iTraxx Xover	404.06	5/3/2011	352.00	3/8/2005	149.94

Source: Markit, Citi Research

The grind tighter in credit indices has continued, along with rising stocks – apart from a small blip post Italian elections. In the US, both indices broke through significant psychological levels on March 11th, with CDX IG closing below 80bp and CDX HY below 400bp (see Figure 1). In Europe, iTraxx Xover is trading very close to the 400bp level and a break through could well be imminent.

While credit indices have underperformed equities in the past few weeks or so, they still remain historically rich to equities at this point, even if we consider the performance over a modest 3 month period (see Figure 2). In particular, we observe that the credit index levels, especially in the US, have reached a regime where the convexity of the credit-equity relationship is preventing large moves tighter in credit even as equity prices surge. We therefore believe that while credit spreads will keep grinding tighter in the short term following the path of least resistance, they will also continue to underperform equities.

Figure 2. CDX IG Price (Y-axis) vs SPX (X-axis) – the region inside the green ellipse is where the convexity of the credit equity relationship is coming into play.

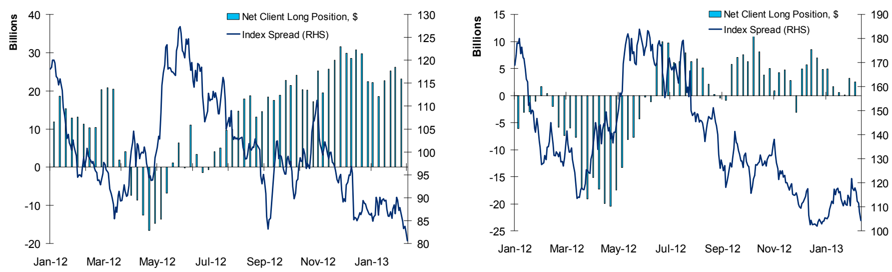


Source: Bloomberg, Markit, Citi Research
Red marker shows current levels.

Credit curves continue to remain steep, especially in the 3s-5s part of the curve, as investors remain more optimistic about the short term. At some level, this optimism is reaching levels of complacency, which we find cause for concern. We therefore reiterate our recommendation on Xover 3s-5s flatteners (see The Credit Index Call - How to Trade The (Non-)Sequester Using Credit Options) given the current attractive entry point. This should allow European investors to position themselves for a market sell-off at a low cost – our European strategists also have a similar recommendation (see Living the fairy tale - Can Credit Goldilocks defy the bears?).

Investor positioning in credit indices has generally remained steady – with net long positions in CDX IG and HY, and net shorts in iTraxx Xover and FinSnr. As in the past several months, investor longs seem to be overwhelmingly concentrated on CDX IG, despite the relatively tight spread levels. We believe that this technical is also contributing to the underperformance of CDX IG versus SPX since it indicates that most investors are already long CDX IG and therefore there is little demand for the index from the long side.

Figure 3. Investor Positioning in CDX IG (left), iTraxx Main (right)



Source: DTCC, Markit, Citi Research

The most significant change in investor positioning has been in iTraxx Main where we observe an increase in investor longs in the past three weeks (see Figure 3) from flattish (roughly 158MM 3 weeks ago) to slightly positive (roughly 2.5B). The sudden surge in investor longs pre-dates the Italian elections, but we see no meaningful reduction in the net longs post the elections, which would also explain the lack of any permanent effect of this event on credit spreads. However, compared to net investor longs in CDX IG (roughly 23B), this is fairly modest – so investors in Europe still remain light on risk.

Figure 4. CDX Index Roll Summary

Index	Names Out	Names In	S19 Fair Value	Change due to Composition	Change due to Maturity	Total Change	S20 Fair Value
CDX IG	CenturyLink, Inc.	Genworth Financial	79.5bp	0.7bp	7.9bp	8.6bp	88.1bp
	Canadian Natl Res Ltd	Block Financial					
CDX HY	Sunoco, Inc.	J. C. Penney	398.7bp	8.6bp	14bp	22.6bp	421.3bp
In price terms			104.3pt			-0.8pt	103.5pt

Source: Markit, Citi Research
All levels as of EOD 3/11/2013.

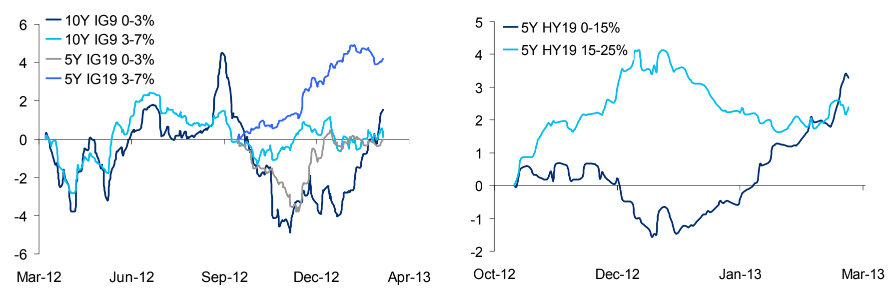
March is the month when the credit indices roll – our European colleagues have already written on the European index rolls elsewhere (see European Credit Weekly - Trading at the tights of the year). In the US, the provisional lists for both major indices have been published, and the name changes are shown in Figure 4. We do not believe that there will be any changes to these lists prior to the publication of the final annex for the index. The proposed membership changes are small – in CDX IG, CenturyLink (downgraded to HY) and Canadian Natural Resources Limited are being replaced by Genworth Financial and Block Financial. In CDX HY, there is only one change – Sunoco (acquired by Energy Transfer Partners on October, 2012) is being replaced by J. C. Penney.

Based on our calculations, we think that the total roll in CDX IG will be worth 8.6bp, out of which 0.7bp is from the change in constituents, and 7.9bp is from the maturity extension. In the case of CDX HY, the total roll in spread terms is 22.6bp where 8.6bp is from the change in constituents and 14bp is from the maturity extension (see Figure 4). In price terms, this is worth about -0.8pt. It is clear that given the relatively small changes in portfolio constituents, the majority of the roll in both cases is attributable to the maturity extension from the rather steep credit curves.

Tranches – Levered Longs Dominate

We have remarked in earlier issues (see Global Structured Credit Outlook - “A Man for All Seasons” and The Credit Index Call - On the Cusp) on the attractiveness of equity tranches as levered longs, especially given the current environment of tight spreads, low yields, low volatility and benign default expectations. This is now being reflected in the tranche markets where most of the recent activity has been driven by clients looking to go long using equity tranches.

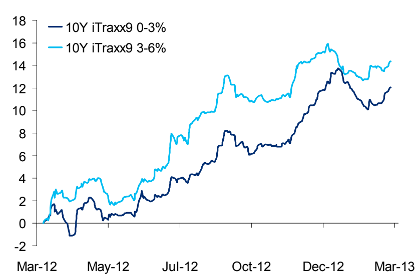
Figure 5. Delta Adjusted Moves in Equity and Mezzanine Tranches, IG (left), HY (right), pt



Source: Markit, Citi Research

In the US, investors have been unwinding junior mezzanine tranche longs (set last year) to monetize the spread rally and going long equity tranches in IG9 and IG19. In both indices, the equity tranche has been recently outperforming the 3-7% tranche on a delta adjusted basis (see Figure 5), especially for IG9. The same technicals are also evident in the CDX HY tranches – the 5Y 0-15% tranche in CDX HY19 has recently outperformed the corresponding 15-25% (junior mezzanine) on a delta adjusted basis (see Figure 5). The rally in IG9 and HY19 equity tranches was also driven in part by MBIA winning the dismissal of a lawsuit that attempted to overturn its restructuring in 2009.

Figure 6. Delta Adjusted Moves, iTraxx9, pt



Source: Markit, Citi Research

In Europe, many investors feel that they are light on risk (also borne out by the investor positioning data in European credit indices that we have remarked on earlier). In addition, they do not feel that a break up of the Euro is likely in the near term, despite the longer term challenges. As in the US, they have been adding risk by going long in both equity and junior mezzanine (in particular, the 3-6%) tranches which have both been outperforming their deltas since the beginning of February, after a rather unimpressive start this year (see Figure 6).

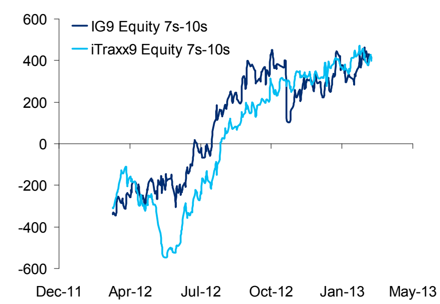
Despite the attractive IRRs for holding these tranches to maturity, we would like to sound a note of caution here. In particular, in the US, we have commented earlier (see The Credit Index Call - How to Trade The (Non-)Sequester Using Credit Options) on the rise of idiosyncratic risk, on the back of Dell and Heinz LBO announcements. The low spread dispersion levels in the IG19 portfolio makes it especially susceptible to a spike in idiosyncratic risk. If that were to happen, a long equity tranche position would be subject to significant mark-to-market P&L volatility – investors who are concerned about spread volatility should consider hedging out a few of the index names that have high risk of a LBO (see Thinking Outside the LBO Box - New screens give new candidates for our analysts’ list of LBO names).

Investor optimism also still manifests itself in the steep equity tranche curves for both IG9 and iTraxx9 (see Figure 7). Our European strategists have recommended a 7s-10s flattener in iTraxx9 (see Flatteners in iTraxx Equity Tranches - European Credit Derivatives – Trade Ideas) to take advantage of a range bound spread

environment where idiosyncratic risks are the main driver of credit spreads. A similar argument applies to the 7s-10s equity tranche curves in IG9.

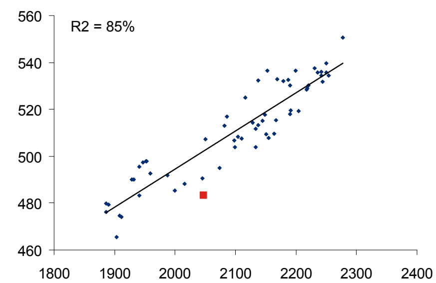
On a relative value basis, we think that the 10Y iTraxx9 junior tranches are still attractively priced. If we look at the relative performance of the various tranches over the past 3 months, we see that the junior tranches in iTraxx9 have mostly underperformed. In Figure 8, we show how the 10Y iTraxx9 6-9% tranche has outperformed the equity tranche. Similar results hold for the 3-6% tranche versus the 6-9% or the 9-12% tranche. Some of this underperformance is only recently beginning to get reversed, especially if we look at delta adjusted moves for the various tranches. We expect this trend to continue given the favorable technicals and advocate relative value trades in the form of long equity/junior mezzanine tranche, short senior mezzanine/senior tranche.

Figure 7. 7s-10s Equity Tranche Curves, bp



Source: Markit, Citi Research

Figure 8. 10Y iTraxx9 0-3% (X-axis) vs 6-9%, bp



Source: Markit, Citi Research
Red marker shows current levels

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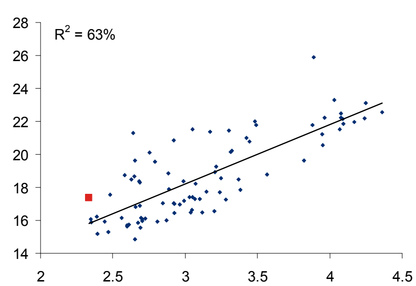
Volatility – Time to Buy?

Figure 9. 3M Main ATM Vol (X-axis) vs V2X (Euro VIX), %



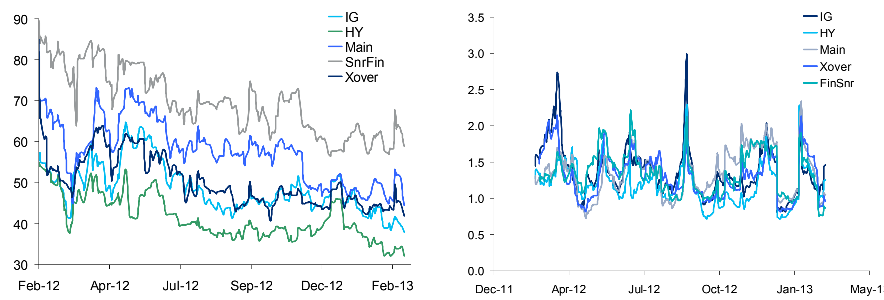
Source: Bloomberg, Citi Research
Red marker shows current levels.

Credit volatility continues on its inexorable march downwards, interrupted briefly by a short-lived spike following the Italian elections. For every major credit index, at-the-money (ATM) implied volatility is trading at or near 1 year lows (see Figure 10). By other measures too, credit volatility looks cheap – in particular, if we look at the ATM credit volatility (price volatility instead of spread volatility, which is usually quoted) versus their VIX counterparts on a relative value basis, we find that credit volatility is cheap (see Figure 9, for example). In addition to that, if we look at realized volatility in the various credit indices, we find that the ratio of realized to implied volatility (backward looking) has begun to compress – in fact, the ratios for 1 month volatility in Xover and FinSnr is currently below 1.

All of this begs the question as to whether volatility is too low right now, and if this would be a good time to buy credit volatility. We advocate caution against a pure volatility trade (e.g. buying delta hedged straddles or strangles), despite the optically attractive nature of the trade. To understand this, consider the ratio of the 1 month (backward looking) implied to realized volatility for the various credit indices (see

Figure 10). For any day, this ratio is computed by taking the implied volatility as of 1 month previously and the realized volatility over the past 1 month period. For each index, both optically, and statistically, we find strong evidence of mean reversion in this ratio. Therefore, starting from close to cyclical lows right now, we expect the implied to realized volatility ratio to move up going forward because of the mean reversion. If we looked at this ratio a month from now, it should be higher than it is today. In other words, the implied volatility as of today should have a larger spread over the realized volatility over the coming month. We therefore argue against a long volatility trade, which is in the money only if realized volatility is higher than implied over the duration of the option holding period (as we have shown in Profiting from the Credit Volatility Premium - Selling credit volatility can be consistently profitable even after paying bid-ask).

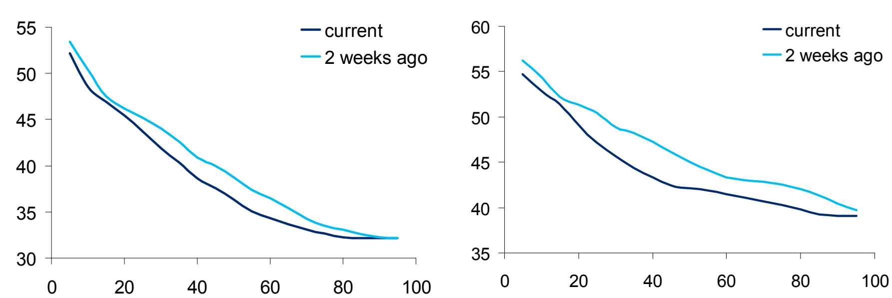
Figure 10. 3M ATM Vol (left),%, Ratio of 1M Implied Vol (backward looking) to 1M Realized Vol (right)



Source: Citi Research

The upcoming roll could also cause a drop in the implied volatilities – given the rather significant rolls that we expect to see (in particular, iTraxx Main roll expected at 7bp versus 4bp in the previous roll), the higher index level would require a lower level of implied volatility in order to keep the implied spread moves (in terms of bps/day) at the same level as the previous index – we had remarked on this when the previous index roll occurred (see The Credit Index Call - Time to Go Short Again?).

Figure 11. 3M Volatility Skews for HY (left), and Xover (right), %



Source: Citi Research

At the same time, we believe that there are alternative ways of taking advantage of the low volatility levels to construct cheap hedges. In particular, if we look at the 3 month volatility skew curves for the various indices, we find that the skew curves are becoming increasingly negatively convex compared to where they were a month ago. This means that the tails are more expensive compared to ATM volatility – this

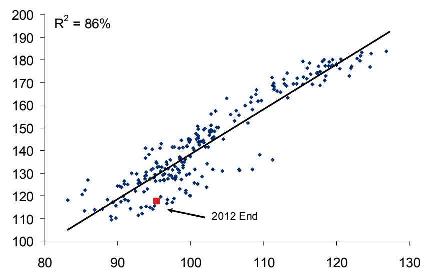
is true particularly for the Xover and HY indices (see Figure 11). We therefore advocate buying payer spreads in these indices as a hedge for two reasons. First, payer spreads typically have a lower cost of carry than holding an index short for the same period as an option. For example, the net cost of a 450-550 strike payer spread hedge on iTraxx Xover expiring in June costs roughly 87.7bp (using mids as of 3/13/2013) whereas the carrying cost for an index short for that period is roughly 114bp. Second, the downside is capped for the payer spread in case index spreads tighten substantially – indeed many investors who had on index shorts as a hedge against a long credit portfolio gave up a significant portion of their P&L as index spreads tightened substantially over the year.

A different way of efficiently hedging a long credit portfolio would be to sell receivers. Such a strategy is equivalent to a covered call in the equity world, and provides upfront income which acts as a hedge if spreads widen. If the market rallies, the losses are mitigated because of the positive volatility risk premium in credit option markets. In other words, most of the time, the premium received upfront more than compensates for the actual (or realized) move tighter in credit spreads. We have actually observed this in our back tests over multiple spread tightening/widening cycles where we looked at the performance of a short receiver hedge against a long credit portfolio represented by a cash credit index. For further details, please call.

Trade Idea: US versus Europe Using Receivers

In our 2013 Structured Credit Outlook (see Global Structured Credit Outlook - “A Man for All Seasons”), we had projected that 2013 will be the year of the US-Europe “bifurcation” and had recommended a long CDX IG, short iTraxx Main trade using receiver options. If anything, our view has strengthened over the past few months, and we are recommending this trade once more. There are multiple reasons for this. First, our US economists are predicting a 2% YoY real GDP growth for 2013, benefitting from a nascent housing recovery and better employment and manufacturing data. The estimated fiscal drag from the sequester is roughly 0.25% of GDP, which still leaves growth in the positive territory. In contrast, the Euro zone GDP estimates are at -0.5% for 2013 – while the markets have negotiated the Italian election curveball successfully, event risks still remain, especially if we consider the prospects of a deadlock in the Italian parliament, the upcoming German elections in September and the negotiations around the Cyprus bailout. Second, iTraxx Main significantly outperformed CDX IG in 2012 (see Figure 12), and some of that outperformance has started to reverse recently, as we have pointed out earlier (see The Credit Index Call - How to Trade The (Non-)Sequester Using Credit Options). We expect this trend to continue further into 2013.

Figure 12. Main (Y-axis) vs IG spreads, bp



Source: Citi Research

We recommend doing the trade using options – the details are shown in Figure 13. Using options makes it possible to execute the trade with a net cost of -7bp (investor gets paid) – compare that with a carrying cost of 16bp[1] for 3 months (till option expiry) if we were to do the trade using the respective indices. While we are showing the trade details using IG19/Itraxx18 options, we recommend waiting for the index roll later this month to put the trade on using the new indices as reference for better liquidity. Obviously, the levels/strikes may need to be refreshed for that purpose.

The obvious downside to this trade is a significant outperformance of iTraxx Main versus its US counterpart, as in 2012. While there could be many positive catalysts that could drive such a market move (such as significant progress on the bank recapitalization details, or a market-friendly resolution to the Italian political situation) we do not expect these events to occur in the next 2-3 months timeframe. In contrast, the main downside risk to the US economy at this point appears to be a budget deadlock in Congress – once again, we are relatively more optimistic about a resolution before the March 27th deadline. Hence overall, we are comfortable with the risk/rewards for this trade.

Figure 13. Trade Details (as of 3/12/2013), all prices are mids.

Trade	Index	Spot	Strike	Expiry	Price	Notional	Upfront	Vol	Delta
Buy Receiver	IG S19	79.78	85	6/19/2013	29.45	100MM	294,462	38%	-45%
Sell Receiver	Main S18	106.28	105	6/19/2013	28.13	-100MM	-365,684	44%	33%
Net							-71,222		

Source: Citi Research
Uses EURUSD = 1.3, negative upfront means investor gets paid.

[1] This assumes a net position spread of 1.3 (EURUSD) * Main spot – IG spot and computes the net carry from 3/12/2013 through option expiry (6/19/2013).

Options Disclosures

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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.

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http://www.theocc.com/components/docs/January_2011_ODD_Definitive_Supplement.pdf,

http://www.theocc.com/components/docs/March_2011_ODD_Definitive_Supplement.pdf, and
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Appendix A-1

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