

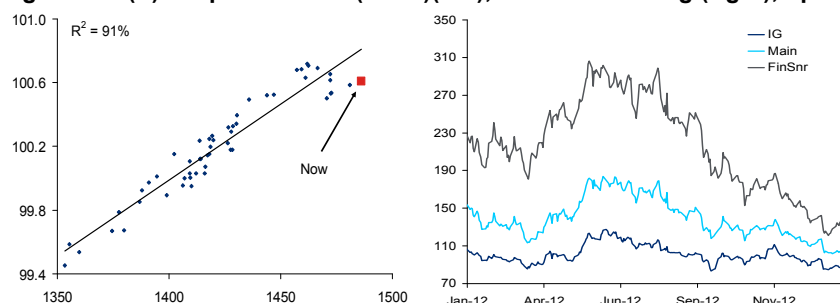
## Whither Credit?

97-104 APRIL RISK REVERSALS IN CDX HY

### Market Outlook

Credit assets seem to have arrived at a crucial inflection point in the post 2008 economic cycle. As growth forecasts are revised higher (see [Global Strategy and Macro Weekly - Growth expectations edging higher](#)), and tail risks continue to abate, risk appetite has started to favor equities over credit, as evidenced by fund flow data. The resurgence in equities is also reflected in the recent underperformance of credit (see Fig 1), which has been stagnating at levels that are close to (or at) post 2008 highs (highs), especially in the US indices. In other words, though fundamentals are improving slowly, technicals seem to be unfavorable for credit. Therefore, in the current environment with low defaults and low volatility, where credit is expected to underperform, we believe that relative value trades, low risk trades that generate positive carry and levered longs using standard or bespoke tranches can be good sources of alpha.

**Fig 1. SPX (X) Outperforms IG (Price)(left), FinSnr Widening (right), bp**



Source: Bloomberg, Markit, Citi Research

One of the main risks to this view stems from negative headlines around the debt ceiling debate in the US which could easily bring back tail risk and increased volatility. However, we are comforted by the passage of a bill in the US Congress that temporarily suspends the debt ceiling for 3 months to give more time for crafting fiscal reforms and incentivizes Congress to negotiate by holding congressional salaries in escrow if either chamber fails to pass a budget resolution by April 15<sup>th</sup>. While the passage of the bill cannot be considered major progress, it raises our expectation that some measure of entitlement reform will come out of these negotiations and at least partially address the medium to long term fiscal issues.

In credit index land, the relative underperformance of credit has been strongly reflected in flat to slightly wider moves in the major credit index spreads, with FinSnr moving significantly wider compared to the other indices (see Fig 1). This

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Credit

Investment Overview

Global

Derivatives

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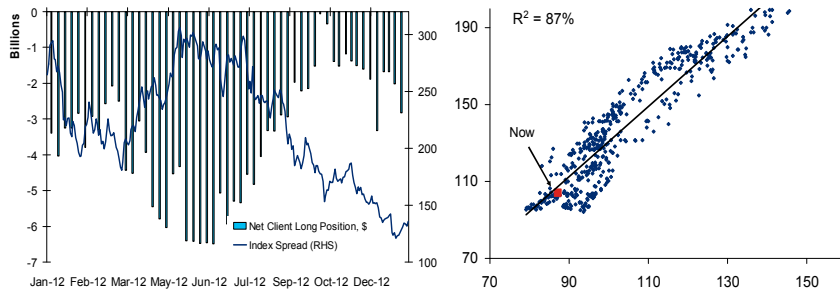
**The Credit Index Call - Why So Distressed?**

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is finally in keeping with the strong net short investor positioning in FinSnr (see Fig 2), especially when compared to other indices. In particular, investors have continued to maintain long positions in the investment grade indices (IG, 29B and Main, 7B) while going short high yield indices (Xover, -2.5B) or reducing long exposure to them (HY down to 2B from 3B).

**Fig 2. Client Positioning in FinSnr (left), IG (X) vs Main Spreads (right), bp**

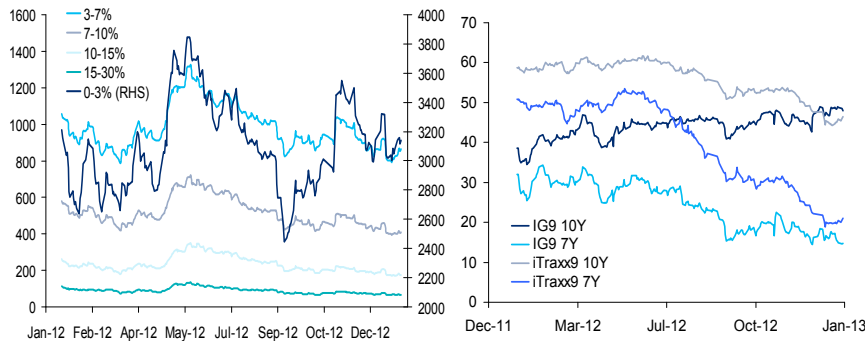


Source: DTCC, Markit, Citi Research

We think that there is a short term opportunity in a Main versus IG compression trade – despite the recent Main outperformance, spread levels in Main continue to be fairly valued if we consider data going back a year (see Fig 2).

Furthermore, the recent news reports about a Dell LBO have pushed IG index skews further into negative territory compared to Main. In addition, we see Main, as the higher “beta” of the two indices, benefitting more in the short term as conviction about a global growth story takes hold.

**Fig 3. 10Y IG9 Tranche Spreads (left), bp, Equity Tranche Upfront, Hedged with Two Widest Names (right), pt**



Source: Markit, Citi Research

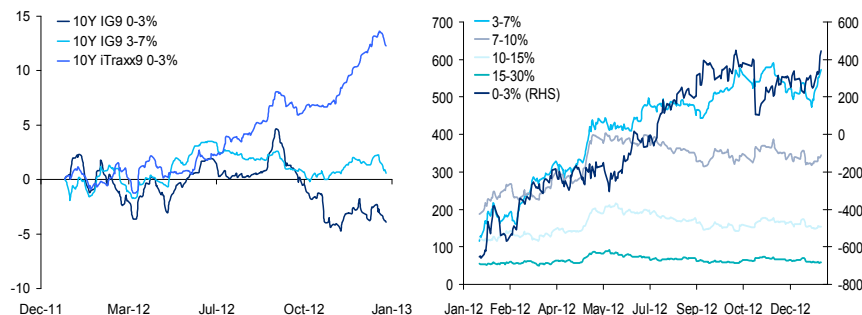
In the right graph, we show upfronts after hedging two of the widest credits in the portfolio on a jump neutral basis. For IG9, these credits are MBIA and RDN, for iTraxx9, OTE and PEUG.

Levered longs in tranches continue to be one of our favorite trades, in keeping with our view that we are in a low default and low volatility environment and credit as an asset class has comparatively less upside remaining. We think that the 10Y equity tranche in IG9 is particularly attractive as an outright long or when hedged with RDN and MBIA on a jump-neutral basis (see Fig 3). It has underperformed the 10Y IG9 3-7% tranche as well as the 10Y iTraxx9 equity tranche on a delta adjusted basis (see Fig 4). Furthermore, it has also underperformed the 7Y IG9 equity tranche as shown by the extreme steepness of the 7s-10s curve (see Fig 4) – going forward, we believe that the curve has more potential to start flattening.

We also point out that the hedged version of the long equity tranche trade looks particularly attractive, given that the MBIA and the RDN curves have not widened

appreciably in comparison to the 10Y IG9 equity tranche, even after MBIA was denied the right to pay interest on its surplus notes. We observe in Fig 3 that the net upfront for this trade after hedging the two single names remains appreciably higher than other the upfronts for comparable tranches and maturities.

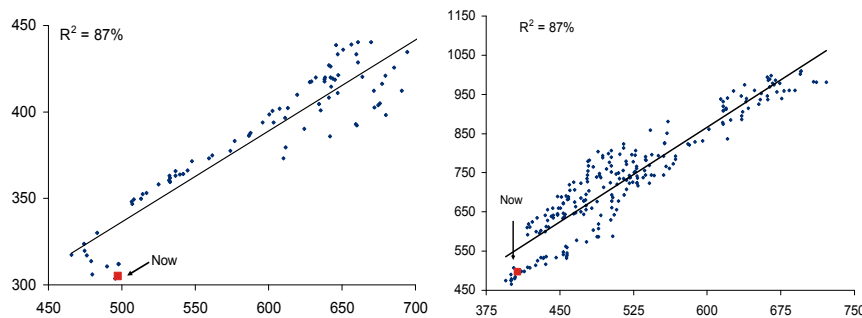
**Fig 4. Delta Adjusted Moves (left), pt, 7s-10s IG9 Tranche Curves (right), bp**



Source: Markit, Citi Research

Another part of the capital structure that has started to look interesting from a relative value perspective is the junior versus senior mezzanine tranche in 10Y iTraxx9. In particular, the 10Y 6-9% tranche has underperformed the more senior 9-12% tranche from a historical spread perspective (see Fig 5), as well as on a delta adjusted basis. We believe that this has been driven by technicals that are related to protection selling in the senior tranches of 10Y iTraxx9 and protection buying in the junior tranches, as tail risks abate and risk flows back into the junior tranches.

**Fig 5. 10Y 6-9% iTraxx9 (X) vs 9-12% (left), bp, 10Y 7-10% IG9 (X) vs 10Y 6-9% iTraxx9 (right), bp**



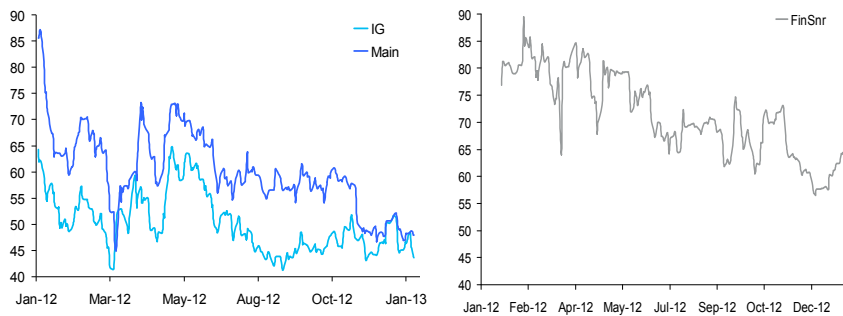
Source: Markit, Citi Research

Ordinarily, the strong underperformance of the 6-9% tranche would suggest going long versus the 9-12%, but the current strong technicals in the other direction should give investors pause. We think a better way of taking advantage of tranche mispricing is to look across indices – in particular, we refer to the outperformance of the 10Y iTraxx9 6-9% tranche versus its 7-10% counterpart in IG9 (see Fig 5). We think there is a good chance for this outperformance to get reversed, especially in light of the recent technicals in iTraxx9 tranches that we have alluded to earlier.

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In volatility markets, we expect IG volatility to underperform Main volatility, continuing its earlier trend (see Fig 6). This has been contrary to our prediction two weeks ago (see [The Credit Index Call - In Search of Convexity](#)) where we had called for an outperformance of 3M ATM IG volatility with respect to 3M ATM Main volatility based on continued uncertainty around the debt ceiling negotiations in the US. However, given the recent developments in the US Congress that we referred to earlier, we think that some of the possible extreme outcomes have been taken off the table, thereby reducing some of the uncertainty. Despite the recent outperformance, Main volatility remains cheap to IG volatility when compared to historical levels, and we think that Main volatility has some more room to outperform IG volatility.

**Fig 6. 3M ATM IG Vol (X) Underperforms Main Vol (left), %, 3M ATM FinSnr Vol Ticks Up (right), %**

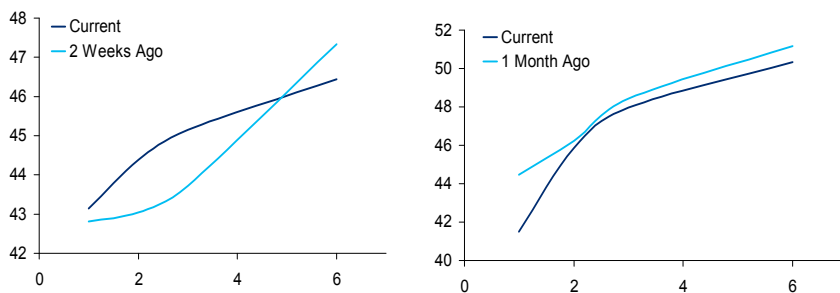


Source: Citi Research

Realized volatility in credit has plunged across all the major credit indices, but though ATM implied volatility in most major indices has been on a downward trend recently, it has not come down as much as realized volatility. A possible explanation is the relative lack of natural volatility sellers in the credit option markets. This is particularly evident if we compare to equity option markets, where the VIX has significantly underperformed implied volatility in credit indices.

One exception to the general downward volatility trend has been implied volatility in the FinSnr index, which has been steadily ticking up (see Fig 6). This is interesting, especially if combined with the recent widening in FinSnr spreads. Given that FinSnr is now a de facto proxy for systemic risk in Europe, we will continue to monitor these developments closely for clues about risk aversion making a re-appearance in investor thinking.

**Fig 7. Volatility Term Structures: Xover (left), %, Main (right), %**



Source: Citi Research

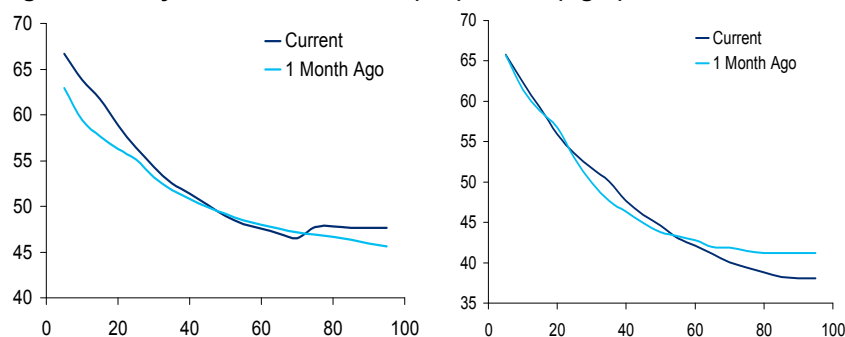
X-axis shows option expiry in months.

We also see opportunities in the volatility term structure – in particular, a 3M-6M steepener in Xover looks particularly attractive. We observe that the Xover term structure for 50 delta volatility has flattened significantly from 2 weeks ago in the

3M-6M part of the curve (see Fig 7). In contrast, the term structure for volatility in other indices has been steepening over the past month (for example, see Fig 7 for Main term structure), as investors become more confident that short term tail risks have been taken off the table due to central bank action. Even for Xover, the 1M-3M part of the curve has steepened and we expect that the remainder of the curve will follow in short order.

The recent downward trend in ATM volatility has also steepened the downward skew (20 delta OTM payer – ATM payer) curve in Main (see Fig 8) – we believe this can be a good opportunity for investors looking for cheap hedges to use payer (put) spreads in Main. In contrast, downward skews have generally remained at the same level for the US indices, but the full skews (20 delta OTM payer – 20 delta OTM receiver) have steepened. This has been mainly driven by a move lower in OTM receiver volatility, especially for HY (see Fig 8). We believe that investors see little upside in HY spreads going forward, especially in cash given that HY cash spreads have traded through leveraged loans spreads recently.

**Fig 8. Volatility Skew Curves: Main (left), %, HY (right), %**



Source: Citi Research  
X-axis shows option delta in %.

### Trade Idea: 97-104 April Risk Reversals in CDX HY

The current credit environment, with spreads close to multi-year tight, has made it difficult to find longs with reasonable returns. While tail risks have been taken off the table in the near term, they have not necessarily been addressed, but going short is also problematic because spreads are grinding tighter due to the lack of any significant negative catalysts. In such a low volatility, low yield environment, we find that trades that have positive carry with some upside are the most appropriate. In that spirit, our recommendation this week is to buy a 20 delta (97-104 strike) bullish risk reversal in CDX HY with April expiry.

**Fig 9. Trade Details (as of 01/23/2013), all prices are mids**

Trade	Index	Spot	Strike	Maturity	Notional	Price	Cost	Delta
Buy Call	CDX HY19	102.5	104	4/17/2013	10MM	40.5	405,000	-19%
Sell Put	CDX HY19	102.5	97	4/17/2013	-10MM	59.5	-595,000	22%
Net							-190,000	

Source: Citi Research  
Negative cost means investor gets paid to put on the trade.

The details of the trade are shown in Fig 9. As we can see, the rather steep 3M volatility skew works for this trade, giving a positive net upfront payment that serves to provide positive carry, adding to the attractiveness of the trade. We are also reasonably comfortable about the 104 strike that needs to be breached for

the trade to have further upside. In the current low volatility environment, with a lack of negative trigger events, we believe that a slow move higher is the path of least resistance. While one can argue that the 104 strike is uncomfortably close to the all time highs for the CDX HY index, we think that even a partial solution to the debt ceiling negotiations can lead to the 104 level being breached.

This brings us to the main risk for this trade – namely, a failure in the US Congress to achieve any form compromise around the debt ceiling negotiations. In this respect, as we explained earlier, we see more signs of hope after the passage of the recent bill in the US Congress. It is possible that there will be some volatility in the interim as uncertainty around the negotiation process builds, but judging from what happened during the fiscal cliff negotiations last year (a 5pt move lower), we think that the 97 strike (a more than 5pt jump from current levels) provides adequate downside protection.

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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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