17 February 2011 │ 9 pages

TotalCredit: Buy Strips, Sell Straps

Sell Vol in Credit Outright or Relative Value Versus Equity Vol

- Market consensus remains bullish and indices are near historic tights.
- We reckon there is limited upside from here, so it is a good opportunity to sell receivers, straddles or straps; either alone or in a relative value trade versus equity vol.

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Figure 1. iTraxx hasn't broken below 95bp level since March
5y iTraxx IG14 index, bp

Source: Citi Investment Research and Analysis

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

Investing in options is not suitable for all investors. Please see the disclosures concerning the risks of investing in options below and discuss with your Financial Advisor whether this particular options strategy is suitable for you. Note that all option prices are indications, based on intraday prices on 17 February 2011. Interested investors should contact our trading desk for updated price and liquidity information. Also, complex option strategies may entail higher commissions costs.

Markets have been range-bound since the start of the sovereign debt crisis, and credit spreads are now at the tight end of that range. Our weekly, European Credit Weekly - Complacent or resilient?*,* highlights our concern with the increasingly bullish consensus which seems to assume that European leaders are on the point of solving the region's sovereign and financial debt problems – despite apparent disagreements on key elements of any resolution.

The more that risky assets rally, the more concerned we become about the possibility of a correction. Benign market conditions ease the pressure on policymakers, reducing the probability of the very policy action markets were pricing in the first place. Hence, we would reduce any exposure on tightening. For most investors, this means putting on shorts using index overlays, but selling options could deliver superior results. More specifically, at this point, we like selling out-of-the-money receivers and 'straps'. We consider this on a standalone basis or a relative value trade against equity markets.

As far as spreads are concerned, current timing for such a strategy looks good across most of the main indices. iTraxx Main is near the 95bp resistance level that has been in place since May 2010. A major break to pre-crisis levels seems improbable or at the very least unsustainable.

For the Crossover, resistance levels seem even more well established: the index has never traded tighter than 382 since 2008. Admittedly, index constituents would have changed over the years, but the level remains important psychologically.

For the CDX, resistance levels are less well defined. It recently broke 82bp, leaving 77bp as the next resistance point.

Figure 2. iTraxx XO looking to 382bp

Source: Bloomberg

Figure 3. CDX IG past 82bp, 77bp next?

Source: Bloomberg

One way to profit from the view that credit indices are at tights and likely to move sideways or wider would be to look at the swaptions market.

Selling covered calls or covered straps

Given our widening bias, we would focus on hedging by either buying payers or selling receivers; as a variation, we also like selling *straps*. For European indices, where there is potential for a large sell-off, buying out-of-the money payers seems more appealing. For US indices, where a sideways move is more probable, we think buying payers is less attractive than selling straps or out-of-the-money receivers.

Our TotalCredit portfolio is already short European periphery risk. Rather than add to the effective size of this short with a position on iTraxx, we prefer a CDX index trade instead. In addition, by selling straps rather than selling receivers, we can take a less directional position. A strap is a combination option trade that involves selling at-the-money receivers and at-the-money payers in the ratio 2:1. A strap is identical to a straddle except that the investor sells more receivers than payers. The strategy makes money if markets remain in their current range, but loses money in a big sell-off or rally, as illustrated in Figure 6.

Straps

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Figure 4. CDX 3m ATM vol, %

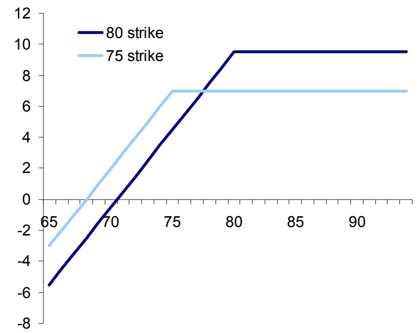
Source: Citi Investment Research and Analysis

Figure 4 illustrates that implied volatility is cheap relative to history, a plus point in favour of buying iTraxx payers and a minus point for selling CDX straps. Volatility and spread tend to be highly positively correlated, meaning that vol will likely pick up in a crisis.

However, this isn't really a vol trade. Short-dated trades are less influenced by volatility and this trade takes the view that at current levels there is a greater probability of a correction or a sideways move than a rally. We also suggest executing the trade in a more volatility neutral fashion in the next section.

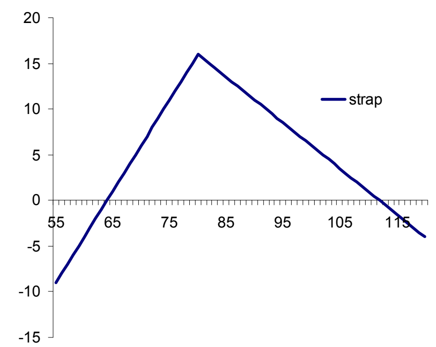
The pay-off graph below on the left illustrates that for a June receiver on the CDX IG15 with an 80bp strike the breakeven would be a rally to 70bp, while for the 75bp strike it is 68bp. In the case of the strap on the same index with the same maturity and same 80 strike, break-even levels require a rally down to 64bp, or a sell-off out to 112bp. Despite low implied volatility, we think these levels are attractive on a four-month horizon.

Figure 5. Pay-off profile, at maturity, of a sold CDX15 June receiver position, bp



Source: Citi Investment Research and Analysis

Figure 6. Pay-off profile, at maturity, of a sold CDX15 June strap (80 strike) position, bp



Source: Citi Investment Research and Analysis

On balance we think the receiver is more tempting as a *covered* receiver, i.e. if we already had a long in US credit and were selling the receiver as a partial hedge. However, our TotalCredit portfolio is already short, so we like the less directional balance provided by the strap. We also like it relative to the equity trade in the next section. For those interested in the strap only we suggest:

Strips

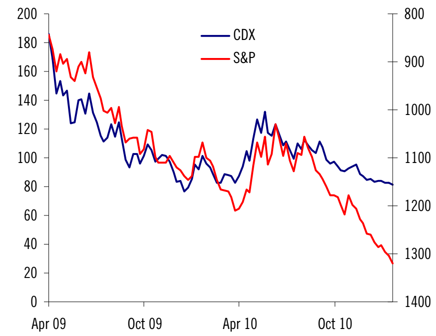
Buying a strip involves buying calls and puts at the same strike in the ratio 1:2; i.e. twice as many puts as calls.

- Sell a June strap (short $10m receiver and $5m payers) with a strike of 80bp on the 5y CDX IG15 index for $65,000.

Shorting credit volatility and going long equity volatility

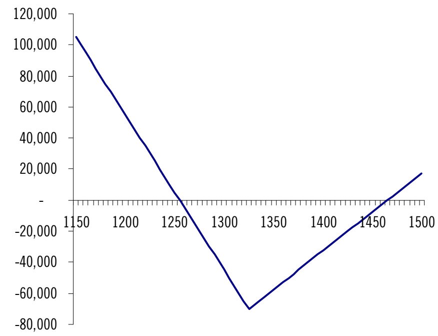
We quite like the idea of just taking the premium from selling CDX straps as a yield enhancement. But, an interesting alternative is to use the premium to put on the opposite transaction on the S&P index in a credit/equity relative value trade. This can be done by buying straddles, or to be more directionally consistent, by buying June strips on the S&P index. Buying a strip involves buying calls and puts at the same strike in the ratio 1:2; i.e. twice as many puts as calls.

Figure 7. S&P has outperformed the CDX, bp and index (inverted)



Source: Citi Investment Research and Analysis

Figure 8. Pay-off profile for the June S&P strip (1325 strike), 10 puts and 5 calls, $

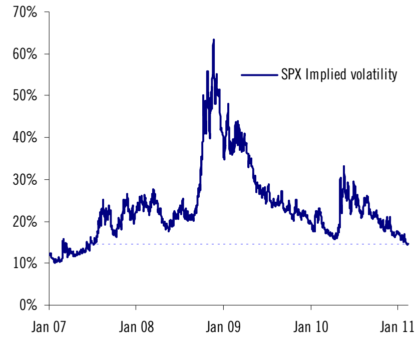


Source: Citi Investment Research and Analysis

This means that in a sell-off, the CDX strap will be on the (smaller) short $5m payers leg while the S&P strip will be on the (bigger) long put leg, so the combination of both positions makes a trade that is sell-off biased. It will lose money in a sustained rally, break even if markets remain where they are now and make money in a sell-off; especially if equities underperform credit. Figure 7 illustrates how the S&P has outperformed credit over the last few months potentially making it more vulnerable to a correction.

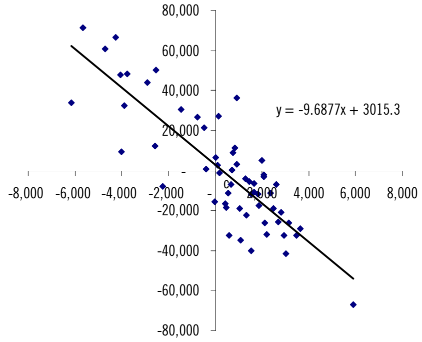
This is not really a volatility trade. But, implied volatility on the S&P is near a historic low making buying strips attractive. One has to go back to the first half of 2007 to find lower volatility as can be seen in Figure 9. Comparing CDX and S&P volatility is difficult because they cannot be compared directly. Swaption implied vol is quoted in terms of at-the-money-forward basis point volatility rather than 'price' vol as the S&P is. To convert from yield vol to price vol, one has to divide by the duration. So, taking this into consideration, CDX volatility is not as low as equity vol. But, it is also not so elevated that this trade makes sense on a volatility basis alone. Therefore, we prefer short-dated trades with low volatility dependence and high theta.

Figure 9. S&P 3m volatility, %



Source: Citi Investment Research and Analysis

Figure 10. Regression of weekly returns of $10m CDX versus 1 S&P future contract, $



Source: Citi Investment Research and Analysis

Calculating hedge ratios is problematic as recent history has been dominated by a credit crisis increasing the amount of S&P required to hedge credit indices. However, given that the next few months could look similar to the last few, we have used weekly returns over the last year (see Figure 10) to estimate what an ideal hedge ratio might look like. From this, we can see we need approximately 10 S&P contracts to hedge every $10m of CDX index.

S&P June at-the-money (1325) calls and puts both currently trade at 47 points per contract, on exchange. Each point is $100 so the cost of a single contract is $4,700 or $14,100 per strip (two puts and a call). If selling a $15m CDX strap provides $70,000, then the zero cost trade would be just under 5 strips.

Putting it all together, this trade involves:

- Sell a June strap (short $10m receiver and $5m payers) with a strike of 80bp on the 5y CDX IG15 index for $65,000.
- Buy a June S&P strip (pay 47 for 10 puts and sell 5 calls at 47) for $70,000.

General Risks

When buying calls and puts the maximum loss is the premium paid. When selling puts the maximum loss eventuates if the underlying falls to zero, and when selling calls the maximum loss is potentially unlimited. Index options are cash settled. The index value may substantially change during the time it takes to notify an individual of assignment. The above calculations do not include any additional fees or transaction costs.

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Appendix A-1

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