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Global

Where to Find the Best Index Longs

A method for finding value in credit indices

- **Longs in credit continue to be in favor** — Despite spreads being at relatively tight levels, credit longs continue to remain in favor among investors, especially in light of expectations for rates to remain low for longer.
- **Synthetic credit indices can provide attractive long opportunities** — Steep synthetic credit index curves should help total returns as positions roll down the curve faster, and the liquidity in credit index markets can enable investors to unwind positions with reasonable ease when the market turns.
- **Our relative value framework identifies optimal index longs** — We present a method that allows investors to compare across credit indices and term structures and identify optimal opportunities for going long credit risk. Our method takes into account curve shape, duration, relative betas across indices, as well as break evens.
- **We recommend going long 7y iTraxx Main** — Using our relative value method, we identify the 7y iTraxx Main as the most attractive long, We believe that this trade has the potential to outperform (on a risk adjusted basis) similar longs across the term structure in both iTraxx Main and CDX IG.

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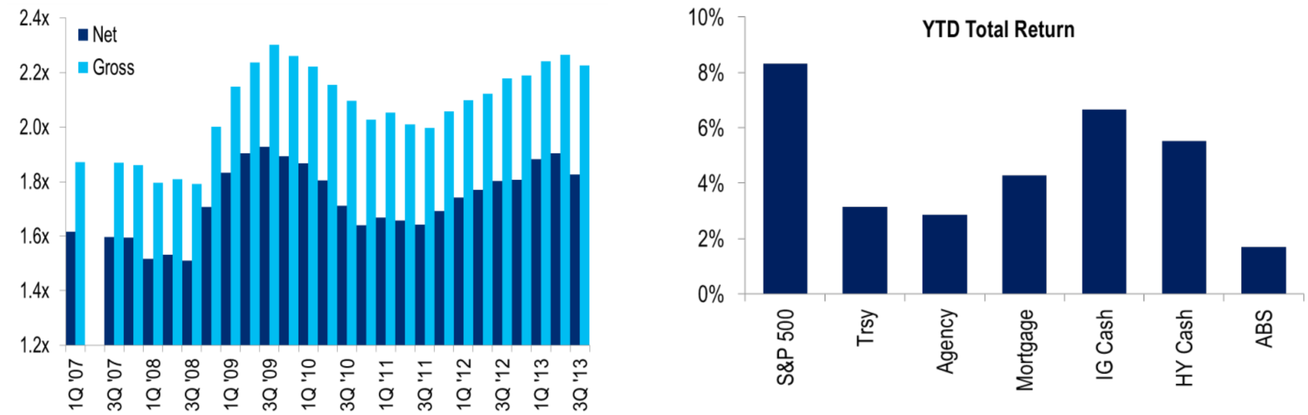
See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Credit Longs Continue to be Profitable

Let's face it – the heightened concerns about credit at the beginning of 2014 have not yet come to be realized fully. We had started the year with credit fundamentals beginning to look stretched (see Figure 1 (left)). In addition, expectations of tapering followed by a rate hike made many of us question how long the post-crisis rally in credit would last.

However, rates have continued to remain low even though tapering is well under way, and credit has had a decent year so far (see Figure 1 (right)). Both investment grade and high yield credit in the US have performed well so far, with total returns of 6.66% YTD[1], and 5.52% YTD, respectively.

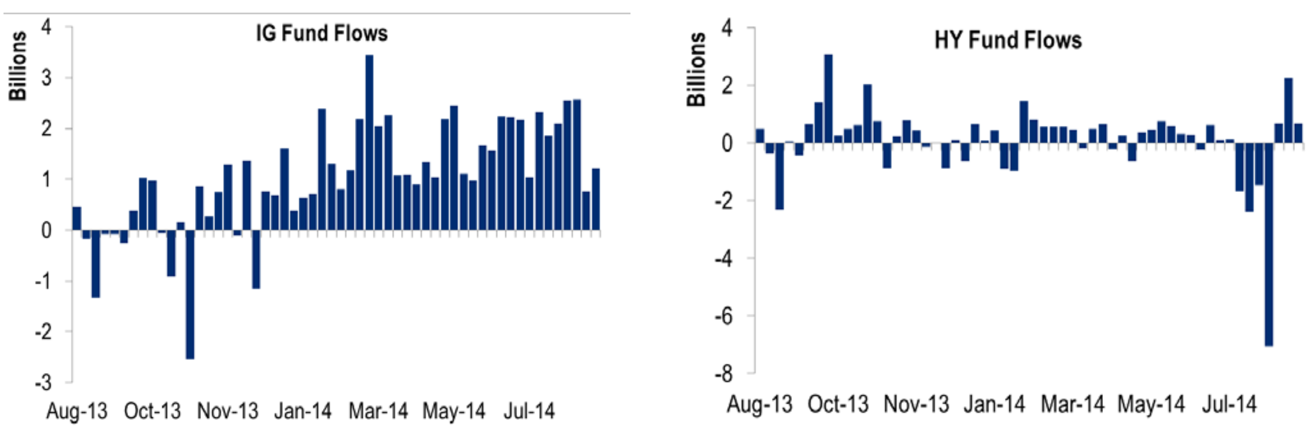
Figure 1. Rising leverage in US IG corporates (ex-fins) was a source of concern as we were going into 2014 (left), but credit has continued to perform well during 2014 (right).



Source: Bloomberg, Moody's, Yieldbook, Citi Research

For those who were looking for rising rates to drive credit spreads wider, it appears that they are in for a longer wait. Our rates strategists have recently lowered their year-end 10-year Treasury yield forecast to 2.8%, mainly "in response to the significant deterioration in Euro area growth and inflation expectations" (see US Rates Weekly: Lowering our year-end forecasts). The same forecast stood at 3.3% at the end of 2013 (see G10 Rates Weekly: The Year Ahead). In other words, the "low for longer" view has gained currency as the year has progressed.

Figure 2. Weekly IG fund flows have been positive every week in 2014 (left), and HY funds seem to have reversed the recent outflows (right).



Source: AMG/Lipper, EPFR, Citi Research

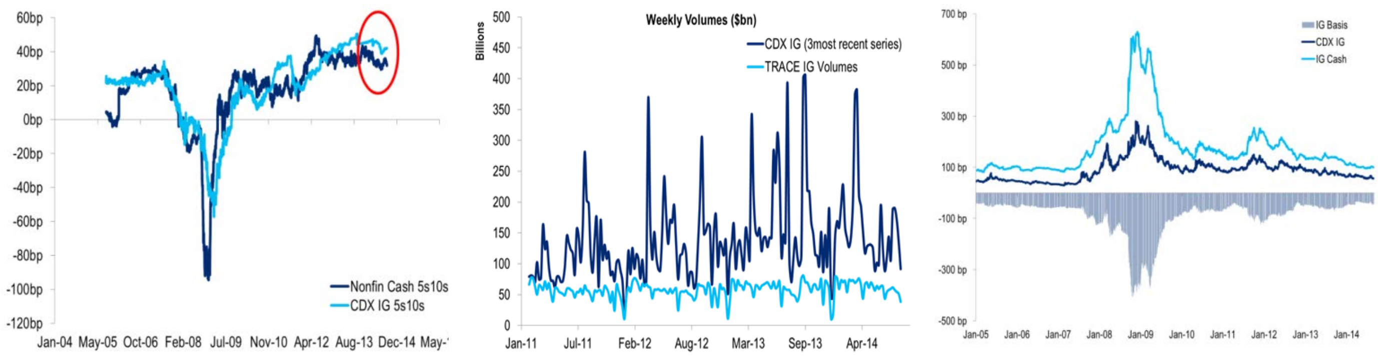
[1] As of EOD 2-Sep-2014.

Where does this leave credit? What we have been observing in credit markets indicates that the love affair of investors with credit is continuing – inflows into IG funds have remained positive for every week of the year (see Figure 2), while the recent outflows from HY funds seem to have reversed. Going forward, if rates are to remain low for longer than previously thought, credit should continue to perform well.

Why synthetic credit indices are attractive longs

So if credit remains a desirable asset class, where should investors go long? We believe that synthetic credit indices provide attractive opportunities. There are a few reasons for that. First, synthetic credit curves are currently steeper than their cash counterparts, especially at the longer end (see Figure 3 (left)). Given how tight credit spreads are right now, we believe that rolling down the curve (or pulling to par in bond terminology) will be a major driver of returns. In this respect, the relative steepness of synthetic credit curves is an advantage.

Figure 3. Synthetic credit curves are currently steeper than corresponding cash curves (left), providing better roll down characteristics, and volumes in cash markets have been muted when compared to synthetic markets (middle). In a sell off, as in 2008-2009, the cash-synthetic basis tends to widen as funding costs rise and liquidity dries up (right).



Source: DTCC, TRACE, Yieldbook, Citi Research

Second, what happens when markets are indeed convinced that credit spreads are about to move wider? To understand that, consider Figure 3 (middle) which shows how transaction volumes in cash markets have been muted compared to synthetic credit index markets. A possible explanation is that as dealers have shrunk their balance sheets, transaction volumes in secondary markets have fallen. At the same time, investors have continued to accumulate long credit risk in cash portfolios from primary allocations.

In the face of a sustained move wider in credit spreads, it is possible that investors could try to exit cash positions quickly, with spreads gapping wider as dealers no longer have the capacity to absorb too much risk. In contrast, the synthetic market, with higher volumes, tighter bid-ask, and less concentrated longs, is likely to be more stable, giving long investors a chance to exit in a more orderly manner. A somewhat similar dynamic played out in 2008-2009 when funding costs rose and liquidity in credit markets dried up (see Figure 3 (right)).

We therefore believe that if one has to go long credit, it makes more sense to go long synthetic credit indices – better roll down characteristics allow investors to realize gains faster, and it is likely to be easier to monetize and exit positions once the market turns.

How to Choose Where to Go Long

For an investor looking to go long a credit index, which index would be the best? Then there is the question of duration – does it make sense to go long the most liquid 5y or some other maturity? There is a lot of choice here, and that can be confusing for someone looking beyond the standard 5y maturity.

We focus on the investment grade credit indices (CDX IG and iTraxx Main) in our analysis in this report, mainly because they trade across a full term structure with 3, 5, 7, and 10 year maturities. A similar analysis can be applied to the high yield credit indices (CDX HY and iTraxx Xover), which mostly trade in the 3 and 5 year maturities.

There are several factors to be taken into account when deciding which specific index/maturity combination is optimal for going long. Among other things, the shape of the credit curve, duration, as well as spread volatility can be important in determining the most attractive index long. We address each of these issues in our model.

We start by considering the shape of the curve – the steeper the curve is, the faster is the roll down[2], and the higher is the projected P&L if overall spread levels remain unchanged. We choose a 1 year holding period[3] and compute the expected total return for all the 4 maturities for each of the two indices, a total of 8 combinations.

However, this does not tell the whole story. There are two other factors to be considered. The first is the duration – overall, we would expect the return from a 10y maturity index to be higher than the same index with a 3y maturity. We therefore adjust the projected 1 year roll down return by the duration of the index.

Figure 4. The 8 possible index/maturity combinations ranked by beta and duration adjusted 1y roll down.

Index	Tenor	Spread	Duration	1Y Roll down (pt)	Spread Beta	Beta & Dur Adj Roll down	Rank
IG	3Y	30	2.79	0.31	0.85	0.1315	8
IG	5Y	57	4.61	0.97	1.00	0.2101	5
IG	7Y	78	6.24	1.30	0.91	0.2304	3
IG	10Y	99	8.35	1.40	0.86	0.1952	6
Main	3Y	31	2.81	0.32	0.87	0.1325	7
Main	5Y	59	4.71	0.99	0.95	0.2211	4
Main	7Y	82	6.47	1.39	0.81	0.2656	1
Main	10Y	101	8.85	1.42	0.67	0.2397	2

Source: Markit, Citi Research
As of EOD 2-Sep-2014.

Second, we have to also consider spread volatility on a relative basis across indices and maturities. An easy way to adjust for this would be to compute the beta of each index/maturity combination with reference to a fixed index and maturity (the "base" index). In our case, we choose the 5y CDX IG as the base index, and compute the

[2] As a long credit position approaches maturity, the default risk associated with the position decreases if nothing else changes. In other words, the position experiences a "spread tightening" as its maturity date comes closer, which leads to positive P&L – we refer to this as roll down. We roll our positions down the spot curve rather than the forward curve.

[3] To some extent, this is driven by our expectations of no defaults in the IG space in the next 1 year. Our analysis holds only if the long index position experiences zero defaults.

spread betas for each of the other index/maturity combinations relative to the base. We use these betas to further adjust the 1 year roll down return (see Figure 4).

Now that we have the 1 year roll down return adjusted for both duration and beta, we can compare them directly. In theory, if we were to rank all the possible combinations based on this metric, we could identify the optimal long opportunity, based on these technical factors[4]. However, there is one last twist, as we explain below.

What happens if spreads widen?

The analysis described so far works as long as overall spread levels remain unchanged – what it ignores is the downside if spread levels go wider from current levels.

To quantify the effect of widening spreads, we consider *break even* spreads – this refers to the overall shift in spread levels required to completely offset the gain from the roll down. For our analysis, we compute how much the entire curve would need to be shifted upward such that the 1 year roll down P&L for a long index position is zero.

The story does not end here, because we now have two different indices, CDX IG, and iTraxx Main. The break even spreads now need to be normalized with respect to some sort of “beta”. This is because different indices can move by different amounts under the same conditions. Therefore, a 10 bp breakeven spread in one index may not be the same as a 10 bp breakeven spread in another.

Since we are now looking at changes in overall spread levels (i.e. shifting up the whole curve), computing the betas with respect to 5y CDX IG does not seem to be appropriate. Instead, we first compute the median spread for the entire term structure for both CDX IG and iTraxx Main, and then compute the spread beta using the time series of median spreads.

Figure 5. The combined ranking using both beta and duration adjusted roll down and (median spread) beta adjusted break even. The best overall (iTraxx 7y) and best IG longs are highlighted by the black borders.

Index	Tenor	Spread	Duration	1Y Roll down (pt)	Spread Beta	Beta & Dur Adj Roll down	BreakEven	Median Spread Beta	Beta Adj BreakEven	Roll down Rank	Break Even Rank	Combined Rank
IG	3Y	30	2.79	0.31	0.85	0.1315	17.18	1.00	17.18	8	8	8
IG	5Y	57	4.61	0.97	1.00	0.2101	26.06	1.00	26.06	5	3	4
IG	7Y	78	6.24	1.30	0.91	0.2304	23.84	1.00	23.84	3	4	3
IG	10Y	99	8.35	1.40	0.86	0.1952	18.18	1.00	18.18	6	7	7
Main	3Y	31	2.81	0.32	0.87	0.1325	17.77	0.93	19.11	7	5	6
Main	5Y	59	4.71	0.99	0.95	0.2211	25.97	0.93	27.93	4	1	2
Main	7Y	82	6.47	1.39	0.81	0.2656	24.47	0.93	26.32	1	2	1
Main	10Y	101	8.85	1.42	0.67	0.2397	17.28	0.93	18.58	2	6	4

Source: Citi Research
As of EOD 2-Sep-2014.

We then adjust the break even spreads by the respective betas (1.00 for CDX IG) and rank the various index/maturity combinations based on the beta adjusted break

[4] We say “technical factors” here to emphasize that investors should also consider fundamental and/or macro factors in conjunction with our model.

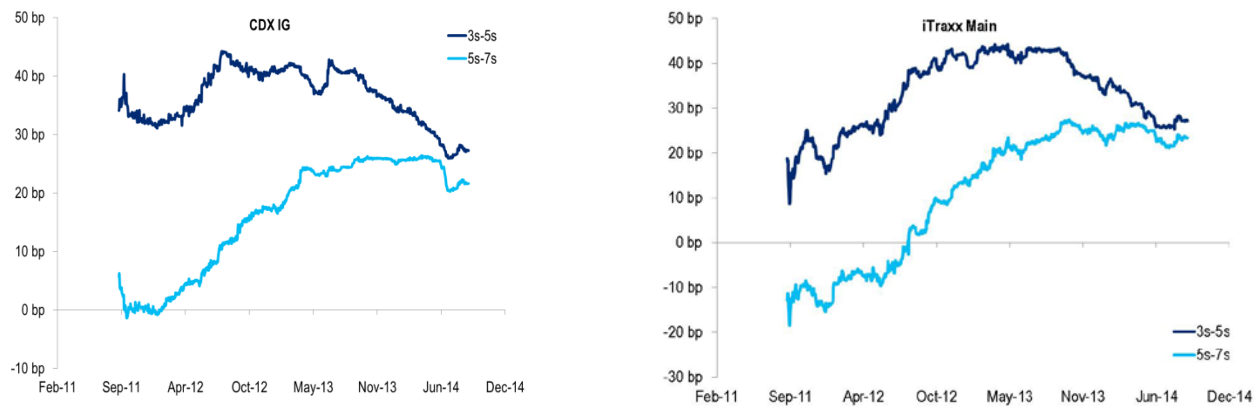
even spreads. A lower beta adjusted break even spread signifies a higher likelihood of losing money in a rising spread environment.

Finally, we combine the rankings from the two approaches (beta/duration adjusted roll down and beta adjusted break even) to come up with a single ranking, shown in Figure 5. The highest ranked combination indicates an optimal long based on our analysis, since it offers good beta adjusted returns as well as a lower probability of losing money if spreads were to widen.

And the optimal long is….

Based on this methodology, we find that a long 7y iTraxx Main position is optimal across both CDX IG and iTraxx Main indices. For investors who are more focused on US credit, the 7y CDX IG long is the optimal choice.

Figure 6. On a relative basis, 3s5s curves have flattened much more than the 5s7s curve recently for both IG (left) and Main (right). The curves shown are roll adjusted.



Source: Markit, Citi Research

The 7y does make sense as an optimal long, given how much more the 3s5s portion of index curve has flattened compared to the 5s7s portion for both IG and Main (see Figure 6). At the longer end, the 10y maturity makes less sense from a roll down perspective, because the 7s10s curve is flatter. Furthermore, in a year's time, a 10y position will roll down to a 9y position, and anecdotal evidence suggests that there is a lack of investor demand for risk in that part of the curve. This would make it difficult to unwind and monetize the position after a year.

Conclusion

The continued benign rate environment has produced compression in credit spreads, and we expect that trend to continue for some time. To take advantage of this dynamic, we have presented a method to identify optimal longs in synthetic credit indices by looking across the term structure as well as multiple indices. Based on this method, our current recommendation is to go long 7y iTraxx Main.

Appendix A-1

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