

Sell vol in iTraxx Main to make some carry in the near term

We partially hedge it buying vol in Senior Financials

- **Although we have a constructive view on spreads for 2014 we believe iTraxx indices may have a hard time tightening much in the near term.** We think the recent pause in the tightening trend in CDS index spreads can continue, allowing bond spreads (which have already started tightening) and implied vol to catch up; especially now that the index skew has moved back to flat from very positive – i.e. the index spread is no longer wide to single names.
- **In the near term, we prefer to look for carry in the options market by selling volatility in iTraxx Main (vs. selling index protection outright).** iTraxx Main implied volatility remains high vs. spreads and vs. recent realised volatility, providing an attractive opportunity to sell vol.
- **We partially hedge our short Gamma position in iTraxx Main by buying volatility in Senior Financials,** where implied vol is fairly priced vs. spreads and realised vol, and has lagged the recent uptick in SX7E equity vol.
- **Trade: Sell delta-hedged February ATM straddles in Main, buy them in Senior Financials.** For each February delta-hedged straddle we sell in Main we buy 0.5 in Senior Financials in order for the overall trade to remain positive Theta, at the expense of a negative Gamma and Vega. The realised beta between the two indices has been ~0.75, which if it holds going forward, still generates a negative Gamma.

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Figure 1. Trade details

Type	Strike	Expiry	Price	Position	Notional
Main Receiver	70	19-Feb	10c	Sell	100,000,000
Main Payer	70	19-Feb	19c	Sell	100,000,000
Main Index		@ 70.5 bp		Sell prot.	20,894,000
Type	Strike	Expiry	Price	Position	Notional
SenFin Receiver	90	19-Feb	27.3c	Buy	50,000,000
SenFin Payer	90	19-Feb	16c	Buy	50,000,000
SenFin Index		@ 86 bp		Sell prot.	11,861,000

Source: Citi Research. Indicative prices shown. Initial delta amount shown; we recommend delta-hedging.

- **Track movements in volatility with our daily analytics:** [iTraxx](#), [CDX](#) and [Cross-Assets](#).

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

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Looking for short term carry? Sell vol in Main

Figure 2. iTraxx vs. Iboxx



Source: Citi Research, Markit. * 60% iTraxx Non-Fin, 30% SenFin, 10%SubFin.

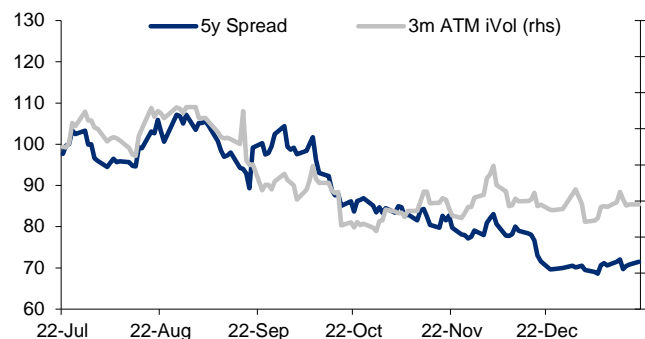
iTraxx indices have moved very little over the past three weeks, after largely outperforming cash bonds late last year – see Figure 2; we **expect that to continue**. Although our 2014 view is constructive, as we argued in our [recent outlook](#), we reckon that before CDS indices have enough room to meaningfully tighten again the gap between cash and synthetic spreads needs to close a little bit more. True that we are [more bullish on synthetics than on cash for 2014](#), but we also believe the entry point for that trade will improve – on a tactical horizon, we would be scaling back rather than adding to index longs (risk) here.

Investors looking for carry in the near term in synthetics would be better off selling vol than going outright long risk, in our view. While the entry point for index longs is not very good, the entry point to sell volatility is:

- Implied volatility lagged the tightening in spreads at the end of 2014 and still looks expensive vs. spreads – see Figure 3.
- Implied volatility is now quite rich vs. realized – see Figure 4. The premium of implied over realised vol tends to be the P&L main driver of selling vol in credit¹, given the short maturities in credit options.
- The richness of implied vol (vs. realised) is now mostly a credit phenomenon after the ratio of implied to realised vol in equities, rates and FX has recently declined – see Figure 5, Figure 6 and Figure 7.

Figure 3. Main spread & 3m ATM implied volatility

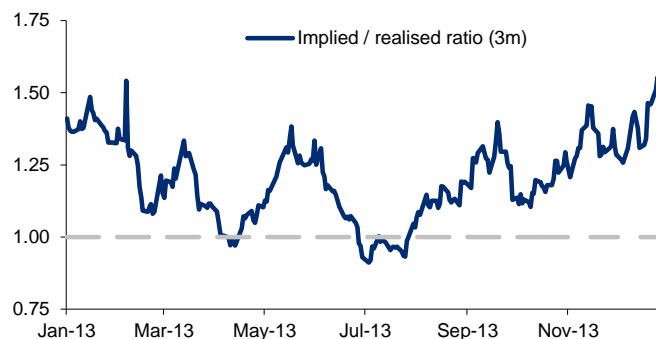
LHS: spreads (bp). RHS: vol (%).



Source: Citi Research, Markit.

Figure 4. Implied to realized volatility ratio

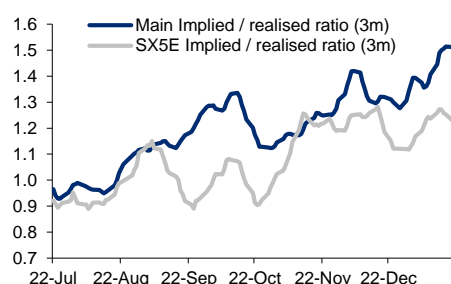
3 months.



Source: Citi Research, Markit, Bloomberg.

Figure 5. iTraxx vs. equities

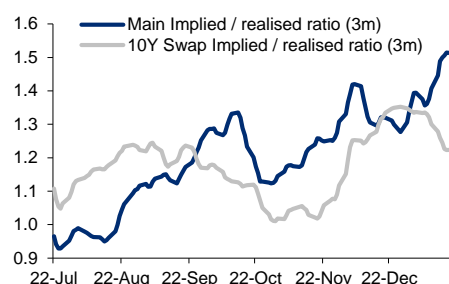
3m implied to realized vol ratio.



Source: Citi Research, Markit, Bloomberg. 5d moving average.

Figure 6. iTraxx vs. rates

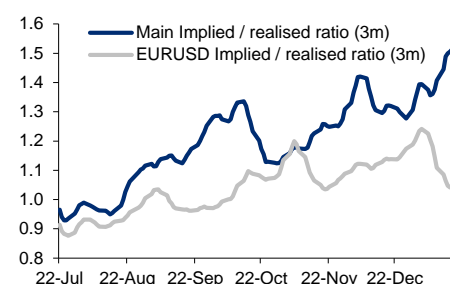
3m implied to realized vol ratio.



Source: Citi Research, Markit, Bloomberg. 5d moving average.

Figure 7. iTraxx vs. FX

3m implied to realized vol ratio.



Source: Citi Research, Markit, Bloomberg. 5d moving average.

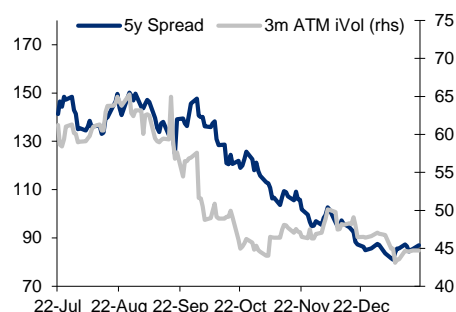
¹ See [Profiting from the Credit Volatility Premium: Selling credit volatility can be consistently profitable even after paying bid-ask](#), A Basu, R Roy, Sept-2012.

Buy vol in Senior Financials as an RV trade

We would be outright sellers of vol in Main. However, investors who prefer a relative value vol trade within credit should consider, in our view, pairing a short vol position in Main with a long vol position in Senior Financials, where implied volatility looks fairly priced vs. spreads (Figure 8) and the implied to realised ratio does not look as overextended (Figure 9). Moreover, as Figure 10 shows, implied volatility in Senior Financials has lagged the recent increase in the SX7E financials equity index implied vol.

Figure 8. Senior Fin. spread & 3m implied vol

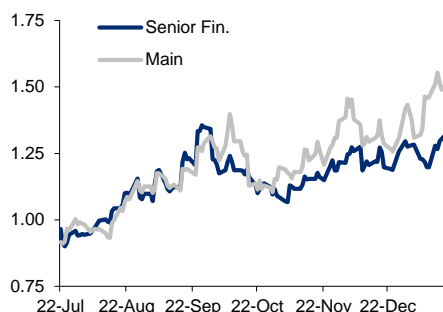
LHS: spreads (bp). RHS: vol (%).



Source: Citi Research, Markit.

Figure 9. Main vs. Senior Fin

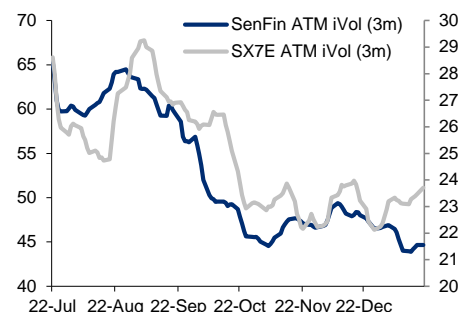
Implied to realized vol ratio. 3 months.



Source: Citi Research, Markit.

Figure 10. iTraxx SenFin vs. SX7E

3m implied vol.



Source: Citi Research, Bloomberg. 5d moving average.

Trade

For a more detailed analysis of each trade please visit our online Options Pricing Tool ([Main](#) trade and [Senior Fins](#) trade).

Sell delta-hedged ATM straddles in Main, buy them in Senior Financials

For each February delta-hedged straddle we sell in Main we buy 0.5 in Senior Financials in order for the overall trade to remain positive Theta, at the expense of a negative Gamma and Vega. The realised beta between the two indices has been ~0.75, which if it holds going forward, still generates a negative Gamma.²

Figure 11. Trade details

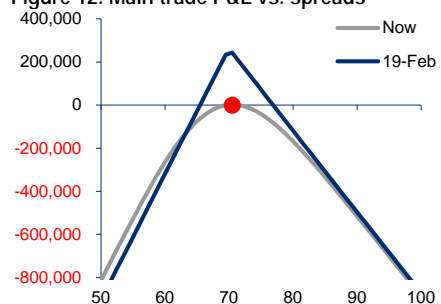
Type	Strike	Expiry	Price	Position	Notional	Upfront	Delta	Gamma	Theta	Vega
Main Receiver	70	19-Feb	10.0c	Sell	100,000,000	100,000	19,158	-1,235	1,614	-3,560
Main Payer	70	19-Feb	19.0c	Sell	100,000,000	190,000	-29,279	-1,235	3,588	-3,560
Main Index	@ 70.5 bp			Buy prot.	20,894,592	293,023	10,121		-433	
Total						583,023	-0	-2,469	4,770	-7,120

Type	Strike	Expiry	Price	Position	Notional	Upfront	Delta	Gamma	Theta	Vega
SenFin Receiver	90	19-Feb	27.3c	Buy	50,000,000	-136,500	-14,697	461	-1,308	2,050
SenFin Payer	90	19-Feb	16.0c	Buy	50,000,000	-80,000	9,061	461	-2,533	2,050
SenFin Index	@ 86 bp			Buy prot.	11,861,446	78,623	5,636		-299	
Total						-137,877	-0	921	-4,140	4,101
Total trade							-0	-1,548	630	-3,019

Source: Citi Research. Indicative prices shown. Initial delta amount shown; we recommend delta-hedging.

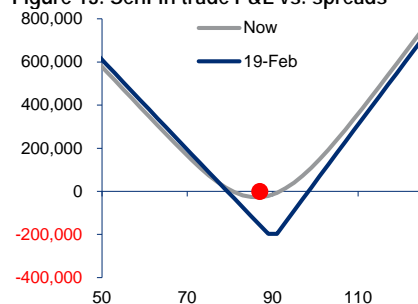
² Gamma on the SenFin trade times 0.75 of the Gamma on Main trade.

Figure 12. Main trade P&L vs. spreads



Source: Citi Research, Markit.

Figure 13. SenFin trade P&L vs. spreads



Source: Citi Research, Markit.

Trade Recommendations Summary

We are opening the trade recommended in this report.

Figure 14. Open trades – Summary and P&L

Trade Description	Leg	Format	Direct.	Notnl.	Entry Upfront	Entry Spread	Coupon	Current Upf.	Current Spread	P&L* Total	P&L* Month**
iTraxx Main Eq. Notional Flatteners	Main S19 3y	Prot.	Buy	1.00	-0.97%	65	100	-1.60%	34	-1.01%	-0.15%
05-Sep-13	Main S19 5y	Prot.	Sell	1.00	0.24%	105	100	-1.58%	63	2.19%	0.25%
									Total	1.19%	0.10%
S9 6-9% vs. S20 Crossover	Main S9 6-9% Jun-18	Prot.	Sell	1.17	-0.25%	294	300	-3.76%	211	4.75%	1.55%
15-Nov-13	Crossover S20 Dec-18	Prot.	Buy	1.00	-7.07%	344	500	-9.63%	280	-3.48%	-0.86%
									Total	1.27%	0.69%
Sell Crossover Receiver	275bp Feb. Receiver	Price	Sell	1.00	0.32%			0.29%		0.03%	
09-Jan-14									Total	0.03%	
Sell 1m Main straddles ***	Sell 1m Main straddles	Price	Buy	1.00	0.00%			-0.02%		-0.02%	
09-Jan-14									Total	-0.02%	
Payer spread vs. index long ***	Buy 3m 25-60% pay spread	Price	Buy	1.00	0.00%			0.00%		0.00%	
09-Jan-14	Buy index prot.	Price	Sell	1.00	0.00%			-0.01%		0.01%	
									Total	0.01%	
SenFin vs. Xover Recs ***	3m SenFin Recs	Price	Buy	3.40	0.00%			-0.03%		-0.09%	
09-Jan-14	3m Xover Recs	Price	Sell	1.00	0.00%			0.12%		-0.12%	
									Total	-0.21%	
3-6% vs. super senior	Main S9 3-6% Jun-18	Prot.	Sell	1.00	-5.50%	366	500	-5.76%	359	0.34%	
14-Jan-14	Main S9 22-100% Jun-18	Prot.	Buy	9.00	0.03%	26.625	25	0.05%	26	0.20%	
									Total	0.54%	
Main vs. SenFin vol ***	Sell delta-hedged Feb 70 Main straddles	Price	Sell	1.00	0.00%						
21-Jan-14	Buy delta-hedged Feb 80 SenFin straddles	Price	Buy	0.50	0.00%						
									Total		

Source: Citi Research. Spreads and coupons in bp. * P&L expressed as % of the leg with notional equal to 1. ** Over the last month. Prices as of COB yesterday. *** We track the trade P&L by using an initial 0% upfront and a current upfront equal to the trade P&L in %.

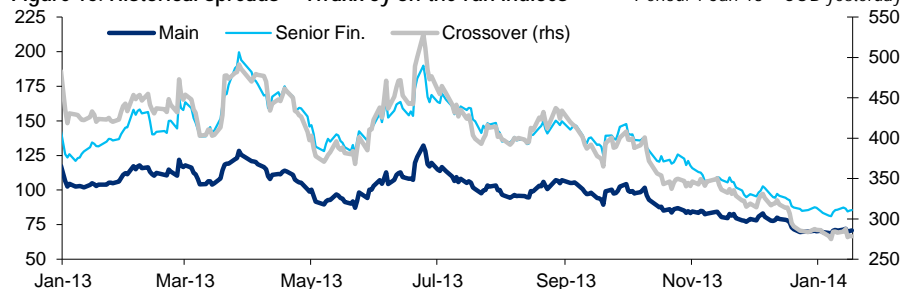
Figure 15. Open and closed trades summary statistics

Number	Open	Closed*	Percentage	Open	Closed*
In profit	5	12	In profit	71%	75%
In loss	2	4	In loss	29%	25%
	7	16			

Source: Citi Research. * Since 1-Jun-13. Excluding the trade ideas opened in the current publication.

Representative Market Conditions

Figure 16. Historical spreads – iTraxx 5y on-the-run indices



Source: Citi Research, Markit. In bp.

Figure 17. Closed trades since Jun-13 – Summary and P&L

Trade Description	Leg	Format	Direct.	Notnl.	Entry Upfront	Entry Spread	Coupon	Final Upfront	Final Spread	P&L* Total
Main July Receiver Fly	105bp Receiver	Price	Buy	1.00	0.25%			0.23%		-0.01%
Opened: 18-Jun-13	90bp Receiver	Price	Sell	2.00	0.04%			0.00%		0.07%

Closed: Expiry	75bp Receiver	Price	Buy	1.00	0.00%			0.00%		0.00%
									Total	0.06%
Senior Fin vs. CDX IG Receivers	SenFin October 140bp receiver	Price	Buy	1.00	0.53%			0.69%		0.17%
Opened: 26-Jul-13	CDX IG October 75bp receiver	Price	Sell	2.00	0.19%			0.18%		0.02%
Closed: 13-Aug-13									Total	0.19%
Series 9 vs. Series 19 equity	iTraxx Main S9 0-3% Jun-18 (10y)	Prot.	Buy	1.00	46.25%	1,720	500	39.82%	1,703	-7.98%
Opened: 5-Jun-13	iTraxx Main S9 Index Jun-18 (10y)	Prot.	Sell	5.00	-2.05%	132	175	-2.73%	114	6.12%
Closed: 25-Sep-13	iTraxx Main S19 0-3% Jun-18 (5y)	Prot.	Sell	1.00	31.75%	1,227	500	25.15%	1,188	8.15%
	iTraxx Main S19 Index Jun-18 (5y)	Prot.	Buy	6.20	0.39%	108	100	-0.53%	88	-7.63%
									Total	-1.34%
S19 Jun-16 3-6% vs. S9 Jun-18 Index	iTraxx Main S19 3-6% Jun-16 (3y)	Prot.	Sell	1.00	-3.59%	375	500	-7.23%	229	4.72%
Opened: 9-Jul-13	iTraxx Main S9 Index Jun-18 (10y)	Prot.	Buy	2.50	-1.58%	138	175	-2.73%	114	-3.83%
Closed: 25-Sep-13									Total	0.89%
Commerzbank sub/senior compr.	Sub CDS	Prot.	Sell	1.00	-5.65%	375	500	-8.03%	327	3.24%
Opened: 13-Aug-13	Senior CDS	Prot.	Buy	2.51	2.37%	150	100	1.95%	140	-1.49%
Closed: 14-Sep-13									Total	1.75%
RBS sub/senior compr.	Sub CDS	Prot.	Sell	1.00	-7.71%	339	500	-11.10%	254	4.25%
Opened: 13-Aug-13	Senior CDS	Prot.	Buy	2.02	2.80%	168	100	1.77%	139	-2.43%
Closed: 14-Sep-13									Total	1.82%
BNP sub/senior compr.	Sub CDS	Prot.	Sell	1.00	-14.42%	198	500	-16.21%	168	2.65%
Opened: 13-Aug-13	Senior CDS	Prot.	Buy	1.68	0.86%	118	100	0.26%	105	-1.30%
Closed: 14-Sep-13									Total	1.36%
S19 3-6% vs. S20 Crossover	Main S19 3-6% Jun-18	Prot.	Sell	1.00	-3.25%	422	500	-5.70%	366	2.99%
Opened: 26-Sep-13	Crossover S20 Dec-18	Prot.	Buy	1.00	-5.18%	386	500	-6.96%	343	-2.32%
Closed: 4-Nov-13									Total	0.67%
iTraxx vs. CDX IG super senior	Main S9 22-100% Jun-18	Prot.	Sell	1.00	0.60%	37	25	0.34%	32	0.29%
Opened: 26-Sep-13	CDX IG S9 30-100% Dec-17	Prot.	Buy	1.00	-3.54%	13	100	-3.43%	16	0.00%
Closed: 4-Nov-13									Total	0.29%
Senior Fin vs. Xover straddle	Xover Dec-13 400bp straddle	Price	Sell	1.00	2.64%			2.63%		0.00%
Opened: 9-Oct-13	SenFin Dec-13 140bp straddle	Price	Buy	2.05	1.29%			1.48%		0.40%
Closed: 15-Nov-13									Total	0.40%
325-350-375 Nov. Crossover Receiver Ladder	325 Xover Nov Rec	Price	Sell	2.00	0.18%			0.02%		0.32%
Opened: 23-Oct-13	350 Xover Nov Rec	Price	Sell	1.00	0.61%			0.47%		0.14%
Closed: 15-Nov-13	375 Xover Nov Rec	Price	Buy	1.00	1.45%			1.46%		0.01%
									Total	0.47%
CDX IG vs. Main Receivers	CDX IG S21 Nov 85 Receiver	Price	Buy	1.00	0.47%			0.62%		0.15%
Opened: 15-Oct-13	Main S20 Nov 100 Receiver	Price	Sell	1.00	0.52%			0.91%		-0.39%
Closed: Expired 20-Nov-13									Total	-0.24%
S19 Jun-16 0-3% vs. 3-6%	Main S19 0-3% Jun-16	Prot.	Sell	1.00	8.00%	839	500	3.88%	725	5.11%
Open: 26-Sep-13	Main S19 3-6% Jun-16	Prot.	Buy	2.00	-7.00%	234	500	-9.75%	132	-7.47%
Closed: 9-Dec-13									Total	-2.36%
SenFin vs. Main	Senior Fin. 5y S20	Prot.	Sell	1.00	0.60%	112	100	0.07%	102	0.61%
Open: 26-Sep-13	Main 5y S20	Prot.	Buy	1.35	-0.79%	84	100	-0.94%	81	-0.32%
Closed: 9-Dec-13									Total	0.29%
S9 super senior vs. light delta	Main S9 22-100% Jun-18	Prot.	Sell	1.00	0.18%	30	25	0.03%	26	0.19%
Open: 15-Nov-13	Main S9 index Jun-18	Prot.	Buy	0.33	-3.65%	93	175	-4.24%	77	-0.29%
Close: 14-Jan-14									Total	-0.10%
75-85 Main January strangle	75bp Jan Main receiver	Price	Sell	1.00	0.08%			0.19%		-0.11%
Open: 9-Dec-13	85bp Jan Main Payer	Price	Sell	1.00	0.13%			0.00%		0.13%
Close: 14-Jan-14									Total	0.02%

Source: Citi Research. Spreads and coupons in bp. * P&L expressed as % of the leg with notional equal to 1. *** We track the trade P&L by using an initial 0% upfront and a final upfront equal to the trade P&L in %.

Notes: The list of open trades reflects our current views; we have no plans to provide regular coverage or updates to these trades. P&L on trade ideas includes carry and roll costs but not trading commissions/costs. Results should not, and cannot, be viewed as an indicator of future performance. **Risks:** 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. Note that ratio writing would leave the writer uncovered in one leg of the trade.

The portion of this research report regarding non-OCC issued options is not intended for US clients other than Qualified Institutional Buyers. 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. Interested investors should contact our trading desk for updated price and liquidity information. Also, complex option strategies may entail higher commissions costs. Please contact us for more details on the trades discussed.

Analytics, Past Trade Ideas & Publications

Figure 18. Analytics – Available at Citi Velocity

Options	iTraxx Volatility Report CDX Volatility Report European Cross-Asset Volatility Report Volatility P&L Report – Credit Indices	Tranches	iTraxx Series 9 Tranche Report iTraxx Series 19 Tranche Report
Curves	iTraxx Curve P&L Report	Indices	CDS Indices Positioning Report CDS Indices Trading Volumes Report

Source: Citi Research.

Figure 19. Past Trade Ideas

Tranches -	More mezz. less seniors - 3-6% vs. super senior	15 Jan 2014
Options -	SenFin vs. Xover Recs	9 Jan 2014
Options -	Payer spread vs. index long	9 Jan 2014
Options -	Sell 1m Main straddles	9 Jan 2014
Options -	Sell Crossover Receiver	9 Jan 2014
Options -	Sell strangles and go on holidays: Position for spreads to stay in the recent range in mid-January	9 Dec 2013
Tranches -	Sell S9 Jun-18 6-9% protection vs. Xover 5y S20	15 Nov 2013
Tranches -	Sell S9 Jun-18 22-100% protection vs. light delta	15 Nov 2013
Indices -	Long risk Senior Fins. vs. short risk Main	5 Nov 2013
Options -	Crossover receiver ladders	23 Oct 2013
Options -	Long risk CDX IG vs. Main via Receivers	15 Oct 2013
Options -	Buy Senior Financials straddles vs. sell Crossover straddles	9 Oct 2013
Tranches -	Long risk equity vs. short risk 3-6% in S19 Jun-16 (3y)	26 Sep 2013
Tranches -	Long risk S19 Jun-18 (5y) 3-6% vs. 5y S20 Crossover	26 Sep 2013
Tranches -	Long risk iTraxx S9 Jun-18 (10y) super senior vs. short risk CDX IG S9 Dec-17 (10y) super senior	26 Sep 2013
Indices -	Equal Notional 3s5s Flatteners: Adding cautious longs by selling forward protection	5 Sep 2013
Single Names -	Sub/Senior compression trades in European banks	13 Aug 2013
Options -	iTraxx Senior Financials vs. CDX IG via Receivers	7 Aug 2013
Tranches -	Sell Jun-16 3-6% Series 19 protection vs. Buy Jun-18 Series 9 index protection	9 Jul 2013
Options -	Option trades ahead of the FOMC	18 Jun 2013
Tranches -	iTraxx Series 9 vs. Series 19 Jun-18 equity tranches	5 Jun 2013
Options -	Hedging via Crossover Bearish Ladders	16 May 2013
Options -	Buy Main straddles; sell CDX IG straddles	1 May 2013
Tranches -	Views & Trades on iTraxx Series 9 Tranches	18 April 2013
Single Names -	Beware of retail and food releveraging – short risk retailers & food vs. Main Non-Financials	18 April 2013
Options -	Receiver 1x2s – Mind the tail if going long	2 Apr 2013
Single Names -	Long insurers vs. short premium autos	19 Mar 2013
Tranches -	Flatteners in iTraxx Equity Tranches	6 Mar 2013
Tranches -	Long risk 3-6% vs. short risk 0-3% - Jun-15 iTraxx Series 9 tranches	12 Feb 2013
Options -	Long risk Main vs. Crossover via indices and receiver options	12 Feb 2013

Source: Citi Research.

Figure 20. Other publications

2014 European Credit Outlook: Strategy // Positioning and Trades	13 Jan 2014
Global Structured Credit Outlook: A Rockier Ride (R Roy, A Basu, K Malhotra, R Brauchler)	20 Dec 2013
2013 Trading Volumes in European Credit: CDS Indices, Single Name CDS and IG Bonds	5 Dec 2013
Credit Options - What did investors do in 2013? What will they do in 2014? (2013 European Credit Conference Presentation)	4 Dec 2013
Credit Index Options 1-0-1: Launching our option pricing tool @ CitiVelocity (2013 European Credit Conference Presentation)	2 Dec 2013
Europe Returns: Assessing value across flow and structured credit assets	22 Nov 2013
iTraxx Tranches Views & Trades: Mezz may be back next year	15 Nov 2013
Financial CDS to get a re-vamp	7 Aug 2013
Hedging menu: payer spreads, 3s5s flatteners and Jun 15/18 equity tranche flatteners	28 Mar 2013
What bail-in means for CDS	11 Feb 2013

Source: Citi Research.

Options Risk Disclosure - Please Read Carefully

This section discusses possible options strategies that you may choose to employ in conjunction with the company securities discussed herein. If you choose to engage in the options transactions discussed within this document, you must have an approved options account and will be subject to certain criteria which may ultimately prevent you from engaging in certain option strategies. It is important for you as an investor to know and understand that Options do involve risk and sometimes, significant risk, therefore may not be appropriate for all investors. If you buy options, the maximum loss is the premium. If you sell put options, the risk is the entire notional below the strike. If you sell call options, the risk is unlimited. The actual profit or loss from any trade will depend on the price at which the trades are executed. The prices used herein are historical and may not be available when you order is entered. Commissions and other transaction costs are not considered in these examples.

Please speak to your Financial Advisor to ensure you have a full understanding of the risk and reward of the strategy you are considering. Strategies that are opened or closed differently than what is discussed in this document could have a significantly different outcome from what is described. It should be noted that certain Index options might have special settlement dates or settlement requirements that are different from traditional equity options. Commissions, taxes, and margin costs have not been included but will affect the outcome of any option transaction and should be considered. However, they can have a significant impact on the profitability of options transactions and should be considered carefully before entering into any option strategy. Because of the importance of tax considerations to all option transactions, the investor considering options should consult with his/her tax advisor as to how their tax situation is affected by the outcome of contemplated options transactions. Certain options trades/strategies must be executed in a margin account. Transactions executed in a margin account can require the investor to periodically deposit additional collateral into the account in order to maintain the positions. The preceding language is not a full description of all possible risks associated with options trading.

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Appendix A-1

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