

European Cross-Asset Vol Report

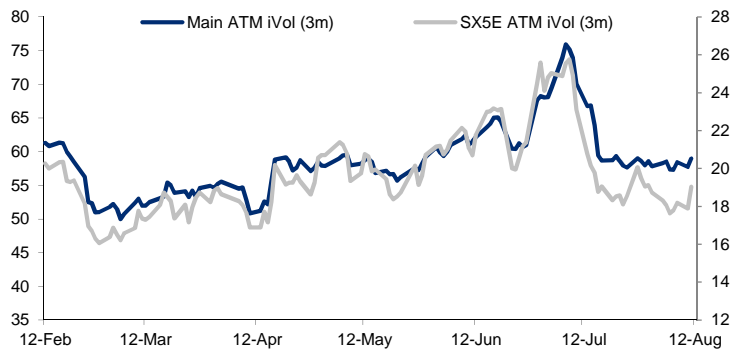
See Appendix A-1 for Analyst Certification,
Important Disclosures and non-US research
analyst disclosures

Data as of COB: 12 Aug 15

	Level	Spot	1w chg	1m chg	Implied vol (ATM, 3m)	(%)	1w chg	1m chg
Main		69	9.7%	6.6%	#N/A	#N/A	#N/A	#N/A
SX5E		3484	-5.2%	-3.0%	#N/A	#N/A	#N/A	#N/A
Crossover		318	9.7%	12.6%	61	4.4	-0.2	-0.2
10Y Swap		0.95	-12.2%	-22.4%	65	-2.2	-8.2	-8.2
CDX IG		76	5.4%	12.2%	51	2.3	0.7	0.7
EURUSD		1.12	2.3%	1.4%	10	-0.4	-0.8	-0.8
SenFin		79	7.7%	5.7%	64	-0.4	-11.0	-11.0
SX7E		151	-4.0%	-3.5%	26	2.8	-0.6	-0.6

	Realised vol (3m)	(%)	1w chg	1m chg	Implied / realised vol (3m)	vol ratio	1w chg	1m chg
Main		58	0.1	-0.9	#N/A	#N/A	#N/A	#N/A
SX5E		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Crossover		57	0.0	-0.5	1.07	0.08	0.01	0.01
10Y Swap		92	0.8	-2.2	0.70	-0.03	-0.07	-0.07
CDX IG		34	-1.2	0.4	1.52	0.12	0.00	0.00
EURUSD		13	0.0	-0.9	0.79	-0.03	-0.00	-0.00
SenFin		70	0.5	-0.4	0.91	-0.01	-0.15	-0.15
SX7E		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

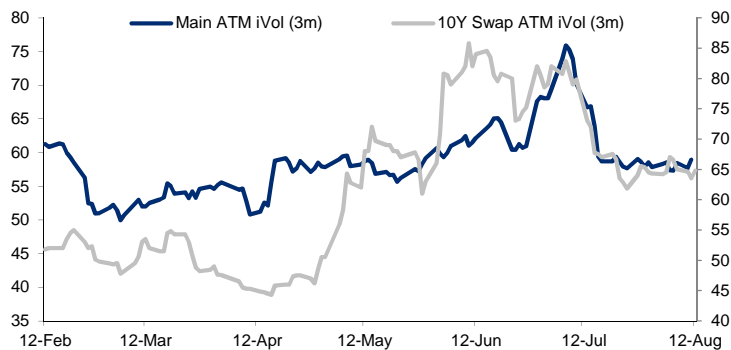
iTraxx Main vs. SX5E Data since: 12-Feb-15
3m ATM implied vol (%).



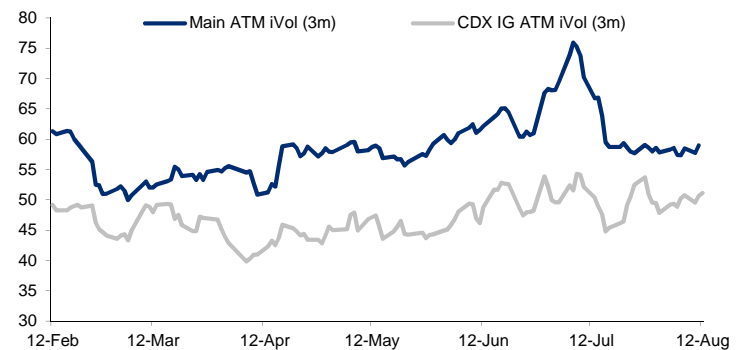
Z-score of spot levels and implied vol ratios Data since: 12-Feb-15
Z-score (Current - average / st.dev) using the average and st.dev for the previous 12m.

Pair	Imp. Vol	Pair	Spot Level
Main / SX5E	#VALUE!	Main / SX5E	0.3
Main / 10Y Swap	#VALUE!	Main / 10Y Swap	-0.1
Main / CDX IG	#VALUE!	Main / CDX IG	-0.7
Main / EURUSD	#VALUE!	Main / EURUSD	1.1
Main / SenFin	#VALUE!	Main / SenFin	-0.7
Main / Crossover	#VALUE!	Main / Crossover	0.4
Crossover / CDX HY	0.4	Crossover / CDX HY	-0.6
Crossover / 10Y Swap	-0.5	Crossover / 10Y Swap	-0.3
SenFin / SX7E	0.7	SenFin / SX7E	0.7

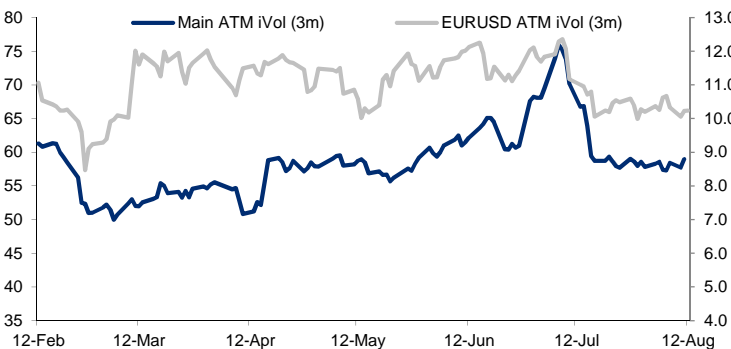
iTraxx Main vs. 10Y Swap Data since: 12-Feb-15
3m ATM implied vol (%).



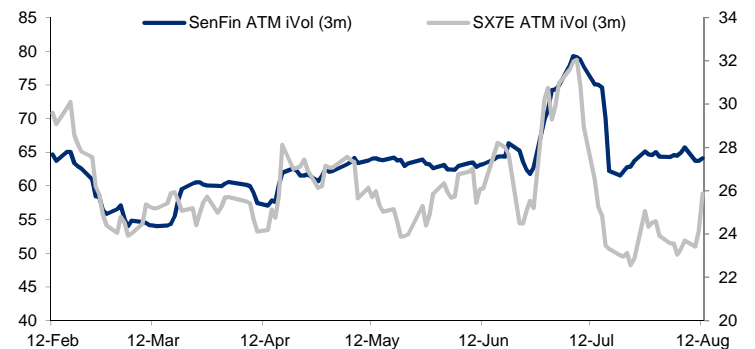
iTraxx Main vs. CDX IG Data since: 12-Feb-15
3m ATM implied vol (%).



iTraxx Main vs. EURUSD Data since: 12-Feb-15
3m ATM implied vol (%).



iTraxx SenFin vs. SX7E Data since: 12-Feb-15
3m ATM implied vol (%).

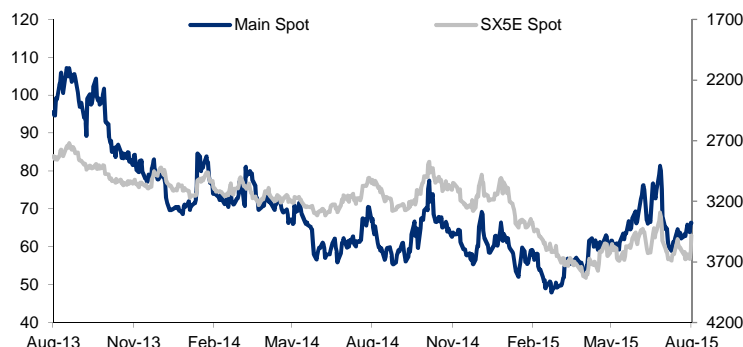


iTraxx Main vs. EuroStoxx 50

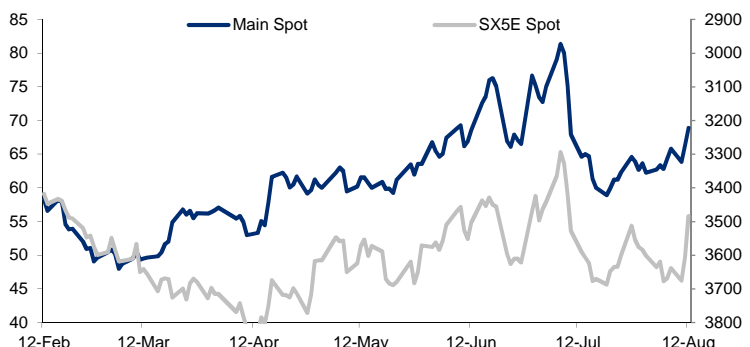
	Level	Spot	1w chg	1m chg	Implied vol (ATM, 3m)	(%)	1w chg	1m chg
Main		69	9.7%	6.6%	#N/A	#N/A	#N/A	#N/A
SX5E		3484	-5.2%	-3.0%	#N/A	#N/A	#N/A	#N/A

	Realised vol (3m)	(%)	1w chg	1m chg	Implied / realised vol (3m)	vol ratio	1w chg	1m chg
Main		58	0.1	-0.9	#N/A	#N/A	#N/A	#N/A
SX5E		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

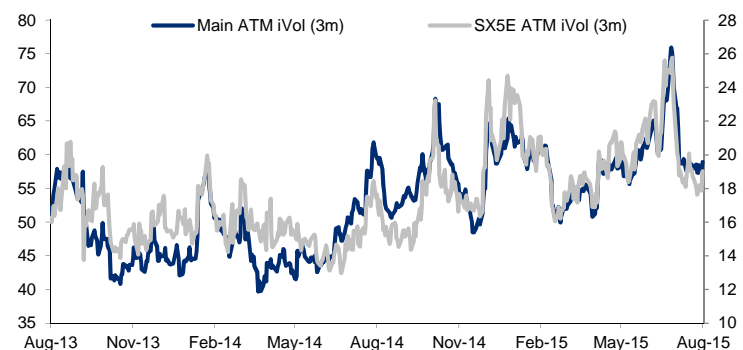
iTraxx Main vs. SX5E - Level
LHS: Main (bp); RHS: SX5E. Data since: 12-Aug-13



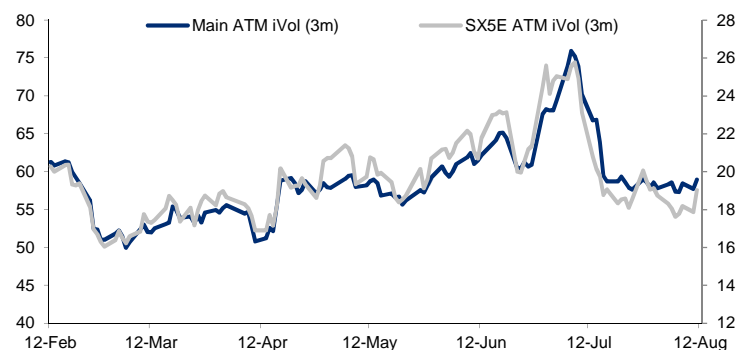
iTraxx Main vs. SX5E - Level
LHS: Main (bp); RHS: SX5E. Data since: 12-Feb-15



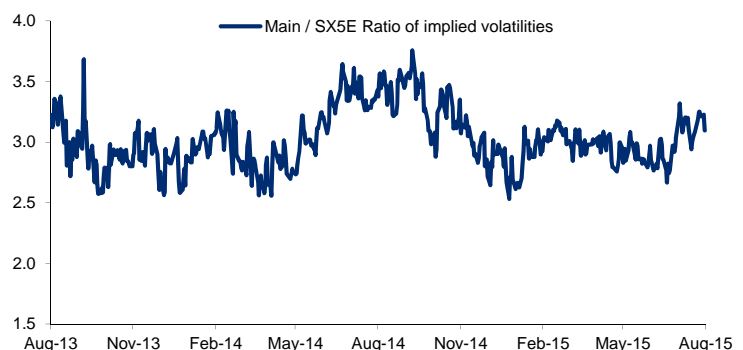
Implied vol (ATM, 3m)
LHS: Main; RHS: SX5E. In %. Data since: 12-Aug-13



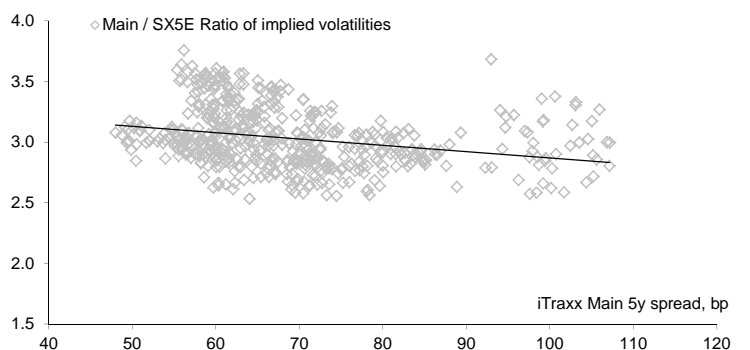
Implied vol (ATM, 3m)
LHS: Main; RHS: SX5E. In %. Data since: 12-Feb-15



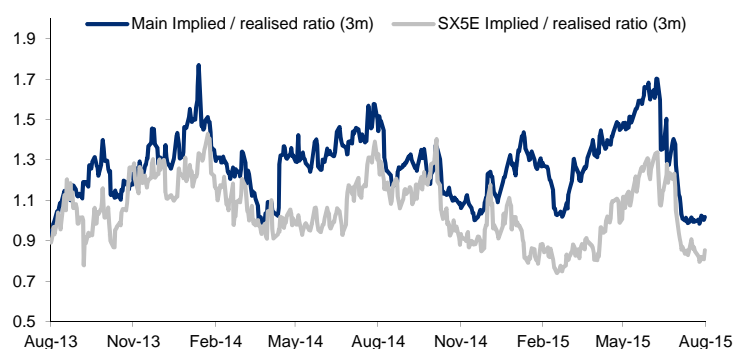
Ratio of implied volatilities
Main / SX5E Data since: 12-Aug-13



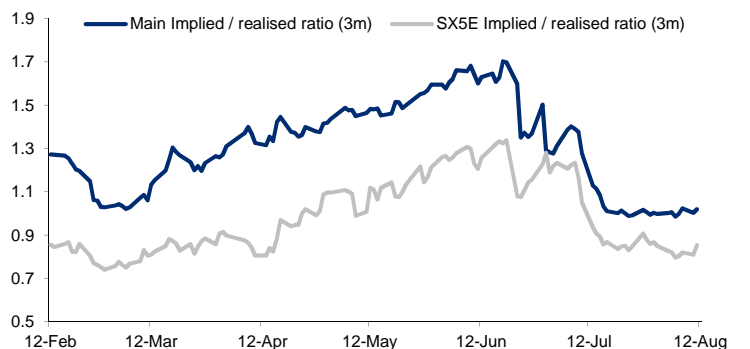
Ratio of implied volatilities
Data since: 12-Aug-13



Implied / realised vol (3m)
Data since: 12-Aug-13



Implied / realised vol (3m)
Data since: 12-Feb-15

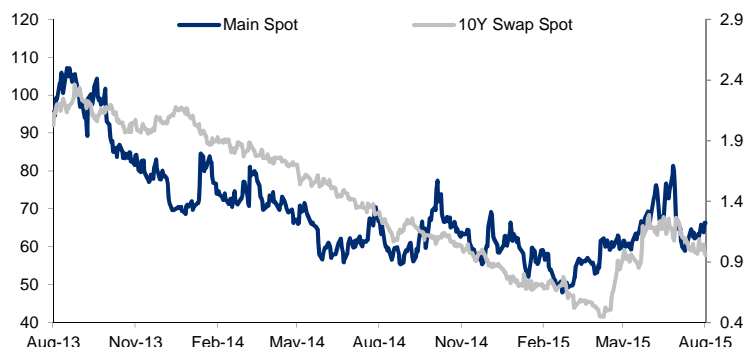


iTraxx Main vs. EUR 10y Swaps

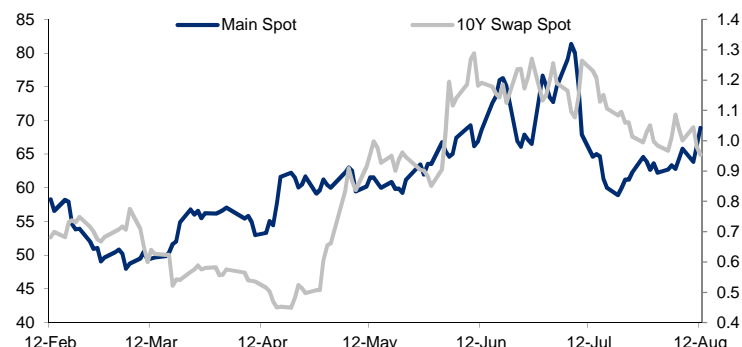
	Level			Implied vol (ATM, 3m)		
	Spot	1w chg	1m chg	(%)	1w chg	1m chg
Main	69	9.7%	6.6%	#N/A	#N/A	#N/A
10Y Swap	0.95	-12.2%	-22.4%	65	-2.2	-8.2

	Realised vol (3m)			Implied / realised vol (3m)		
	(%)	1w chg	1m chg	vol ratio	1w chg	1m chg
Main	58	0.1	-0.9	#N/A	#N/A	#N/A
10Y Swap	92	0.8	-2.2	0.70	-0.03	-0.07

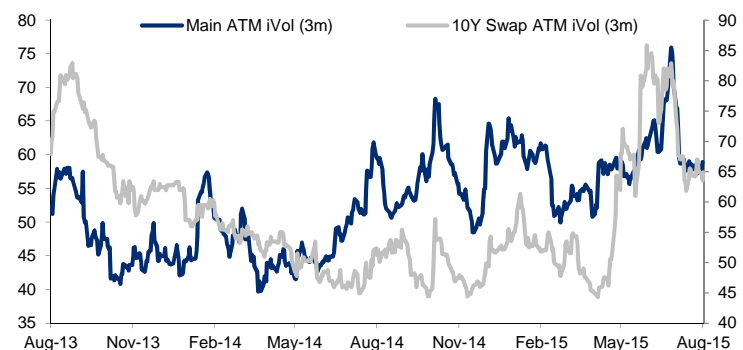
iTraxx Main vs. 10Y Swap - Level
LHS: Main (bp); RHS: 10Y Swap. Data since: 12-Aug-13



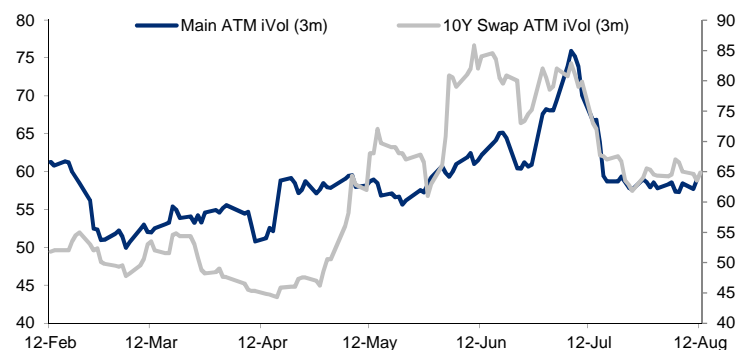
iTraxx Main vs. 10Y Swap - Level
LHS: Main (bp); RHS: 10Y Swap. Data since: 12-Feb-15



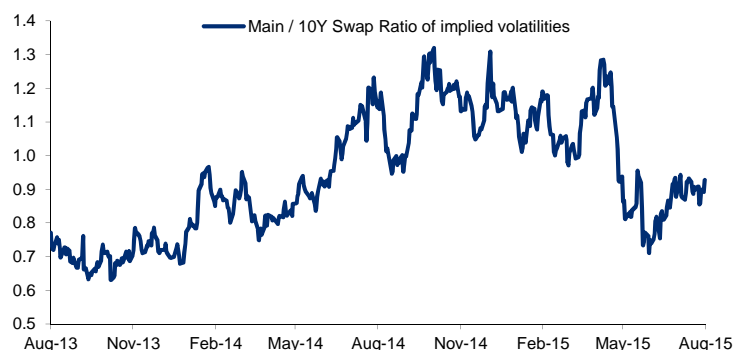
Implied vol (ATM, 3m)
LHS: Main; RHS: 10Y Swap. In %. Data since: 12-Aug-13



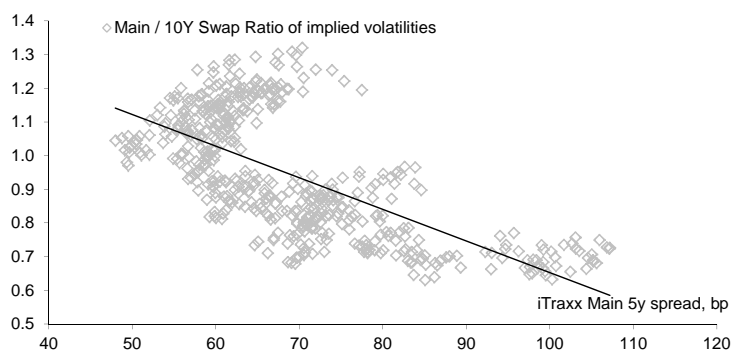
Implied vol (ATM, 3m)
LHS: Main; RHS: 10Y Swap. In %. Data since: 12-Feb-15



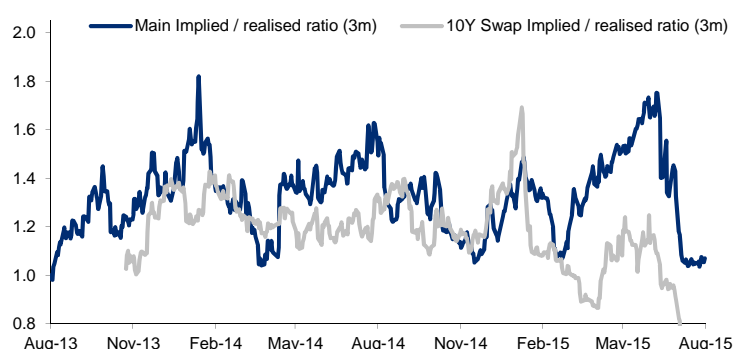
Ratio of implied volatilities
Main / 10Y Swap Data since: 12-Aug-13



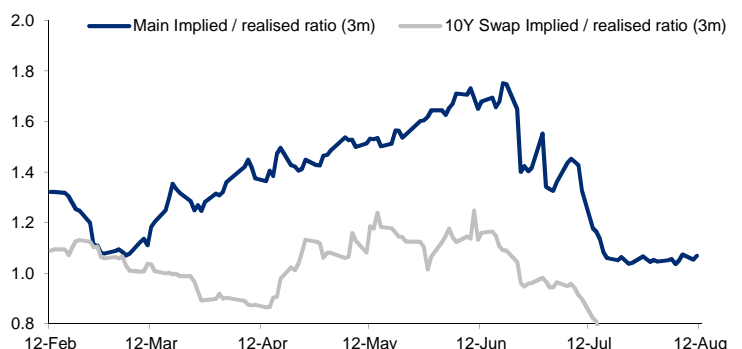
Ratio of implied volatilities
Data since: 12-Aug-13



Implied / realised vol (3m)
Data since: 12-Aug-13



Implied / realised vol (3m)
Data since: 12-Feb-15

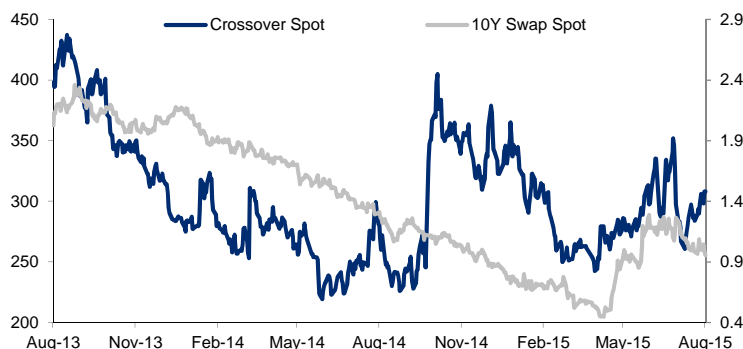


iTraxx Crossover vs. EUR 10y Swaps

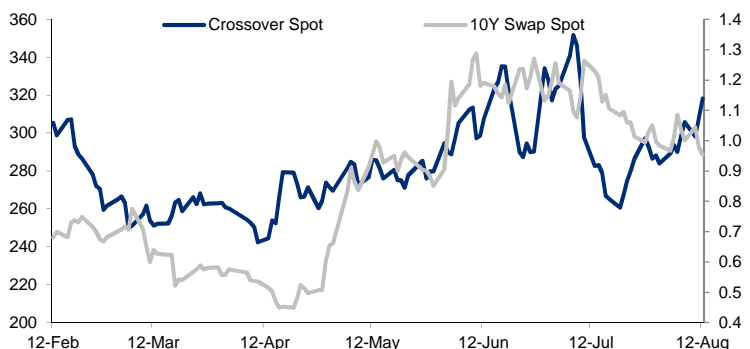
	Level			Implied vol (ATM, 3m)		
	Spot	1w chg	1m chg	(%)	1w chg	1m chg
Crossover	318	9.7%	12.6%	61	4.4	-0.2
10Y Swap	0.95	-12.2%	-22.4%	65	-2.2	-8.2

	Realised vol (3m)			Implied / realised vol (3m)		
	(%)	1w chg	1m chg	vol ratio	1w chg	1m chg
Crossover	57	0.0	-0.5	1.07	0.08	0.01
10Y Swap	92	0.8	-2.2	0.70	-0.03	-0.07

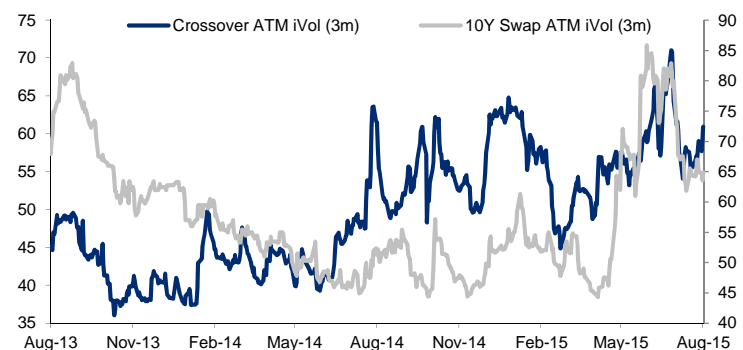
iTraxx Crossover vs. 10Y Swap - Level
LHS: Crossover (bp); RHS: 10Y Swap. Data since: 12-Aug-13



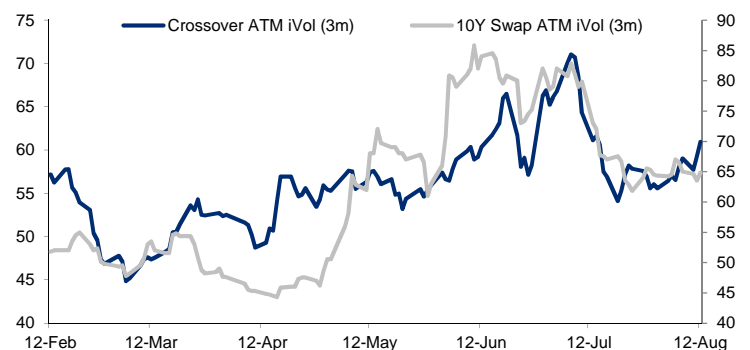
iTraxx Crossover vs. 10Y Swap - Level
LHS: Crossover (bp); RHS: 10Y Swap. Data since: 12-Feb-15



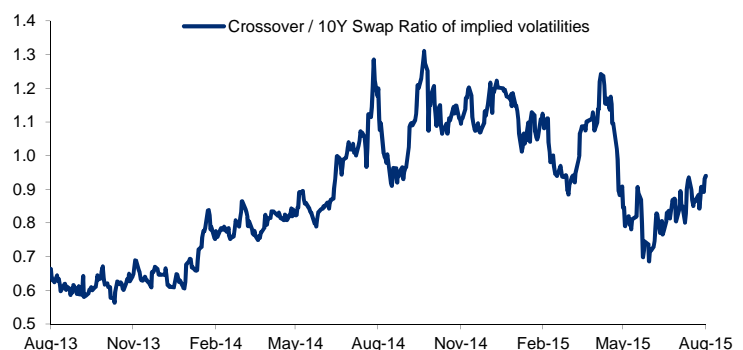
Implied vol (ATM, 3m)
LHS: Crossover; RHS: 10Y Swap. In %. Data since: 12-Aug-13



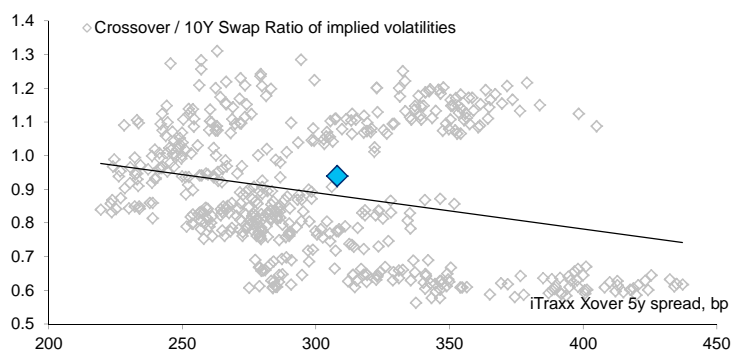
Implied vol (ATM, 3m)
LHS: Crossover; RHS: 10Y Swap. In %. Data since: 12-Feb-15



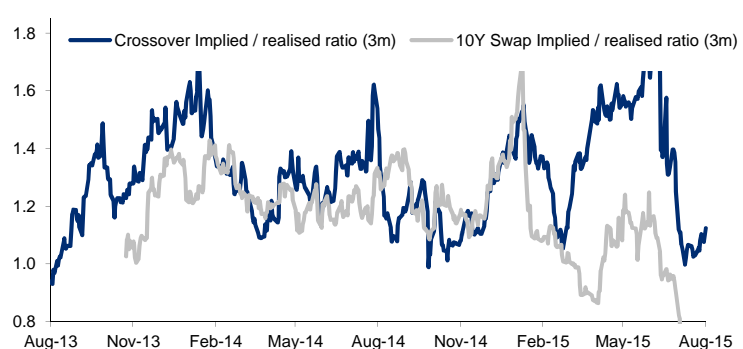
Ratio of implied volatilities
Crossover / 10Y Swap Data since: 12-Aug-13



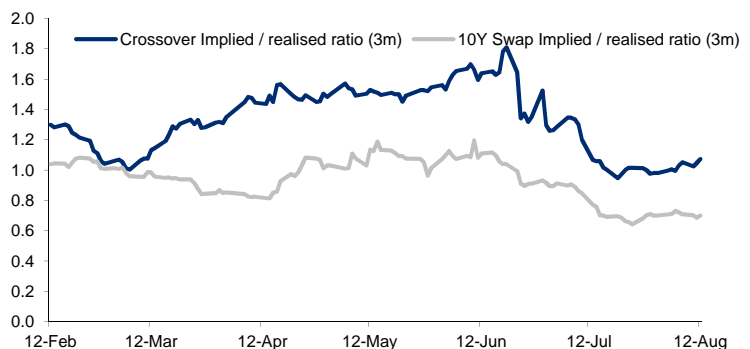
Ratio of implied volatilities Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Feb-15

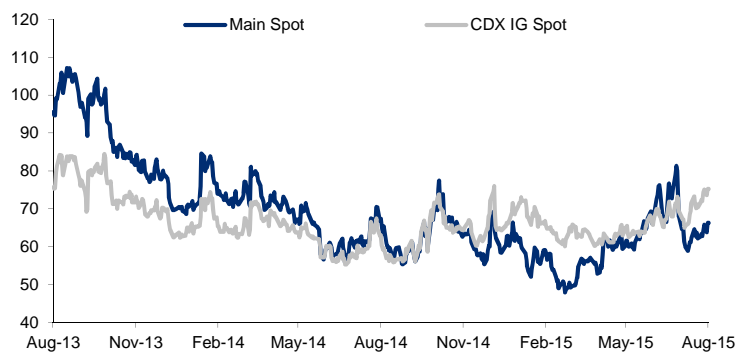


iTraxx Main vs. CDX IG

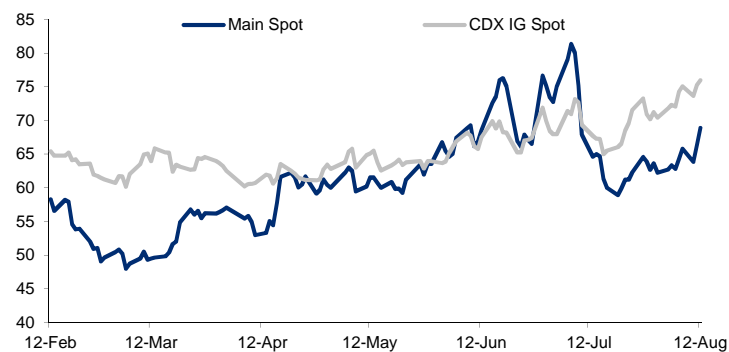
	Level			Implied vol (ATM, 3m)		
	Spot	1w chg	1m chg	(%)	1w chg	1m chg
Main	69	9.7%	6.6%	#N/A	#N/A	#N/A
CDX IG	76	5.4%	12.2%	51	2.3	0.7

	Realised vol (3m)			Implied / realised vol (3m)		
	(%)	1w chg	1m chg	vol ratio	1w chg	1m chg
Main	58	0.1	-0.9	#N/A	#N/A	#N/A
CDX IG	34	-1.2	0.4	1.52	0.12	0.00

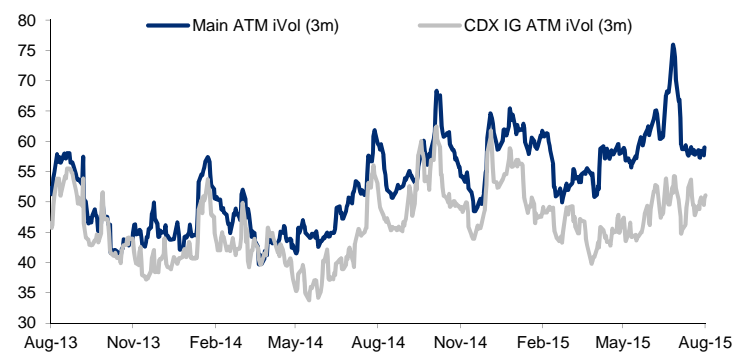
iTraxx Main vs. CDX IG - Level Data since: 12-Aug-13
LHS: Main (bp); RHS: CDX IG (bp).



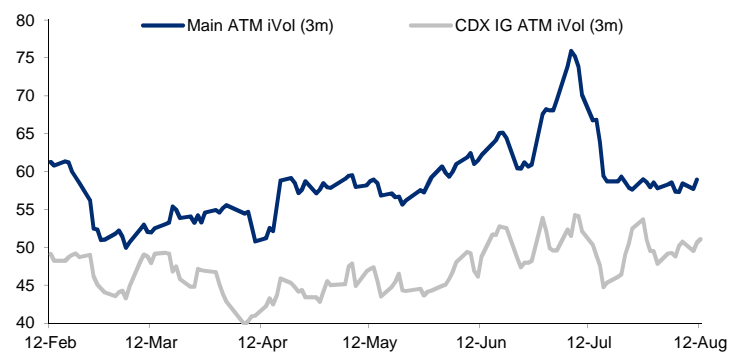
iTraxx Main vs. CDX IG - Level Data since: 12-Feb-15
LHS: Main (bp); RHS: CDX IG (bp).



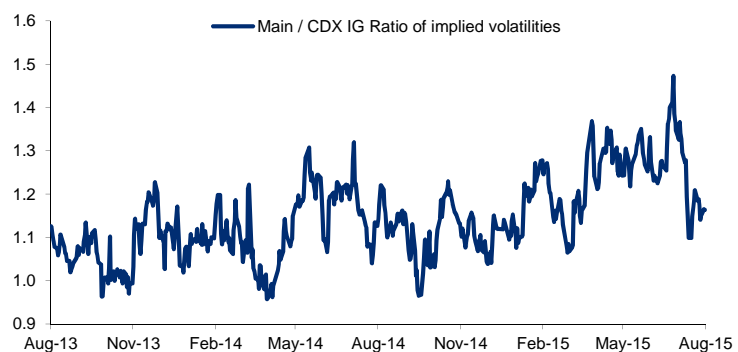
Implied vol (ATM, 3m) Data since: 12-Aug-13
LHS: Main; RHS: CDX IG. In %.



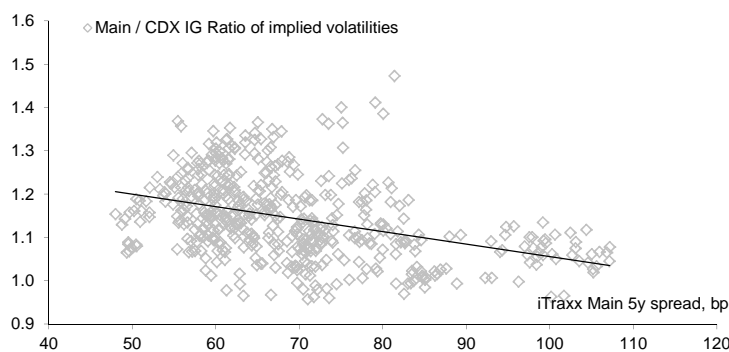
Implied vol (ATM, 3m) Data since: 12-Feb-15
LHS: Main; RHS: CDX IG. In %.



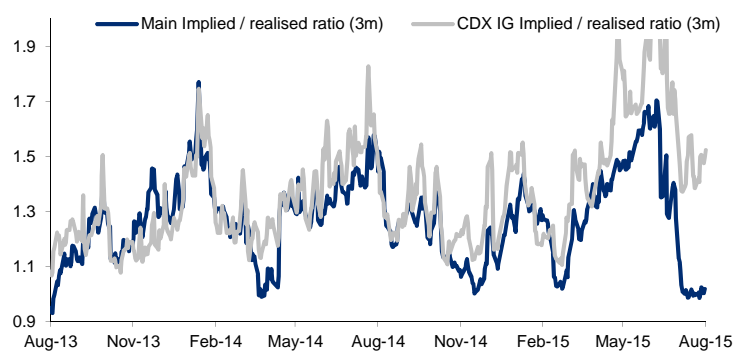
Ratio of implied volatilities Data since: 12-Aug-13
Main / CDX IG



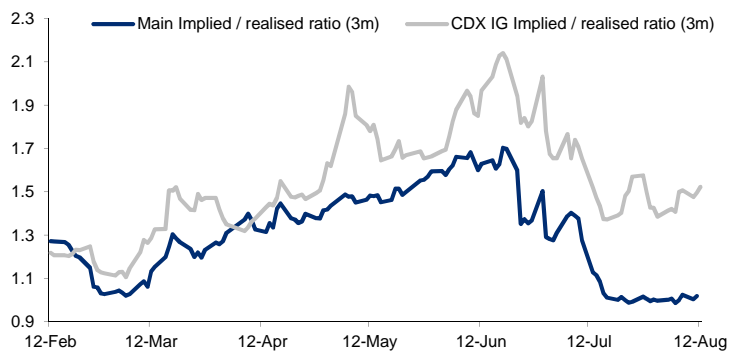
Ratio of implied volatilities Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Feb-15

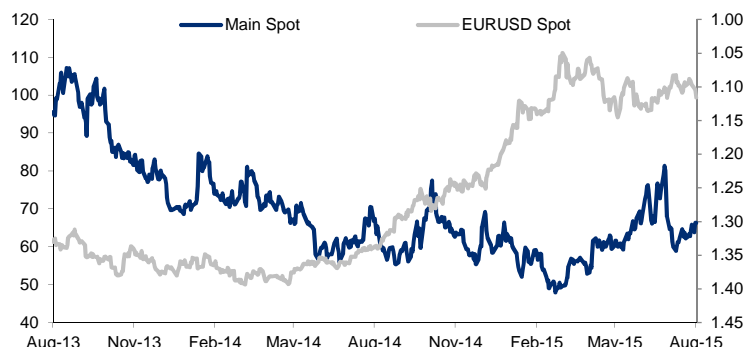


iTraxx Main vs. EURUSD

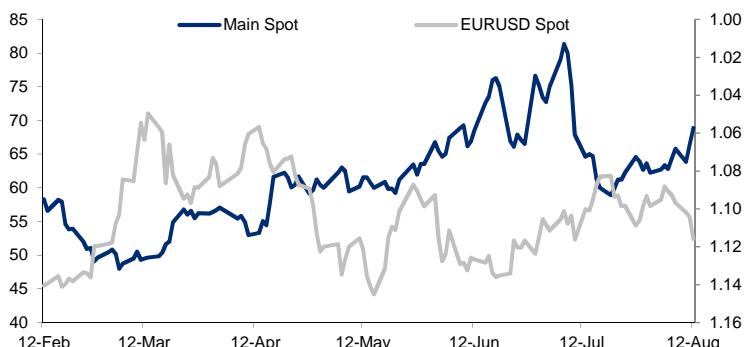
	Level			Implied vol (ATM, 3m)		
	Spot	1w chg	1m chg	(%)	1w chg	1m chg
Main	69	9.7%	6.6%	#N/A	#N/A	#N/A
EURUSD	1.12	2.3%	1.4%	10.2	-0.4	-0.8

	Realised vol (3m)			Implied / realised vol (3m)		
	(%)	1w chg	1m chg	vol ratio	1w chg	1m chg
Main	58	0.1	-0.9	#N/A	#N/A	#N/A
EURUSD	13.0	0.0	-0.9	0.79	-0.03	-0.00

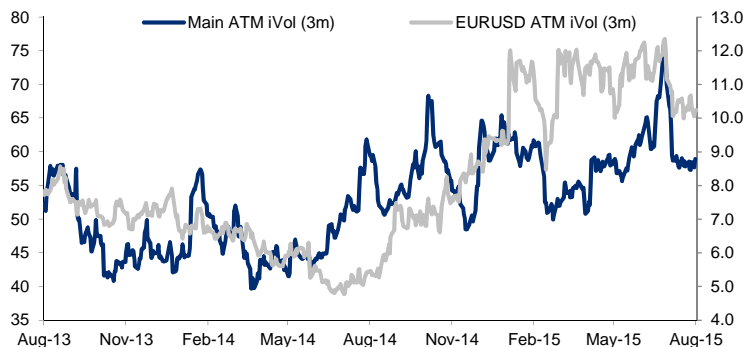
iTraxx Main vs. EURUSD - Level
LHS: Main (bp); RHS: EURUSD. Data since: 12-Aug-13



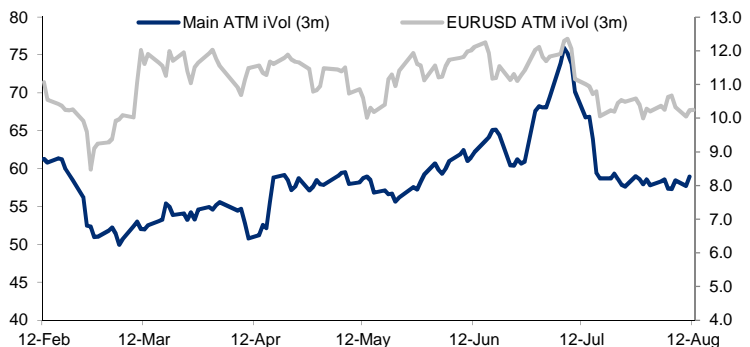
iTraxx Main vs. EURUSD - Level
LHS: Main (bp); RHS: EURUSD. Data since: 12-Feb-15



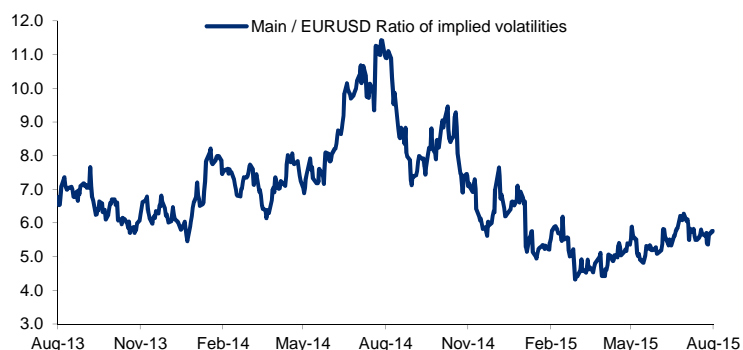
Implied vol (ATM, 3m)
LHS: Main; RHS: EURUSD. In %. Data since: 12-Aug-13



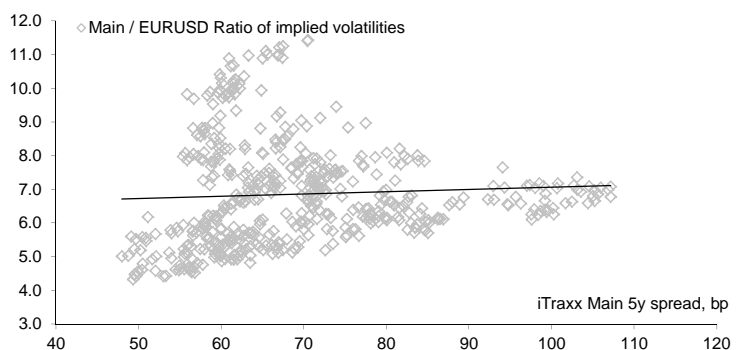
Implied vol (ATM, 3m)
LHS: Main; RHS: EURUSD. In %. Data since: 12-Feb-15



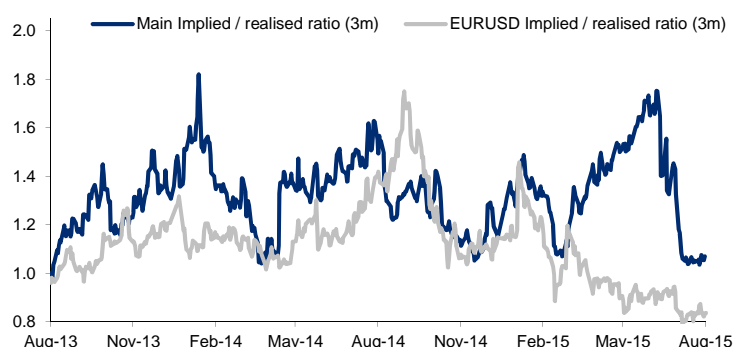
Ratio of implied volatilities
Main / EURUSD Data since: 12-Aug-13



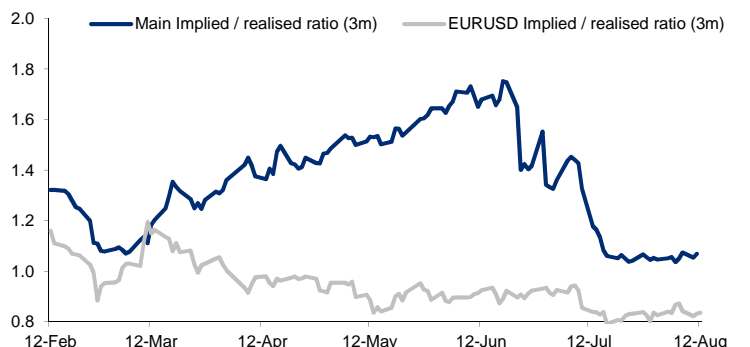
Ratio of implied volatilities Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Feb-15

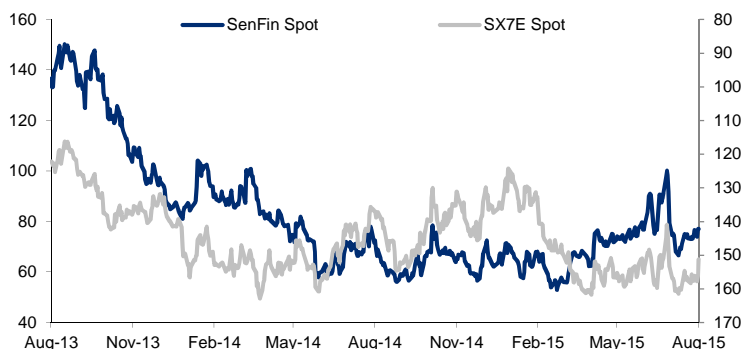


iTraxx Senior Fins vs. SX7E

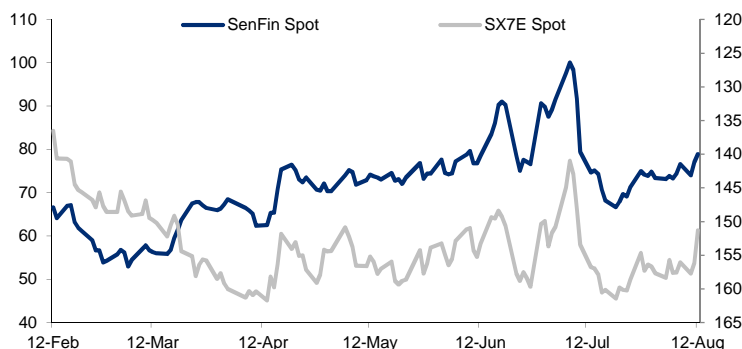
	Level			Implied vol (ATM, 3m)		
	Spot	1w chg	1m chg	(%)	1w chg	1m chg
SenFin	79	7.7%	5.7%	64	-0.4	-11.0
SX7E	151	-4.0%	-3.5%	26	2.8	-0.6

	Realised vol (3m)			Implied / realised vol (3m)		
	(%)	1w chg	1m chg	vol ratio	1w chg	1m chg
SenFin	70	0.5	-0.4	0.91	-0.01	-0.15
SX7E	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

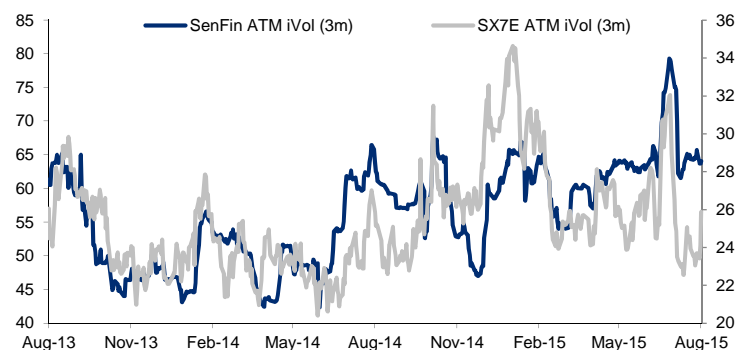
iTraxx SenFin vs. SX7E - Level
LHS: SenFin (bp); RHS: SX7E. Data since: 12-Aug-13



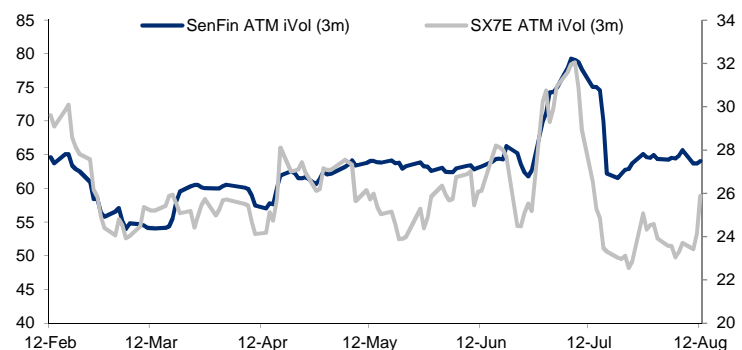
iTraxx SenFin vs. SX7E - Level
LHS: SenFin (bp); RHS: SX7E. Data since: 12-Feb-15



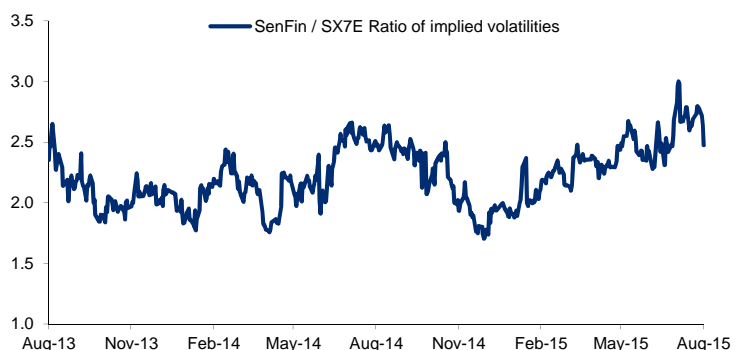
Implied vol (ATM, 3m)
LHS: SenFin; RHS: SX7E. In %. Data since: 12-Aug-13



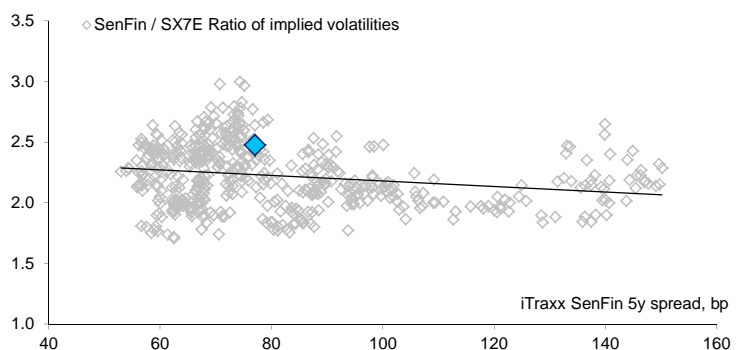
Implied vol (ATM, 3m)
LHS: SenFin; RHS: SX7E. In %. Data since: 12-Feb-15



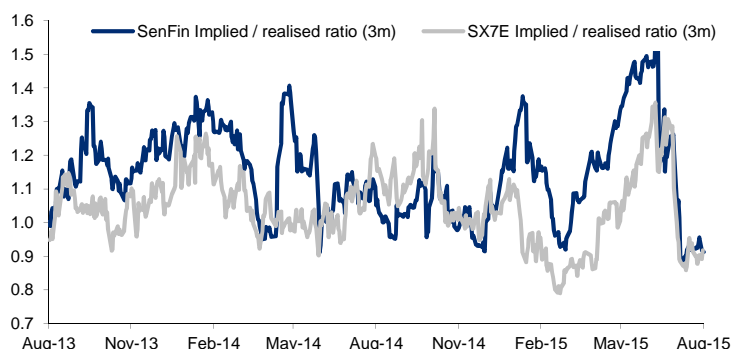
Ratio of implied volatilities
SenFin / SX7E. Data since: 12-Aug-13



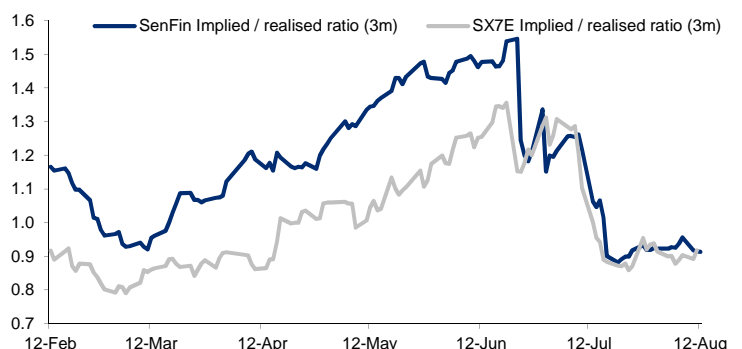
Ratio of implied volatilities
Data since: 12-Aug-13



Implied / realised vol (3m)
Data since: 12-Aug-13



Implied / realised vol (3m)
Data since: 12-Feb-15

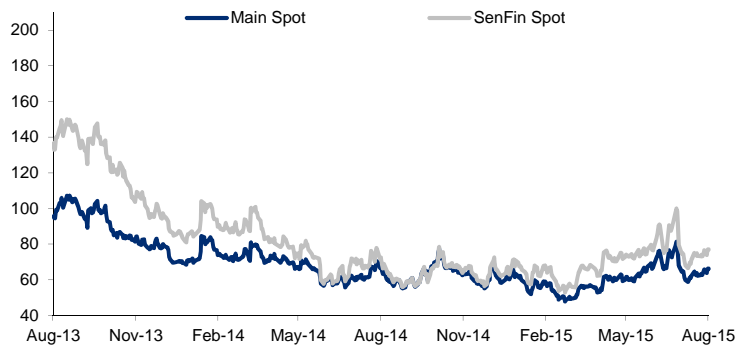


iTraxx Main vs. Senior Fin

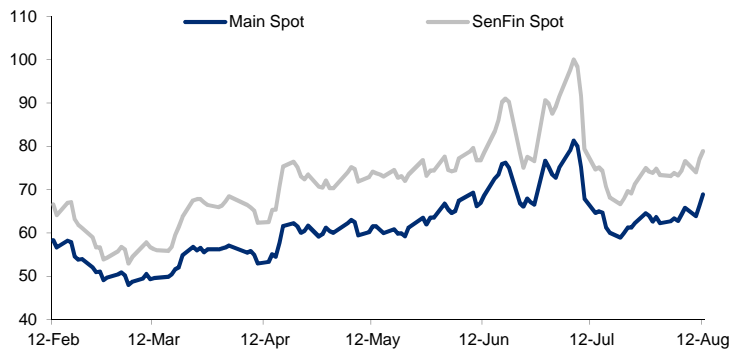
	Level	Spot	1w chg	1m chg	Implied vol (ATM, 3m)	(%)	1w chg	1m chg
Main		69	9.7%	6.6%	#N/A	#N/A	#N/A	#N/A
SenFin		79	7.7%	5.7%	64	-0.4	-11.0	

	Realised vol (3m)	(%)	1w chg	1m chg	Implied / realised vol (3m)	vol ratio	1w chg	1m chg
Main	58	0.1	-0.9	#N/A	#N/A	#N/A	#N/A	#N/A
SenFin	70	0.5	-0.4	0.91	-0.01	-0.15		

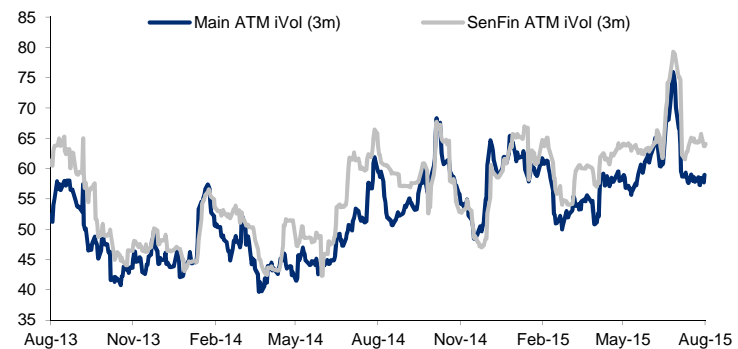
iTraxx Main vs. SenFin - Level Data since: 12-Aug-13
LHS: Main (bp); RHS: SenFin (bp).



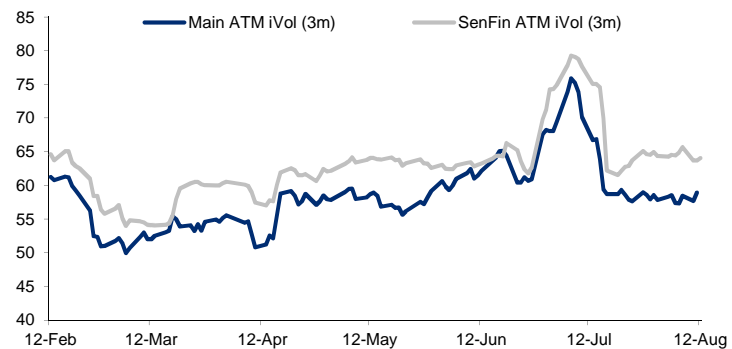
iTraxx Main vs. SenFin - Level Data since: 12-Feb-15
LHS: Main (bp); RHS: SenFin (bp).



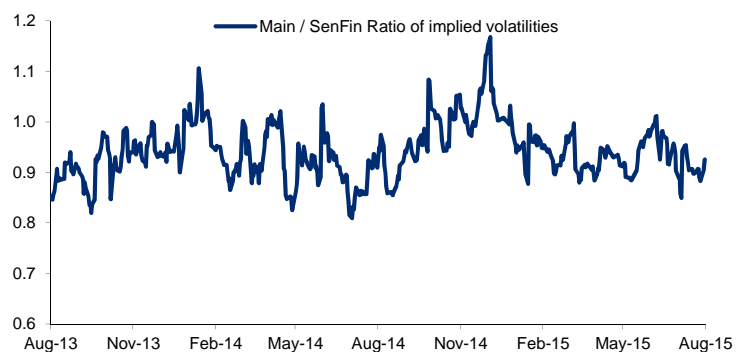
Implied vol (ATM, 3m) Data since: 12-Aug-13
LHS: Main; RHS: SenFin. In %.



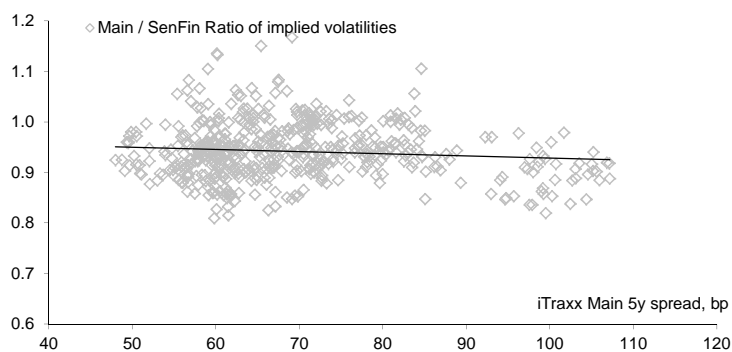
Implied vol (ATM, 3m) Data since: 12-Feb-15
LHS: Main; RHS: SenFin. In %.



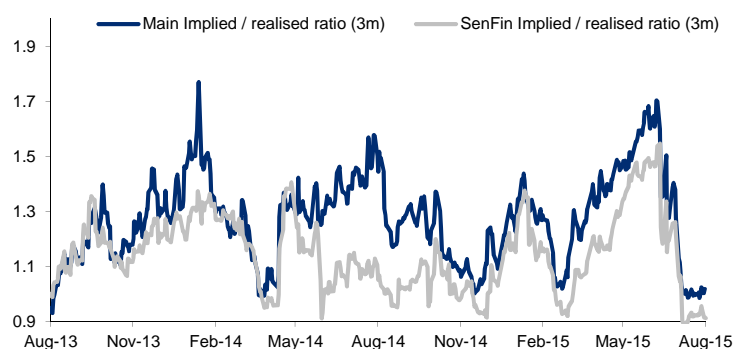
Ratio of implied volatilities Data since: 12-Aug-13
Main / SenFin



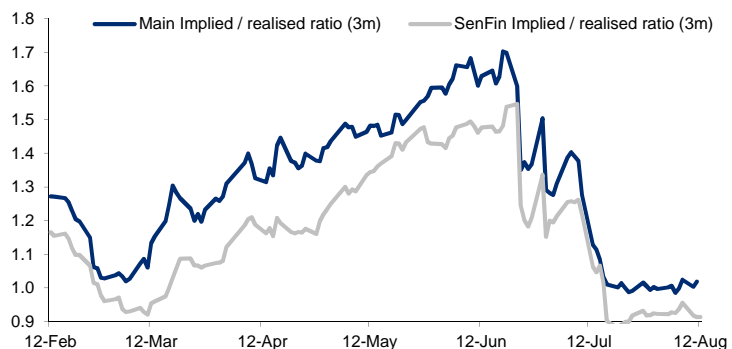
Ratio of implied volatilities Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Feb-15

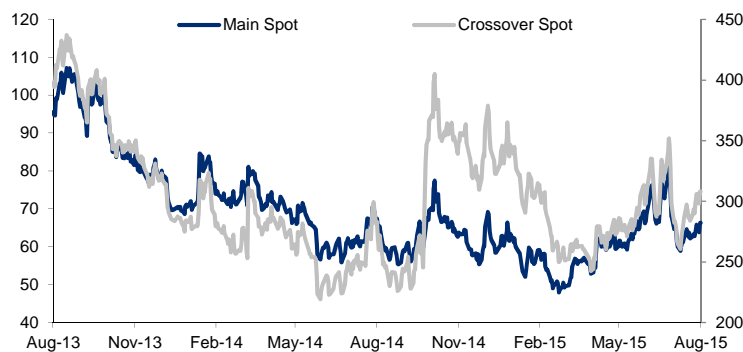


iTraxx Main vs. Crossover

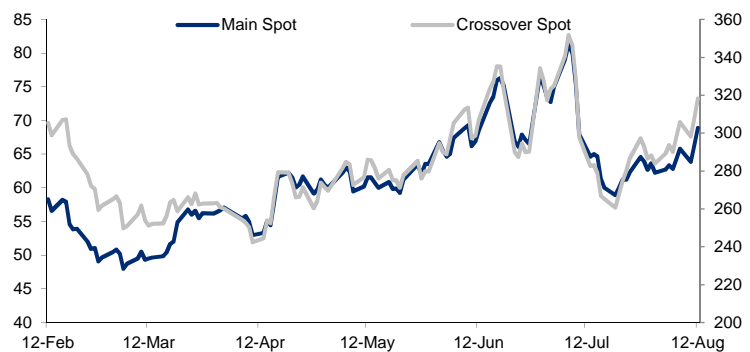
	Level	Spot	1w chg	1m chg	Implied vol (ATM, 3m)	(%)	1w chg	1m chg
Main		69	9.7%	6.6%	#N/A	#N/A	#N/A	#N/A
Crossover		318	9.7%	12.6%	61	4.4	-0.2	

	Realised vol (3m)	(%)	1w chg	1m chg	Implied / realised vol (3m)	vol ratio	1w chg	1m chg
Main		58	0.1	-0.9	#N/A	#N/A	#N/A	#N/A
Crossover		57	0.0	-0.5	1.07	0.08	0.01	

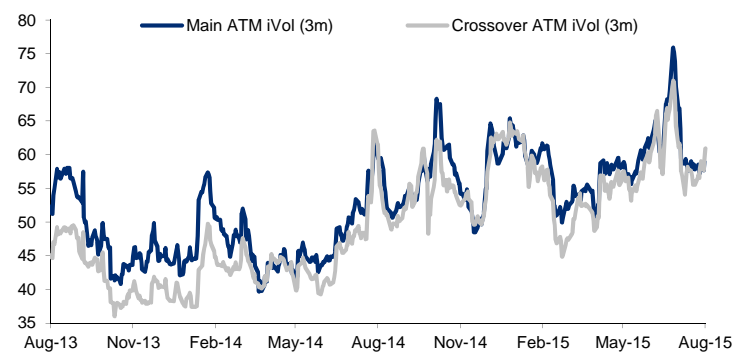
iTraxx Main vs. Crossover - Level
LHS: Main (bp); RHS: Crossover (bp). Data since: 12-Aug-13



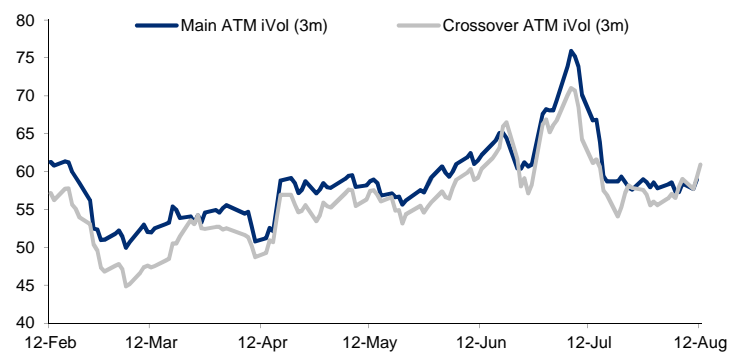
iTraxx Main vs. Crossover - Level
LHS: Main (bp); RHS: Crossover (bp). Data since: 12-Feb-15



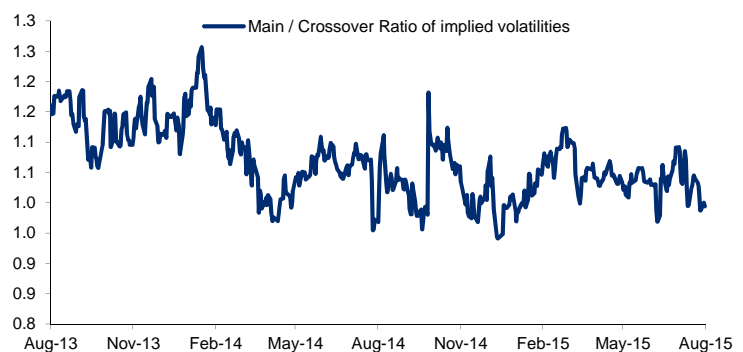
Implied vol (ATM, 3m)
LHS: Main; RHS: Crossover. In %. Data since: 12-Aug-13



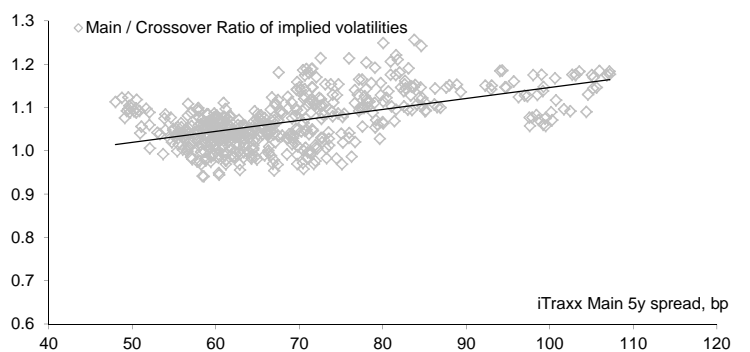
Implied vol (ATM, 3m)
LHS: Main; RHS: Crossover. In %. Data since: 12-Feb-15



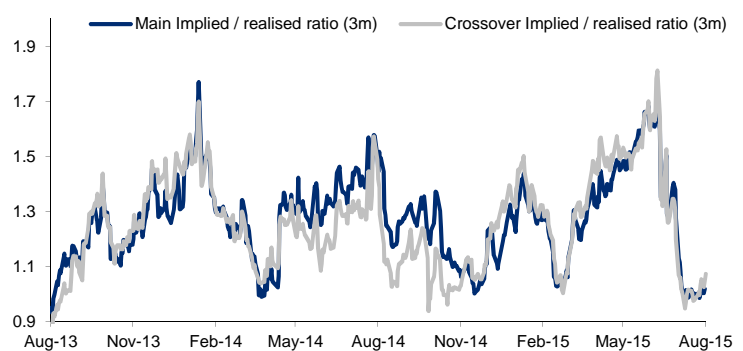
Ratio of implied volatilities
Main / Crossover Data since: 12-Aug-13



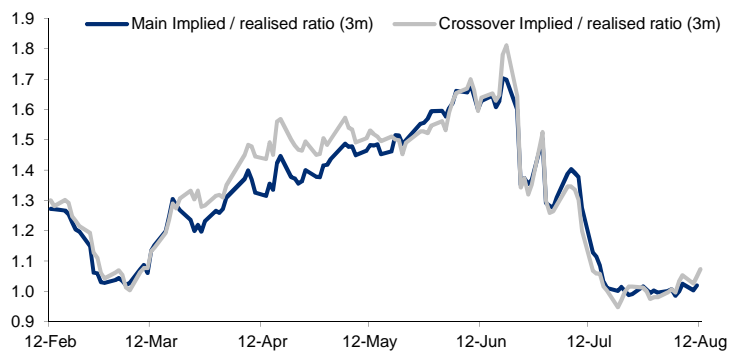
Ratio of implied volatilities
Main / Crossover Data since: 12-Aug-13



Implied / realised vol (3m)
Data since: 12-Aug-13



Implied / realised vol (3m)
Data since: 12-Feb-15

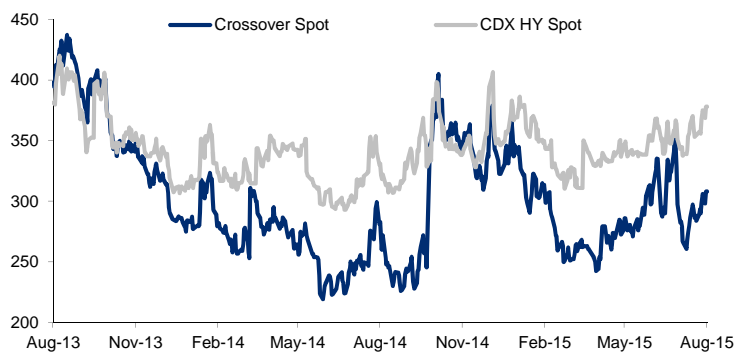


iTraxx Crossover vs. CDX HY

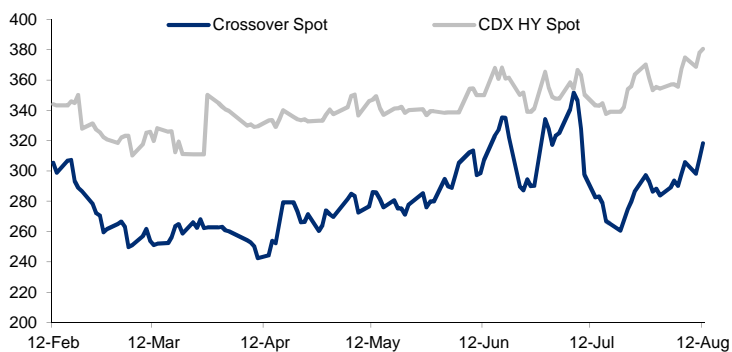
	Level	Spot	1w chg	1m chg	Implied vol (ATM, 3m)	(%)	1w chg	1m chg
Crossover		318	9.7%	12.6%	61	4.4	-0.2	
CDX HY		381	7.0%	10.9%	48	3.8	1.2	

	Realised vol (3m)	(%)	1w chg	1m chg	Implied / realised vol (3m)	vol ratio	1w chg	1m chg
Crossover	57	0.0	-0.5	1.0	1.07	0.08	0.01	
CDX HY	30	-0.5	1.0	1.61	0.15	-0.02		

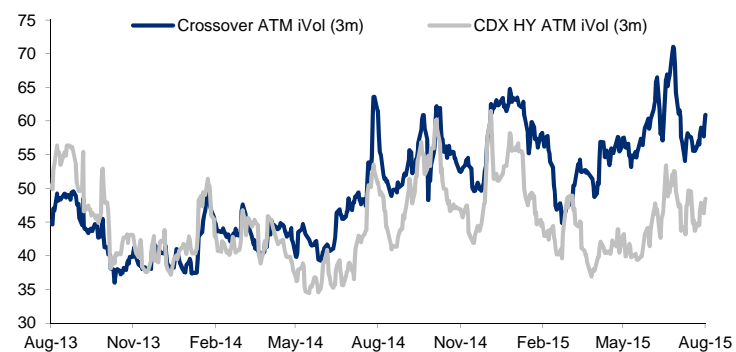
iTraxx Crossover vs. CDX HY - Level
LHS: Crossover (bp); RHS: CDX HY (bp). Data since: 12-Aug-13



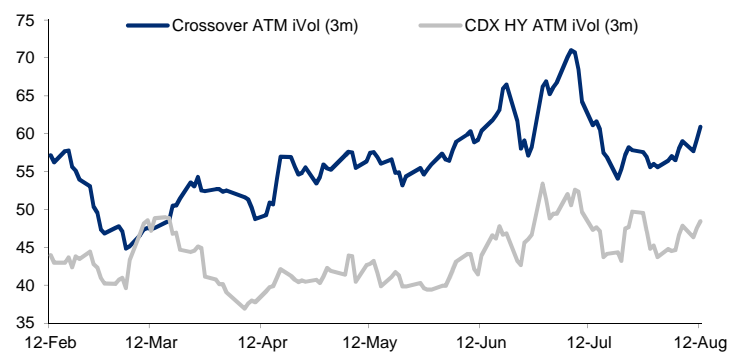
iTraxx Crossover vs. CDX HY - Level
LHS: Crossover (bp); RHS: CDX HY (bp). Data since: 12-Feb-15



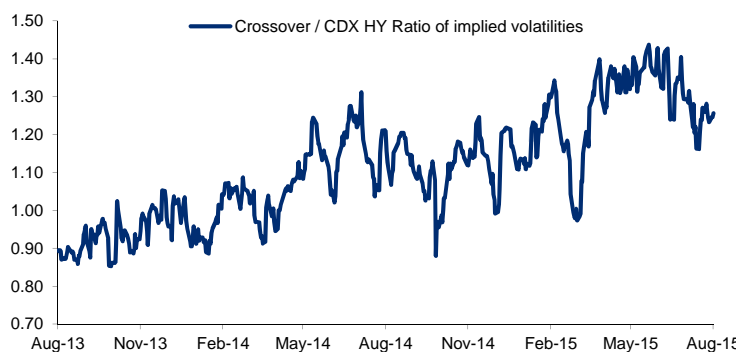
Implied vol (ATM, 3m)
LHS: Crossover; RHS: CDX HY. In %. Data since: 12-Aug-13



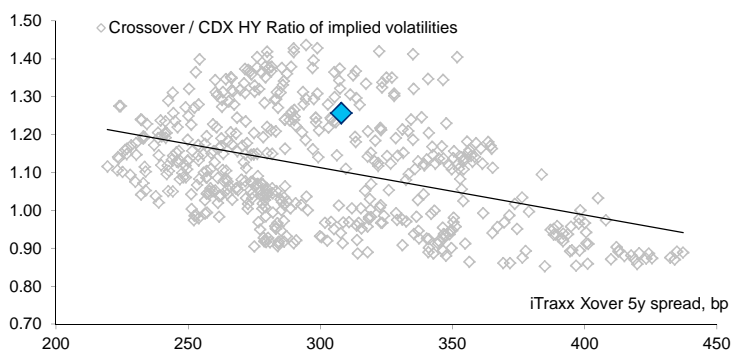
Implied vol (ATM, 3m)
LHS: Crossover; RHS: CDX HY. In %. Data since: 12-Feb-15



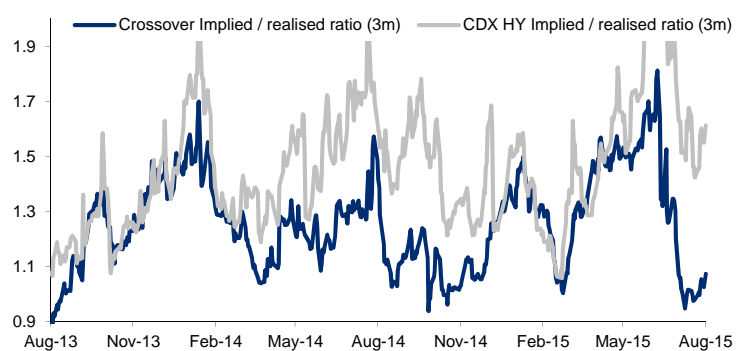
Ratio of implied volatilities
Crossover / CDX HY Data since: 12-Aug-13



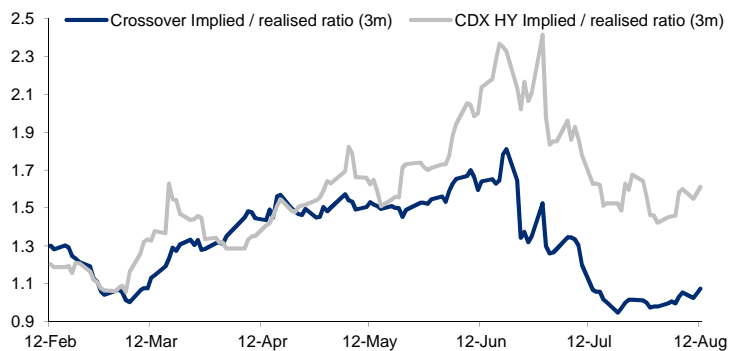
Ratio of implied volatilities Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Aug-13



Implied / realised vol (3m) Data since: 12-Feb-15



Appendix A-1

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