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Resiliency of CDS indices

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Using investor positioning data, we review the capacity of CDS indices to transmit risk. We find that iTraxx Main has exhibited a steady market depth, and even a slight improvement in the last 18 months. SenFin has seen a similar trend, but remains less deep than Main when measured in terms of the 'beta equivalent' capacity to transmit risk. Crossover has only a third of the market depth of Main on this metric, reflecting to us compositional and convexity differences with the cash indices, preventing the widespread adaptation as a hedge against cash portfolios.

With the significant uptick in macro headlines and with that an uptick in changes in investor positioning in CDS indices, we review previous analyses on the capacity for the CDS indices to transmit risk, discussing iTraxx Main, SenFin and Cross in turn.

Main – resilient, unrelated to CSPP

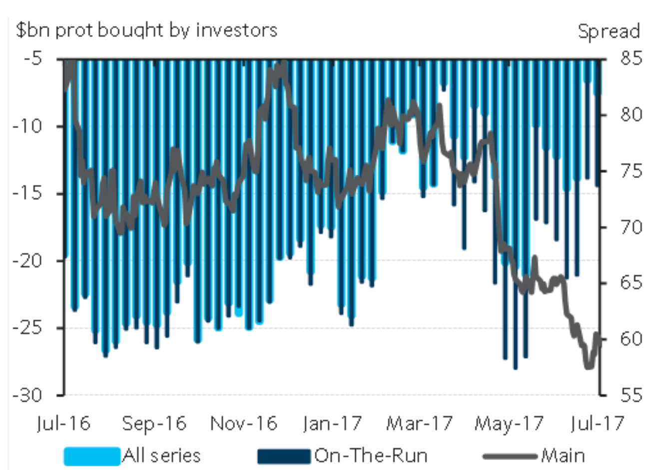
The last 12 months have seen a significant change in the stability of investor positioning. There were generally gradual changes in investor positioning between Jul-16 to Jul-17 (Figure 1), with only a meaningful de-risking in February 2017 ahead of the French election, followed by meaningful adding of risk by investors.

However, this stands in sharp contrast to the past 12 months (Figure 2), where investors shifted positioning from being net short risk $5bn to being net long risk $25bn, with many shifts in between.

A casual inspection (Figure 3) shows that on a weekly basis the relationship is in general weak, but that there has been a positive correlation between shifts in investor positioning and spread changes: when investors buy protection, spreads tend to widen, and when they sell protection, spreads tend to tighten. It also appears that in the past 12 months, there has been both a stronger relationship and a higher sensitivity of spread changes to shifts in investor positioning.

FIGURE 1

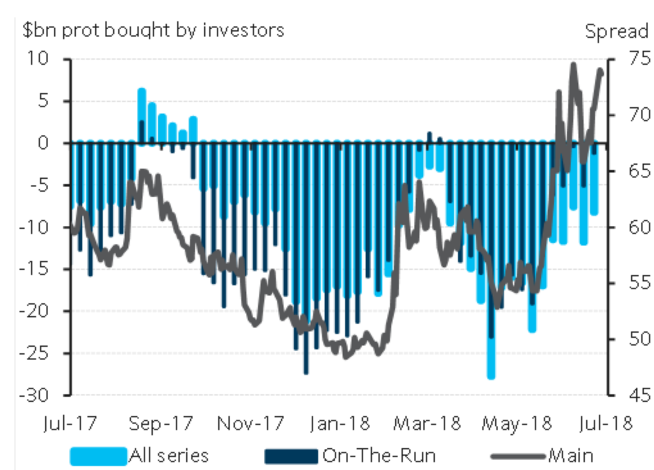
Between Jul-16 and Jul-17, positioning was relatively stable and spreads changing showed less of a correlation to positioning…



Source: DTCC, Barclays Research

FIGURE 2

… whereas in the last 12 months, positioning has become more volatile, with spreads more correlated



Source: DTCC, Barclays Research

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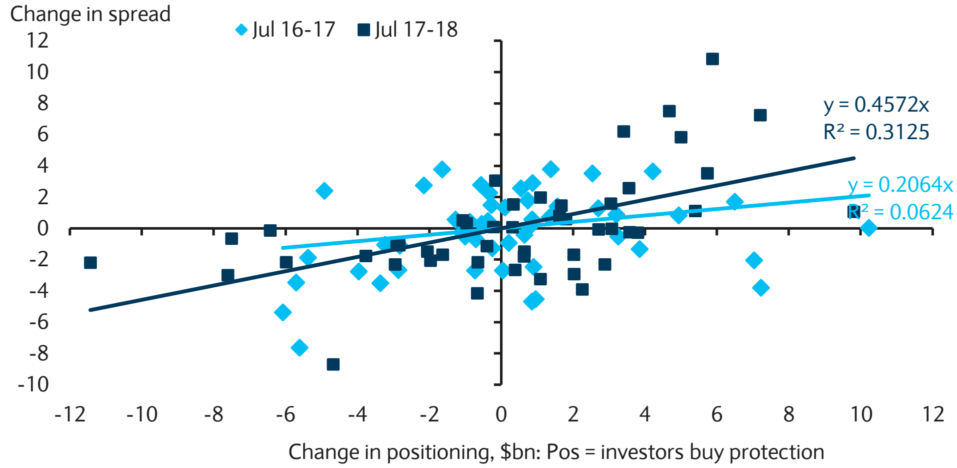
FIGURE 3

Weak positive correlation of weekly positioning and spread changes – higher in the last 12 months vs. prior 12 months



Note: Weekly changes over the last 24 months in on-the-run investor positioning vs spreads, excluding roll-weeks.
Source: DTCC, Barclays Research

As we discussed in our previous analysis on the topic (*CDS index positioning: No news is good news*, 14 October 2016), on a weekly basis, the relationship between investor positioning and spread moves is very 'noisy', partly because spreads can move for other reasons than investors shifting their positioning: there could be general news in the market which causes spreads to move 'in vacuum', or the buying/selling of protection an investor seeks to do suits an axe of a dealer.

Ultimately, we are interested in gauging to what degree spreads are affected by investors shifting their positioning and how that has changed over time. To answer that question, we employ the methodology from our earlier publication, focusing on periods where investors shifted their positioning meaningfully, recording the shift in positioning and the spread move – see the collection in the appendix.

Armed with that data, we can calculate, for each period identified, how much spreads move per $1bn protection shifted by investors. Splitting between periods of widening and tightening, we show the results for iTraxx Main in (Figure 4). From that, we glean a number of conclusions:

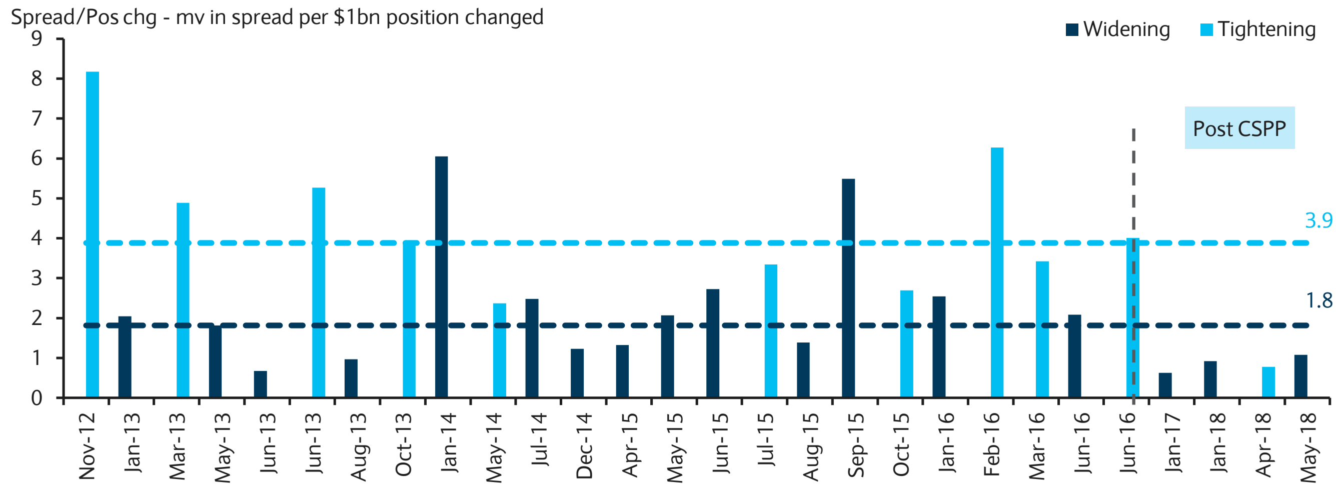
- The median spread impact from $1bn protection bought by investors is 1.8bp compared to 3.9bp from selling protection: spreads have historically reacted twice as much to protection selling as to protection buying by investors. This reflects well the 'squeeze-y' nature of CDS indices, with investors quickly cutting hedges and with little resistance, making the indices more sensitive to protection selling than buying.

- There is no clear historical pattern. Thinking of the spread/positioning sensitivity as a measure of market depth, there are no signs that the CDS index market has seen reduced liquidity over time, nor any meaningful improvement.

- In the most recent period post CSPP announcements, we have seen a number of consecutive periods where the sensitivities to protection shifting have been relatively low vs. history. Is that a sign that CSPP has reduced the sensitivity of spread changes to shifts in investor positioning and this could unwind when CSPP (as scheduled) ends in December? Optics can be deceiving and we explore this in more detail below.

FIGURE 4

Spread-position sensitivity for periods of interest: how much spreads move per $1bn of position changed



Note: For each period of spread move, we calculate the ratio of absolute spread move to absolute change in investor positioning, gauging how much $1bn of shift in investor positioning has moved spreads. Source: Barclays Research

To examine whether the sensitivity to protection buying/selling by investors has dropped with the introduction of CSPP we build a small framework for assessing this quantitatively. Specifically, we run a regression seeking to explain the spread changes over the defined periods using: i) protection buying (or zero); ii) protection sell (or zero); and a dummy variable for whether the period is inside the CSPP period. We try to explain both absolute and percentage spread moves.

The results (Figure 5) tell a fairly convincing story. Firstly, it confirms the optics of Figure 4 that protection selling by investors causes a large spread move (both in absolute and percentage spread levels). Secondly, the CSPP variable is statistically insignificant – and even has opposing signs in the two specifications.

From this we conclude that there is no reason to believe that CSPP has reduced the sensitivity of spreads to shifts in investor positioning. This also fits with our conclusions from a separate analysis. In *Cash, CDS, Equity - spot the CSPP effect*, 18 May 2018, we argued again from a quantitative angle that the CSPP had a 'level' effect on spreads (which has since then largely disappeared) but no 'beta' effect, exemplified by Figure 6.

FIGURE 5

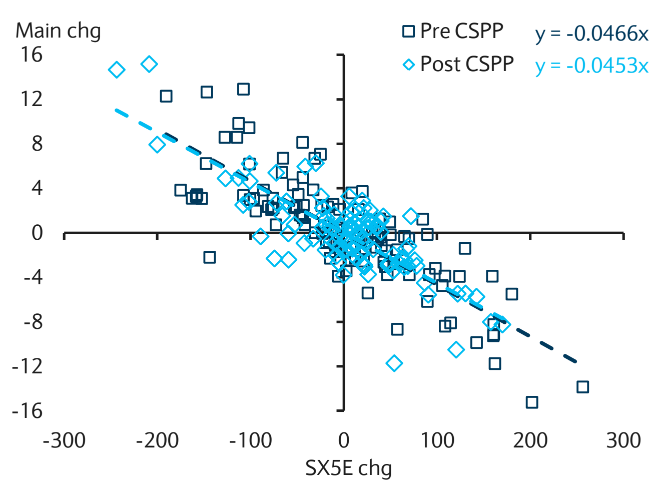
Explaining absolute/percentage spread changes: Protection selling matters more, CSPP factor insignificant

	Model	
	Abs spread moves	**Pct spread moves**
Pos, buying	1.43	1.81%
	(4.18)	(5.03)
Pos selling	3.51	3.90%
	(3.93)	(4.16)
CSPP period	-0.86	0.82%
	(-0.21)	(0.19)
R^2	80%	84%

Note: Explaining spread moves (absolute and percentage) using protection buying/selling by investors, along with a dummy variable for CSPP holdings. Source: Barclays Research

FIGURE 6

Main beta to SX5E is essentially the same before/after CSPP



Note: weekly changes of SX5E vs Main for Jan-14 to Mar-16 ('Pre CSPP') and for Mar-16 to May-18 ('Post CSPP'). Source: Barclays Research

SenFin – jumps in SenFin-Main are hiccups in positioning

iTraxx SenFin (Figure 7) shows similar features to that of Main: higher sensitivity to protection selling than protection buying by investors, although to a smaller degree than for Main.

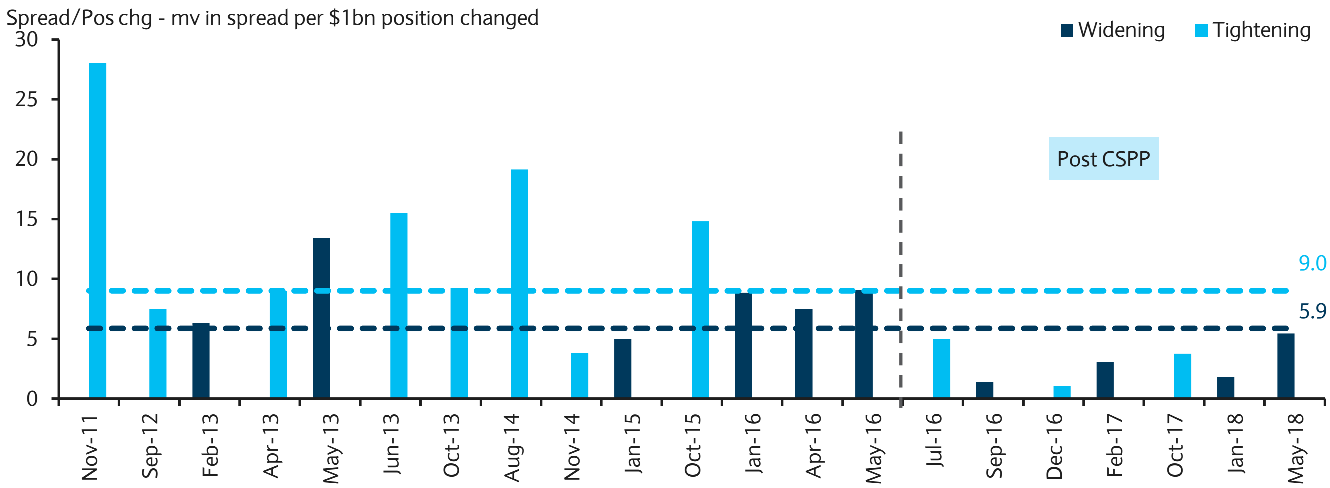
It also appears that in the past 18 months, the sensitivity to spread moves has dropped: for a $1bn change in positioning, spreads moved less since mid-2016. Although this obviously coincides with the introduction of CSPP, we have a hard time believing this 'correlation' is 'causation': only about half of SenFin (the insurers) are CSPP eligible, and as we illustrated above, Main has no measurable change in sensitivity post the start of CSPP.

Given the recent rapid increase in the SenFin-Main differential, it is worth flagging that, from a positioning perspective, this is 'business as usual': the spread widening in SenFin relative to Main was perfectly in line with historical patterns, taking into account the amount of protection bought.

How does the depth of SenFin and Main compare on this metric? SenFin has historically been a higher-beta index, so it would be natural that $1bn protection shifted in SenFin would elicit a larger spread response than for Main. Starting with Main, the median sensitivity was 3.9bp in a tightening, 1.8bp in a widening. Assuming a beta of 1.7, this means that the 'beta equivalent' sensitivity in SenFin should be 6.6bp and 3bp, respectively. Given that the actual numbers are 9 and 5.9, this means that SenFin is somewhere between 1.5-2 'times as jumpy' as Main: the depth of SenFin in this measure is 50% less than that of Main. This is perhaps not surprising, since as we showed in *CDS index and option trends: the return of vol*, 2 March 2018, SenFin volumes are only 10-20% (depending on the period) of Main volumes.

FIGURE 7

Spread-position sensitivity for periods of interest: how much spreads move per $1bn of position changed



Note: For each period of spread move, we calculate the ratio of absolute spread move to absolute change in investor positioning, gauging how much $1bn of shift in investor positioning has moved spreads. Source: Barclays Research

Cross – thrice the jump

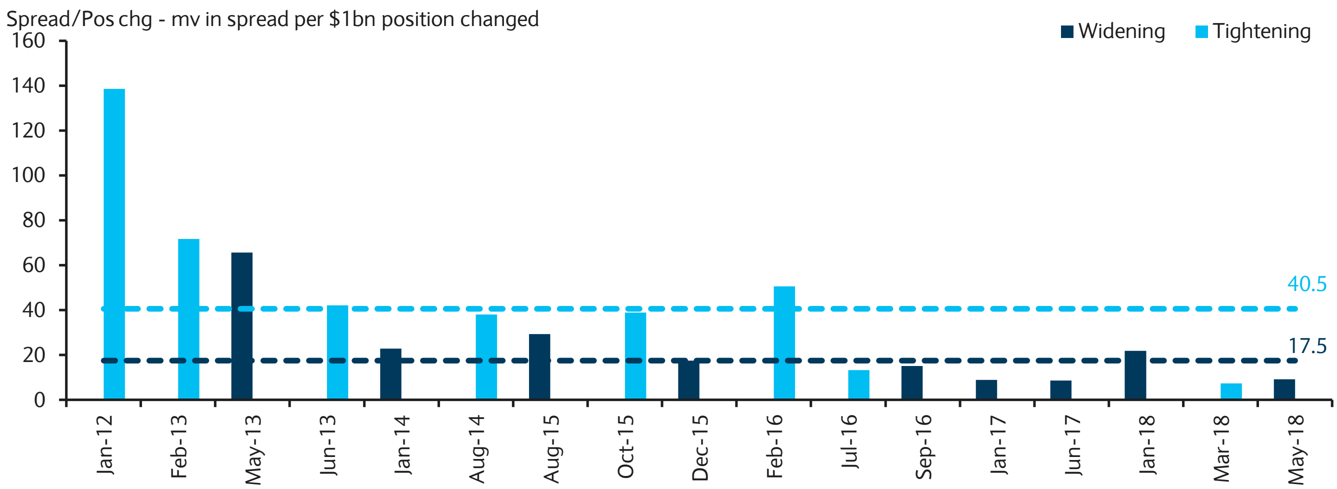
Sensitivity of spreads to changes in investor positioning for Cross (Figure 8) shows a similar pattern: higher for tightening than for widening. However, in contrast to Main and SenFin, there appears to be more of a pattern over time with a reduction in the sensitivity, potentially reflecting an evolution of a deeper market. This also fits with the evolution of the index, which has gone from a 45/50-name index to 75 names currently.

How deep is Cross relative to Main? Cross has in recent times had a beta to Main of approximately 3.4. Translating from Main sensitivities to $1bn protection buying/selling, this is a 'beta equivalent' sensitivity of Cross of 13bp and 6bp for widening and tightening, respectively. The actual numbers from Figure 8 are effectively three times that, indicating that the depth of Cross is much less than that of Main – in spite of trading volumes in Cross being between 20-30% that of Main – so measurably higher than that of SenFin which we found to be somewhat less sensitive.

One aspect to this could be the fact that the Cross index can be problematic as a hedge for €HY cash portfolios given constituent differences and the fact that, at current yield levels, many bonds are call-constrained, meaning that the bonds can exhibit very different dynamics from that of CDS. As and when (or if) interest rise, the 'call constrained' issue will become less relevant, but compositional differences will likely remain a hindrance to widespread adaptation of the Cross index by HY asset managers as a hedging tool, and thereby an improved depth.

FIGURE 8

Spread-position sensitivity for periods of interest: how much spreads move per $1bn of position changed



Note: For each period of spread move, we calculate the ratio of absolute spread move to absolute change in investor positioning, gauging how much $1bn of shift in investor positioning has moved spreads. Source: Barclays Research

Appendix – data samples up close

We show the periods of sustained widening and tightening for iTraxx Main, SenFin and Cross in Figures 9, 10 and 11.

FIGURE 9

Main: Periods with sustained spread widening or tightening after the sovereign crisis

		Investor Position		Spread		Changes	
From	To	From	To	From	To	Investor Position	Spread
16-Nov-12	21-Dec-12	-4.4	-7.2	138.8	115.7	-2.8	-23.1
18-Jan-13	15-Feb-13	-7.1	-1.8	109.7	120.3	5.2	10.7
22-Mar-13	10-May-13	-3.7	-8.8	120.2	95.3	-5.1	-24.9
17-May-13	21-Jun-13	-11.0	8.0	94.3	128.8	19.0	34.5
14-Jun-13	28-Jun-13	-7.3	8.6	114.1	124.9	15.9	10.8
21-Jun-13	26-Jul-13	8.0	4.1	128.8	108.3	-3.9	-20.5
09-Aug-13	23-Aug-13	3.2	9.1	103.3	109.1	6.0	5.8
04-Oct-13	25-Oct-13	-2.5	-5.0	98.0	88.3	-2.5	-9.6
17-Jan-14	24-Jan-14	2.4	4.5	76.8	89.3	2.1	12.5
16-May-14	13-Jun-14	-19.6	-23.2	71.1	62.7	-3.5	-8.4
27-Jun-14	08-Aug-14	-15.3	-10.8	64.7	76.0	4.5	11.3
05-Dec-14	19-Dec-14	-27.4	-21.9	58.0	64.9	5.6	6.8
10-Apr-15	17-Apr-15	-24.2	-17.5	53.9	62.8	6.7	8.8
15-May-15	19-Jun-15	-22.0	-14.2	61.7	78.0	7.9	16.3
26-Jun-15	10-Jul-15	-19.6	-18.8	69.2	71.4	0.8	2.2
03-Jul-15	24-Jul-15	-22.2	-25.6	78.1	66.7	-3.4	-11.4
07-Aug-15	28-Aug-15	-28.0	-23.5	70.4	76.6	4.5	6.3
25-Sep-15	02-Oct-15	-20.6	-19.3	84.5	91.6	1.3	7.1
02-Oct-15	23-Oct-15	-19.3	-27.2	91.6	70.4	-7.9	-21.2
01-Jan-16	12-Feb-16	-29.1	-13.3	76.9	117.2	15.8	40.3
12-Feb-16	04-Mar-16	-13.3	-17.4	117.2	91.3	-4.1	-25.9
04-Mar-16	25-Mar-16	-17.4	-21.7	91.3	76.5	-4.3	-14.8
03-Jun-16	24-Jun-16	-28.2	-19.5	78.2	96.3	8.7	18.1
24-Jun-16	08-Jul-16	-19.5	-23.7	96.3	79.6	-4.2	-16.7
20-Jan-17	17-Feb-17	-21.6	-11.8	73.8	80.0	9.7	6.1
26-Jan-18	23-Feb-18	-17.5	-0.8	48.7	64.0	16.7	15.3
30-Mar-18	20-Apr-18	-13.4	-19.5	59.6	54.9	-6.1	-4.7
11-May-18	08-Jun-18	-19.1	-0.4	54.3	74.6	18.7	20.2

Note: In the period post-sovereign crisis, we identify periods of large spread moves in either direction. We record spread level, investor position ($bn, positive numbers indicating that investors own protection) and the changes in these over each period. One criterion we have applied is that the periods must be 'index roll free' – not spanning 20 March and 20 September dates.
Source: DTCC, Barclays Research

FIGURE 10

SenFin: Periods with sustained spread widening or tightening after the sovereign crisis

		Investor Position		Spread		Changes	
From	To	From	To	From	To	Investor Position	Spread
25-Nov-11	09-Dec-11	6.9	5.1	329.2	278.6	-1.8	-50.6
21-Sep-12	19-Oct-12	0.3	-2.0	182.6	165.6	-2.3	-17.0
08-Feb-13	01-Mar-13	1.5	3.2	163.7	174.5	1.7	10.8
12-Apr-13	10-May-13	5.7	2.4	168.5	138.6	-3.3	-29.9
24-May-13	28-Jun-13	3.2	5.3	146.0	174.7	2.1	28.7
21-Jun-13	02-Aug-13	5.6	2.8	186.8	143.7	-2.8	-43.1
11-Oct-13	15-Nov-13	2.6	0.6	129.9	111.0	-2.0	-18.9
01-Aug-14	05-Sep-14	2.9	1.9	80.6	62.3	-1.0	-18.3
14-Nov-14	05-Dec-14	3.8	1.2	68.2	58.1	-2.6	-10.1
02-Jan-15	30-Jan-15	2.6	3.7	65.1	70.7	1.1	5.6
25-Sep-15	23-Oct-15	3.0	1.6	90.2	69.6	-1.4	-20.6
01-Jan-16	12-Feb-16	4.9	10.6	81.1	131.9	5.7	50.8
15-Apr-16	06-May-16	3.0	4.5	90.6	101.7	1.5	11.1
27-May-16	17-Jun-16	4.2	6.8	91.2	114.7	2.6	23.5
01-Jul-16	15-Jul-16	5.7	4.3	108.6	101.7	-1.4	-6.9
23-Sep-16	07-Oct-16	-1.5	0.7	96.5	99.6	2.2	3.1
23-Dec-16	13-Jan-17	1.2	-2.2	94.6	90.9	-3.5	-3.6
03-Feb-17	10-Feb-17	-1.0	1.4	92.4	99.8	2.4	7.4
13-Oct-17	03-Nov-17	2.2	0.3	59.7	52.6	-1.9	-7.2
19-Jan-18	16-Feb-18	-1.3	4.1	49.8	59.7	5.4	9.8
11-May-18	08-Jun-18	1.3	7.5	57.3	90.5	6.1	33.2

Note: In the period post-sovereign crisis, we identify periods of large spread moves in either direction. We record spread level, investor position ($bn, positive numbers indicating that investors own protection) and the changes in these over each period. One criterion we have applied is that the periods must be 'index roll free' – not spanning 20 March and 20 September dates.

Source: DTCC, Barclays Research

FIGURE 11

Cross: Periods with sustained spread widening or tightening after the sovereign crisis

		Investor Position		Spread		Changes	
From	To	From	To	From	To	Investor Position	Spread
30-Dec-11	10-Feb-12	0.3	-1.1	1047.0	854.3	-1.4	-192.7
22-Feb-13	15-Mar-13	0.2	-0.5	686.5	639.9	-0.6	-46.6
17-May-13	28-Jun-13	-2.7	-0.7	534.5	666.2	2.0	131.7
21-Jun-13	26-Jul-13	0.0	-2.8	701.2	583.4	-2.8	-117.7
17-Jan-14	07-Feb-14	4.6	5.9	443.8	473.2	1.3	29.4
08-Aug-14	29-Aug-14	5.0	2.9	418.5	339.7	-2.1	-78.9
31-Jul-15	28-Aug-15	-2.0	-0.8	266.5	302.3	1.2	35.8
25-Sep-15	06-Nov-15	-1.1	-2.6	346.8	288.6	-1.5	-58.2
27-Nov-15	18-Dec-15	-3.3	-1.1	283.3	321.5	2.2	38.3
05-Feb-16	11-Mar-16	-1.8	-4.1	406.6	289.5	-2.3	-117.1
01-Jul-16	15-Jul-16	-0.6	-2.1	355.1	335.1	-1.5	-19.9
02-Sep-16	16-Sep-16	-0.1	1.7	322.8	350.3	1.8	27.5
06-Jan-17	10-Feb-17	-1.3	0.9	299.8	319.3	2.2	19.5
16-Jun-17	07-Jul-17	0.6	3.3	257.0	280.0	2.7	23.0
26-Jan-18	09-Feb-18	2.9	5.1	254.3	302.0	2.2	47.7
02-Mar-18	16-Mar-18	4.6	1.9	304.2	284.2	-2.7	-20.0
11-May-18	01-Jun-18	-2.8	0.2	268.9	296.3	3.0	27.4

Note: In the period post-sovereign crisis, we identify periods of large spread moves in either direction. We record spread level, investor position ($bn, positive numbers indicating that investors own protection) and the changes in these over each period. One criterion we have applied is that the periods must be 'index roll free' – not spanning 20 March and 20 September dates.

Source: DTCC, Barclays Research

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For sectors rated against the Bloomberg Barclays U.S. Credit Index, the Bloomberg Barclays Pan-European Credit Index, the Bloomberg Barclays EM Asia USD High Grade Credit Index or the Bloomberg Barclays EM USD Corporate and Quasi-Sovereign Index, the analyst expects the six-month excess return of the sector to be in line with the six-month excess return of the relevant index.

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To view sector definitions and monthly sector returns for Asia, EEMEA and Latin America Research, go to https://live.barcap.com/go/research/EMSectorReturns on Barclays Live.

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Overweight (OW): The analyst expects the six-month excess return of the issuer's index-eligible corporate debt securities to exceed the six-month expected excess return of the relevant sector.
Market Weight (MW): The analyst expects the six-month excess return of the issuer's index-eligible corporate debt securities to be in line with the six-month expected excess return of the relevant sector.
Underweight (UW): The analyst expects the six-month excess return of the issuer's index-eligible corporate debt securities to be less than the six-month expected excess return of the relevant sector.
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