

# Global fixed income monthly focus – November 2016

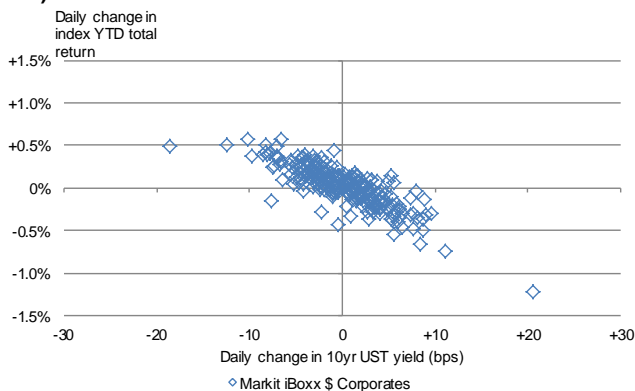
Leveraged loans • Credit default swaps • Global corporate bonds • Sovereigns • Municipal bonds • Securitised products

Global interest rates appear to have reached the long awaited inflection point in November, as the unexpected turn of events led to a very brief period of distress in the financial markets followed by improved outlook for US growth driven by the new administrations likely pro-business policies. As would be expected, the prospects of higher interest rates and the likely implementation of inflationary policies in the US put significant price pressure on global fixed income markets, with some of the pain softened by the tightening of credit spreads. **Figure 1** shows how USD investment grade and high yield reacted very differently to daily changes in 10-year US treasury rates during most of this year, but actually reacted in almost lockstep during this month's sell-off in rates.

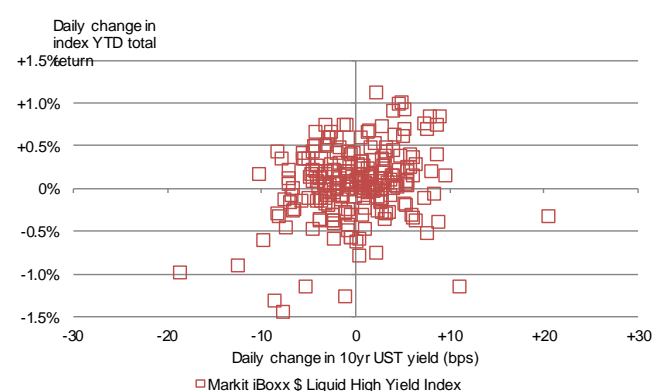
- This month's special report is on assessing European corporate bond liquidity using dealer quote depth data
- The predominantly floating-rate leveraged loan market outshined the mostly fixed-rate investment grade and high yield corporate bond sectors, returning 0.6% after the US elections.
- The [Markit iBoxx € Liquid High Yield Index](#) and [Markit iBoxx € Contingent Convertible Index](#) were the only categories to escape the global sell-off in bonds, returning +0.7% and +1.3%, respectively on the month
- The US election results, and potential changes in municipal bond tax benefits and increases in infrastructure spending policies, immediately pressured municipal bond spreads, with the sell-off in longer rates having the most direct impact on muni prices.

**Figure 1: Daily changes in USD investment grade and high yield Markit iBoxx indices returns vs changes in 10yr US treasury yields**

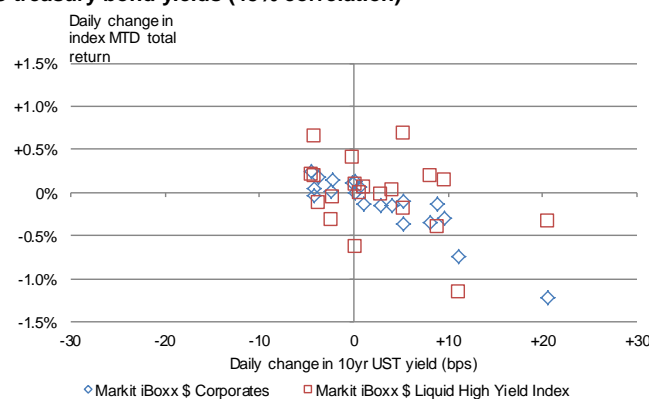
**Markit iBoxx \$ Corporates 2016 YTD through Nov 30 (investment grade)**



**Markit iBoxx \$ Liquid High Yield 2016 YTD through Nov 30**



**November 2016 month to date daily changes in total returns vs changes in 10yr US treasury bond yields (45% correlation)**



Source: IHS Markit

## European Corporate Bond Liquidity

**There is no single metric that captures all the aspects of a bond's liquidity**

The definition of “liquid” is the ability to sell an asset without driving the market price of the asset significantly lower upon the sale. Assessing liquidity for exchange trade products with automated order books like equities is generally straightforward, while measuring it for fixed income instruments can be somewhat complex given the heterogeneity of that market. Most companies will have one traded common stock issue, while those same companies can have hundreds of bond issues that vary by coupon, maturity, seniority, and optional redemption characteristics.

Bid/ask spread, turnover (trade volume/total issue size), quote depth, average trade size, and dealer count are among some of the most common metrics for assessing a bond's liquidity, but each has their own shortcoming. For instance, given the buy and hold nature of a bond, the lion's share of the bond market trades only a few times per year with some bonds not trading at all in one or more years, so calculating bid/ask spread or turnover using the bond's actual trading levels is difficult to produce on a consistent basis.

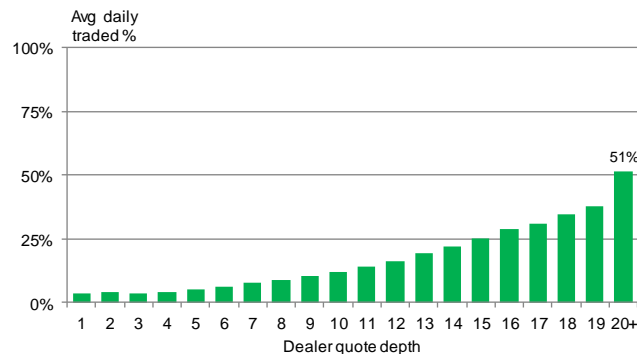
**Dealer quote depth correlates with the likelihood of a bond trading**

Dealer bond inventories have plummeted since the financial crisis, but market makers are still an integral part of a functioning bond market and the quotes they send out every day to their clients provide a gauge for several aspects of liquidity. A very simple analogy would be to look at the quote data as a dealer's mass marketing initiative and the trades as their actual revenue. Similar to paid advertising, sending a quote does come at a cost, with a desk's reputation often being more at risk than actual capital. A dealer needs to be careful about the quantity and quality of their broadly distributed quotes, as trading partners don't like to see bids too far below the market or offers well above the market. Ironically, those same trading partners will often try to hold the trader to execute on their above market bids and below market offers, regardless of whether the levels were intentional or accidental.

It should come as no surprise that a bond that is quoted by several dealers is much more likely to trade than a bond quoted by few or no dealers on a given day. When comparing Q1-Q3 US corporate bond daily round lot trades versus dealer depth, the data indicate that bonds quoted by only one dealer only traded 4% of the time while bonds quoted by 20 or more dealers on a given day traded 51% of the time (**Figure 2**). Given the lack of publically available European trade

data, we believe that the US corporate bond data is a fair proxy for the European market.

**Figure 2: Q1–Q3 2016 average daily US round lot trade % versus quote depth**

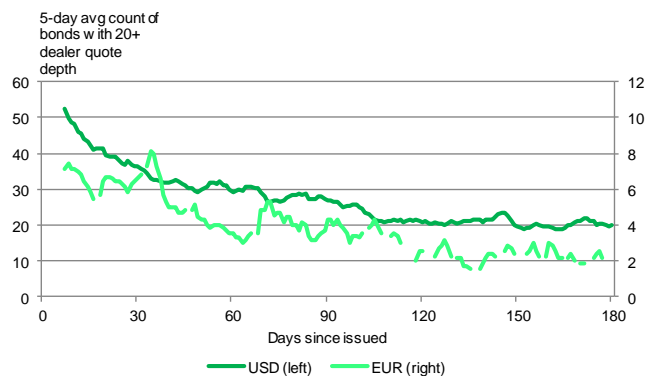


Source: IHS Markit

### Bond liquidity declines after issuance

The number of issues of both US and European corporate bonds that are quoted by 20 or more dealers typically decreases with each successive day past issuance (**Figure 3**). The quote depth data for the analysis spans all of 2015 and includes USD and EUR denominated corporate bonds issued during the first half of 2015, with a minimum outstanding issue size of \$100Mn or €100Mn. The declines in the number of highly quoted bonds over time is apparent in the chart, while it is worth noting that there were fewer EUR bonds that met the requirements to be included in the analysis. This by no means indicates that bonds become illiquid as they season, but does indicate less quote activity and potential less trading activity, which both have a negative impact on the issue's price transparency and liquidity.

**Figure 3: 2015 average 20+ dealer depth since issuance**



Source: IHS Markit

### Dealer quote depth dropped off precipitously after the Brexit vote outcome

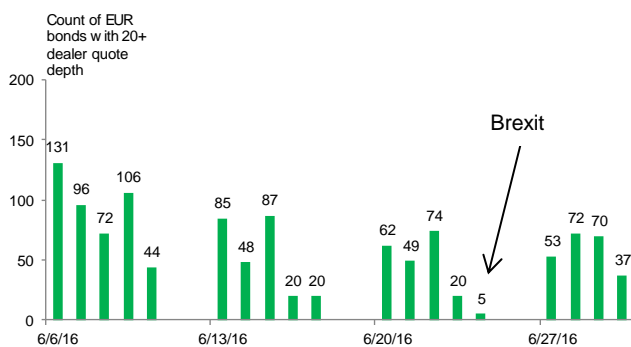
This past June, there were approximately 64 euro denominated bonds quoted by 20 or more dealers on average. However, that number dropped significantly by June 24 to only five bonds, as global financial markets reacted to the surprise Brexit vote outcome (**Figure 4**). We note that all five bonds quoted by 20+ dealers on that day were European investment bank issues ranging from 9-12 year maturities.

### Quote depth improved going into Q4 2016

Major periods of distress and declines in liquidity often coincide with a decline in the number of bonds quoted by several dealers. The data in **Figure 5** highlight periods of market distress that coincided with prolonged periods of decreases in the number of euro denominated bonds quoted by 20+ dealers. The data also highlight the well-known trend of declines in dealer quote depth every December and increases at the beginning of every new year, although January 2016 failed to recover to the same magnitude as prior years.

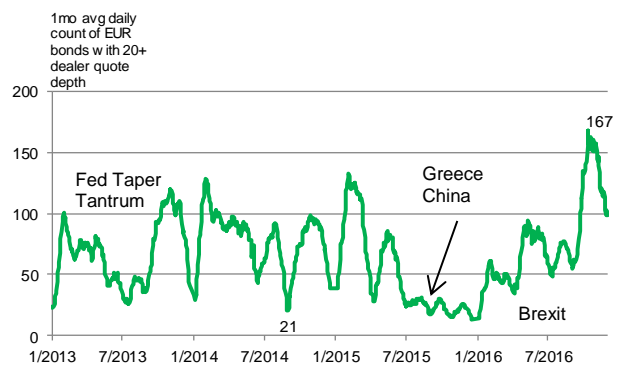
On a positive note, the data in the chart also indicate that the fourth quarter 2016 began on a high note as the monthly average of bonds being quoted by 20+ dealers breached a new high of 167 bonds on October 11. This recent data may indicate that the ECB's and BoE's bond purchase programs are in fact improving the liquidity of European corporates to some degree.

**Figure 4: Daily count of EUR corporate bonds with 20+ dealer depth during June 2016**



Source: IHS Markit

**Figure 5: 1mo average daily count of euro denominated corporate bonds with 20+ dealer quote depth from January 2013 – November 2016**



## Leveraged loans

### US leveraged loans outperform IG and HY during the post-election rates sell-off

The sell-off in global rates that followed the US presidential election resulted in 10yr US treasuries widening 53bps from the day of the election to end the month at a 2.39% yield, which had a devastating effect on most bond markets despite some degree of spread tightening on a more optimistic outlook of US economic growth (**Figure 6**). The predominantly floating-rate leveraged loan market outshined the mostly fixed-rate investment grade and high yield corporate bond sectors, with [Markit iBoxx \\$ Corporates](#) and [Markit iBoxx \\$ Liquid High Yield](#) indices returning -2.7% and -0.2% during the period that followed the election until the end of November. However, during that same period the [Markit iBoxx USD Leveraged Loans](#) index returned +0.6%.

### European basic materials sector the best performer during the month

All European basic materials ratings cohorts tightened over 40bps on the month, with the exception of the B+ cohort at -33bps and CCC+ at a modest 18bps tighter. **Figure 7** indicates that BBB- and BB through B rated European basic material loan spreads hit new 12 month lows in November, while it's been almost a year since the other rating cohorts were at their tightest levels.

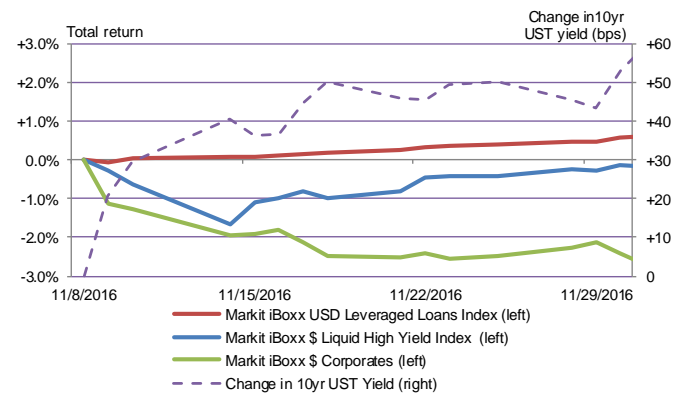
The average spread basis between North American and European loans tightened in since the widest level of -57bps reached on October 12, ending November at -36bps, which is only 10bps from the 12 month average of -26bps (**Figure 8**). It's worth noting that October 12 was only one day after the day with the all-time highest number of European corporate bonds quoted by 20 or more dealers, as mentioned in the prior section.

North American and European spreads were modestly tighter across most rating cohorts, with the exception of the CCC+ rating category for most sectors during the month (**Table 3**). However, North American healthcare continues to come under downward pressure in the wake of Obamacare and political pressure to enact more laws to control pharmaceutical prices.

### Consumer services and goods issues dominated the best performers in both regions

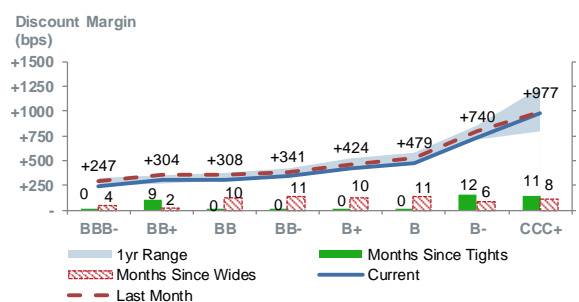
The North American largest distributor of pet food and supplies Phillips Pet Food's 1/14 2nd Lien TL issue was the best performing par loan globally, increasing 9% to end the month at a 90.50 price (**Table 1**). European apparel company Vivarte's 10/14 Super Senior TL issue was the best performer in the distressed category (was the worst performer last month) shortly after hiring a new CEO, with the loan increasing almost 16% to end the month at a 70.10 price.

**Figure 6: Leveraged loans outperform IG and HY after the post-election sell-off in rates**



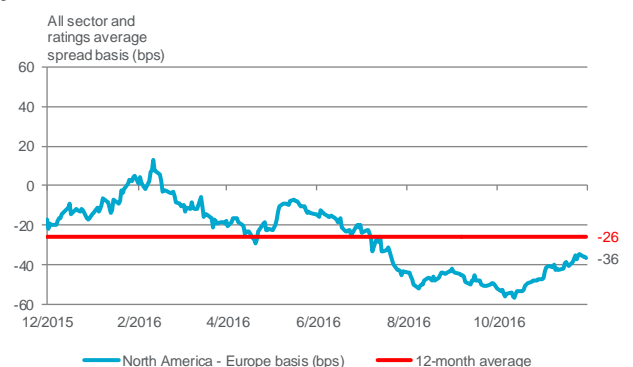
Source: IHS Markit

**Figure 7: European basic materials spreads to LIBOR**



Source: IHS Markit

**Figure 8: North America to European average spread to LIBOR basis**



Source: IHS Markit

**Table 1: November North American loans best and worst price performance<sup>1</sup>**
**North America**

LXID	Loan Name	Sector	Country	Liq score	11/30 price	% change	One year low	Date	One year high	Date
<b>Best performers</b>										
<b>Par</b>										
1	LX134883	Phillips Pet Food 1/14 2nd Lien TL	Consumer Services	USA	4	90.50	+9.0%	67.88	2/15/16	90.50 11/30/16
2	LX131401	Trident USA Health 7/13 TLB	Healthcare	USA	5	87.75	+7.5%	81.67	11/9/16	95.69 4/22/16
3	LX132557	Peabody Energy 9/13 Cov-Lite TL	Energy	USA	1	94.00	+6.8%	34.35	3/1/16	94.00 11/30/16
4	LX144217	Avaya 5/15 B7 TLB	Technology	USA	1	86.58	+5.8%	57.33	2/18/16	86.58 11/30/16
5	LX123563	Container Store (4/12) TLb	Consumer Services	USA	4	90.67	+5.4%	66.67	2/18/16	90.67 11/30/16
<b>Distressed</b>										
1	LX128316	J.G. Wentworth 2/13 TL	Financials	USA	4	44.33	+12.7%	33.50	6/17/16	80.50 12/11/15
2	LX135620	Nine West 4/14 Cov-Lite TL	Consumer Goods	USA	3	60.50	+5.5%	49.10	9/21/16	75.69 12/1/15
3	LX127583	Ameriforge 1/13 2nd Lien TL	Industrials	USA	5	14.00	+5.0%	12.67	11/11/16	19.22 4/22/16
4	LX137138	UTEX Industries 5/14 2nd Lien TL	Industrials	USA	3	52.33	+3.6%	38.00	3/3/16	69.17 12/9/15
5	LX141603	Sourcehov 10/14 2nd Lien TL	Industrials	USA	4	65.70	+3.3%	50.00	8/12/16	75.00 3/9/16
<b>Worst performers</b>										
<b>Par</b>										
1	LX147030	CPI Card Group 8/15 Cov-Lite TLB	Industrials	USA	4	90.75	-7.5%	90.67	11/18/16	100.00 5/3/16
2	LX144372	Houghton Mifflin 5/15 Cov-Lite TLB	Consumer Services	USA	1	93.56	-5.3%	92.58	11/21/16	99.75 9/22/16
3	LX144914	Academy Sports 6/15 TLB	Consumer Services	USA	1	92.00	-5.1%	91.08	2/18/16	98.81 4/26/16
4	LX130123	CareStream 6/13 Cov-Lite TL	Healthcare	USA	3	88.75	-4.3%	83.20	3/8/16	98.25 6/6/16
5	LX133832	One Call Medical 11/13 Cov-Lite TL	Healthcare	USA	4	88.50	-3.7%	79.19	2/26/16	93.33 12/2/15
<b>Distressed</b>										
1	LX135737	J. Crew 2/14 Cov-Lite TL	Consumer Services	USA	1	64.13	-15.8%	61.86	11/23/16	80.44 5/4/16
2	LX134252	Cumulus Media 12/13 TLB	Consumer Services	USA	1	60.14	-12.5%	59.44	11/28/16	76.20 1/11/16
3	LX141448	Education Management 1/15 TLA	Consumer Services	USA	5	22.63	-11.7%	22.63	11/30/16	30.83 3/30/16
4	LX149955	Millennium Laboratories 12/15 TL	Healthcare	USA	2	56.50	-10.1%	43.50	9/14/16	95.20 4/25/16
5	LX130126	CareStream 6/13 2nd Lien Cov-Lite TL	Healthcare	USA	3	80.25	-9.5%	75.80	2/25/16	96.38 8/16/16

Source: IHS Markit

<sup>1</sup> Par is defined as a loan with a month end price of 85 or higher and distressed has a price lower than 85.

Table 2: November European loans best and worst price performance<sup>1</sup>

## Europe

	LXID	Loan Name	Sector	Country	Liq score	11/30 price	% change	One year low	Date	One year high	Date
<b>Best performers</b>											
<b>Par</b>											
1	LX136501	SkillSoft 4/14 Cov-Lite TL	Technology	LUX	1	92.38	+3.9%	71.13	2/3/16	92.38	11/30/16
2	LX136884	Flint Group 5/14 (EUR) 2nd Lien TL	Basic Materials	DEU	4	97.63	+1.8%	92.17	3/30/16	97.72	12/4/15
3	LX132212	Consolis 8/13 Restructured PIK TL	Consumer Goods	FRA	4	98.50	+1.6%	80.00	3/4/16	98.50	11/30/16
4	LX142370	United Biscuits 12/14 (EUR) TLB2	Consumer Goods	GBR	2	99.66	+1.4%	97.44	2/15/16	100.61	9/14/16
5	LX141974	Zodiac 9/14 (EUR) 2B TLB1	Consumer Goods	FRA	5	98.83	+1.2%	88.92	3/2/16	99.00	11/29/16
<b>Distressed</b>											
1	LX139578	Vivarte 10/14 Super Senior TL	Consumer Goods	FRA	3	70.10	+15.6%	55.50	10/28/16	101.75	5/12/16
2	LX129817	Pacific Drilling 5/13 TL	Energy	LUX	3	30.81	+9.6%	19.19	2/29/16	54.83	12/1/15
3	LX126786	Cortefiel 9/12 Extended PIK TLB3	Consumer Services	ESP	1	62.90	+4.8%	55.50	7/1/16	85.00	12/8/15
4	LX135963	Petroleum Geo-Services 3/14 Cov-Lite TLB	Energy	NOR	1	80.25	+3.9%	52.00	2/16/16	80.25	11/30/16
5	LX133563	Crosby Worldwide 11/13 Cov-Lite TL	Energy	GBR	2	84.50	+2.2%	67.00	1/14/16	85.38	5/6/16
<b>Worst performers</b>											
<b>Par</b>											
1	LX134586	Prisa 12/13 Disposal TL3	Consumer Services	ESP	4	85.50	-4.5%	79.00	3/1/16	89.80	11/7/16
2	LX137173	KCA 5/14 TLB	Energy	GBR	1	85.58	-3.3%	51.50	3/4/16	88.75	10/27/16
3	LX142052	Aenova 9/14 TEMMLER TL	Healthcare	DEU	2	94.90	-1.3%	83.25	2/22/16	97.70	9/16/16
4	LX131857	BMC Software 8/13 (USD) Foreign Borrower TL	Technology	IRL	1	97.60	-1.0%	78.61	2/15/16	98.67	11/1/16
5	LX155454	Ammeraal Beltech 9/16 TLB	Industrials	NLD	4	99.13	-1.0%	99.00	11/15/16	100.11	10/31/16
<b>Distressed</b>											
1	LX062451	HC Starck 11/06 (USD) 2nd Lien TLA	Basic Materials	DEU	5	33.00	-40.3%	33.00	11/30/16	82.75	3/31/16
2	LX121462	Jack Wolfskin (8/11) TLb	Consumer Goods	DEU	2	49.00	-36.2%	47.25	11/17/16	84.07	12/7/15
3	LX129905	CSM Bakery Supplies 5/13 Cov-Lite TL	Consumer Goods	NLD	4	83.90	-13.6%	82.25	11/17/16	100.13	8/3/16
4	LX141716	Autobar 10/14 Senior TL	Consumer Services	NLD	2	56.97	-9.4%	56.79	11/28/16	85.80	12/8/15
5	LX068349	Ecobat 5/07 (EUR) PIK TL	Industrials	GBR	5	21.83	-6.8%	19.50	5/30/16	24.25	8/31/16

Source: IHS Markit

**Table 3: North American and European loan sector curve monthly discount margin spread change in basis points**

		BBB-	BB+	BB	BB-	B+	B	B-	CCC+
<b>Basic Materials</b>	NA	-32	-38	-35	-35	-22	-37	-47	-6
	EU	-43	-48	-46	-46	-33	-48	-58	-18
	Change NA-EU	+11.2	+9.9	+11.3	+11.7	+11.2	+11.2	+11.6	+12.2
<b>Consumer Goods</b>	NA	-2	-8	-5	-5	+8	-8	-17	+24
	EU	-13	-19	-16	-17	-4	-19	-29	+11
	Current NA-EU	+11.4	+10.1	+11.5	+12.0	+11.4	+11.4	+11.8	+12.4
<b>Consumer Services</b>	NA	-4	-10	-7	-7	+6	-9	-19	+22
	EU	-15	-20	-18	-18	-5	-20	-30	+10
	Current NA-EU	+11.0	+9.7	+11.1	+11.5	+11.0	+11.0	+11.4	+12.0
<b>Energy</b>	NA	-3	-10	-7	-7	+6	-9	-19	+22
	EU	-14	-19	-17	-18	-4	-20	-29	+11
	Current NA-EU	+10.3	+9.0	+10.4	+10.9	+10.4	+10.4	+10.8	+11.3
<b>Financials</b>	NA	+6	-0	+3	+3	+16	+1	-9	+32
	EU	-4	-9	-7	-7	+6	-9	-19	+21
	Current NA-EU	+10.0	+8.7	+10.1	+10.6	+10.1	+10.1	+10.4	+11.0
<b>Healthcare</b>	NA	+9	+2	+6	+6	+18	+3	-6	+34
	EU	-2	-8	-6	-6	+7	-8	-18	+22
	Current NA-EU	+11.4	+10.1	+11.5	+11.9	+11.4	+11.4	+11.8	+12.4
<b>Industrials</b>	NA	-11	-18	-14	-14	-2	-17	-26	+14
	EU	-22	-27	-25	-25	-12	-27	-37	+3
	Current NA-EU	+10.7	+9.4	+10.8	+11.3	+10.8	+10.8	+11.2	+11.7
<b>Technology</b>	NA	-8	-15	-11	-12	+1	-14	-24	+17
	EU	-20	-25	-23	-23	-10	-25	-35	+5
	Current NA-EU	+11.2	+9.9	+11.3	+11.8	+11.2	+11.2	+11.6	+12.2
<b>Telecommunication Services</b>	NA	-2	-8	-5	-5	+8	-7	-17	+24
	EU	-10	-16	-14	-14	-1	-16	-26	+14
	Current NA-EU	+8.9	+7.6	+9.0	+9.5	+8.9	+8.9	+9.3	+9.9
<b>Utilities</b>	NA	+12	+5	+8	+8	+21	+6	-4	+37
	EU	+3	-3	-1	-1	+12	-3	-13	+27
	Current NA-EU	+8.9	+7.7	+9.0	+9.5	+9.0	+9.0	+9.4	+9.9

Source: IHS Markit

# Credit default swaps

## Not the typical quiet November

November is often a subdued month in the credit markets as investors begin to position themselves for year-end. But events can sometimes prevent docility setting in, and this was the case in 2016.

In the US all eyes were on the presidential election, which resulted in a surprise victory for Donald Trump. Markets across the globe were obviously focused on the US vote, but there were also domestic factors that were shaping sentiment. In Europe, investors were trying to price in the likely outcome of the Italian referendum on December 4, which was no easy task.

This confluence of events served to push US and European elections in different directions. The [Markit CDX.NA.IG](#) index tightened from 78bps to 73bps over November, while the [Markit iTraxx Europe](#) widened from 73bps to 80bps over the month. This directional basis between the two indices was at its widest since Brexit.

What does this tell us about the two regions? It clearly suggests that US markets were not as fearful about a Trump presidency compared to the conventional wisdom in the media. Perhaps European investors were not as enamoured by Trump, though it seems more likely that they were concerned by a No vote in the Italian referendum (which transpired). The main issue was that Italian banks, and Monte dei Paschi de Siena (MPS) in particular, are in the midst of shoring up their balance sheets with the assistance of the government. If the incumbent government is toppled, it may destabilise the banking sector. The [Markit iTraxx Europe](#), unlike the [Markit CDX.NA.IG](#), has a large weighting of financials, so this probably accounted for some of the underperformance in the European index.

Unsurprisingly, MPS and two other Italian banks are among the worst performing CDS names for November (**Table 5**), with MPS senior 5Y spreads widening by 124bps to close the month at 474bps. There also a contagion effect, with Societe Generale widening by 18bps to hit 89bps.

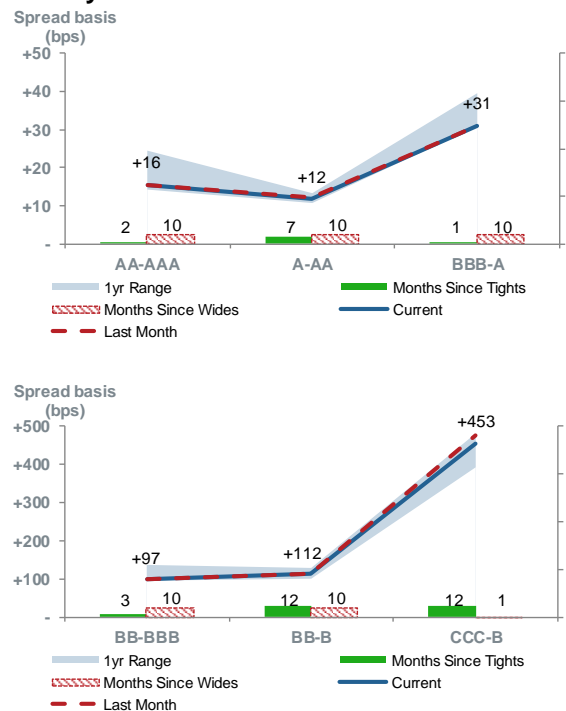
The best performing names, both in the US and Europe, were steel producers (**Table 4**). Perhaps the massive infrastructure programme promised by Trump is raising expectations of higher demand for steel.

## Lower end of the CDS credit curve flattens a bit

The AA/A and A.BBB basis remained unchanged during the month at +12bps and +31bps respectively, while the BBB/BB basis tightened 2bp to 97bps (**Figure 9**). However, the lowest end of the curve flattened a bit, with B/CCC 22bps tighter to a +453bps basis after hitting their widest level of the year of +480bps on November 1.

Global CDS sector spreads were close to unchanged through the B rated cohort, with CCC rated spreads tightening 25bps on the month (**Figure 10**).

**Figure 9: Global CDS sector ratings spread basis summary**

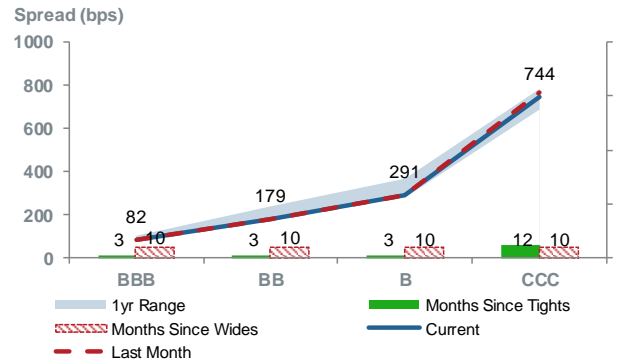
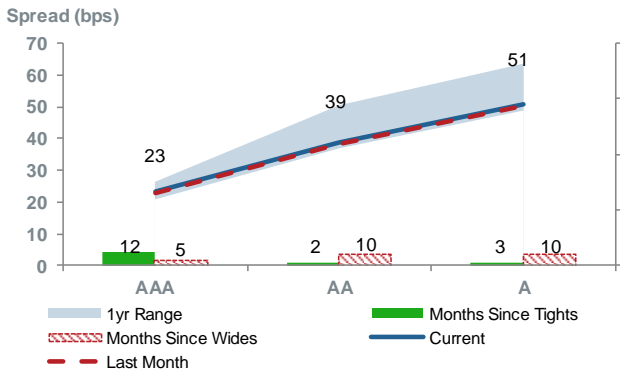


Source: IHS Markit

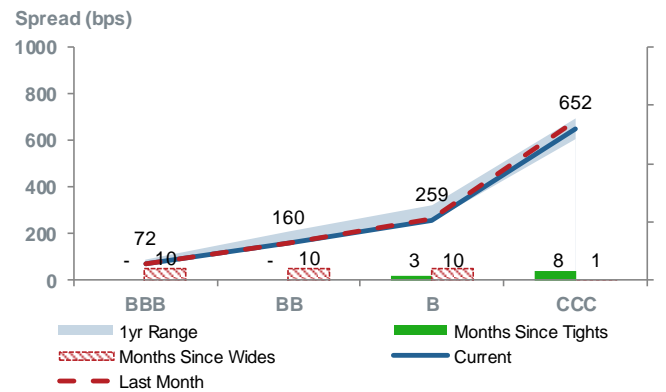
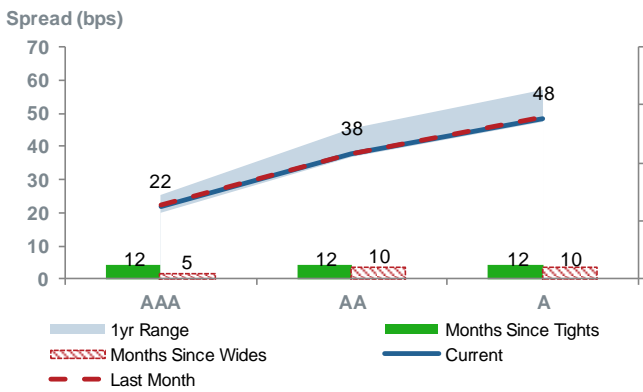


**Figure 10: November regional CDS sector spread summary**

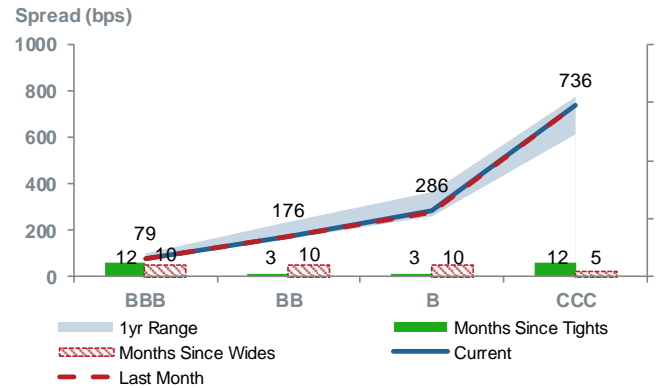
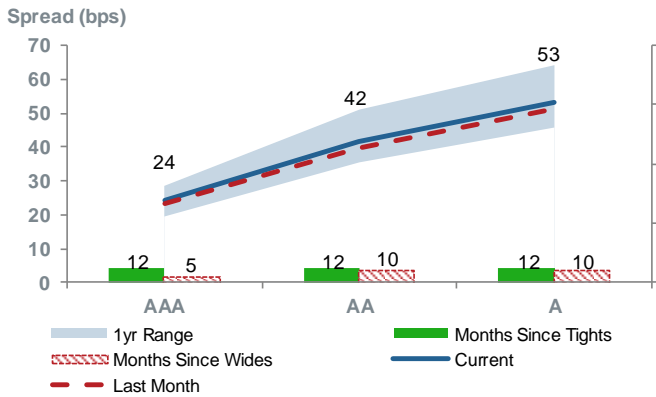
**Global**



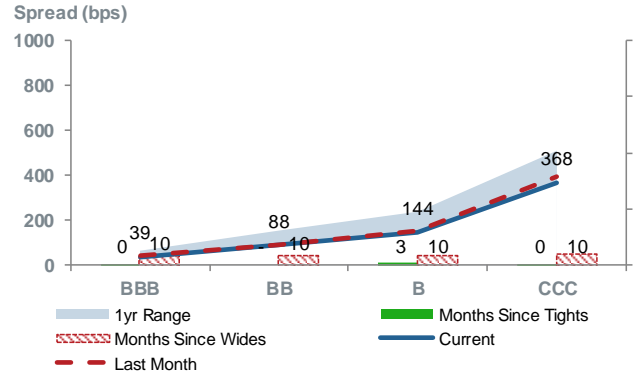
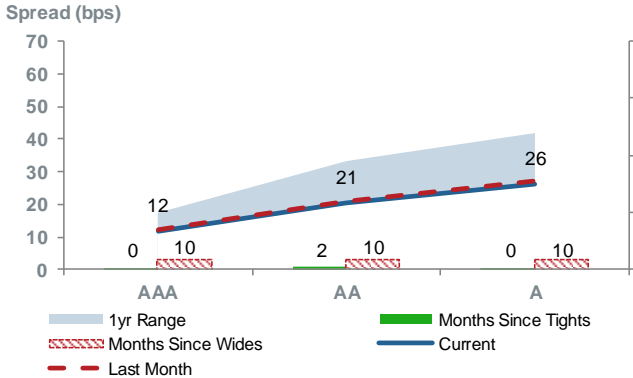
**North America**



**Europe**



**Japan**



Source: IHS Markit

Table 4: November liquid 5yr corporate CDS best spread performance<sup>2</sup>

## Best performers

	Ticker	Company	Sector	Country	Liq score	11/30 spread	Change	% change	One year tight	Date	One year wide	Date
<b>Americas</b>												
1	X	Utd Sts Stl Corp	Basic Materials	USA	1	457	-409	-47.2%	452	11/28/16	2755	1/27/16
2	MBI-InsCorp	Mbia Ins Corp	Financials	USA	1	866	-543	-38.5%	819	11/28/16	4315	1/18/16
3	AKS-Corp	Ak Stl Corp	Basic Materials	USA	1	475	-298	-38.5%	475	11/30/16	3928	1/25/16
4	FREEPIN	Freeportmcmoran Inc	Basic Materials	USA	1	294	-159	-35.1%	294	11/30/16	2221	1/25/16
5	ENTRPA	Energy Transfer Partners Lp	Energy	USA	2	129	-48	-27.2%	129	11/30/16	544	2/22/16
<b>EMEA</b>												
1	ARMLL	Arcelormittal	Basic Materials	LUX	1	300	-74	-19.7%	300	11/30/16	1147	1/15/16
2	PNL	Postnl Nv	Industrials	NLD	2	34	-7	-16.3%	34	11/30/16	73	12/14/15
3	NEWLOO AC	New Look Sr Issuer Plc	Consumer Services	GBR	1	769	-136	-15.0%	318	12/8/15	905	10/31/16
4	VUEINT	Vue Intl Bidco Plc	Consumer Services	GBR	2	290	-49	-14.4%	273	8/26/16	352	10/13/16
5	NXT	Next Plc	Consumer Services	GBR	2	114	-19	-14.1%	46	12/1/15	134	10/19/16
<b>APAC</b>												
1	OJIHOL	Oji Hldgs Corp	Basic Materials	JPN	2	24	-5	-18.8%	22	11/21/16	76	1/21/16
2	SUMI	Sumitomo Corp	Industrials	JPN	2	35	-7	-17.6%	34	11/28/16	142	1/21/16
3	MITSCO	Mitsui & Co Ltd	Energy	JPN	2	31	-6	-17.2%	31	11/29/16	102	1/22/16
4	MARUB	Marubeni Corp	Energy	JPN	2	47	-9	-16.0%	46	11/25/16	196	1/21/16
5	CITOH	Itochu Corp	Industrials	JPN	2	38	-6	-14.0%	38	11/29/16	96	1/21/16

Source: IHS Markit

<sup>2</sup> A liquid CDS is defined as an entity with a current Markit liquidity score of 1 or 2. Markit liquidity scores range from 1-5, with 1 being the most liquid and 5 the least liquid.

Table 5: November liquid 5yr corporate CDS worst spread performance<sup>2</sup>

## Worst performers

	Ticker	Company	Sector	Country	Liq score	11/30 spread	Change	% change	One year tight	Date	One year wide	Date
<b>Americas</b>												
1	CYH	Cmnty Health Sys Inc	Healthcare	USA	2	1592	+399	+33.4%	523	12/2/15	1606	11/11/16
2	LLY	Eli Lilly & Co	Healthcare	USA	2	40	+10	+32.0%	28	10/7/16	40	11/30/16
3	NEM	Newmont Mng Corp	Basic Materials	USA	1	144	+31	+27.8%	90	8/17/16	270	12/1/15
4	STARHOT	Starwood Hotels Resorts Worldwide Llc	Consumer Services	USA	2	51	+11	+27.5%	38	11/17/16	52	11/22/16
5	TSN	Tyson Foods Inc	Consumer Goods	USA	1	74	+16	+26.9%	45	12/8/15	75	11/22/16
<b>EMEA</b>												
1	MONTE	Bca Monte Dei Paschi Di Siena S P A	Financials	ITA	2	474	+124	+35.4%	240	12/2/15	722	2/11/16
2	LAFALTD	Lafargeholcim Ltd	Industrials	CHE	1	103	+22	+26.8%	79	9/19/16	292	2/11/16
3	BPSC	Bco Pop S C	Financials	ITA	2	288	+58	+25.3%	184	12/2/15	383	2/11/16
4	SOCGEN	Sciete Generale	Financials	FRA	1	89	+18	+25.0%	66	1/13/16	135	2/11/16
5	USPA	Unicredit Spa	Financials	ITA	1	226	+43	+23.3%	111	12/2/15	252	2/11/16
<b>APAC</b>												
1	QBEAU	Q B E Ins Gp Ltd	Financials	AUS	2	127	+13	+11.8%	106	9/16/16	184	2/12/16
2	CBA	Comwlth Bk Aust	Financials	AUS	1	73	+5	+8.0%	61	9/9/16	140	2/25/16
3	RIOLN-Ltd	Rio Tinto Ltd	Basic Materials	AUS	1	128	+10	+8.0%	116	11/10/16	279	2/10/16
4	NAB	Natl Aust Bk Ltd	Financials	AUS	1	73	+5	+7.7%	61	9/9/16	141	2/25/16
5	ANZ	Aust & New Zld Bkg Gp Ltd	Financials	AUS	1	73	+5	+7.6%	62	9/9/16	141	2/25/16

Source: IHS Markit

## Global corporate bonds

US dollar investment grade corporate debt dropped sharply in November, as US government bond yields skyrocket on expectations of the new presidential administration driving both inflation and growth expectations higher in the near term. On a positive note, credit spread were generally tighter on the month (**Figure 11**), due president elect Trump’s very pro-business policy themes, which did cushion some of the price declines from the rapidly rising rates.

### Sharp declines across global bond markets

The [Markit iBoxx € Liquid High Yield Index](#) and [Markit iBoxx € Contingent Convertible Index](#) were the only categories to escape the global sell-off in bonds, returning +0.7% and +1.3%, respectively on the month (**Table 6**). [Markit iBoxx \\$ Utility Index](#) was the worst performer globally, ending the month 3.6% lower, as the sector is very sensitive to increased inflation.

Investment grade corporate bonds were lower across all regions. Total returns in the [Markit iBoxx \\$ Liquid Investment Grade Index](#) were down 2.6%, well behind the -1.3% and -1.1% in the [Markit iBoxx £ Liquid Investment Grade Index](#) and the [Markit iBoxx € Liquid Investment Grade Index](#), respectively.

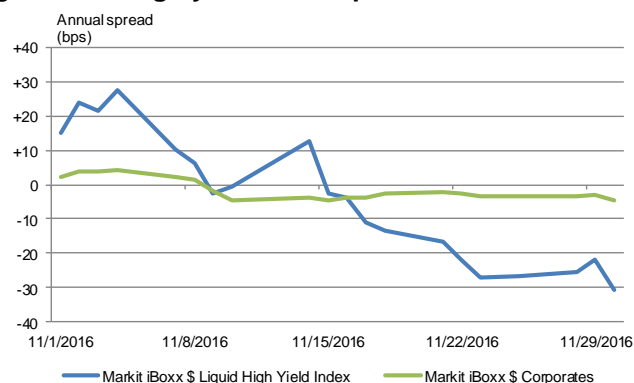
### High yield best performing sector for USD

The [Markit iBoxx \\$ Liquid High Yield Index](#) was the best performing USD index, declining only 0.4% on the month. The year is not over yet, but it appears that this year will be the eighth year that the Markit iBoxx \$ Liquid High Yield Index ended in positive territory out of the past ten years (**Figure 12**). The two times it ended the year lower were during the financial crisis in 2008 (-23.9%) and last year’s credit crisis (-5.0%).

### Energy issues dominate the best performers again

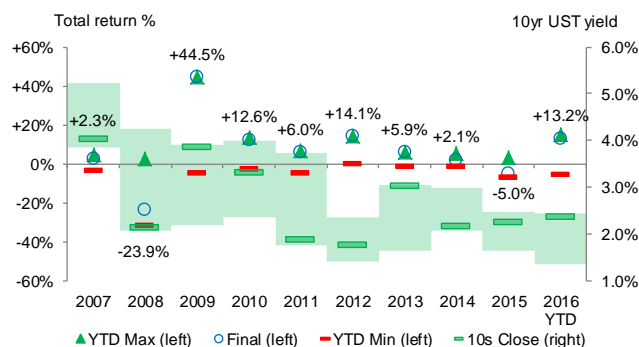
Not surprisingly given the rally in oil prices, five out of the 15 best performing issues came from the energy sector (**Table 7**). The US dollar denominated Qgog Constellation S.A. 6.25 11/2019 issue from the Brazil based oil and gas producer was the best performer from the sector, increasing 38% to end the month at a 66.00 price. However, the telecommunication company Avaya’s 10.5 3/2021 issue was the best performer globally, increasing 41% to end the month at a 46.53 price on reports that it may be selling its call centre software business and could use the proceeds to pay off certain debt holders before potentially filing chapter 11 bankruptcy protection<sup>3</sup>.

**Figure 11: Changes in Markit iBoxx \$ investment grade and high yield index spreads in November**



Source: IHS Markit

**Figure 12: Markit iBoxx \$ Liquid High Yield Index performance in various rate environments**



Source: IHS Markit

<sup>3</sup> Source: The Wall Street Journal, “[Facing heavy debt, Avaya may seek bankruptcy](#)” by Matt Jarzemyk published on November 25th, 2016

**Table 6: November corporate bond US and European iBoxx indices performance**

	Total Return						Yield						Duration		
	Month			YTD			Current			Month			\$	€	£
	\$	€	£	\$	€	£	\$	€	£	\$	€	£			
Corporates	-2.60%	-1.13%	-1.34%	+4.96%	+4.04%	+9.38%	4.02%	1.28%	3.17%	+0.43%	+0.24%	+0.19%	6.6	5.3	8.3
Corporates AAA	-3.41%	-1.78%	-2.28%	+2.67%	+4.52%	+13.94%	3.67%	1.02%	2.22%	+0.37%	+0.22%	+0.17%	9.7	8.2	14.8
Corporates AA	-2.25%	-0.84%	-1.14%	+3.17%	+3.80%	+9.80%	3.41%	0.73%	2.50%	+0.42%	+0.16%	+0.16%	6.0	5.4	8.7
Corporates A	-2.48%	-0.98%	-1.51%	+3.67%	+3.65%	+9.22%	3.70%	1.03%	3.07%	+0.43%	+0.21%	+0.18%	6.4	5.4	9.0
Corporates BBB	-2.78%	-1.33%	-1.23%	+6.95%	+4.48%	+9.35%	4.48%	1.68%	3.50%	+0.44%	+0.29%	+0.19%	7.0	5.1	7.5
Banks	-1.72%	-0.62%	-0.50%	+3.07%	+2.68%	+5.90%	3.66%	1.12%	3.30%	+0.41%	+0.16%	+0.11%	4.8	4.5	6.4
Basic Materials	-2.76%	-1.08%	-1.06%	+11.05%	+9.33%	+21.27%	4.49%	1.11%	3.06%	+0.40%	+0.21%	+0.12%	7.2	5.6	7.4
Consumer Goods	-2.71%	-1.24%	-0.82%	+4.12%	+4.35%	+7.05%	3.78%	1.14%	2.48%	+0.46%	+0.23%	+0.16%	6.3	5.6	6.0
Consumer Services	-3.34%	-1.11%	-1.52%	+5.72%	+5.34%	+11.49%	4.17%	1.11%	2.91%	+0.44%	+0.21%	+0.18%	8.3	5.6	9.9
Financials	-1.93%	-0.82%	-0.81%	+3.39%	+3.08%	+6.69%	3.76%	1.41%	3.48%	+0.42%	+0.19%	+0.15%	5.2	4.8	6.9
Health Care	-2.97%	-1.31%	-2.69%	+3.80%	+3.43%	+14.91%	3.90%	1.11%	2.81%	+0.43%	+0.23%	+0.24%	7.6	6.0	12.3
Industrials	-2.85%	-1.13%	-1.51%	+4.78%	+4.09%	+10.02%	3.81%	0.95%	2.83%	+0.42%	+0.23%	+0.20%	7.3	5.4	9.0
Insurance	-2.80%	-1.64%	-1.22%	+4.38%	+3.93%	+5.63%	4.25%	2.90%	4.60%	+0.44%	+0.28%	+0.23%	7.3	6.3	6.9
Non-Financials	-2.97%	-1.34%	-1.66%	+5.88%	+4.79%	+11.16%	4.13%	1.20%	3.03%	+0.43%	+0.26%	+0.20%	7.4	5.7	9.1
Oil & Gas	-3.03%	-1.79%	-0.94%	+9.34%	+5.86%	+7.55%	4.61%	1.53%	2.68%	+0.47%	+0.39%	+0.18%	7.1	5.8	6.3
Technology	-2.43%	-1.07%	N/A	+4.66%	+5.51%	N/A	3.78%	0.79%	N/A	+0.39%	+0.16%	N/A	7.2	6.6	N/A
Telecommunications	-3.10%	-1.44%	-2.03%	+5.61%	+4.63%	+9.39%	4.54%	1.35%	3.50%	+0.40%	+0.26%	+0.24%	8.5	5.9	9.4
Utilities	-3.58%	-1.49%	-1.89%	+5.56%	+4.23%	+12.51%	4.21%	1.30%	3.16%	+0.47%	+0.32%	+0.21%	8.6	5.6	10.0
Liquid High Yield	-0.43%	-0.79%	+0.70%	+13.20%	+6.78%	+7.94%	6.38%	3.91%	5.73%	+0.22%	+0.31%	+0.06%	3.9	3.4	3.3
Contingent Convertible	-1.63%	-1.28%	+1.29%	+5.03%	+2.13%	+2.76%	7.57%	6.94%	7.62%	+0.57%	+0.53%	-0.13%	4.2	3.6	5.6

Source: IHS Markit

Table 7: November global corporate bond best price performance

## Best performers

Ticker	Issue	Sector	Country	CCY	Liq score	11/30 price	Change	% change	One year low	Date	One year high	Date
<b>Americas</b>												
1	AV	Avaya Inc. 10.5 3/2021	Technology	USA	USD	2	46.53	+13.50	+40.9%	20.00	5/17/16	46.53 11/30/16
2	QGOGCON	Qgog Constellation S.A. 6.25 11/2019	Energy	BRA	USD	1	66.00	+18.25	+38.2%	34.97	2/2/16	66.00 11/30/16
3	ODEBDRI	Odebrecht Drilling Norbe Viii/lx Ltd. 6.35 6/2021	Energy	BRA	USD	1	43.75	+11.47	+35.5%	20.00	5/2/16	49.50 12/2/15
4	SPEECAS	Speedy Cash Intermediate Holdings Corp 10.75 5/2018	Financials	USA	USD	2	93.67	+14.42	+18.2%	40.75	2/25/16	93.67 11/30/16
5	CALIRES	California Resources Corporation 8 12/2022	Energy	USA	USD	1	80.37	+12.12	+17.8%	19.50	2/11/16	80.37 11/30/16
<b>EMEA</b>												
1	NAVMH	Navios Maritime Holdings Inc. 7.375 1/2022	Industrials	GRC	USD	1	59.50	+7.25	+13.9%	32.06	2/29/16	76.00 12/2/15
2	PACIDRI	Pacific Drilling S.A 5.375 6/2020	Energy	LUX	USD	2	30.65	+3.27	+11.9%	19.00	3/1/16	52.00 12/2/15
3	LOCKLOW	Lock Lower Holding As 9.5 8/2022	Financials	NOR	EUR	2	114.19	+9.71	+9.3%	96.00	2/11/16	114.42 11/22/16
4	INTSAT-Lux	Intelsat (Luxembourg) S.A. 7.75 6/2021	Telecom Services	LUX	USD	1	34.63	+2.12	+6.5%	21.41	7/14/16	49.64 1/7/16
5	CMACGM	Cma Cgm 7.75 1/2021	Industrials	FRA	EUR	1	86.25	+4.86	+6.0%	71.03	5/20/16	90.75 12/2/15
<b>APAC</b>												
1	HSINCHO	Hsin Chong Construction Group Ltd. 8.75 5/2018	Industrials	CHN	USD	1	81.27	+8.37	+11.5%	63.67	10/18/16	103.50 1/8/16
2	BTAB	Joint Stock Company "Bta Bank" 5.5 12/2022	Financials	KAZ	USD	2	76.85	+6.76	+9.6%	61.75	2/23/16	77.38 12/1/15
3	HONGGRO	Honghua Group Limited 7.45 9/2019	Energy	CHN	USD	1	73.46	+3.47	+5.0%	34.00	2/12/16	73.83 11/28/16
4	WHITFUN	Whitedove Funding 2014 4.75 12/2024	Financials	CHN	USD	4	104.90	+4.90	+4.9%	100.00	11/21/16	105.63 11/22/16
5	YINGDGA	Yingde Gases Investment Limited 8.125 4/2018	Basic Materials	CHN	USD	2	100.97	+3.47	+3.6%	69.41	3/28/16	101.19 11/18/16

Source: IHS Markit

Table 8: November global corporate bond worst price performance

## Worst performers

Ticker	Issue	Sector	Country	CCY	Liq score	11/30 price	Change	% change	One year low	Date	One year high	Date
<b>Americas</b>												
1 JACKCOO	Jack Cooper Holdings Corporation 9.25 6/2020	Financials	USA	USD	1	34.75	-32.50	-48.3%	34.75	11/30/16	73.25	8/29/16
2 CONCHEA	Concordia Healthcare Corp. 7 4/2023	Healthcare	BRB	USD	1	38.25	-20.49	-34.9%	37.75	11/8/16	94.75	4/25/16
3 ERICINC	Erickson Incorporated 8.25 5/2020	Industrials	USA	USD	1	28.00	-14.46	-34.1%	26.75	11/18/16	65.00	4/12/16
4 OFFSDRI	Offshore Drilling Holding S.A. 8.375 9/2020	Energy	MEX	USD	2	37.78	-15.80	-29.5%	29.00	5/19/16	75.64	12/1/15
5 MOODMED	Mood Media Corporation 9.25 10/2020	Consumer Services	USA	USD	2	54.50	-21.37	-28.2%	54.50	11/30/16	80.00	9/7/16
<b>EMEA</b>												
1 CGGAA	Cgg 5.875 5/2020	Energy	FRA	EUR	2	40.63	-17.94	-30.6%	36.79	11/8/16	65.00	12/2/15
2 BANCPODI	Banca Popolare Di Vicenza Societa Per Azioni. 9.5 9/2025	Financials	ITA	EUR	2	48.36	-16.94	-25.9%	45.60	11/22/16	101.00	12/1/15
3 MONTE	Banca Monte Dei Paschi Di Siena S.P.A. 5 4/2020	Financials	ITA	EUR	2	59.50	-18.42	-23.6%	58.11	1/20/16	100.54	12/1/15
4 OHLSA	Obrascon Huarte Lain Sa 5.5 3/2023	Industrials	ESP	EUR	2	65.32	-13.65	-17.3%	56.79	8/5/16	91.44	12/2/15
5 NBAD	National Bank Of Abu Dhabi Pjsc 4.75 12/2027	Financials	ARE	MYR	5	92.32	-12.66	-12.1%	91.83	1/12/16	104.98	11/9/16
<b>APAC</b>												
1 TMSK-TF	Temasek Financial (I) Limited 4.2 8/2050	Financials	SGP	SGD	4	105.98	-15.21	-12.5%	100.85	5/3/16	126.14	9/12/16
2 MALASUK	1malaysia Sukuk Global Berhad 4.08 4/2046	Financials	MYS	USD	1	93.00	-12.26	-11.6%	92.89	11/18/16	115.61	8/22/16
3 PETROL-Cap	Petronas Capital Limited 4.5 3/2045	Energy	MYS	USD	1	98.19	-10.70	-9.8%	93.73	12/15/15	117.31	8/22/16
4 EZIOHOL	Ezion Holdings Limited 4.875 6/2021	Energy	SGP	SGD	3	59.25	-6.25	-9.5%	59.25	11/30/16	97.45	4/19/16
5 GOVCHOL	Govco Holdings Berhad 4.73 6/2031	Financials	MYS	MYR	4	93.54	-9.79	-9.5%	93.54	11/30/16	103.41	10/19/16

Source: IHS Markit

## Sovereigns

### Most G7 sovereign CDS weaken in November

One look at the table for G7 CDS shows that November was an unusually weak month for developed market CDS (**Table 9**). US CDS spreads hit 28bps, 8bps wider on the month and the widest level since the first quarter of 2014. President-elect Donald Trump has promised to implement a massive programme of infrastructure spending, as well as lower taxes. If this gets approved by Congress – which is by no means certain – then this will worsen the country's finances. The US already has an external debt-to-GDP ratio over 100%, and this looks set to soar if Trump gets his way. This may well be driving the credit deterioration. However, it should be noted that US sovereign CDS is not particularly liquid, and the US is still trading at AAA levels.

Italy, a country with even worse government finances, has a CDS contract that is highly liquid. It was also one of the worst performers in November, with its spreads widening 33bps to 179bps. Its credit standing was affected by the forthcoming referendum and the consequent political instability. Perhaps more surprising was the knock-on effect across the EU. France was the worst performing sovereign, widening 10bps to 41bps. Italy is a core member of the EU, and its fate will determine the future of the currency bloc. France also faces presidential elections in the first half of next year, and the anti-EU National Front party is riding high in the polls.

### Mexico coming under pressure after Trump wins election

Perhaps less surprising was the weak performance of Mexico (**Table 10**). The sovereign has been under fire from Trump and may well bear the brunt of the new President's protectionist policies. Mexico's CDS spreads widened 25bps to 179bps and the country's 2047 bond was down over 12% (**Table 12**).

**Table 9: November G7 industrialised countries ranked by percent change in CDS spreads**

			11/30 10yr bond yield	CDS change	11/30 CDS	% change	One year tight	Date	One year wide	Date
1	JAPAN	Japan	0.03%	-0.6	32.9	-1.9%	31.7	9/5/16	56.1	2/12/16
2	UKIN	United Kingdom	1.28%	+0.1	38.3	+0.2%	17.3	12/1/15	50.6	6/24/16
3	CAN	Canada	1.59%	+2.4	33.5	+7.6%	25.0	1/11/16	34.6	11/17/16
4	DBR	Germany	0.27%	+3.2	22.8	+16.5%	12.6	12/24/15	24.9	6/27/16
5	ITALY	Italy	1.96%	+33.2	178.9	+22.8%	91.6	12/9/15	183.4	11/28/16
6	FRTR	France	0.73%	+9.7	40.6	+31.6%	25.7	12/24/15	50.6	6/24/16
7	USGB	United States	2.39%	+7.7	28.5	+36.8%	17.6	3/18/16	28.8	11/11/16

Source: IHS Markit



Table 10: November liquid sovereign 5yr CDS best and worst spread performance<sup>2</sup>

			Liq Score	Change	11/30 spread	% change	One year tight	Date	One year wide	Date
<b>Best Performers</b>										
1	THAI	Thailand	1	-4	91	-4.1%	81	9/7/16	171	2/11/16
2	JAPAN	Japan	1	-1	33	-1.9%	32	9/5/16	56	2/12/16
3	SOAF	South Africa	1	-4	237	-1.6%	219	8/16/16	387	1/20/16
4	KAZAKS	Kazakhstan	2	-3	192	-1.4%	182	9/8/16	336	1/20/16
5	DENK	Denmark	2	-0	23	-0.4%	14	12/10/15	28	3/15/16
6	EMIABD	Emirate Of Abu Dhabi	2	+0	69	-	66	10/25/16	137	2/9/16
7	CHILE	Chile	1	+0	89	+0.1%	67	8/15/16	148	1/20/16
8	UKIN	United Kingdom	1	+0	38	+0.2%	17	12/1/15	51	6/24/16
9	PORTUG	Portugal	2	+1	279	+0.2%	168	12/31/15	355	2/12/16
10	QATAR	Qatar	2	+0	89	+0.4%	81	12/7/15	140	2/3/16
<b>Worst Performers</b>										
1	FRTR	France	1	+10	41	+31.6%	26	12/24/15	51	6/24/16
2	BELG	Belgium	2	+8	35	+30.0%	27	10/24/16	68	6/27/16
3	MALAYS	Malaysia	1	+35	159	+28.4%	114	9/7/16	214	1/18/16
4	ITALY	Italy	1	+33	179	+22.8%	92	12/9/15	183	11/28/16
5	SPAIN	Spain	1	+16	88	+21.9%	69	10/24/16	137	6/27/16
6	AUST	Austria	2	+5	33	+20.1%	23	12/10/15	38	6/27/16
7	VENZ	Venezuela	1	+717	4604	+18.5%	2997	10/4/16	10686	2/15/16
8	KOREA	Soiuth Korea	1	+8	50	+18.2%	39	9/22/16	79	2/11/16
9	DBR	Germany	1	+3	23	+16.5%	13	12/24/15	25	6/27/16
10	MEX	Mexico	1	+25	179	+16.2%	129	9/7/16	231	2/11/16

Source: IHS Markit

Table 11: November sovereign bond best price performance

## Best performers

Ticker	Issue	CCY	Liq score	11/30 price	Change	% change	11/30 yield	One year low	Date	One year high	Date	
<b>Americas</b>												
1	VENZ	Bolivarian Republic of Venezuela 13.625 8/2018	USD	1	78.98	+4.96	+6.7%	34.14%	49.16	1/27/16	84.34	10/11/16
2	BRAZIL	Federative Republic of Brazil 0.0 1/2018	BRL	3	884.63	+9.56	+1.1%		733.73	12/16/15	884.63	11/30/16
3	COLOM	Republic of Colombia 7.5 8/2026	COP	2	100.90	+0.12	+0.1%	7.38%	87.67	2/11/16	104.00	9/7/16
4	DOMREP	Dominican Republic 6.875 1/2026	USD	4	110.25	+0.06	+0.1%	5.45%	98.50	2/11/16	117.04	8/15/16
5	USGB	United States of America 0.0 12/2016	USD	1	99.98	+0.02	+0.0%	0.24%	99.84	7/15/16	99.98	11/30/16
<b>EMEA</b>												
1	GREECE	Hellenic Republic 3 2/2034	EUR	1	69.66	+9.70	+16.2%	8.28%	47.69	2/12/16	69.66	11/30/16
2	REPUOFAF	Republic of Mozambique 10.5 1/2023	USD	2	63.71	+7.09	+12.5%	24.32%	55.72	11/1/16	89.79	4/12/16
3	SOAF	Republic of South Africa 2 1/2025	ZAR	4	99.47	+3.48	+3.6%		91.54	8/29/16	103.85	3/22/16
4	FRTR	French Republic 1.3 7/2019	EUR	2	107.98	+0.91	+0.9%		106.72	11/14/16	108.99	12/2/15
5	SLOVAK	Slovak Republic 4 3/2021	EUR	2	119.14	+0.47	+0.4%	-0.22%	118.25	11/11/16	122.27	2/26/16
<b>APAC</b>												
1	CHINA	People's Republic of China 4.76 9/2043	CNY	3	124.44	+12.00	+10.7%	4.00%	100.19	1/12/16	132.16	9/20/16
2	IGB	Republic of India 10.18 9/2026	INR	4	125.93	+10.15	+8.8%	7.85%	115.69	9/12/16	126.96	11/28/16
3	TGB	Taiwan, Province of China .375 1/2019	TWD	3	99.59	+0.53	+0.5%	0.56%	98.92	1/21/16	99.73	6/15/16
4	JAPAN	Japan .1 9/2024	JPY	3	105.71	+0.25	+0.2%		102.07	7/15/16	108.70	6/27/16
5	INDON	Republic of Indonesia 11 11/2020	IDR	3	113.97	+0.22	+0.2%	7.02%	107.52	12/15/15	116.25	8/22/16

Source: IHS Markit

Table 12: November sovereign bond worst price performance

## Worst performers

Ticker	Issue	CCY	Liq score	11/30 price	Change	% change	11/30 yield	One year low	Date	One year high	Date	
<b>Americas</b>												
1	BLZE	Belize 5 2/2038	USD	3	43.50	-9.00	-17.1%	13.35%	34.88	11/18/16	73.25	12/14/15
2	ELSALV	Republic of El Salvador 7.625 2/2041	USD	2	85.46	-17.24	-16.8%	7.38%	74.50	2/10/16	107.63	9/8/16
3	ARGENT	Argentine Republic 7.625 4/2046	USD	2	94.95	-13.99	-12.8%	6.91%	94.95	11/30/16	115.34	9/7/16
4	MEX	United Mexican States 4.35 1/2047	USD	2	82.88	-11.94	-12.6%	4.67%	81.92	11/14/16	104.58	9/7/16
5	COSTAR	Republic of Costa Rica 5.625 4/2043	USD	2	78.37	-10.62	-11.9%	6.50%	70.29	12/16/15	94.52	8/30/16
<b>EMEA</b>												
1	TURKEY	Republic of Turkey 6.625 2/2045	USD	2	98.89	-13.24	-11.8%	5.75%	97.60	11/14/16	126.26	7/11/16
2	SPAIN	Kingdom of Spain 4 10/2064	EUR	2	120.92	-13.53	-10.1%	2.71%	119.61	1/12/16	162.54	9/28/16
3	MOROC	Kingdom of Morocco 5.5 12/2042	USD	2	101.31	-11.20	-10.0%	4.67%	92.00	1/21/16	118.06	8/25/16
4	UKIN	United Kingdom of Great Britain And Northern Ireland .125 3/2068	GBP	2	235.44	-22.89	-8.9%		157.30	1/1/16	276.79	10/6/16
5	ISRAEL	State of Israel 4.5 1/2043	USD	2	100.25	-9.70	-8.8%	3.89%	99.90	12/4/15	115.03	9/7/16
<b>APAC</b>												
1	KOREA	Republic of Korea 2.75 12/2044	KRW	4	111.33	-16.34	-12.8%	1.53%	106.77	12/7/15	130.14	8/1/16
2	PHILIP	Republic of The Philippines 4.625 9/2040	PHP	3	88.43	-10.03	-10.2%	4.73%	88.14	11/24/16	117.21	8/18/16
3	CHINA	People's Republic of China 3.7 5/2066	CNY	4	93.56	-10.41	-10.0%	3.53%	93.56	11/30/16	107.30	8/17/16
4	TGB	Taiwan, Province of China 1.375 8/2046	TWD	3	84.91	-9.36	-9.9%	1.62%	84.44	11/29/16	98.52	10/3/16
5	MALAYS	Malaysia 3.844 4/2033	MYR	3	85.66	-8.79	-9.3%	4.32%	85.66	11/30/16	98.87	8/17/16

Source: IHS Markit

## Municipal bonds

Total municipal bond issuance tapered off to \$26.4bn in November after the prior month's record issuance levels. Year to date revenue and general obligation issuance are both 12% higher than the same period last year (**Figure 14**).

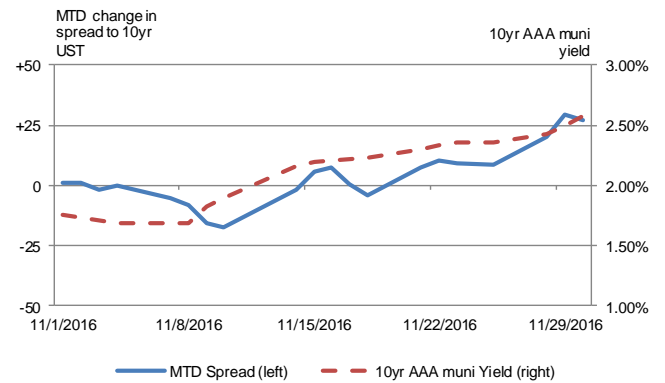
### US election resulted in a sharp decline in municipal bond prices

The US election results, and potential changes in municipal bond tax benefits and increases in infrastructure spending policies, immediately pressured municipal bond spreads, with the sell-off in longer rates having the most direct impact on muni prices. **Figure 13** shows that unlike the broader credit market, where spreads generally tightened during the month, the spread differential between 10-year AAA municipal bonds and US treasuries actually widened during the month, which further accelerated price declines. The graph indicates that 10-year AAA muni spreads ended the month 27bps wider and yields were a very weak 83bps higher.

### Puerto Rico issues still dominate the best performers list

Four of the top ten best performing revenue bonds this month were Puerto Rican issues (**Table 13**), with the Puerto Rico Commonwealth Highway & Transportation Authority Transportation Revenue 2007-M 5 7/2023 issue the best performer during the month, increasing 7% to end the month at a 28.00 price. The other three Puerto Rico issues hit a new 12 month high price during the month.

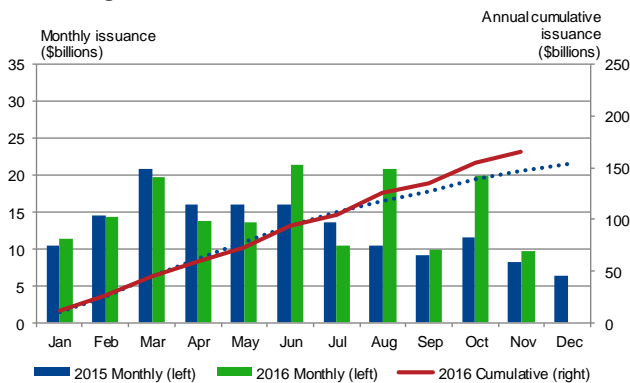
**Figure 13: AAA 10yr municipal bond month to date spread changes vs daily yield**



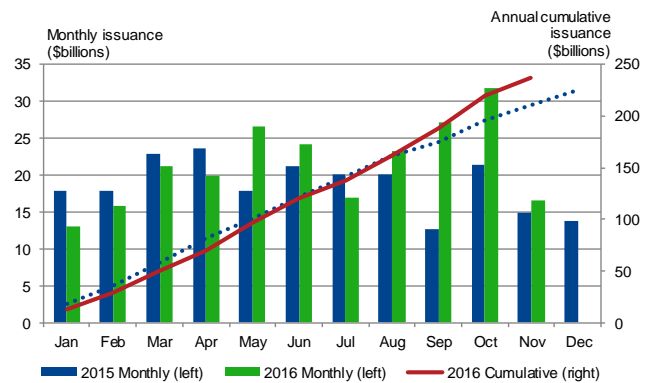
Source: IHS Markit

**Figure 14: Municipal bond issuance**

#### General obligation



#### Revenue



Source: SIFMA

Table 13: November municipal revenue bond best price performance

## Best performers

	Issuer	Issue	Liq score	11/30 price	Change	% change	One year low	Date	One year high	Date
1	Puerto Rico Comwth Hwy & Transn Auth Transn Rev	Transportation Revenue - 2007-M 5 7/2023	2	28.00	+1.86	+7.1%	15.00	1/11/16	34.42	12/17/15
2	Puerto Rico Pub Bldgs Auth Rev Gtd	Government Facilities Revenue - 2004-I 5 7/2036	2	60.00	+2.48	+4.3%	51.48	5/31/16	61.00	11/18/16
3	North Harris Cnty Regl Wtr Auth Tex Rev	Senior Lien Revenue Refunding - 2013 5 12/2030	2	115.81	+2.47	+2.2%	112.25	11/11/16	118.17	11/14/16
4	Puerto Rico Indl Tourist Edl Med & Environmental Ctl Facs	Educational Facilities Revenue - University Plaza 2000a 5 7/2033	1	102.56	+1.78	+1.8%	89.69	1/22/16	102.62	11/29/16
5	Los Angeles Calif Dept Wtr & Pwr Wtrwks Rev	Water System Revenue - 2012-A 5 7/2037	2	115.61	+1.89	+1.7%	110.85	11/16/16	117.73	11/17/16
6	New York N Y City Transitional Fin Auth Bldg Aid Rev	Building Aid Revenue Tax-Exempt - Fiscal 2012 S-1a 4.125 7/2031	2	108.35	+1.68	+1.6%	104.94	12/4/15	111.60	11/9/16
7	Puerto Rico Comwth Aqueduct & Swr Auth Rev	Revenue - 2012-A 5.125 7/2037	2	75.25	+0.75	+1.0%	61.00	4/7/16	76.25	11/14/16
8	Los Angeles Calif Dept Arpts Arpt Rev	Senior Revenue - Los Angeles International Airport 2010-A 5 5/2032	2	113.21	+1.08	+1.0%	109.97	11/16/16	116.29	2/11/16
9	North Harris Cnty Regl Wtr Auth Tex Rev	Senior Lien Revenue Refunding - 2013 5 12/2021	2	118.33	+1.00	+0.8%	116.56	12/4/15	121.32	11/14/16
10	Massachusetts St Port Auth Rev	Revenue Refunding - 2012-B 5 7/2031	2	116.51	+0.79	+0.7%	112.65	11/21/16	119.28	7/6/16

Source: IHS Markit

**Table 14: November municipal revenue bond worst price performance****Worst performers**

	Issuer	Issue	Liq score	11/30 price	Change	% change	One year low	Date	One year high	Date
1	Tobacco Settlement Fing Corp Va	Tobacco Settlement Asset Backed Senior - 2007 B-1 5 6/2047	1	80.75	-11.75	-12.7%	76.56	1/12/16	98.65	7/6/16
2	California Edl Facs Auth Rev	Revenue Jj - Stanford University 2016 U-7 5 6/2046	1	122.50	-17.18	-12.3%	122.50	11/30/16	158.13	7/6/16
3	New Jersey St Transn Tr Fd Auth	Transportation Program - 2014-Aa 4.25 6/2044	1	88.50	-12.00	-11.9%	88.50	11/30/16	106.38	8/12/16
4	Golden St Tob Securitization Corp Calif Tob Settlement Rev	Tobacco Settlement Asset-Backed Senior Current Interest - 2007 A 5.125 6/2047	1	85.25	-11.14	-11.6%	82.94	12/23/15	100.27	8/29/16
5	Long Beach Calif Bd Fin Auth Nat Gas Pur Rev	Natural Gas Purpose Revenue - 2007-A 5.5 11/2037	2	115.08	-14.73	-11.3%	115.08	11/30/16	139.00	7/6/16
6	Salt Verde Finl Corp Sr Gas Rev Ariz	Senior Gas Revenue - 2007 5 12/2032	2	107.40	-13.03	-10.8%	107.40	11/30/16	127.74	7/6/16
7	Maryland St Health & Higher Edl Facs Auth Rev	Revenue - Medlantic/Helix Issue 1998-B 5.25 8/2038	2	111.78	-12.72	-10.2%	111.78	11/30/16	131.02	8/31/16
8	Massachusetts St Health & Edl Facs Auth Rev	Revenue - Boston College Issue 2001 M-2 5.5 6/2035	2	125.85	-13.07	-9.4%	125.85	11/30/16	147.90	7/6/16
9	Public Auth For Colo Energy Nat Gas Pur Rev	Natural Gas Purchase Revenue - 2008 6.5 11/2038	2	128.86	-12.64	-8.9%	128.86	11/30/16	149.97	7/6/16
10	Massachusetts St Dev Fin Agy Rev	Revenue - Harvard University Issue 2016-A 5 7/2036	1	122.28	-11.39	-8.5%	122.28	11/30/16	136.19	10/11/16

Source: IHS Markit

## Securitised products

Securitised products spreads were generally tighter in November, which was in line with spread trends in the high yield market. AAA 10+ year FFELP student loan paper was the best performing consumer ABS sector, tightening 15bps to 3mo LIBOR +131bps, which is within 3bps of its tightest level reached in late-July.

### CMBS spreads tighten sharply

CMBS spreads were significantly tighter across the entire credit curve this month (**Figure 16**). BBB and A spreads were the best performers, tightening 160bps and 113bps respectively on the month. It is worth noting that AAA and AA cohorts reached their best levels in 12 months in November.

### Loan balance pay-ups decline sharply on decrease rate refinance incentives

Loan balance stories declined significantly across most of the Fannie Mae and Freddie Mac cohorts in November (**Table 15**), as the rapid rise in mortgage rates during the month added one of the most effective call protections by decreasing or outright eliminating borrowers' desire to refinance based on rates. Loan balance stories declined the most, while pay-up actually improved modestly for most MHA <90 and <95 LTV cohorts.

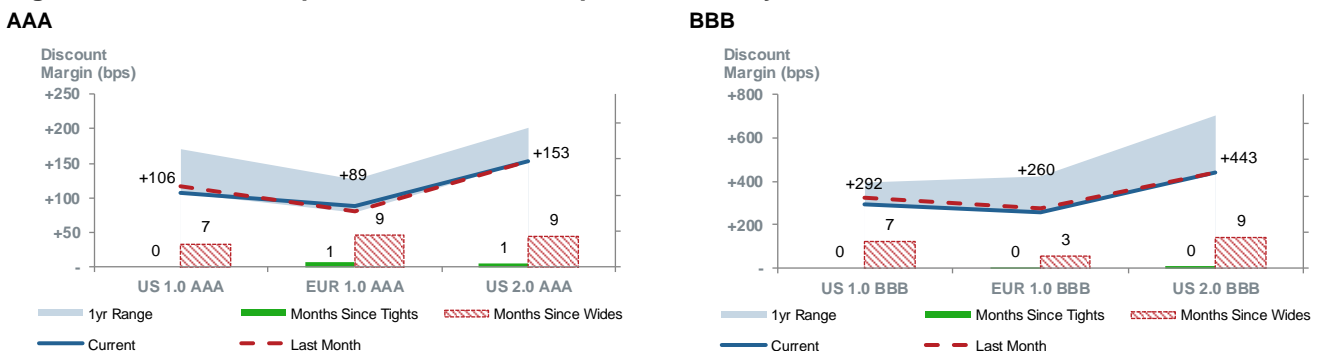
### 1.0 US CLOs outperform the broader sector

CLO spreads were mixed across the credit curve and both regions in November, with US 1.0 BBB bonds the best performer, ending the month 33bps tighter at L+292bps (**Figure 15**). We note that the US 1.0 AAA and every BBB CLO group reached their tightest spread in 12 month during the month.

### Non-agency spreads soften

Non-agency MBS spreads were modestly tighter during the month, as investors began to assess the implications of much higher mortgage rates on legacy MBS prepayments and overall home price appreciation. In the short term, the higher rates may be a drag on home prices as affordability will decrease, but improved growth prospects would benefit the housing sector in the long run.

**Figure 15: US and European CLO AAA/BBB spread summary**



Source: IHS Markit

**Table 15: November 2016 agency specified pools pay-ups in ticks (1/32 points)**

FNM/FHL 30Y Specified Pools Pay-ups					
Coupon	3	3.5	4	4.5	5
LLB (85K)	0-19	1-07	1-23	2-07	2-01
MLB (110K)	0-16	1-01	1-16	1-28	1-27
HLB (150K)	0-11	0-23	1-04	1-11	1-07
New Prod	0-01	0-02	0-08	0-11	N/A
Low FICO	0-03	0-07	0-09	0-11	0-28
Investor	0-06	0-09	0-09	0-13	0-18
MHA <90	0-07	0-10	0-11	0-11	0-19
MHA <95	0-06	0-10	0-16	0-22	0-22
MHA <100	0-05	0-12	0-15	0-24	0-21
MHA <105	0-10	0-16	0-27	1-05	1-14
<125 LTV	0-05	0-16	2-07	2-03	2-03
125+ LTV	0-17	0-23	1-17	1-32	2-08

Source: IHS Markit

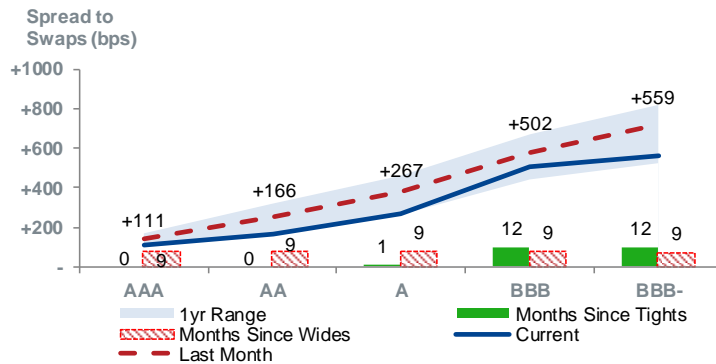
MoM Change					
3	3.5	4	4.5	5	
-0-06	-0-22	-0-27	-0-15	-0-18	
-0-06	-0-18	-0-22	-0-09	-0-18	
-0-06	-0-17	-0-15	-0-04	-0-09	
+0-01	-0-01	-0-01	-0-02	N/A	
+0-02	-0-01	-0-01	-0-01	+0-02	
-0-01	+0-01	-0-02	+0-01	+0-02	
+0-01	+0-02	-0-03	+0-03	-0-02	
+0-01	+0-02	+0-06	-0-02	+0-01	
-0-01	-0-02	-0-05	+0-05	0-00	
0-00	+0-01	-0-16	-0-10	-0-03	
0-00	-0-10	-0-04	-0-11	0-00	
-0-01	-0-14	-0-11	-0-11	0-00	

GNMA 30Y Specified Pools Pay-ups					
Coupon	3	3.5	4	4.5	5
LLB <sub>1</sub> (85K)	0-12	1-19	2-24	2-08	1-01
LLB <sub>2</sub> (110K)	0-11	1-09	2-04	2-15	2-13
MLB (125K)	0-17	0-27	1-17	1-30	1-17
HLB <sub>1</sub> (150K)	0-11	0-29	1-16	1-20	2-23
HLB <sub>2</sub> (175K)	0-11	0-24	0-30	1-08	1-03
New Prod	0-00	0-02	0-13	0-14	0-13
PR Geo	0-13	1-11	1-28	2-09	2-12

Source: IHS Markit

MoM Change					
3	3.5	4	4.5	5	
-0-09	-0-15	-0-16	-0-29	-0-30	
-0-06	-0-09	-0-14	-0-15	-0-29	
0-00	-0-10	-0-21	-0-15	0-00	
-0-02	-0-05	-0-11	-0-28	+0-03	
-0-05	-0-02	-0-15	+0-02	0-00	
-0-01	+0-01	-0-01	0-00	-0-02	
-0-05	-0-09	-0-17	-0-29	0-00	

**Figure 16: CMBS credit curve spread to swaps (10-year)**



Source: Trepp



Table 16: Global consumer ABS spread summary

	Current (bps)	MoM change (bps)	1yr tight	Date	1yr wide	Date
<b>US Credit Cards - Fixed-Rate</b>						
2-3yr AAA US Swaps	+26	-3	+25	7/29/16	+58	3/11/16
4-5yr AAA US Swaps	+37	-2	+32	9/6/16	+71	4/18/16
<b>US Credit Card - Floating-Rate</b>						
2-3yr AAA US LIBOR DM	+27	-	+26	10/12/16	+40	3/16/16
4-5yr AAA US LIBOR DM	+44	-1	+44	11/29/16	+96	5/16/16
<b>US Prime Auto - Fixed-Rate</b>						
0-2yr AAA EDSF	+12	-	+12	11/30/16	+45	3/29/16
2+yr AAA US Swaps	+25	+2	+21	9/8/16	+60	3/29/16
<b>European Prime Auto Loan - Floating-Rate</b>						
AAA EUR LIBOR DM	+24	-8	+23	11/3/16	+54	2/5/16
<b>US Subprime Auto - Fixed-Rate</b>						
1-2-yr AAA EDSF	+37	-	+36	11/16/16	+84	5/12/16
2+yr AAA US Swaps	+54	+2	+48	10/12/16	+96	3/22/16
<b>US Equipment - Fixed-Rate</b>						
2+yr AAA US Swaps	+30	-1	+30	11/28/16	+85	6/14/16
<b>European Equipment - Floating-Rate</b>						
A EUR LIBOR DM	+108	+25	+83	11/8/16	+160	2/29/16
<b>US FFELP Student Loans - Floating-Rate</b>						
2-4yr AAA 3mo US LIBOR DM	+102	+1	+68	7/29/16	+151	3/25/16
10+yr AAA 3mo US LIBOR DM	+131	-15	+128	7/29/16	+191	3/21/16

Source: IHS Markit

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