

Global fixed income focus – October 2015

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

Global markets recovered slightly from the prior very difficult two months, with potential for more economic stimulus measures from multiple countries if economic conditions deteriorate any further. The US Federal Reserve’s decision to not raise rates in September was viewed as an indication of concern for US growth, but the meeting minutes, which are released on a delayed basis, indicated that the decision to raise rates was a bit closer than expected.

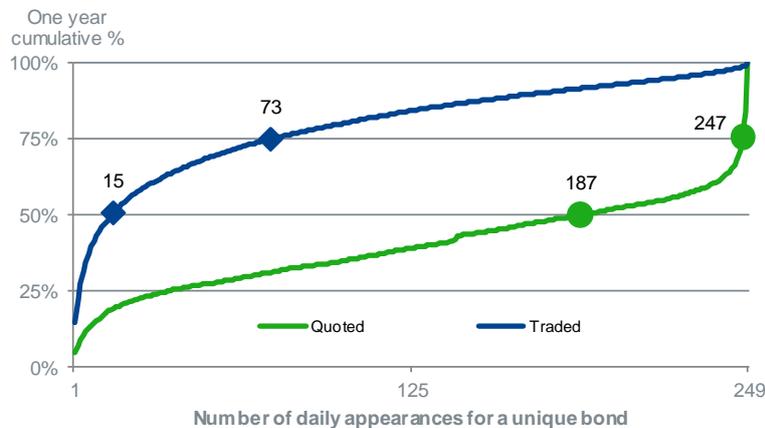
The resilience of the markets was tested on October 2nd when the US employment report came in much lower than anyone expected at 142k jobs versus a 203k consensus (the October number was revised even lower in November to 137k), with a sharp selloff in global equities and a significant rally in government bonds immediately after the report. Investors returned that Monday with a new sense of optimism that gained further traction with each wave of announcements from China, Japan, and Europe that they will continue to consider further economic stimulus measures. However, given the rising perception that the US economy is on track for growth and US jobless claims continue to trend lower, the US appears more likely to increase rates and wind down some aspects of its economic stimulus measures. This is in spite of manufacturing reports from several regions being negative for consecutive months and inconsistencies with this fall’s employment and wage growth data.

The bond and leveraged loans markets continued to digest the SEC’s recent proposal on liquidity for US mutual funds and ETFs, with some aspects of the plan having the potential to make leveraged loans (given the greater than three day settlement time), smaller issuers’ bonds and very long duration bonds out of favour and ironically less liquid if the plan is implemented exactly as proposed. This month’s special reports focus on sector liquidity in the US corporate bond market and spread correlations between BB CDS sectors and BB loan sectors.

- We reviewed the daily number of uniquely traded (8k daily average / 2.0m annual total) and quoted (15.5k daily average / 3.9m annual total) US corporate bonds and determined that only 359 bonds traded every day (249 business days in total) from November 2014 to October 2015, with 50% of the traded bonds trading only 15 days or less during that period (**Figure 1**). The below cumulative daily quoted instances curve is somewhat inversely correlated to the traded curve, as 50% of bonds were quoted 187 days or less during the year. Combining the two sets of data together can provide a high level gauge of liquidity at the sector level.
- An analysis of the 20-day moving average spread correlations between BB CDS sectors and BB loan sectors determined that the correlations were somewhat cyclical, although the timing of the cycles from peak-to-trough ranged from two weeks to a full month. Data indicates that there were multiple instances where BB loan spreads widened shortly after periods of very negative correlations between CDS and loans (**Page 6**).

Figure 1: Cumulative percentage of daily unique quoted and traded bonds

50% of US corporate bonds traded 15 or less days between November 2014 – October 2015



Source: Markit, TRACE

The combination of TRACE and bond quote data provide one means of determining breadth of corporate bond liquidity

The phrase “bond liquidity crisis” is being mentioned now almost as much as “Y2K” was back in the late-90s, with the latter fortunately resulting in a non-event after an immeasurable number of hours of development work and testing. In both cases, financial markets had time to prepare, but Y2K had a finite end date of January 1st 2000, while a significant bond liquidity crisis can happen any minute of any day or (hopefully) never.

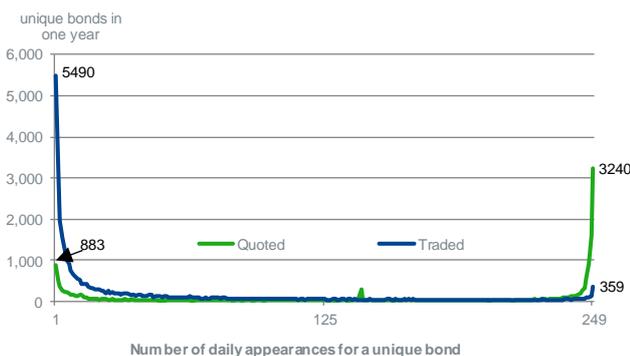
There are many ways to measure liquidity, but a true measure of liquidity that can be applied to every fixed income product continues to elude the fixed income markets given the varying degrees of trading transparency across markets. At the end of the day, markets only function when participants have different views on a security’s value, and price transparency is a key element in forming those investment decisions. Sellers have obvious reasons for not wanting detailed and timely price transparency on the vast number of unique bonds, as it could decrease trading profits on the trading of less liquid bonds since the buyer would know the seller’s purchase price and press for a lower purchase price. Market participants are also concerned that the trade information can be aggregated and used by the competition to reverse engineer a trading or investment strategy. In the US, TRACE is the most comprehensive warehouse of recent and historical corporate bond trade information. The major drawback with TRACE is that it is not applied the same way across all fixed income products, and it is only limited to US securities. The data also has a lot of “noise” from odd-lot trades with some trade sizes too small to fund a nice dinner in New York City. Despite its shortcomings, TRACE is still one of the most valuable metrics for a high level analysis of corporate bond liquidity. In Europe, MiFiD II is expected to not only provide the same post trade price data as TRACE, but also provide pre trade price transparency of a kind not required under current US securities law.

Daily trade volumes are just one component of liquidity, as there’s no way to differentiate between liquidity from dealers or investment firms, as all trades among the buy-side need to go through a broker dealer or one of the dark pool bond exchanges. Dealers’ ability to provide liquidity via principal trades is typically the quickest channel to execute when selling a security in a normal market, but their ability to rapidly provide liquidity continues to be a concern in the wake of shrinking balance sheets. The breadth, depth and volatility of parsed dealer quotes are one simple method to measure the dealer component of liquidity. Dealers and brokers can and do sometimes send out hundreds of non-executable bond quotes a day, but during times of market distress there is a noticeable decrease in the breadth and depth of these quotes, keeping in mind that a broker would prefer to just decrease the number of quotes than repeatedly send out way off-market quotes that could fray the client relationships that are essential for their business.

The daily number of unique bonds that trade and are quoted is one way to determine breadth of liquidity

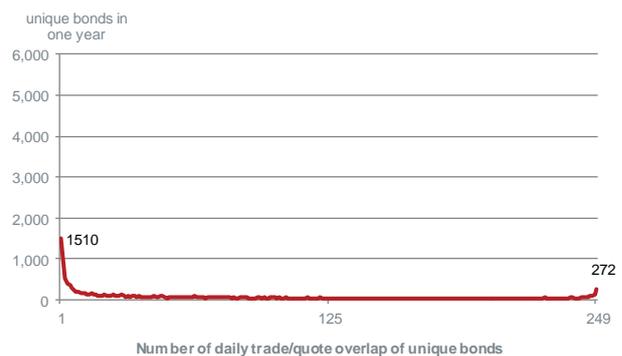
Comparing the daily number of unique bonds that are traded versus quoted is one of the most straightforward ways to measure the breadth of liquidity. This simplistic approach avoids getting caught in the morass of trying to calculate trade volumes when a \$5m trade print could be between \$5,000,001 and \$500m (or more) and it also completely disregards the complex relationship between quoted and traded levels and the frequency of both. The construction of our analysis will only determine if at least one person traded the bond and or one person quoted the bond on a given day. Since we did not include the trade size or market value in this analysis, there are likely some instances where only a very small amount of a bond traded, so the analysis may actually be overstating liquidity to some extent. For the purposes of this analysis, we focused on the approximately 39,000 unique bonds that traded between November 2014 and October 2015 and only included quotes from that

Figure 2: Number of days a unique bond appeared (traded or quoted) in one year



Source: Markit, TRACE

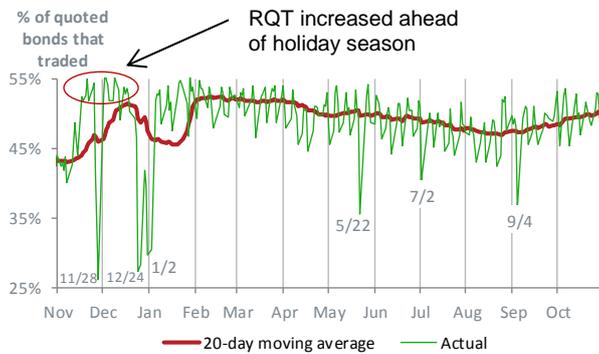
Figure 3: Number of days a unique bond was quoted and traded on the same day



Source: Markit, TRACE

universe to guarantee that every quote came from a TRACE eligible bond. For the sector level analysis, we used a 20,323 bond subset, as a large portion of the traded bonds were credit linked notes that cannot be easily mapped to a single sector.

Figure 4: 20-day moving average of the ratio of quoted bonds that traded on a given day



Source: Markit, TRACE

Only 359 bonds traded every trading day during a one year period

The traded trend line almost looks like a mirror image to the quoted line (Figure 2), with only 359 bonds (149 distinct issuers) trading every business day during the period and 3,240 bonds quoted every day. The traded number does seem particularly low given that there are over \$8tn in USD denominated corporates as of Q2 2015, according to SIFMA. Also keep in mind that there may have been some days with only one small trade.

The data also indicates (Figure 1) half of the bonds traded only 15 days (three work weeks) or less in one year, while the same percentage of bonds were quoted 187 times or less during that same period. Figure 2 shows that 5,490 bonds traded once in the year (14% of traded bonds), while only 883 bonds were quoted once (5% of quoted bonds). Despite the relatively high number of bonds quoted every day, only 272 bonds were both quoted and traded every day, while 1,510 traded (28% of traded) and were quoted once on the same day.

The ratio of quoted bonds that traded (RQT) can be used as a high level gauge of market liquidity

The frequency and breadth of dealer quotes provides several key indicators of liquidity, even in cases when the bids are below and the offers are above the actual market for a given security. A high frequency of unchanged levels could indicate a quiet day in the market, while more frequent quotes that are changing throughout the day can indicate an overall market or sector based rally/selloff. More offers could indicate a build-up in dealer inventory and vice versa. For simplicity's sake, we decided to focus on the magnitude of sectors' trade-to-quote hit ratio. Data shows that both the ratios of bonds that were traded

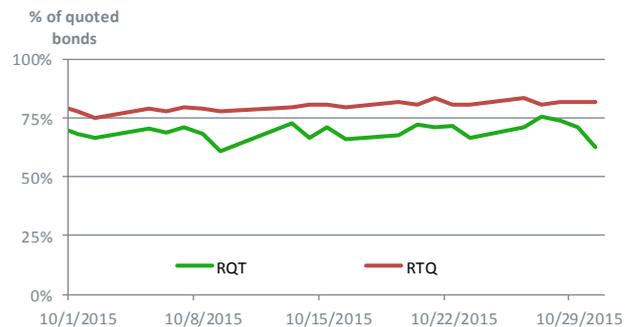
and quoted (RTQ) on the same day and were quoted and also traded (RQT) are very stable over the one year period, with the latter metric being very sector specific.

RQT appears to ebb and flow with market liquidity

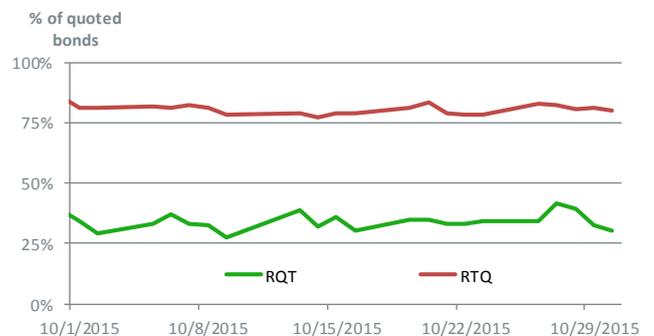
When looking at the 20-day moving average of RQT (Figure 4), it is clear that liquidity increased in early December 2014, ahead of the year-end holiday season, but decreased right before Christmas and New Year's and every major US market holiday (no surprise there). It also shows the decline in liquidity that coincided with concerns over Greece's exit from the EU. RQT began improving near late August, at the same time that concerns over China began to build in the market. We used a 20-day moving average to make the patterns easier to see, but non-adjusted daily data clearly indicates the drop off in liquidity that every market experiences the day before every US market holiday, with the Christmas Eve 2014 level being only 27%.

Figure 5: Sector level RQT and RTQ trends in October

Technology has the highest percentage of unique quoted bonds that traded



Utilities sector has the lowest percentage



Source: Markit, TRACE

Table 1: Summary of the daily averages of US corporate bond quote and trade data by sector

	Universe	Traded and never quoted	Traded every day	Daily average of November 2014 - October 2015				
				Unique parsed	Traded	Daily overlap	Percentage of traded with quotes (RTQ)	Percentage of quoted that traded (RQT)
All	20,323	4,197	359	11,548	7,050	5,703	81%	49%
Financials	7,374	1,381	144	3,716	2,237	1,697	76%	46%
Energy	2,228	434	46	1,457	901	775	86%	53%
Consumer Services	1,844	372	34	1,148	730	644	88%	56%
Industrials	1,939	504	8	1,088	610	484	79%	44%
Utilities	1,593	184	2	986	393	320	81%	32%
Consumer Goods	1,636	395	17	962	588	480	81%	50%
Healthcare	1,125	254	11	685	492	422	86%	61%
Basic Materials	1,179	324	28	660	422	321	76%	48%
Technology	803	236	33	449	381	305	80%	68%
Telecommunications Services	602	113	36	398	297	256	86%	64%

Source: Markit, TRACE

Technology sector appears the most liquid and utilities the least when comparing RQT

Sector level RQT data (**Figure 5**) can be used to highlight the differences among the various sectors. We believe that a sector with a higher average RQT is more liquid than one with a lower value, on a relative basis. For instance, when comparing the technology to the utility sector, the one year average RQTs (**Table 1**) are 68% and 32%, respectively. The technology universe in the analysis was much smaller than the utilities (803 vs 1,593 bonds), but the RQT results are reinforced by the fact that there were more than 15 times as many technology bonds that traded every day that year (33 technology vs 2 utility bonds).

Over 4,000 bonds traded, but were not quoted by any dealers

The data indicated that over 4,000 bonds traded, but were not included in any dealer's broadly disseminated daily quote runs. This list was particularly interesting, since it focuses on the underserved segment of the corporate market and highlights that there are still thousands of bonds that trade in a given year that were not broadly quoted a single time in the year.

RQT component of liquidity appears stable

In conclusion, liquidity appeared relatively stable in the US corporate market over the past year based on the RQT data. However, RQT is only one of many factors in liquidity and is inherently flawed in low quote count environments (i.e., theoretically, one trade and one quote is 100% RQT). Accurate trade volumes and a clearer picture of the breakdown between dealers' principal and agent (riskless) trades would further help to improve the market's ability to assess liquidity. One sobering outcome of the analysis is that the hit ratio of quotes to actual trades are somewhat discouraging

statistics for dealers and brokers that send out hundreds or thousands of quotes each day, but those quote levels coupled with TRACE are the essential fuel that spurs the conversations with investors that trigger every trade and provide the comparable market colour necessary to properly trade and value the entire US corporate universe.

Leveraged loans

The leveraged loan market had a somewhat negative tone for most of October, albeit on relatively light trading volumes, with a continued focus on higher quality names. The Markit iBoxx USD Leveraged Loan index (MiLLi) returned -0.13% in October, bringing the sector to 0.99% year-to-date. Outside of government bonds, it was the worst USD denominated performer in October.

Top tier issuers continue to be very well bid, while CLO interest in second liens continues to be modest. The secondary market began to retake centre stage, as the primary market appeared to slow down slightly for the time being ahead of the anticipated potential surge in loan issuance to quench the appetite of CLO issuers looking to price deals ahead of the holiday season.

Weight Watchers 4/13 Cov-Lite TLB2 was the best performer on the month in the October edition of our Global fixed income focus research and shortly afterwards, on October 19th, the equity price more than doubled on news that Oprah Winfrey acquired a 10% stake in the company. That same loan is the best performer globally this month, at 42% over September's closing price, which demonstrates how the strength or weakness in an issuer's equity shares can sometimes increase price momentum on their loan issues despite the significant risk profile differences between the two types of securities.

The second best performer on the month, was Fieldwood 9/13 2nd Lien TL, which was downgraded by S&P early in the month along with several other oil companies, based on a downward revision to oil price projections. The loan's price reached a new one-year low of 27.10 shortly before the rating action on September 28th, but rallied 33.4% to close at 36.21 in October.

A loan issued by the Dutch subsidiary of titanium dioxide (white pigment) producer Tronox was the best performer out of Europe at 5.3% month-over-month (see **Table 3**). According to *The Wall Street Journal*, the US parent company was downgraded by S&P in early September due to concerns over softness in pigment pricing, with the company issuing a statement afterwards that they are committed to reducing leverage. We note that Markit's Securities Finance data indicates the recent increase in short interest on Tronox Ltd (TROX) from approximately 1.6% in late May to a peak of 6.2% in early October, before declining to 5.3% on October 30th.

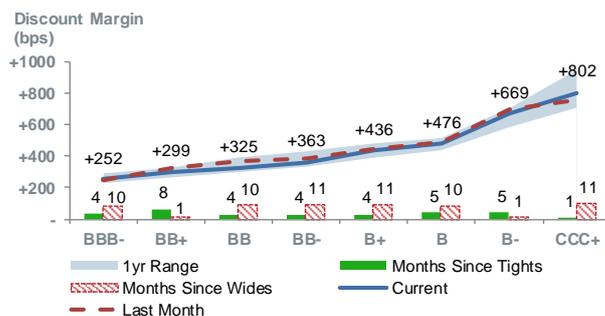
Loan sector spreads were tighter on the month, with financials the most stable

Leveraged loan sector spread data (**Figure 6**) indicates that spreads for financials are the furthest from their one year widest levels as compared to all other sectors, despite North American BB+ and B- loans from both regions reaching their one year widest

levels last month. Sector spreads (**Table 6**) were mostly tighter on the month, with the exception of the entire CCC+ bucket and most of the energy sector.

Figure 6: Most financial sector curve rating nodes are almost a full year from one year widest levels

North America



Source: Markit

Europe



Source: Markit

CDS and loan sector correlations trends

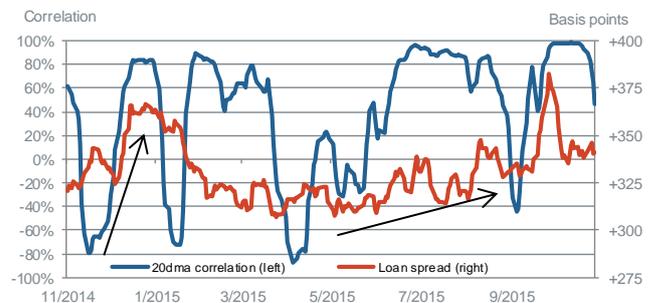
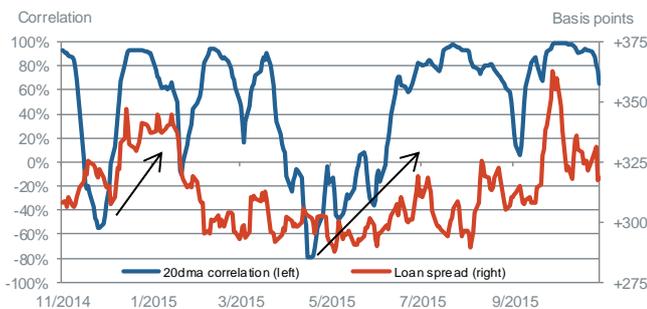
Leveraged loan investors continue to look to other markets to try to predict trends in spreads. We took a closer look at spread correlations between BB CDS sectors and BB loan sectors (**Figure 7**) and determined that the correlations were somewhat cyclical, although the timing of the cycles from peak to trough ranged from two weeks to a month. These trends were not as obvious when we analysed single or multiple month snapshots of the correlation (**Table 2 and Table 3**), but those analyses did highlight that correlation increases and decreases in sync across sectors for the most part. One interesting consistency across most sectors was a significant negative correlation in early April that could have potentially coincided with either the very strong 296k US jobs report in March or the robust CLO pipeline that same month.

issuance volume and strong CLO demand stabilised spreads during extreme movements in the global markets that were only captured by CDS data. The results also may act as a means to quantify the lag between when the broader markets selloff or rally and loan prices catch up to the market.

Spreads often widened following significant negative correlation cycles

Data from all the sectors did show that spreads often, albeit not always, widened after a significant negative correlation and tightened after very high correlation peaks. There are various factors that could be driving this trend, like how the curves are constructed or the disparity in liquidity between the products, but a more plausible explanation is that the year's light loan

Figure 7: BB leveraged loan to CDS sector correlations compared to loan sector spreads
North American consumer goods **European consumer goods**



North American energy

European energy

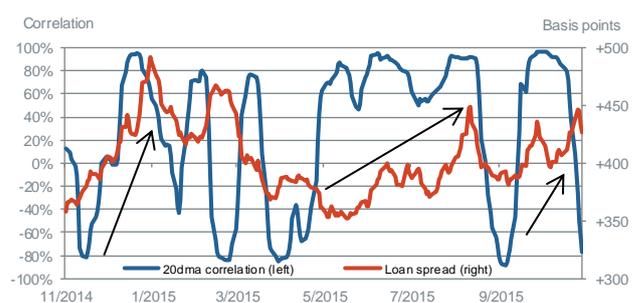
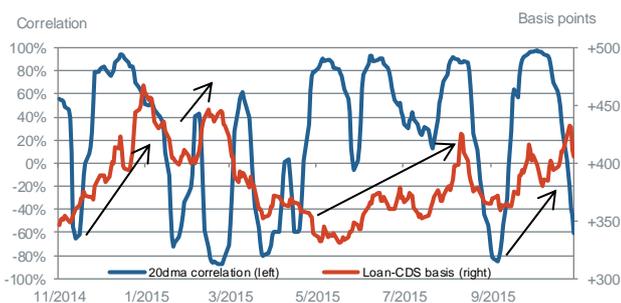


Table 2: BB rated loan and CDS sector spread correlation¹ during October 2015

North America										
BB Leveraged Loans										
BB CDS	BM	CG	CS	EN	FN	HC	IN	TE	TS	UT
Basic Materials (BM)	83%	91%	78%	-27%	84%	76%	89%	71%	80%	92%
Consumer Goods (CG)	81%	83%	72%	-45%	74%	69%	83%	60%	73%	86%
Consumer Services (CS)	82%	81%	71%	-49%	71%	68%	81%	58%	72%	85%
Energy (EN)	75%	84%	68%	-40%	74%	64%	82%	59%	70%	87%
Financials (FN)	80%	83%	70%	-46%	72%	66%	82%	58%	70%	86%
Healthcare (HC)	89%	93%	86%	-20%	88%	86%	93%	80%	90%	93%
Industrials (IN)	84%	86%	77%	-40%	78%	73%	86%	66%	79%	89%
Technology (TE)	78%	78%	67%	-54%	67%	62%	77%	53%	67%	82%
Telecom Services (TS)	82%	80%	71%	-50%	70%	67%	80%	57%	72%	83%
Utilities (UT)	78%	83%	69%	-45%	73%	65%	81%	58%	71%	86%

Europe										
BB CDS	BM	CG	CS	EN	FN	HC	IN	TE	TS	UT
Basic Materials (BM)	84%	87%	90%	88%	84%	82%	87%	90%	91%	80%
Consumer Goods (CG)	80%	83%	87%	85%	80%	78%	84%	87%	87%	76%
Consumer Services (CS)	81%	84%	87%	86%	80%	79%	84%	88%	88%	76%
Energy (EN)	81%	86%	91%	88%	88%	79%	86%	85%	91%	84%
Financials (FN)	84%	87%	89%	88%	82%	82%	87%	90%	90%	78%
Healthcare (HC)	84%	88%	92%	89%	88%	83%	88%	88%	92%	84%
Industrials (IN)	84%	87%	89%	88%	82%	83%	87%	91%	90%	78%
Technology (TE)	83%	87%	89%	88%	83%	82%	86%	90%	90%	79%
Telecom Services (TS)	81%	86%	90%	88%	85%	80%	86%	87%	90%	81%
Utilities (UT)	81%	86%	91%	88%	87%	80%	86%	87%	91%	83%

Source: Markit

Table 3: BB rated loan and CDS sector spread correlation during August – October 2015

North America										
BB Leveraged Loans										
BB CDS	BM	CG	CS	EN	FN	HC	IN	TE	TS	UT
Basic Materials (BM)	86%	89%	77%	24%	68%	78%	81%	86%	75%	83%
Consumer Goods (CG)	56%	65%	59%	-10%	58%	67%	58%	68%	69%	73%
Consumer Services (CS)	65%	72%	65%	-4%	60%	71%	65%	75%	72%	76%
Energy (EN)	80%	84%	70%	16%	58%	69%	73%	81%	66%	77%
Financials (FN)	67%	74%	66%	-1%	63%	71%	68%	73%	72%	78%
Healthcare (HC)	91%	91%	81%	39%	71%	80%	86%	86%	76%	83%
Industrials (IN)	84%	86%	77%	24%	71%	81%	82%	84%	78%	83%
Technology (TE)	71%	76%	67%	0%	61%	71%	69%	76%	71%	77%
Telecom Services (TS)	88%	89%	80%	25%	71%	80%	84%	84%	78%	84%
Utilities (UT)	83%	87%	77%	18%	69%	75%	79%	82%	75%	83%

Europe BB										
BB CDS	BM	CG	CS	EN	FN	HC	IN	TE	TS	UT
Basic Materials (BM)	71%	78%	63%	33%	60%	62%	64%	64%	68%	79%
Consumer Goods (CG)	69%	78%	64%	35%	59%	63%	65%	64%	69%	77%
Consumer Services (CS)	70%	79%	66%	36%	58%	65%	66%	66%	71%	77%
Energy (EN)	68%	73%	59%	36%	61%	57%	60%	56%	64%	81%
Financials (FN)	70%	79%	65%	31%	56%	65%	65%	68%	70%	75%
Healthcare (HC)	70%	80%	67%	31%	57%	65%	65%	68%	71%	76%
Industrials (IN)	68%	79%	66%	28%	52%	67%	65%	73%	70%	70%
Technology (TE)	72%	80%	66%	33%	57%	66%	66%	70%	70%	78%
Telecom Services (TS)	72%	79%	66%	36%	62%	64%	66%	65%	71%	80%
Utilities (UT)	72%	79%	66%	31%	59%	63%	64%	67%	70%	79%

Source: Markit

¹ Correlation is determined using Pearson Product-Moment Correlation method. 100% correlation coefficient indicates perfect correlation, 0% no correlation, and -100% indicates a perfectly inverse correlation.

Table 4: October North American loans best and worst price performance

North America

	LXID	Loan Name	Sector	Country	Liq score	10/30 price	Perc change	One year low	Date	One year high	Date
Best Performers											
1	LX128907	Weight Watchers 4/13 Cov-Lite TLB2	Consumer Services	USA	1	77.38	+42.3%	46.50	3/2/15	78.19	10/27/15
2	LX132457	Fieldwood 9/13 2nd Lien TL	Energy	USA	3	36.21	+31.7%	27.10	9/28/15	94.42	11/4/14
3	LX136428	Millennium Laboratories 4/14 Cov-Lite TLB	Healthcare	USA	4	35.25	+16.1%	29.75	10/1/15	100.59	3/31/15
4	LX135814	Nine West 4/14 Cov-Lite Unsecured Guaranteed TL	Consumer Goods	USA	4	62.83	+10.4%	52.50	8/25/15	92.50	11/19/14
5	LX129016	Weight Watchers 4/13 TLB1	Consumer Services	USA	4	97.50	+8.5%	77.64	3/3/15	97.83	10/21/15
6	LX139814	Visant 9/14 Cov-Lite TL	Consumer Services	USA	2	99.55	+8.4%	91.81	10/2/15	100.56	3/27/15
7	LX130470	Weather Channel 6/13 Cov-Lite 2nd Lien TL	Consumer Services	USA	2	99.78	+7.4%	84.33	4/13/15	99.78	10/30/15
8	LX131623	Bowie 8/13 TL	Energy	USA	3	96.71	+4.9%	92.17	9/30/15	96.71	10/30/15
9	LX144235	DuPont (E.I.) De Nemours 5/15 Cov-Lite TLB	Basic Materials	USA	2	91.40	+4.5%	86.30	10/8/15	100.38	5/7/15
10	LX119275	Toys 'R' Us (Add-on 5/11) TLB2	Consumer Services	USA	4	80.00	+3.9%	75.25	12/15/14	81.28	6/15/15
Worst Performers											
1	LX141449	Education Management 1/15 TLB	Consumer Services	USA	5	10.50	-81.0%	10.50	10/30/15	81.25	2/4/15
2	LX141448	Education Management 1/15 TLA	Consumer Services	USA	4	25.75	-60.5%	25.50	10/28/15	93.10	1/26/15
3	LX134515	Samson 12/13 Cov-Lite 2nd Lien TL	Energy	USA	3	7.42	-46.5%	13.13	10/7/15	91.63	11/3/14
4	LX129276	Securus Technologies 4/13 2nd Lien Cov-Lite TL	Telecom Services	USA	4	59.33	-34.0%	59.33	10/30/15	98.78	12/8/14
5	LX138432	American Energy Marcellus 7/14 Cov-Lite 2nd Lien TL	Energy	USA	4	7.33	-31.3%	10.67	10/1/15	95.13	11/3/14
6	LX136121	Fairmount Minerals 3/14 TLB2	Industrials	USA	1	57.33	-25.9%	57.33	10/30/15	99.85	11/20/14
7	LX144142	Securus Technologies 4/15 Incremental TLB2	Telecom Services	USA	5	74.00	-24.0%	69.33	10/26/15	99.56	6/5/15
8	LX138431	American Energy Marcellus 8/14 Cov-Lite TL	Energy	USA	3	46.20	-17.9%	45.75	10/28/15	97.00	11/3/14
9	LX136385	Southern Pacific 3/14 1st Priority TL	Energy	CAN	5	18.25	-17.7%	18.25	10/30/15	22.17	10/5/15
10	LX143728	Murray Energy 3/15 Cov-Lite TLB2	Energy	USA	1	64.63	-16.6%	64.63	10/30/15	99.02	5/8/15

Source: Markit

Table 5: October European loans best and worst price performance

Europe

	LXID	Loan Name	Sector	Country	Liq score	10/30 price	Perc change	One year low	Date	One year high	Date
Best Performers											
1	LX122688	Tronox (2/12) TL	Basic Materials	NLD	1	91.66	+5.3%	86.50	9/29/15	100.40	4/13/15
2	LX095069	Camaieu 7/07 (EUR) B/C Pro Rata	Consumer Services	FRA	4	86.33	+3.2%	72.96	1/23/15	86.42	10/29/15
3	LX137333	Deoleo 6/14 TL	Consumer Goods	ESP	1	90.21	+2.2%	82.50	9/4/15	97.50	4/23/15
4	LX139588	Expro Holdings 8/14 Cov-Lite TL	Energy	LUX	2	82.16	+1.6%	77.33	1/20/15	97.75	11/3/14
5	LX133019	Tunstall 9/13 (GBP) TLB1	Telecommunication Services	GBR	4	89.38	+1.6%	68.33	11/17/14	89.38	10/30/15
6	LX142830	Wittur 2/15 Cov-Lite TLB	Industrials	DEU	1	97.68	+1.5%	95.50	10/15/15	100.54	6/12/15
7	LX133020	Tunstall 9/13 (EUR) TLB2	Telecommunication Services	GBR	4	90.19	+1.5%	71.83	11/14/14	90.25	10/29/15
8	LX138453	Cortefiel 6/14 PIYC TLB3	Consumer Services	LUX	1	83.82	+1.3%	64.79	11/25/14	83.82	10/30/15
9	LX138207	Serbia Broadband (Telemach) 6/14 PIK TL	Consumer Services	NLD	1	101.81	+1.1%	96.06	1/14/15	104.38	6/5/15
10	LX123899	Ineos 4/12 (EUR) Cov-Lite TL	Energy	GBR	1	97.45	+1.0%	95.46	10/15/15	100.30	3/6/15
Worst Performers											
1	LX141502	Endeavour 10/14 TL	Energy	NLD	5	32.25	-51.2%	32.25	10/30/15	98.00	11/27/14
2	LX142328	BARTEC 11/14 TLC4	Industrials	DEU	1	83.97	-14.8%	83.97	10/30/15	99.88	6/26/15
3	LX135963	Petroleum Geo-Services 3/14 Cov-Lite TLB	Energy	NOR	3	64.17	-13.1%	62.83	10/28/15	93.50	5/15/15
4	LX136503	SkillSoft 4/14 Cov-Lite 2nd Lien TL	Technology	LUX	3	75.50	-11.2%	75.50	10/30/15	96.42	4/28/15
5	LX129817	Pacific Drilling 5/13 TL	Energy	LUX	1	53.83	-8.6%	52.83	10/28/15	95.66	11/3/14
6	LX138624	FCC 6/14 (EUR) TLA1	Industrials	ESP	4	84.00	-7.1%	84.00	10/30/15	91.67	7/20/15
7	LX066305	Fraikin 3/07 (GBP) Holdco TLb 2	Consumer Services	FRA	3	53.00	-6.7%	51.83	10/28/15	69.67	8/20/15
8	LX142050	Aenova 9/14 DRAG TL	Healthcare	DEU	2	93.65	-5.4%	92.56	10/19/15	100.58	6/12/15
9	LX138005	Mauser 7/14 (USD) Cov-Lite 2nd Lien TL	Industrials	DEU	4	93.80	-4.6%	93.80	10/30/15	99.75	6/2/15
10	LX139578	Vivarte 10/14 Super Senior TL	Consumer Goods	FRA	2	101.10	-4.2%	77.73	2/3/15	107.46	10/27/15

Source: Markit

Table 6: North American and European loan sector curve monthly discount margin spread change in basis points

		BBB-	BB+	BB	BB-	B+	B	B-	CCC+
Basic Materials	NA	-3	-26	-46	-25	-15	-21	-30	+42
	EU	0	-21	-42	-21	-14	-16	-27	+46
	Change in NA-EU	-3	-5	-4	-4	-1	-5	-4	-4
Consumer Goods	NA	+2	-21	-41	-20	-10	-15	-25	+48
	EU	+5	-16	-38	-16	-9	-11	-22	+51
	Current NA-EU	-3	-5	-3	-3	-1	-4	-3	-3
Consumer Services	NA	+2	-21	-41	-19	-9	-15	-25	+48
	EU	+5	-16	-37	-16	-8	-11	-21	+51
	Current NA-EU	-3	-5	-4	-3	-1	-4	-3	-3
Energy	NA	+36	+13	-7	+15	+25	+19	+9	+82
	EU	+38	+17	-4	+17	+25	+23	+12	+84
	Current NA-EU	-2	-4	-3	-2	+0	-4	-2	-2
Financials	NA	+1	-22	-42	-21	-11	-16	-26	+47
	EU	+3	-18	-39	-18	-11	-13	-24	+49
	Current NA-EU	-2	-4	-3	-3	-0	-4	-3	-3
Healthcare	NA	-4	-27	-48	-26	-16	-22	-31	+41
	EU	-1	-23	-44	-23	-15	-17	-28	+45
	Current NA-EU	-3	-5	-4	-3	-1	-5	-3	-3
Industrials	NA	+2	-21	-41	-19	-9	-15	-25	+48
	EU	+5	-16	-38	-16	-9	-11	-22	+51
	Current NA-EU	-3	-4	-3	-3	-0	-4	-3	-3
Technology	NA	+4	-19	-39	-17	-7	-13	-23	+50
	EU	+7	-14	-35	-14	-6	-8	-19	+53
	Current NA-EU	-3	-5	-4	-4	-1	-5	-3	-3
Telecommunication Services	NA	-7	-30	-50	-28	-18	-24	-34	+39
	EU	-4	-25	-46	-25	-18	-20	-31	+42
	Current NA-EU	-3	-5	-3	-3	-1	-4	-3	-3
Utilities	NA	-2	-25	-45	-23	-13	-19	-29	+44
	EU	+1	-20	-41	-20	-13	-15	-25	+47
	Current NA-EU	-3	-5	-3	-3	-1	-4	-3	-3

Source: Markit

Credit default swaps

CDS sector spreads were generally tighter across the globe in October after North America and Europe both reached new 12-month widest levels in September (**Figure 8** and **Figure 9**). Contrary to other regions, most Japanese CDS sector spreads reached their widest levels almost a year ago.

Americas top performers were dominated by media companies

Positive earnings were a key driver in this month's best CDS improvers (see **Table 7**). Ad agency Omnicom saw the best credit improvement after its solid third quarter results saw its CDS spread tighten to yearly lows after its spread nearly halved over the month. Omnicom's earnings also looked to have led the improvement in its media peers with Disney and Comcast both seeing their spreads tighten by over 40%. Dow Chemicals also saw its CDS spread tighten significantly in the wake of positive earnings and news surfacing that the firm may spin off its agriculture division.

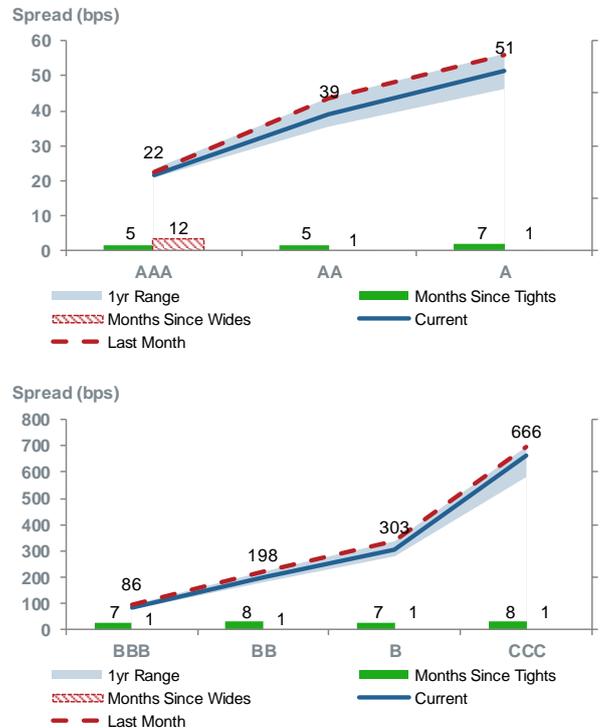
Automobile companies were the top two performers in EMEA

In Europe, carmakers led the names seeing the largest decrease in CDS premiums as fears about the potential spill over from the Volkswagen scandal dissipated. This saw spreads in Daimler, BMW and Renault all trade over a third tighter than at the start of the month. Component maker Valeo also benefited from the trend with its CDS spread trading 38% tighter for the month of October.

Weaker demand out of China pressures fast food companies' CDS

On the other side of the trend, the disappointing Chinese sales data from Yum Brands sent its CDS spread sharply higher. Though the company has seen spreads tighten in the closing week of the month, the current 200bps required by investors is nearly four times higher than the levels seen in early May, which underscores the importance of China as a fast food market. McDonald's also felt the impact as it joined its fellow peer among the names seeing the largest surge in CDS spreads over the month.

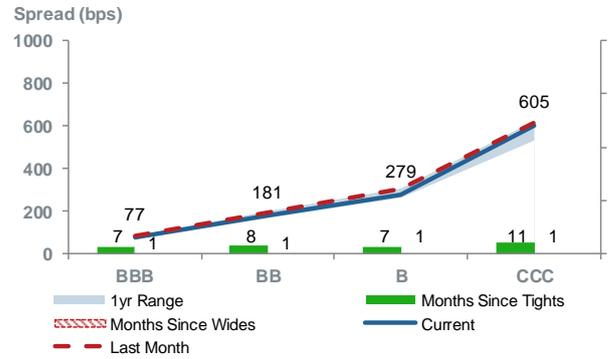
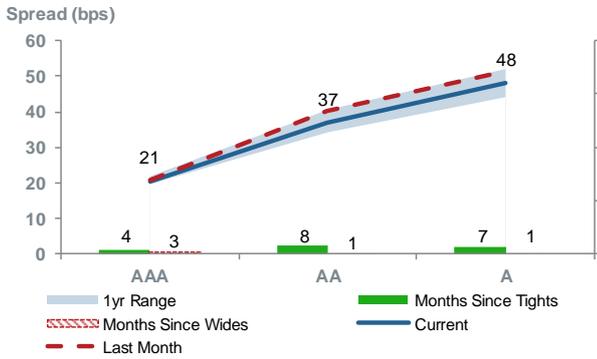
Figure 8: Global CDS sector spread summary



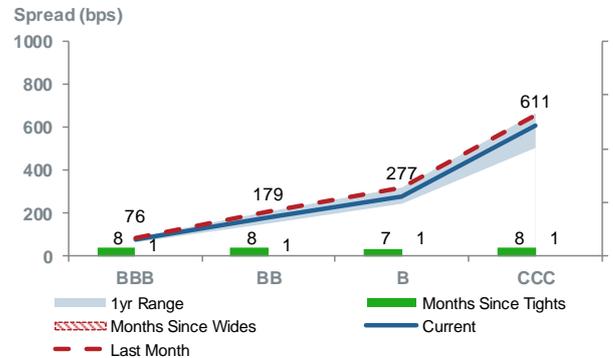
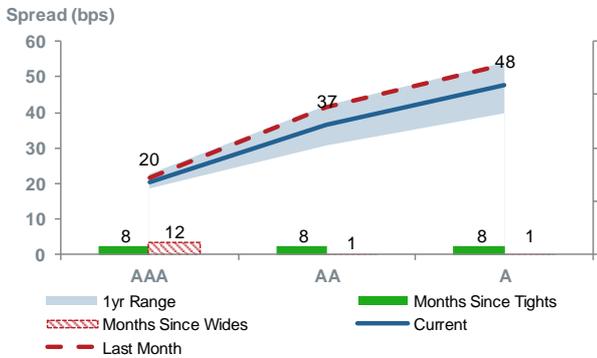
Source: Markit

Figure 9: October regional CDS sector spread summary

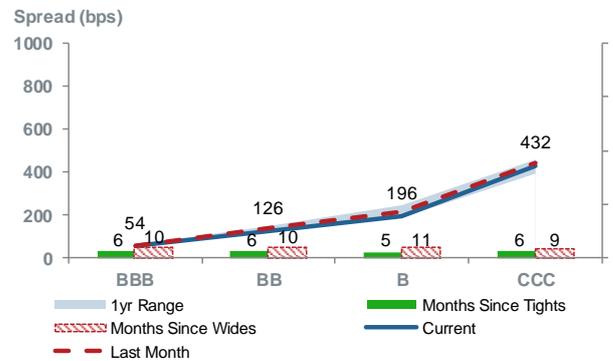
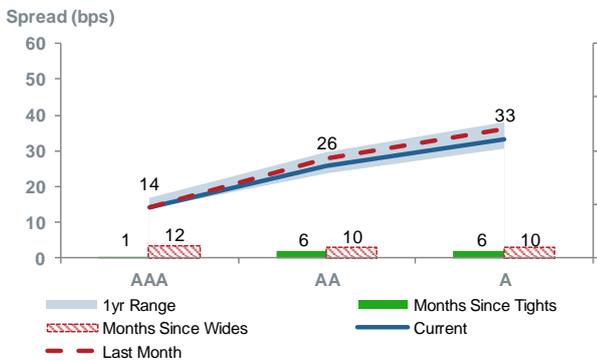
North America



Europe



Japan



Source: Markit

Table 7: October liquid 5yr corporate CDS best spread performance²

Best performers

	Ticker	Company	Sector	Country	Liq score	10/30 spread	Change	Perc change	One year tight	Date	One year wide	Date
Americas												
1	OMC	Omnicom Gp Inc	Consumer Services	USA	1	25	-23	-47.8%	25	10/29/15	58	8/24/15
2	DIS	Walt Disney Co	Consumer Services	USA	1	15	-12	-44.6%	14	4/20/15	39	8/24/15
3	CMCSA	Comcast Corp	Consumer Services	USA	1	31	-22	-40.8%	27	3/18/15	53	10/2/15
4	MMC	Marsh & McLennan Cos Inc	Financials	USA	1	25	-15	-37.8%	16	2/6/15	41	10/2/15
5	DOW	Dow Chem Co	Basic Materials	USA	1	77	-45	-36.5%	65	4/27/15	127	9/29/15
EMEA												
1	DAMLR	Daimler AG	Consumer Goods	DEU	1	58	-44	-43.1%	30	3/6/15	115	9/24/15
2	BMW	Bay Motoren Werke AG	Consumer Goods	DEU	1	69	-44	-39.1%	34	3/6/15	130	9/24/15
3	STORA	Stora Enso CORP	Basic Materials	FIN	2	129	-81	-38.7%	108	3/12/15	222	9/29/15
4	RENAUL	Renault	Consumer Goods	FRA	1	123	-76	-38.2%	63	3/6/15	204	9/29/15
5	VLOF	Valeo	Consumer Goods	FRA	2	77	-47	-38.1%	44	3/6/15	129	9/29/15
APAC												
1	CITOH	ITOCHE Corp	Industrials	JPN	1	69	-35	-33.4%	46	11/12/14	104	10/1/15
2	SUMI	Sumitomo Corp	Industrials	JPN	2	59	-28	-32.2%	41	7/20/15	87	9/30/15
3	MITCO	Mitsubishi Corp	Basic Materials	JPN	2	46	-20	-30.7%	30	5/1/15	68	10/1/15
4	MITSCO	Mitsui & Co Ltd	Energy	JPN	2	59	-26	-30.3%	38	6/12/15	86	10/1/15
5	MARUB	Marubeni Corp	Energy	JPN	2	99	-31	-23.9%	61	6/11/15	133	10/1/15

Source: Markit

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

Table 8: October liquid 5yr corporate CDS worst spread performance²

Worst performers

Ticker	Company	Sector	Country	Liq score	10/30 spread	Change	Perc change	One year tight	Date	One year wide	Date	
Americas												
1	YUM	YUM Brands Inc	Consumer Services	USA	2	214	+111	+108.1%	52	4/27/15	266	10/21/15
2	BAX	Baxter Intl Inc	Healthcare	USA	1	55	+14	+33.3%	19	2/6/15	56	10/26/15
3	MCD	McDonalds Corp	Consumer Services	USA	2	47	+12	+32.2%	27	11/12/14	58	10/21/15
4	CHK	Chesapeake Energy Corp	Energy	USA	1	1630	+369	+29.2%	186	11/25/14	1723	10/27/15
5	GPS	GAP INC	Consumer Services	USA	2	196	+44	+29.1%	70	4/13/15	212	10/19/15
EMEA												
1	GSK	Glaxosmithkline Plc	Healthcare	GBR	2	49	+9	+22.1%	25	3/11/15	49	10/29/15
2	ABNG	ABENGOA SA	Industrials	ESP	2	5125	+913	+21.7%	647	11/3/14	10278	9/22/15
3	DPW	Deutsche Post AG	Industrials	DEU	2	33	+5	+19.0%	16	3/17/15	33	10/29/15
4	NOVOBAN	NOVO BCO SA	Financials	PRT	2	637	+79	+14.2%	249	3/4/15	709	10/16/15
5	PUBFP	Publicis Groupe SA	Consumer Services	FRA	2	89	+11	+13.6%	35	3/17/15	89	10/30/15
APAC												
1	NIPPOST	Nippon Steel Sumitomo Metal Corp	Basic Materials	JPN	1	89	-1	-1.2%	39	12/4/14	94	10/1/15
2	PC	Panasonic Corp	Consumer Goods	JPN	2	50	-1	-2.4%	32	4/22/15	53	9/29/15
3	NPG-NPI	Nippon Paper Inds CoLtd	Basic Materials	JPN	2	128	-8	-6.1%	74	4/27/15	150	12/15/14
4	HITACH	Hitachi Ltd	Industrials	JPN	2	30	-2	-6.7%	20	4/29/15	33	11/3/14
5	AMCOR	Amcor Ltd	Industrials	AUS	2	98	-7	-7.1%	75	3/19/15	107	10/1/15

Source: Markit

Global corporate bonds

Corporate bonds fell back into favour in October, after September’s broad based selloff, driving the corporate bond segment of the Markit iBoxx Index Family month-over-month total returns higher across all three main issuing currencies (**Table 9**). Both euro and USD denominated bonds experienced the bulk of the gains, with investment grade bonds in both currencies surging 1.37% and 0.68% in October, respectively, as all constituent subsectors for those regions provided positive total returns for the month. The lower end of the credit curve outperformed the higher rated cohorts across all currencies, with GBP AAA-rated sub-index actually returning the least on the month at -1.07%.

The GBP market was less buoyant, as pound denominated bonds only posted 0.18% in total returns on the month, with health care and industrials among the few sub-indices that posted losses for the month. It is worth noting that most of the GBP indices that reported negative returns had a much higher duration than their USD/EUR equivalents, and are therefore more sensitive to the anticipation of higher rates.

iBoxx Liquid HY indices were among the strongest performers across the three currencies. USD was the best performer in the sector at 3.27% in October, but it still remains at -0.46% on the year. Euro was 3.24% and pound 2.43% on the month, bringing their year-to-date performance to 2.16% and 4.67%, respectively.

Basic materials and oil & gas sectors begin to recover

The risk-on mode seen in the US market became apparent in the basic materials and oil & gas sub-indices, which started the month as two of the most battered sectors, but ended the month outpacing the broader index with total returns of 1.90% and 1.24%, respectively, for the month. The positive performance in oil & gas can partially be attributed to the sharp rally in oil prices during the first nine days of the month (10% by October 9th), but that rally quickly faded on higher than expected supply, with crude oil closing only 2.3% on the month. The performance can partially be attributed to the 11bps tightening in basic materials and 17bps in oil & gas yields, which outpaced the 5bps tightening seen in the overall USD index. Not surprisingly, the increased demand for the sectors is mirrored in this month’s best performers list (**Table 10**), as energy and basic material names made up four of the five best performing bonds in the Americas in terms of price returns for the month. However, the asset class is still not out of the woods, as bonds from Peabody Energy and Seventy Seven Energy made their way onto the worst performing bonds list in that same region.

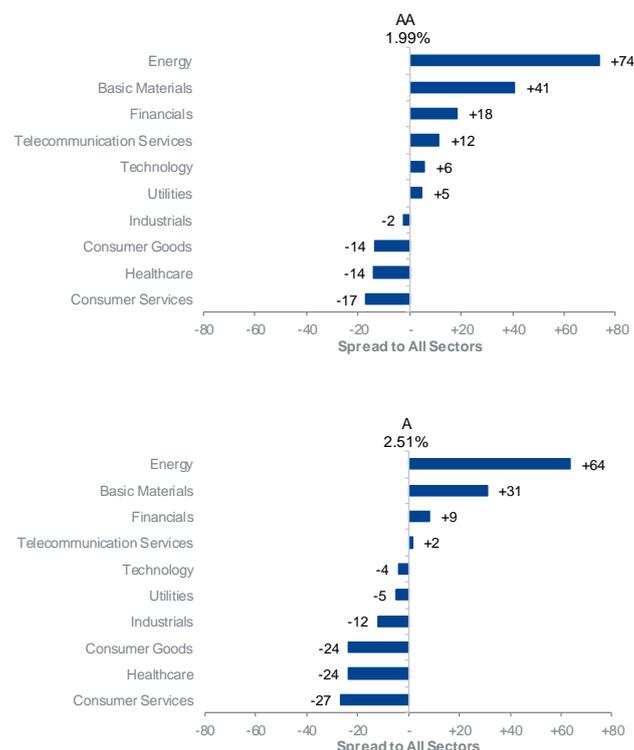
The price volatility was also evidenced in Europe, with the two sectors’ bonds also making up four of the five

worst EMEA performers. The worst performer in the region was New World Resources’ 8% bonds due April 2020, which declined by nearly 30 points to end the month at its one year low 39-00 price.

Talks of a possible Greek deal gives a big lift to some bond prices

In Europe, the ongoing negotiations around the Greek bailout saw the country’s bank bonds fluctuate over the month, with talks of a possible deal lifting the asset class. This overall positive momentum resulted in four Greek bank bonds featured among the five best performing bonds for the month. The Hellas 4.25% 2018 maturity bond was the best performer on the month, nearly doubling in price over the month to close at 74-00.

Figure 10: 5yr US AA and A sector spreads to entire rating category



Source: Markit

Table 9: October corporate bond US and European iBoxx indices performance

Index	Total Return						Yield						Duration		
	Month			YTD			Current			Month			\$	€	£
	\$	€	£	\$	€	£	\$	€	£	\$	€	£			
Corporates	+0.68%	+1.37%	+0.18%	+0.56%	-0.53%	-0.25%	4.14%	1.70%	3.96%	-0.05%	-0.23%	+0.03%	6.5	5.0	7.9
Corporates AAA	+0.11%	+1.00%	-1.07%	+0.15%	-0.30%	+0.49%	3.56%	1.36%	3.01%	+0.02%	-0.13%	+0.09%	8.5	6.8	14.1
Corporates AA	+0.21%	+1.03%	-0.33%	+1.35%	-0.38%	-0.13%	3.47%	1.23%	3.36%	+0.01%	-0.16%	+0.07%	6.2	5.4	8.9
Corporates A	+0.45%	+1.18%	+0.01%	+1.22%	-0.44%	-0.51%	3.66%	1.43%	3.86%	-0.02%	-0.20%	+0.03%	6.1	5.1	8.6
Corporates BBB	+1.06%	+1.67%	+0.45%	-0.34%	-0.63%	-0.06%	4.77%	2.15%	4.25%	-0.09%	-0.28%	+0.00%	7.0	4.9	7.0
Banks	+0.63%	+1.10%	-0.03%	+2.10%	+0.20%	+0.74%	3.53%	1.36%	3.88%	-0.06%	-0.22%	+0.06%	4.8	4.2	6.3
Basic Materials	+1.90%	+1.29%	+1.34%	-2.76%	-5.15%	-6.76%	5.39%	2.47%	4.64%	-0.17%	-0.23%	-0.11%	6.8	5.0	7.2
Consumer Goods	+0.61%	+1.90%	+0.38%	+0.81%	-1.74%	-0.28%	3.79%	1.65%	3.28%	-0.04%	-0.31%	-0.02%	6.1	5.4	5.2
Consumer Services	+0.44%	+1.64%	-0.04%	-0.71%	-0.79%	-0.95%	4.33%	1.78%	3.76%	-0.02%	-0.22%	+0.06%	8.2	5.9	8.6
Financials	+0.57%	+1.30%	-0.09%	+2.01%	+0.07%	+0.56%	3.66%	1.68%	4.04%	-0.05%	-0.24%	+0.08%	5.1	4.5	6.8
Health Care	+0.49%	+1.45%	-0.20%	+0.43%	-0.04%	-0.71%	3.90%	1.48%	3.72%	-0.02%	-0.24%	+0.04%	7.6	6.0	12.2
Industrials	+0.54%	+0.84%	-0.13%	+0.53%	-0.16%	+0.49%	3.95%	1.41%	3.71%	-0.01%	-0.14%	+0.06%	7.2	4.8	8.4
Insurance	+0.71%	+2.91%	+0.02%	+1.23%	-0.06%	-0.26%	4.32%	3.15%	4.94%	-0.05%	-0.40%	+0.08%	7.7	6.0	7.0
Non-Financials	+0.74%	+1.43%	+0.36%	-0.30%	-0.99%	-0.78%	4.34%	1.72%	3.91%	-0.05%	-0.23%	+0.00%	7.4	5.5	8.6
Oil & Gas	+1.24%	+1.91%	+0.22%	-1.16%	-0.99%	+0.38%	4.92%	1.84%	3.38%	-0.11%	-0.31%	+0.01%	7.1	6.0	6.8
Technology	+0.13%	+1.29%	N/A	+0.44%	-0.45%	N/A	3.75%	1.39%	N/A	+0.03%	-0.15%	N/A	6.7	7.2	N/A
Telecommunications	+1.10%	+1.37%	+0.48%	+0.06%	-0.46%	-0.86%	4.65%	1.80%	4.20%	-0.07%	-0.21%	-0.01%	8.5	5.6	8.4
Utilities	+0.19%	+1.23%	+0.56%	-0.37%	-0.40%	-0.84%	4.37%	1.74%	4.07%	+0.02%	-0.19%	-0.02%	8.3	5.3	9.5
High Yield Liquid High Yield	+3.27%	+3.24%	+2.43%	-0.46%	+2.16%	+4.67%	7.16%	4.85%	5.82%	-0.52%	-0.73%	-0.55%	4.0	3.5	3.4
Convertible CVBX	+3.73%	+2.63%	+1.29%	+0.40%	+5.50%	+2.76%	0.83%	5.80%	7.62%	-0.67%	-0.49%	-0.13%	6.7	4.5	5.6
Contingent Convertible	+3.89%	+2.63%	+1.29%	+5.36%	+5.50%	+2.76%	7.03%	5.80%	7.62%	-0.62%	-0.49%	-0.13%	4.9	4.5	5.6

Source: Markit

Table 10: October global corporate bond best price performance

Best performers

	Ticker	Issue	Sector	Country	CCY	Liq score	10/30 price	Change	Perc change	One year low	Date	One year high	Date
Americas													
1	EGYXXI-EGCI	Energy XXI Gulf Coast, Inc. 9.25 12/2017	Energy	USA	USD	1	30.00	10.00	+50.0%	20.00	9/30/15	97.77	11/3/14
2	OISA	Oi S.A. 5.75 2/2022	Telecom Services	BRA	USD	1	62.50	17.50	+38.9%	45.00	9/30/15	95.85	11/27/14
3	ODEBDRI	Odebrecht Drilling Norbe VIII/IX Ltd. 6.35 6/2021	Energy	BRA	USD	2	48.00	13.00	+37.1%	35.00	9/30/15	105.10	11/6/14
4	CSNRES	CSN Resources S.A. 6.5 7/2020	Basic Materials	BRA	USD	1	58.25	14.25	+32.4%	42.00	9/25/15	102.93	11/3/14
5	ODEBOFF	Odebrecht Offshore Drilling Finance Limited 6.75 10/2022	Energy	BRA	USD	1	33.00	8.00	+32.0%	25.00	9/30/15	104.60	11/6/14
EMEA													
1	ERBH	ERB HELLAS PLC 4.25 6/2018	Financials	GRC	EUR	2	74.00	36.00	+94.7%	22.00	7/9/15	91.75	12/8/14
2	HEMABO	HEMA BondCo II B.V. 8.5 12/2019	Consumer Services	NLD	EUR	2	43.00	16.00	+59.3%	26.00	9/9/15	70.75	11/3/14
3	PIRB-PGF	Piraeus Group Finance Plc 5 3/2017	Financials	GRC	EUR	1	64.00	23.00	+56.1%	23.00	7/9/15	95.50	12/8/14
4	NATGRE-NGBFin	NBG Finance Plc 4.375 4/2019	Financials	GRC	EUR	2	79.00	26.00	+49.1%	22.00	7/9/15	89.88	12/8/14
5	ALPHBK-CrGrPlc	Alpha Credit Group Plc 3.375 6/2017	Financials	GRC	EUR	1	88.50	25.00	+39.4%	27.00	7/9/15	93.89	12/8/14
APAC													
1	GLORPRO	Glorious Property Holdings Limited 13.25 3/2018	Financials	CHN	USD	1	86.50	30.50	+54.5%	50.00	1/22/15	86.50	10/30/15
2	ANTOOIL	Anton Oilfield Services Group 7.5 11/2018	Energy	CHN	USD	2	49.00	17.00	+53.1%	32.00	10/2/15	100.25	11/3/14
3	MIEHOL	MIE Holdings Corporation 7.5 4/2019	Energy	CHN	USD	2	58.00	12.00	+26.1%	45.00	10/6/15	98.50	11/3/14
4	ROLTAME	Rolta Americas Llc 8.875 7/2019	Technology	IND	USD	1	51.00	8.50	+20.0%	39.50	10/15/15	100.12	11/5/14
5	INDOEN	Indo Energy Finance B.V. 7 5/2018	Energy	IDN	USD	2	55.25	7.75	+16.3%	47.50	10/5/15	95.00	11/3/14

Source: Markit

Table 11: October global corporate bond worst price performance

Worst performers

Ticker	Issue	Sector	Country	CCY	Liq score	10/30 price	Change	Perc change	One year low	Date	One year high	Date
Americas												
1 MEC	Murray Energy Corporation 11.25 4/2021	Energy	USA	USD	1	27.50	-21.50	-43.9%	27.50	10/30/15	103.37	5/5/15
2 EMPRICA	Empresas ICA, S.A.B. de C.V. 8.9 2/2021	Industrials	MEX	USD	4	27.75	-21.25	-43.4%	27.75	10/30/15	107.25	11/14/14
3 PLCOAL	Peabody Energy Corporation 6 11/2018	Energy	USA	USD	1	17.50	-8.50	-32.7%	17.50	10/30/15	99.00	11/12/14
4 ESASI	Essar Steel Algoma Inc. 9.5 11/2019	Basic Materials	CAN	USD	2	38.00	-18.00	-32.1%	36.00	10/21/15	103.00	11/19/14
5 SEVENTS	Seventy Seven Energy Inc. 6.5 7/2022	Energy	USA	USD	2	30.25	-9.99	-24.8%	30.25	10/30/15	66.21	6/25/15
EMEA												
1 NWRNV	New World Resources N.V. 8 4/2020	Energy	CZE	EUR	3	39.00	-16.00	-29.1%	39.00	10/30/15	80.00	11/27/14
2 WASTITA	WASTE ITALIA S.P.A. 10.5 11/2019	Industrials	ITA	EUR	2	55.00	-20.00	-26.7%	45.00	10/28/15	92.25	12/4/14
3 NSINO	Norske Skogindustrier Asa 7 6/2017	Basic Materials	NOR	EUR	1	56.00	-9.00	-13.8%	54.00	11/24/14	77.00	7/15/15
4 PACIDRI	Pacific Drilling S.A. 5.375 6/2020	Energy	LUX	USD	1	51.75	-7.50	-12.7%	50.50	10/27/15	90.00	11/3/14
5 TRAFBEH	Trafigura Beheer B.V. 7.5 12/2099	Energy	NLD	SGD	5	86.50	-8.75	-9.2%	84.00	10/5/15	102.85	11/17/14
APAC												
1 PACIAND	Pacific Andes Resources Development Limited 8.5 7/2017	Consumer Goods	HKG	SGD	2	50.00	-15.00	-23.1%	50.00	10/30/15	99.05	11/3/14
2 SEAGHDD	Seagate HDD Cayman 5.75 12/2034	Technology	SGP	USD	2	84.51	-9.64	-10.2%	84.01	10/29/15	110.57	2/25/15
3 BCPSIN	BCP (Singapore) VI Cayman Financing Co. Ltd. 8 4/2021	Technology	CHN	USD	1	86.75	-7.25	-7.7%	86.75	10/30/15	103.00	11/5/14
4 OFFSGRO	Offshore Group Investment Limited 7.5 11/2019	Energy	IND	USD	1	29.25	-2.25	-7.1%	27.00	10/27/15	85.53	11/3/14
5 HOC	Harvest Operations Corp. 6.875 10/2017	Energy	KOR	USD	2	83.00	-4.00	-4.6%	82.50	10/29/15	102.50	11/3/14

Source: Markit

Sovereigns

Italian sovereign CDS was the best performer on a spread percentage basis in the G7 for October, as it tightened 19.2bps to close the month at 102.5bps (**Table 12**). The US ended the month at a new one-year wide, as uncertainty regarding the US government's debt ceiling weighed on spreads, albeit in a very thinly traded market.

Seven countries on the best performers list after reaching one-year wides in September

Thailand (-22.7%), Philippines (-22.3%), South Korea (-22.1%), Indonesia (-19.6%), Turkey (-18.9%), Australia (-18.8%) and China (-18.1%) reached one year wides in September, but retraced back significantly and were all on this month's best performers list (**Table 13**). Contrary to last month, the overall list was dominated by the APAC region (seven of ten). Venezuela, the sole CDS on the list from the Americas, was the best performer on the month at -26.8%, potentially due to optimism regarding political changes driven by upcoming elections in December.

Worst CDS performers were really not that bad

The overall improvement in corporate credit sentiment is ironically best illustrated by this month's worst performers list (**Table 13**), with the UK widening the most on a percentage basis at 10.1% at a meagre 2bps on the month. Israel widened the most on a spread basis at 5bps, with the remainder of the list consisting of four Scandinavian countries that widened 1bp or less and four countries that actually tightened on the month.

Americas best bond performers were dominated by Central American countries

Mirroring CDS, Venezuela's 7% 12/2018 bond issue was the best price performer in the Americas (18.6%), but it was the issues from Central American countries that dominated the list. Issues from Mexico (9.3%),

Ecuador (9.3%) and Costa Rica (6.2%) closed in the top five for the region.

In other Latin American news, investors are welcoming the initial election results out of Argentina, as the opposition candidate Mauricio Macri had an unexpectedly high percentage of votes and could unseat the Peronist party from power. The incumbent party's 12 year rule has been linked to some of the country's significant financial troubles, so the change in leadership would be welcome by some investors. There were no candidates that received the required percentage of votes, so the final run-off vote will take place on November 22nd. There was also an announcement at the end of the month that a US judge added \$6.1bn in Argentine debt to be paid ahead of the country's \$28bn in restructured debt's interest payments.

Bonds denominated in the issuing country's currency were the best performers in EMEA and APAC

Naira denominated Federal Republic of Nigeria 12.1493% 7/2034 bonds were the best performer in EMEA at 10.4% on the month. Republic of Indonesia's 6.75% 4/2043 rupiah denominated bonds at 9.9% and Malaysia's 4.254% 5/2035 ringgit bonds at 6.3% were the best performers in APAC. Both the rupiah and ringgit were higher on the month at 2.1% and 6.6%, respectively.

Table 12: October G7 industrialised countries ranked by percent change in CDS spreads

			10/30 10yr bond yield	CDS change	10/30 CDS	Perc change	One year tight	Date	One year wide	Date
1	ITALY	Italy	1.48%	-19.2	102.5	-15.8%	99.3	1/26/15	161.2	12/16/14
2	JAPAN	Japan	0.30%	-4.9	43.5	-10.1%	34.0	8/18/15	73.4	12/16/14
3	FRTR	France	0.87%	-2.8	30.0	-8.6%	28.7	6/3/15	54.8	11/13/14
4	DBR	Germany	0.53%	-1.7	13.0	-11.5%	13.0	10/23/15	21.0	11/7/14
5	CAN	Canada	1.54%	+0.4	25.5	+1.8%	18.2	2/9/15	25.5	10/28/15
6	UKIN	United Kingdom	1.92%	+1.5	16.7	+10.1%	15.2	9/30/15	21.9	4/15/15
7	USGB	United States	2.14%	+3.4	19.9	+20.5%	14.3	9/18/15	19.9	10/30/15

Source: Markit

Table 13: October liquid sovereign 5yr CDS best and worst spread performance²

			Liq Score	10/30 spread	Change	Perc change	One year tight	Date	One year wide	Date
Best Performers										
1	VENZ	Venezuela	1	4850	-1780	-26.8%	1812	11/3/14	8219	1/22/15
2	RUSSIA	Russia	1	271	-87	-24.3%	252	11/3/14	627	1/30/15
3	THAI	Thailand	1	130	-38	-22.7%	82	12/8/14	172	9/29/15
4	PHILIP	Philippines	1	105	-30	-22.3%	80	3/2/15	143	9/29/15
5	KOREA	South Korea	1	61	-17	-22.1%	46	5/18/15	82	9/29/15
6	INDON	Indonesia	1	217	-53	-19.6%	131	3/2/15	274	9/29/15
7	TURKEY	Turkey	1	251	-58	-18.9%	155	12/2/14	323	9/29/15
8	AUSTLA	Australia	2	45	-11	-18.8%	30	3/6/15	56	9/29/15
9	CHINA	China	1	105	-23	-18.1%	77	12/8/14	135	9/29/15
10	SPAIN	Spain	1	89	-20	-18.1%	76	1/23/15	129	7/7/15
Worst Performers³										
1	UKIN	United Kingdom	2	17	+2	+10.1%	15	9/30/15	22	4/15/15
2	ISRAEL	Israel	2	76	+5	+7.8%	64	8/3/15	83	12/16/14
3	SWED	Sweden	2	14	+1	+3.8%	13	12/22/14	17	6/29/15
4	NETHRS	Netherlands	1	16	+0.3	+2.0%	16	10/21/15	26	11/3/14
5	DENK	Denmark	2	15	+0.1	+0.4%	15	9/18/15	26	11/10/14
6	NORWAY	Norway	2	14	+0.0	+0.1%	13	12/22/14	16	8/12/15
7	PORTUG	Portugal	1	171	-3	-1.9%	119	3/11/15	234	7/7/15
8	KAZAKS	Kazakhstan	2	304	-11	-3.5%	169	11/3/14	380	12/16/14
9	EMIABD	Emirate of Abu Dhabi	2	76	-3	-3.6%	55	7/27/15	80	9/29/15
10	AUST	Austria	1	26	-1	-4.0%	22	12/5/14	31	6/29/15

Source: Markit

³ The United States (per Table 12) would have been the worst performer in October, from a percentage basis, but it did not qualify as 'liquid' due to its current 3 liquidity score driven by very low quote counts in October.

Table 14: October sovereign bond best price performance

Best performers

Ticker	Issue	CCY	Liq score	10/30 price	Change	Perc change	10/30 yield	One year low	Date	One year high	Date
Americas											
1 VENZ	Bolivarian Republic of Venezuela 7 12/2018	USD	1	43.00	+6.75	+18.6%	48.19%	32.50	1/21/15	66.75	11/3/14
2 MEX	United Mexican States 3 3/2045	EUR	2	89.88	+7.64	+9.3%	4.04%	81.92	9/29/15	105.40	3/23/15
3 BRAZIL	Federative Republic of Brazil 2.875 4/2021	EUR	1	91.68	+7.78	+9.3%	6.44%	83.89	9/30/15	104.14	1/28/15
4 ECUA	Republic of Ecuador 10.5 3/2020	USD	2	82.50	+7.00	+9.3%	18.84%	75.00	10/9/15	109.50	5/14/15
5 COSTAR	Republic of Costa Rica 5.625 4/2043	USD	2	77.00	+4.50	+6.2%	8.14%	72.50	9/30/15	90.50	4/15/15
EMEA											
1 NGERIA	Federal Republic of Nigeria 12.1493 7/2034	NGN	4	87.24	+8.24	+10.4%	15.63%	79.00	10/6/15	89.45	10/21/15
2 TURKEY	Republic of Turkey 4.875 4/2043	USD	2	90.20	+7.20	+8.7%	6.17%	82.13	9/29/15	105.50	1/29/15
3 RUSSIA	Russian Federation 5.625 4/2042	USD	2	100.00	+6.75	+7.2%	6.14%	75.40	12/16/14	103.13	4/9/15
4 ITALY	Republic of Italy 2.55 9/2041	EUR	3	127.62	+6.96	+5.8%	N/A	105.53	11/5/14	154.01	3/13/15
5 SPAIN	Kingdom of Spain 1 11/2030	EUR	3	100.47	+5.47	+5.8%	N/A	90.92	7/6/15	107.56	4/29/15
APAC											
1 INDON	Republic of Indonesia 6.75 4/2043	IDR	4	75.26	+6.77	+9.9%	10.18%	68.49	9/30/15	89.61	3/4/15
2 MALAYS	Malaysia 4.254 5/2035	MYR	2	97.05	+5.76	+6.3%	4.95%	91.29	9/30/15	100.00	7/10/15
3 CHINA	People's Republic of China 3.96 8/2040	CNY	5	100.08	+5.16	+5.4%	4.29%	93.75	5/29/15	102.12	2/24/15
4 REPUOFB A	Republic of Armenia 7.15 3/2025	USD	2	99.00	+4.75	+5.0%	8.03%	94.00	8/24/15	103.13	5/29/15
5 KAZAKS	Republic of Kazakhstan 3.875 10/2024	USD	2	94.00	+4.00	+4.4%	5.28%	84.00	12/16/14	98.62	4/29/15

Source: Markit

Table 15: October sovereign bond worst price performance

Worst performers

Ticker	Issue	CCY	Liq score	10/30 price	Change	Perc change	10/30 yield	One year low	Date	One year high	Date
Americas											
1 COLOM	Republic of Colombia 11.25 10/2018	COP	3	111.61	-1.54	-1.4%	6.38%	111.61	10/30/15	120.32	1/29/15
2 USGB	United States of America 5.25 2/2029	USD	1	132.68	-1.65	-1.2%	2.26%	128.82	6/26/15	140.61	1/30/15
3 MEX	United Mexican States 7.5 4/2033	USD	2	132.50	-1.50	-1.1%	4.64%	130.00	10/2/15	145.85	2/3/15
4 CAN	Canada 3.25 6/2021	CAD	1	112.21	-0.39	-0.3%	0.96%	109.35	11/6/14	115.40	2/2/15
5 CHILE	Republic of Chile 5.5 8/2020	USD	2	103.80	-0.28	-0.3%	4.55%	103.37	10/28/15	106.99	4/27/15
EMEA											
1 EGYPT	Arab Republic of Egypt 6.875 4/2040	USD	2	89.88	-3.13	-3.4%	7.50%	89.00	10/23/15	106.53	11/28/14
2 PORTUG	Portuguese Republic 4.1 4/2037	EUR	2	110.89	-3.20	-2.8%	3.18%	97.45	11/4/14	136.45	3/16/15
3 ISRAEL	State of Israel 6.25 10/2026	ILS	3	140.87	-3.73	-2.6%	1.78%	134.95	12/17/14	151.09	4/21/15
4 SPAIN	Kingdom of Spain 5.25 4/2029	GBP	3	112.13	-2.75	-2.4%	3.82%	110.67	11/3/14	121.88	1/30/15
5 LITHUN	Republic of Lithuania 2.125 10/2026	EUR	1	107.00	-2.43	-2.2%	1.21%	98.39	11/3/14	116.79	3/27/15
APAC											
1 PHILIP	Republic of the Philippines 9.25 11/2034	PHP	4	150.51	-16.76	-10.0%	4.12%	148.53	5/4/15	167.27	9/30/15
2 CHINA	People's Republic of China 4.3 10/2044	CNY	5	91.79	-7.56	-7.6%	4.34%	91.37	10/26/15	106.58	8/31/15
3 SRILAN	Democratic Socialist Republic of Sri Lanka 6.125 6/2025	USD	2	94.00	-2.00	-2.1%	6.69%	94.00	10/30/15	99.88	5/28/15
4 KOREA	Republic of Korea 9/2019	KRW	3	100.43	-1.91	-1.9%	N/A	99.37	7/3/15	102.34	9/22/15
5 BHREIN	Kingdom of Bahrain 6 9/2044	USD	2	82.50	-1.25	-1.5%	7.36%	82.25	8/24/15	103.36	11/3/14

Source: Markit

Municipal bonds

The municipal bond market continued to focus on the FOMC for guidance on rates going into 2016, while also digesting the news out of Puerto Rico and Illinois. The market continues to assess how the new SEC liquidity proposal could impact certain municipal bonds, with potential negative implications on smaller issues, longer duration and high yield municipal bonds if it is implemented exactly as drafted. At the Federal level, the US debt ceiling was suspended until March 2017, allowing the incoming president's administration to drive the policy direction.

News on Puerto Rico indicates more ideas and proposals than actual solutions

There was plenty of news during the month about potential solutions to Puerto Rico's debt crisis, but we do not believe that there was any real substance within most of the reports. The market appears to believe that any legislation that can be viewed as a "bailout" is completely off the table, given the current sentiment of the US population, with an amendment to the US bankruptcy code allowing US commonwealths and protectorates to file for bankruptcy protection being the most anticipated outcome. Puerto Rico's population are US citizens and do have representation in Congress that can propose and debate legislation, but they do not have voting rights, given that they are a commonwealth and not a US state. Despite the limited substance in the news, continued media attention to the dire financial situation on the island continues to highlight why the negative socioeconomic impact of the deterioration in infrastructure, pensions and utilities should be addressed by legislation before it deteriorates much further.

Chicago passes the city budget with a sharp increase in property taxes

In other news, Chicago's city council approved both the city's budget and the mayor's property tax increase (record \$543m tax hike over next four years), with both designed to address pension deficiencies. The news was met with a tepid response from rating agencies due to a combination of certain dependencies on actions by the State of Illinois and Illinois Supreme Court and projections for increases in pension contributions.

Table 16: October municipal revenue bond best price performance

Best performers

	Issuer	Issue	Liq score	10/30 price	Change	Perc change	One year low	Date	One year high	Date
1	Puerto Rico Sales Tax Fing Corp Sales Tax Rev	Sales Tax Revenue - First Subordinate 2010-A 5.5 8/2042	2	45.80	+3.79	+9.0%	36.50	9/1/15	74.49	11/14/14
2	Puerto Rico Sales Tax Fing Corp Sales Tax Rev	First Subordinate Sales Tax Revenue - 2010-C 5.375 8/2036	2	45.75	+3.63	+8.6%	37.32	8/5/15	74.62	11/21/14
3	Tobacco Settlement Auth Iowa Tob Settlement Rev	Tobacco Settlement Asset-Backed - 2005-C 5.5 6/2042	3	94.79	+5.94	+6.7%	79.74	11/12/14	94.79	10/30/15
4	Tobacco Settlement Fing Corp N J	Tobacco Settlement Asset-Backed (Senior) - 2007 1-A 4.75 6/2034	1	80.96	+3.60	+4.7%	72.69	7/6/15	81.00	10/21/15
5	Tobacco Settlement Fing Corp N J	Tobacco Settlement Asset-Backed (Senior) - 2007 1-A 5 6/2041	1	80.99	+2.70	+3.4%	73.37	7/17/15	82.00	10/20/15
6	Golden St Tob Securitization Corp Calif Tob Settlement Rev	Tobacco Settlement Asset-Backed Senior Current Interest - 2007 A 5.125 6/2047	1	84.50	+2.06	+2.5%	74.45	11/3/14	86.13	10/21/15
7	California Edl Facs Auth Rev	Revenue - Stanford University 2010 U-1 5.25 4/2040	3	134.30	+2.08	+1.6%	125.99	5/20/15	147.38	1/30/15
8	Liberty N Y Dev Corp Rev	Revenue - Goldman Sachs Headquarters 2007 5.5 10/2037	3	122.25	+1.75	+1.4%	117.43	6/10/15	128.53	1/30/15
9	Chicago Ill Wtr Rev	Second Lien Water Revenue Refunding, - 2001 5.75 11/2030	4	117.62	+1.54	+1.3%	114.19	9/11/15	133.49	1/29/15
10	Nassau Cnty N Y Tobacco Settlement Corp	Tobacco Settlement Asset-Backed - 2006 A-3 5 6/2035	2	89.21	+0.79	+0.9%	77.46	11/12/14	89.21	10/30/15

Source: Markit

Table 17: October municipal revenue bond worst price performance

Worst performers

	Issuer	Issue	Liq score	10/30 price	Change	Perc change	One year low	Date	One year high	Date
1	Puerto Rico Pub Fin Corp	Bonds - Commonwealth Appropriation Bonds 2011-B 5.5 8/2031	1	7.13	-8.00	-52.9%	7.13	10/30/15	52.97	1/9/15
2	Puerto Rico Sales Tax Fing Corp Sales Tax Rev	Sales Tax Revenue - Senior 2011-C 5 8/2040	1	59.63	-2.52	-4.1%	58.60	8/10/15	76.90	12/3/14
3	M-S-R Energy Auth Calif Gas Rev	Gas Revenue - 2009-A 6.5 11/2039	3	132.56	-2.69	-2.0%	127.08	5/25/15	142.67	1/20/15
4	Puerto Rico Elec Pwr Auth Pwr Rev	Power Revenue - 2010-Aaa 5.25 7/2030	3	63.62	-1.14	-1.8%	49.00	12/5/14	68.00	9/2/15
5	Wayne Cnty Mich Arpt Auth Rev	Airport Revenue - Detroit Metropolitan Wayne County Airport 2014 5 12/2039	3	111.25	-1.75	-1.6%	107.82	6/3/15	114.62	1/30/15
6	Southern Ill Univ Revs	Housing And Auxiliary Facilities System Revenue - 2012 B-1 5 4/2026	5	108.97	-1.70	-1.5%	108.72	6/11/15	116.05	1/30/15
7	South Dakota St Health & Edl Facs Auth Rev	Revenue - 2014-B 5 11/2044	3	108.20	-1.66	-1.5%	106.54	5/20/15	115.24	1/30/15
8	Puerto Rico Comwlth Aqueduct & Swr Auth Rev	Revenue - 2012-A 5 7/2030	3	69.09	-1.06	-1.5%	62.61	7/3/15	72.57	7/20/15
9	Port Auth N Y & N J	Consolidated - 2012-175 5 12/2025	3	119.23	-1.82	-1.5%	115.35	6/11/15	123.09	1/20/15
10	Chicago Ill Midway Arpt Rev	Chicago Midway Airport Second Lien Revenue & Revenue Refu - 2014 5 1/2031	3	106.97	-1.52	-1.4%	104.05	9/11/15	113.77	1/30/15

Source: Markit

Securitised products

There was a generally negative tone for most securitised products in October, with the exception of some agency MBS, which could see some benefits from the increasing likelihood of a Fed rate increase in December in the form of anticipated slower prepayments. The steady stream of issuance of CMBS and consumer ABS continues to put pressure on spreads (**Figure 12** and **Table 20**), with the former more linked to the perceived lower quality of current underwriting standards and the latter more likely linked to supply pressure. European ABS markets remained relatively stable on the month, with a fair amount of new issuance being absorbed into the market without any noticeable widening of spreads.

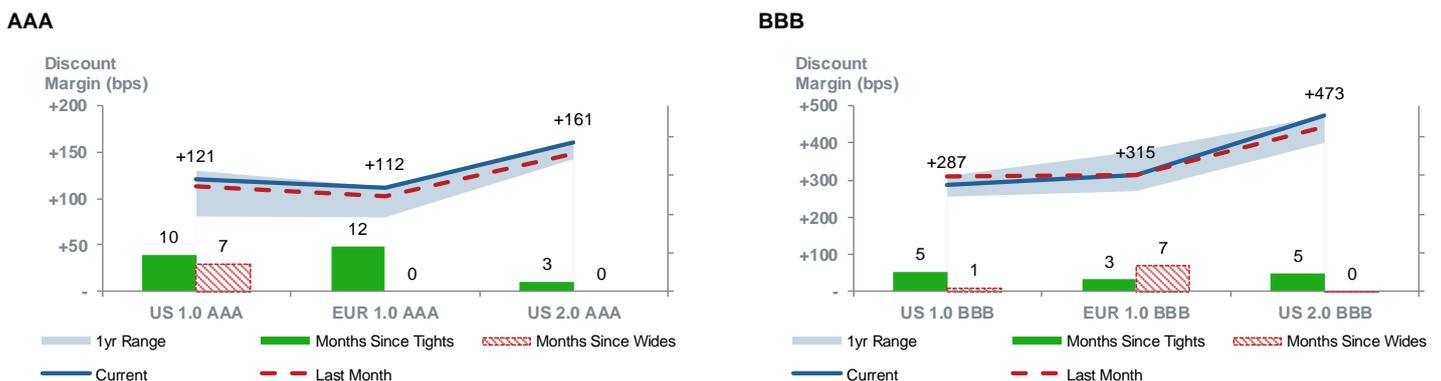
Legacy non-agency MBS trading volume picked up towards the end of the month and spreads now remain in a holding pattern for most of the sector after losing a large portion of the year's gains over the past three months. Legacy liquidity does appear to be among the strongest in the non-agency space given the increased demand for cash flow stability, as evidenced by some of the larger legacy BWICs being absorbed pretty well during the month. New issue and CRT paper continues to dominate trading volume, but spreads remain relatively soft.

The agency MBS market generally fared well versus most other securitised products in October, with low rate volatility for the first half of the month benefiting the product. TRID mortgage originator disclosure rules went into effect at the beginning of the month, with the market generally expecting a modest slowdown in prepayments due to the complex and resource intensive document processing process. Lenders may be forced to temporarily stop offering certain loan products until their systems are fully compliant with the new process. On the CMO side, spreads were generally tighter (**Table 19**) and October floating rate issuance increased versus PACs in the wake of more clarity on the timing of a Fed rate increase. 5.0 FN/FH medium loan balance pools were the best performer

on the month for loan size stories at 0-16 versus September (**Table 18**) and 5.0 125+ LTV HARP pools were the best overall performer on the month at 0-22.

October CLO issuance picked up for the first time since the beginning of the summer, with spreads continuing to come under pressure as loan downgrade risk may continue to increase in the wake of lower energy and commodity prices. AAA spreads generally fared worse than subordinate bonds on the month (**Figure 11**), as EUR 1.0 and US 2.0 AAAs hit new one-year wides in October. Newly issued AAA spread tiering is very wide, with prints ranging from mid-to-high 140s to low 170s basis points discount margin (DM). 2.0 BBBs have widened out to ranges of mid-to-high 400s to mid-to-high 500s basis points DM, while BBBs remain clustered in the high 700s to low 800s basis points, further segmented by manager tiering and weaker portfolios with distressed names and heavy commodity exposure.

Figure 11: US and European CLO AAA/BBB spread summary



Source: Markit

Table 18: Fannie Mae / Freddie Mac 30yr specified pools pay-ups in ticks (1/32 points)

Coupon	October 2015						Change vs September 2015					
	3	3.5	4	4.5	5	5.5	3	3.5	4	4.5	5	5.5
LLB (85K)	0-16	1-02	1-26	2-14	3-01	1-30	-0-01	+0-05	+0-13	+0-09	+0-14	0-00
MLB (110K)	0-13	0-26	1-17	2-09	2-21	2-15	-0-01	+0-04	+0-04	+0-13	+0-16	+0-06
HLB (150K)	0-11	0-18	1-05	1-19	1-12	1-03	-0-03	+0-04	+0-05	+0-03	-0-05	+0-06
New Prod	0-02	0-02	0-05	0-15	0-18	0-00	+0-01	-0-01	-0-02	+0-06	0-00	0-00
Low FICO	0-19	0-05	0-09	0-14	0-15	0-28	-0-06	+0-02	+0-01	+0-01	-0-05	-1-01
Investor	0-08	0-06	0-07	0-11	0-22	1-25	-0-03	-0-02	+0-01	0-00	+0-02	0-00
MHA <90	0-05	0-05	0-07	0-12	0-21	2-12	-0-03	-0-01	+0-02	-0-01	-0-06	0-00
MHA <95	0-09	0-09	0-13	0-17	0-23	0-27	+0-03	+0-04	+0-04	-0-01	+0-04	-0-01
MHA <100	0-11	0-10	0-09	0-19	0-24	1-02	-0-01	+0-04	+0-01	-0-02	-0-02	-0-01
MHA <105	0-19	0-08	0-16	0-16	0-28	2-05	-0-05	0-00	-0-01	-0-02	0-00	-0-03
<125 LTV	0-05	0-11	1-04	1-26	2-24	1-31	+0-02	+0-02	-0-03	-0-03	-0-10	-0-15
125+ LTV	0-26	0-14	1-03	2-07	2-20	3-28	0-00	+0-02	-0-01	+0-03	+0-22	+0-12

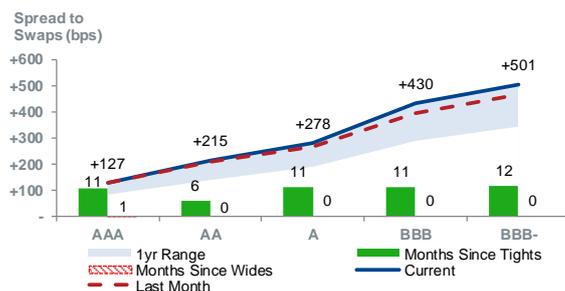
Source: Markit

Table 19: Fannie Mae / Freddie Mac 2015 production agency CMO spreads - 30yr WAM 4.0% coupon

	Spread to Treasuries (bps)	October-September change (bps)
Sequential		
2-yr	+65	-5
5-yr	+55	-5
10-yr	+85	-
PAC		
2-yr	+70	-15
5-yr	+85	-10
10-yr	+95	+5

Source: Markit

Figure 12: CMBS credit curve spread to swaps



Source: Trepp

Table 20: Global consumer ABS spread summary

	Current (bps)	MoM change (bps)	1yr tight	Date	1yr wide	Date
US Credit Cards - Fixed-Rate						
2-3yr AAA US Swaps	+46	+12	+24	5/8/15	+46	10/16/15
4-5yr AAA US Swaps	+70	+14	+35	4/1/15	+70	10/14/15
US Credit Card - Floating-Rate						
2-3yr AAA US LIBOR DM	+39	+7	+24	11/5/14	+39	10/19/15
4-5yr AAA US LIBOR DM	+59	+3	+35	12/8/14	+59	10/14/15
European Credit Card - Floating-Rate						
AAA EUR LIBOR DM	+38	-	+31	11/3/14	+54	1/12/15
US Prime Auto - Fixed-Rate						
0-2yr AAA EDSF	+37	+1	+16	11/3/14	+37	10/28/15
2+-yr AAA US Swaps	+51	+3	+24	11/3/14	+51	10/28/15
European Prime Auto Loan - Floating-Rate						
AAA EUR LIBOR DM	+46	-2	+26	3/4/15	+48	10/1/15
US Subprime Auto - Fixed-Rate						
1-2-yr AAA EDSF	+73	+3	+39	11/10/14	+73	10/28/15
2-3+yr AAA US Swaps	+96	+5	+48	6/15/15	+96	10/28/15
US Equipment - Fixed-Rate						
2+yr AAA US Swaps	+53	-0.4	+42	11/19/14	+53	9/30/15
European Equipment - Floating-Rate						
A EUR LIBOR DM	+141	+1	+109	12/29/14	+141	10/30/15
US FFELP Student Loans - Floating-Rate						
2-4yr AAA 3mo US LIBOR DM	+86	-4	+36	11/7/14	+91	9/10/15
10+yr AAA 3mo US LIBOR DM	+154	-3	+90	12/3/14	+157	9/24/15

Source: Markit

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