

MONTHLY COMMENTARY

Year End Credit Update

TAMMY KARP | JANUARY 6, 2016



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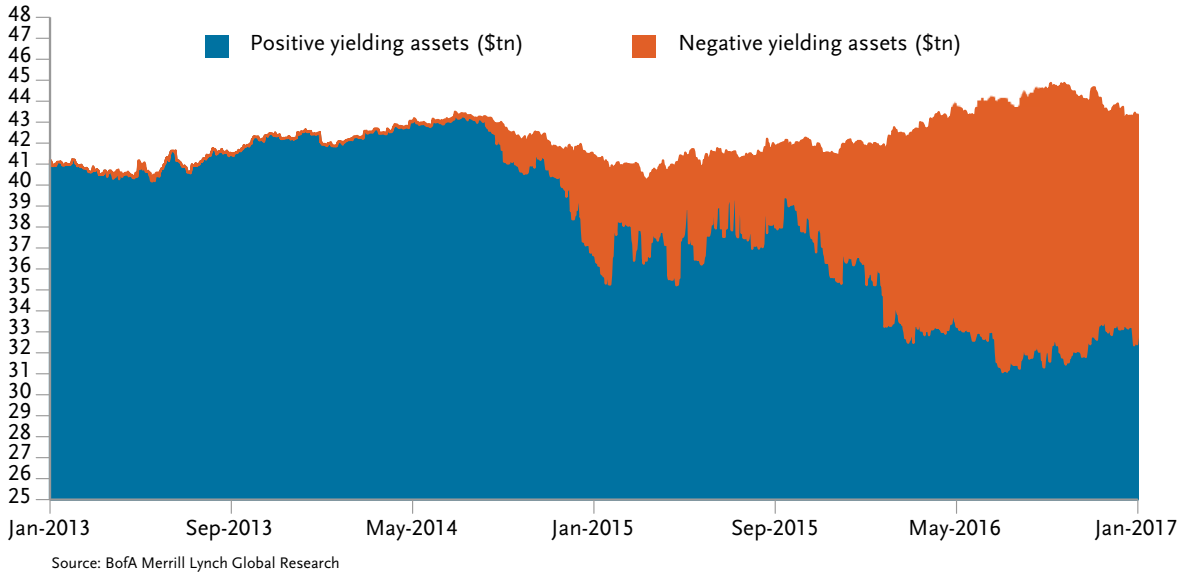
Ms. Karp is a Managing Director in the U.S. Fixed Income group where she trades investment grade and cross over securities. Ms. Karp joined TCW in 2009 during the acquisition of Metropolitan West Asset Management LLC (MetWest). Prior to joining MetWest in 1997, she was with the fixed income department at The Capital Group. Ms. Karp earned her BS in Business from University of Arizona.

After a messy start to the year due to the collapse of commodity prices, risk assets staged a meaningful comeback in 2016 after central banks intervened and commodity prices rebounded off the lows. Further central bank policy intervention came in the form of the ECB's CSPP (Corporate Sector Purchase Program) announcement in March, followed by the BOE's corporate purchase announcement post the Brexit vote. The ECB's buying of large quantities of corporate bonds produced its desired effect, i.e. the suppression of volatility. But it also paved the way for further asset price distortion as fundamentals and valuations diverged. The credit index tightened 37 basis points in 2016, a reversal of the widening that occurred in 2015. Spreads were volatile however, with the index trading in an 83 basis point range – starting the year at an OAS of +155 then widening to +200 in February. From a valuation standpoint, the index ended the year at a spread of +118 basis points over Treasuries. That is well inside the historical mean (15 yr average OAS of +150) and approaching the post crisis tights of +93 basis points over Treasuries touched in June 2014. On the fundamental side, corporate leverage reached new highs, having steadily increased since the trough of 2011 thanks to earnings deterioration, debt funded M&A, dividends and share buybacks.

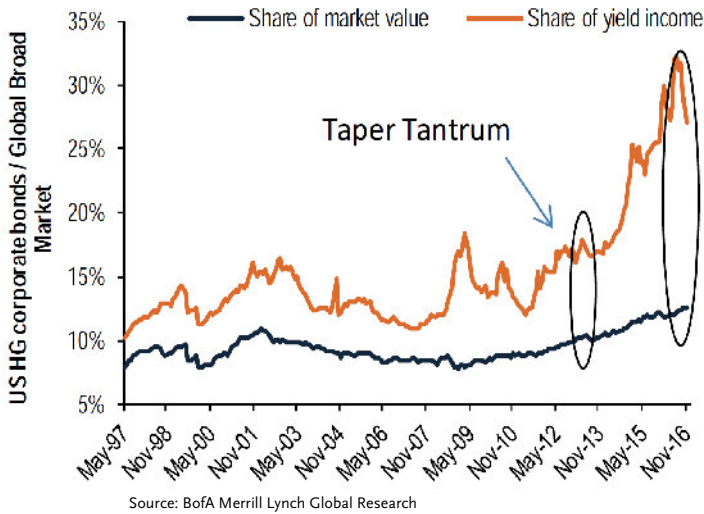
It was a record-breaking year for investment grade new issuance, corporate debt outstanding and corporate leverage. The year also brought record low global yields, culminating in an unprecedented \$13 trillion of debt trading at negative yields. Central bank monetary action divergence continued as the ECB, BOJ and BOE expanded their asset purchases - including the purchase of corporate bonds - while the Fed raised interest rates for only the second time in ten years. This policy divergence led to record yield differentials between the U.S. and both Europe and Japan. In turn, the “relative” attractiveness of U.S. credit yields impelled yield-starved overseas investors to buy U.S. credit in record amounts. In fact, foreign ownership of U.S. corporate bonds has increased by \$400 billion ytd (thru Sept '16) according to TIC (Treasury International Capital) data. At approx. \$3.2 trillion, foreign ownership now accounts for about 29% of the \$11 trillion U.S. corporate bond market.

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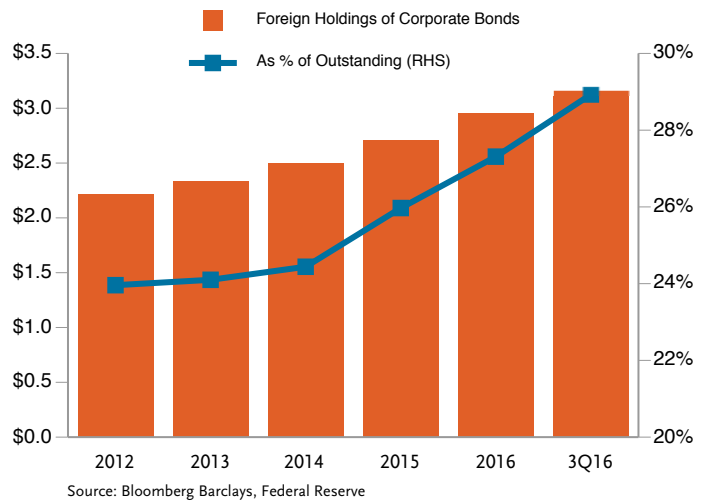
Global Assets With Negative Yields Reached \$13 Trillion in July 2016



U.S. IG Corporates Comprise 12% of the Global IG Market but Account for 28% of its Yield Income



Foreign Ownership of U.S. Corporate Bonds has Increased to 29%



Year End Credit Update

Sector performance: Spread convergence and beta compression were main themes for credit in 2016 as lower quality outperformed higher quality. The spread between single As and BBBs compressed 42 basis points in 2016, ending the year at a spread differential of 60 bps (got as wide as 128 bps apart in Feb). The best performing sectors in 2016 were those that performed the worst in 2015, namely the commodity related sectors – energy and metals. Early in the year, spreads in the energy and metals sectors touched levels only seen during the financial crisis. Crude (WTI) dropped to \$26, triggering Moody's wholesale downgrade of the E&P sector which resulted in \$25 billion of IG debt falling out of the credit index in February alone. Several names saw 3-4 notch downgrades as Moody's lowered its price deck for oil, citing a lower-for-longer scenario for prices. Fallen angels totaled \$100 billion in 2016, with about half of that number coming from one issuer – Turkey - and the rest coming mainly from commodity related credits.

After hitting a post-crisis low point in February, commodity sectors staged an impressive comeback – with metals ending the year 275 bps tighter, posting returns of 24.66% and an excess return of 24.35%. Midstream tightened 216 bps (21.91% total

return, 20.87% excess return) and independent energy tightened 200 bps (16.89% total return, 16.24% excess return). Overall, index returns were strong at 5.63% in 2016, as spread tightening and carry more than offset modestly higher rates. The index yield declined 25 bps to 3.29%, ranging close to 100 basis points (2.656% to 3.552%) due to rate and spread volatility.

While strong technicals drove credit spreads tighter, the fundamental picture continued to worsen. Corporate earnings were anemic, posting five consecutive quarters of negative growth (2q15 -2q16). Ebitda declines coupled with record debt issuance led to deteriorating credit metrics, with net leverage (net debt/ebitda) rising .26 turns y-o-y (3q15 to 3q16) to 2.32x, a new historical peak. Since the trough in 2011, leverage has increased .82x as cheap money encouraged companies to spend more than they earn, thereby issuing record amounts of net debt earmarked primarily for share buybacks, dividends and M&A. As a result, the earnings payout ratio (defined as dividends plus share buybacks divided by EBITDA) has reached peak levels of 50%. Since 12/15, spending on dividends and buybacks has also exceeded capex as capital spending in the energy and metals sectors declined substantially with the drop in commodity prices.

2016 Index Performance

	Year-to-Date Total Return	Year-to-Date Excess Return	Option-Adjusted Spread	Option-Adjusted Spread Change
Credit Index	5.63%	4.42%	118	-37
Industrials	7.18%	6.03%	125	-58
Fins	3.78%	2.78%	120	-14
Utilities	5.62%	4.77%	117	-33
Munis	5.26%	3.75%	149	-21
Sovereigns	4.15%	3.31%	155	-37
Best performers:				
Metals	24.66%	24.35%	205	-275
Energy: midstream	21.91%	20.87%	183	-216
Energy: independents	16.89%	16.24%	167	-200

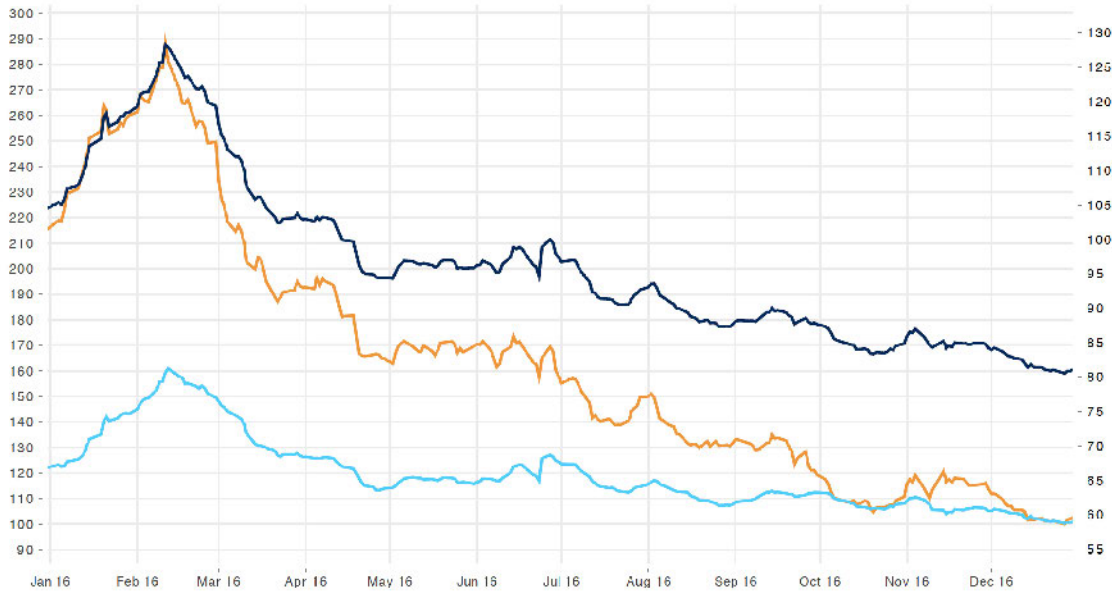
Credit Index Spreads and Yields



Key	Axis Name	Last	Minimum	Maximum
■	Right U.S. Credit - OAS	118.014	117.045 12/27/2016	199.808 02/12/2016
■	Left U.S. Credit - Yield to Worst	3.290	2.656 07/08/2016	3.552 01/04/2016

Source: Bloomberg Barclays

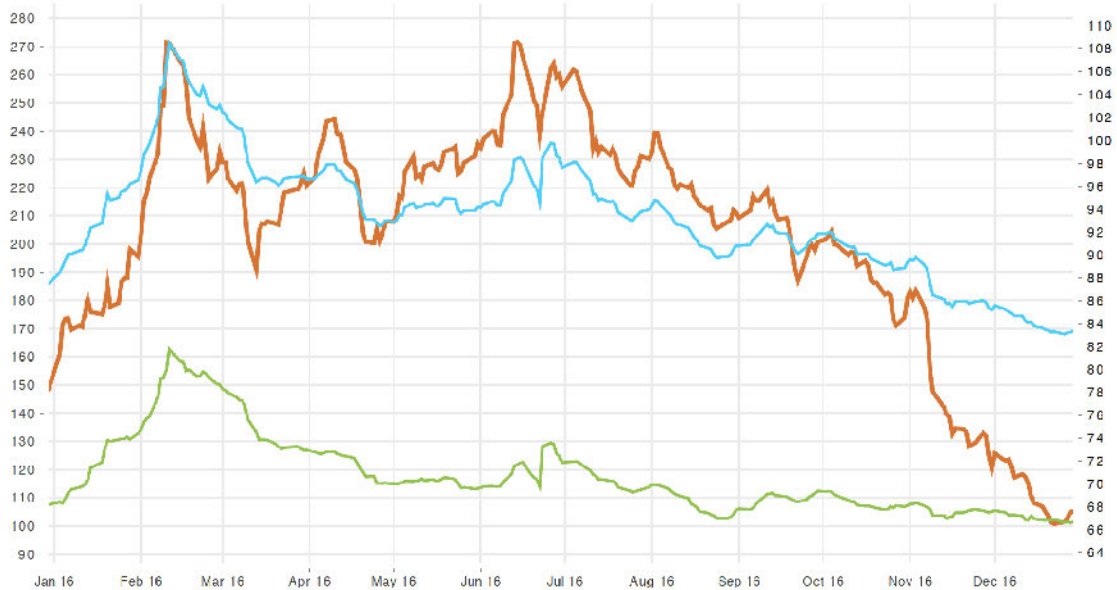
A vs. BBB spreads compresses 42 Basis Points



Key	Axis Name	Last	Minimum	Maximum
■	Left U.S. Credit Baa - OAS	160.430	159.027 12/27/2016	287.837 02/11/2016
■	Left U.S. Credit A - OAS	100.865	100.409 12/27/2016	160.929 02/12/2016
■	Right BBB's - A's	59.565	58.618 12/27/2016	128.487 02/11/2016

Source: Bloomberg Barclays

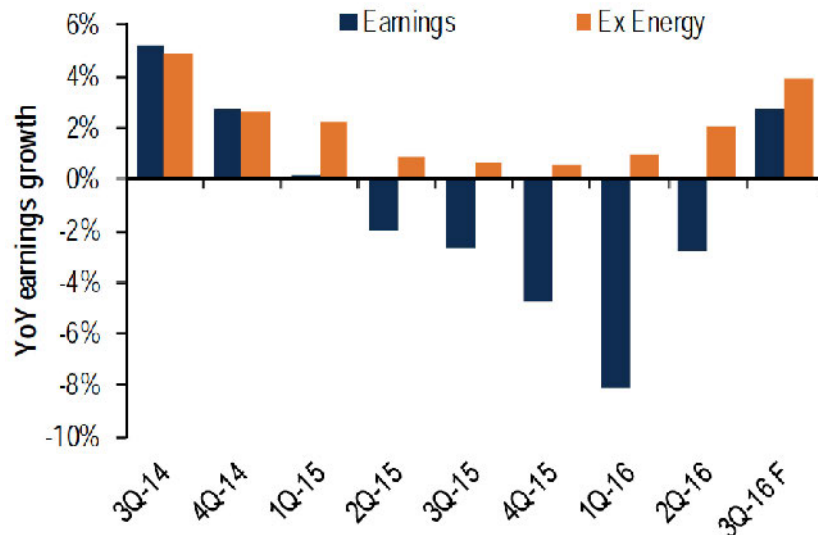
Subordination Premiums Compressed: Sr Bank vs. Sub Bank Spread Relationship Tightened 10 Basis. Range 42 bps



Key	Axis	Name	Last	Minimum	Maximum
■	Left	Invest. Grade: Banking - Senior - OAS	101.492	101.109 12/29/2016	162.589 02/12/2016
■	Left	Invest. Grade: Banking - Subordinated - OAS	169.078	168.030 12/27/2016	271.082 02/12/2016
■	Right	sr vs sub basis	67.586	66.523 12/23/2016	108.550 06/15/2016

Source: Bloomberg Barclays

Earnings for the IG Universe: After 5 Consecutive Quarters of Negative Growth, Earnings Rebounded in Q3. Looking Ahead to 2017, Energy Should Perform Better Given Better/Weaker Y-o-Y Comps

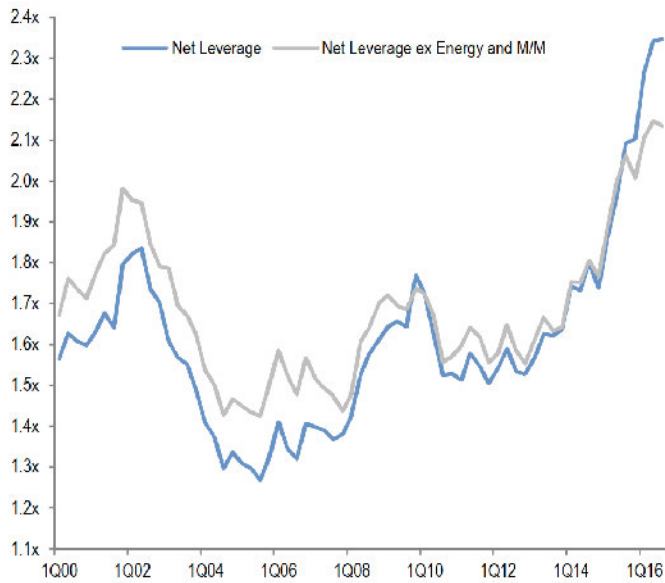


Source: BofA Merrill Lynch Global Research

Year End Credit Update

Leverage climbed to new highs:

Net Debt/EBITDA



Source: J.P. Morgan

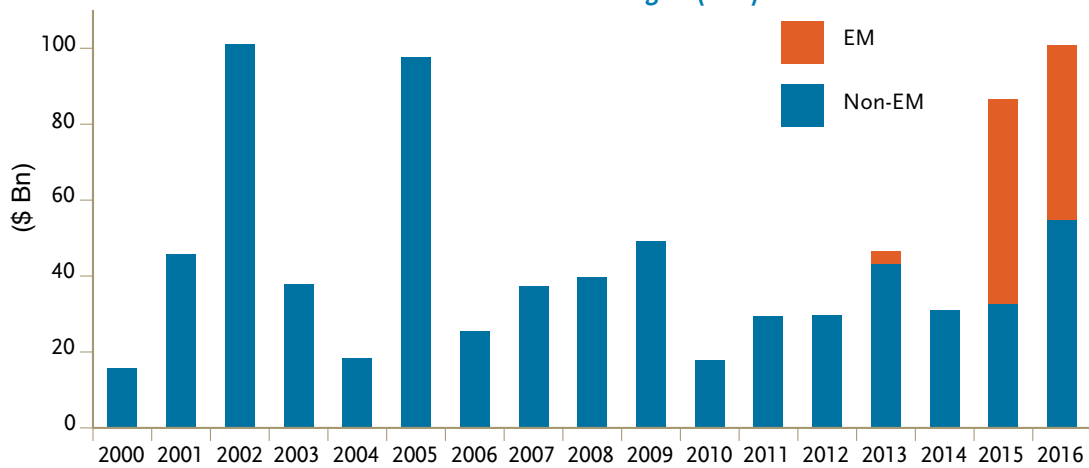
Net Leverage By Sector

Sector	3Q16 Level	Y/Y Change	Sector Weight
Healthcare/HMOs	0.66x	-0.49x	4%
Telecoms - Domestic	2.40x	-0.26x	7%
Non-Food Retail	1.73x	-0.07x	4%
Food/Beverages	2.66x	-0.03x	10%
Food/Drug Retail	3.01x	0.01x	3%
Capital Goods	1.22x	0.03x	5%
Telecoms - Yankees	2.57x	0.04x	2%
Consumer Products	1.54x	0.05x	2%
Diversified Media	2.49x	0.05x	4%
Pharmaceuticals/Medical Products	1.68x	0.06x	11%
Technology	0.24x	0.08x	11%
Transportation	1.68x	0.22x	3%
Chemicals	2.14x	0.31x	3%
Utilities	4.55x	0.32x	12%
Cable/TV	2.30x	0.34x	3%
Metals/Mining	2.50x	0.84x	2%
Energy	3.68x	1.43x	16%
Industrials Total	2.32x	0.26x	100%

Source: J.P. Morgan

Fallen Angels totaled \$100 billion, Second worst year on record.

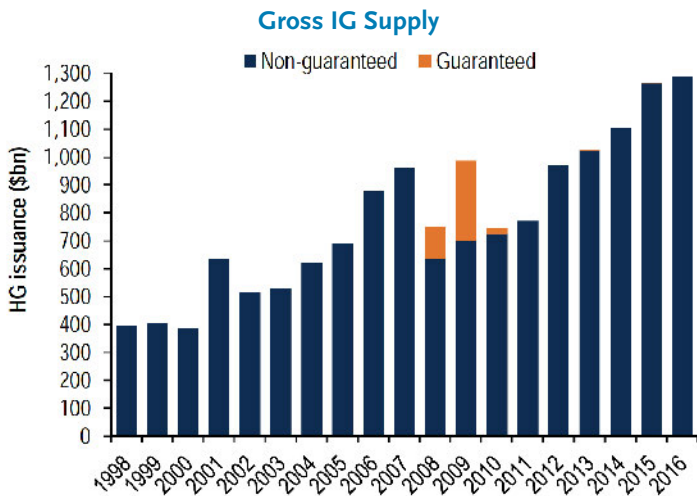
Barc Credit Index Fallen Angels (blns)



Source: Bloomberg Barclays

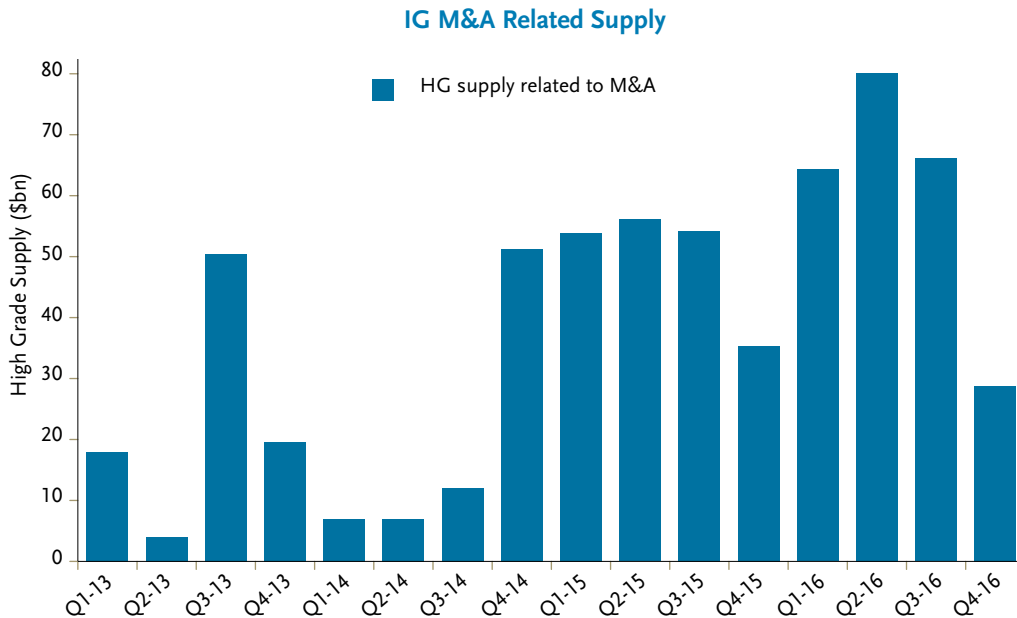
Year End Credit Update

2016 IG Supply: It was another record year of gross investment grade supply, coming in at \$1.29 trillion, up 2% from 2015. Yankee bank issuance saw a significant increase as money market reform prompted banks to term out commercial paper. We also saw another record year for M&A related issuance, with \$239 billion worth of M&A related deals printing, up from \$199 billion last year. EM supply grew 20% in 2016 vs. 2015, albeit from a significantly lower comparable as 2015 EM supply was down 40%. New issue concessions varied throughout the year, tightening significantly in the latter half as spreads tightened. Record supply had no negative impact on spread performance as demand remained robust for most of the year.



Sector	Year 2013	Year 2014	Year 2015	Year 2016
Financials	416.5	498.5	505.1	510.5
AAA-A Industrials	287.3	298.3	387.7	380.8
BBB Industrials	320.9	307.7	373.3	397.8
Total	1,024.7	1,104.5	1,266.1	1,289.1
%-change		8%	15%	2%
US	637.6	689.2	884.8	811.4
Europe	149.2	172.3	195.4	240.6
EM	111.2	123.6	73.6	87.6
Other DM	126.7	119.5	112.3	149.4

Source: BofA Merrill Lynch Global Research



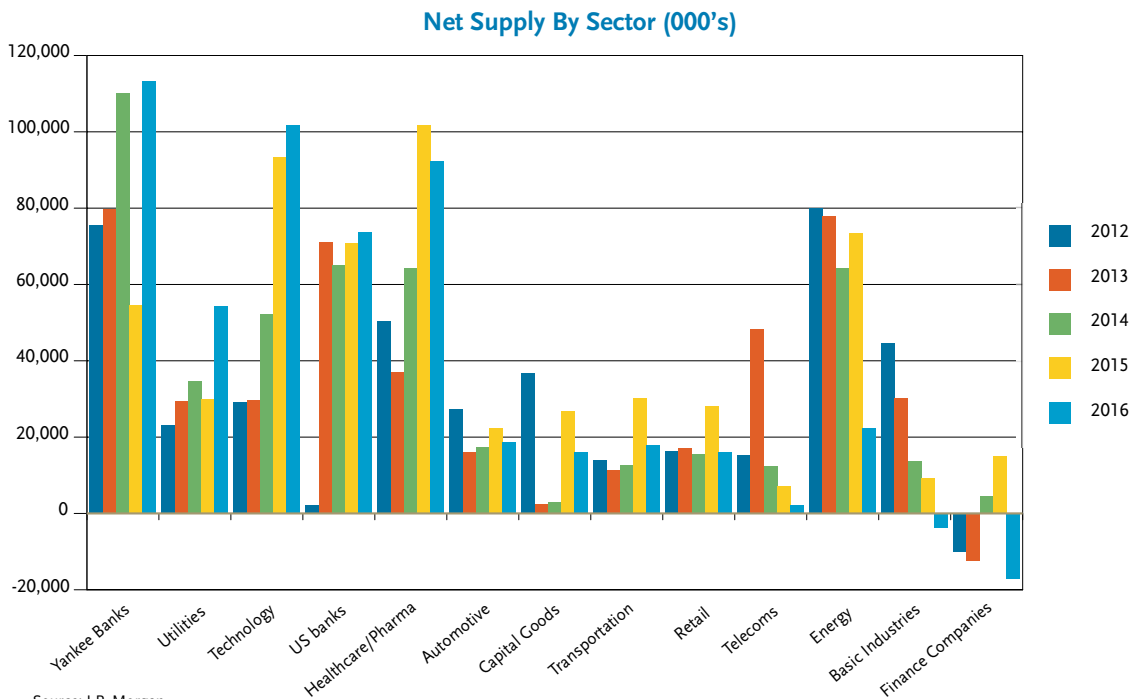
Source: BofA Merrill Lynch Global Research

Year End Credit Update

IG Net Supply: Energy and Basics had large net issuance declines. Net issuance was dominated by Yankee, Tech and Healthcare/Pharma.

	2012	2013	2014	2015	2016	yoy % change
Yankee Banks	75,573	79,821	110,290	54,491	113,375	108%
Utilities	23,104	29,463	34,823	29,880	54,351	82%
Technology	29,200	29,675	52,325	93,365	101,900	9%
US banks	2,213	71,185	65,025	70,800	73,748	4%
Healthcare/Pharma	50,336	37,037	64,251	101,750	92,325	-9%
Automotive	27,246	16,048	17,303	22,400	18,745	-16%
Capital Goods	36,875	2,415	3,030	26,785	16,171	-40%
Transportation	13,909	11,313	12,598	30,231	18,034	-40%
Retail	16,345	17,097	15,479	28,106	15,975	-43%
Telecoms	15,220	48,423	12,315	7,110	2,285	-68%
Energy	79,968	78,010	64,244	73,540	22,456	-69%
Basic Industries	44,700	30,214	13,715	9,350	-3,882	-142%
Finance Companies	-10,183	-12,354	4,555	14,920	-17,046	-214%

Source: J.P. Morgan



Source: J.P. Morgan

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