

Leveraged Capital Markets Analysis

Q4 2016

Global Leveraged Loan and High Yield Quarterly

A Middle-Market Perspective on the
Global Leveraged Loan and High Yield Markets



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In This Issue

| | |
|--|----|
| • U.S. Leveraged Loan and High Yield Perspectives | 1 |
| • Europe Leveraged Loan and High Yield Perspectives..... | 2 |
| • U.S. LBO Summary | 3 |
| • U.S. LBO Debt Multiple Trends..... | 4 |
| • U.S. Leveraged Loan Market..... | 5 |
| • U.S. LBO Loan Market..... | 6 |
| • U.S. Leveraged Loan Pricing | 7 |
| • U.S. Second-Lien Loan Market..... | 8 |
| • U.S. High Yield Bond Market..... | 9 |
| • U.S. Leveraged Loan and High Yield Liquidity Drivers | 10 |
| • Europe LBO Summary..... | 11 |
| • Europe LBO Debt Multiple Trends | 12 |
| • Europe Leveraged Loan Market | 13 |
| • Europe Buyout Loan Market | 14 |
| • Europe Leveraged Loan Pricing | 15 |
| • Europe Mezzanine Market | 16 |
| • Europe High Yield Bond Market | 17 |
| • Appendix – Q4 2016 U.S. LBO Loans | 18 |
| • Appendix – Q4 2016 Europe LBO Loans..... | 20 |
| • Global Investment Banking Contact List..... | 21 |

U.S. Leveraged Loan and High Yield Perspectives

Q4 2016

Q4 closed out a solid 2016 in the U.S. leveraged finance markets. During the fourth quarter, issuance in both the leveraged loan and high yield markets exceeded the levels of Q4 2015, resulting in combined 2016 leveraged finance volume modestly above the prior-year figure. As the year ended, debt capital remained available at attractive terms for high quality credits, with spreads and yields moving back toward historically low levels in Q4 after rising in early 2016. Moreover, leveraged finance funds posted a 12-quarter peak for inflows in Q4, highlighting the increased risk appetite of investors heading into 2017.

During Q4, U.S. leveraged loan issuance was \$121 billion, up 66% year over year and slightly above the 2016 quarterly average but 14% below Q3 volume. Issuance in 2016 rose 14%, overcoming a slow start to the year. In 2016, 37% of volume was issued to refinance pre-existing loans, as borrowers continued to capitalize on interest rates remaining below historical averages. Loans used to finance non-LBO acquisitions represented 29% of 2016 volume, while another 17% was issued to finance LBO acquisitions.

Leveraged loan pricing was up slightly for BB credits and decreased for B credits in Q4. Among first-lien loan yields, average yields in Q4 were 4.1% for BB credits (vs. 4.0% in Q3) and 5.3% for B credits (vs. 5.7% in Q3). For new-issue spreads, institutional pricing for BB/BB- credits averaged 278 bps over LIBOR in Q4, 58 bps below the Q1-Q3 mean. For B+/B credits, the average institutional spread in Q4 was 397 bps, which was also 58 bps below the Q1-Q3 average.

LBO loan issuance was robust in Q4. LBO financing reached a 10-quarter high of \$22 billion in Q4, above the average of \$19 billion during 2015-2016 and similar to the \$21 billion quarterly mean of 2014, the best year for LBO loan volume since 2007. For all LBOs, total purchase price multiples averaged 9.9x in 2016, slightly down from 10.1x in 2015 but higher than 9.6x in 2014, 8.7x in 2013, and 8.6x in 2012. In terms of average debt / EBITDA multiples for LBO loans, companies with EBITDA above \$50 million witnessed average multiples of 5.5x in 2016 (vs. 5.7x in 2015). For LBO deals in the lower middle market (EBITDA below \$50 million), the average debt multiple was 5.3x in 2016 (vs. 5.3x in 2015).

Volume in the second-lien loan market declined further in 2016. Issuance of \$10 billion during 2016 fell just short of second-lien volume of \$11 billion in 2015 and was well below 2014's record level of \$37 billion. Average pricing on second-lien loans in Q4 was 880 bps over LIBOR, just below the Q1-Q3 mean but 28 bps above average pricing for 2015.

Issuance in the high yield market during Q4 moderated relative to Q2-Q3 but exceeded year-ago volume. Volume of \$47 billion in Q4 was below the Q2-Q3 2015 average of \$73 billion while topping Q4 2015 issuance of \$36 billion. Pricing in Q4 reflected a preference for quality, as average yields on BB-rated bonds declined 10 bps (relative to Q3 yields) to 5.2% in Q4, while average yields on B-rated bonds were up 100 bps (versus Q3) in Q4 to 7.0%, which was in line with the average of the first half of 2016.

Flows for leveraged finance funds were positive in Q4. High yield funds posted net inflows of \$2 billion in Q4 and net inflows of \$11 billion in 2016. On the heels of nine quarterly outflows, loan funds registered inflows for the second straight quarter, with inflows of \$10 billion in Q4 and \$6 billion during 2016.

Based on Baird's debt advisory experience in Q4, U.S. middle-market LBO lenders are still actively searching for high quality opportunities. "Typical" deals are seeing senior leverage of 3.5-4.0x and another 1.25-1.75x in subordinated debt. On some recent situations, we have seen high quality credits reaching 6.0x+ total leverage. In the middle market, senior pricing is centering on L+450-525 with a 1.0% floor, 2nd lien pricing is at L+850-950 (1.0% floor), and mezzanine pricing is centered on 11.0% cash / 1.0% PIK. The unitranche market has held steady at similar levels where senior + sub have been coming out, with pricing in the L+675-775 range (1.0% floor).

Leveraged finance market conditions should continue to support M&A activity in 2017, as participants expect positive impacts from the Trump administration's economic and regulatory policies. LTSA and Standard & Poor's cited estimates of mid-single-digit percentage growth for leveraged loan and high yield volume in 2017. Rising interest rates should make floating rate loans appealing to investors. Borrowers are likely to be drawn to rates that should remain historically attractive, benefiting supply. Multi-year highs for leveraged finance fund inflows in Q4 bode well for liquidity for M&A financings in early 2017.

Europe Leveraged Loan and High Yield Perspectives

Q4 2016

Despite a bounce back in leveraged loan volume, high yield volumes dropped for the second year running in 2016, which dragged overall leveraged finance volume down slightly on 2015. However, given the shock Brexit vote, the leveraged loan markets showed resilience, and significant liquidity drove opportunistic issuance, reducing spreads and yields, while maintaining leverage levels. For new issuance, an increase in overall purchase price multiples was met by increased equity percentage in deals. Expectations from market participants are for increased issuance in 2017.

Leveraged loan issuance in Q4 reached €21 billion, its highest level in two and a half years and 47% ahead of Q4 2015. Annual 2016 loan volume of €71 billion was 12% ahead of 2015. LBO issuance accounted for 34%, non-LBO acquisitions 19%, with the remainder being refinancing and re-caps, which at 53% of total volume in Q4 was the second-highest quarterly share since H2 2013. Repricing transactions accelerated in Q4 with €16.8 billion of volume, taking overall 2016 volume to €29 billion across 52 deals, equating to 31% of the S&P European Leveraged Loan Index (ELLI).

Buyout loan issuance performed strongly with a 16% increase year on year to reach €24 billion, but in a game of two halves, H2 only accounted for €7 billion of this volume. Loan volume made up over 80% of LBO issuance, a record high as high yield involvement in LBO deals dropped from 30% to 18%. Leverage fell slightly to 4.9x from 5x, but with purchase price multiples approaching a record 10x, the equity component rose to 50% from 44%, the highest annual level recorded since 2012. There was minor differentiation in leverage through the size spectrum, with 4.9x being highest for deals under €250 million and 4.8x throughout other deal sizes.

Leveraged loan pricing fell over the year with TLB spreads at 382 bps at year end, down 84 bps from the end of 2015 and YTM at 4.33%, down 1.38% from 2015 and at a historically low level. These levels were influenced by the high level of re-pricing activity mentioned above. For LBO and acquisition new issuance, the TLB spread was 453 bps at year end, down 10 bps from 2015 but down over 70 bps from the May 2016 high. Prices inched 10 bps higher in Q4. The supply / demand imbalance was reflected in the flex mix, with downward flexes continuing their domination, which began in March 2016.

Average spread per unit of leverage ended the year at 97, at similar levels to 2014 and 2015 but well below levels from 2009-2013, which ranged from 114 to 136 bps.

In the high yield bond market, Q4 volumes at €10 billion were up 25% on Q4 2015 but 46% down on the previous quarter. Despite September volume at €13 billion representing the highest monthly high yield volume on record, 2016 volumes were down 17.5% year on year at €53 billion. Recent market reports suggest the market is well and truly open and volumes are expected to increase. Average yields on BB-rated bonds were down 0.7% on 2015 at 6.2% and on B-rated at 4.1% just under the 2015 end of year level.

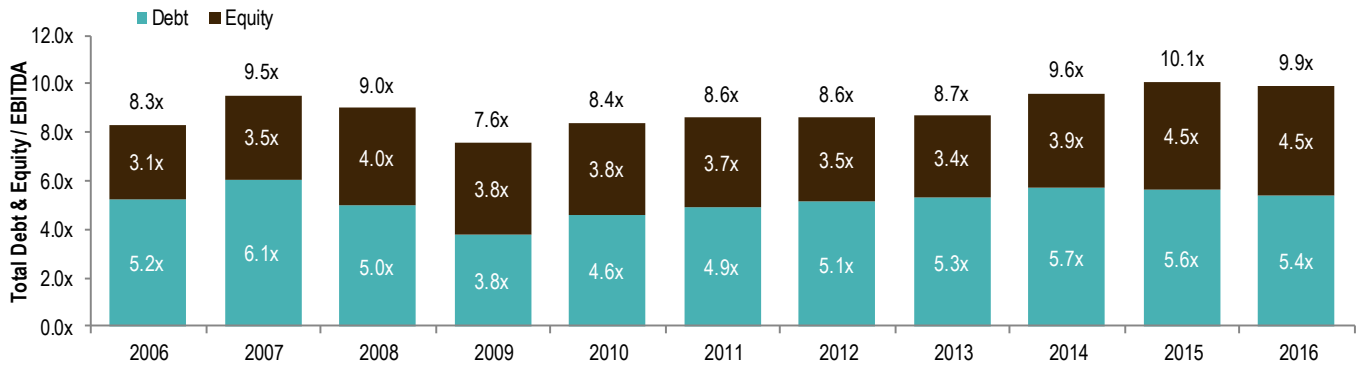
Q4 CLO volume at €5 billion was the highest quarterly level since the CLO market re-opened post financial crisis, and for 2016 a total of €16.8 billion demonstrates the search for yield and considerable liquidity in the European loan market.

Baird's middle market debt processes demonstrated continued strong appetite across banks and debt funds, with stronger credits attracting all senior leverage at 5x and a little above and unitranche leverage of 6x and above. For perceived more cyclical credits, the lenders tended to reduce leverage by a turn or more from the levels detailed above. Pricing on a senior basis varies by country, but for those deals requiring international bank clubs, margins of 450-500 bps for TLBs are the norm, the higher end reserved for sterling denominated deals. 'Local' deals could attract margins below 400 bps. Debt funds have extended their offering into senior and 'stretched senior' with the latter attracting sub 6% margins, compared with the 'standard' unitranche with margins at 6.5-7.5%. Borrowers can effectively select leverage at different price points in the current market.

Market sentiment for 2017 remains strong and barring external events, most market participants are predicting an overall rise in volumes.

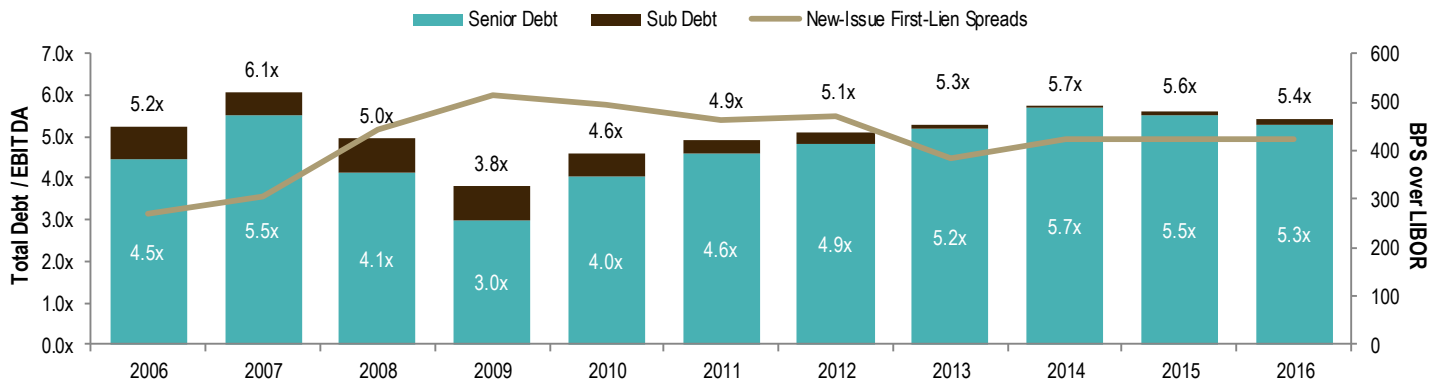
U.S. LBO Summary

Average Purchase Price Multiples



Source: S&P LCD.

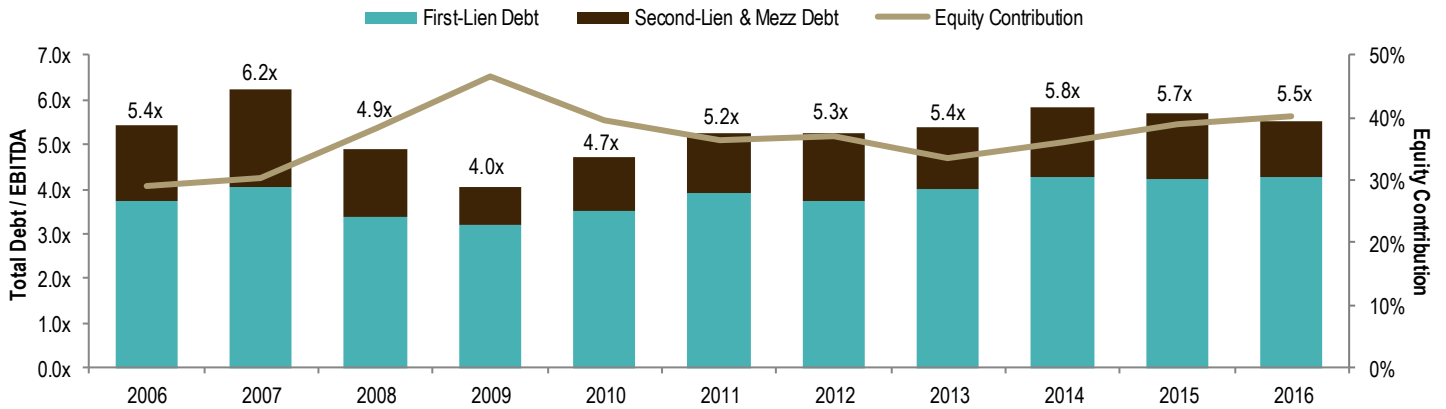
Average Debt / EBITDA Multiples



Source: S&P LCD.

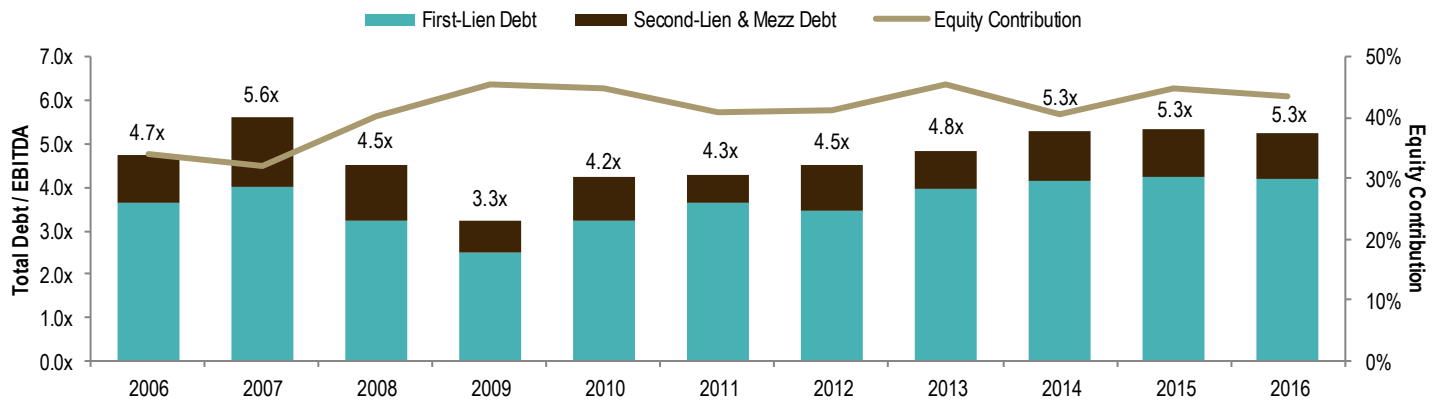
U.S. LBO Debt Multiple Trends

Average Debt / EBITDA Multiples: Issuers with EBITDA More Than \$50 Million



Source: S&P LCD.

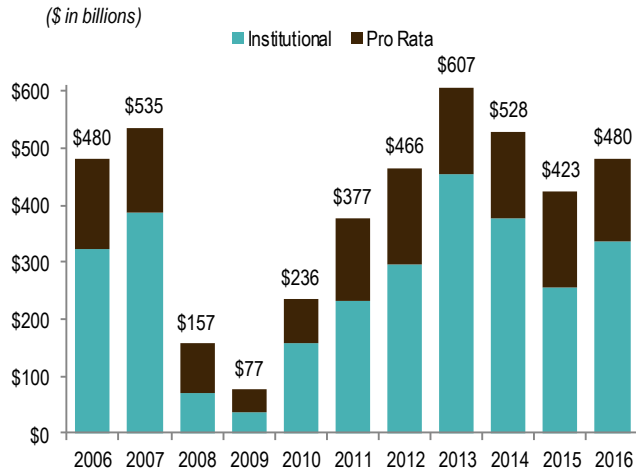
Average Debt / EBITDA Multiples: Issuers with EBITDA Less Than \$50 Million



Source: S&P LCD.

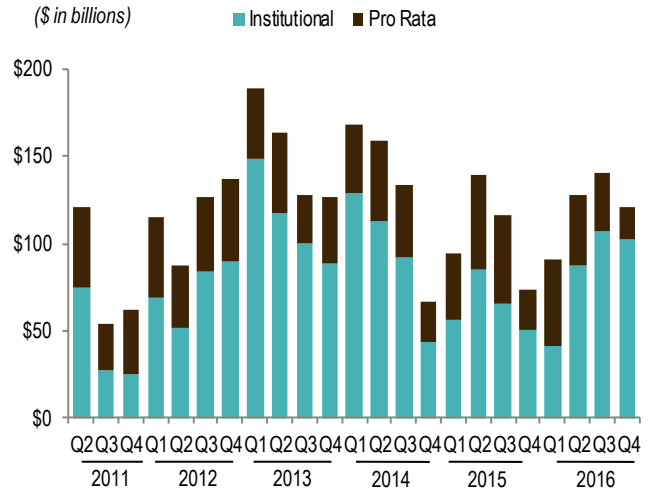
U.S. Leveraged Loan Market

Annual Leveraged Loan Issuance



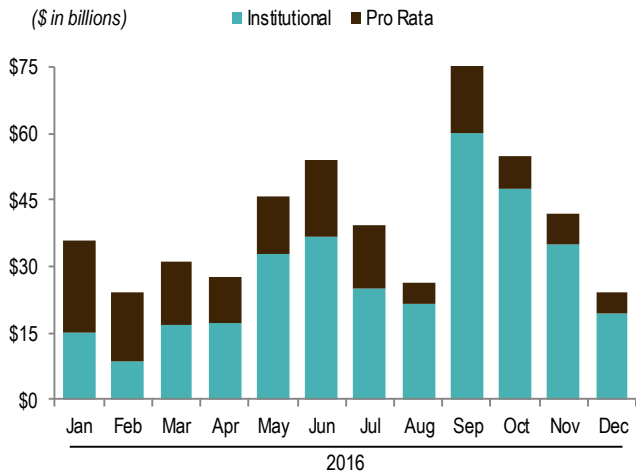
Source: S&P LCD.

Quarterly Leveraged Loan Issuance



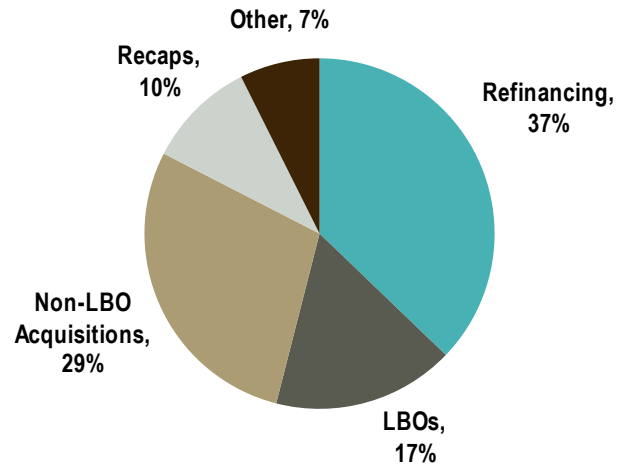
Source: S&P LCD.

Monthly Leveraged Loan Issuance



Source: S&P LCD.

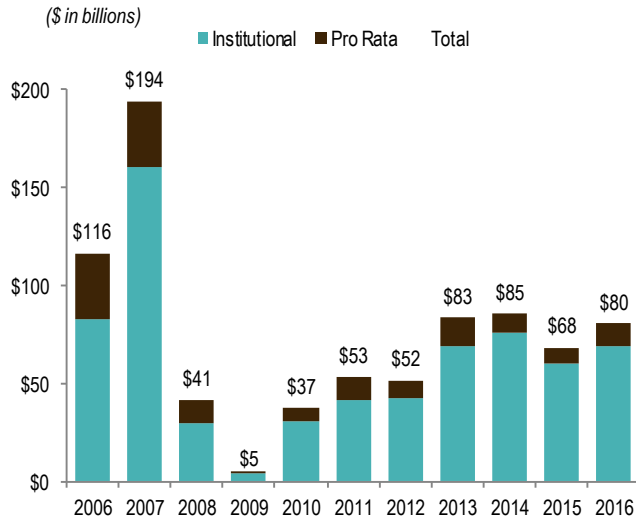
2016 Leveraged Loan Issuance by Purpose



Source: S&P LCD.

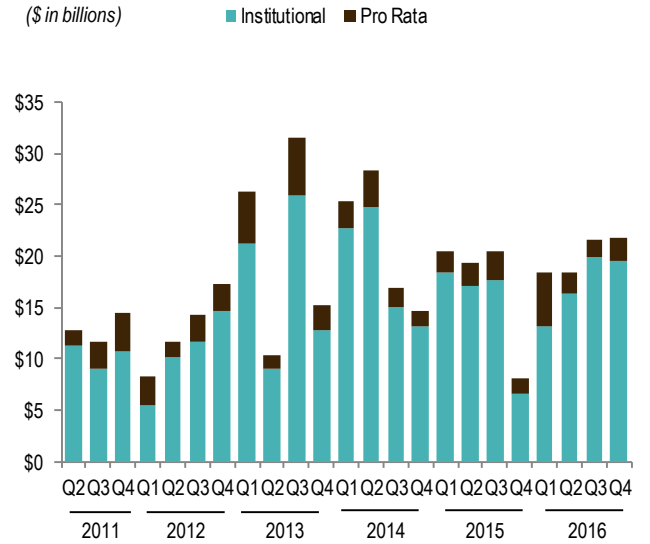
U.S. LBO Loan Market

Annual LBO Loan Issuance



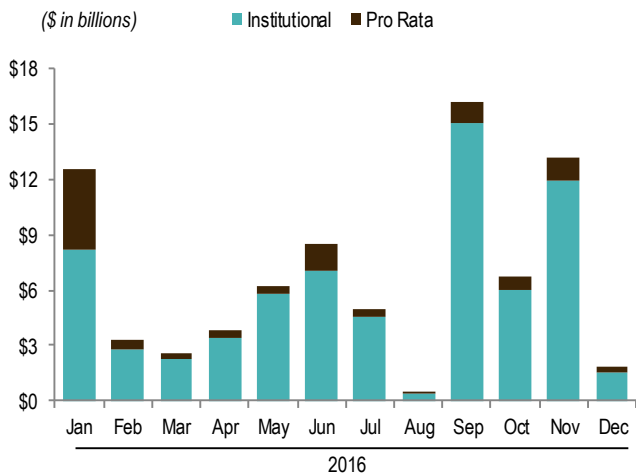
Source: S&P LCD.

Quarterly LBO Loan Issuance



Source: S&P LCD.

Monthly LBO Loan Issuance



Source: S&P LCD.

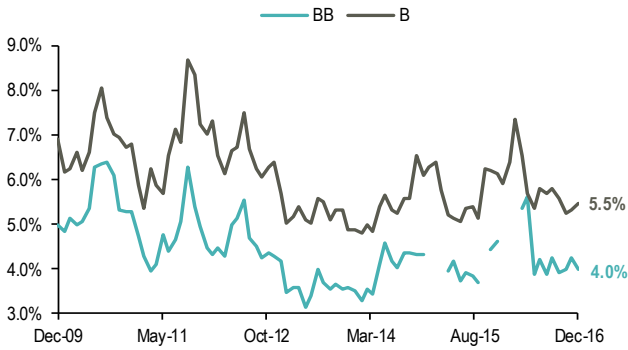
LBO Loan Issuance as % of Leveraged Loan Issuance



Source: S&P LCD.

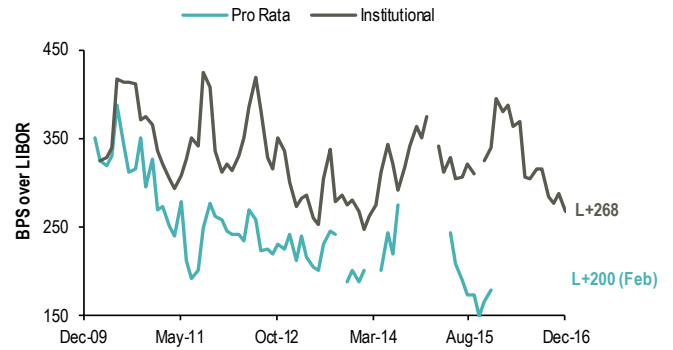
U.S. Leveraged Loan Pricing

New-Issue First-Lien Yield-to-Maturities



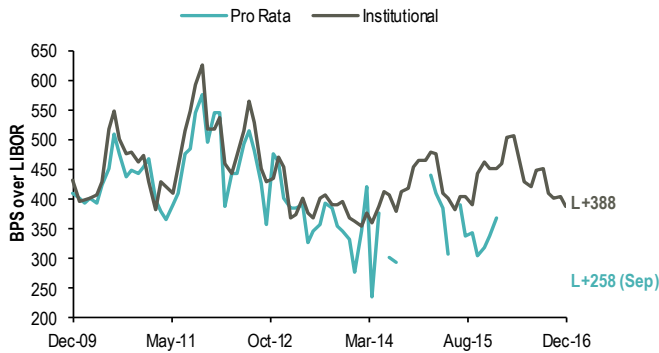
Source: S&P LCD.

New-Issue First-Lien Spreads: BB/BB-



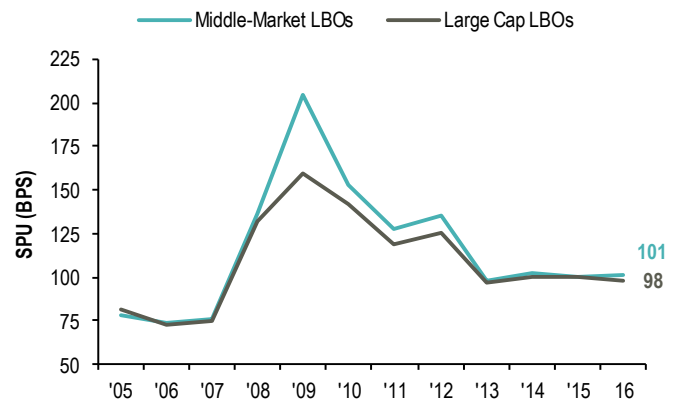
Source: S&P LCD.

New-Issue First-Lien Spreads: B+ /B



Source: S&P LCD.

Average Spread Per Unit of Leverage (SPU) for First-Lien Debt on LBOs

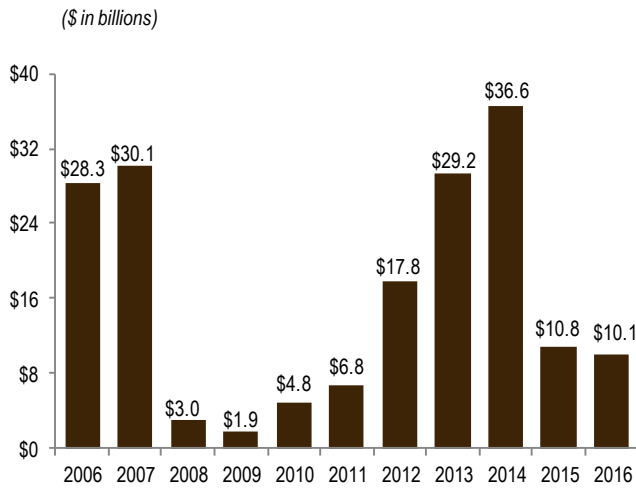


Source: S&P LCD.

Note: SPU equal to average new-issue first-lien spreads divided by average first-lien debt-to-EBITDA multiple. Middle-Market defined as issuers with EBITDA less than \$50 million. Large Cap defined as issuers with EBITDA greater than \$50 million.

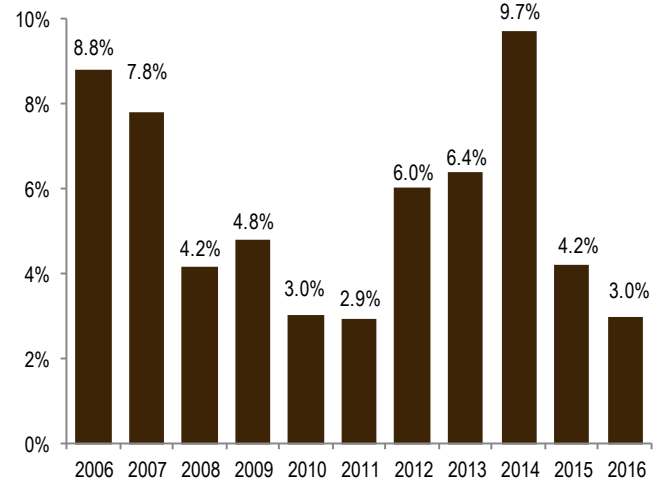
U.S. Second-Lien Loan Market

Annual Second-Lien Loan Issuance



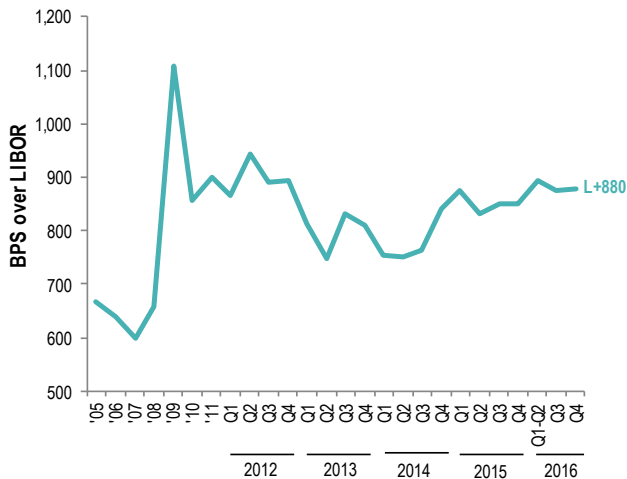
Source: S&P LCD.

Second-Lien Volume as % of Total Institutional Volume



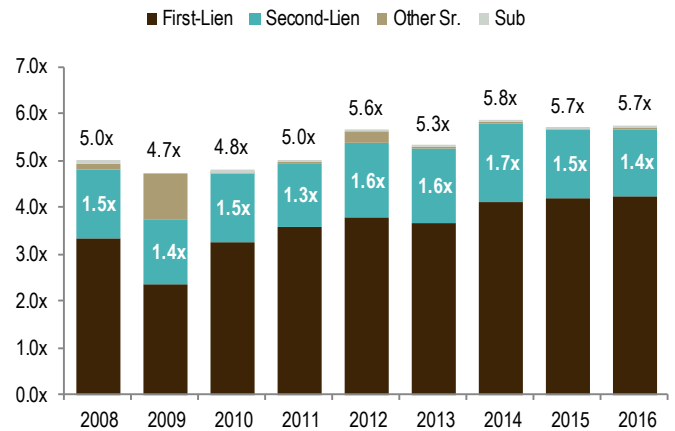
Source: S&P LCD.

Average New-Issue Second-Lien Spreads



Source: S&P LCD.

Debt / EBITDA Multiples for Deals with Second-Lien Debt

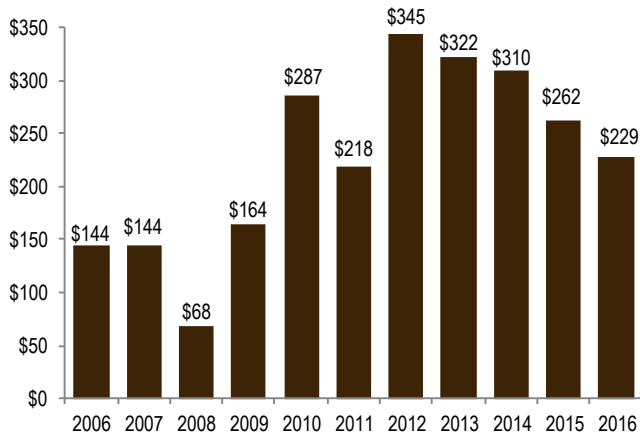


Source: S&P LCD.

U.S. High Yield Bond Market

Annual High Yield Bond Issuance

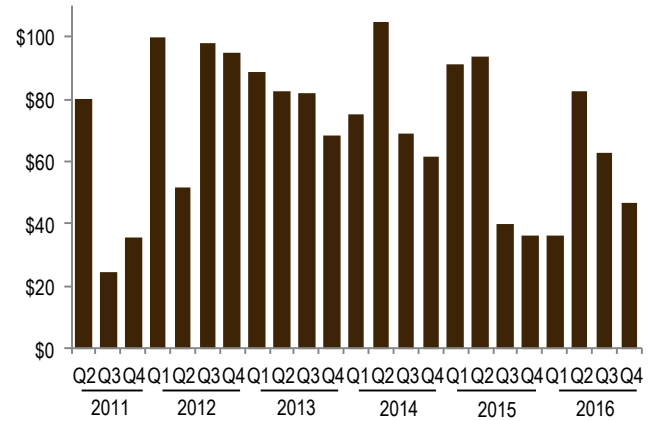
(\$ in billions)



Source: S&P LCD.

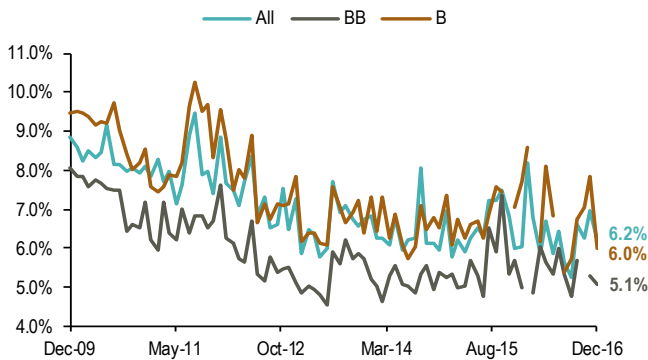
Quarterly High Yield Bond Issuance

(\$ in billions)



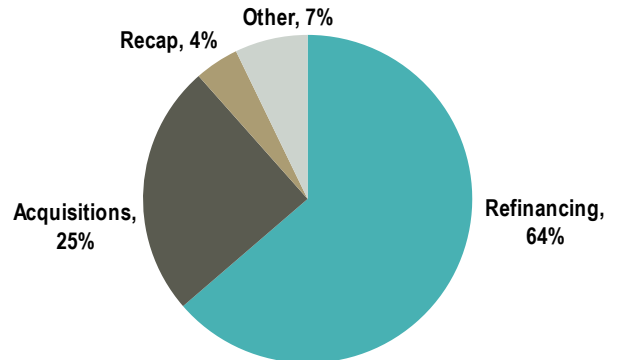
Source: S&P LCD.

New-Issue Yield-to-Maturities



Source: S&P LCD.

2016 High Yield Bond Issuance by Purpose

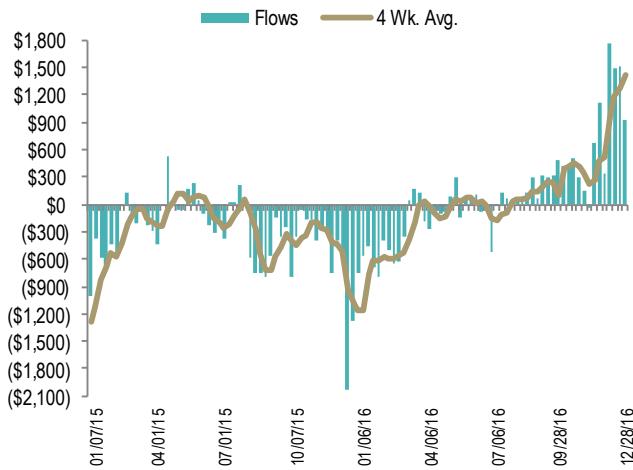


Source: S&P LCD.

U.S. Leveraged Loan and High Yield Liquidity Drivers

Weekly Leveraged Loan Fund Flows

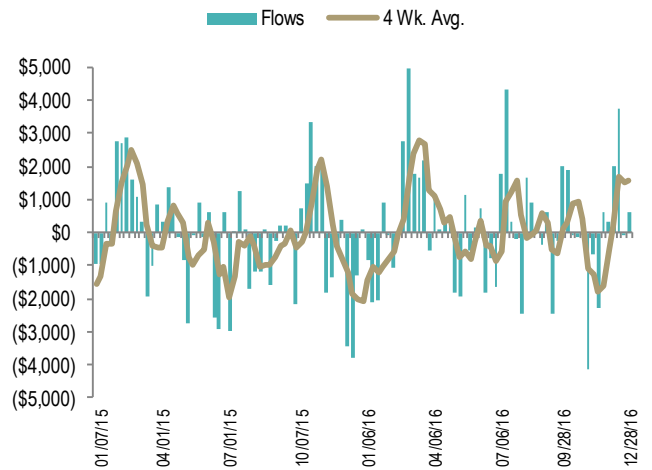
(\$ in millions)



Source: S&P LCD.

Weekly High Yield Bond Fund Flows

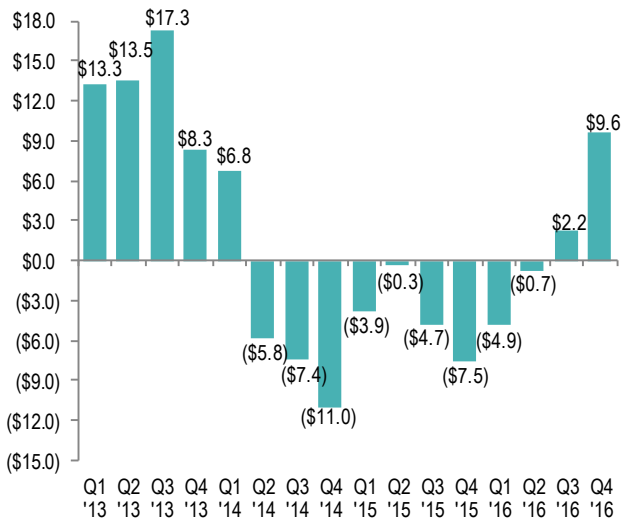
(\$ in millions)



Source: S&P LCD.

Quarterly Leveraged Loan Fund Flows

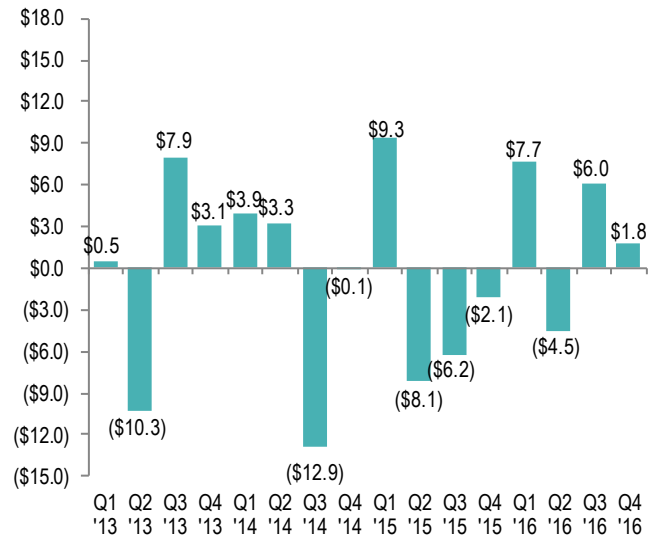
(\$ in billions)



Source: S&P LCD.

Quarterly High Yield Bond Fund Flows

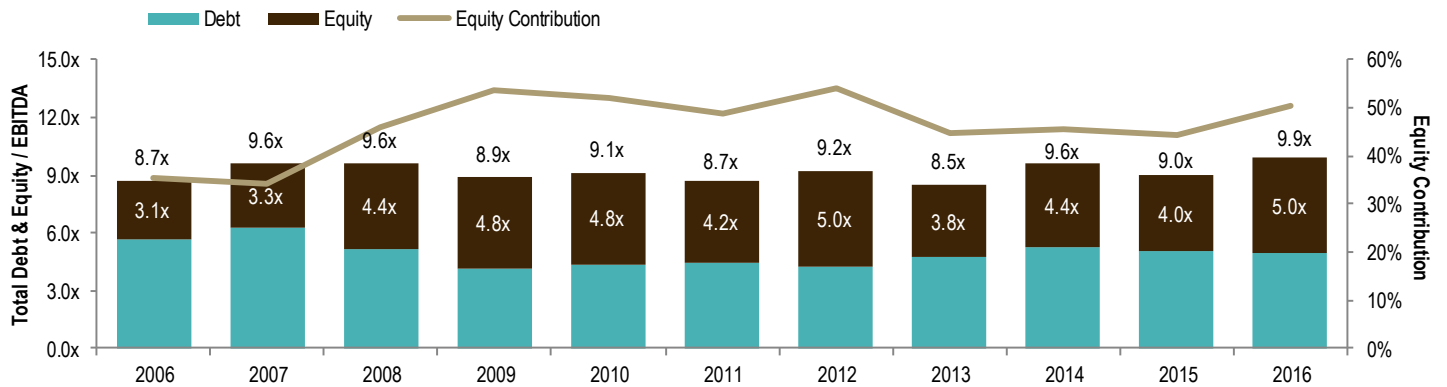
(\$ in billions)



Source: S&P LCD.

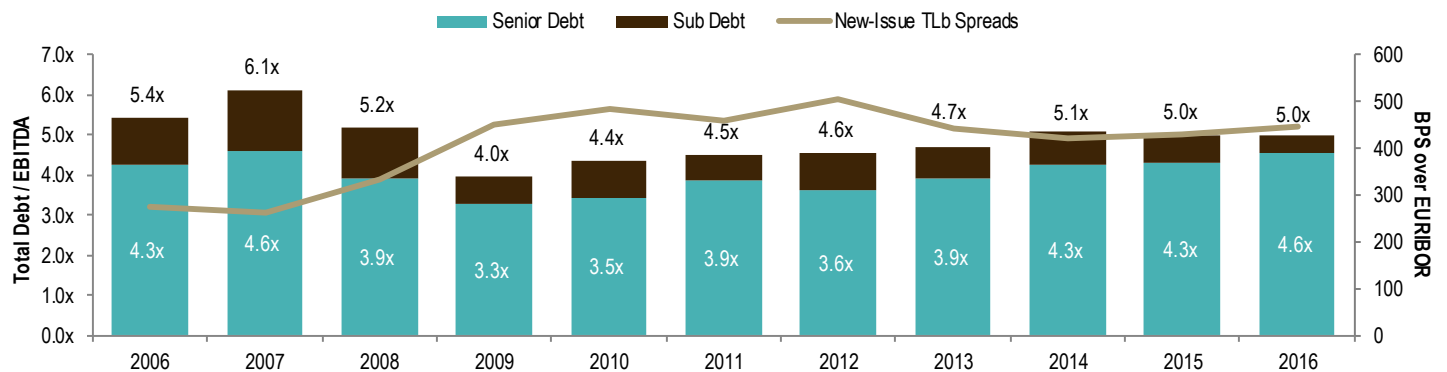
Europe LBO Summary

Average Purchase Price Multiples



Source: S&P LCD.

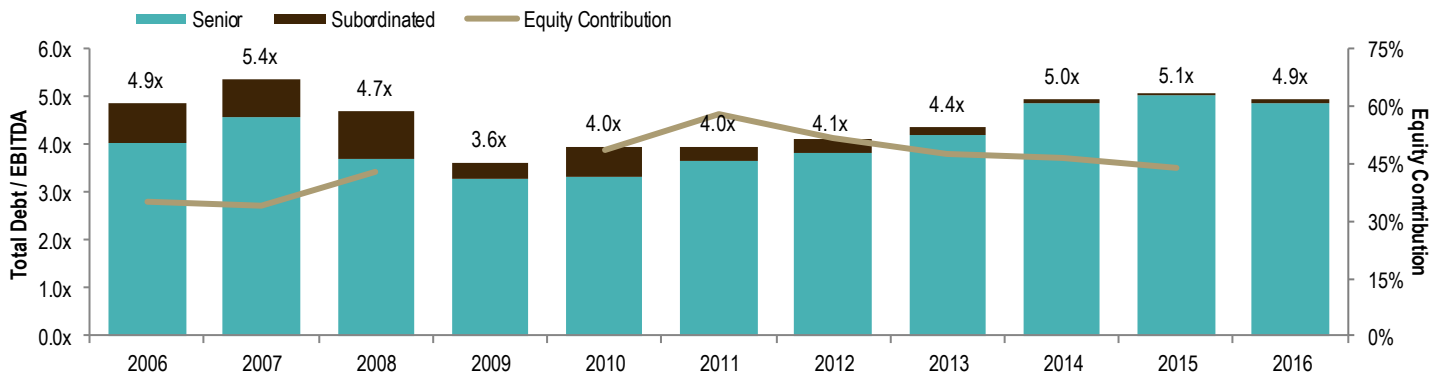
Average Debt / EBITDA Multiples



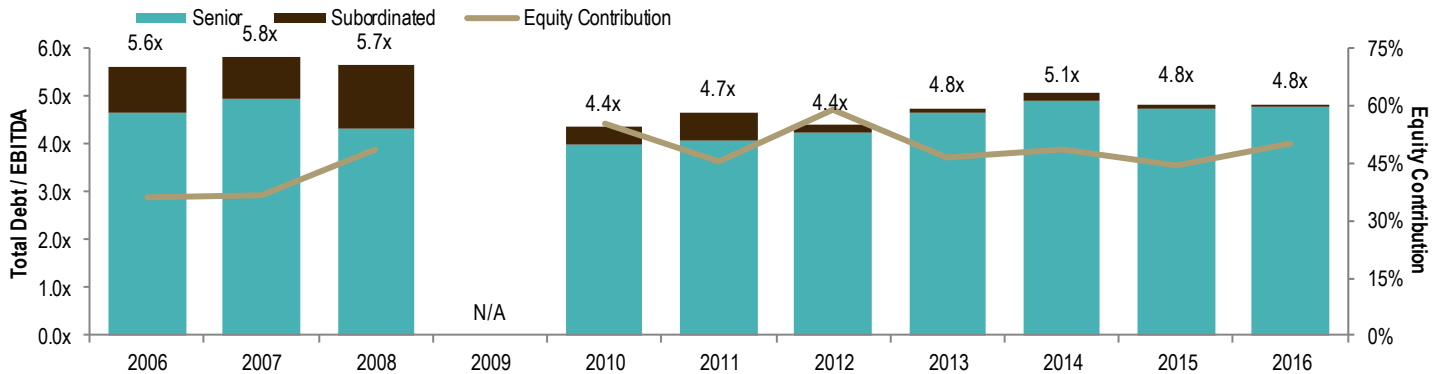
Source: S&P LCD.

Europe LBO Debt Multiple Trends

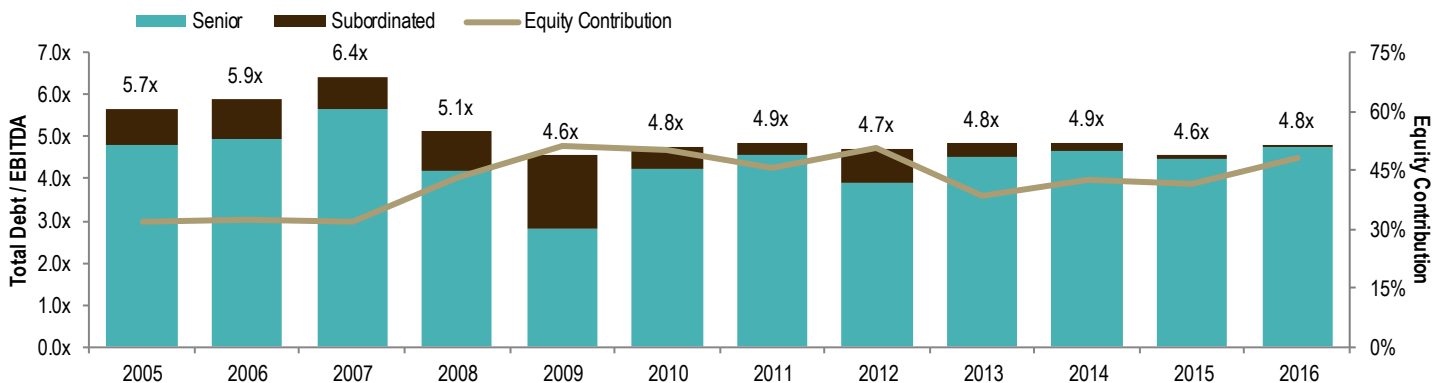
Average Debt / EBITDA Multiples: Deal Value Less Than €250 Million



Average Debt / EBITDA Multiples: Deal Value of €250-500 Million



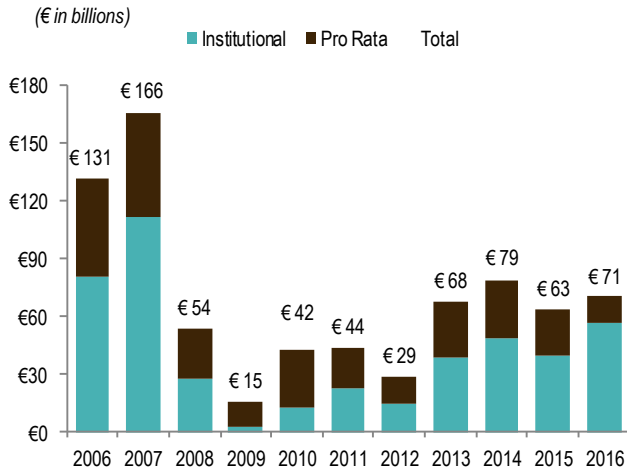
Average Debt / EBITDA Multiples: Deal Value of €500-1,000 Million



Source: S&P LCD.

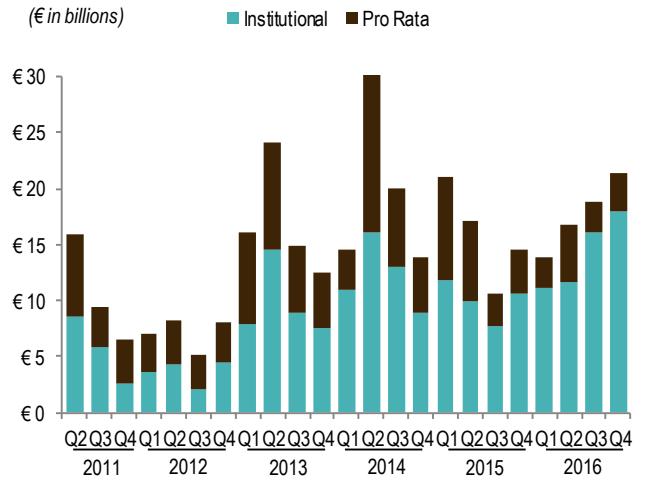
Europe Leveraged Loan Market

Annual Leveraged Loan Issuance



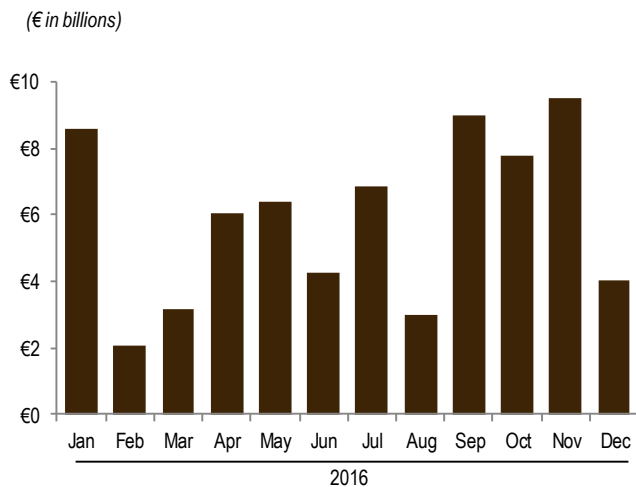
Source: S&P LCD.

Quarterly Leveraged Loan Issuance



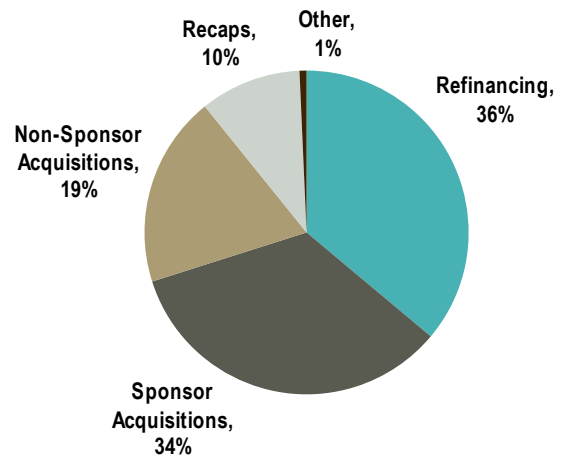
Source: S&P LCD.

Monthly Leveraged Loan Issuance



Source: S&P LCD.

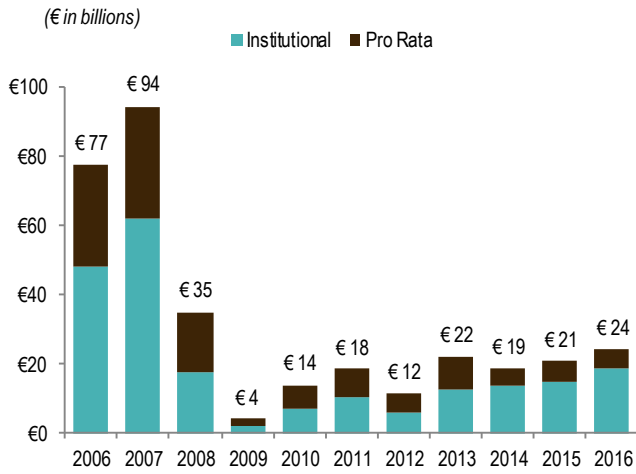
2016 Leveraged Loan Issuance by Purpose



Source: S&P LCD.

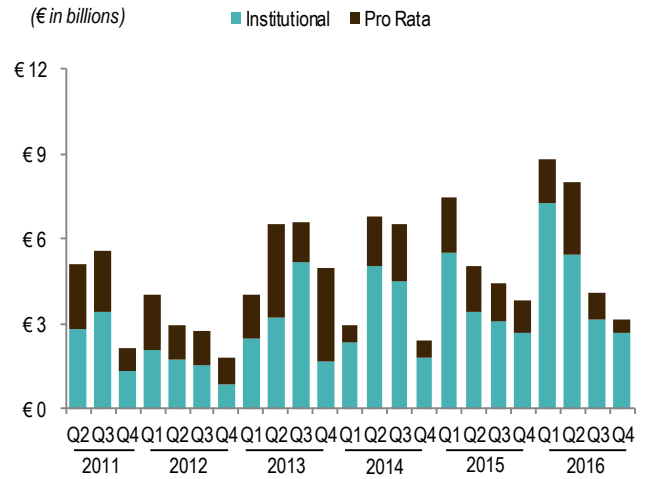
Europe Buyout Loan Market

Annual Buyout Loan Issuance



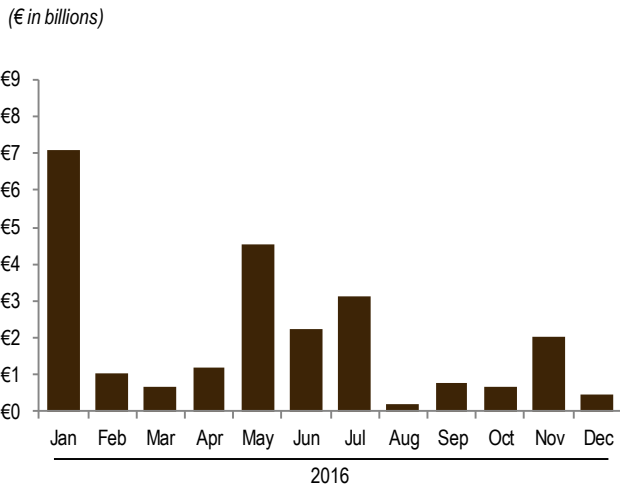
Source: S&P LCD.

Quarterly Buyout Loan Issuance



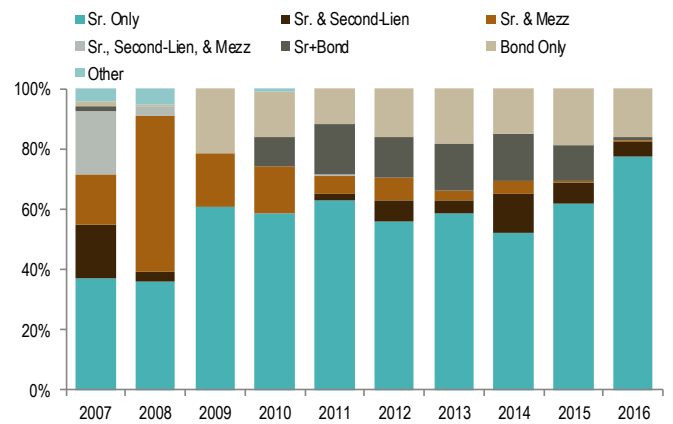
Source: S&P LCD.

Monthly Buyout Loan Issuance



Source: S&P LCD.

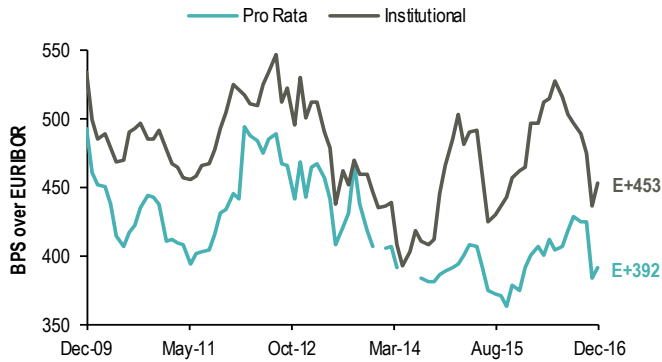
Total Transaction Structure for LBOs



Source: S&P LCD.

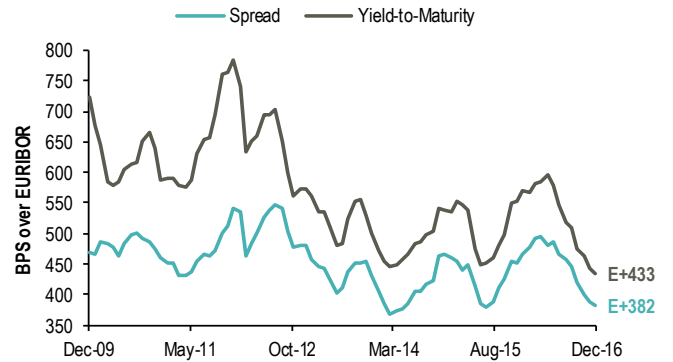
Europe Leveraged Loan Pricing

New-Issue Buyout & Acquisition Financing Spreads



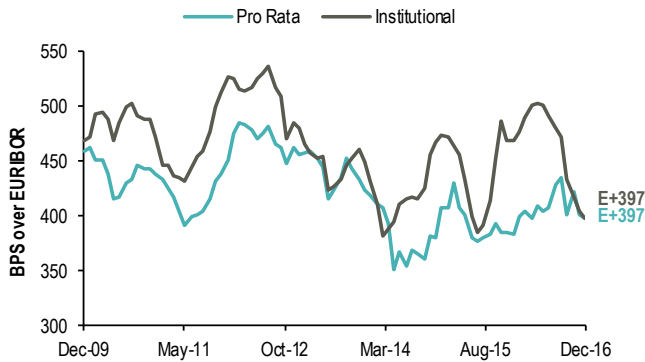
Source: S&P LCD.

Average Institutional Spreads & Yield-to-Maturities



Source: S&P LCD.

New-Issue Sponsor-Backed Loan Spreads



Source: S&P LCD.

Average SPU⁽¹⁾ for 1st Lien Debt on LBOs

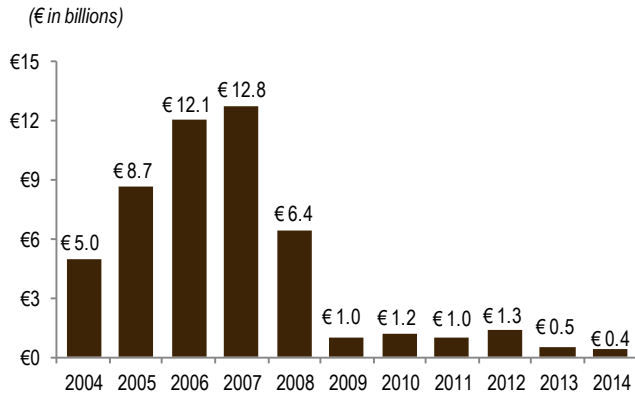


Source: S&P LCD.

(1) Spread per unit of leverage, equal to average new-issue first-lien spread divided by average first-lien debt-to-EBITDA multiple.

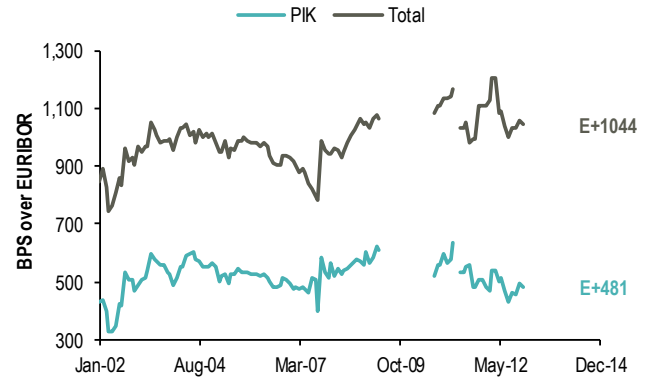
Europe Mezzanine Market

Annual Mezzanine Loan Issuance



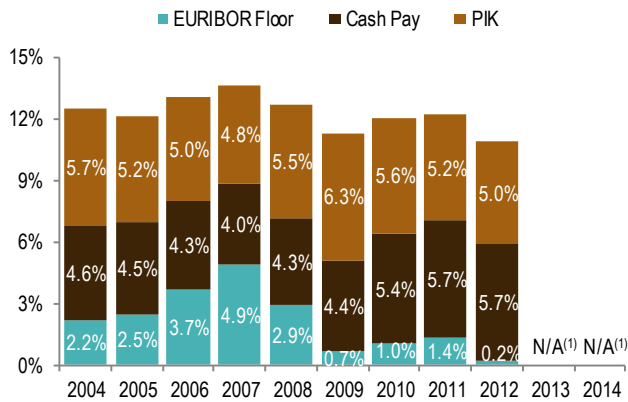
Source: S&P LCD.

Average New-Issue Mezzanine Spreads



Source: S&P LCD.

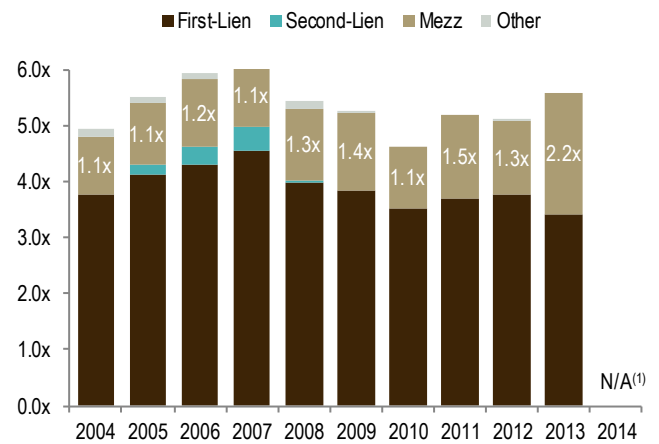
Average All-In Mezzanine Yields



Source: S&P LCD.

(1) Not enough data points to provide meaningful data.

Debt / EBITDA Multiples for LBOs with Mezzanine Debt



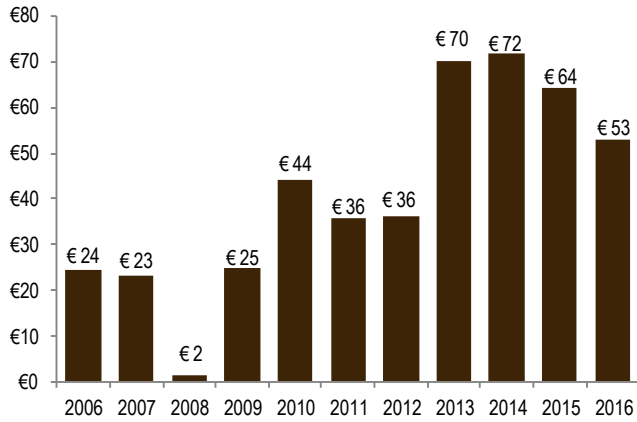
Source: S&P LCD.

(1) Not enough data points to provide meaningful data.

Europe High Yield Bond Market

Annual High Yield Bond Issuance

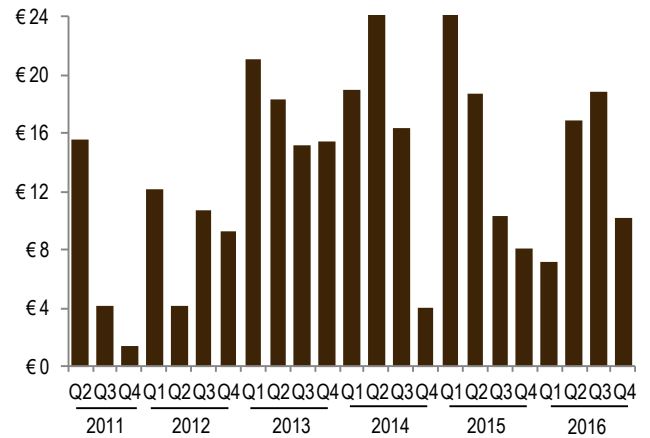
(€ in billions)



Source: S&P LCD.

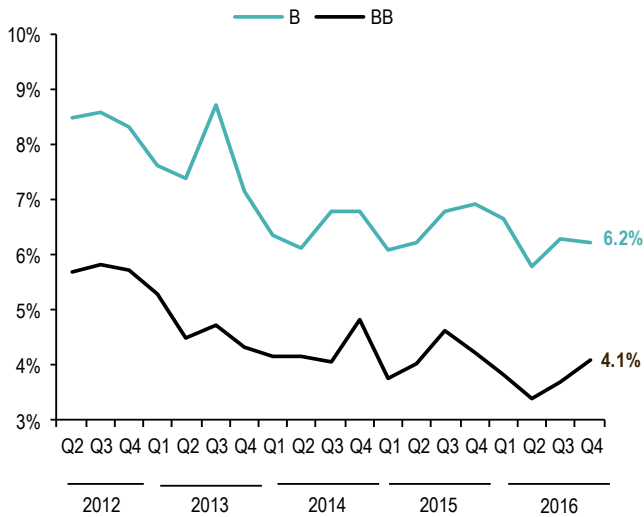
Quarterly High Yield Bond Issuance

(€ in billions)



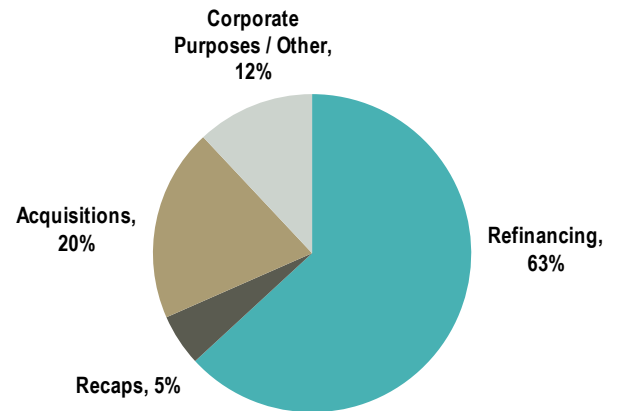
Source: S&P LCD.

Average High Yield Bond Yields



Source: S&P LCD.

2016 High Yield Bond Issuance by Purpose



Source: S&P LCD.

Appendix – Q4 2016 U.S. LBO Loans

| Launch Date | Company | Sponsor | Industry | Deal Size (\$mil) | S&P Rating | Tranche Amount (\$mil) / Spread ⁽¹⁾ | | | Total / Sr. Debt |
|-------------|--------------------------------|--------------------------------------|---------------------------|-------------------|------------|--|---------------|-------------|------------------|
| | | | | | | RC | First-Lien | Second-Lien | |
| 12/06/16 | Novolex | Carlyle Group | Chemicals | 1,575 | B | - | 1,575 / L+325 | - | - |
| 12/06/16 | Novolex | Carlyle Group | Chemicals | 300 | B | 300 / NA | - | - | - |
| 11/30/16 | Lightstone Generation LLC | Blackstone Group | Utilities | 1,725 | NR | - | 1,725 / L+550 | - | - |
| 11/30/16 | Lightstone Generation LLC | Blackstone Group | Utilities | 100 | NR | 100 / L+550 | - | - | - |
| 11/29/16 | Masergy Communications | Berkshire Partners | Computers & Electronics | 348 | B | - | 348 / L+450 | - | - |
| 11/29/16 | Masergy Communications | Berkshire Partners | Computers & Electronics | 140 | B | - | - | 140 / L+850 | - |
| 11/29/16 | Masergy Communications | Berkshire Partners | Computers & Electronics | 50 | B | 50 / NA | - | - | - |
| 11/29/16 | Radiate Holdco | Texas Pacific Group | Cable | 1,425 | B | - | 1,425 / L+300 | - | 6.5 / NA |
| 11/29/16 | Radiate Holdco | Texas Pacific Group | Cable | 150 | B | 150 / NA | - | - | 6.5 / NA |
| 11/29/16 | Vestcom International | Charlesbank Capital Partners | Services & Leasing | 335 | B | - | 335 / L+425 | - | 6.8 / NA |
| 11/29/16 | Vestcom International | Charlesbank Capital Partners | Services & Leasing | 40 | B | 40 / NA | - | - | 6.8 / NA |
| 11/29/16 | Zodiac Pool Solutions SAS | Rhone Capital LLC | Entertainment & Leisure | 520 | B | - | 520 / L+450 | - | - |
| 11/29/16 | Zodiac Pool Solutions SAS | Rhone Capital LLC | Entertainment & Leisure | 130 | B | 130 / L+175 | - | - | - |
| 11/29/16 | Zodiac Pool Solutions SAS | Rhone Capital LLC | Entertainment & Leisure | 150 | B | - | - | 150 / L+900 | - |
| 11/23/16 | Ministry Brands | Insight Ventures | Computers & Electronics | 503 | NR | 20 / NA | 379 / L+500 | - | - |
| 11/23/16 | Ministry Brands | Insight Ventures | Computers & Electronics | 213 | NR | - | - | 167 / L+925 | - |
| 11/18/16 | Cvent | Vista Equity Partners | Computers & Electronics | 45 | B- | - | 45 / L+500 | - | - |
| 11/17/16 | Intermedia | Madison Dearborn Partners | Computers & Electronics | 215 | B | 25 / NA | 190 / L+550 | - | 5.7 / NA |
| 11/17/16 | Intermedia | Madison Dearborn Partners | Computers & Electronics | 70 | B | - | - | 70 / L+950 | 5.7 / NA |
| 11/15/16 | Anchor Glass Container Corp | CVC | Manufacturing & Machinery | 650 | B | - | 650 / L+325 | - | - |
| 11/15/16 | Anchor Glass Container Corp | CVC | Manufacturing & Machinery | 150 | B | - | - | 150 / L+775 | - |
| 11/15/16 | Anchor Glass Container Corp | CVC | Manufacturing & Machinery | 120 | B | 120 / NA | - | - | - |
| 11/14/16 | Drive Medical | Clayton, Dubilier & Rice | Healthcare | 430 | B | - | 430 / L+550 | - | - |
| 11/14/16 | Drive Medical | Clayton, Dubilier & Rice | Healthcare | 167 | B | - | - | 162 / L+925 | - |
| 11/14/16 | Drive Medical | Clayton, Dubilier & Rice | Healthcare | 100 | B | 100 / NA | - | - | - |
| 11/14/16 | Save-A-Lot | Onex Corp. | Retail Food & Drug | 740 | B | - | 740 / L+600 | - | - |
| 11/10/16 | Learfield Communications | Atairos Group | Radio | 475 | B | - | 475 / L+325 | - | - |
| 11/10/16 | Learfield Communications | Atairos Group | Radio | 100 | B | - | - | 100 / NA | - |
| 11/10/16 | Learfield Communications | Atairos Group | Radio | 65 | B | 65 / NA | - | - | - |
| 11/10/16 | SAI Global | Baring Private Equity | Services & Leasing | 515 | B+ | - | 325 / L+450 | - | - |
| 11/10/16 | SAI Global | Baring Private Equity | Services & Leasing | 60 | B+ | 60 / NA | - | - | - |
| 11/09/16 | TricorBraun Inc | AEA Investors | Chemicals | 660 | B | - | 600 / L+375 | - | - |
| 11/09/16 | TricorBraun Inc | AEA Investors | Chemicals | 75 | B | 75 / NA | - | - | - |
| 11/07/16 | RevSpring Inc | GTCR Golder Rauner | Computers & Electronics | 227 | B- | 20 / NA | 207 / L+550 | - | 6.3 / NA |
| 11/02/16 | Culligan International Company | Advent International | Manufacturing & Machinery | 300 | B | - | 300 / L+400 | - | - |
| 11/02/16 | Culligan International Company | Advent International | Manufacturing & Machinery | 75 | B | 75 / NA | - | - | - |
| 11/02/16 | HealthSun Health Plans Inc | Summit Partners | Healthcare | 457 | BB- | - | 457 / L+550 | - | - |
| 11/02/16 | HealthSun Health Plans Inc | Summit Partners | Healthcare | 25 | BB- | 25 / NA | - | - | - |
| 11/02/16 | ProAmpac | Pritzker Organization LLC | Forest Product | 830 | B | - | 830 / L+400 | - | - |
| 11/02/16 | ProAmpac | Pritzker Organization LLC | Forest Product | 215 | B | - | - | 215 / L+850 | - |
| 11/02/16 | ProAmpac | Pritzker Organization LLC | Forest Product | 75 | B | 75 / NA | - | - | - |
| 11/02/16 | Terra Millennium | Court Square Capital Partners | Building Materials | 215 | B | 40 / NA | 175 / L+550 | - | - |
| 11/01/16 | Constellation Brands | Ontario Teachers Pension Plan | Food & Beverage | 260 | B | - | 260 / L+375 | - | - |
| 10/26/16 | Chromaflor Technologies LLC | American Securities Capital Partners | Chemicals | 360 | B- | - | 360 / L+400 | - | - |
| 10/26/16 | Chromaflor Technologies LLC | American Securities Capital Partners | Chemicals | 120 | B- | - | - | 120 / L+800 | - |
| 10/26/16 | Chromaflor Technologies LLC | American Securities Capital Partners | Chemicals | 50 | B- | 50 / L+400 | - | - | - |
| 10/25/16 | Hoffmaster Group Inc | Wellspring Capital Management LLC | Forest Product | 390 | B | - | 390 / L+450 | - | - |

Source: S&P LCD.
(1) Spread over LIBOR.

Appendix – Q4 2016 U.S. LBO Loans

| Launch Date | Company | Sponsor | Industry | Deal Size (\$mil) | S&P Rating | Tranche Amount (\$mil) / Spread ⁽¹⁾ | | | Total / Sr. Debt |
|-------------|----------------------------------|-----------------------------------|-------------------------|-------------------|------------|--|---------------|-------------|------------------|
| | | | | | | RC | First-Lien | Second-Lien | |
| 10/25/16 | Hoffmaster Group Inc | Wellspring Capital Management LLC | Forest Products | 125 | B | - | - | 125 / L+950 | - |
| 10/25/16 | Hoffmaster Group Inc | Wellspring Capital Management LLC | Forest Products | 50 | B | 50 / NA | - | - | - |
| 10/24/16 | Acrisure LLC | Genstar Capital | Insurance | 1,260 | B | - | 1,065 / L+475 | - | - |
| 10/24/16 | Acrisure LLC | Genstar Capital | Insurance | 200 | B | 200 / NA | - | - | - |
| 10/20/16 | Accuride Corp | Crestview Partners | Automotive | 235 | B- | - | 235 / L+700 | - | - |
| 10/20/16 | Accuride Corp | Crestview Partners | Automotive | 65 | B- | 65 / NA | - | - | - |
| 10/19/16 | Infoblox | Vista Equity Partners | Computers & Electronics | 500 | B- | - | 500 / L+500 | - | - |
| 10/19/16 | Infoblox | Vista Equity Partners | Computers & Electronics | 250 | B- | - | - | 250 / L+875 | - |
| 10/19/16 | Infoblox | Vista Equity Partners | Computers & Electronics | 50 | B- | 50 / NA | - | - | - |
| 10/18/16 | Cardenas Markets | Kohlberg, Kravis & Roberts | Retail Food & Drug | 190 | NR | 25 / NA | 165 / L+575 | - | - |
| 10/13/16 | Rackspace Hosting Inc | Apollo Management | Computers & Electronics | 2,000 | BB- | - | 2,000 / L+400 | - | 4.0 / 4.0 |
| 10/13/16 | Rackspace Hosting Inc | Apollo Management | Computers & Electronics | 225 | BB- | 225 / NA | - | - | 4.0 / 4.0 |
| 10/11/16 | Systems Maintenance Services Inc | Partners Group | Computers & Electronics | 260 | B | - | 260 / L+500 | - | - |
| 10/11/16 | Systems Maintenance Services Inc | Partners Group | Computers & Electronics | 40 | B | 40 / L+400 | - | - | - |
| 10/04/16 | K&N Engineering | Goldman Sachs | Automotive | 245 | B | - | 245 / L+475 | - | - |
| 10/04/16 | K&N Engineering | Goldman Sachs | Automotive | 100 | B | - | - | 100 / L+875 | - |
| 10/04/16 | K&N Engineering | Goldman Sachs | Automotive | 40 | B | 40 / NA | - | - | - |

Source: S&P LCD.

(1) Spread over LIBOR

Appendix – Q4 2016 Europe LBO Loans

| Launch Date | Company | Sponsor | Industry | Deal Size (mil) | S&P Rating | Tranche Amount (mil) / Spread ⁽¹⁾ | | | Total / Sr. Debt |
|-------------|--------------------------------|------------------------------|---------------------------|-----------------|------------|--|-----------------|-----------------|------------------|
| | | | | | | RC | TLa | TLb | |
| 12/02/16 | Saptec Agro SA | Bridgepoint Capital | Chemicals | €250 | NR | €60 / NA | - | €190 / E+475 | - |
| 12/01/16 | Elysium Healthcare | BC Partners | Healthcare | £173 | NR | £15 / E+450 | - | £133 / E+525 | 3.3 / 3.3 |
| 11/28/16 | Optima | Charterhouse Equity Partners | Food & Beverage | €235 | NR | €50 / NA | - | €185 / NA | 5.5 / 5.5 |
| 11/24/16 | SLV | Ardian | Computers & Electronics | €50 | NR | €50 / NA | - | - | 5.5 / 5.5 |
| 11/24/16 | SLV | Ardian | Computers & Electronics | €397 | NR | - | - | €397 / E+425 | 5.5 / 5.5 |
| 11/22/16 | MSX International Inc | Bain Capital | Services & Leasing | \$75 | NR | \$75 / NA | - | - | 5.3 / 4.3 |
| 11/22/16 | MSX International Inc | Bain Capital | Services & Leasing | €328 | NR | - | - | €328 / E+550 | 5.3 / 4.3 |
| 11/17/16 | Allegro Group Sp. | Cinven Ltd | Computers & Electronics | zł3,840 | NR | zł340 / E+325 | zł1,050 / E+325 | zł2,450 / E+375 | 6.5 / 4.7 |
| 11/02/16 | Culligan International Company | Advent International | Manufacturing & Machinery | €68 | B | - | - | €68 / E+350 | - |
| 10/24/16 | P&I Personal & Informatik AG | Permira | Computers & Electronics | €65 | NR | €15 / NA | - | - | 7.0 / 5.3 |
| 10/24/16 | P&I Personal & Informatik AG | Permira | Computers & Electronics | €305 | NR | - | - | €305 / E+425 | 7.0 / 5.3 |
| 10/14/16 | Powerflute | Madison Capital Partners | Forest Product | €40 | B | €40 / E+400 | - | - | - |
| 10/14/16 | Powerflute | Madison Capital Partners | Forest Product | €240 | B | - | - | €240 / E+500 | - |
| 10/03/16 | Losberger gmbh | Gilde Investments | Textile & Apparel | €170 | NR | - | - | - | - |

Source: S&P LCD.

(1) Spread over EURIBOR.

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