

# European High Yield & Leveraged Loan Report

## European Leveraged Finance

Q3: 2017



# Table of Contents

<b>Table of Contents</b> .....	<b>2</b>
<b>Highlights and Market Environment</b> .....	<b>4</b>
Issuance Highlights .....	4
Market and Economic Environment .....	4
Issuance: Leveraged Loans .....	5
Issuance: High Yield Bonds .....	6
Returns & Credit Quality .....	7
<b>1 Leveraged Finance Overview</b> .....	<b>8</b>
1.1 European Leveraged Issuance by Type .....	8
1.2 European Leveraged Issuance Percentage .....	8
1.3 European Leveraged Average Deal Size .....	8
1.4 Bank Credit Standards .....	8
1.5 Factors Affecting Bank Credit Standards: October 2017 .....	8
1.6 European Leveraged Issuance Percentage .....	8
1.7 Factors Affecting Loan Demand: October 2017 .....	9
1.8 Global Comparison – High Yield Issuance .....	9
<b>2 Issuance – Leveraged Loans</b> .....	<b>10</b>
2.1 European Leveraged Loan Issuance By Type .....	10
2.2 European Leveraged Loan Issuance by Industry .....	10
2.3 Forward Pipeline of Leveraged Loan Market .....	10
2.4 ELLI Total Institutional Loans Outstanding .....	10
2.5 ELLI Ratings Diversification .....	10
2.6 Institutional and Pro Rata Spreads .....	10
2.7 Mezzanine Spreads .....	11
<b>3 Issuance – High Yield Bonds Overview</b> .....	<b>12</b>
3.1 European High Yield Issuance .....	12
3.2 European High Yield Issuance by Sponsor .....	12
3.3 European Corporate Bonds Outstanding (IG and HY only) .....	12
3.4 European Corporate Bonds HY Maturity Wall: September 2017 .....	12
3.5 European Corporate HY Bonds Outstanding by Sector: 3Q 2017 .....	12
3.6 European Corporate HY Bonds Outstanding by Current Rating: September 2017 .....	12
3.7 European Corporate Bond Issuance by Rating: 2Q 2017 .....	13
3.8 European Corporate Bond Issuance by Tenor: 3Q 2017 .....	13
3.9 European HY Use of Proceeds .....	13
<b>4 Issuance – European Developed Market High Yield Bonds</b> .....	<b>14</b>
4.1 European Developed Market HY Bond Issuance .....	14
4.2 European Developed Market HY Issuance by Currency .....	14
4.3 European Developed Market HY Issuance by Industry: 3Q 2017 .....	14
4.4 European Developed Market HY Issuance by Country of Risk: 3Q 2017 .....	14
4.5 European Developed Market HY Issuance, Fixed vs. Floating .....	14
4.6 European Developed Market HY Issuance, Sponsored vs. Corporate .....	14
4.7 European Developed Market HY Rating Distribution at Issuance .....	15
4.8 European Developed Market Corporate Bonds Outstanding: 3Q 2017 .....	15
4.9 European Developed Market HY Bond Issuance .....	15
<b>5 Issuance – European Emerging Market High Yield Bonds</b> .....	<b>16</b>
5.1 European Emerging Market HY Bond Issuance .....	16
5.2 European Emerging Market HY Bond Issuance by Currency .....	16
5.3 European Emerging Market HY Issuance by Industry: 3Q 2017 .....	16
5.4 European Emerging Market HY Issuance by Country of Risk: 3Q 2017 .....	16
5.5 European Emerging Market HY Issuance, Fixed vs. Floating .....	16
5.6 European Emerging Market HY Issuance, Sponsored vs. Corporate .....	16
5.7 European Emerging Market HY Rating Distribution at Issuance .....	17
5.8 European Emerging Market Corporate Bonds Outstanding: 3Q 2017 .....	17
5.9 European Emerging Market HY Bond Issuance .....	17
<b>6 Credit Quality</b> .....	<b>18</b>
6.1 Developed Europe Issuer Rating Actions .....	18
6.2 Emerging Europe Issuer Rating Actions .....	18
6.3 Developed Europe Industry Rating Actions by Number of Ratings: 3Q 2017 .....	18
6.4 Emerging European Industry Rating Actions by Number of Ratings: 3Q 2017 .....	18
6.5 European High Yield Default Rates .....	18
6.6 European Leveraged Loan Default Rates .....	18
6.7 Mezzanine and Senior Loan Default Rate .....	19
6.8 Mezzanine and Senior Loan Recovery Rates .....	19

6.9 High-Yield bond CDS spreads vs. liquidity-stress index and HY bonds rated B3 neg and lower in Europe .....	19
6.10 European Defaults .....	19
<b>7 Relative Value and Total Return .....</b>	<b>20</b>
7.1 Relative value: European HY Bonds, Cash vs. Synthetic.....	20
7.2 European HY Bond Total Return .....	20
7.3 European Leveraged Loan Total Return.....	20
7.4 Asset Class Total Return, 3Q 2017.....	20
<b>Summary of the Methodologies Adopted for this Report .....</b>	<b>21</b>
<b>Annex.....</b>	<b>25</b>

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## Highlights and Market Environment

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### Highlights

#### Issuance Highlights

European leveraged finance issuance (leveraged loans and high yield bonds) decreased in 3Q'17 to €47.6 billion, a 41.3% decrease from €81.2 billion in 2Q'17 and a 20.7% decrease from €60.0 billion issued in 3Q'16. The quarterly decrease in 3Q'17 was almost equally driven by a 44.5% decrease in high yield bond issuance and a 39.0% decrease in leveraged loan issuance. The high yield bond share of the leveraged finance market decreased to 40.0% in 3Q'17, down from 42.3% in 2Q'17 but slightly up from 39.9% in 3Q'16.

#### Market and Economic Environment

According to the October 2017 European Central Bank lending survey, in the third quarter of 2017, credit standards for loans to enterprises stayed broadly unchanged, while credit standards on loans to households and consumer credit eased. Banks' overall terms and conditions on new loans continued to ease across all loan categories in 3Q'17, driven largely by further narrowing of margins on average loans, while margins on riskier loans remained broadly unchanged.

For loans to enterprises, credit standards eased for loans to large firms, but remained unchanged for loans to small and medium-sized enterprises (SMEs). Across the large euro area countries, credit standards on loans to enterprises eased in German, tightened in Spain, while remaining unchanged in France, Italy and the Netherlands.

Looking ahead to the fourth quarter of 2017, euro banks expect credit standards on loans to enterprises to remain unchanged but anticipate a net easing for housing loans and consumer credit.

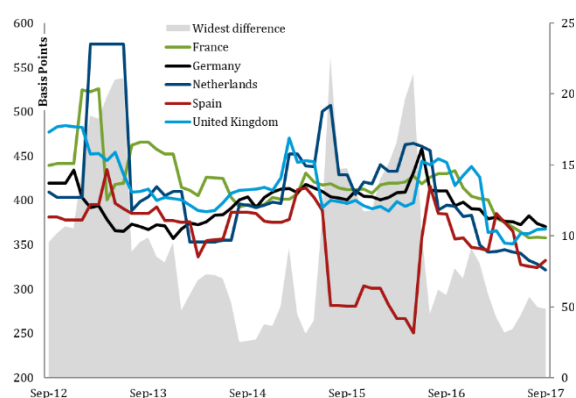
Net demand for loans to enterprises, housing loans, and consumer credit continued to increase in 3Q'17 driven mainly by the generally low level of interest rates and an increase in fixed investment. Net demand for loans is expected to increase further in 4Q'17.

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*“European leveraged finance issuance (leveraged loans and high yield bonds) totaled €47.6 billion in 3Q'17 ”*

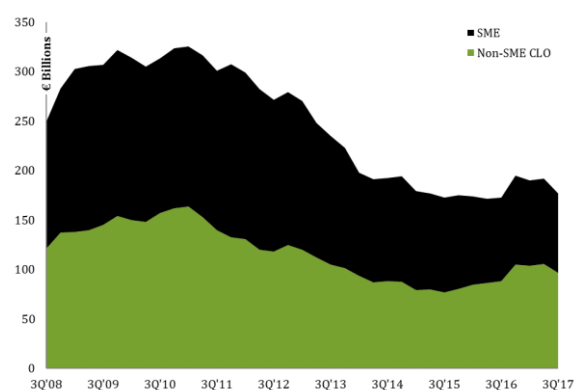
*“In 3Q’17, leveraged loan issuance decreased to €28.6 billion on 62 deals”*

### Institutional Spreads



Source: Dealogic, AFME, SIFMA

### European CLO Outstanding



Source: AFME, SIFMA

## Issuance

### Issuance: Leveraged Loans

Leveraged loan issuance, including first lien, second lien, and mezzanine financing, decreased to €28.6 billion in the third quarter of 2017, down 39.0% q-o-q (€46.8 billion in 2Q’17) and down 20.9% y-o-y (€36.1 billion in 3Q’16).

In the third quarter of 2017, only €4.5 billion of amend-and-extend (“A&E”) loans were financed, a significant decrease from €11.5 billion in 2Q’17 and from €9.2 billion in 3Q’16.

Most of the leveraged loans issued in 3Q’17 were 1<sup>st</sup> lien loans (€28.4 billion); there were two 2<sup>nd</sup> lien loans financed (€0.2 billion) and no mezzanine loans. Pricing spreads for institutional loans tightened by 4 basis points (bps) q-o-q and by 38 bps y-o-y while spreads for pro rata loans tightened by 17 bps q-o-q and by 18 bps y-o-y.

The top three sectors in leveraged loan issuance in 3Q’17 accounted for almost half of the issuance volume; the leading sector was transportation (€4.6 billion), followed by auto/truck (€4.5 billion), and retail (€3.7 billion), with the balance split between 15 other sectors.

The share of deals used to refinance and/or repay debt decreased to 55.1% of all deals by euro amount in the third quarter of 2017, down from 63.1% in 2Q’17 and 71.7% in 3Q’16. Refinancing and/or repayment of debt were the largest use of proceeds in 3Q’17 with €15.7 billion, followed by leveraged buyouts with €9.9 billion or 34.6% of total, and acquisitions with €2.8 billion or 9.9% of total with the remainder €0.1 billion split between general corporate, and other, purposes.

European CLO outstandings, including SME deals, decreased by 7.9% to €176.8 billion in 3Q’17 from €192.0 billion in 2Q’17, but increased by 2.3% from €172.8 billion in 3Q’16. Non-SME CLOs outstanding decreased by 8.8% to €96.4 billion in 3Q’17 from €105.7 billion in 2Q’17 but increased by 9.3% y-o-y, while SME CLOs decreased by 6.8% to €80.4 billion from €86.2 billion in 2Q’17 and by 4.9% from 3Q’16.

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*“Primary high yield issuance totaled €19.1 billion on 48 deals in 3Q’17”*

**Issuance: High Yield Bonds**

Primary high yield issuance in 3Q’17 totaled €19.1 billion on 48 deals, a 44.5% decrease from 2Q’17 (€34.4 billion on 83 deals) and a 20.4% decrease from 3Q’16 (€23.9 billion on 44 deals).

In the third quarter of 2017, average deal size in developed market Europe decreased by 6.0% to €372.6 million from €396.3 million in 2Q’17 and was down 36.3% from €585.2 million in 3Q’16. Average deal size in emerging market Europe increased by 8.7% to €503.8 million in 3Q’17 from €463.5 million in 2Q’17 and increased by 54.1% y-o-y (€326.9 million in 3Q’16).

High yield issuance for refinancing and/or repayment of debt in developed market Europe decreased to €4.7 billion, representing 32.3% of all issuance in 3Q’17, down from €7.4 billion (30.5% of total) in 2Q’17 and from €11.2 billion (51.7% of total) in 3Q’16. In emerging market Europe, €1.4 billion (29.8% of total) in high yield debt was issued for refinancing and/or repayment of debt in the third quarter of 2017, which was an increase from €0.3 billion (3.0% of total) in 2Q’17 and from no issuance for this purpose in 3Q’16.

Four sectors accounted for over half of the total high yield issuance volume in 3Q’17: the telecommunications industry led issuance with €3.2 billion (16.8% of total), followed by finance with €2.7 billion (14.0% of total), retail with €2.4 billion (12.8% of total), and transportation with €2.3 billion (11.8% of total). In developed market Europe, the top three industries in 3Q’17 were: retail (€2.4 billion or 16.7% of total issuance volume), followed by transportation and telecommunications (€1.9 billion or 12.8% of total each). In emerging market Europe the top three sectors were: telecommunications (€1.4 billion or 29.8% of total), followed by oil & gas (€1.1 billion or 23.9% of total) and finance (€1.0 billion or 21.9% of total).

The proportion of USD-denominated issuance decreased to only 18.5% of all issuance in 3Q’17, compared to 42.9% in 2Q’17 and 40.2% in 3Q’16. USD-denominated issuance in developed market Europe decreased to €1.6 billion, or 11.2% of issuance, down from €5.1 billion or 20.9% in 2Q’17 and €7.7 billion (35.6% of total) in 3Q’16. Of high yield bonds issued in emerging market Europe, €1.9 billion or 42.0% was denominated in USD, down from €9.7 billion (95.0% of total) in 2Q’17 but unchanged from €1.9 billion (84.2% of total) in 3Q’16.

### Returns & Credit Quality

All asset classes analysed recorded positive returns in the third quarter of 2017. MCSI Emerging Market Index led returns with 7.0% q-o-q, followed by Russell 2000 (5.3% q-o-q) and Euro High Yield CCC and Lower Rated (4.5% q-o-q). The worst performing asset classes in 3Q'17 were U.S. Treasuries (0.4% q-o-q), EMU Covered Bonds (0.5% q-o-q), and U.S. ABS/MBS (0.7% q-o-q).

As of September 2017, S&P reported the trailing 12-month speculative-grade default rate at 2.2%, a slight increase from 2.1% end-June 2017 and up from 1.9% end-September 2016. S&P expects the 12-month speculative-grade European corporate default rate to remain at about 2% through the end of June 2018, continuing the recent trend.

Moody's reported the trailing 12-month speculative-grade default rate in September 2017 to be 2.4%, down from 2.8% end-June 2017 and from 2.6% end-September 2016.

Only one bond-related default was reported in the third quarter of 2017: a Norwegian firm Norske Skogindustrier defaulted due to a missed interest payment.

According to Standard and Poor's, in 3Q'17 upgrades exceeded downgrades in developed market Europe (24 upgrades to 23 downgrades), a slightly worse ratio than 29 upgrades to 26 downgrades in 2Q'17 but more positive than 21 upgrades to 28 downgrades in 3Q'16. In emerging market Europe, there were 5 upgrades and 2 downgrades by S&P in 3Q'17 compared to 4 upgrades and 5 downgrades in 2Q'17 and 7 upgrades and 6 downgrades in 3Q'16. Three sectors accounted for almost half of the rating actions in 3Q'17: banks (total of 5 upgrades and 1 downgrade) followed by utilities (4 upgrades and 1 downgrades) and forest products and building materials (2 upgrades and 3 downgrade).

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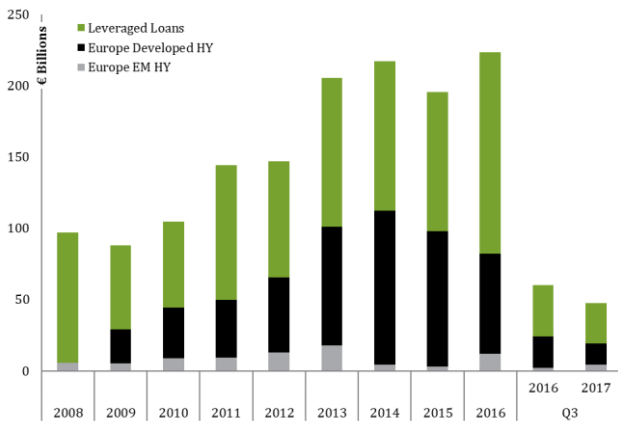
*“MCSI Emerging Market Index led returns in 3Q'17 with total return of 7.0% q-o-q”*

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*“One European high yield bond issuer defaulted in 3Q'17”*

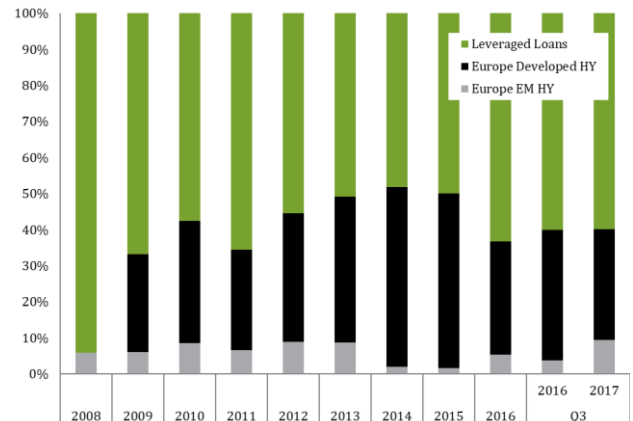
# 1 Leveraged Finance Overview

## 1.1 European Leveraged Issuance by Type



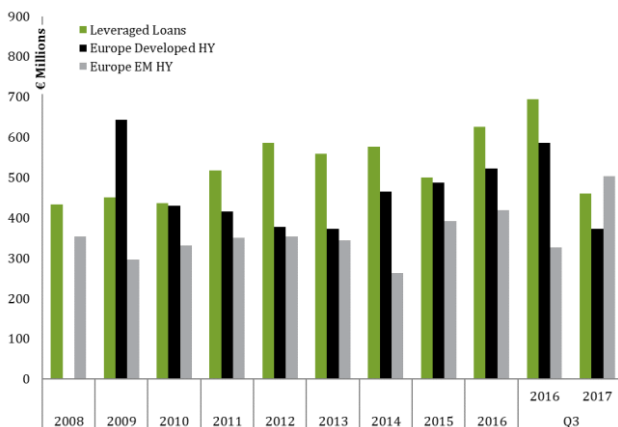
Source: Dealogic, Thomson Reuters LPC

## 1.2 European Leveraged Issuance Percentage



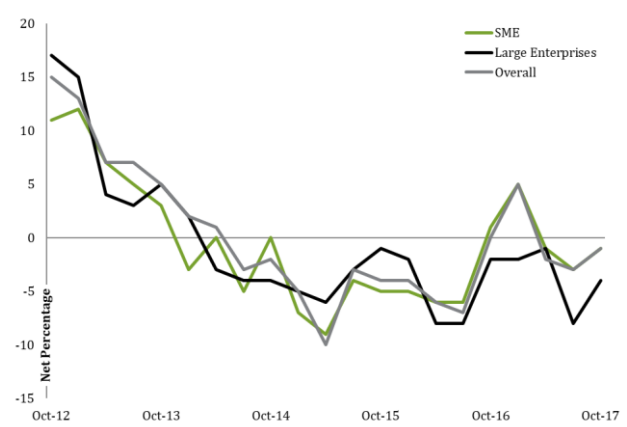
Source: Dealogic, Thomson Reuters LPC

## 1.3 European Leveraged Average Deal Size



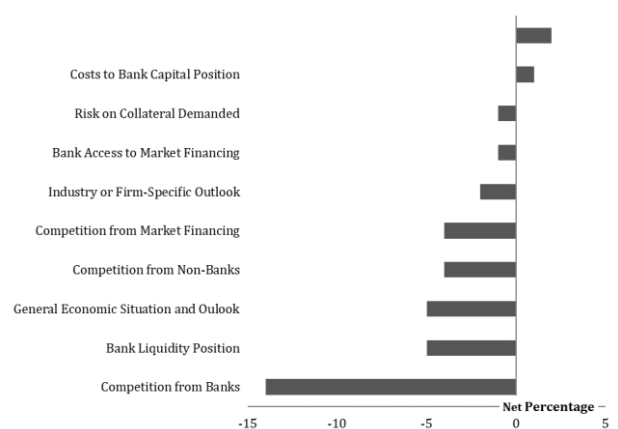
Source: Dealogic, Thomson Reuters LPC

## 1.4 Bank Credit Standards<sup>1</sup>



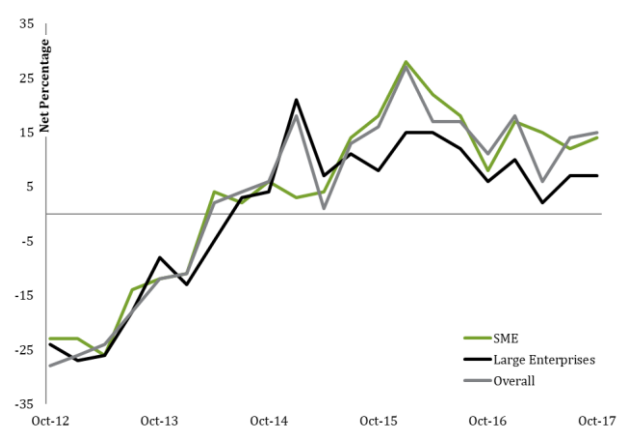
Source: European Central Bank

## 1.5 Factors Affecting Bank Credit Standards: October 2017<sup>2</sup>



Source: European Central Bank

## 1.6 European Leveraged Issuance Percentage<sup>3</sup>



Source: European Central Bank

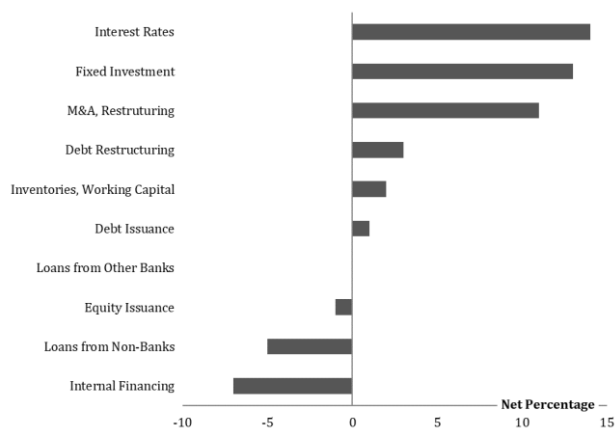
<sup>1</sup> A positive net percentage number signifies tightening bank credit; a negative net percentage number signifies easing credit.

<sup>2</sup> A positive net percentage signifies the factor contributed to tightening credit standards; a negative net percentage signifies the factor contributed to easing credit standards.

<sup>3</sup> A positive net percentage signifies increased demand; a negative net percentage signifies decreased demand.



1.7 Factors Affecting Loan Demand: October 2017<sup>4</sup>



Source: European Central Bank

1.8 Global Comparison – High Yield Issuance

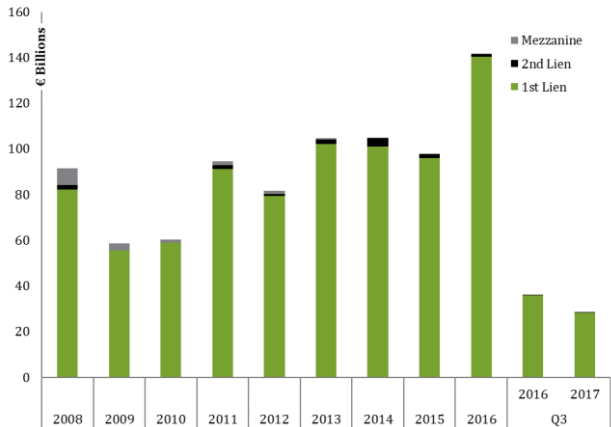
€ Billions	2017			2016					Prior Years			
	Q1	Q2	Q3	Q1	Q2	Q3	Q4	Full Year	2015	2014	2013	2012
<b>United States</b>	62.6	48.2	49.0	33.71	54.22	49.38	38.27	175.6	191.5	185.2	196.8	214.8
<b>Asia Pacific</b>	26.3	27.3	28.6	25.99	16.98	21.91	15.56	80.4	41.4	36.0	42.8	32.2
<b>Europe</b>	41.2	41.1	22.1	12.95	39.21	28.44	27.58	108.2	116.2	125.0	121.2	80.7

Source: Dealogic

<sup>4</sup> A positive net percentage signifies a factor that contributed to higher demand; a negative net percentage signifies a factor that contributed to lower demand.

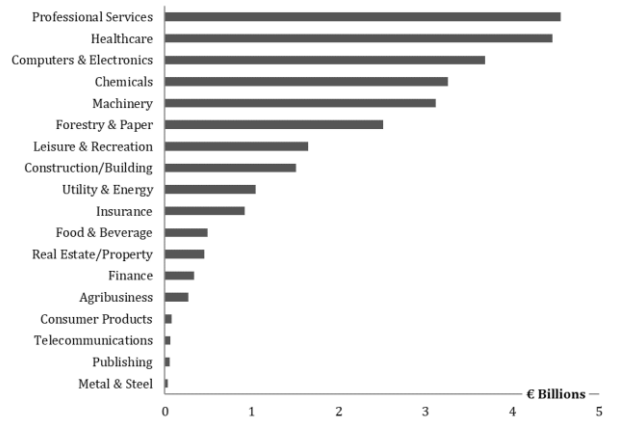
## 2 Issuance – Leveraged Loans

### 2.1 European Leveraged Loan Issuance By Type



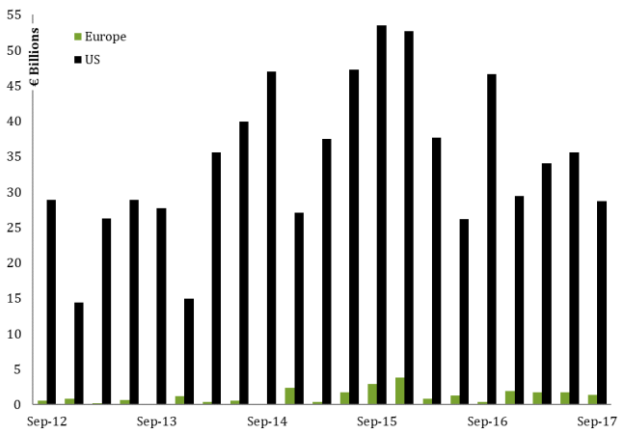
Source: Dealogic, Thomson Reuters LPC

### 2.2 European Leveraged Loan Issuance by Industry



Source: Dealogic

### 2.3 Forward Pipeline of Leveraged Loan Market



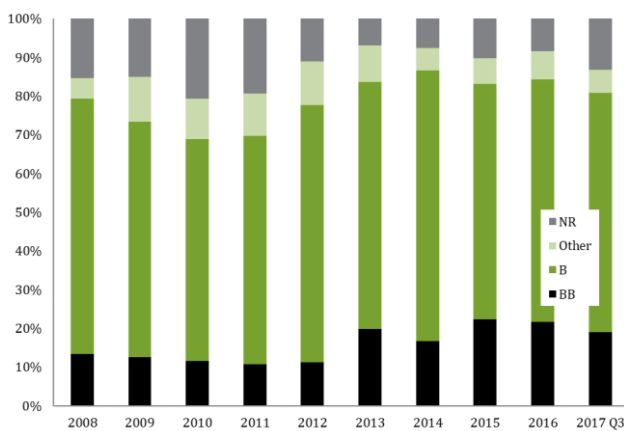
Source: Standard & Poor's LCD

### 2.4 ELLI Total Institutional Loans Outstanding



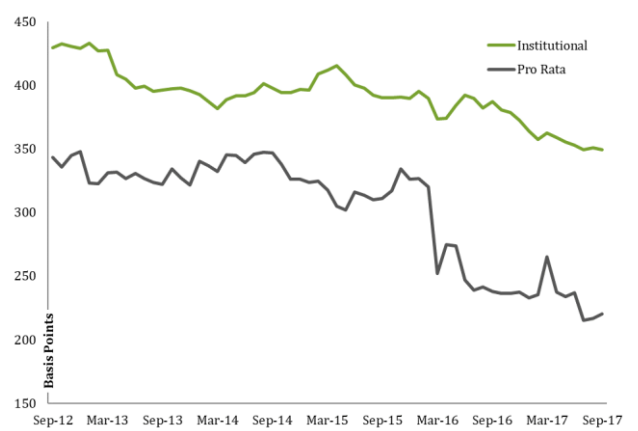
Source: Standard & Poor's LCD

### 2.5 ELLI Ratings Diversification



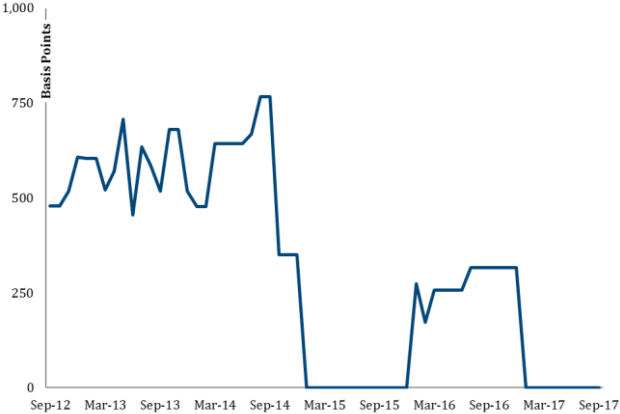
Source: Standard & Poor's LCD

### 2.6 Institutional and Pro Rata Spreads



Source: Dealogic, AFME, SIFMA

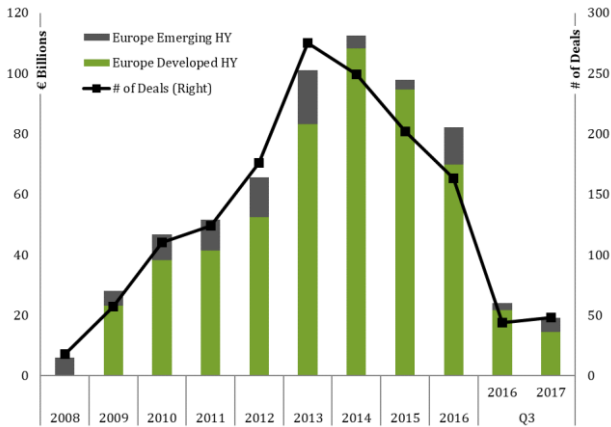
2.7 Mezzanine Spreads



Source: Dealogic, AFME, SIFMA

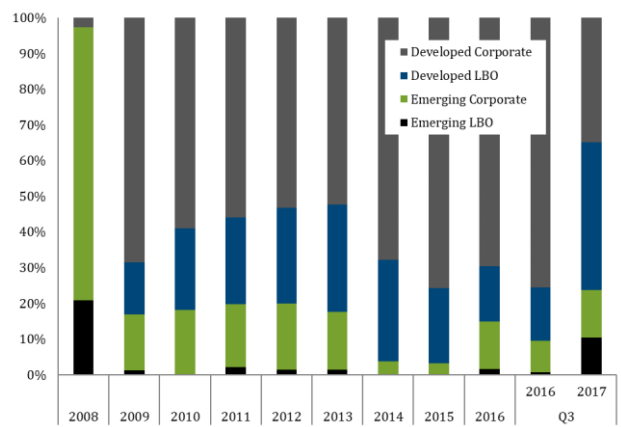
### 3 Issuance – High Yield Bonds Overview

#### 3.1 European High Yield Issuance



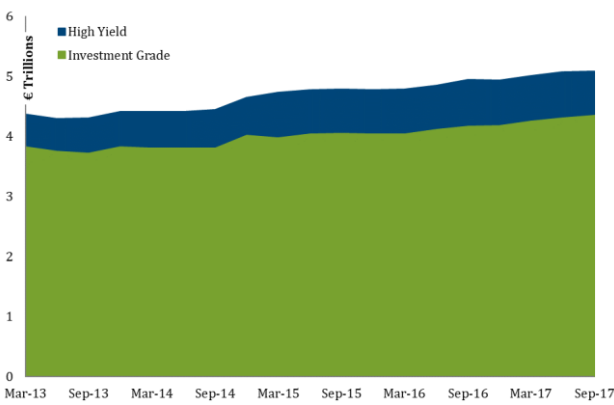
Source: Dealogic, Thomson Reuters LPC

#### 3.2 European High Yield Issuance by Sponsor



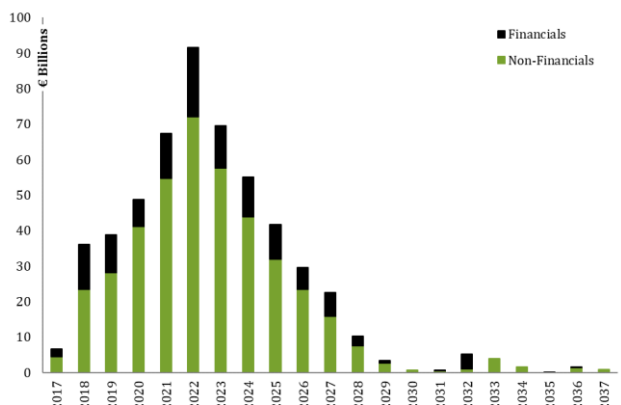
Source: Dealogic, Thomson Reuters LPC

#### 3.3 European Corporate Bonds Outstanding (IG and HY only)



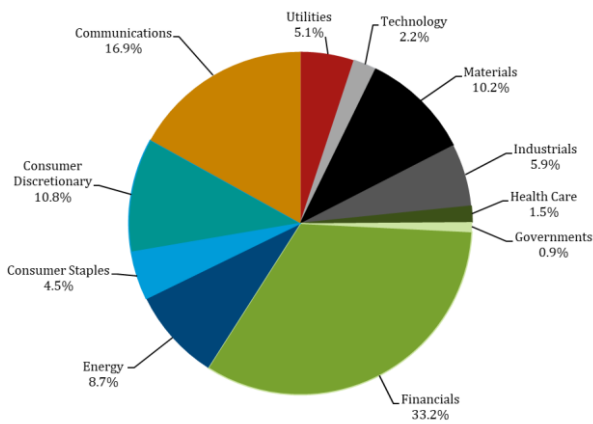
Source: Bloomberg, AFME, SIFMA

#### 3.4 European Corporate Bonds HY Maturity Wall: September 2017



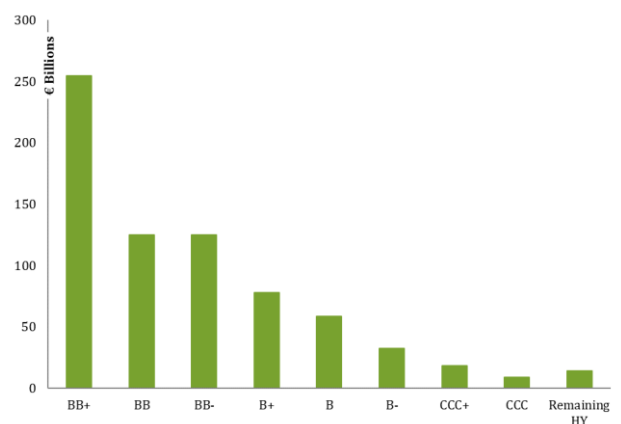
Source: Bloomberg, AFME, SIFMA

#### 3.5 European Corporate HY Bonds Outstanding by Sector: 3Q 2017



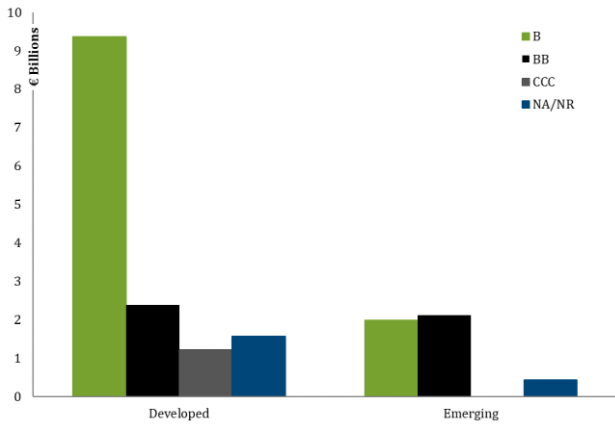
Source: Bloomberg, AFME, SIFMA

#### 3.6 European Corporate HY Bonds Outstanding by Current Rating: September 2017



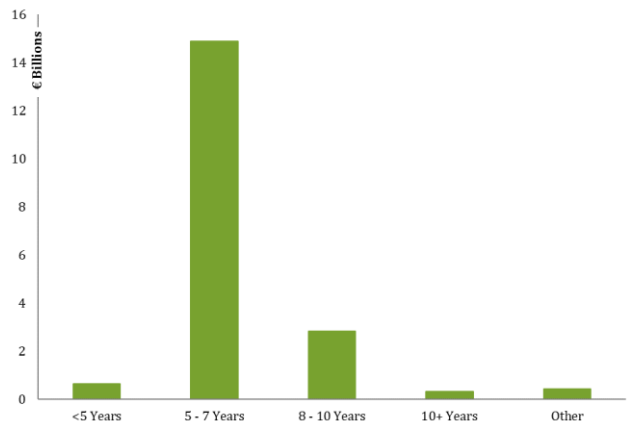
Source: Bloomberg, AFME, SIFMA

3.7 European Corporate Bond Issuance by Rating: 2Q 2017



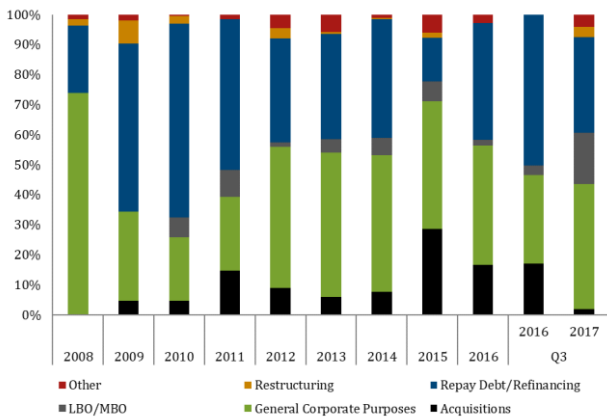
Source: Dealogic, AFME, SIFMA

3.8 European Corporate Bond Issuance by Tenor: 3Q 2017



Source: Dealogic, AFME, SIFMA

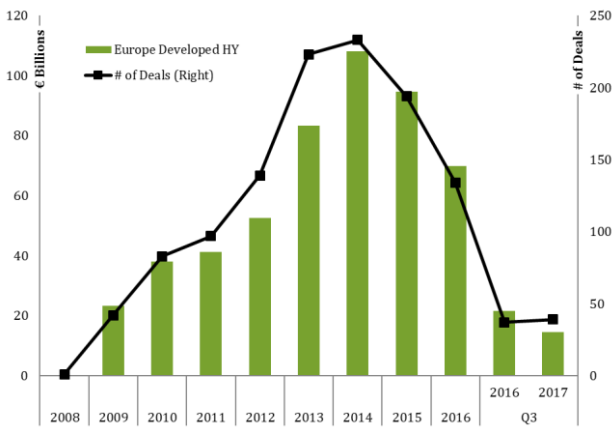
3.9 European HY Use of Proceeds



Source: Dealogic, AFME, SIFMA

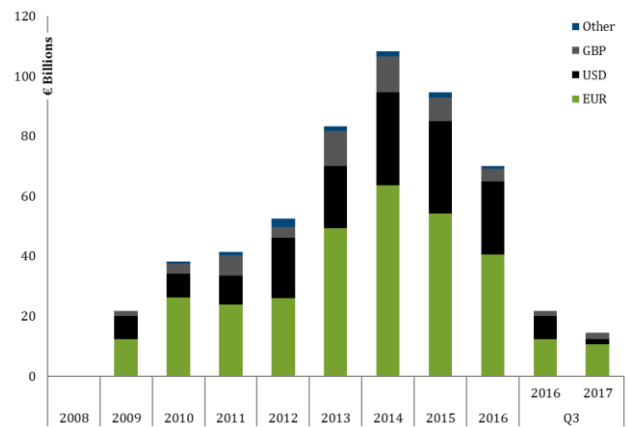
# 4 Issuance – European Developed Market High Yield Bonds

## 4.1 European Developed Market HY Bond Issuance



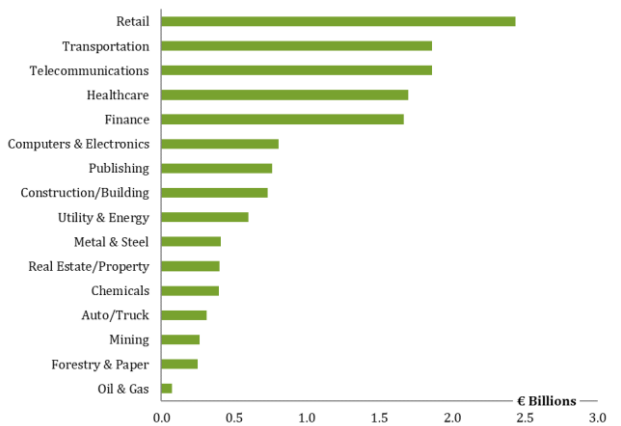
Source: Dealogic, Thomson Reuters LPC

## 4.2 European Developed Market HY Issuance by Currency



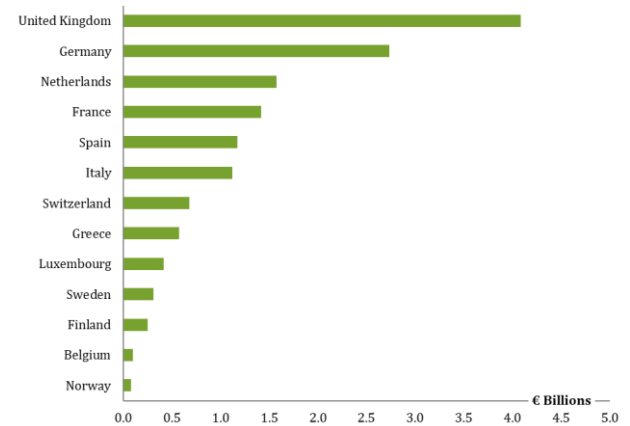
Source: Dealogic, Thomson Reuters LPC

## 4.3 European Developed Market HY Issuance by Industry: 3Q 2017



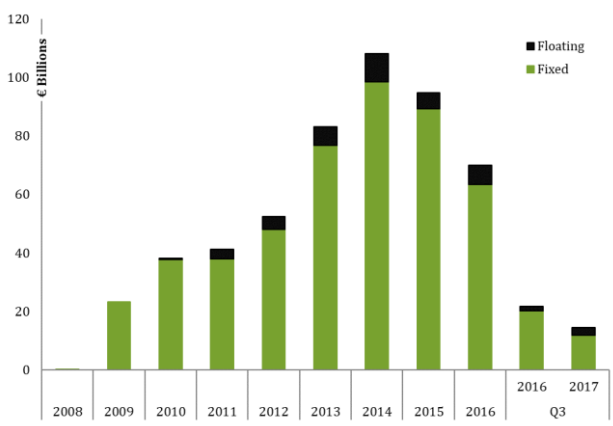
Source: Dealogic

## 4.4 European Developed Market HY Issuance by Country of Risk: 3Q 2017



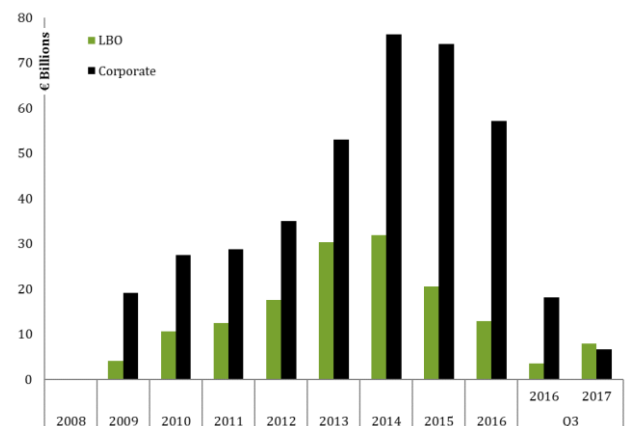
Source: Dealogic

## 4.5 European Developed Market HY Issuance, Fixed vs. Floating



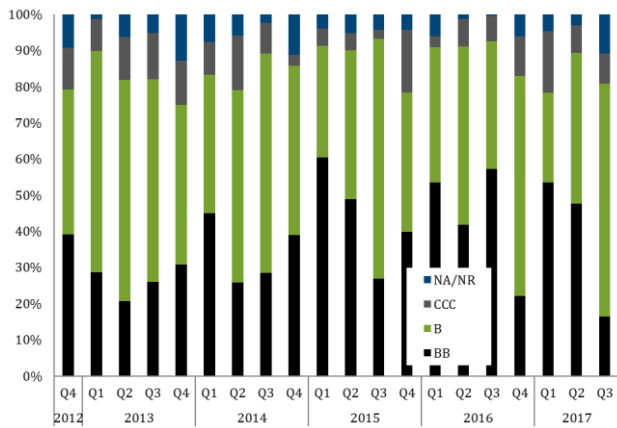
Source: Dealogic, Thomson Reuters LPC

## 4.6 European Developed Market HY Issuance, Sponsored vs. Corporate



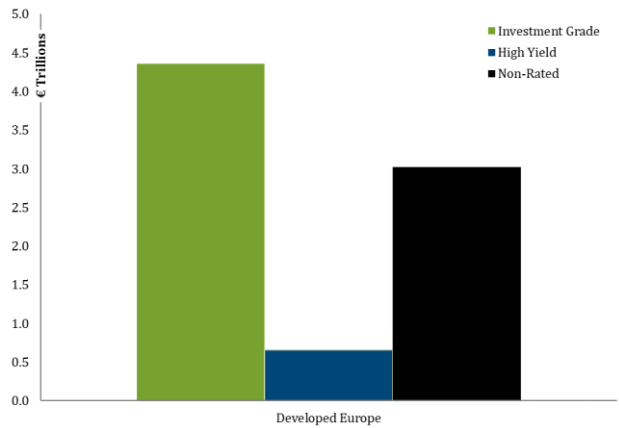
Source: Dealogic, Thomson Reuters LPC

4.7 European Developed Market HY Rating Distribution at Issuance



Source: Dealogic, AFME, SIFMA

4.8 European Developed Market Corporate Bonds Outstanding: 3Q 2017



Source: Bloomberg, AFME, SIFMA

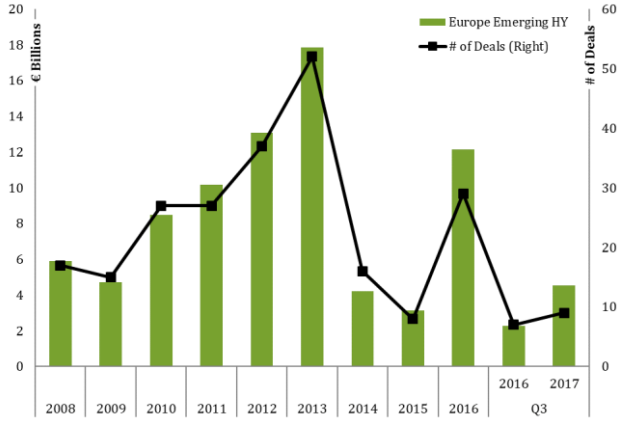
4.9 European Developed Market HY Bond Issuance

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moody's	S&P	Fitch
Hapag-Lloyd AG	Transportation	04/07/2017	EUR	450	5.13 Caa1	B-		
Kedrion SpA	Healthcare	05/07/2017	EUR	350	3.00 NA	NA	NA	NA
Cooperativa Muratori & Cementisi CMC di Ravenna	Construction/Building	06/07/2017	EUR	250	6.88 B2	NA	NA	
Kleopatra Holdings 1 SCA	Chemicals	06/07/2017	EUR	395	8.50 NA	NA	NA	NA
CMA CGM SA	Transportation	07/07/2017	EUR	650	6.50 B3	NA	NA	
RAC Bond Co plc	Auto/Truck	07/07/2017	GBP	275	5.00 NA	B		
IHS Markit Ltd	Publishing	10/07/2017	USD	300	4.75 Ba1	BB+		BBB
Swissport Investments SA	Transportation	11/07/2017	EUR	400	6.75 B1	B		
			EUR	281	9.75 Caa1	CCC+		
DEMIRE Deutsche Mittelstand Real Estate AG	Real Estate/Property	12/07/2017	EUR	270	2.88 Ba2	BB+		
Tizir Ltd	Mining	12/07/2017	USD	300	9.50 NA	NA	NA	NA
AnaCap Financial Europe SA	Finance	13/07/2017	EUR	325	3M EURIBOR +500 B1	BB-		
Maxeda DIY Holding BV	Retail	13/07/2017	EUR	475	6.13 B2	B-		
Hema Bondco I BV	Retail	14/07/2017	EUR	600	3M EURIBOR +625 B2	B-		
Hema Bondco II BV	Retail	14/07/2017	EUR	150	8.50 Caa2	CCC		
LendInvest Secured Income plc	Computers & Electronics	19/07/2017	GBP	50	5.25 NA	NA	NA	NA
IPD 3 BV	Publishing	20/07/2017	EUR	325	4.50 B2	B		
			EUR	175	3M EURIBOR +450 B2	B		
Hellenic Petroleum Finance plc	Oil & Gas	26/07/2017	EUR	75	4.88 NA	NA	NA	NA
LHC3 plc	Finance	27/07/2017	EUR	575	4.13 Ba2			BB-
Limacorporate SpA	Healthcare	02/08/2017	EUR	275	3M EURIBOR +375 B2	B		
C&W Senior Financing dac	Telecommunications	10/08/2017	USD	700	6.88 B2	BB-		BB-
Nyrstar Netherlands (Holdings) BV	Metal & Steel	05/09/2017	EUR	100	6.88 B3	B-		
Garfunkelux Holdco 3 SA	Finance	06/09/2017	EUR	415	3M EURIBOR +350 B2	B+		
Iceland Bondco plc	Retail	07/09/2017	GBP	550	4.63 B2	B+		
Masaria Investments SAU	Retail	07/09/2017	EUR	325	3M EURIBOR +525 B2	B		
			EUR	275	5.00 B2	B		
Vieo BV	Telecommunications	07/09/2017	EUR	350	3M EURIBOR +675 NA	NA	NA	NA
Amigo Luxembourg SA	Finance	11/09/2017	GBP	75	7.63 B1	B+		
MPC Container Ships Invest BV	Transportation	11/09/2017	USD	100	3M LIBOR +475 NA	NA	NA	NA
Virgin Media Receivables Financing Notes I DAC	Telecommunications	13/09/2017	GBP	450	5.50 B1	B		B+
Viridian Group FinanceCo plc	Utility & Energy	13/09/2017	EUR	350	4.00 B1			BB-
			GBP	225	4.75 B1			BB-
Intralot Capital Luxembourg SA	Computers & Electronics	14/09/2017	EUR	500	5.25 B1	B		BB-
Louvre Bidco SAS	Finance	14/09/2017	EUR	270	4.25 B2	BB-		
Millicom International Cellular SA	Telecommunications	14/09/2017	USD	500	5.13 Ba2			BB+
DEMIRE Deutsche Mittelstand Real Estate AG	Real Estate/Property	18/09/2017	EUR	130	2.88 Ba2	BB+		
Metsa Board Oyj	Forestry & Paper	21/09/2017	EUR	250	2.75 NA	BB+		
Miller Homes Group Holdings plc	Construction/Building	21/09/2017	GBP	250	5.50	BB-		BB-
			GBP	175	3M LIBOR +525	BB-		BB-
Ovako AB	Metal & Steel	21/09/2017	EUR	310	5.00 B3	B-		
Nidda Bondco GmbH	Healthcare	22/09/2017	EUR	340	5.00 Caa1	B-		B-
Nidda Healthcare Holding AG	Healthcare	22/09/2017	EUR	735	3.50 B2	B+		BB-
AlmavivA SpA	Computers & Electronics	28/09/2017	EUR	250	7.25 B2	NA		

Source: Dealogic

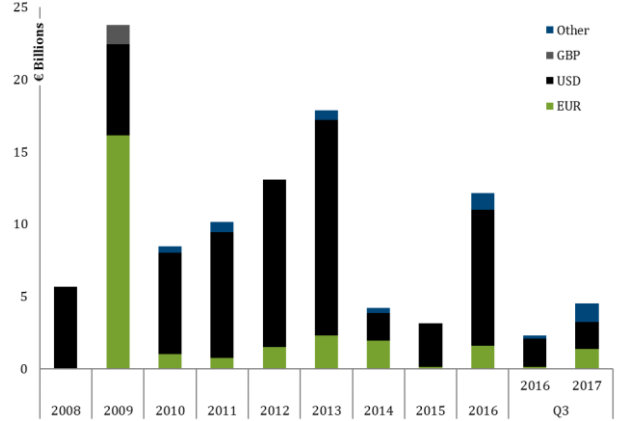
## 5 Issuance – European Emerging Market High Yield Bonds

### 5.1 European Emerging Market HY Bond Issuance



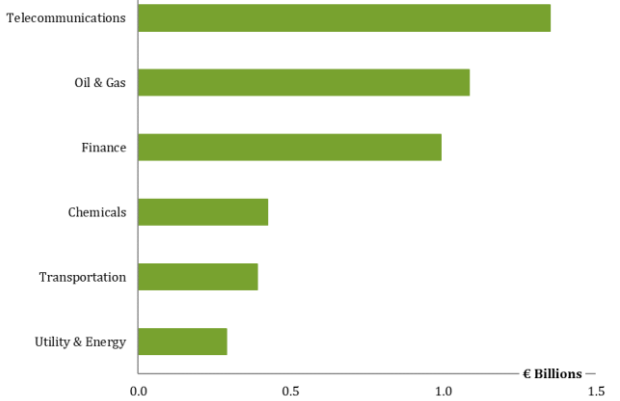
Source: Dealogic, Thomson Reuters LPC

### 5.2 European Emerging Market HY Bond Issuance by Currency



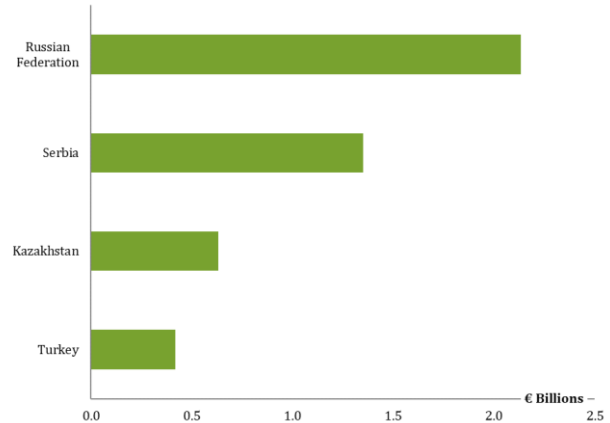
Source: Dealogic, Thomson Reuters LPC

### 5.3 European Emerging Market HY Issuance by Industry: 3Q 2017



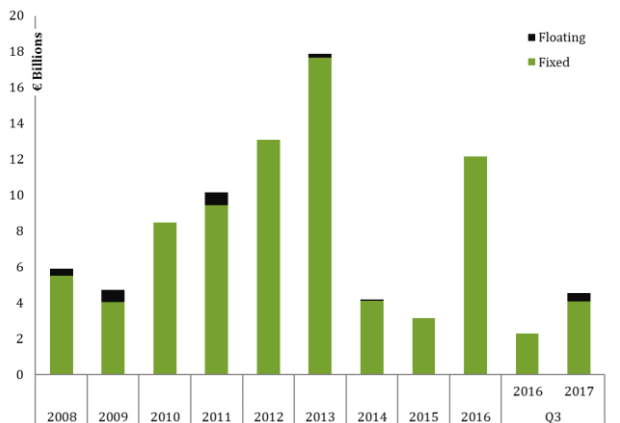
Source: Dealogic

### 5.4 European Emerging Market HY Issuance by Country of Risk: 3Q 2017



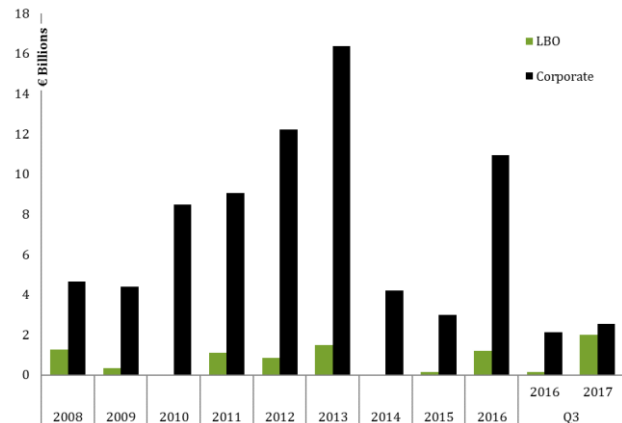
Source: Dealogic

### 5.5 European Emerging Market HY Issuance, Fixed vs. Floating



Source: Dealogic, Thomson Reuters LPC

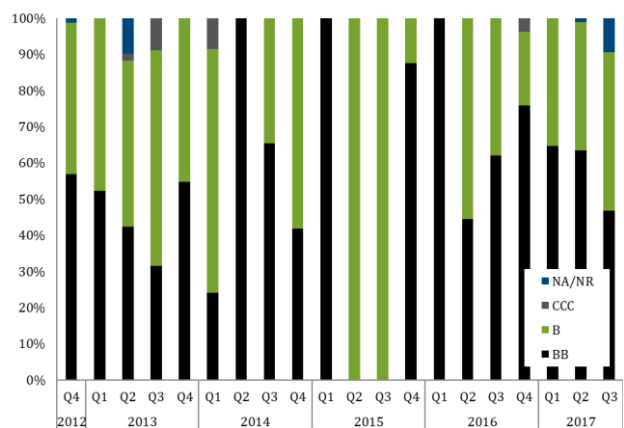
### 5.6 European Emerging Market HY Issuance, Sponsored vs. Corporate



Source: Dealogic, Thomson Reuters LPC

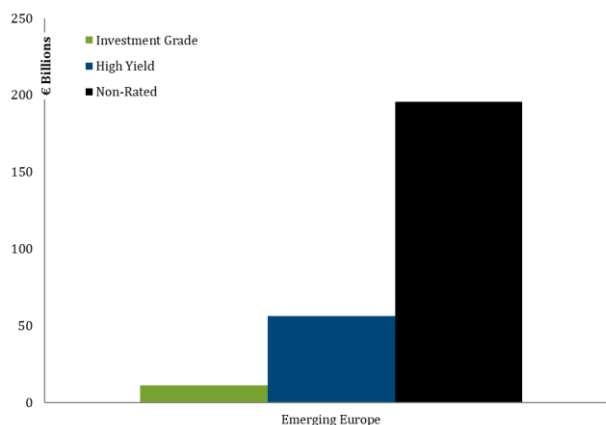


## 5.7 European Emerging Market HY Rating Distribution at Issuance



Source: Dealogic, AFME, SIFMA

## 5.8 European Emerging Market Corporate Bonds Outstanding: 3Q 2017



Source: Bloomberg, AFME, SIFMA

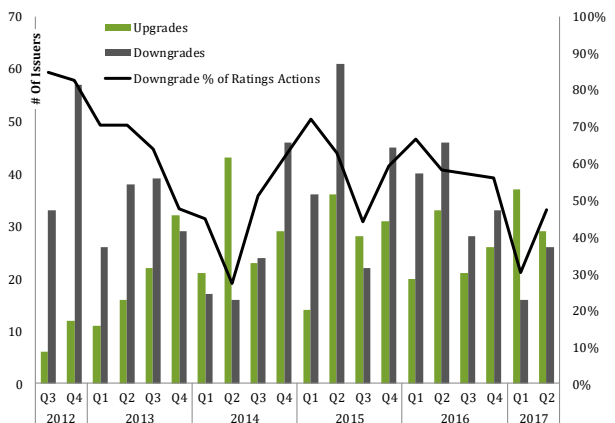
## 5.9 European Emerging Market HY Bond Issuance

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moodys	S&P	Fitch
Alfa Bank OAO	Finance	13/07/2017	RUB	10,000	8.900	Ba2		BB+
Gazprom OAO	Oil & Gas	13/07/2017	CHF	500	2.250	Ba1		BBB-
United Group BV	Telecommunications	13/07/2017	EUR	575	4.375	B2		B
			EUR	450	3M EURIBOR +437.5	B2		B
			EUR	325	4.875	B2		B
			USD	725	8.000	B2		B
Nostrum Oil & Gas Finance BV	Oil & Gas	17/07/2017	USD	725	8.000	B2		B
Promsvyazbank OAO	Finance	26/07/2017	USD	500	8.750	NA	NA	NA
RZD Capital Ltd	Transportation	14/09/2017	CHF	450	2.100	Ba1		BBB-
RusHydro OAO	Utility & Energy	22/09/2017	RUB	20,000	8.125	Ba1		BB+
TC Ziraat Bankasi AS	Finance	25/09/2017	USD	500	5.125	Ba1		BB+
SIBUR Securities Ltd	Chemicals	29/09/2017	USD	500	4.125	Ba1		BB+

Source: Dealogic

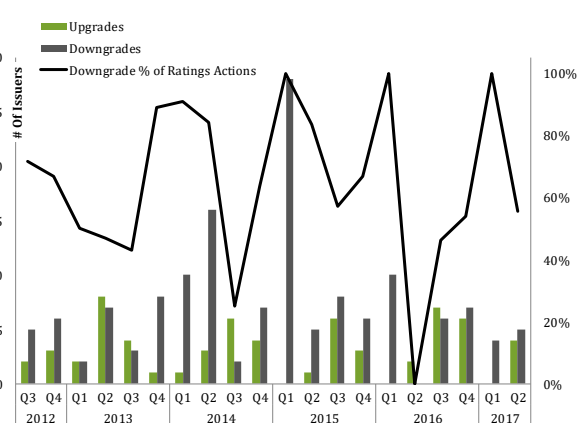
# 6 Credit Quality

## 6.1 Developed Europe Issuer Rating Actions<sup>5</sup>



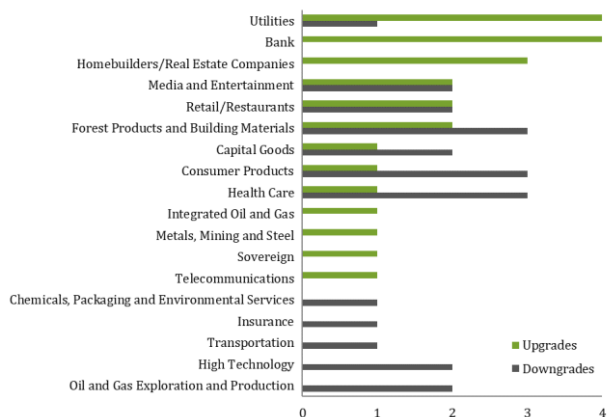
Source: Standard and Poor's

## 6.2 Emerging Europe Issuer Rating Actions<sup>6</sup>



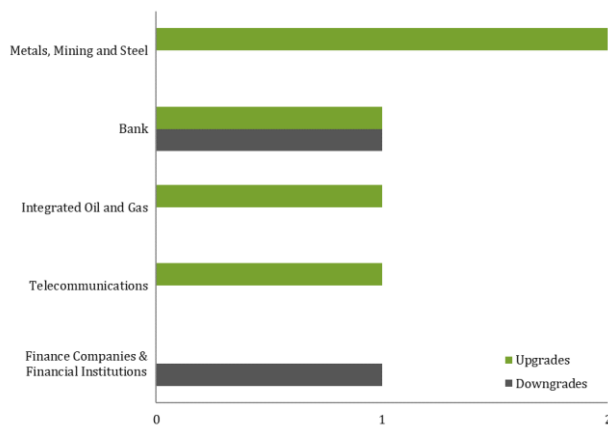
Source: Standard & Poor's

## 6.3 Developed European Industry Rating Actions by Number of Ratings: 3Q 2017



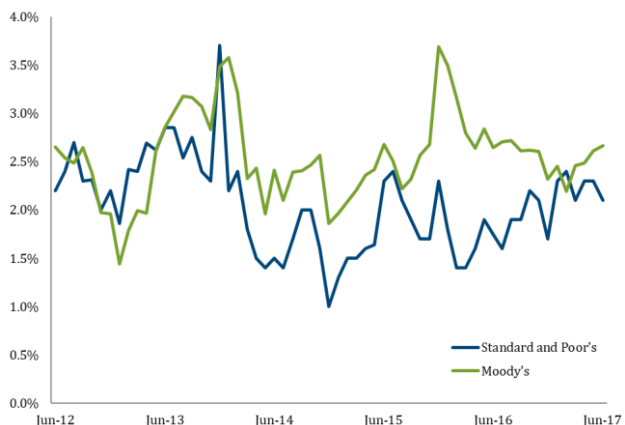
Source: Standard & Poor's

## 6.4 Emerging European Industry Rating Actions by Number of Ratings: 3Q 2017



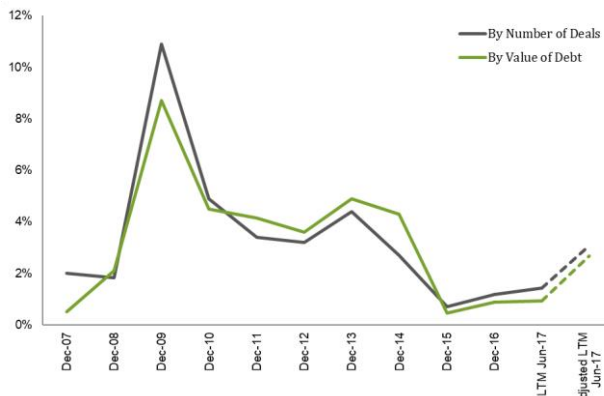
Source: Standard & Poor's

## 6.5 European High Yield Default Rates



Source: Standard & Poor's, Moody's

## 6.6 European Leveraged Loan Default Rates<sup>7</sup>



Note: Data only available to Jun-17 at the time of publication.

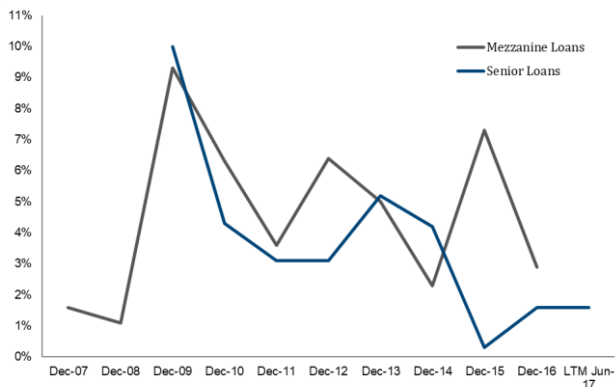
Source: Fitch Leveraged Credit Database

<sup>5</sup> Numbers include both corporate and sovereigns.

<sup>6</sup> Numbers include both corporate and sovereigns.

<sup>7</sup> Includes c\* and cc\* rated issuers as if those had already defaulted

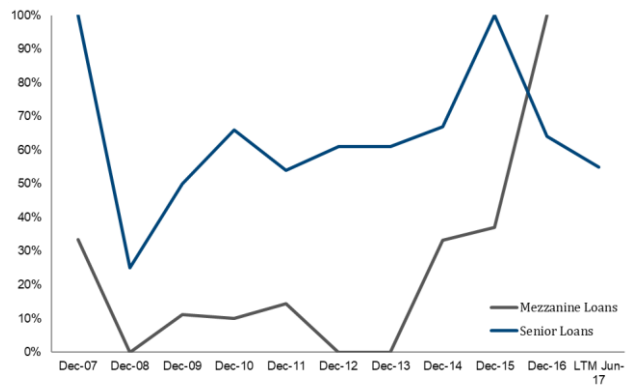
6.7 Mezzanine and Senior Loan Default Rate



Note: Data only available to Jun-17 at the time of publication; there were no mezzanine defaults or mezzanine loans outstanding in LTM Jun-17.

Source: Fitch Leveraged Credit Database

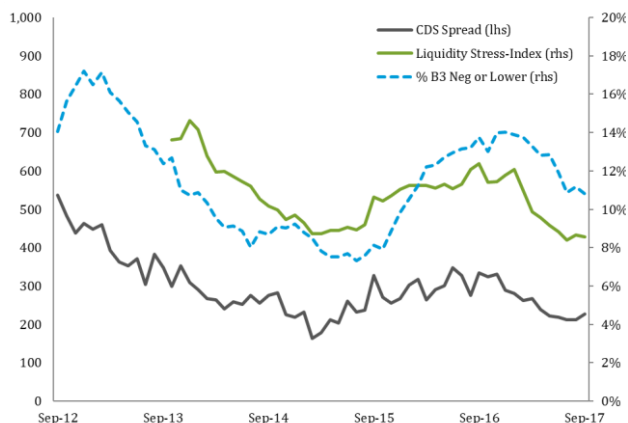
6.8 Mezzanine and Senior Loan Recovery Rates



Note: Data only available to Jun-17 at the time of publication; there were no mezzanine defaults or mezzanine loans outstanding in LTM Jun-17.

Source: Fitch Leveraged Credit Database

6.9 High-Yield bond CDS spreads vs. liquidity-stress index and HY bonds rated B3 neg and lower in Europe



Source: Moody's

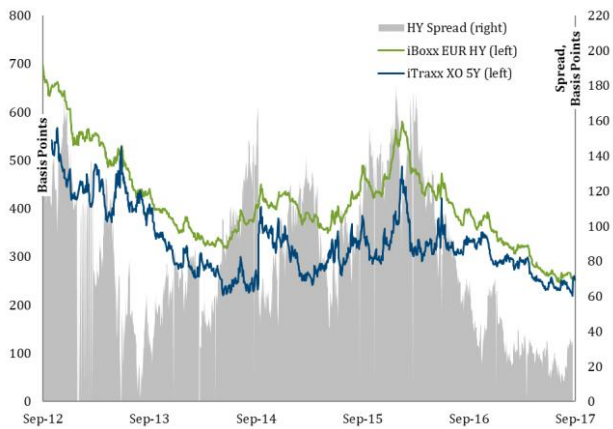
6.10 European Defaults

Issuer	Industry Group	Country	Date	Reported By	Reason
Norske Skogindustrier ASA	Forest Products	Norway	July 2017	Moody's, S&P	Missed interest payment

Source: Standard & Poor's, Moody's

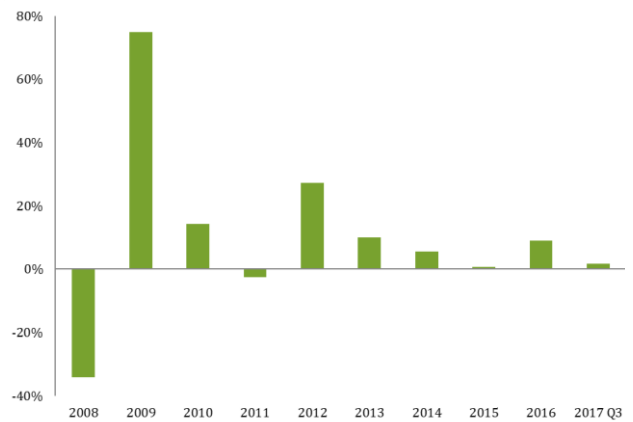
# 7 Relative Value and Total Return

## 7.1 Relative value: European HY Bonds, Cash vs. Synthetic



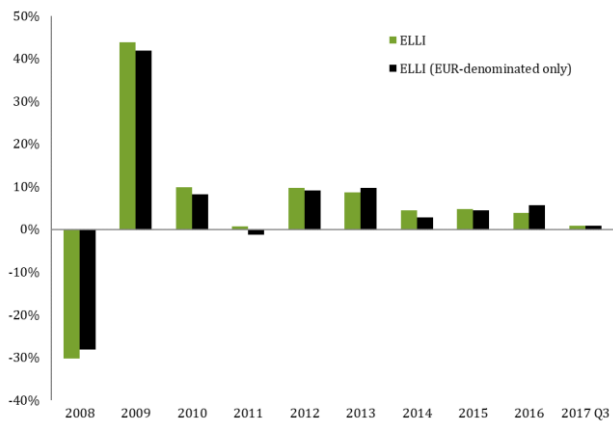
Source: Thomson Reuters Eikon, Markit

## 7.2 European HY Bond Total Return



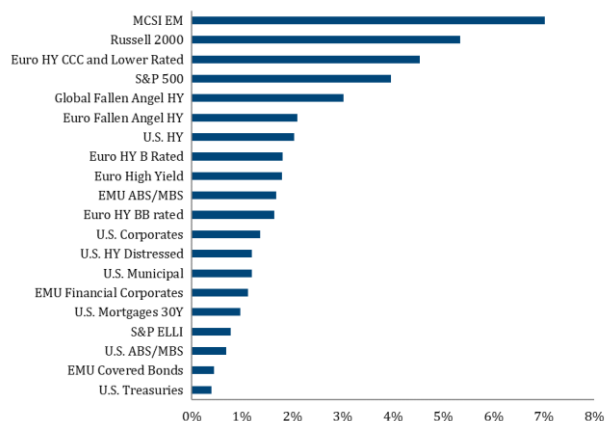
Source: BAML

## 7.3 European Leveraged Loan Total Return



Source: Standard & Poor's LCD

## 7.4 Asset Class Total Return, 3Q 2017



Source: BAML, Bloomberg

## Summary of the Methodologies Adopted for this Report

### 1. Leveraged Issuance – Overview

#### 1.1. – 1.3. Leveraged Loans and High Yield Bonds

Leveraged loan data are sourced from Thomson Reuters LPC and Dealogic.

Leveraged loan data from Thomson Reuters LPC are defined primarily as having sub-investment grade ratings and/or a margin spread minimum of 200 basis points (spread minimums will vary from year to year to make Thomson LPC's cutoff). Leveraged loan aggregates will include first lien, second lien, and mezzanine financing. Discrepancies in Thomson Reuters LPC data are due to rounding and/or currency rate of exchange.

Leveraged loan data from Dealogic are defined primarily as coming from a leveraged or highly leveraged European deal; loan tranches must have sub-investment grade ratings, or, if unrated, a margin spread minimum of 125 basis points over a benchmark (e.g., Euribor, LIBOR). Under these guidelines, sub-investment grade-rated loans with a margin spread of less than 125 basis points are included. Deals must be European and are inclusive of both developed and emerging market Europe as defined in high yield criteria in Section 3. Deals must also be marketed either in Europe or in the United States. Loans not EUR-denominated are converted to EUR as of credit date for purposes of aggregation. Aggregates include new money as well as non-new money deals.

Criteria for high yield bond transactions can be found in Section 3, 4, and 5.

#### 1.4. – 1.7. Bank Lending Surveys

Data for loan demand and credit standards are sourced from the ECB's bank lending survey. Graph numbers are net percentages of reporting banks.

#### 1.8. Global Comparison – High Yield Issuance

Data for global high yield issuance are sourced from Dealogic. Asian deals are inclusive of Japan and Australia.

### 2. Issuance – Leveraged Loans

#### 2.1. – 2.2. Leveraged Loan Issuance

Leveraged loan issuance data are sourced primarily from Dealogic and Thomson Reuters LPC. For more details on qualifying criteria, please refer to section 1.

#### 2.3. Forward Pipeline of Leveraged Loan Market

Forward leveraged loan pipeline data are sourced from S&P LCD.

#### 2.4. S&P ELLI Total Institutional Loans Outstanding

Total institutional loan outstanding data are sourced from S&P LCD and are outstanding loans in the S&P ELLI index.

#### 2.5. S&P ELLI Ratings Diversification

S&P ELLI ratings diversification are the percentages of currently outstanding loans in S&P's ELLI index that are rated accordingly. Data are provided by S&P LCD.

#### 2.6. – 2.7. Loan Spreads

Loan spread data are sourced from Dealogic under our criteria for leveraged loans (see Section 1). For purposes of loan spread calculations, deals marketed in the US are excluded. Spreads are a weighted average of spread margin on new leveraged issuance on a rolling twelve months basis, and are typically benchmarked to LIBOR or EURIBOR. Institutional loan spread data are inclusive of 2<sup>nd</sup> lien; pro rata spreads include all revolvers and term loan A (T1a).

### 3. Issuance – High Yield Bonds Overview

High yield bond transactions are sourced primarily from Dealogic, with supplemental information sourced from Bloomberg. High yield transactions are defined as transactions with a Dealogic "effective" rating of equal or less than BB+, and may include unrated transactions based on issuer and desk notes. Split-junk rated transactions are generally excluded.

European issuance, inclusive of both emerging market Europe and developed market Europe, are defined as an issue having a Dealogic "deal nationality" as well as "nationality of risk" within Europe issued in the euro, foreign, and global markets; deals marketed locally are excluded. Sovereign, sub-sovereign, and supranational parent issuers are excluded from issuance, as well as ABS/MBS issuers.

Emerging market Europe and developed market European issuance are defined by nationality of risk, rather than nationality of deal, and although primarily sourced from Dealogic, are ultimately subject to AFME's discretion. Emerging and developed market issuances are mutually exclusive and will contain no overlap unless otherwise mentioned.

European emerging market bonds are further defined with having a minimum deal size of €75.0 million; deals on the same day from the same issuer are aggregated for the purpose of meeting this minimum. Deals are shown in EUR amount but include deals originated in other currencies and are converted to EUR at the exchange rate on the day of the deal. Russian ruble (RUB)-denominated issuance are excluded due to differences in terms and documentation; as of 4Q'10 this criteria no longer applies and may be included on a case by case basis.

### 3.2. European HY Issuance by Sponsor

Data for high yield issuance by sponsor are sourced from Dealogic. LBO deals are defined as all high yield transactions whose issuer parent is a public or private finance entity (i.e., a financial sponsor), regardless of use of proceeds.

### 3.3. – 3.6. European Corporate Bonds Outstanding

Data for European corporate outstanding are sourced from Bloomberg and AFME/SIFMA estimates. Criteria for European corporate bonds are: bonds must be placed in the domestic, euro, foreign and global markets with nationality of incorporation from a European developed or emerging market country as defined by AFME. Corporate bonds exclude non-Bloomberg verified securities, all structured notes, covered bonds, warrants, deposit notes, receipts, and certificates of deposit. All currencies are included and have been converted to EUR at time of pricing and/or issue.

High-yield ratings are sourced from Bloomberg's composite rating, which is an average of all available ratings from four rating agencies: Moody's, Standard and Poor's, Fitch Ratings, or DBRS. Split-rated securities may be included in high yield numbers due to this.

Corporate bonds outstanding include certain securities that may be considered corporate securitisations or structured finance securities; while all effort is made to exclude the latter, the former will be counted toward the corporate bonds outstanding total, and will subsequently overlap to some extent to AFME structured finance outstanding numbers. Excludes unrated securities.

### 3.7. European Corporate Bond Issuance by Rating

Data for HY issuance by rating are sourced from Dealogic, Bloomberg, and the three rating agencies. The composite rating is determined by the lowest rating assigned by either Moody's, Standard and Poor's, or Fitch Ratings.

### 3.8. European Corporate Bond Issuance by Tenor

Data for HY issuance by tenor are sourced from Dealogic. "Other" includes perpetuals.

### 3.9. European HY Issuance By Use of Proceeds

Data for HY issuance by use of proceeds are sourced from Dealogic and aggregated for the purposes of this calculation. Please refer to Section 3 for criteria on high yield issue inclusion.

## 4. Issuance – European Developed Market High Yield Bonds

### 4.1. – 4.7., 4.9 European Developed Market HY Bond Issuance

High yield bond issuance data are sourced from Dealogic. For further criteria on how high yield issuance are defined, please refer to section 3.

Developed European issuance are deals predominantly from western Europe and includes deals from Andorra, Austria, Belgium, Bulgaria, Cyprus, Switzerland, Germany, Denmark, Spain, Estonia, Finland, France, Faroe Islands, United Kingdom, Guernsey, Gibraltar, Greenland, Greece, Isle of Man, Ireland, Iceland, Italy, Jersey, Liechtenstein, Luxembourg, Monaco, Malta, Montenegro, Netherlands, Norway, Portugal, San Marino, and Sweden.

### 4.8. European Developed Market Corporate Bonds Outstanding

Data for corporate bonds outstanding are sourced from Bloomberg. Please refer to Section 3 for criteria and methodology.

## 5. Issuance – European Emerging Market High Yield Bonds

### 5.1. – 5.7., 5.9. European Emerging Market HY Bond Issuance

High yield bond issuance data are sourced from Dealogic. Criteria for all high yield issuance are found in section 3.

Emerging market European issuance deals are predominantly from Eastern Europe but will also additionally include Turkey, the Russian Federation, Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, Azerbaijan, and Kyrgyzstan. Certain sub-investment grade countries are not included in the emerging market total, including, among others, Iceland and Greece.

### 5.8. European Emerging Market Corporate Bonds Outstanding

Data for corporate bonds outstanding are sourced from Bloomberg. Please refer to Section 3 for criteria and methodology.

## 6. Credit Quality

### 6.1. – 6.2. European Issuer Rating Actions

European issuer upgrades and downgrades are sourced from S&P. The breakdown by emerging market and developed Europe are from AFME's definition of developed and emerging markets and would be, under S&P's guidelines, a combination of both European and EMEA rating actions. Multiple downgrades of a single issuer are counted separately. Rating actions are inclusive of both corporate (both credit and merger-related) as well as sovereign ratings.

### 6.3. – 6.4. European Issuer Rating Actions by # of Ratings

Rating actions are sourced from S&P. Breakdown by emerging market and developed Europe are from AFME's definition of developed and emerging markets and would be, under S&P's guidelines, a combination of both European and EMEA rating actions.

### 6.5. European High Yield Default Rate

European HY bond default rates are sourced from Standard and Poor's and Moody's, calculated on a trailing 12 month basis.

"Europe" for the S&P default rate is defined to include Austria, Belgium, Bulgaria, Channel Islands, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. Countries are subject to revision.

### 6.6. – 6.7. European Leveraged Loan Default Rate

European LL default rates are sourced from Fitch Leveraged Credit Database, calculated on a trailing 12 month basis.

### 6.8. Leveraged Loan Recovery Rates

European LL recovery rate are sourced from Fitch Leveraged Credit Database, calculated on a trailing 12 month basis. Recovery rates are based on median cash realised (cash or cash-pay debt received) recoveries for senior loans and on average cash realised recoveries (excluding any equity/warrants given in a debt exchange) for mezzanine loans.

### 6.9. HY CDS spreads vs. liquidity-stress index and HY bonds rated B3 negative and lower in Europe

The liquidity stress index is calculated by Moody's Investor Services as the percentage of speculative grade companies with the weakest liquidity profile in EMEA. Speculative grade liquidity is categorised in one of four ways: SGL 1: Very good liquidity. Most likely to meet obligations over the coming 12 months through internal resources without relying on external sources of committed financing. SGL 2: Good liquidity. Likely to meet obligations during the coming 12 months through internal resources but may rely on external sources of committed financing. The issuer's ability to access committed financing is highly likely, based on Moody's evaluation of near term covenant compliance. SGL3: Adequate liquidity. Expected to rely on external sources of committed financing. Based on Moody's evaluation of near term covenant compliance there is only a modest cushion, and the issuer may require covenant relief in order to maintain orderly access to funding lines. SGL4: Weak liquidity. Relies on external sources of financing and the availability of that financing is, in Moody's opinion, highly uncertain. The percentage of bonds rated B3 negative or lower is sourced from Moody's

### 6.10. European Defaults

Defaults reported by either Moody's or Standard and Poor's in the European bond markets and loan markets, when available.

## 7. Cash and Synthetic

### 7.1. Loans and Bonds, Cash and Synthetic

Data are sourced from Markit and Thomson Reuters LPC. High yield bond cash and synthetic spreads from Markit; European leveraged loan cash bid prices from Thomson Reuters LPC, and European leveraged loans synthetic prices from Markit.

### 7.2. European HY Bond Total Return

European HY bond total return data are sourced from the Bank of America-Merrill Lynch's Euro High Yield Index (HE00). The index tracks the performance of EUR-denominated below-investment-grade corporate debt publicly issued in the euro domestic or Eurobond markets. Qualifying securities must have a below-investment-grade rating and an investment-grade rated country of risk. Qualifying securities must have at least one year remaining term to maturity, fixed coupon schedule and minimum amount outstanding of €100 million. Original issue zero coupon bonds, "global securities" (debt issued simultaneously in the Eurobond and euro domestic markets), 144a

securities and pay-in-kind securities, including toggle notes, qualify for inclusion in the index. Callable perpetual securities qualify provided they are at least one year from the first call date. Fixed-to-floating rate securities also qualify provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Defaulted, warrant-bearing and euro legacy currency securities are excluded from the index.

### **7.3. European Leveraged Loan Total Return**

Total return data are provided by S&P LCD and are total returns from S&P's ELLI index, both ELLI and EUR-denominated ELLI. Total returns for ELLI EUR-denominated data are unavailable for 2003 and 2004.

### **7.4. Asset Class Total Return (Cash Basis)**

Total returns are sourced from respective index owners and Bank of America-Merrill Lynch's indices.



## Annex

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**London Office**

39th Floor  
25 Canada Square  
London E14 5LQ  
United Kingdom

Switchboard:  
+44 (0)20 3828 2700

**Brussels Office**

Rue de la Loi, 82  
1040 Brussels  
Belgium

Switchboard:  
+32 (0) 2 788 3971

**Frankfurt Office**

Skyper Villa  
Taunusanlage 1  
60329 Frankfurt am Main  
Germany

Switchboard:  
+49 (0) 69 5050 60 590

**AFME**

**Gary Simmons** –  
Managing Director,  
High Yield  
**Julio Suarez** –  
Associate Director, Research

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