

# European High Yield & Leveraged Loan Report

European Leveraged Finance

Q1: 2018



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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 to €62.8 billion in 1Q'18, a 39.9% decrease from €104.5 billion in 4Q'17 and a 30.6% decrease from €90.5 billion issued in 1Q'17. The quarterly decrease in 1Q'18 was driven by both a 41.5% decrease in leveraged loan issuance and a 37.1% decrease in high yield bond issuance. The high yield bond share of the leveraged finance market increased slightly to 38.7% in 1Q'18, up from 37.0% in 4Q'17 but down from 39.0% in 1Q'17.

#### Market and Economic Environment

According to the April 2018 European Central Bank lending survey, credit standards eased considerably for loans to enterprises and housing loans in the first quarter of 2018, and demand increased across all loan categories, thereby continuing to support lending growth.

Credit standards for all three loan categories: loans to enterprises, housing loans and consumer credit eased in the first quarter of 2018 and are expected to ease further in 2Q'18. Banks reported that industry or firm-specific outlook and perceptions regarding the general economic situation were the main factors having an easing impact on credit standards in 1Q'18.

Banks' overall terms and on new loans continued to ease across all loan categories in 1Q'18, driven mainly by a narrowing of margins on average loans.

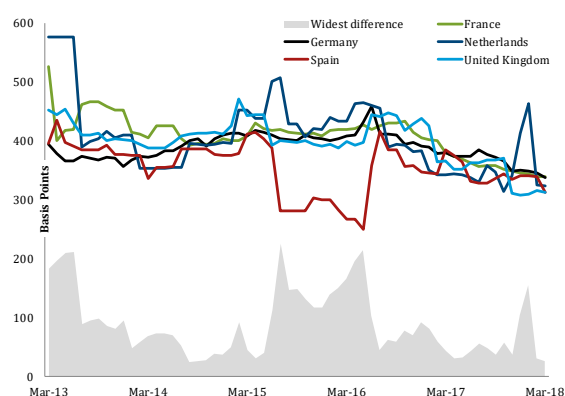
Net demand for loans to enterprises, housing loans and consumer credit continued to increase in the first quarter of 2018 and is expected to increase further in 2Q'18. Fixed investment, M&A activity and general level of interest rates were the main drivers to increase demand for loans to enterprises. Net demand for housing loans continued to be driven mainly by the low general level of interest rates, consumer confidence and favourable housing market prospects.

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*“European leveraged finance issuance (leveraged loans and high yield bonds) totaled €62.8 billion in 1Q'18”*

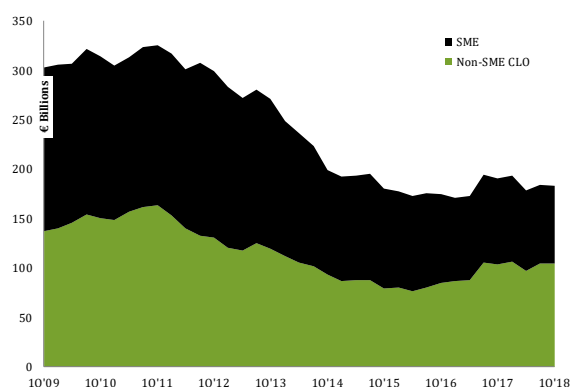
*“Leveraged loan issuance totaled €38.5 billion on 46 deals in 1Q’18”*

### 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 €38.5 billion in the first quarter of 2018, down 41.5% q-o-q (€65.8 billion in 4Q’17) and down 30.2% y-o-y (€55.2 billion in 1Q’17).

Most of the leveraged loans issued in 1Q’18 were 1<sup>st</sup> lien loans (€38.2 billion or 99.2% of total). There were three 2<sup>nd</sup> lien loans financed (€0.3 billion) and no mezzanine loans.

In the first quarter of 2018, pricing spreads for institutional loans tightened by 2 basis points (bps) q-o-q and by 40 bps y-o-y while spreads for pro rata loans tightened by 18 bps q-o-q and by 133 bps y-o-y.

Only €3.7 billion of amend-and-extend (“A&E”) loans were financed in 1Q’18, a significant decrease from €13.2 billion in 4Q’17 and down from €12.2 billion in 1Q’17.

In addition to A&E loans, €1.4 billion of loans had been amended to reduce pricing in the first quarter of 2018, a decrease from €6.8 billion in 4Q’17 and down from €12.8 billion in 1Q’17.

The top three sectors in leveraged loan issuance in 1Q’18 accounted for slightly over half of leveraged loan issuance; the leading sector was food & beverage (€9.0 billion), followed by leisure & recreation (€7.3 billion), and retail (€6.1 billion), with the balance split between 13 other sectors.

The share of deals used to refinance and/or repay debt decreased to 26.5% of all deals by euro amount in the first quarter of 2018, down from 68.7% in 4Q’17 and 79.7% in 1Q’17. Refinancing and/or repayment of debt were the third largest use of proceeds in 1Q’18 with €10.2 billion, following acquisitions with €15.1 billion or 39.1% of total, and leveraged buyouts with €10.4 billion or 27.0% of total.

European CLO outstandings, including SME deals, decreased by 0.1% to €183.5 billion in 1Q’18 from €183.6 billion in 4Q’17 and by 3.7% from €190.7 billion in 1Q’17. Non-SME CLOs outstanding increased to €105.1 billion in 1Q’18, up 0.8% q-o-q and by 1.7% y-o-y, while SME CLOs decreased to €78.5 billion, down 1.2% q-o-q and by 10.2% y-o-y.

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*“Primary high yield issuance totaled €24.3 billion on 77 deals in 1Q’18”*

### Issuance: High Yield Bonds

Primary high yield issuance in 1Q’18 totaled €24.3 billion on 77 deals, a 37.1% decrease from 4Q’17 (€38.6 billion on 103 deals) and a 31.1% decrease from 1Q’17 (€35.3 billion on 88 deals). In developed market Europe, €18.8 billion of high yield bonds were issued, down 47.0% from €35.4 billion in 4Q’17 and down 30.9% from €27.1 billion in 1Q’17. Emerging market Europe saw €5.5 billion in high yield bonds issuance in 1Q’18, up 71.7% from €3.2 billion in 4Q’17 but down 32.1% from €8.2 billion in 1Q’17.

In the first quarter of 2018, average deal size in developed market Europe decreased by 17.5% to €307.5 million from €372.8 million in 4Q’17 and was down 17.3% from €371.6 million in 4Q’17. Average deal size in emerging market Europe decreased by 14.2% to €346.1 million in 1Q’18 from €403.2 million in 4Q’17 and by 36.3% y-o-y (€543.7 million in 4Q’17).

High yield issuance for refinancing and/or repayment of debt in developed market Europe decreased to €5.2 billion, representing 27.9% of all issuance in 1Q’18, down from €14.3 billion (40.3% of total) in 4Q’17 and from €8.4 billion (30.9% of total) in 1Q’17. In emerging market Europe, €0.4 billion (7.4% of total) in high yield debt was issued for refinancing and/or repayment of debt in the first quarter of 2018, a decrease from €1.1 billion (34.4% of total) in 4Q’17 but up from no issuance for this purpose in 1Q’17.

Four sectors accounted for over half of the total high yield issuance volume in 1Q’18: the finance sector led issuance with €5.5 billion (22.5% of total), followed by oil & gas with €2.9 billion (11.8% of total), retail with €2.04 billion (8.4% of total), and telecommunications with €2.03 billion (8.3% of total). In developed market Europe, the top three industries in 1Q’18 were: finance (€2.9 billion or 15.4% of total issuance volume), followed by oil & gas (€2.5 billion, 13.6%) and retail (€2.0 billion, 10.9%). In emerging market Europe the top three sectors were: finance (€2.6 billion or 47.1% of total), followed by chemicals (€0.8 billion, 14.8%) and agribusiness (€0.4 billion, 8.1%).

The proportion of USD-denominated issuance increased to 43.8% of all issuance in 1Q’18, up from only 18.7% in 4Q’17 and up from 37.5% in 1Q’17. USD-denominated issuance in developed market Europe decreased to €5.4 billion, or 28.7% of issuance, down from €5.9 billion or 16.8% in 4Q’17 and €6.8 billion (25.2% of total) in 1Q’17. Of high yield bonds issued in emerging market Europe, €5.3 billion or 94.9% was denominated in USD, up from €1.3 billion (39.8% of total) in 4Q’17 but down from €6.4 billion (78.1% of total) in 1Q’18.



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*“U.S. High Yield Distressed Index led returns in 1Q’18 with 2.0% q-o-q”*

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*“Three European high yield bond issuers defaulted in 1Q’18”*

### Returns & Credit Quality

Only four asset classes analysed recorded positive returns in the first quarter of 2018. U.S. High Yield Distressed Index led returns with 2.0% q-o-q, followed by MCSI Emerging Market Index (1.1% q-o-q) and S&P ELLI (0.8% q-o-q). The worst performing asset classes were U.S. Corporates (-2.2% q-o-q), U.S. 30-Year Mortgages (-1.23% q-o-q), and S&P 500 (-1.22% q-o-q).

As of March 2018, S&P reported the trailing 12-month speculative-grade default rate at 2.1%, a slight decrease from 2.4% end-December 2017 and unchanged from 2.1% end-March 2017. S&P expects the 12-month speculative-grade European corporate default rate to increase to 2.5% by the end of June 2018.

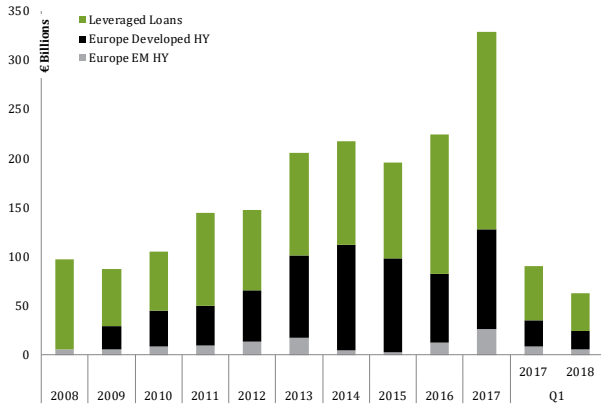
Moody’s reported the trailing 12-month speculative-grade default rate in March 2018 to be 2.4%, down from 2.6% end-December 2017 and from 2.5% end-March 2017.

Three bond-related defaults were reported in the first quarter of 2018, all from U.K. based companies. Two defaults were due to distressed exchange and one firm filed for Chapter 11.

According to Standard and Poor’s, in 1Q’18 upgrades exceeded downgrades in developed market Europe (22 upgrades to 20 downgrades), a slightly worse ratio than 47 upgrades to 26 downgrades in 4Q’17 and than 37 upgrades to 16 downgrades in 1Q’17. In emerging market Europe, there were 11 upgrades and no downgrades by S&P in 1Q’18 compared to 5 upgrades and 7 downgrades in 4Q’17 and no upgrades and 4 downgrades in 1Q’17. Three sectors accounted for over a third of the rating actions in 1Q’18: media and entertainment (total of 2 upgrades and 5 downgrades), followed by utilities (5 upgrades and 1 downgrade) and high technology (1 upgrade and 4 downgrades).

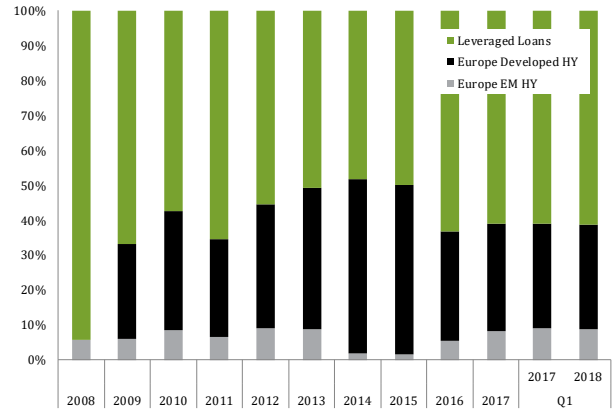
# 1 Leveraged Finance Overview

## 1.1 European Leveraged Issuance by Type



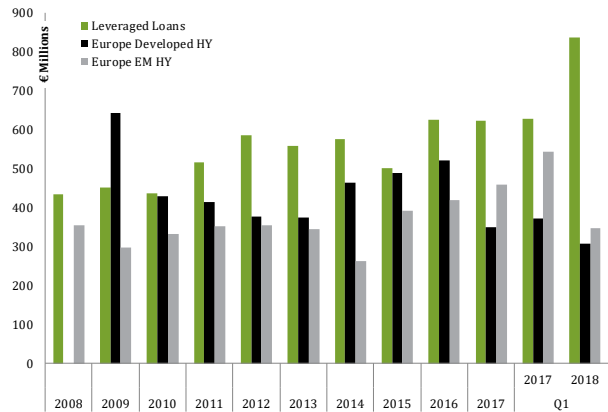
Source: Dealogic, Thomson Reuters LPC

## 1.2 European Leveraged Issuance Percentage



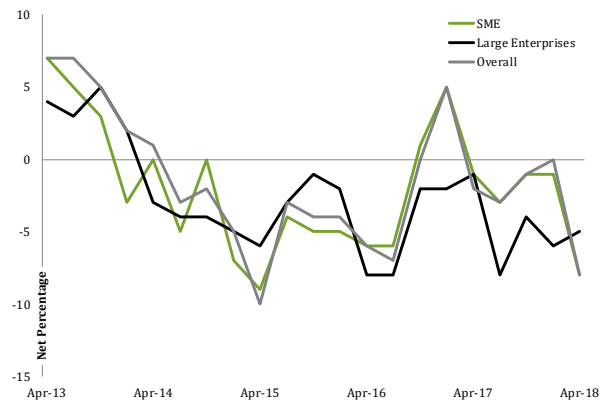
Source: Dealogic, Thomson Reuters LPC

## 1.3 European Leveraged Average Deal Size



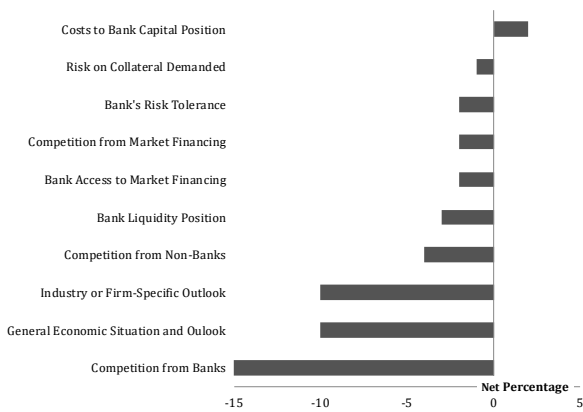
Source: Dealogic, Thomson Reuters LPC

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



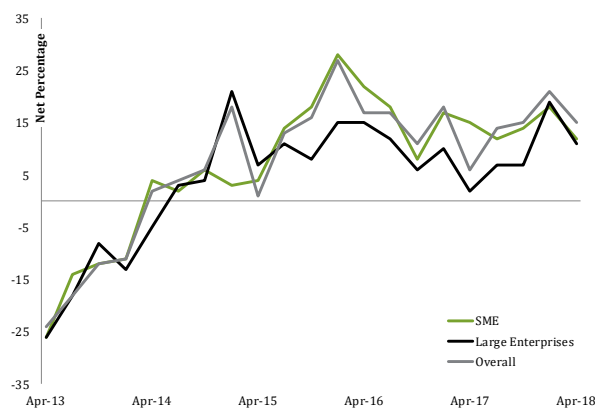
Source: European Central Bank

## 1.5 Factors Affecting Bank Credit Standards: April 2018<sup>2</sup>



Source: European Central Bank

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



Source: European Central Bank

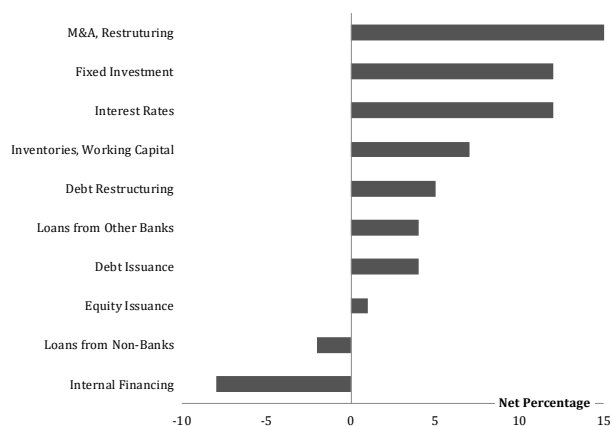
<sup>1</sup> A positive net percentage number signifies tightening bank credit; a negative net percentage number signifies easing credit.

<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: April 2018<sup>4</sup>



Source: European Central Bank

1.8 Global Comparison – High Yield Issuance

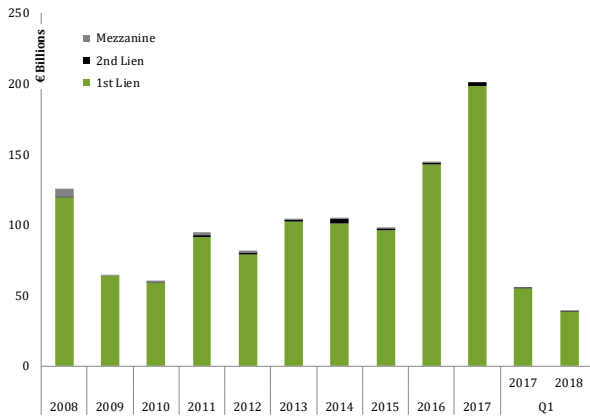
€ Billions	2018	2017					Prior Years			
	Q1	Q1	Q2	Q3	Q4	Full Year	2016	2015	2014	2013
<b>United States</b>	40.9	64.19	48.24	48.98	48.77	210.2	176.5	192.8	185.2	196.8
<b>Europe</b>	29.6	40.35	41.43	21.36	41.62	144.8	107.9	114.2	125.0	121.1
<b>Asia Pacific</b>	21.7	25.89	27.45	29.76	15.62	98.7	79.9	41.4	35.9	42.8

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.

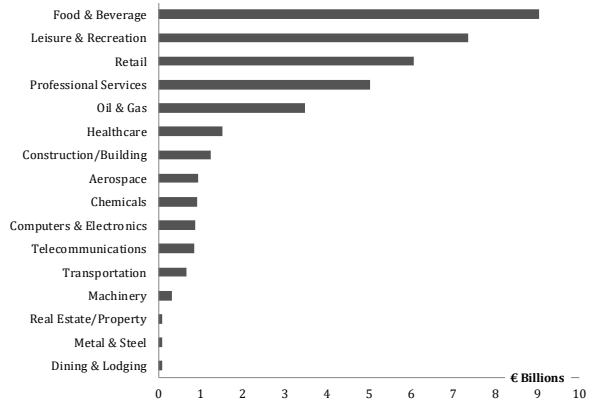
## 2 Issuance – Leveraged Loans

### 2.1 European Leveraged Loan Issuance By Type



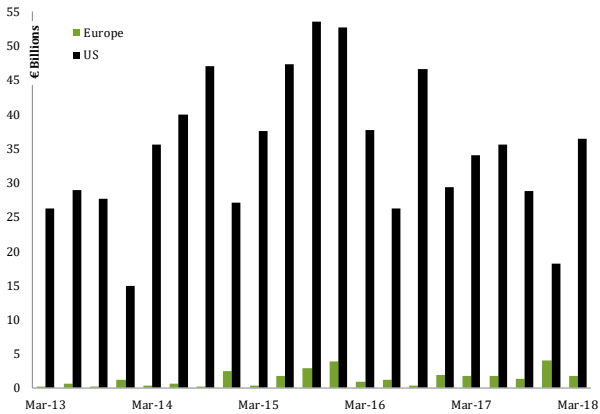
Source: Dealogic

### 2.2 European Leveraged Loan Issuance by Industry: 1Q 2018



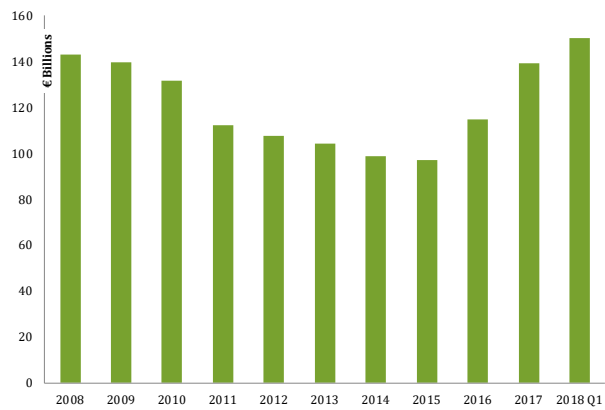
Source: Dealogic

### 2.3 Forward Pipeline of Leveraged Loan Market



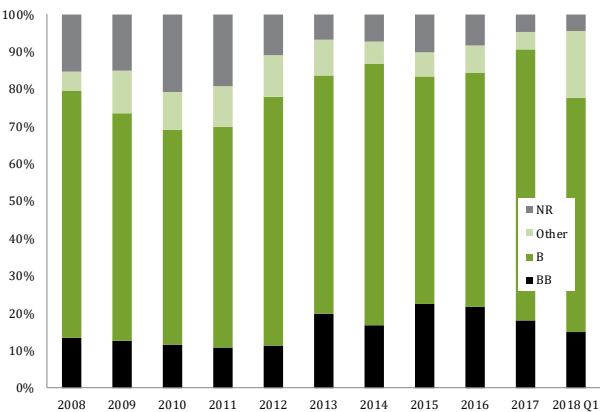
Source: Standard & Poor's LCD

### 2.4 ELLI Total Institutional Loans Outstanding



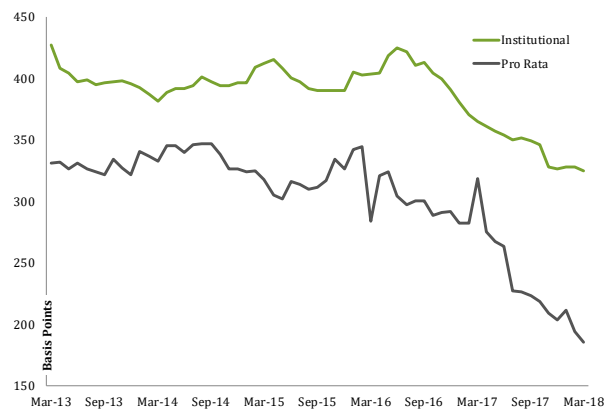
Source: Standard & Poor's LCD

### 2.5 ELLI Ratings Diversification



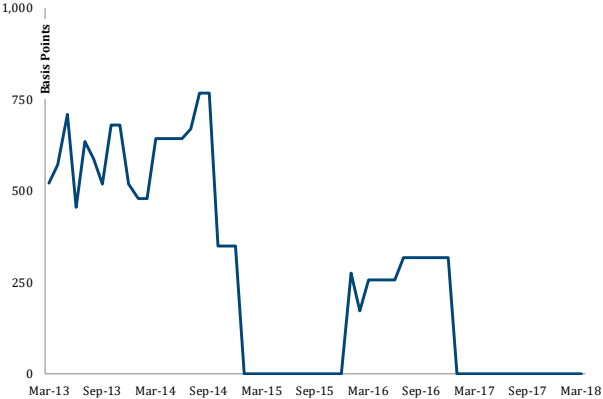
Source: Standard & Poor's LCD

### 2.6 Institutional and Pro Rata Spreads



Source: Dealogic, AFME, SIFMA

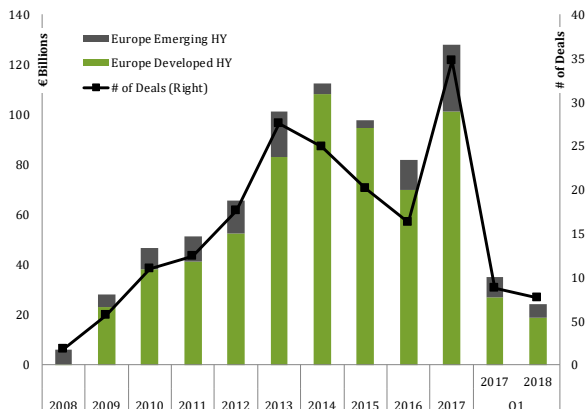
2.7 Mezzanine Spreads



Source: Dealogic, AFME, SIFMA

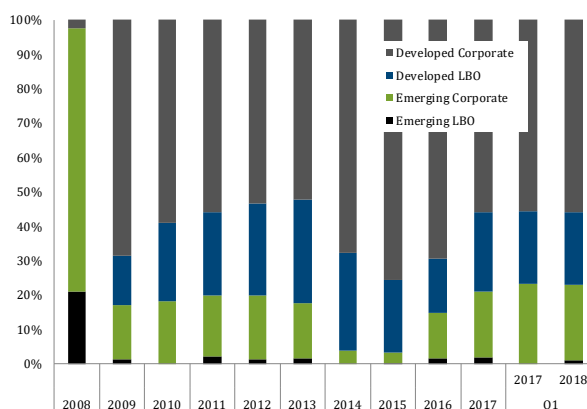
### 3 Issuance – High Yield Bonds Overview

#### 3.1 European High Yield Issuance



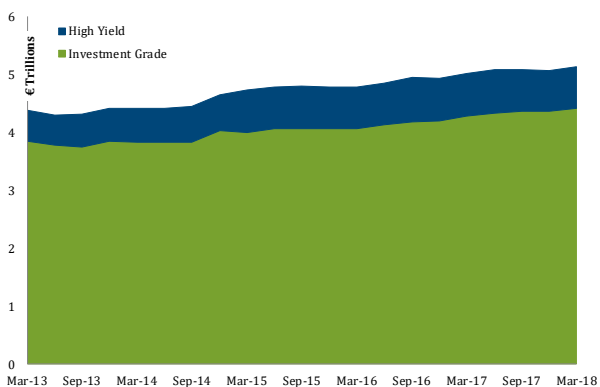
Source: Dealogic

#### 3.2 European High Yield Issuance by Sponsor



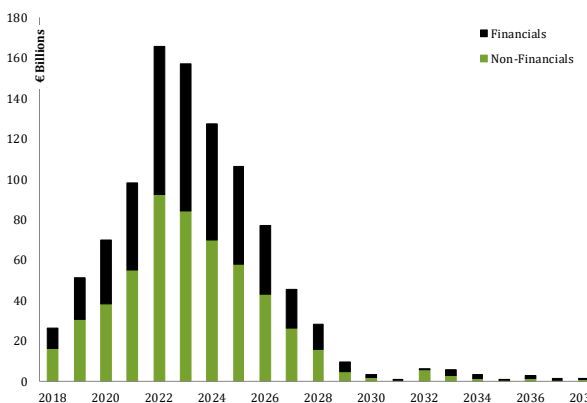
Source: Dealogic

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



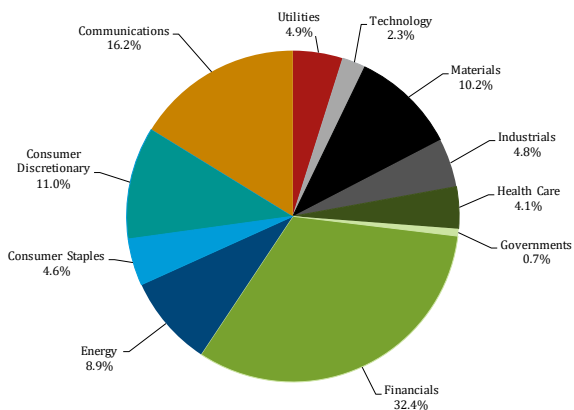
Source: Bloomberg, AFME, SIFMA

#### 3.4 European Corporate Bonds HY Maturity Wall: 1Q 2018



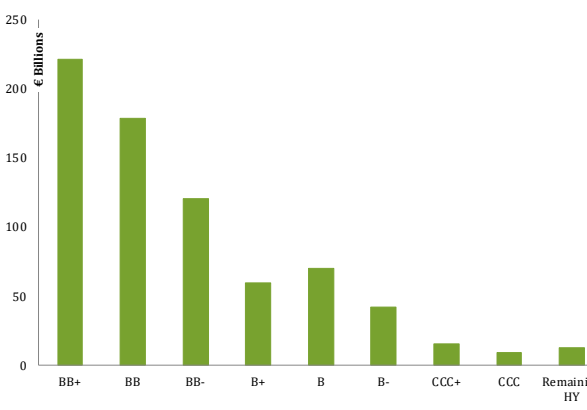
Source: Bloomberg, AFME, SIFMA

#### 3.5 European Corporate HY Bonds Outstanding by Sector: 1Q 2018



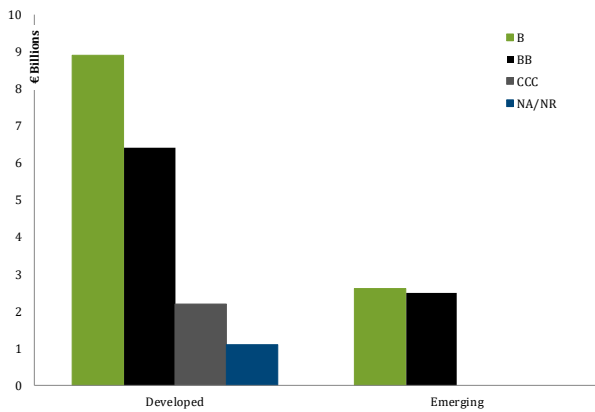
Source: Bloomberg, AFME, SIFMA

#### 3.6 European Corporate HY Bonds Outstanding by Current Rating: 1Q 2018



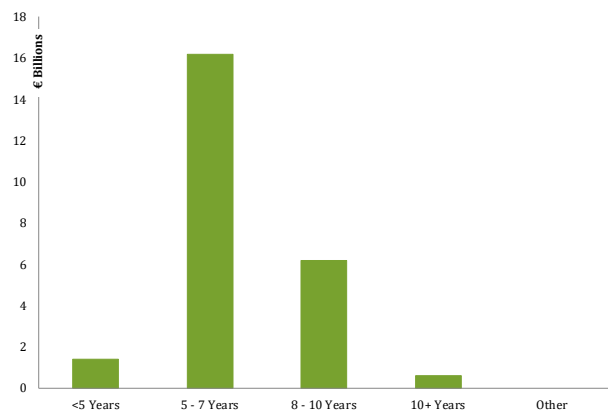
Source: Bloomberg, AFME, SIFMA

3.7 European Corporate Bond Issuance by Rating: 1Q 2018



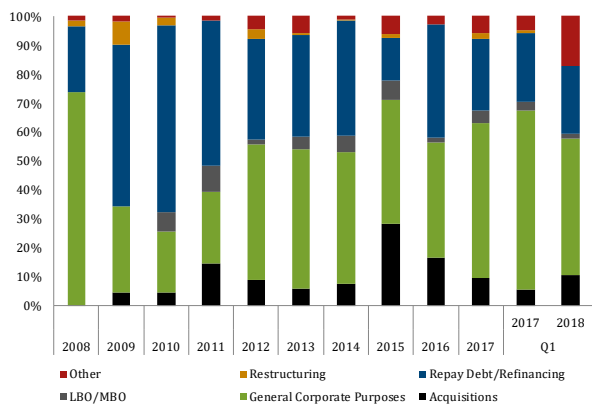
Source: Dealogic, AFME, SIFMA

3.8 European Corporate Bond Issuance by Tenor: 1Q 2018



Source: Dealogic, AFME, SIFMA

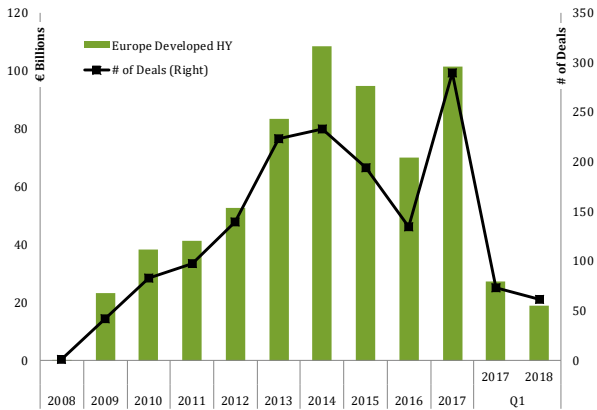
3.9 European HY Use of Proceeds



Source: Dealogic, AFME, SIFMA

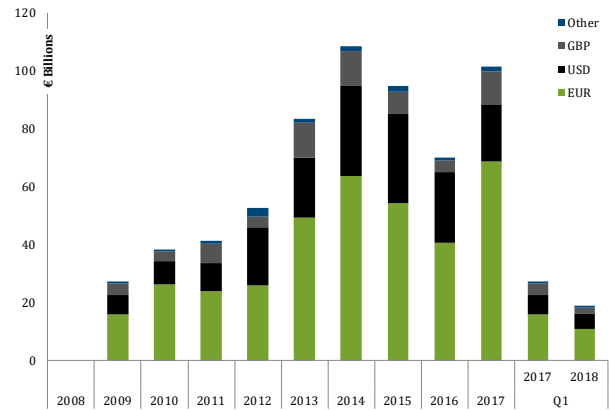
# 4 Issuance – European Developed Market High Yield Bonds

## 4.1 European Developed Market HY Bond Issuance



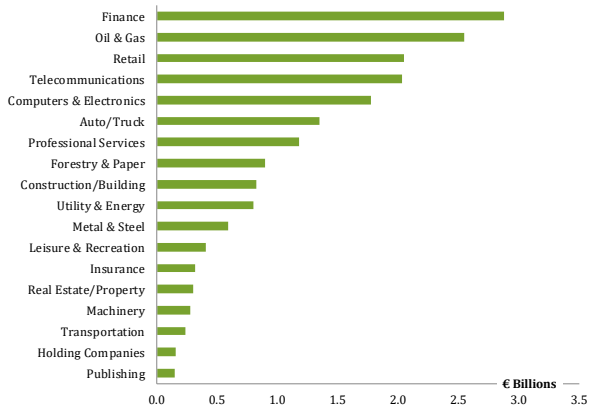
Source: Dealogic, Thomson Reuters LPC

## 4.2 European Developed Market HY Issuance by Currency



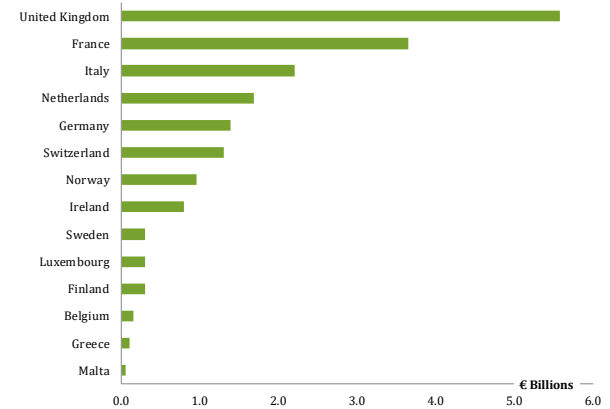
Source: Dealogic, Thomson Reuters LPC

## 4.3 European Developed Market HY Issuance by Industry: 1Q 2018



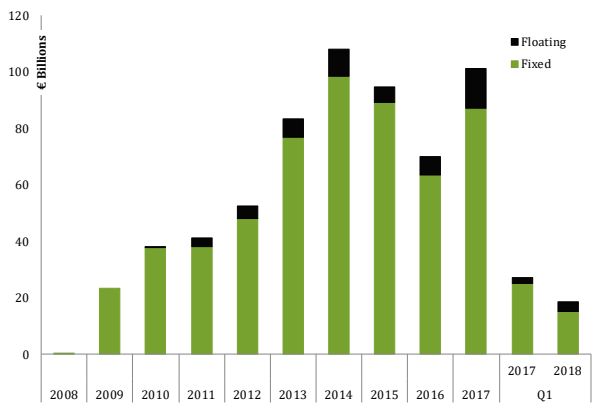
Source: Dealogic

## 4.4 European Developed Market HY Issuance by Country of Risk: 1Q 2018



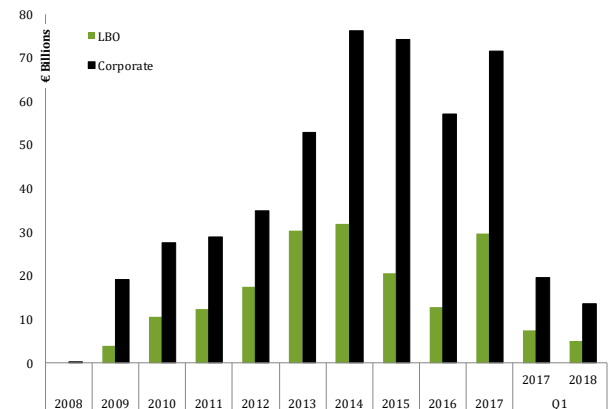
Source: Dealogic

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



Source: Dealogic

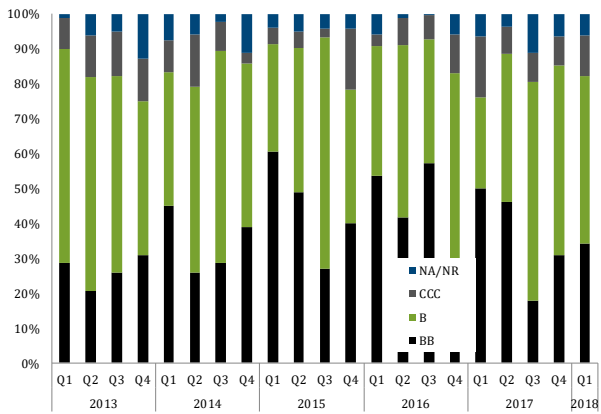
## 4.6 European Developed Market HY Issuance, Sponsored vs. Corporate



Source: Dealogic

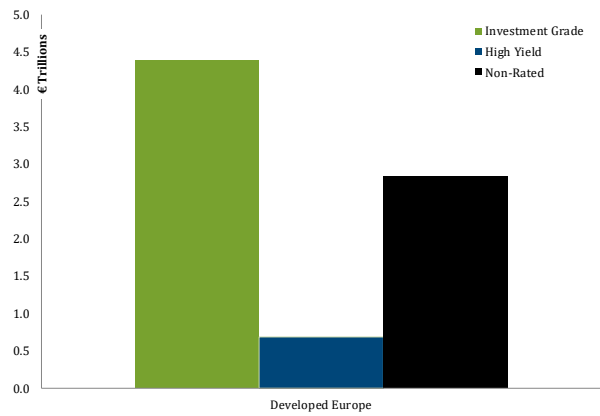


4.7 European Developed Market HY Rating Distribution at Issuance



Source: Dealogic, AFME, SIFMA

4.8 European Developed Market Corporate Bonds Outstanding: 1Q 2018



Source: Bloomberg, AFME, SIFMA

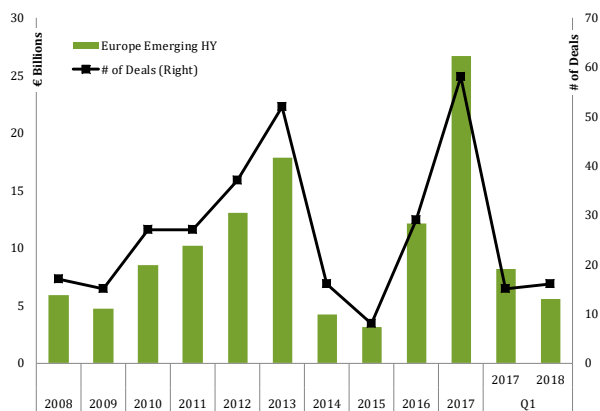
4.9 European Developed Market HY Bond Issuance

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moody's	S&P	Fitch
IPD 3 BV	Publishing	30/01/2018	EUR	150		4.50 B2	B	NA
Hercule Debtco SARL	Forestry & Paper	31/01/2018	EUR	150		6.75 NA	CCC+	NA
Garfunkelux Holdco 3 SA	Finance	19/01/2018	EUR	530	3M EURIBOR +450 (P)B2		B+	NA
			SEK	1,280	3M STIBOR +475 (P)B2		B+	NA
Pinnacle Bidco plc	Leisure & Recreation	17/01/2018	GBP	360		6.38 B3	B	B+
Selecta Group BV	Retail	19/01/2018	EUR	765		5.79 (P)B3	B	NA
			EUR	325	3M EURIBOR +587.5 (P)B3		B	NA
			CHF	250		5.88 (P)B3	B	NA
SL Bidco BV	Computers & Electronics	22/01/2018	EUR	150	3M EURIBOR +550 NA		NA	NA
Nordex SE	Machinery	26/01/2018	EUR	275		6.50 B3	B	NA
Jerrold FinCo plc	Finance	25/01/2018	GBP	150		6.13 B+	NA	BB-
ICCREA Banca SpA	Finance	25/01/2018	EUR	400	3M EURIBOR +100 NA		BB	BB+
Siccar Point Energy Bonds plc	Oil & Gas	24/01/2018	USD	100		9.00 NA	NA	NA
Quant AB	Professional Services	24/01/2018	EUR	28		14.00 Ba1	BB-	BB-
Casino	Retail	24/01/2018	EUR	200		1.87 Ba1	BB+	BB+
Titan Global Finance plc	Construction/Building	22/01/2018	EUR	100		2.38 NA	BB+	NA
Matalan Finance plc	Retail	18/01/2018	GBP	350		6.75 B2	B-	NA
			GBP	130		9.50 Caa2	CCC	NA
Aker ASA	Holding Companies	18/01/2018	NOK	1,500	3M NIBOR +265 NA		NA	NA
Optimum	Telecommunications	12/01/2018	USD	1,000		5.38 Ba1	BB-	BB
ZPG plc	Computers & Electronics	11/01/2018	GBP	200		3.75 Ba3	BB-	NA
Monte dei Paschi	Finance	11/01/2018	EUR	750		5.38 Caa2	NA	CCC+
Ensco plc	Oil & Gas	11/01/2018	USD	1,000		7.75 B3	BB-	NA
ARD Securities Finance SARL	Metal & Steel	11/01/2018	USD	350		8.75 Caa2	B-	NA
Polygon AB	Construction/Building	08/02/2018	EUR	210		4.00 B1	NA	B+
Cognita Financing plc	Professional Services	16/02/2018	GBP	60		7.75 (P)B2	B-	NA
Faurecia SA	Auto/Truck	22/02/2018	EUR	700		2.63 Ba1	BB+	BB+
Catena Media plc	Computers & Electronics	16/02/2018	EUR	50	3M EURIBOR +550 NA		NA	NA
Quant AB	Professional Services	13/02/2018	EUR	63	3M EURIBOR +600 NA		NA	NA
Elis Services SA	Professional Services	08/02/2018	EUR	650		1.88 Ba2	NA	BB+
			EUR	350		2.88 Ba2	NA	BB+
Borealis Finance LLC	Transportation	07/02/2018	USD	50		7.50 NA	NA	NA
Burford Capital Finance LLC	Insurance	06/02/2018	USD	180		6.13 NA	NA	NA
MPC Container Ships Invest BV	Transportation	02/02/2018	USD	100	3M LIBOR +475 NA		NA	NA
KME AG	Metal & Steel	02/02/2018	EUR	300		6.75 B3	NA	B
KCA Deutag UK Finance plc	Oil & Gas	23/03/2018	USD	400		9.63 B3	B-	NA
LSF10 Wolverine Investments SCA	Construction/Building	08/03/2018	EUR	265	3M EURIBOR +462.5 B2		NA	NA
			EUR	250		5.00 B2	NA	NA
Pandion Energy AS	Oil & Gas	19/03/2018	NOK	400	3M NIBOR +725 NA		NA	NA
Point Resources AS	Oil & Gas	13/03/2018	USD	250		8.50 NA	NA	NA
Teamsystem SpA	Computers & Electronics	22/03/2018	EUR	550	3M EURIBOR +400 B3		NA	B+
			EUR	200	3M EURIBOR +400 B3		NA	B+
Galaxy Bidco Ltd	Insurance	14/03/2018	GBP	107	3M LIBOR +450 B2		NA	NA
			GBP	43	3M LIBOR +450 B2		NA	NA
CEVA Group plc	Transportation	12/03/2018	USD	50		9.00 NA	NA	NA
Corestate Capital Holding SA	Real Estate/Property	23/03/2018	EUR	300		3.50 NA	BB+	NA
Suddenlink Communications	Telecommunications	22/03/2018	USD	1,050		7.50 Caa1	B	NA
AIB Group plc	Finance	22/03/2018	EUR	500		1.50 Ba2	BB+	BBB-
Virgin Media Receivables Financing Notes II dac	Telecommunications	21/03/2018	GBP	300		5.75 B1	B	B+e
Tullow Oil plc	Oil & Gas	16/03/2018	USD	800		7.00 B3	B	NA
New Nordic FinCo Holding A/S	Professional Services	16/03/2018	EUR	23	3M EURIBOR +1000 NA		NA	NA
Color Group ASA	Transportation	16/03/2018	NOK	700	3M NIBOR +320 NA		NA	NA
Paprec Holding SA	Utility & Energy	15/03/2018	EUR	575		4.00 B1	B+	NA
			EUR	225	3M EURIBOR +350 B1		B+	NA
Aker BP ASA	Oil & Gas	15/03/2018	USD	500		5.88 Ba2	BB+	NA
Stora Enso Oyj	Forestry & Paper	14/03/2018	EUR	300		2.50 Ba1	BB+	NA
Progroup AG	Forestry & Paper	13/03/2018	EUR	450		3.00 Ba3	BB-	NA
Groupe PSA	Auto/Truck	09/03/2018	EUR	650		2.00 Ba1	NA	BB+
Travelport Corporate Finance plc	Computers & Electronics	08/03/2018	USD	745		6.00 B1	B+	NA
Arrow Global Finance plc	Finance	07/03/2018	EUR	285	3M EURIBOR +375 (P)Ba3		BB	NA
			GBP	100		5.13 (P)B1	BB	NA

Source: Dealogic

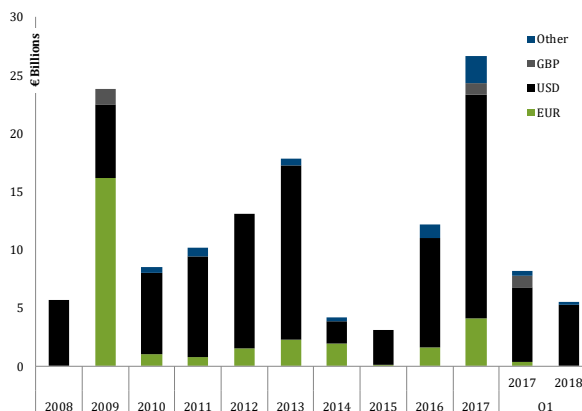
# 5 Issuance – European Emerging Market High Yield Bonds

## 5.1 European Emerging Market HY Bond Issuance



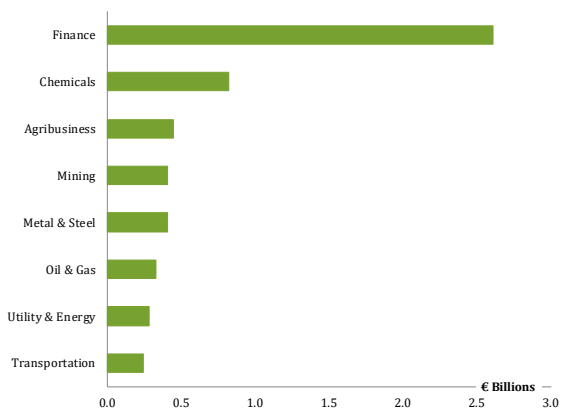
Source: Dealogic

## 5.2 European Emerging Market HY Bond Issuance by Currency



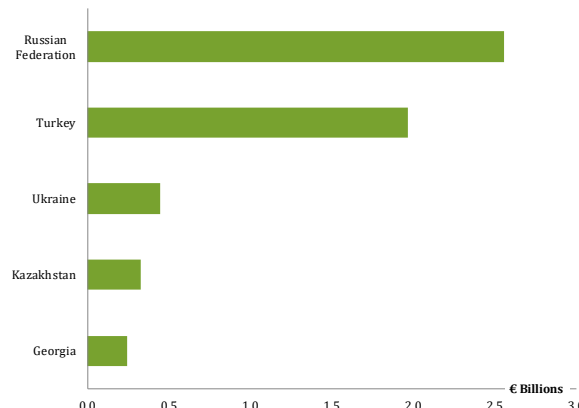
Source: Dealogic

## 5.3 European Emerging Market HY Issuance by Industry: 1Q 2018



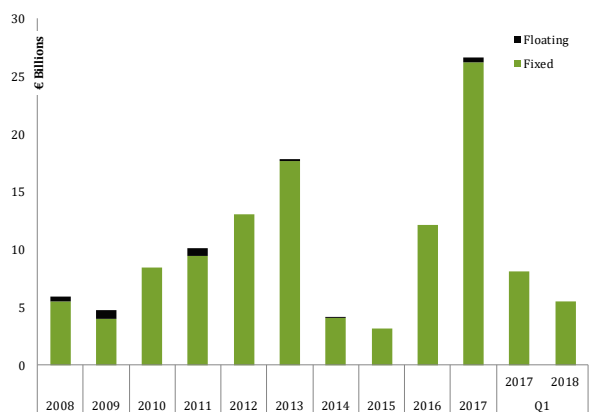
Source: Dealogic

## 5.4 European Emerging Market HY Issuance by Country of Risk: 1Q 2018



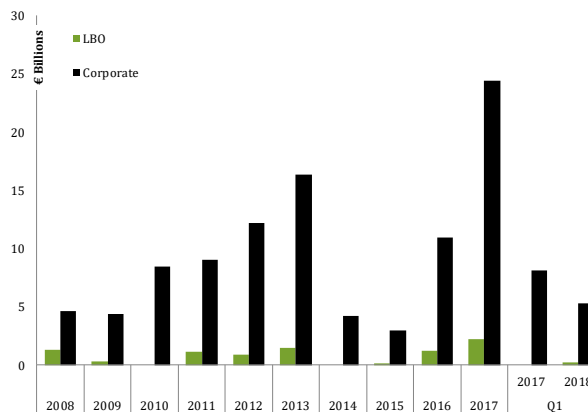
Source: Dealogic

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



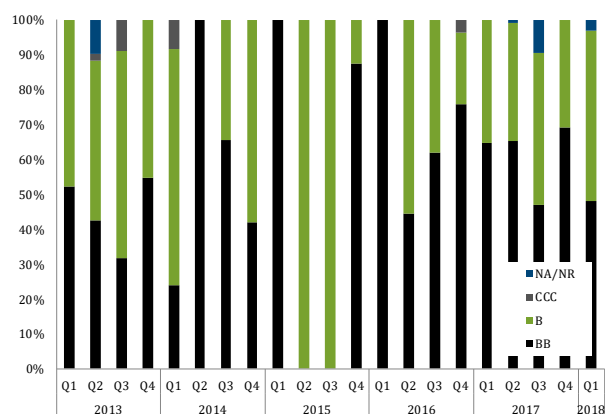
Source: Dealogic

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



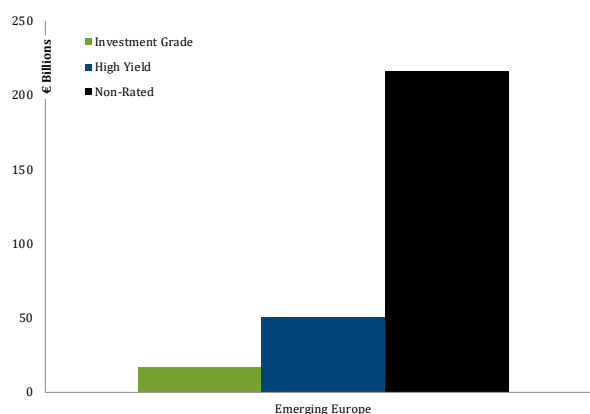
Source: Dealogic

## 5.7 European Emerging Market HY Rating Distribution at Issuance



Source: Dealogic, AFME, SIFMA

## 5.8 European Emerging Market Corporate Bonds Outstanding: 1Q 2018



Source: Bloomberg, AFME, SIFMA

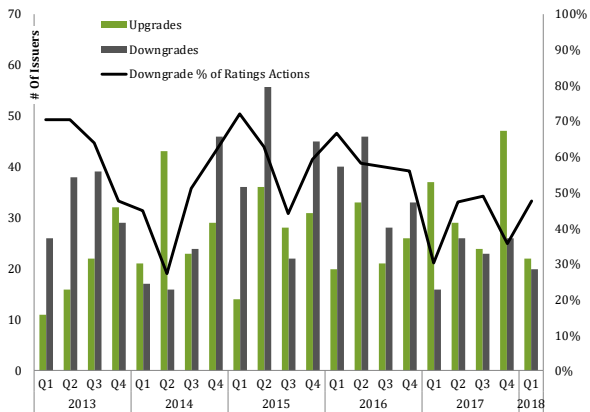
## 5.9 European Emerging Market HY Bond Issuance

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moody's	S&P	Fitch
Fibabanka AS	Finance	18/01/2018	USD	300	6.000	NA	NA	BB-
Rusal Capital DAC	Metal & Steel	25/01/2018	USD	500	4.850	B1	NA	BB-
Alfa Bank	Finance	25/01/2018	USD	500	6.950	B2	NA	B
Polyus Finance plc	Mining	24/01/2018	USD	500	4.700	Ba1	BB-	BB-
Turkiye Vakiflar Bankasi TAO - VakifBank	Finance	23/01/2018	USD	650	5.750	Ba1	NA	BB+
Petkim Petrokimya Holding AS	Chemicals	19/01/2018	USD	500	5.875	B1	NA	B
PJSC PhosAgro OAO	Chemicals	17/01/2018	USD	500	3.949	Ba1	BBB-	BB+
Turkiye Sinai Kalkinma Bankasi	Finance	09/01/2018	USD	350	5.500	Ba1	NA	BB+
Akbank	Finance	21/02/2018	USD	400	6.797	(P)B1	NA	BB
Albaraka Turk Katilim Bankasi AS	Finance	14/02/2018	USD	205	10.000	NA	NA	NA
RusHydro OAO	Utility & Energy	08/02/2018	RUB	20,000	7.400	Ba1	BB+	BB+
Nostrum Oil & Gas Finance BV	Oil & Gas	08/02/2018	USD	400	7.000	B2	B	NA
Hacienda Investments Ltd	Transportation	08/02/2018	USD	300	5.075	Ba1	NA	BB+
Credit Bank of Moscow	Finance	07/02/2018	USD	500	5.550	(P)Ba3	BB-	BB-
MHP Lux SA	Agribusiness	22/03/2018	USD	550	6.950	NA	B	B
Georgia Capital plc	Finance	05/03/2018	USD	300	6.125	B2	(P)B+	NA

Source: Dealogic

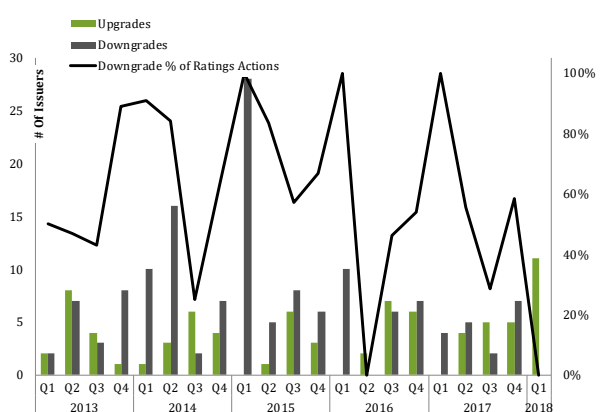
# 6 Credit Quality

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



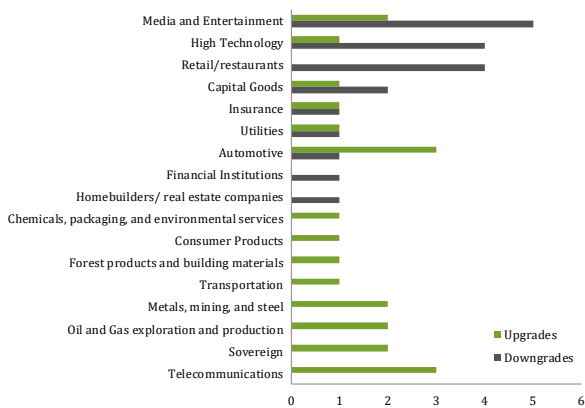
Source: Standard and Poor's

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



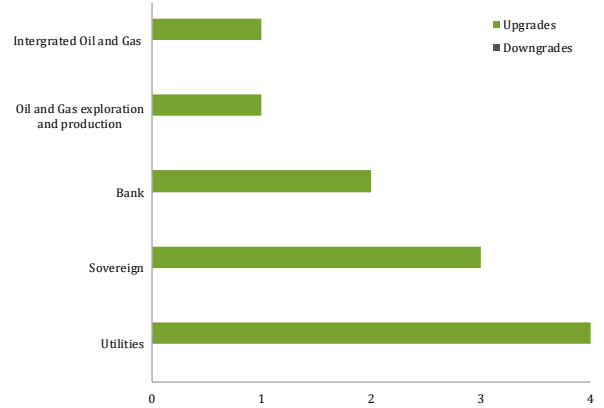
Source: Standard & Poor's

## 6.3 Developed European Industry Rating Actions by Number of Ratings: 1Q 2018



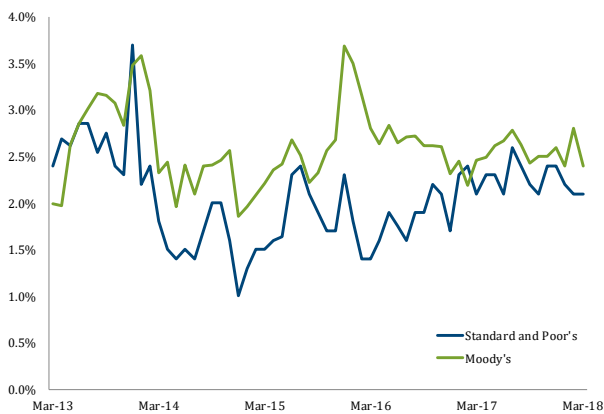
Source: Standard & Poor's

## 6.4 Emerging European Industry Rating Actions by Number of Ratings: 1Q 2018



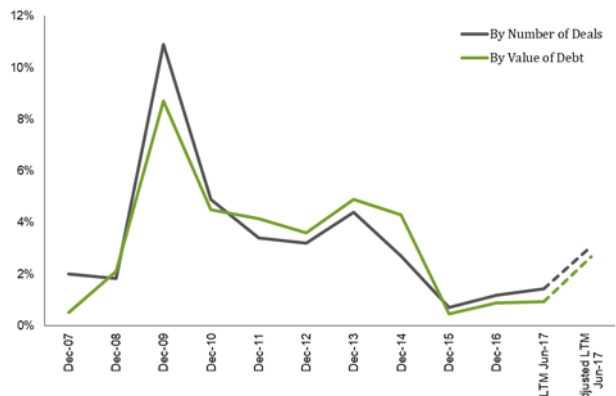
Source: Standard & Poor's

## 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.

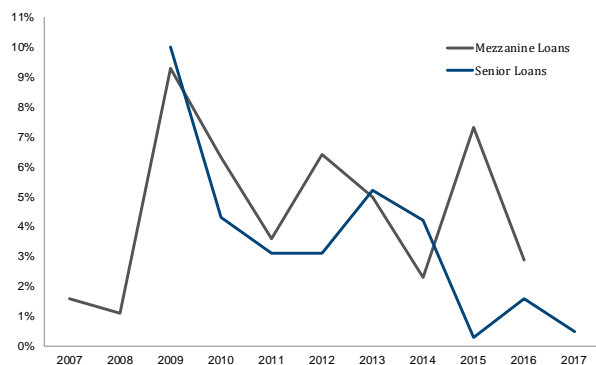
Source: Fitch Leveraged Credit Database

<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

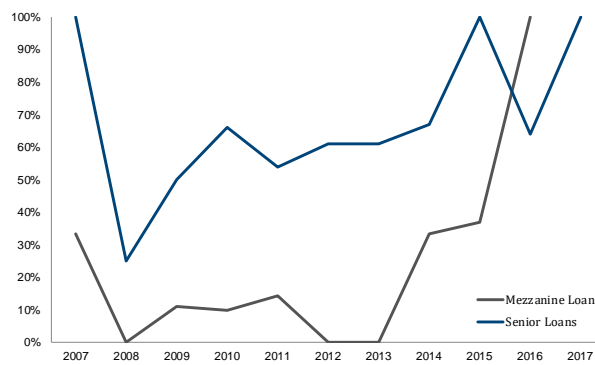
### 6.7 Mezzanine and Senior Loan Default Rate



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

Source: Fitch Leveraged Credit Database

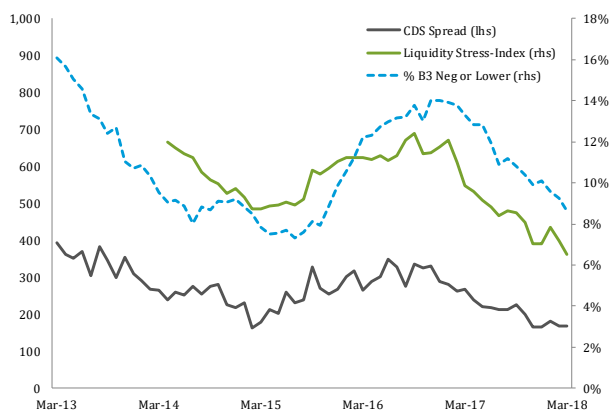
### 6.8 Mezzanine and Senior Loan Recovery Rates



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

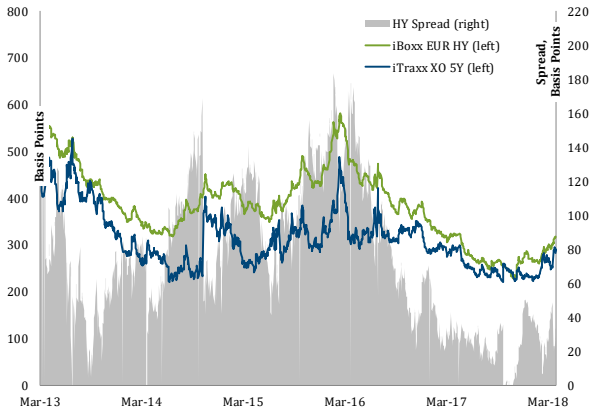
Issuer	Industry Group	Country	Date	Reported By	Reason
Expro Holdings U.K. 3 Ltd.	Oil and gas	U.K.	January 2018	S&P, Moody's	Chapter 11
BrightHouse Group PLC	Retail	U.K.	February 2018	S&P, Moody's	Distressed exchange
Avanti Communications Group plc	Telecommunications	U.K.	February 2018	Moody's	Distressed exchange

Source: Standard & Poor's, Moody's



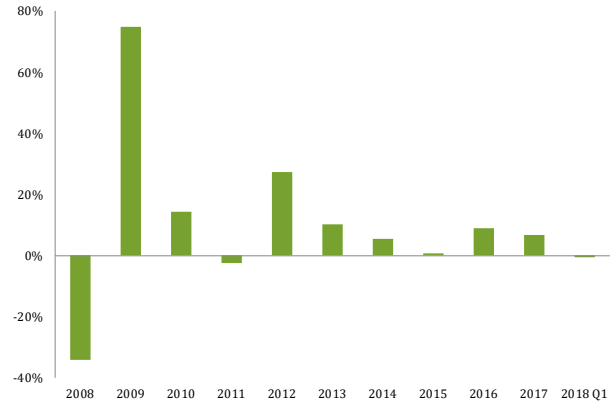
# 7 Relative Value and Total Return

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



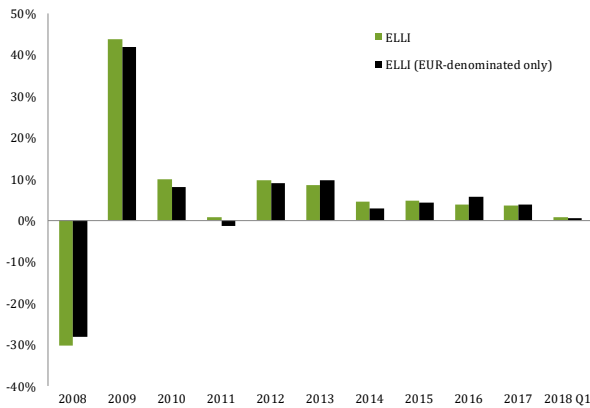
Source: Thomson Reuters Eikon, Markit

## 7.2 European HY Bond Total Return



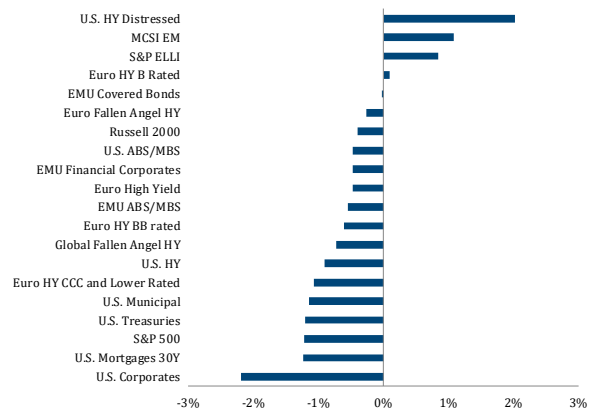
Source: BAML

## 7.3 European Leveraged Loan Total Return



Source: Standard & Poor's LCD

## 7.4 Asset Class Total Return, 1Q 2018



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

[www.afme.eu](http://www.afme.eu)

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