

# European High Yield & Leveraged Loan Report

## European Leveraged Finance

Q4: 2015



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## Highlights and Market Environment

### Highlights

#### Issuance

European leveraged finance issuance (leveraged loans and high yield bonds) decreased in 4Q'15 to €25.6 billion, a 13.3% decrease from €29.6 billion quarter-over-quarter (q-o-q) and a 5.4% decrease from €27.1 billion in 4Q'14. The quarterly decrease stems from the large fall in leveraged loan issuance, which decreased by 30.0% in the fourth quarter of 2015 while high yield bonds issuance increased by 8.0%; the high yield share of the leveraged finance market increased to 54.9%, up from 44.1% in 3Q'15.

In full year 2015, European leveraged finance issuance decreased to €171.1 billion, down 16.8% from €205.7 billion in 2014. Leveraged loan issuance decreased by 20.9% to €75.7 billion in 2015 from €95.6 billion in 2014, while high yield bond issuance decreased by 13.4% to €95.4 billion in 2015 from €110.1 billion in 2014.

#### Market and Economic Environment

According to the January 2016 European Central Bank lending survey, in the fourth quarter of 2015, credit standards on loans to enterprises eased further as those on housing loans returned to a net easing, continuing to support the recovery in loan growth. In 4Q'15, euro area banks reported a further net easing of credit standards on loans to enterprises for the seventh consecutive quarter, driven in particular by banks' competition, while risk perceptions contributed only marginally to such easing. Looking ahead to the first quarter of 2016, euro banks expect a further net easing in standards on loans to enterprises, broadly unchanged standards for housing loans and a return to a net easing for consumer credit.

Across firm sizes, credit standards eased more strongly on loans to small and medium-sized enterprises (SMEs) than on loans to large firms. For the large euro area countries, credit standards on loans to enterprises continued to ease considerably in Italy and remained unchanged in the other countries, with the exception of France where they continued to tighten in net terms.

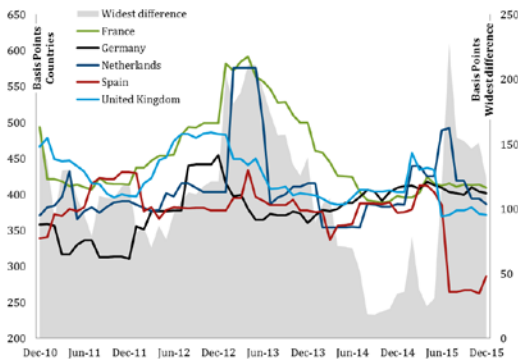
Net demand for loans to enterprises continued to increase in 4Q'15, mostly due to the low general level of interest rates. Net loan demand by enterprises increased to 27% in 4Q'15, up from 16% in the previous quarter. Banks reported a net increase in the demand for housing loans and consumer credit as well. The net loan demand for housing loans was 29%, slightly lower than 33% in 3Q'15 while net demand for consumer credit increased to 21% in 4Q'15 from 19% in 3Q'15.

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*“European leveraged finance issuance (leveraged loans and high yield bonds) decreased in 2015 to €171.1 billion”*

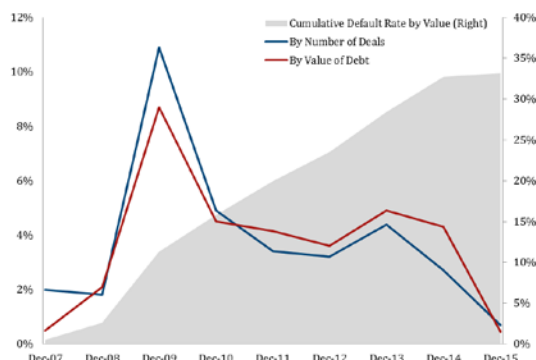
*“Leveraged loan issuance in 2015 totalled €95.4 billion on 195 deals”*

### Institutional Spreads



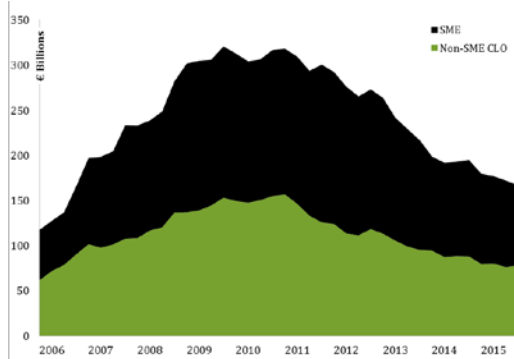
Source: Dealogic, AFME, SIFMA

### Leveraged Loan Default Rates



Source: Fitch's Leveraged Credit Database

### European CLO Outstanding



Source: AFME, SIFMA

## Issuance

### Issuance: Leveraged Loans

Leveraged loan issuance, including first lien, second lien, and mezzanine financing, declined in the fourth quarter of 2015 to €11.6 billion, down 30.0% q-o-q (€16.5 billion) and 38.7% y-o-y (€18.9 billion). In full year 2015, €75.7 billion in leveraged loans was issued, down 20.9% from €104.5 billion in 2014.

Amend-and-extend (“A&E”) transactions continue to take place but the issuance volume declined to €0.9 billion in the fourth quarter of 2015, a 42.1% decrease from the third quarter’s €4.6 billion and an 83.6% decrease y-o-y. In full year 2015, amend-and-extend leverage loan issuance increased to €23.3 billion, an increase of 48.0% from €15.8 billion in 2014.

In 4Q’15, no mezzanine loans and €0.3 billion in second liens were financed. Pricing spreads for institutional loans tightened by 1.7 basis points (bps) while spreads for pro rata loans widened by 33.7 bps. Mezzanine loan spreads remained at 0 bps in the fourth quarter of 2015 as no mezzanine loans were financed in 2015.

According to Dealogic, the top five sectors in leveraged loan issuance for the fourth quarter of 2015 accounted for over half of the issuance volume; the leading sector was telecommunications (€2.1 billion), followed by healthcare (€1.4 billion), chemicals (€1.2 billion), utility and energy (€0.9 billion) and transportation (€0.9 billion).

The share of deals aimed to refinance and/or repay debt increased to 35.9% of all deals by euro amount in the fourth quarter of 2015, compared to 27.0% in 3Q’15 and 56.4% in 4Q’14. Refinancing and/or repaying of debt was the top use of proceeds in 4Q’15 with €4.1 billion, a decrease of 7.1% q-o-q (€4.5 billion) and 61.0% down y-o-y (€10.6 billion). The second largest use of proceeds in the fourth quarter was acquisitions totalling €2.9 billion or 25.2% of total issuance, up from €1.3 billion in 3Q’15 (7.9% of total) and up from €1.4 billion in 4Q’14 (7.2% of total).

Leveraged loan default rates decreased sharply in December 2015, with Fitch Ratings reporting the default rate by number of deals at 0.7% and by value of debt at 0.5%, (down from 2.7% and 4.3%, respectively, from December 2014).

European CLO outstandings, including SME deals, decreased by an annualized rate of 11.6% in 4Q’15, ending 2015 at €166.9 billion. Non-SME CLOs increased at an annualized rate of 9.9% to €78.1 billion in 4Q’15 while SME CLOs decreased by an annualized 26.3% to €88.8 billion.

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*“Primary high yield issuance in 2015 totalled €95.4 billion on 195 deals”*

### Issuance: High Yield Bonds

Primary high yield issuance in 4Q'15 totalled €14.1 billion on 38 deals, an 8.0% and 70.7% increase by euro amount, respectively, from 3Q'15 (€13.0 billion on 34 deals) and 4Q'14 (€8.2 billion on 27 deals). Issuance from developed market Europe decreased slightly in the fourth quarter of 2015 while issuance from emerging market Europe increased. In full year 2015, €95.4 billion in high yield bonds were financed, a decrease of 13.4% from €110.1 billion in 2014.

Primary high yield issuance in developed market Europe in the fourth quarter of 2015 was €12.2 billion on 33 deals, a 4.2% decrease by euro amount from 3Q'15 (€12.7 billion on 33 deals) but a 61.0% increase from 4Q'14 (€7.6 billion on 23 deals). In full year 2015, €92.3 billion in high yield bonds was issued in developed market Europe, down 13.5% from €106.7 billion in 2014.

In emerging market Europe primary issuance in 4Q'15 was €1.9 billion on 4 deals, a significant increase by euro amount from both 3Q'15 (€0.3 billion on 1 deal) and 4Q'14 (€0.7 billion on 4 deals). In full year 2015, €3.1 billion in high yield bonds was issued in emerging market Europe, an 8.6% decrease from €3.4 billion in 2014.

In the fourth quarter of 2015, average deal size from developed market Europe decreased by 4.2% to €369.2 million from €385.5 million in 3Q'15 but increased by 12.2% from €329.0 billion in 4Q'14. Average deal size for emerging market Europe increased by 18.9% to €379.4 million in 4Q'15 from €319.1 million in 3Q'15 and by 122.6% y-o-y (€170.5 billion in 4Q'14).

High yield issuance for refinancing and/or repayment of debt in developed market Europe decreased to €1.4 billion, representing 11.4% of all issuance by euro amount in 4Q'15, compared to €1.6 billion (12.3% of total) in 3Q'15 and €2.6 billion (34.1% of total) in 4Q'14. No deals issued in emerging market Europe in the fourth quarter of 2015 were for refinancing and/or repayment of debt.

Three sectors accounted for almost three quarters of the total high yield issuance in 4Q'15: the finance industry led the issuance with €6.3 billion (44.6% of total), followed by telecommunications with €2.6 billion (18.4% of total), and professional services with €1.4 billion (9.9% of total) with the remainder of the issuance in fourth quarter split among many industries.

The proportion of USD-denominated issuance decreased to 36.8% of all issuance by euro amount in 4Q'15 compared to 53.4% in 3Q'15 and 53.4% in 4Q'14. USD-denominated issuance in developed market Europe decreased to €3.3 billion or 27.0% of all issuance by euro amount from €4.6 billion or 35.9% in 3Q'15 and from €7.6 billion (50.3%) in 4Q'14. All issues priced in emerging market Europe (€1.9 billion) were denominated in USD, compared to €0.3 billion (100% of total) in 3Q'15 and €0.7 billion or 87.5% in 4Q'14.

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*“S&P 500 Index led returns in the fourth quarter of 2015 with 6.5% followed by Russell 2000 (3.2%) and European high yield CCC and lower rated bonds (3.0%)”*

### Returns & Credit Quality

S&P 500 Index led returns in the fourth quarter of 2015 with 6.5% followed by Russell 2000 (3.2%) and European high yield CCC and lower rated bonds (3.0%). Fourteen out of 20 asset classes examined recorded positive returns while six recorded losses in 4Q'15, however losses were much greater in magnitude than gains. The worst performing asset classes were: U.S. distressed high yield (-15.9% in 4Q'15) and U.S. high yield (-2.2%).

High-yield bond default rates increased in December 2015, with S&P reporting the trailing 12-month speculative-grade default rate at 2.3% (up from 1.9% end-September 2015).

Eight bond-related defaults were reported in the fourth quarter, two in developed market Europe and four in emerging market Europe. In full year 2015, there were 22 high yield bond defaults, an increase from ten defaults in 2014. Out of the 22 defaults in 2015, six were in developed market Europe and 16 were in emerging market Europe.

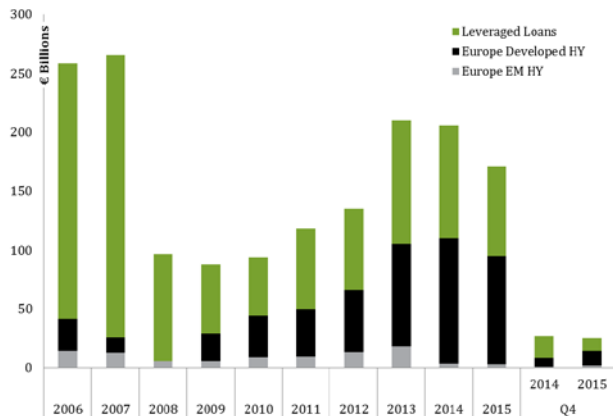
According to S&P, in 4Q'15 downgrades exceeded upgrades in developed market Europe with 45 downgrades to 31 upgrades as well as in emerging market Europe with 6 downgrades to 3 upgrades. Both upgrades and downgrades were distributed across the sector spectrum. The sector with the most rating actions in fourth quarter 2015 was banking with 6 upgrades and 2 downgrades in developed market Europe and 1 upgrade and 3 downgrades in emerging market Europe.

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*"22 European high yield bond issuers defaulted in 2015"*

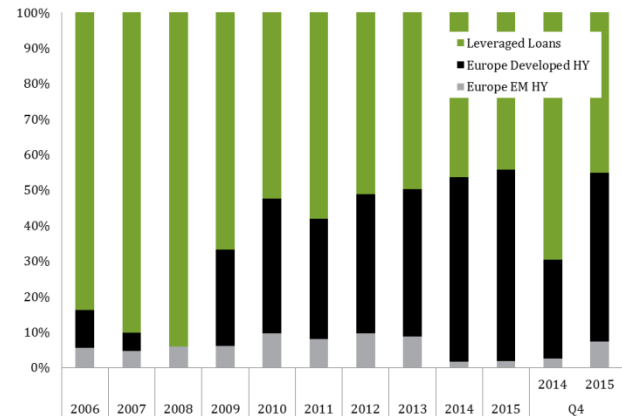
# 1 Leveraged Finance Overview

## 1.1 European Leveraged Issuance by Type



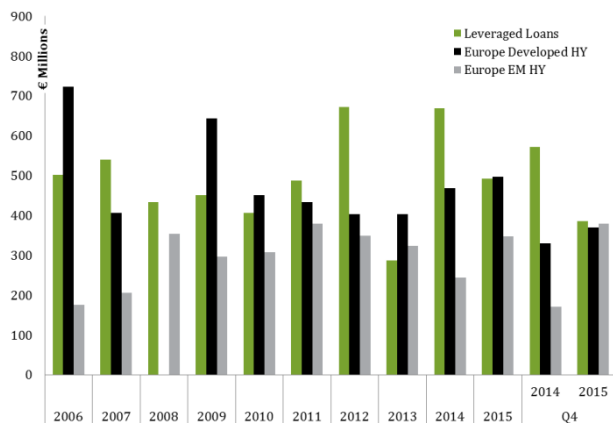
Source: Dealogic, Thomson Reuters LPC

## 1.2 European Leveraged Issuance Percentage



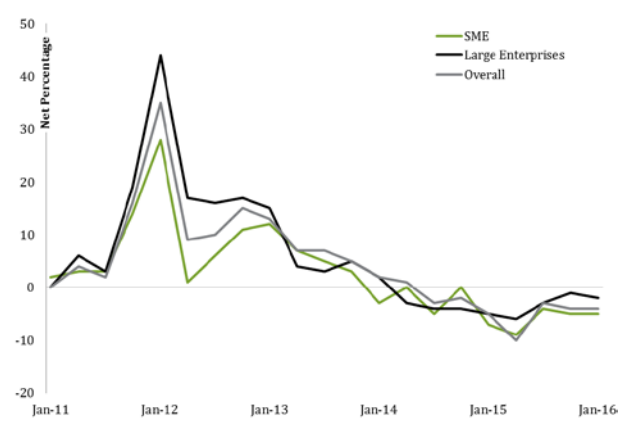
Source: Dealogic, Thomson Reuters LPC

## 1.3 European Leveraged Average Deal Size



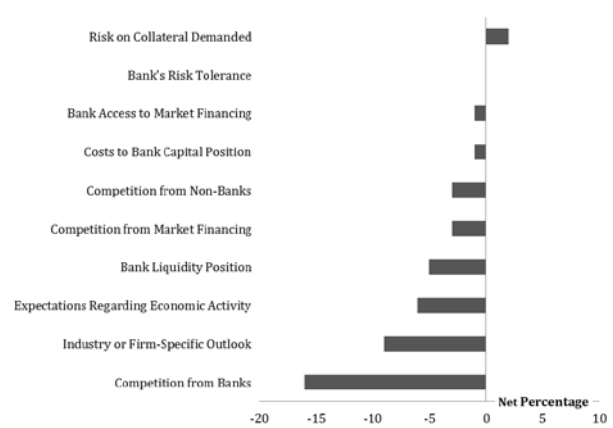
Source: Dealogic, Thomson Reuters LPC

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



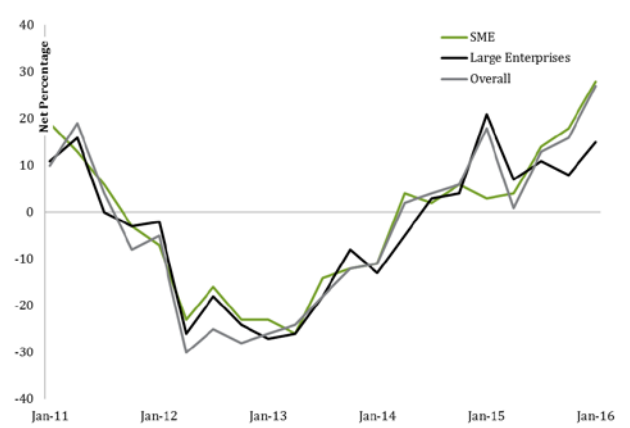
Source: ECB

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



Source: ECB

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

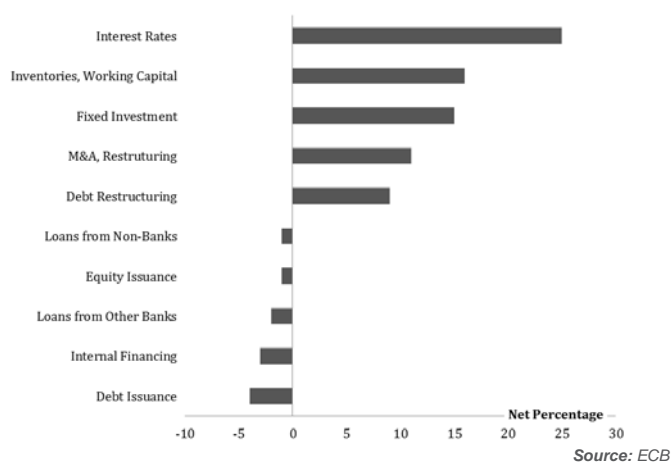


Source: ECB

<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 2015<sup>4</sup>

## 1.8 Global Comparison – High Yield Issuance

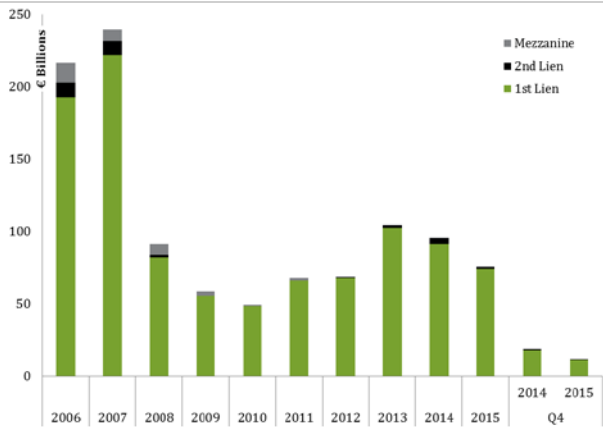
€ Billions	2015					2014					Prior	
	Q1	Q2	Q3	Q4	Full Year	Q1	Q2	Q3	Q4	Full Year	2013	2012
<b>United States</b>	60.99	70.71	29.20	30.24	191.1	43.42	50.96	48.46	42.89	185.7	197.01	213.34
<b>Asia Pacific</b>	9.53	10.63	13.43	6.07	39.7	9.80	8.90	10.13	9.30	38.1	42.00	30.24
<b>Europe</b>	40.17	35.19	16.19	18.63	110.2	28.77	61.79	21.79	10.83	123.2	121.30	82.19

Source: Dealogic

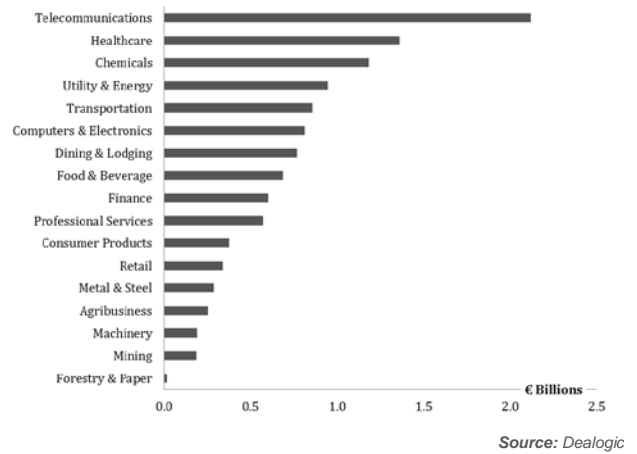
<sup>4</sup> A positive net percentage signifies a factor that contributed to higher demand; a negative net percentage signifies a factor that contributed to lower demand.

## 2 Issuance – Leveraged Loans

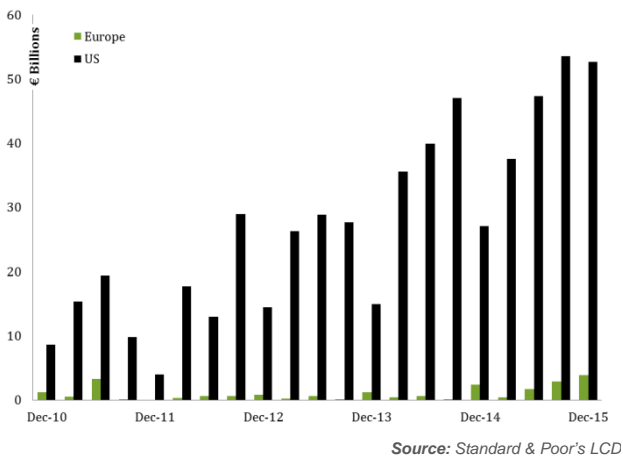
### 2.1 European Leveraged Loan Issuance By Type



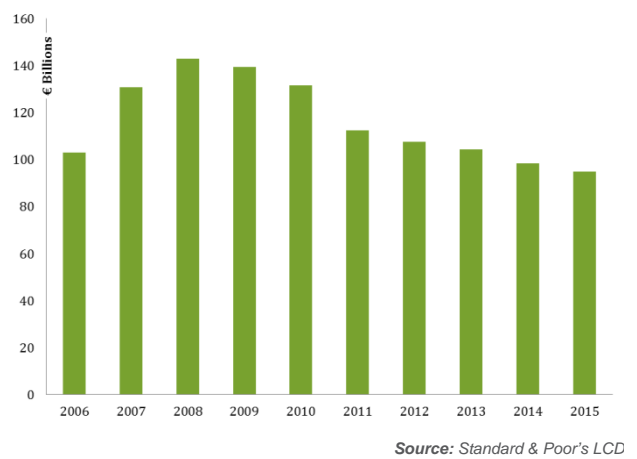
### 2.2 European Leveraged Loan Issuance by Industry



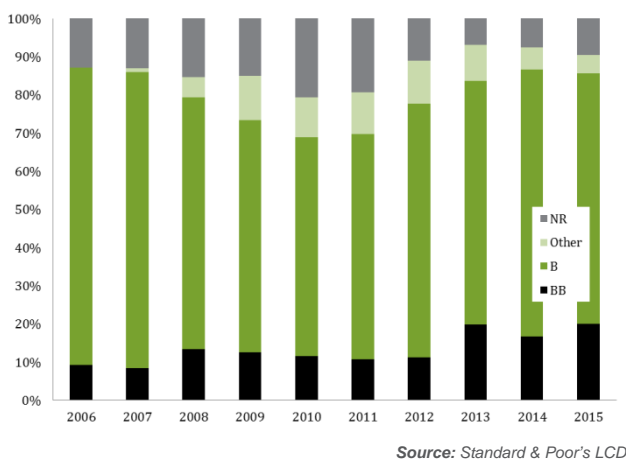
### 2.3 Forward Pipeline of Leveraged Loan Market



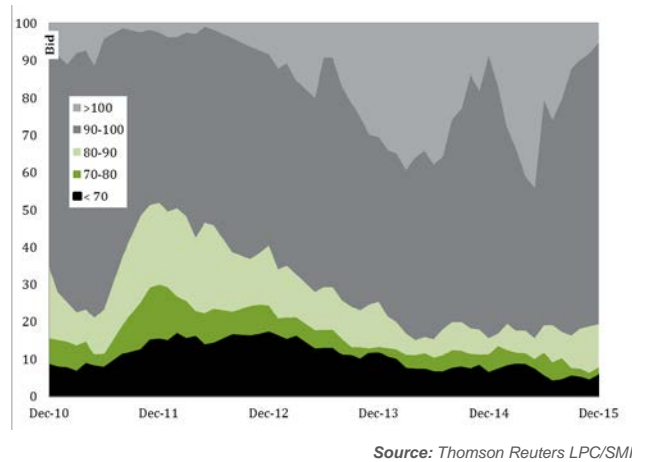
### 2.4 ELLI Total Institutional Loans Outstanding



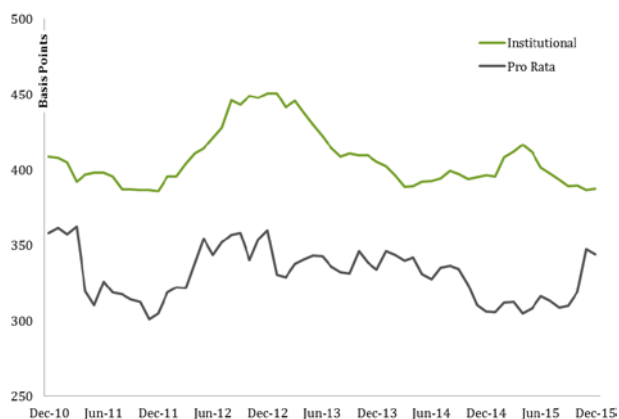
### 2.5 ELLI Ratings Diversification



### 2.6 Leveraged Loan Secondary Market Bids

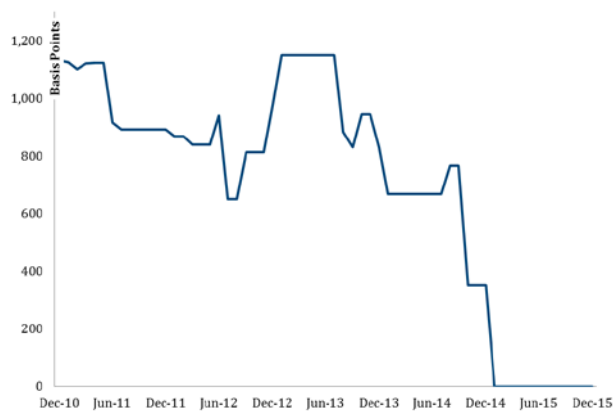


## 2.7 Institutional and Pro Rata Spreads



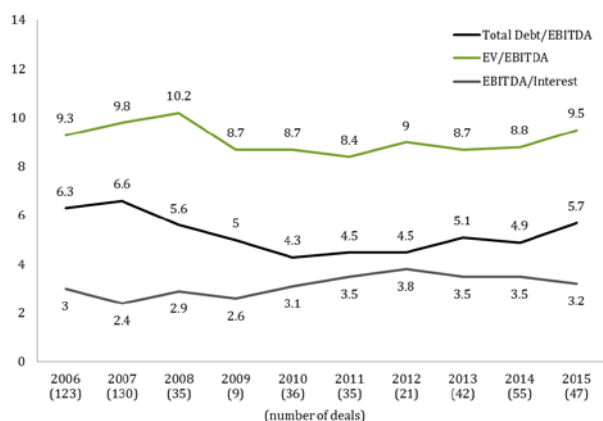
Source: Dealogic, AFME, SIFMA

## 2.8 Mezzanine Spreads



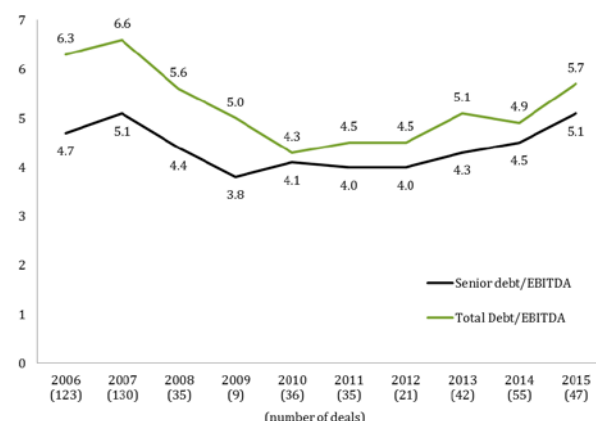
Source: Dealogic, AFME, SIFMA

## 2.9 Evolution of Debt, Enterprise Value (EV) and Interest Cover Multiples at Time of Transaction (Median)<sup>5</sup>



Source: Fitch Credit Opinions Database

## 2.10 Evolution of Senior Debt vs. Total Debt Multiples at Time of Transaction (Median)<sup>6</sup>



Source: Fitch Credit Opinions Database

## 2.11 Actual Senior and Mezzanine Loan Recovery Rates<sup>7</sup>

Senior Loans					Mezzanine Loans					
Default year	Defaulted total deal amount (EURm)	Defaulted Senior loan debt amount (EURm)	No. of defaults	Median recovery rate (%)	Default year	Defaulted amount (EURm)	No. of defaults	Average size (EURm)	Time to default (months)	Average recovery rate (%)
2007	2,161	1,436	6	100	2002	146	4	37	40	
2008	5,431	4,863	6	25	2003	336	5	67	39	45.4
2009	25,593	20,798	38	50	2004	102	4	26	54	6.8
2010	14,022	8,823	16	66	2005	538	5	108	33	40.4
2011	12,259	6,387	11	54	2006	371	5	74	43	1.3
2012	10,850	6,190	10	61	2007	449	5	90	31	33.4
2013	13,973	9,880	15	61	2008	350	4	87	21	0.0
2014	13,250	8,765	11	67	2009	2,958	25	118	32	11.2
2015	1,461	759	3	100	2010	1,886	11	171	37	10.0
					2011	822	5	164	40	14.3
					2012	959	6	160	61	0.0
					2013	650	4	162	58	0.0
					2014	246	3	82	62	33.3
					2015	527	2	263	45	37.0

Source: Fitch Leveraged Credit Database

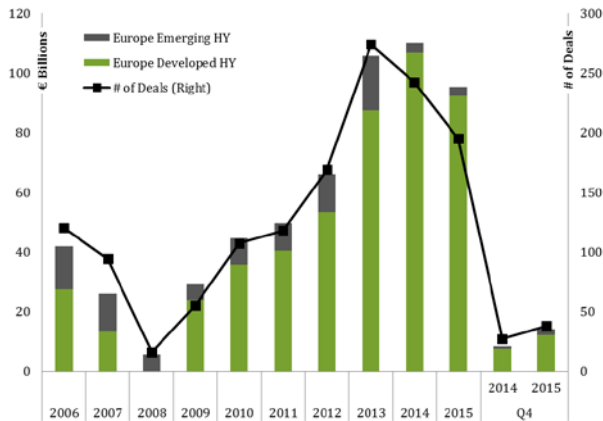
<sup>5</sup> Primary market transactions

<sup>6</sup> Primary market transactions

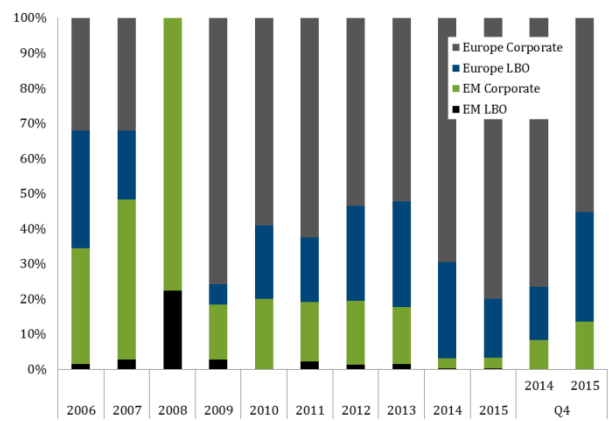
<sup>7</sup> Median recovery rates: median cash realised (cash or cash pay debt received) recoveries.

### 3 Issuance – High Yield Bonds Overview

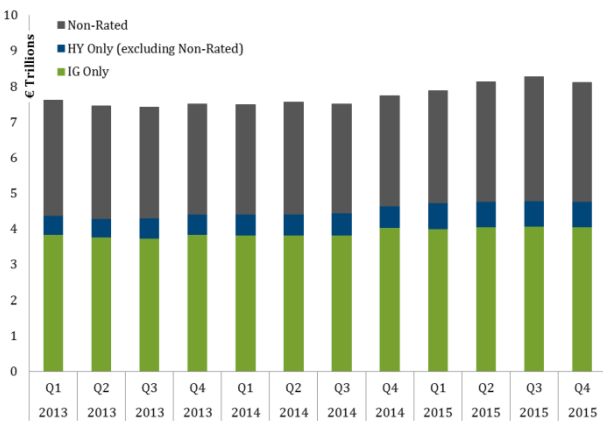
#### 3.1 European High Yield Issuance



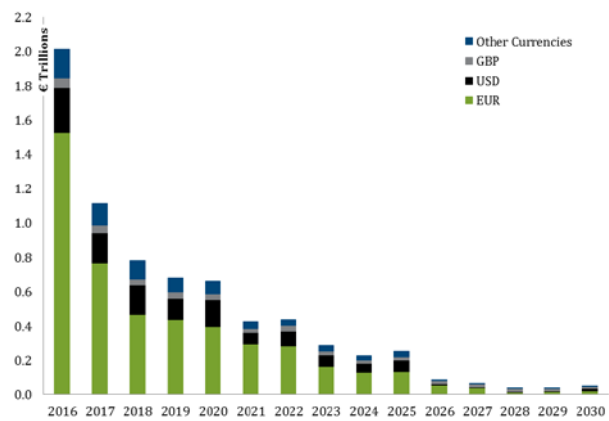
#### 3.2 European High Yield Issuance



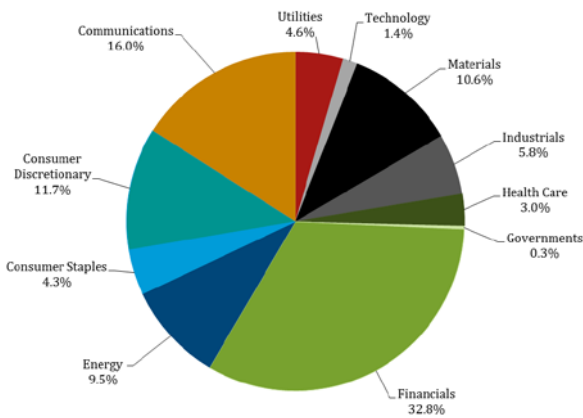
#### 3.3 European Corporate Bonds Outstanding



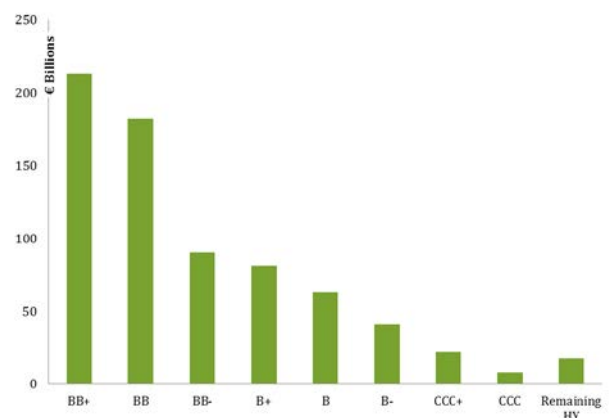
#### 3.4 European Corporate Bonds Maturity Wall



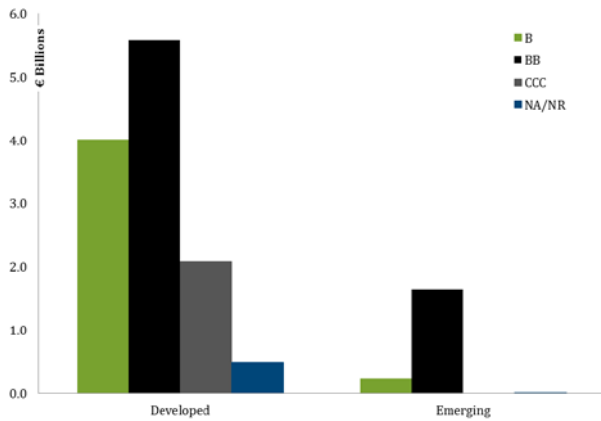
#### 3.5 European Corporate HY Bonds Outstanding By Sector



#### 3.6 European Corporate HY Bonds Outstanding by Current Rating

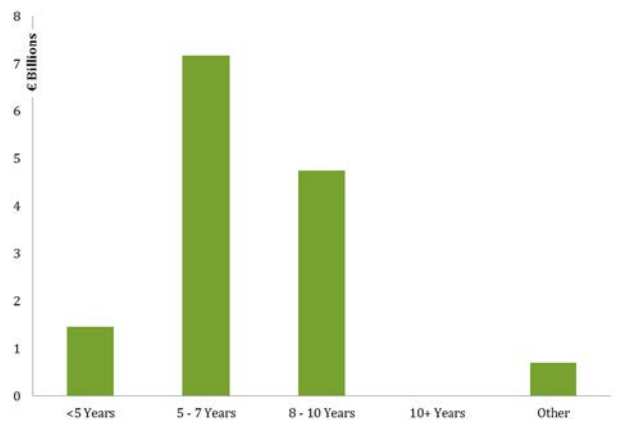


### 3.7 European Corporate Bond Issuance by Rating



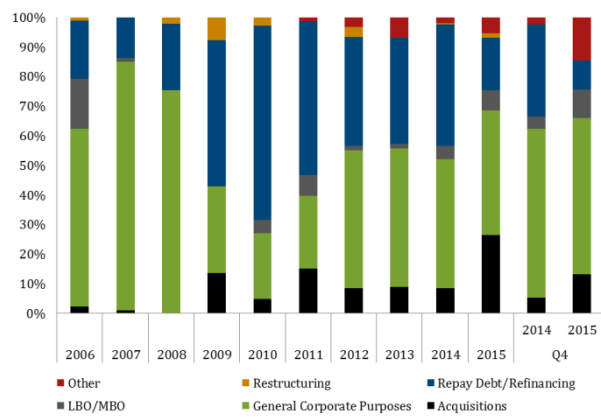
Source: Bloomberg, AFME, SIFMA

### 3.8 European Corporate Bond Issuance by Tenor



Source: Bloomberg, AFME, SIFMA

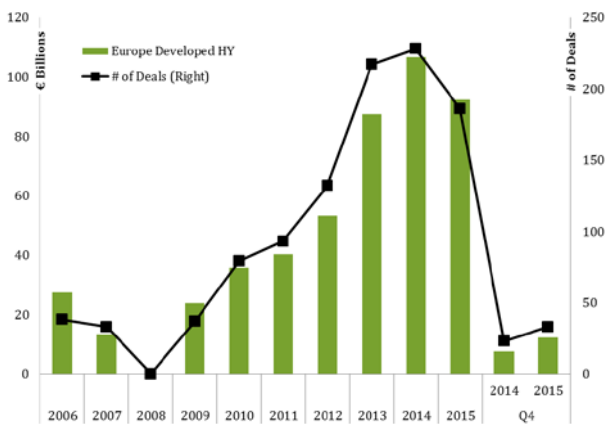
### 3.9 European HY Use of Proceeds



Source: Bloomberg, AFME, SIFMA

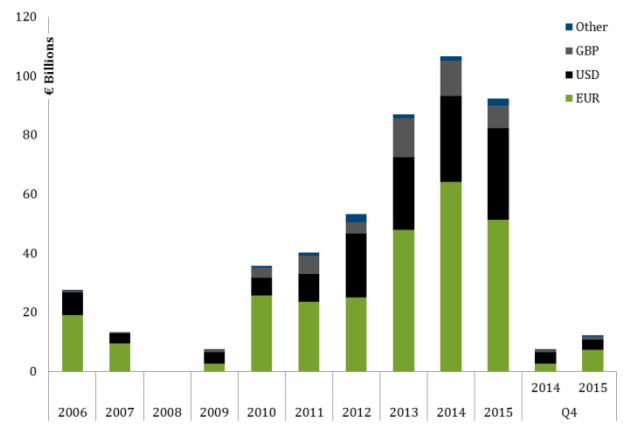
## 4 Issuance – European Developed Market High Yield Bonds

### 4.1 European Developed Market HY Bond Issuance



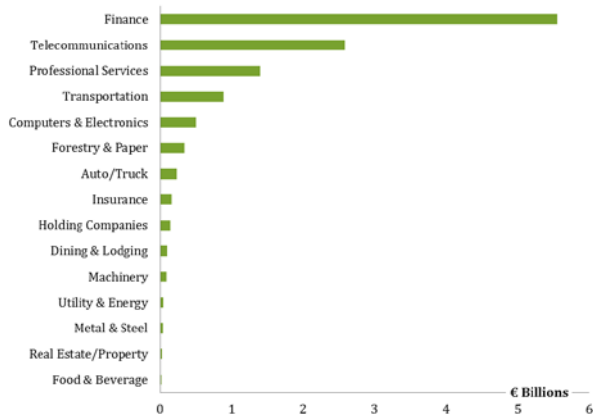
Source: Dealogic

### 4.2 European Developed Market HY Issuance by Currency



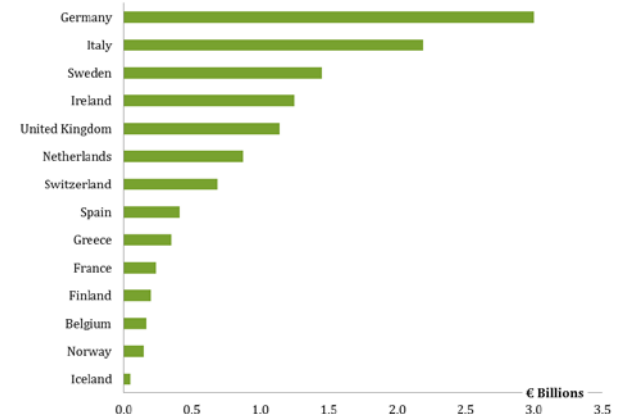
Source: Dealogic

### 4.3 European Developed Market HY Issuance by Industry



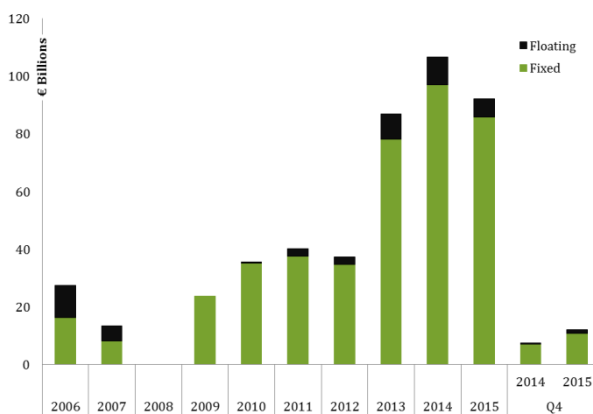
Source: Dealogic

### 4.4 European Developed Market HY Issuance by Country of Risk



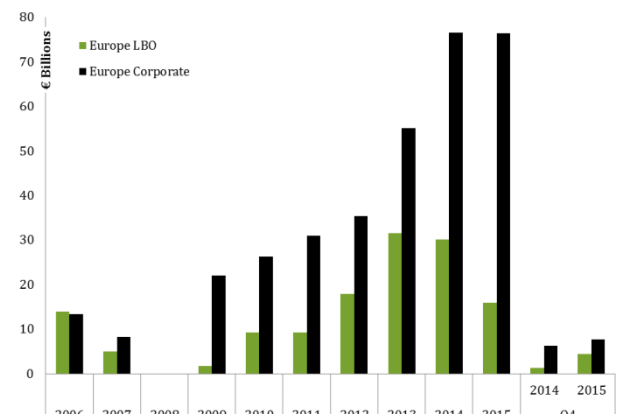
Source: Dealogic

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



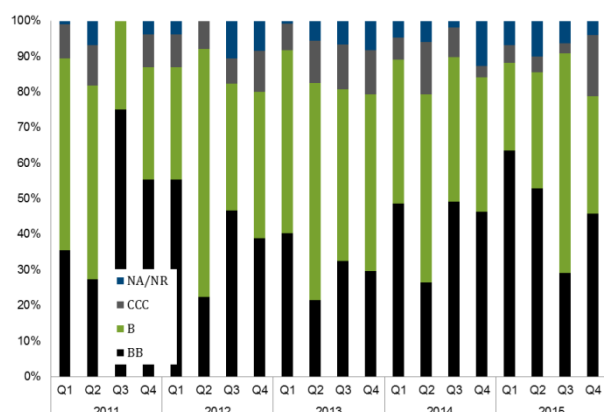
Source: Dealogic

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



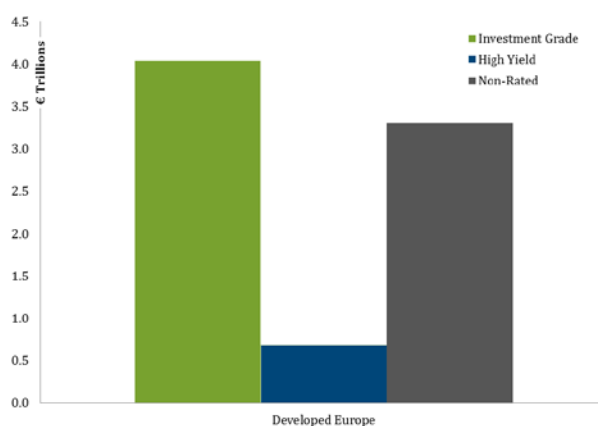
Source: Dealogic

## 4.7 European Developed Market HY Rating Distribution at Issuance



Source: Dealogic, AFME, SIFMA

## 4.8 European Developed Market Corporate Bonds Outstanding



Source: Dealogic, AFME, SIFMA

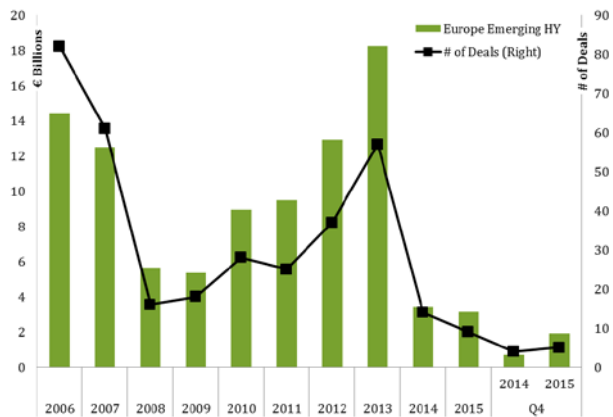
## 4.9 European Developed Market HY Bond Issuance

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moodys	S&P	Fitch
Banca Popolare di Vicenza Scarl	Finance	01/10/2015	EUR	50	9.500			
Stonegate Pub Co Financing plc	Dining & Lodging	02/10/2015	GBP	80	5.750 B2		B	
Finnair Oyj	Transportation	02/10/2015	EUR	200	7.875			
Garfunkelux Holdco 3 SA	Finance	15/10/2015	GBP	565	8.500 B2		B+	
			GBP	230	11.000 Caa1		B-	
AerCap Ireland Capital Ltd	Finance	16/10/2015	USD	1,000	4.625 Ba2		BB+	BB+
Verisure MidHolding AB	Professional Services	21/10/2015	EUR	400	3M EURIBOR + 725		CCC+	
			SEK	2,816	3M STIBOR + 800		CCC+	
Landsvirkjun	Utility & Energy	22/10/2015	USD	50	4.270 Ba1		BBB-	
Verisure Holding AB	Professional Services	23/10/2015	EUR	700	6.000 B1			
Ence Energia y Celulosa SA	Forestry & Paper	23/10/2015	EUR	250	5.375 Ba3			
SSAB AB	Metal & Steel	26/10/2015	SEK	300	3M STIBOR + 250			
Ethias SA	Insurance	28/10/2015	EUR	171	5.000			BB
Dakar Finance SA	Auto/Truck	29/10/2015	EUR	239	9.000 B3		CCC+	
T-Mobile USA Inc	Telecommunications	02/11/2015	USD	2,000	6.500 Ba3		BB	
CNH Industrial Capital LLC	Finance	03/11/2015	USD	600	4.375 Ba1		BB	
Worldpay Finance plc	Computers & Electronics	05/11/2015	EUR	500	3.750 Ba2		BB	
Mercury Bondco plc	Finance	06/11/2015	EUR	200	6M EURIBOR + 800 B3		B	
			EUR	900	8.250 B3		B	
CNH Industrial Finance Europe SA	Machinery	06/11/2015	EUR	100	3.500 Ba2		BB	
BPE Financiaciones SA	Finance	12/11/2015	EUR	150	2.000 Ba2			BB-
Jefast Holding AB	Real Estate/Property	17/11/2015	SEK	200	3M STIBOR + 650			
International Personal Finance plc	Finance	18/11/2015	RON	22	7.000			BB+e
			RON	44	7.000			BB+e
Allied Irish Banks plc	Finance	19/11/2015	EUR	750	4.125 B1		B+	BB
Veneto Banca ScpA	Finance	24/11/2015	EUR	200	9.500		CCC	
OTE plc	Telecommunications	24/11/2015	EUR	350	4.375 Caa2		B+	
B2 Holding AS	Holding Companies	25/11/2015	EUR	150	3M EURIBOR + 750			
Allied Irish Banks plc	Finance	26/11/2015	EUR	500	7.375 B3u			B
Landsvirkjun	Utility & Energy	30/11/2015	USD	7	0.000			
Swissport Investments SA	Transportation	03/12/2015	EUR	290	9.750 (P)Caa1		CCC+	
			EUR	400	6.750 (P)B1		B	
Semper Idem Underberg GmbH	Food & Beverage	07/12/2015	EUR	20	6.750			
Progroup AG	Forestry & Paper	08/12/2015	EUR	95	5.125 B1		B+	
Unitymedia Hessen GmbH & Co KG	Telecommunications	09/12/2015	EUR	420	4.625 (P)Ba3		BB-	
Tubos Reunidos SA	Metal & Steel	14/12/2015	EUR	16	4.950			
Banca Popolare di Vicenza Scarl	Finance	18/12/2015	EUR	300	3M EURIBOR + 400			B+

Source: Bloomberg, Dealogic

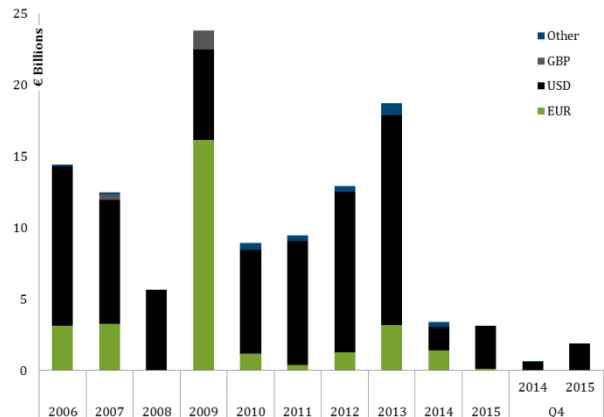
## 5 Issuance – European Emerging Market High Yield Bonds

### 5.1 European Emerging Market HY Bond Issuance



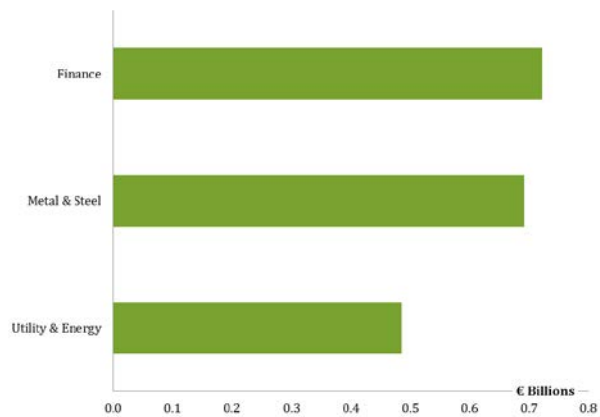
Source: Dealogic

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



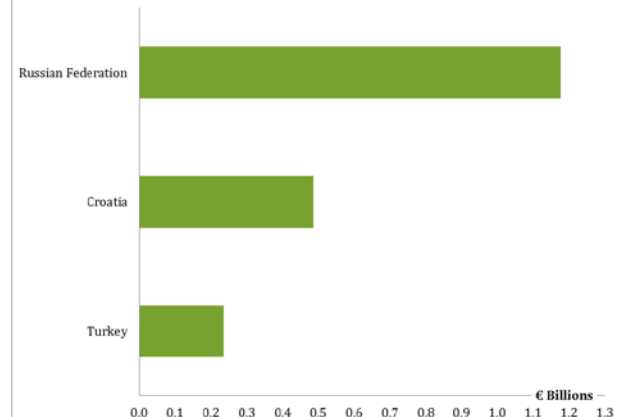
Source: Dealogic

### 5.3 European Emerging Market HY Issuance by Industry



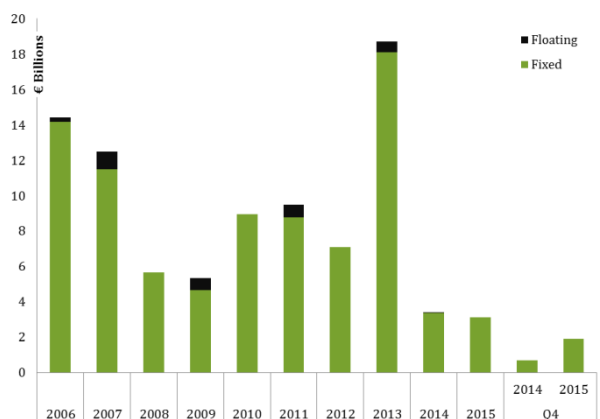
Source: Dealogic

### 5.4 European Emerging Market HY Issuance by Country of Risk



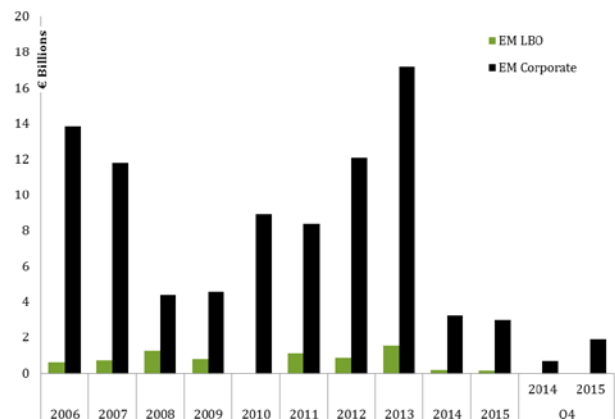
Source: Dealogic

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



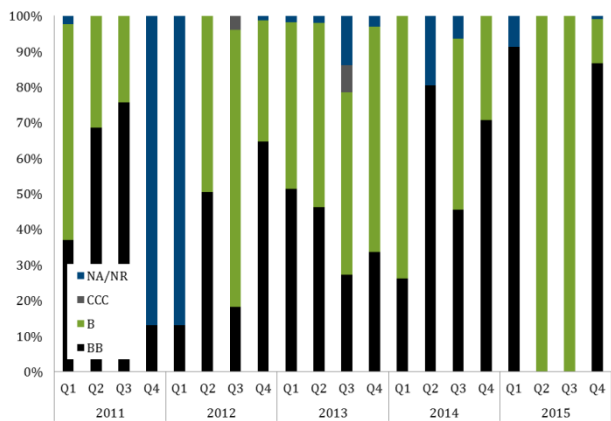
Source: Dealogic

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



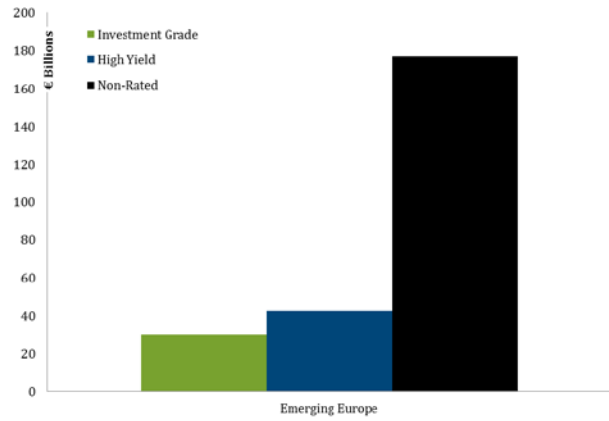
Source: Dealogic

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



Source: Dealogic, AFME, SIFMA

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



Source: Bloomberg, AFME, SIFMA

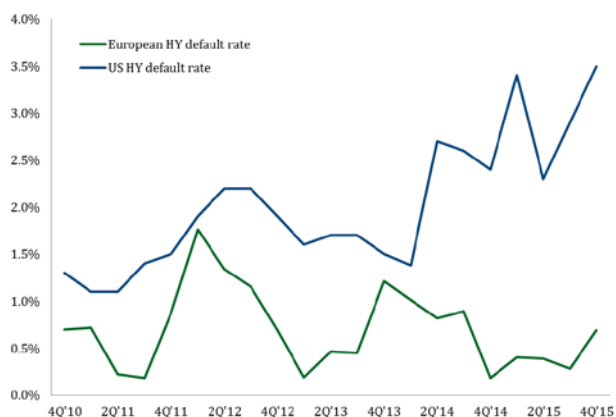
## 5.9 European Issuance by Retention

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moodys	S&P	Fitch
Expobank OOO	Finance	15/10/2015	USD	20	8.000			
Hrvatska Elektroprivreda dd - HEP	Utility & Energy	19/10/2015	USD	550	5.875	Ba2	BB-	
Alfa Bank OAO	Finance	19/11/2015	USD	500	5.000	Ba2		BB+
Albaraka Turk Katilim Bankasi AS	Finance	24/11/2015	USD	250	10.500		B	
Evrast Group SA	Metal & Steel	10/12/2015	USD	750	8.250		BB-	BB-

Source: Bloomberg, Dealogic

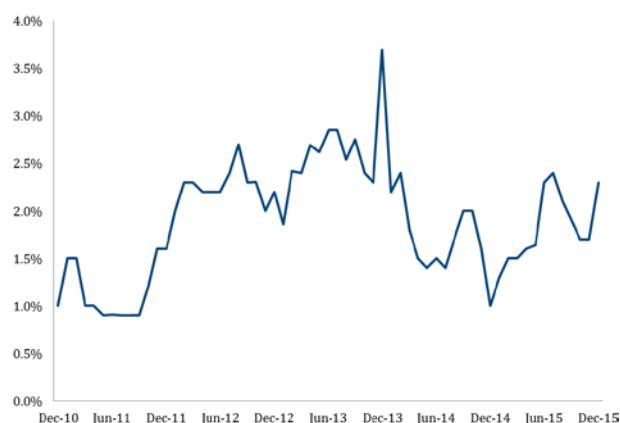
## 6 Credit Quality

### 6.1 European and US HY Default Rate<sup>8</sup>



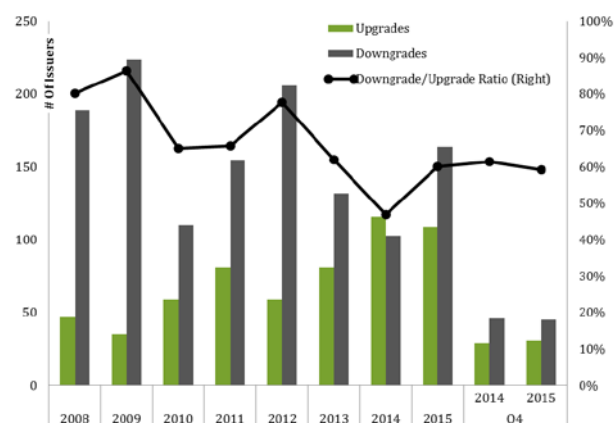
Source: Fitch Leveraged Credit Database

### 6.2 European HY Default Rate



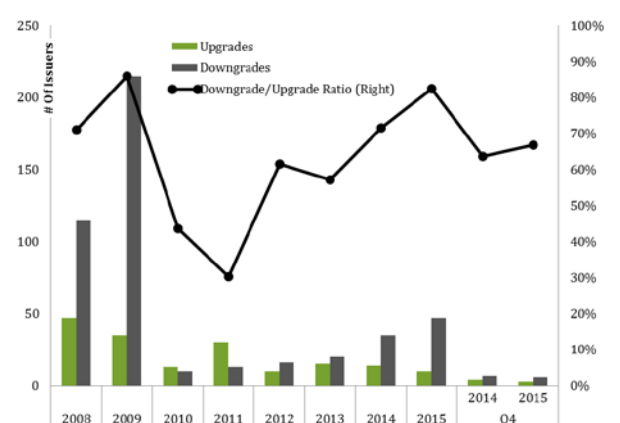
Source: Standard & Poor's

### 6.3 Developed Europe Issuer Rating Actions<sup>9</sup>



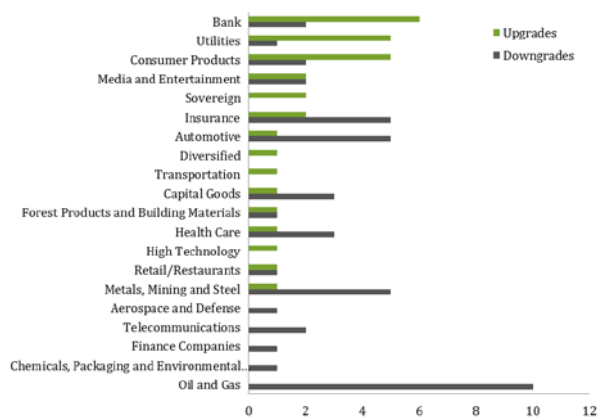
Source: Standard & Poor's

### 6.4 Emerging Europe Issuer Rating Actions<sup>10</sup>



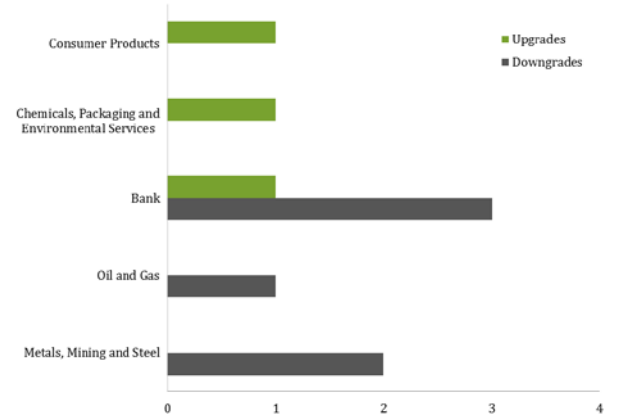
Source: Standard & Poor's

### 6.5 Developed European Industry Rating Actions by Number of Ratings



Source: Standard & Poor's

### 6.6 Emerging European Industry Rating Actions by Number of Ratings



Source: Standard & Poor's

<sup>8</sup> Numbers cover the European and US market (i.e. not only entities rated by Fitch). Rates are calculated by market value.

<sup>9</sup> Numbers include both corporate and sovereigns.

<sup>10</sup> Numbers include both corporate and sovereigns.

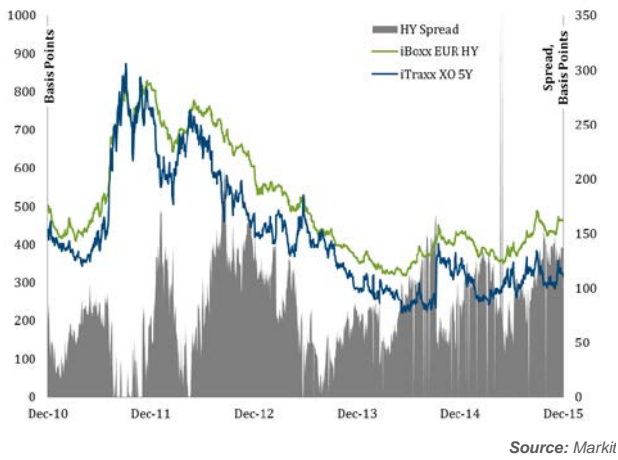
## 6.7 European Defaults

Issuer	Industry Group	Country	Date	Reported By	Reason
Nota Bank	Bank	Russia	October 2015	S&P	Distressed Exchange
Globo PLC	High Technology	U.K.	November 2015	S&P	Administration
Bank URALSIB	Bank	Russia	November 2015	S&P	Regulatory Intervention
PJSC Commercial Bank PrivatBank (B)	Bank	Ukraine	December 2015	S&P	Distressed Exchange
Abengoa S.A.	Oil and Gas Exploration and Production	Spain	December 2015	S&P	Missed Commercial Paper Payments
Foreign Economic Industrial Bank (Vnesheprombank)	Bank	Russia	December 2015	S&P	Regulatory Intervention
Heckler & Koch GmbH	Aerospace and defense	Germany	December 2015	S&P	Distressed Exchange
Cognor S.A.	Metals, Mining and Steel	Poland	December 2015	S&P	Distressed Exchange

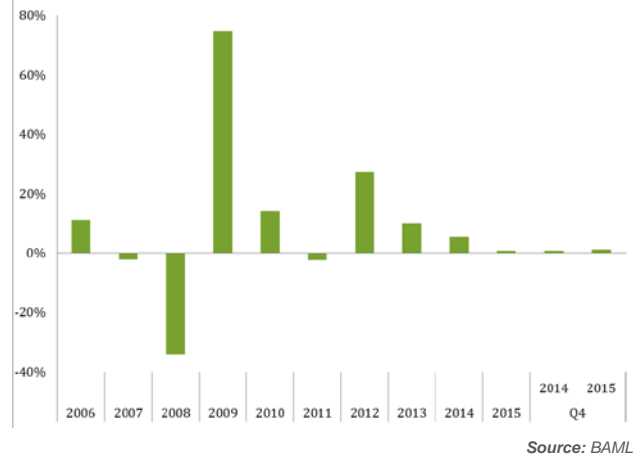
Source: Standard &amp; Poor's

## 7 Relative Value and Total Return

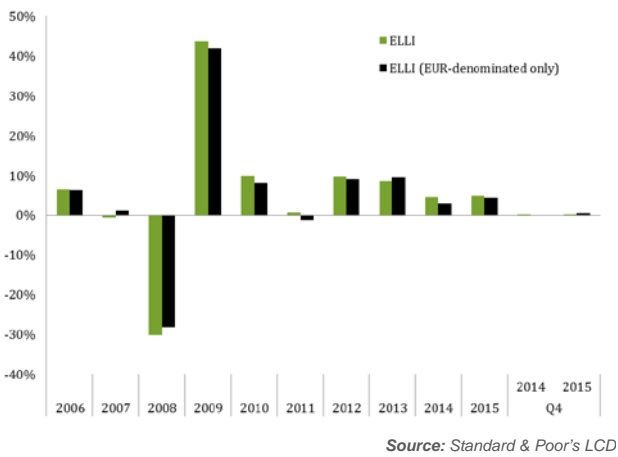
### 7.1 Relative value: European HY Bonds, Cash vs. Synthetic



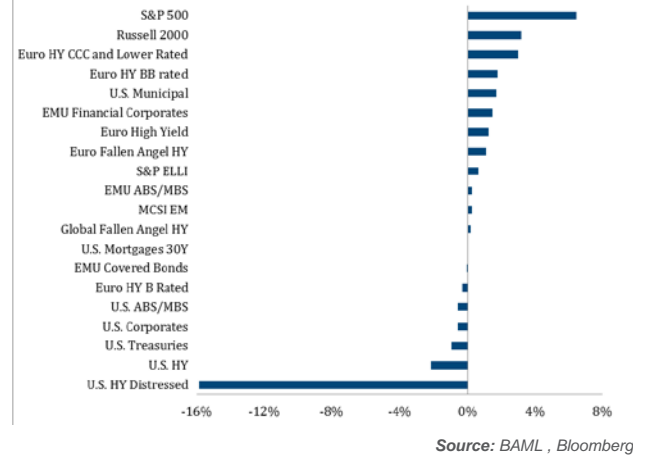
### 7.2 European HY Bond Total Return



### 7.3 European Leveraged Loan Total Return



### 7.4 Asset Class Total Return, Quarter



## Summary of the Methodologies Adopted for this Report

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### 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 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. Leveraged Loan Secondary Market Bids

European leveraged trading volumes are sourced from Thomson Reuters LPC and are percentage of volume by bid price.

#### 2.7. – 2.8. 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 (Tla).

### 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. 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 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.

### 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.

### 3.10. European HY Issuance, Senior Secured Share

Data for HY issuance by seniority are sourced from Dealogic and Bloomberg. "Senior Unsecured" totals include all bonds that are senior but not senior secured.

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

### 4.1. – 4.7., 4.9

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.

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 and US HY Default Rate

European HY bond default rates are sourced from Fitch and are on a trailing 12 month basis (TTM).

The default rates cover the wider European market (i.e. not only entities rated by Fitch). Rates are calculated by market value.

### 6.2. European HY Default Rate

European HY bond default rates are sourced from S&P and are 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.

### 6.3. – 6.4. 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.

### 6.5. – 6.6. European Issuer Rating Actions by # of Rating Actions

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.

### 6.7. 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. – 7.2. 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.

## 8. Total Return

### 8.1. 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.

### 8.2. 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.

### 8.3. 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

**Brussels Office**

Rue de la Loi, 82  
1040 Brussels  
Belgium

**AFME**

**Gary Simmons** - Managing  
Director  
**Julio Suarez** - Manager

**SIFMA**

**Kyle Brandon** - Managing  
Director, Director of  
Research  
**Justyna Podziemska** –  
Senior Associate, Research

Switchboard:  
+44 (0)20 3828  
2700

Switchboard:  
+32 (0) 2 788 3971

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

[www.sifma.org](http://www.sifma.org)

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