

# European High Yield & Leveraged Loan Report

European Leveraged Finance

Q2: 2016



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## Highlights and Market Environment

### Highlights

#### Issuance Highlights

European leveraged finance issuance (leveraged loans and high yield bonds) increased in 2Q'16 to €52.1 billion, a 22.0% increase from €42.6 billion in 1Q'16 and a 6.5% decrease from €55.7 billion in 2Q'15. The quarterly surge stems from the large increase in high yield bonds issuance, which increased by 195.6% in the second quarter of 2016 while leveraged loan issuance decreased by 36.3%; the high yield bond share of the leveraged finance market increased to 61%, up from 25.2% in 1Q'16 and up from 54.8% in 2Q'15.

#### Market and Economic Environment

According to the July 2016 European Central Bank lending survey, in the second quarter of 2016, improving loan supply conditions for enterprises and the continued increase in loan demand across all loan categories suggested an ongoing recovery in loan growth. The net easing on credit standards for loans to enterprises in 2Q'16 was stronger than the historical average calculated over the period since the start of the survey in 2003. Competition remained the main factor behind the net easing of credit standards on loans to enterprises while risk perceptions and banks' reduced cost of funds contributed only marginally to such easing.

Across firm size, credit standards were eased more strongly for loans to large firms than for loans to small and medium-sized enterprises. For the large euro area countries, credit standards on loans to enterprises eased in France, Italy, and Germany, while remaining unchanged in Spain and the Netherlands.

Credit standards on housing loans eased and were stronger than the historical average since 2003. While the scope of the survey included the time period directly after the UK referendum on EU membership, no clear picture has emerged on how banks assess the impact of the referendum outcome on business.

Looking ahead to the third quarter of 2016, euro banks expect a further net easing in standards on loans to enterprises, as well as easing for consumer credit and housing loans.

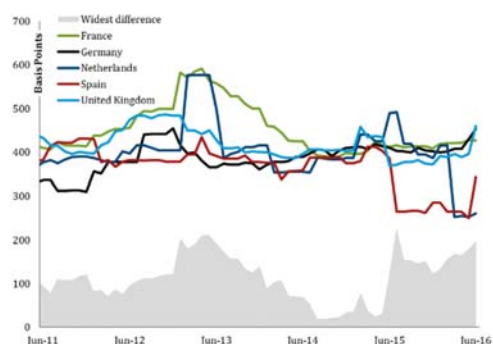
Net demand increased for all types of loans in 2Q'16 and banks forecast a further net increase in the demand for loans in the third quarter.

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*“European leveraged finance issuance (leveraged loans and high yield bonds) increased in 2Q'16 to €52.1 billion”*

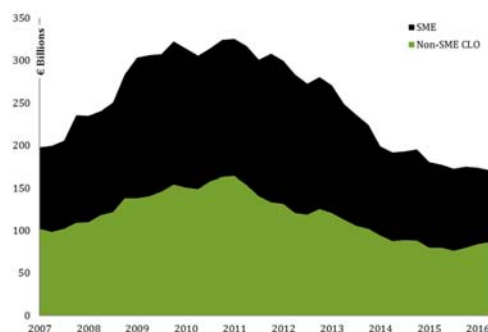
*“Leveraged loan issuance in 2Q’16 totalled €20.3 billion on 33 deals”*

### Institutional Spreads



Source: Dealogic, AFME, SIFMA

### European CLO Outstanding



Source: AFME, SIFMA

## Issuance

### Issuance: Leveraged Loans

Leveraged loan issuance, including first lien, second lien, and mezzanine financing, decreased in the second quarter of 2016 to €20.3 billion, down 36.3% q-o-q (€31.9 billion in 1Q’16) and 19.2% down y-o-y (€25.2 billion in 2Q’15).

Amend-and-extend (“A&E”) transactions continue to take place and the issuance volume increased to €2.1 billion in the second quarter of 2016, a 205.8% increase from the 1Q’16 (€0.7 billion) and an 85.8% decrease from 2Q’15.

In 2Q’16, no mezzanine loans and one second lien loan (€125 million) were financed. Pricing spreads for institutional loans widened by 20 basis points (bps) while spreads for pro rata loans tightened by 26 bps. Mezzanine loan spreads remained at 258 bps in the second quarter of 2016.

According to Dealogic, the top five sectors in leveraged loan issuance for the second quarter of 2016 accounted for over three quarters of the issuance volume; the leading sector was telecommunications (€5.0 billion), followed by chemicals (€3.6 billion), computers & electronics (€3.0 billion), consumer products (€2.0 billion) and professional services (€1.9 billion).

The share of deals aimed to refinance and/or repay debt increased to 56.7% of all deals by euro amount in the second quarter of 2016, compared to 12.8% in 1Q’16 and 64.7% in 2Q’15. Refinancing and/or repaying of debt was the largest use of proceeds in 2Q’16 with €11.5 billion, an increase of 182.1% q-o-q (€4.1 billion in 1Q’16) and 29.4% down y-o-y (€16.3 billion in 2Q’15). The second largest use of proceeds in the second quarter of 2016 was leveraged buyouts totalling €7.2 billion or 35.7% of total issuance, up from €6.6 billion in 1Q’16 (20.6% of total) and up from €5.5 billion in 2Q’15 (21.9% of total).

European CLO outstandings, including SME deals, decreased by an annualized rate of 7.2% to €170.4 billion in 2Q’16. Non-SME CLOs increased at an annualized rate of 10.1% to €86.3 billion in 2Q’16 while SME CLOs decreased by an annualized rate of 21.5% to €84.1 billion.

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*“Primary high yield issuance in 2Q’16 totalled €31.8 billion on 55 deals”*

### Issuance: High Yield Bonds

Primary high yield issuance in 2Q’16 totalled €31.8 billion on 55 deals, a 195.6% and 4% increase by euro amount, respectively, from 1Q’16 (€10.8 billion on 22 deals) and 2Q’15 (€30.5 billion on 58 deals). High yield bond issuance increased in both developed and emerging market Europe in the second quarter of 2016.

Primary high yield issuance in developed market Europe in the second quarter of 2016 was €28.2 billion on 46 deals, a 200.6% increase by euro amount from 1Q’16 (€9.4 billion on 20 deals) and a 7.1% decrease from 2Q’15 (€30.4 billion on 57 deals).

In emerging market Europe primary issuance in 2Q’16 was €3.5 billion on 9 deals, an increase of 160.8% by euro amount from 1Q’16 (€1.4 billion on 2 deals) and an increase of 2258.5% from 2Q’15 (€0.2 billion on 1 deal).

In the second quarter of 2016, average deal size from developed market Europe increased by 30.7% to €613.9 million from €469.7 million in 1Q’16, and increased by 15.1% from €533.2 million in 2Q’15. Average deal size for emerging market Europe decreased by 42% to €393.1 million in 2Q’16 from €678.2 million in 1Q’16, and increased by 162.1% y-o-y (€150 million in 2Q’15).

High yield issuance for refinancing and/or repayment of debt in developed market Europe increased to €13.2 billion, representing 46.9% of all issuance by euro amount in 2Q’16, compared to €2.4 billion (25.6% of total) in 1Q’16 and €8.5 billion (28% of total) in 2Q’15. No deals in emerging market Europe in the second quarter of 2016 were issued for refinancing and/or repayment of debt.

Three sectors accounted for over half of the total high yield issuance in 2Q’16: the telecommunications industry led issuance with €10.5 billion (33% of total), followed by consumer products with €4.8 billion (13.1% of total), and computers & electronics with €2.8 billion (8.8% of total), with the remainder of the issuance in second quarter split among many industries.

The proportion of USD-denominated issuance increased to 52.6% of all issuance by euro amount in 2Q’16 compared to 29.8% in 1Q’16 and 42.6% in 2Q’15. USD-denominated issuance in developed market Europe increased to €13.2 billion or 46.9% of issuance by euro amount from €2.3 billion or 24.5% in 1Q’16 and up from €13 billion (42.8%) in 2Q’15. Of the issues priced in emerging market Europe (€3.5 billion or 98.6%) was denominated in USD, compared to €0.9 billion (66.4% of total) in 1Q’16 and €0 billion (0% in 2Q’15).

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*“US high yield distressed bonds led returns in the second quarter of 2016 with 21.6% followed by Global fallen angel high yield bonds (6.5%) and US high yield bonds (5.9%)”*

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*“7 European high yield bond issuers defaulted in 2Q’16”*

### Returns & Credit Quality

The U.S. HY Distressed Index led returns in the second quarter of 2016 with 21.6% followed by Global Fallen Angel HY Index (6.5%) and U.S. HY (5.9%). Nineteen out of 20 asset classes examined recorded positive returns while Euro HY CCC and lower rated bonds (-0.8%) recorded losses in 2Q’16.

With respect to high-yield bond default, S&P reported the trailing 12-month speculative-grade default rate at 1.8% (up from 1.4% end-March 2016), with Moody’s reporting 2.2% (down from 2.7% end-March 2016).

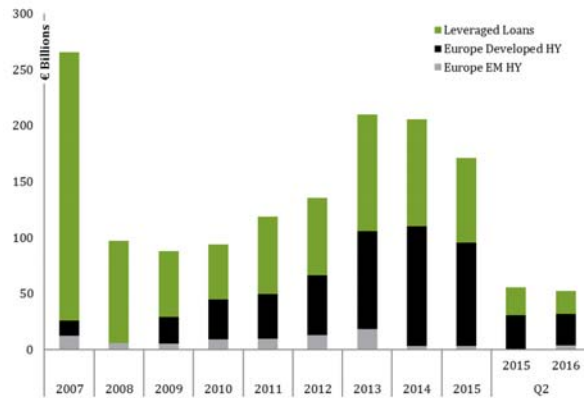
Seven different bond related defaults were reported in the second-quarter 2016 for reasons ranging from missing principal payments, to debt exchanges, distressed exchanges, debt acceleration, distressed restructuring, and missing interest payments.

According to S&P, in 2Q’16 downgrades exceeded upgrades in developed market Europe with 46 downgrades to 33 upgrades, but upgrades exceeded downgrades in emerging market Europe with 2 upgrades to no downgrades. Both upgrades and downgrades were distributed across the sector spectrum in developed market Europe. The sector with the most rating actions in second quarter 2016 was oil and gas exploration and production, with 8 downgrades in developed market Europe.



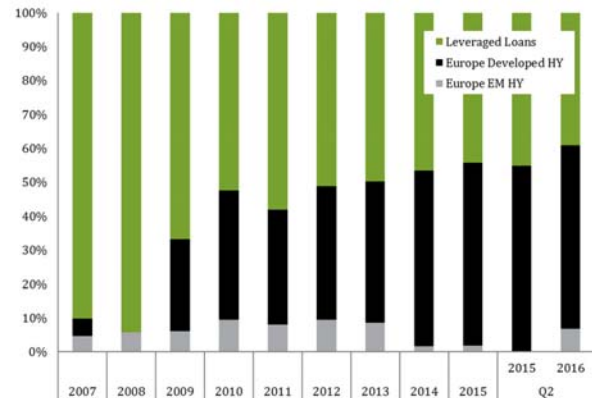
# 1 Leveraged Finance Overview

## 1.1 European Leveraged Issuance by Type



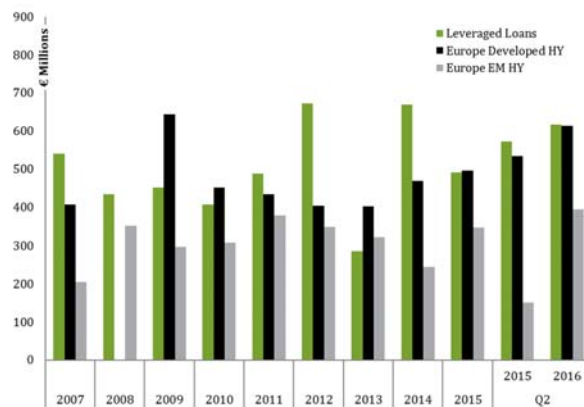
Source: Dealogic, Thomson Reuters LPC

## 1.2 European Leveraged Issuance Percentage



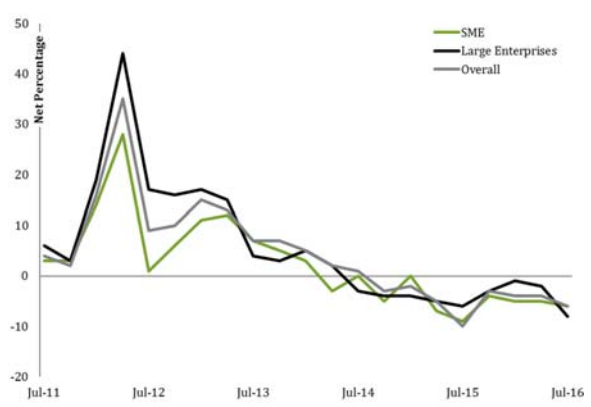
Source: Dealogic, Thomson Reuters LPC

## 1.3 European Leveraged Average Deal Size



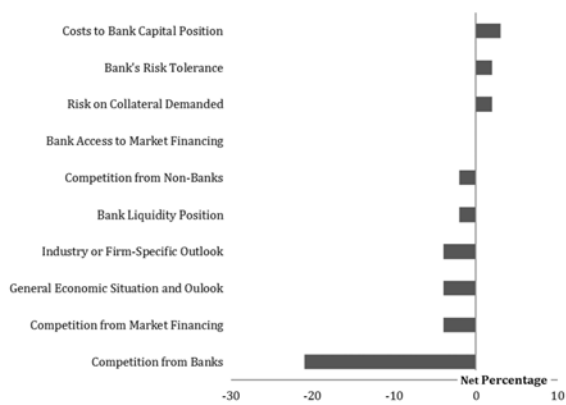
Source: Dealogic, Thomson Reuters LPC

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



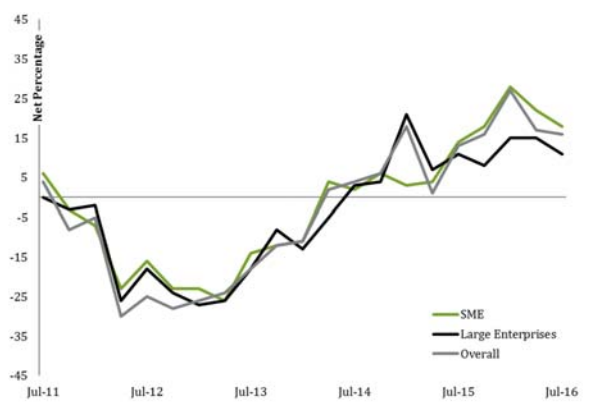
Source: ECB

## 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: July 2016<sup>4</sup>

## 1.8 Global Comparison – High Yield Issuance

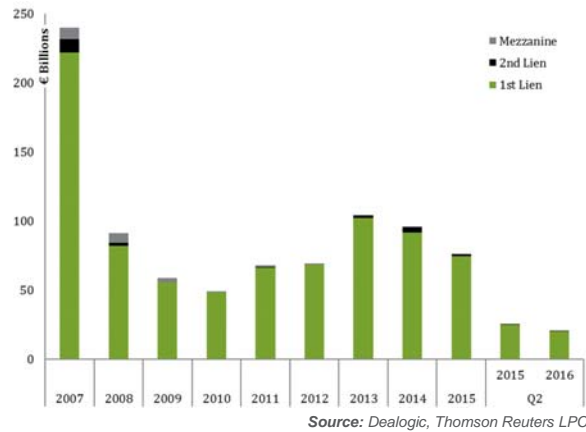
€ Billions	2016		2015					Prior Years		
	Q1	Q2	Q1	Q2	Q3	Q4	Full Year	2014	2013	2012
<b>United States</b>	32.44	54.79	61.21	70.71	29.70	30.26	191.9	185.7	197.0	213.3
<b>Asia Pacific</b>	26.45	20.84	9.60	10.83	13.56	6.82	40.8	38.0	42.0	30.2
<b>Europe</b>	14.06	37.11	41.72	35.11	18.39	20.03	115.3	124.7	121.3	81.9

Source: Dealogic

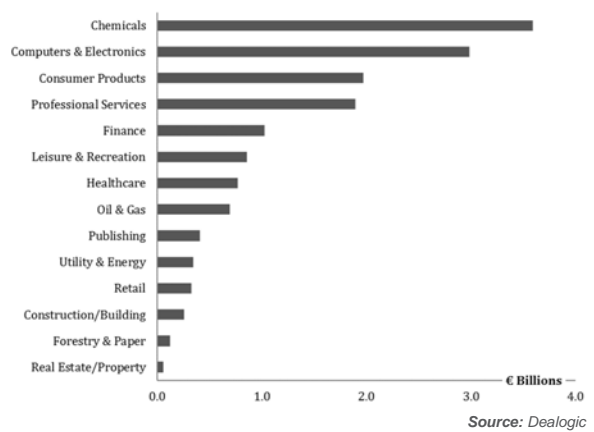
<sup>4</sup> A positive net percentage signifies a factor that contributed to higher demand; a negative net percentage signifies a factor that contributed to lower demand.

## 2 Issuance – Leveraged Loans

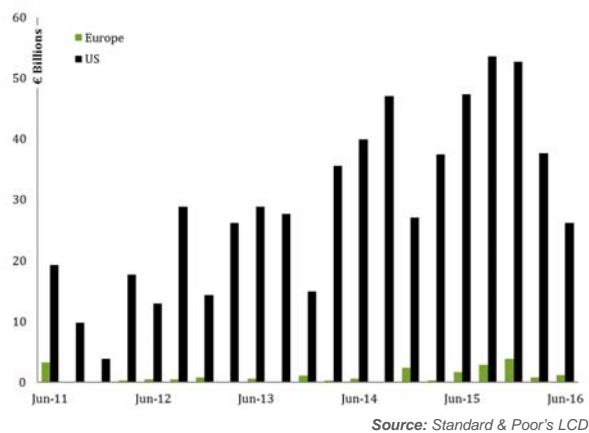
### 2.1 European Leveraged Loan Issuance By Type



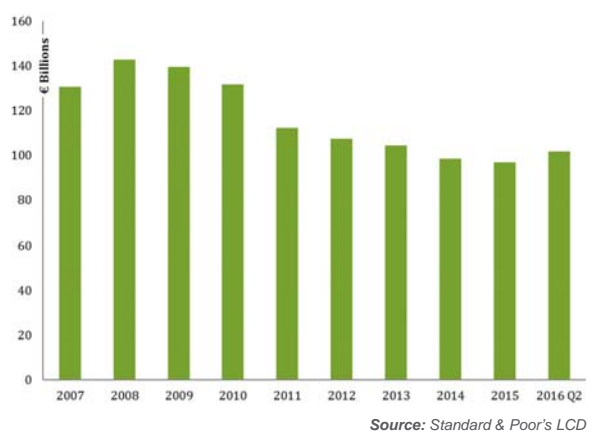
### 2.2 European Leveraged Loan Issuance by Industry



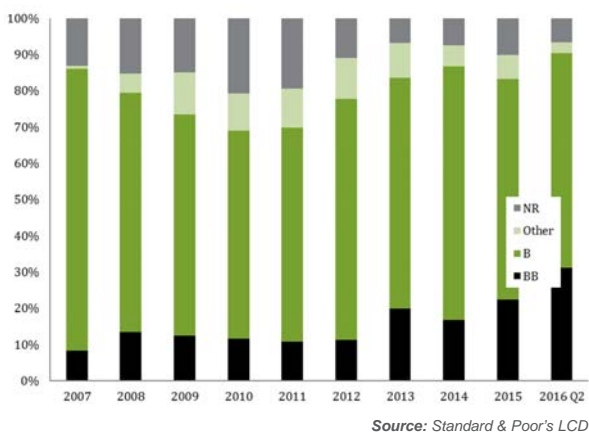
### 2.3 Forward Pipeline of Leveraged Loan Market



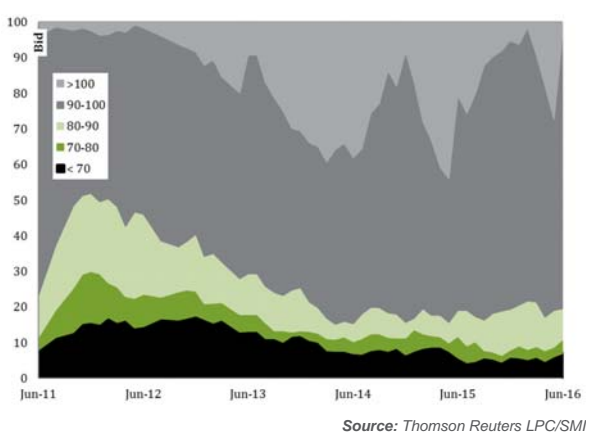
### 2.4 ELLI Total Institutional Loans Outstanding



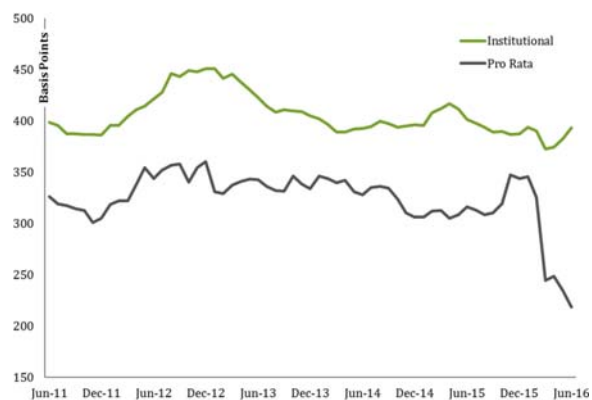
### 2.5 ELLI Ratings Diversification



### 2.6 Leveraged Loan Secondary Market Bids



## 2.7 Institutional and Pro Rata Spreads



Source: Dealogic, AFME, SIFMA

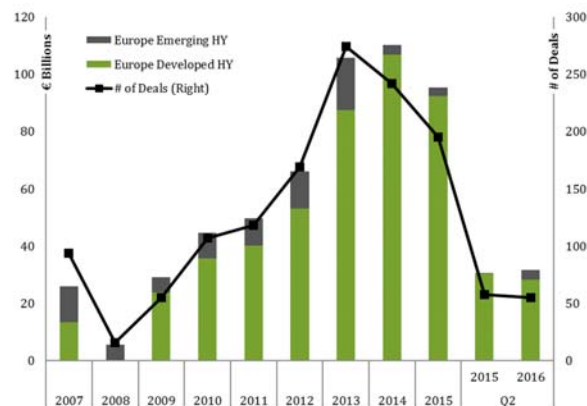
## 2.8 Mezzanine Spreads



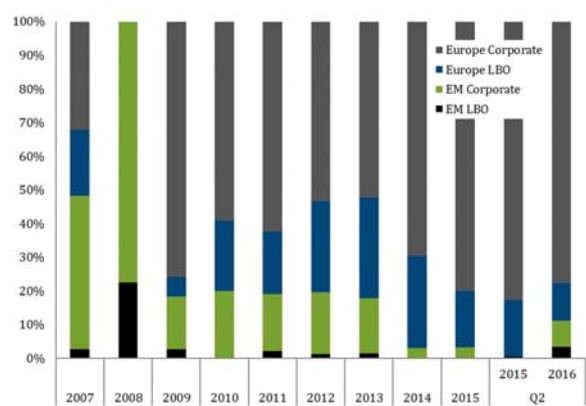
Source: Dealogic, AFME, SIFMA

## 3 Issuance – High Yield Bonds Overview

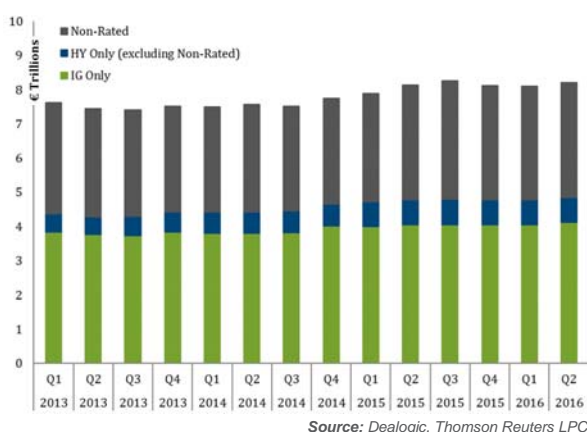
### 3.1 European High Yield Issuance



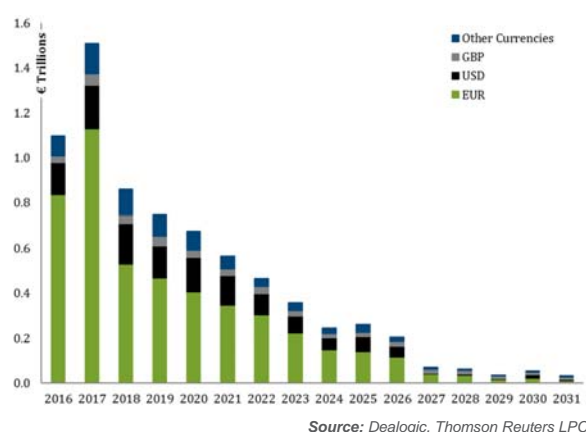
### 3.2 European High Yield Issuance by Sponsor



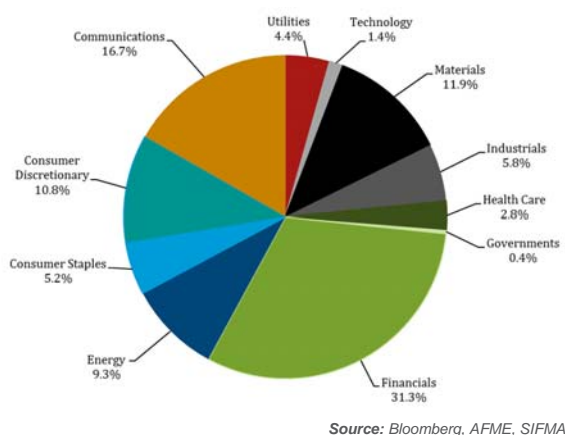
### 3.3 European Corporate Bonds Outstanding



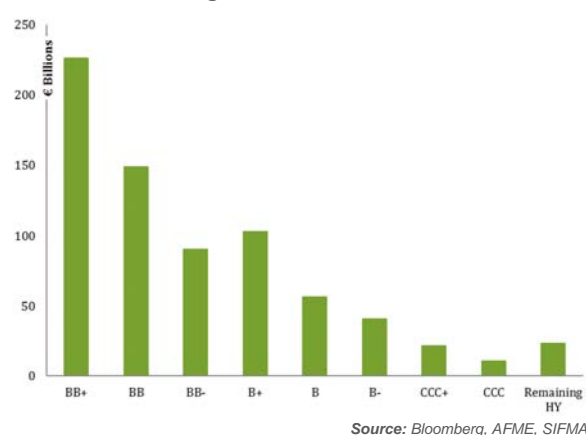
### 3.4 European Corporate Bonds Maturity Wall



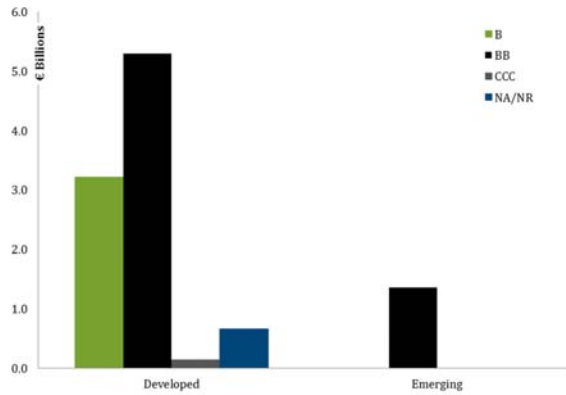
### 3.5 European Corporate HY Bonds Outstanding By Sector



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

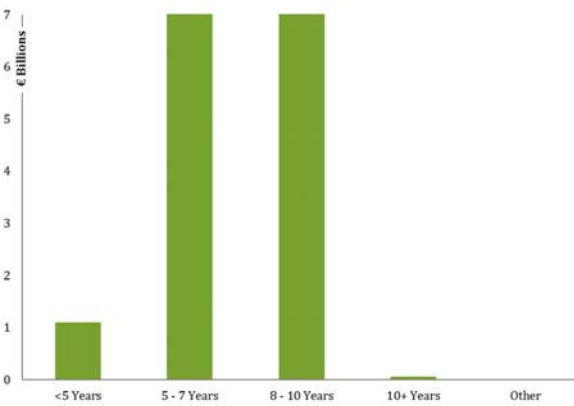


### 3.7 European Corporate Bond Issuance by Rating



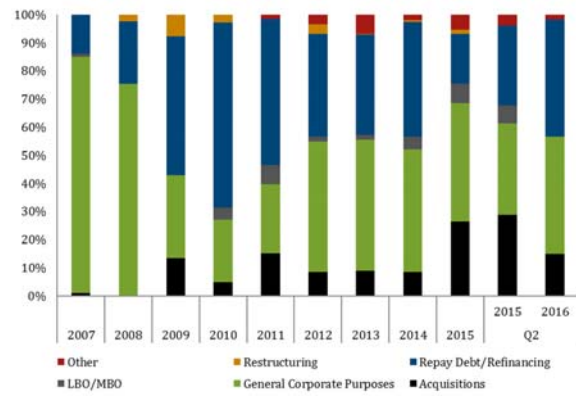
Source: Bloomberg, AFME, SIFMA

### 3.8 European Corporate Bond Issuance by Tenor



Source: Bloomberg, AFME, SIFMA

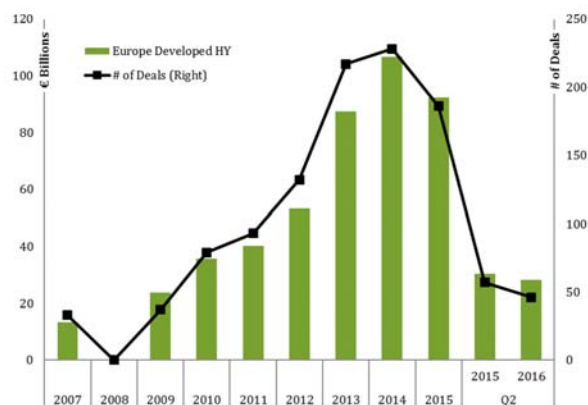
### 3.9 European HY Use of Proceeds



Source: Bloomberg, AFME, SIFMA

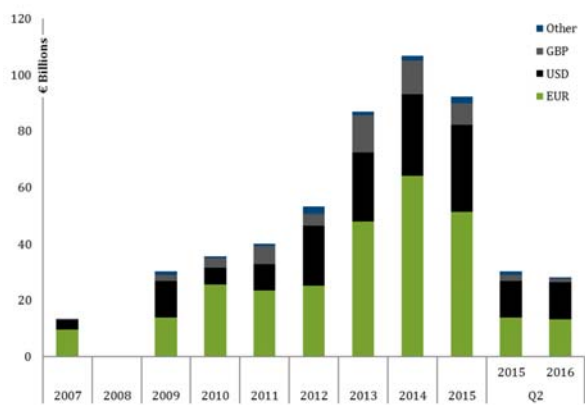
## 4 Issuance – European Developed Market High Yield Bonds

4.1 European Developed Market HY Bond Issuance



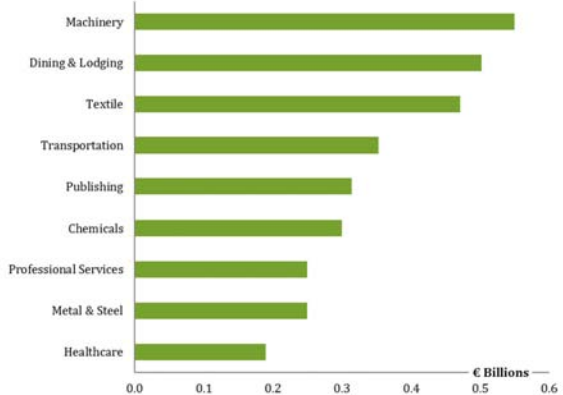
Source: Dealogic

4.2 European Developed Market HY Issuance by Currency



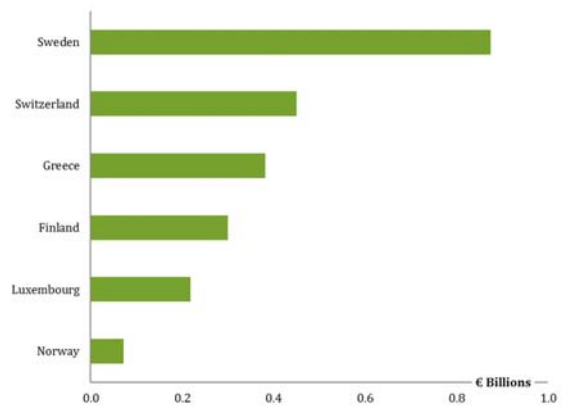
Source: Dealogic

4.3 European Developed Market HY Issuance by Industry



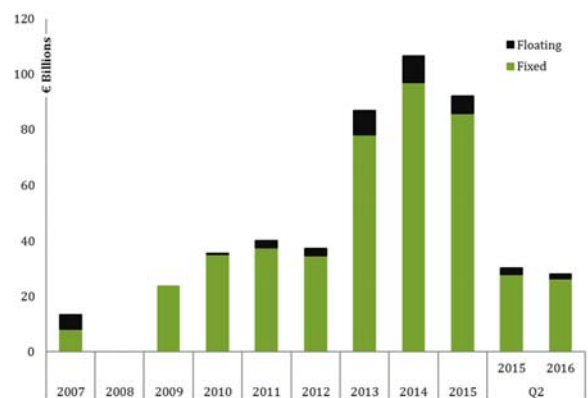
Source: Dealogic

4.4 European Developed Market HY Issuance by Country of Risk



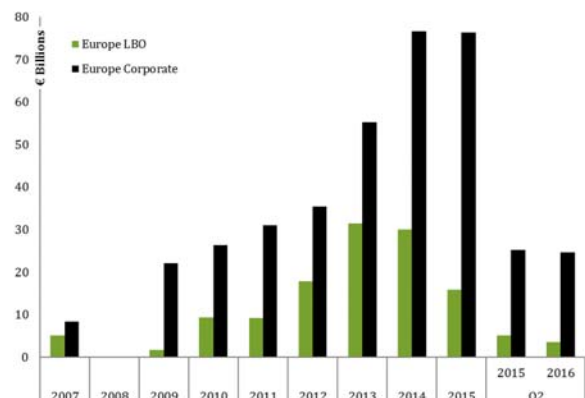
Source: Dealogic

4.5 European Developed Market HY Issuance, Fixed vs. Floating



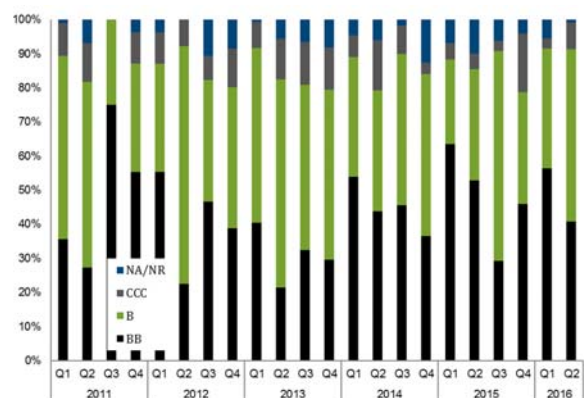
Source: Dealogic

4.6 European Developed Market HY Issuance, Sponsored vs. Corporate



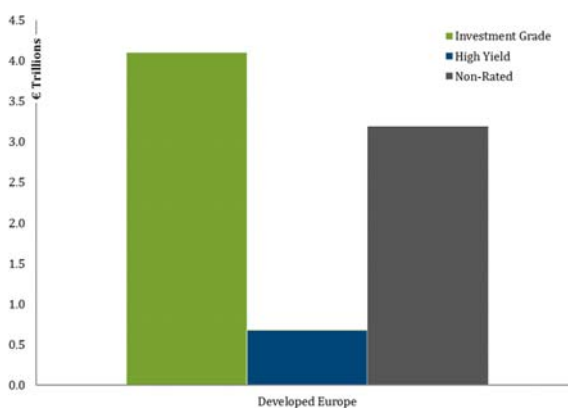
Source: Dealogic

## 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

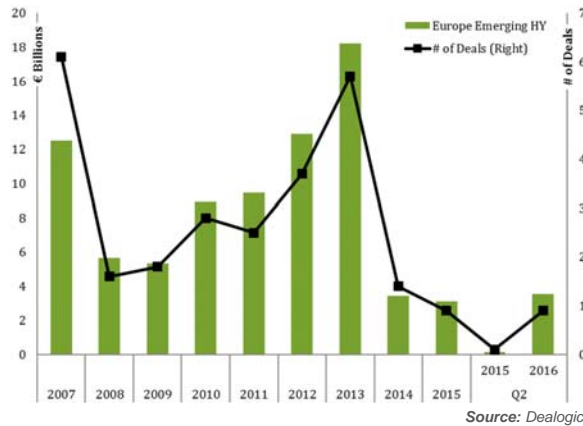
Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moodys	S&P	Fitch
Numericable-SFR	Telecommunications	06/04/2016	USD	5,190	7.38	B1	B+	
Peugeot SA	Auto/Truck	08/04/2016	EUR	500		2.38 Ba2		BB
InterXion Holding NV	Computers & Electronics	11/04/2016	EUR	150	6.00	B2	BB-	
Virgin Media Secured Finance plc	Telecommunications	12/04/2016	USD	750	5.50	Ba3	BB-	BB+
CNH Industrial Finance Europe SA	Machinery	14/04/2016	EUR	50	3.88	NA	BB+	
Arrow Global Finance plc	Finance	14/04/2016	EUR	230	3M EURIBOR +475	B1	BB-	
Millicom International Cellular SA	Telecommunications	15/04/2016	SEK	2,000	3M STIB +330	NA		BB+
Altice Financing SA	Telecommunications	18/04/2016	USD	2,750	7.50	B1	BB-	
Cirsa Funding Luxembourg SA	Leisure & Recreation	19/04/2016	EUR	450	5.75	B2	B+	
Buzzi Unicem SpA	Construction/Building	20/04/2016	EUR	500	2.13	NA	BB+	
Loxam SAS	Professional Services	21/04/2016	EUR	250	3.50	NA	BB-	
TVL Finance plc	Dining & Lodging	28/04/2016	GBP	100	3M LIBOR +750	B3	B-	
			GBP	290	8.50	B3	B-	
Banco de Sabadell SA	Finance	28/04/2016	EUR	500	5.63	B1	B+	
Corral Petroleum Holdings AB	Oil & Gas	29/04/2016	SEK	500	12.25		B	B
			EUR	570	11.75		B	B
Ardagh Packaging Finance plc	Consumer Products	29/04/2016	USD	1,000	4.63	Ba3	B+	
			EUR	440	4.13	Ba3	B+	
			USD	500	3M LIBOR +325	Ba3	B+	
			USD	1,650	7.25	B3	CCC+	
			EUR	750	6.75	B3	CCC+	
Gestamp Funding Luxembourg SA	Auto/Truck	04/05/2016	EUR	500	3.50	Ba3	BB+	
Rexel SA	Computers & Electronics	04/05/2016	EUR	650	3.50	Ba3	BB-	BB
Travis Perkins plc	Construction/Building	05/05/2016	GBP	300	4.50	NA	BB+	
Inovyn Finance plc	Chemicals	06/05/2016	EUR	300	6.25	B2	B	
CNH Industrial Finance Europe SA	Machinery	10/05/2016	EUR	500	2.88	Ba2	BB+	
WEPA Hygieneprodukte GmbH	Forestry & Paper	11/05/2016	EUR	450	3.75	B1	BB	
BiSoho SAS	Textile	11/05/2016	EUR	100	3M EURIBOR +600	(P)B2	(P)B	
			EUR	371	5.88	(P)B2	(P)B	
BPE Financiaciones SA	Finance	17/05/2016	EUR	12	0.65	NA	NA	NA
Barry Callebaut Services SA/NV	Food & Beverage	17/05/2016	EUR	450	2.38	Ba1	NA	
AerCap Ireland Capital Ltd	Finance	17/05/2016	USD	1,000	3.95	Ba1	BBB-	BB+
NXP BV	Computers & Electronics	18/05/2016	USD	900	4.63	Ba2	BB+	
			USD	850	4.13	Ba2	BB+	
Telecom Italia SpA	Telecommunications	18/05/2016	EUR	1,000	3.63	Ba1	BB+	BBB-
Synlab Bondco plc	Healthcare	18/05/2016	EUR	190	3M EURIBOR +500	B2	B+	B+
Grandi Navi Veloci SpA	Transportation	19/05/2016	EUR	75	12.50	NA	NA	NA
Nexans SA	Metal & Steel	19/05/2016	EUR	250	3.25	NA	BB-	
Barolo Bidco SpA	Computers & Electronics	20/05/2016	EUR	450	3M EURIBOR +725	B2	NA	
William Hill plc	Leisure & Recreation	20/05/2016	GBP	350	4.88	(P)Ba1	BB+	
HeidelbergCement AG	Construction/Building	25/05/2016	EUR	750	2.25	Ba1e		BB+
Hoist Kredit AB	Finance	25/05/2016	EUR	250	3.13	Ba1		
EMI Music Publishing Group North America Holdings I	Publishing	26/05/2016	USD	350	7.63	B3	B	
Europcar Groupe SA	Transportation	01/06/2016	EUR	125	5.75	B3	B-	
Stora Enso Oyj	Forestry & Paper	07/06/2016	EUR	300	2.13	Ba2	BB	
Eircom Finance Ltd	Telecommunications	07/06/2016	EUR	500	4.50	B2	B	B+
BMBG Bond Finance SCA	Construction/Building	08/06/2016	EUR	435	3.00	Ba3	BB-	
Color Group ASA	Transportation	09/06/2016	NOK	500	3M NIBOR +475	NA	NA	NA
Tereos Finance Groupe I SA	Food & Beverage	10/06/2016	EUR	400	4.13		BB	BB
Titan Global Finance plc	Construction/Building	10/06/2016	EUR	300	3.50	NA	BB	
GasLog Ltd	Transportation	14/06/2016	NOK	750	3M NIBOR +690	NA	NA	NA
Verallia Packaging SAS	Consumer Products	15/06/2016	EUR	200	5.13	B1	B+	
Salini Impregilo SpA	Construction/Building	16/06/2016	EUR	300	3.75		BB+	BB
Color Group ASA	Transportation	17/06/2016	NOK	167	3M NIBOR +485	NA	NA	NA

Source: Bloomberg, Dealogic

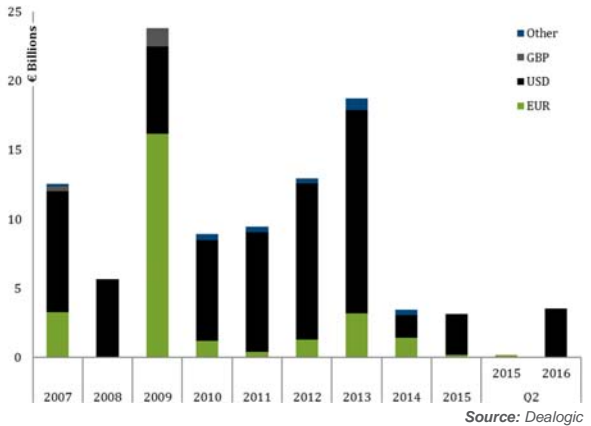


## 5 Issuance – European Emerging Market High Yield Bonds

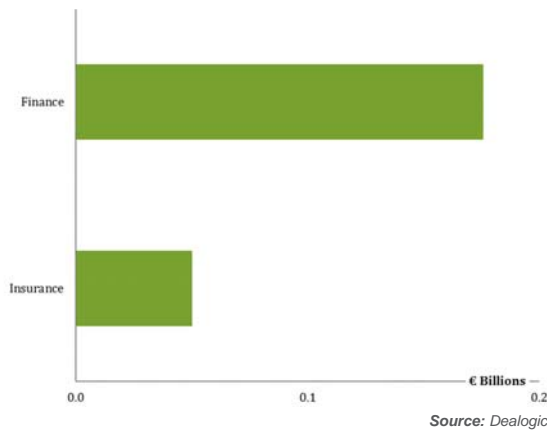
5.1 European Emerging Market HY Bond Issuance



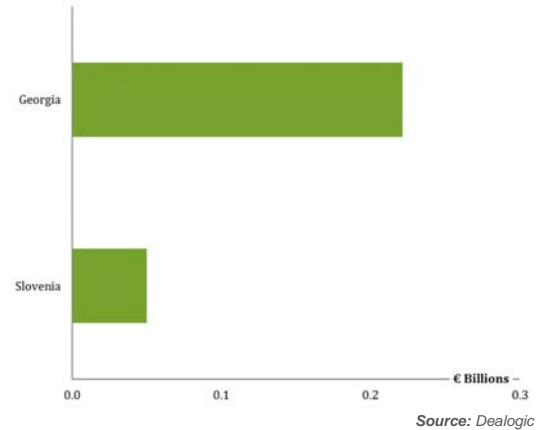
5.2 European Emerging Market HY Bond Issuance by Currency



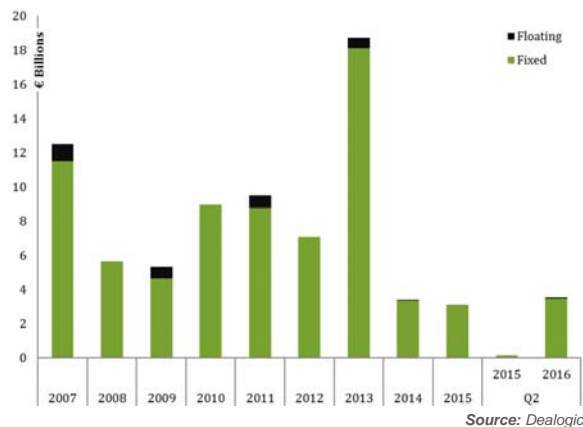
5.3 European Emerging Market HY Issuance by Industry



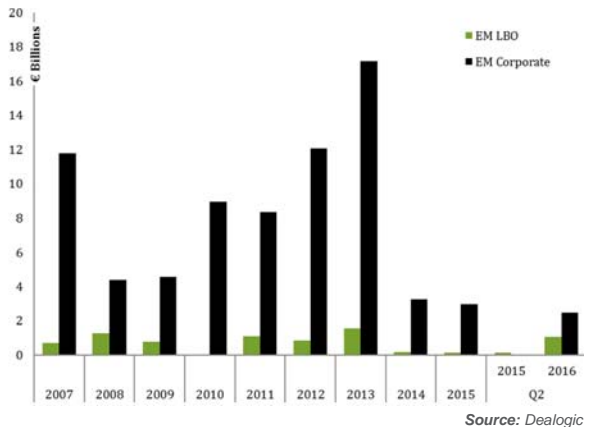
5.4 European Emerging Market HY Issuance by Country of Risk



5.5 European Emerging Market HY Issuance, Fixed vs. Floating

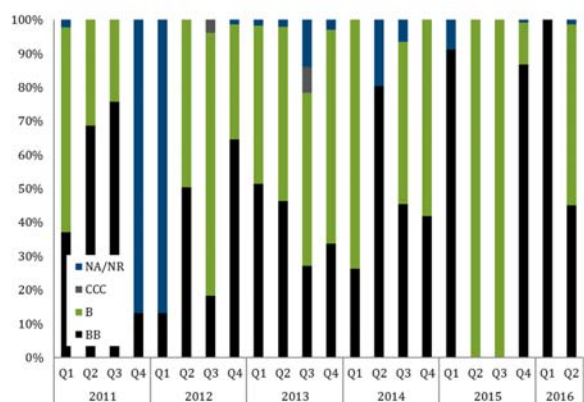


5.6 European Emerging Market HY Issuance, Sponsored vs. Corporate



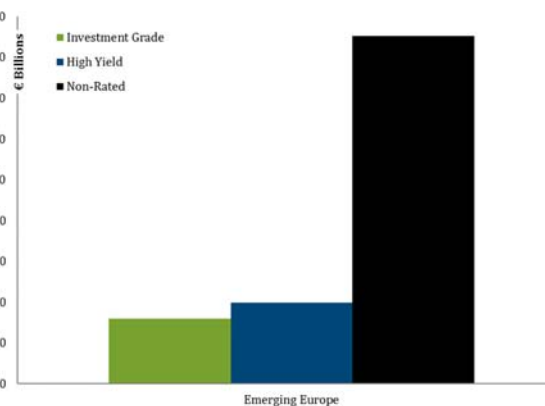
## Issuance – European Emerging Market High Yield Bonds

### 5.7 European Emerging Market HY Rating Distribution at Issuance



Source: Dealogic, AFME, SIFMA

### 5.8 European Emerging Market Corporate Bonds Outstanding



Source: Bloomberg, AFME, SIFMA

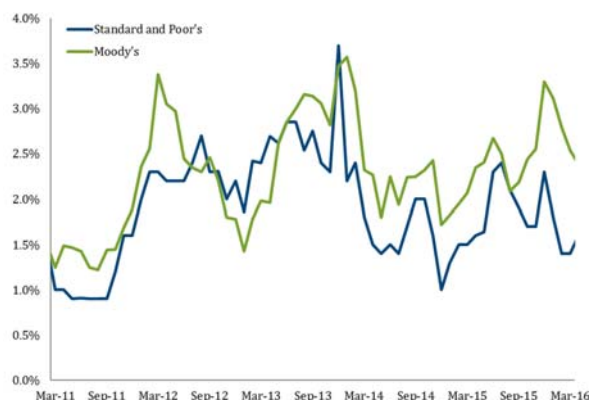
### 5.9 European Emerging Market HY Bond Issuance

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moodys	S&P	Fitch
Evraz Group SA	Metal & Steel	10/06/2016	USD	500	6.750		B+	BB-
SCF Capital Ltd	Transportation	10/06/2016	USD	750	5.375	Ba2	BB	BB
Novolipetsk Iron & Steel Works OAO - NLMK	Metal & Steel	09/06/2016	USD	700	4.500	Ba1	BB+	BBB-
Adriatic Slovenica Zavarovalna Druzba dd	Insurance	24/05/2016	EUR	50	3M EURIBOR +780	NA	NA	NA
GTH Finance BV	Telecommunications	20/04/2016	USD	700	7.250	B1	B+	BB+
GTH Finance BV	Telecommunications	20/04/2016	USD	500	6.250	B1	B+	BB+
Georgian Oil & Gas Corp - GOGC	Oil & Gas	19/04/2016	USD	250	6.750	B+		BB-
Global Ports Investments plc	Transportation	13/04/2016	USD	350	6.872	NA		BB+
Renaissance Financial Holdings Ltd	Finance	11/04/2016	USD	200	9.500		B-	B-

Source: Bloomberg, Dealogic

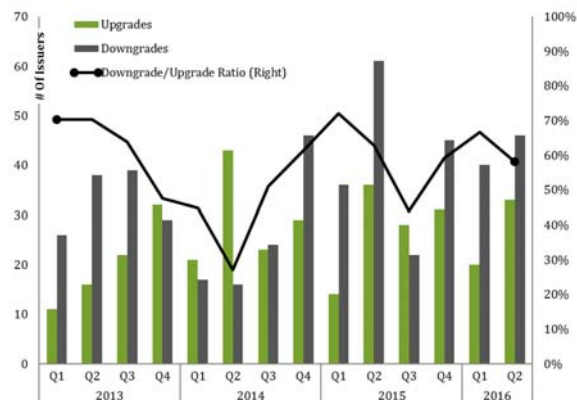
## 6 Credit Quality

### 6.1 European HY Default Rate



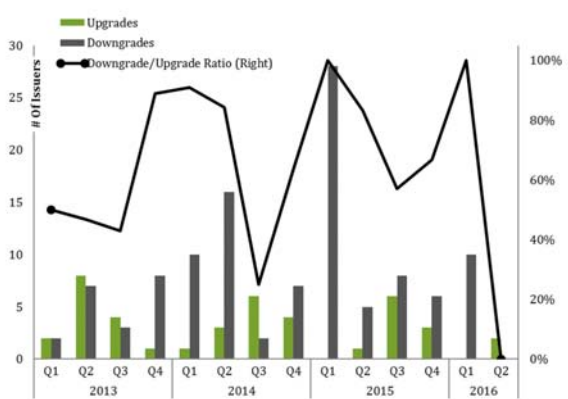
Source: Standard and Poor's and Moody's

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



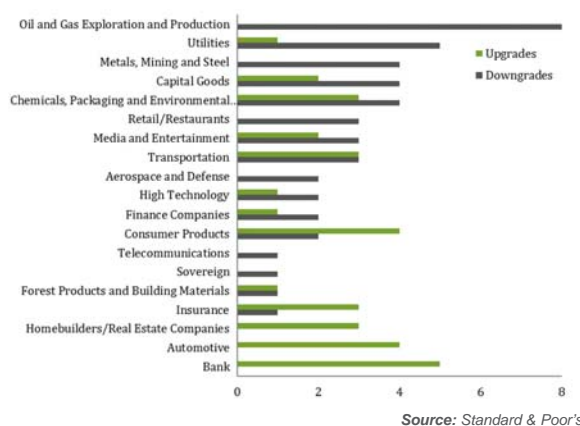
Source: Standard & Poor's

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



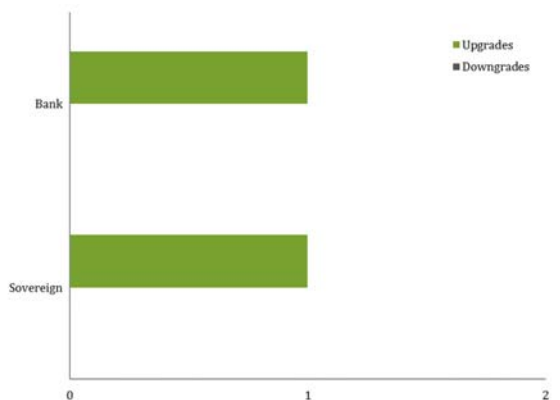
Source: Standard & Poor's

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



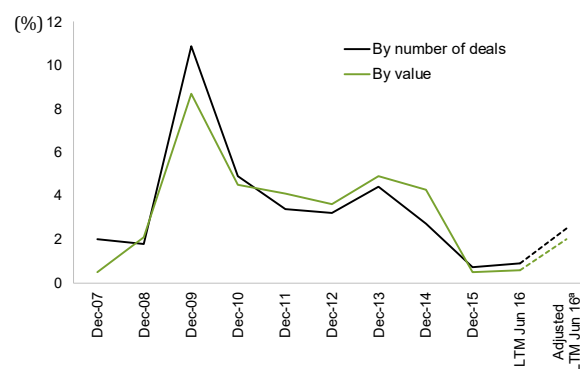
Source: Standard & Poor's

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



Source: Standard & Poor's

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



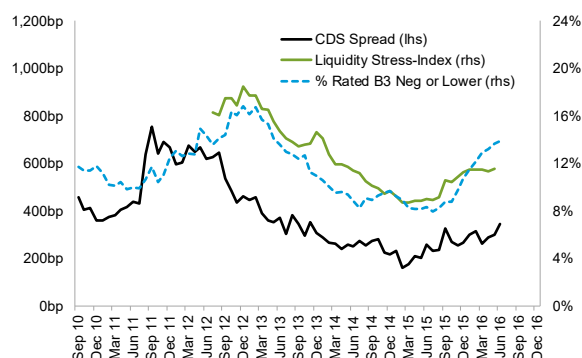
Source: Fitch Leveraged Credit Database

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



Source: Moody's

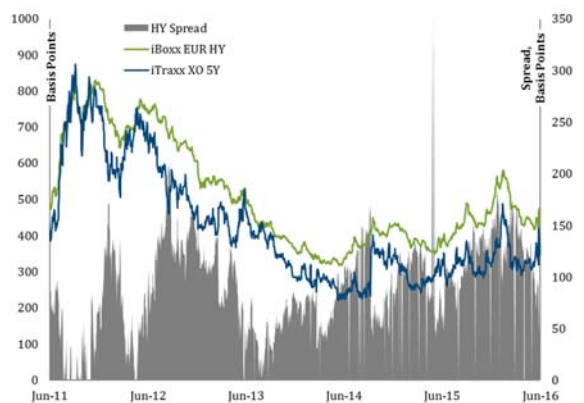
## 6.8 European Defaults

Issuer	Industry Group	Country	Date	Reported By	Reason
UkrLandFarming PLC	Consumer Products	Ukraine	April 2016	S&P	Missed Principal Payment
Norske Skogindustrier ASA	Forest Products and Building Materials	Norway	April 2016	S&P	Debt Exchange
CHC Group Ltd.	Oil and Gas	United Kingdom	April 2016	S&P	Missed Interest Payment
Intelsat S.A.	Telecommunications	Luxembourg	May 2016	S&P	Distressed Exchange
New World Resources N.V.	Metals, Mining and Steel	United Kingdom	May 2016	S&P	Debt Acceleration
New World Resources	Energy and Natural Resources	Czech Republic	May 2016	Moody's	Bankruptcy
Far-Eastern Shipping Co. PLC	Transportation	Russia	June 2016	S&P	Missed Interest Payment
Consolidated Minerals Ltd.	Metals, Mining and Steel	Jersey	June 2016	S&P, Moody's	Distressed Restructuring
Waste Italia S.p.A.	Environment	Italy	June 2016	Moody's	Missed Interest Payment
Bridge Finco LLC	Manufacturing	United Kingdom	June 2016	Moody's	Distressed Exchange

Source: Standard & Poor's, Moody's

## 7 Relative Value and Total Return

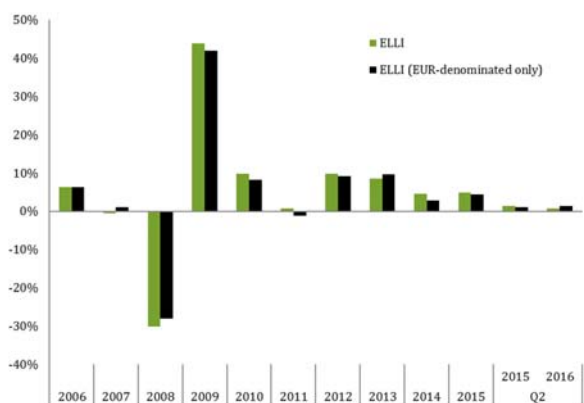
### 7.1 Relative value: European HY Bonds, Cash vs. Synthetic



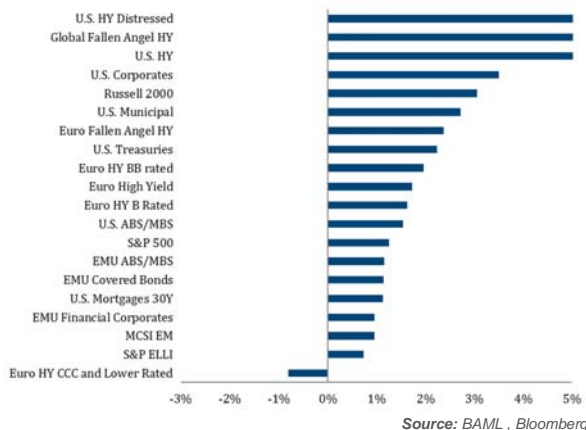
### 7.2 European HY Bond Total Return



### 7.3 European Leveraged Loan Total Return



### 7.4 Asset Class Total Return, Quarter



## Summary of the Methodologies Adopted for this Report

### 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 (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. 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.

## 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. European HY 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.

### 6.2. – 6.3. 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.

### 6.4. – 6.5. 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.

### 6.6. European Leveraged Loan Default Rate

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

### 6.7. 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

### 6.8. 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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