

European High Yield & Leveraged Loan Report

European Leveraged Finance

Q1: 2016



Table of Contents

Table of Contents	2
Highlights and Market Environment	4
Issuance Highlights	4
Market and Economic Environment	4
Issuance: Leveraged Loans	5
Issuance: High Yield Bonds	6
Returns & Credit Quality	7
1 Leveraged Finance Overview	8
1.1 European Leveraged Issuance by Type	8
1.2 European Leveraged Issuance Percentage	8
1.3 European Leveraged Average Deal Size	8
1.4 Bank Credit Standards	8
1.5 Factors Affecting Bank Credit Standards	8
1.6 European Leveraged Issuance Percentage	8
1.7 Factors Affecting Loan Demand: April 2016	9
1.8 Global Comparison – High Yield Issuance	9
2 Issuance – Leveraged Loans	10
2.1 European Leveraged Loan Issuance By Type	10
2.2 European Leveraged Loan Issuance by Industry	10
2.3 Forward Pipeline of Leveraged Loan Market	10
2.4 ELLI Total Institutional Loans Outstanding	10
2.5 ELLI Ratings Diversification	10
2.6 Leveraged Loan Secondary Market Bids	10
2.7 Institutional and Pro Rata Spreads	11
2.8 Mezzanine Spreads	11
2.9 Evolution of Debt, Enterprise Value (EV) and Interest Cover Multiples at Time of Transaction (Median)	11
2.10 Evolution of Senior Debt vs. Total Debt Multiples at Time of Transaction (Median)	11
2.11 Actual Senior and Mezzanine Loan Recovery Rates	11
3 Issuance – High Yield Bonds Overview	12
3.1 European High Yield Issuance	12
3.2 European High Yield Issuance	12
3.3 European Corporate Bonds Outstanding	12
3.4 European Corporate Bonds Maturity Wall	12
3.5 European Corporate HY Bonds Outstanding By Sector	12
3.6 European Corporate HY Bonds Outstanding by Current Rating	12
3.7 European Corporate Bond Issuance by Rating	13
3.8 European Corporate Bond Issuance by Tenor	13
3.9 European HY Use of Proceeds	13
4 Issuance – European Developed Market High Yield Bonds	14
4.1 European Developed Market HY Bond Issuance	14
4.2 European Developed Market HY Issuance by Currency	14
4.3 European Developed Market HY Issuance by Industry	14
4.4 European Developed Market HY Issuance by Country of Risk	14
4.5 European Developed Market HY Issuance, Fixed vs. Floating	14
4.6 European Developed Market HY Issuance, Sponsored vs. Corporate	14
4.7 European Developed Market HY Rating Distribution at Issuance	15
4.8 European Developed Market Corporate Bonds Outstanding	15
4.9 European Developed Market HY Bond Issuance	15
5 Issuance – European Emerging Market High Yield Bonds	16
5.1 European Emerging Market HY Bond Issuance	16
5.2 European Emerging Market HY Bond Issuance by Currency	16
5.3 European Emerging Market HY Issuance by Industry	16
5.4 European Emerging Market HY Issuance by Country of Risk	16
5.5 European Emerging Market HY Issuance, Fixed vs. Floating	16
5.6 European Emerging Market HY Issuance, Sponsored vs. Corporate	16
5.7 European Emerging Market HY Rating Distribution at Issuance	17
5.8 European Emerging Market Corporate Bonds Outstanding	17
5.9 European Emerging Market HY Bond Issuance	17
6 Credit Quality	18
6.1 European and US HY Default Rate	18
6.2 European HY Default Rate	18
6.3 Developed Europe Issuer Rating Actions	18
6.4 Emerging Europe Issuer Rating Actions	18
6.5 Developed European Industry Rating Actions by Number of Ratings	18
6.6 Emerging European Industry Rating Actions by Number of Ratings	18
6.7 European Defaults	19
7 Relative Value and Total Return	20
7.1 Relative value: European HY Bonds, Cash vs. Synthetic	20
7.2 European HY Bond Total Return	20
7.3 European Leveraged Loan Total Return	20

7.4 Asset Class Total Return, Quarter.....	20
Summary of the Methodologies Adopted for this Report	21
Annex	24

Highlights and Market Environment

Highlights

Issuance Highlights

European leveraged finance issuance (leveraged loans and high yield bonds) decreased in 1Q'16 to €22.6 billion, a 12.0% decrease from €25.6 billion quarter-over-quarter (q-o-q) and a 62.5% decrease from €60.1 billion in 1Q'15. The quarterly decrease stems from the large fall in high yield bonds issuance, which decreased by 24.1% in the first quarter of 2016 while leveraged loan issuance increased by 2.9%; the high yield bond share of the leveraged finance market decreased to 47.3%, down from 54.9% in 4Q'15 and down from 62.8% in 1Q'15.

Market and Economic Environment

According to the April 2016 European Central Bank lending survey, in the first 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 1Q'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 to small and medium-sized enterprises. For the large euro area countries, credit standards on loans to enterprises eased in Italy and Germany, while remaining unchanged in Spain and the Netherlands and continuing to tighten in France in net terms.

Credit standards on housing loans tightened and remained below the historical average since 2003. The net tightening was largely driven by the implementation of the EU mortgage credit directive and by a net tightening impact of banks' risk tolerance.

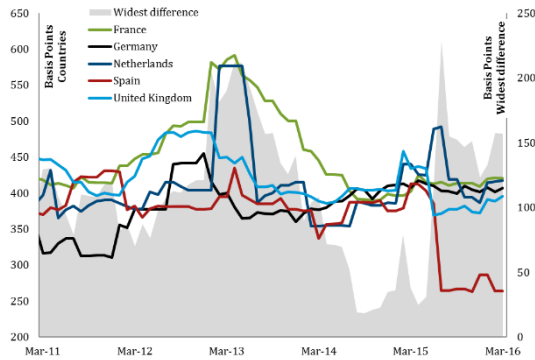
Looking ahead to the second quarter of 2016, euro banks expect a further net easing in standards on loans to enterprises and consumer credit but continued net tightening of standards for housing loans.

Net demand increased for all types of loans in 1Q'16 and banks forecasted a further net increase in the demand for loans in the second quarter.

“European leveraged finance issuance (leveraged loans and high yield bonds) decreased in 1Q'16 to €22.6 billion”

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

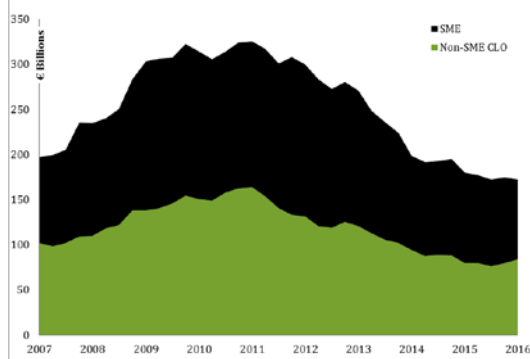
Institutional Spreads



Source: Dealogic, AFME, SIFMA

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, increased in the first quarter of 2016 to €11.9 billion, up 2.9% q-o-q (€11.6 billion in 4Q'15) but 46.9% down y-o-y (€22.4 billion in 1Q'15).

Amend-and-extend (“A&E”) transactions continue to take place but the issuance volume declined further to €0.7 billion in the first quarter of 2016, a 6.2% decrease from the 4Q'15 (€0.9 billion) and an 87.8% decrease y-o-y.

In 1Q'16, one mezzanine loan (€54 million) and four second lien loans (€377 million) were financed. Pricing spreads for institutional loans widened by 2.1 basis points (bps) while spreads for pro rata loans tightened by 17.1 bps. Mezzanine loan spreads remained at 0 bps in the first quarter of 2016.

According to Dealogic, the top five sectors in leveraged loan issuance for the first quarter of 2016 accounted for over three quarters of the issuance volume; the leading sector was professional services (€2.7 billion), followed by retail (€2.5 billion), utility and energy (€1.6 billion), consumer products (€1.3 billion) and computers and electronics (€0.9 billion).

The share of deals aimed to refinance and/or repay debt decreased to 32.4% of all deals by euro amount in the first quarter of 2016, compared to 35.9% in 4Q'15 and 44.2% in 1Q'15. Refinancing and/or repaying of debt was the second largest use of proceeds in 1Q'16 with €3.9 billion, a decrease of 7.1% q-o-q (€4.1 billion in 4Q'15) and 61.1% down y-o-y (€9.9 billion in 1Q'15). The top use of proceeds in the first quarter was leveraged buyouts totalling €5.8 billion or 48.6% of total issuance, up from €2.0 billion in 4Q'15 (17.5% of total) but down from €6.5 billion in 1Q'15 (28.9% of total).

European CLO outstandings, including SME deals, decreased by an annualized rate of 4.8% to €172.4 billion in 1Q'16. Non-SME CLOs increased at an annualized rate of 22.3% to €84.2 billion in 1Q'16 while SME CLOs decreased by an annualized rate of 24.1% to €88.2 billion.

Issuance: High Yield Bonds

Primary high yield issuance in 1Q'16 totalled €10.1 billion on 21 deals, a 24.1% and 71.7% decrease by euro amount, respectively, from 4Q'15 (€14.1 billion on 38 deals) and 1Q'15 (€37.7 billion on 65 deals). High yield bonds issuance decreased in both developed and emerging market Europe in the first quarter of 2016.

Primary high yield issuance in developed market Europe in the first quarter of 2016 was €9.3 billion on 19 deals, a 23.5% decrease by euro amount from 4Q'15 (€12.2 billion on 33 deals) and a 74.8% decrease from 1Q'15 (€37.0 billion on 63 deals).

In emerging market Europe primary issuance in 1Q'16 was €1.4 billion on 2 deals, a decrease of 28.5% by euro amount from 4Q'15 (€1.9 billion on 5 deals) but an increase of 77.8% from 1Q'15 (€0.8 billion on 2 deals).

In the fourth quarter of 2015, average deal size from developed market Europe increased by 32.9% to €490.7 million from €369.2 million in 4Q'15 but decreased by 16.4% from €586.9 million in 1Q'15. Average deal size for emerging market Europe increased by 78.8% to €678.2 million in 1Q'16 from €379.4 million in 4Q'15 and by 77.8% y-o-y (€381.4 billion in 1Q'15).

High yield issuance for refinancing and/or repayment of debt in developed market Europe increased to €2.4 billion, representing 25.8% of all issuance by euro amount in 1Q'16, compared to €1.4 billion (11.4% of total) in 4Q'15 and €5.3 billion (14.4% of total) in 1Q'15. No deals in emerging market Europe in the first 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 1Q'16: the finance industry led the issuance with €2.2 billion (20.7% of total), followed by auto and truck with €2.0 billion (18.4% of total), and telecommunications with €1.9 billion (17.4% of total) with the remainder of the issuance in first quarter split among many industries.

The proportion of USD-denominated issuance decreased to 30.0% of all issuance by euro amount in 1Q'16 compared to 36.8% in 4Q'15 and 28.6% in 1Q'15. USD-denominated issuance in developed market Europe decreased to €2.3 billion or 24.7% of issuance by euro amount from €3.3 billion or 27.0% in 4Q'15 and significantly down from €10.0 billion (27.1%) in 1Q'15. One of two issues priced in emerging market Europe (€0.9 billion or 66.4%) was denominated in USD, compared to €1.9 billion (100% of total) in 4Q'15 and €0.8 billion (100% in 1Q'15).

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

“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%)”

“22 European high yield bond issuers defaulted in 2015”

Returns & Credit Quality

The MSCI Emerging Markets Index led returns in the first quarter of 2016 with 5.4% followed by Global Fallen Angel HY Index (5.0%) and U.S. corporate bonds (3.9%). Seventeen out of 20 asset classes examined recorded positive returns while three recorded losses in 1Q'16. Those three asset classes were: Russell 2000 (-1.9% in 1Q'16), Euro HY CCC and lower rated bonds (-0.8%) and S&P ELLI index (-0.4%).

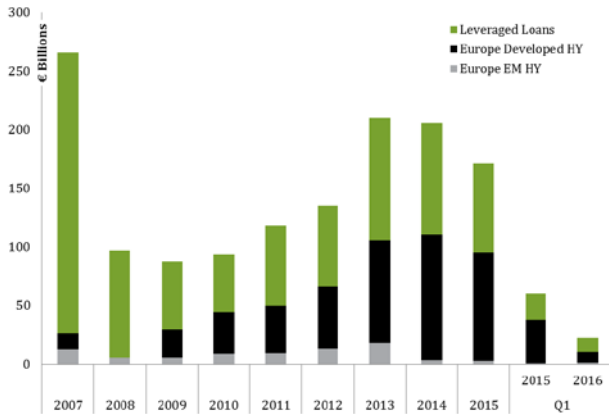
High-yield bond default rates decreased in March 2016, with S&P reporting the trailing 12-month speculative-grade default rate at 1.6% (down from 2.3% end-December 2015).

Only one bond-related default was reported in the first quarter: a Russian bank, CB Intercommerz Ltd., defaulted due to regulatory intervention in February 2016.

According to S&P, in 1Q'156 downgrades exceeded upgrades in developed market Europe with 40 downgrades to 20 upgrades as well as in emerging market Europe with 10 downgrades to no upgrades. Both upgrades and downgrades were distributed across the sector spectrum. The sector with the most rating actions in first quarter 2016 was meals, mining and steel with 9 downgrades in developed market Europe and 2 downgrades in emerging market Europe.

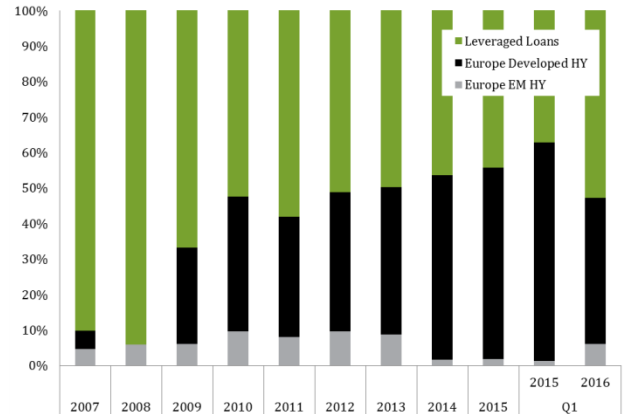
1 Leveraged Finance Overview

1.1 European Leveraged Issuance by Type



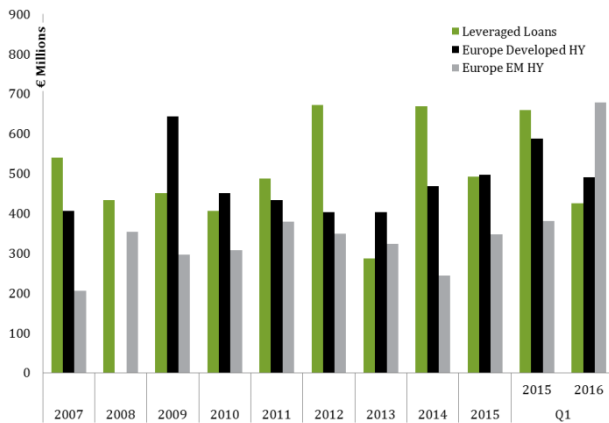
Source: Dealogic, Thomson Reuters LPC

1.2 European Leveraged Issuance Percentage



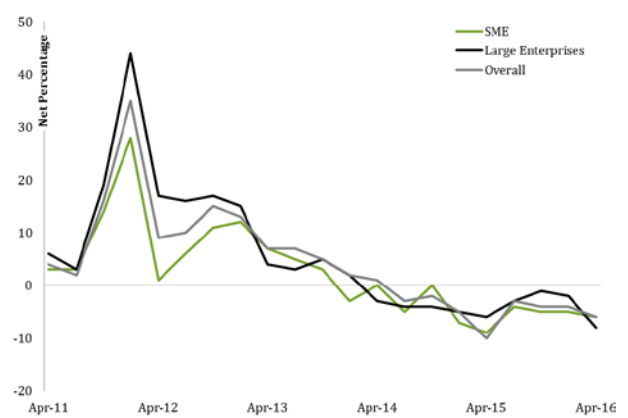
Source: Dealogic, Thomson Reuters LPC

1.3 European Leveraged Average Deal Size



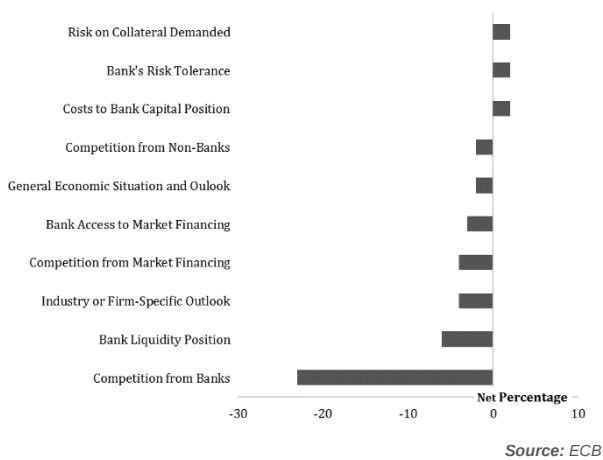
Source: Dealogic, Thomson Reuters LPC

1.4 Bank Credit Standards¹



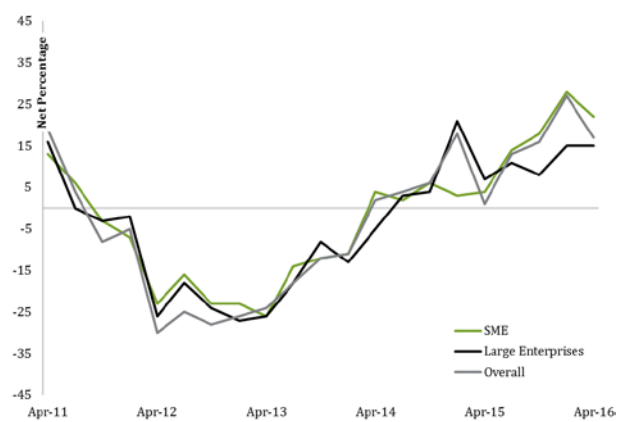
Source: ECB

1.5 Factors Affecting Bank Credit Standards²



Source: ECB

1.6 European Leveraged Issuance Percentage³

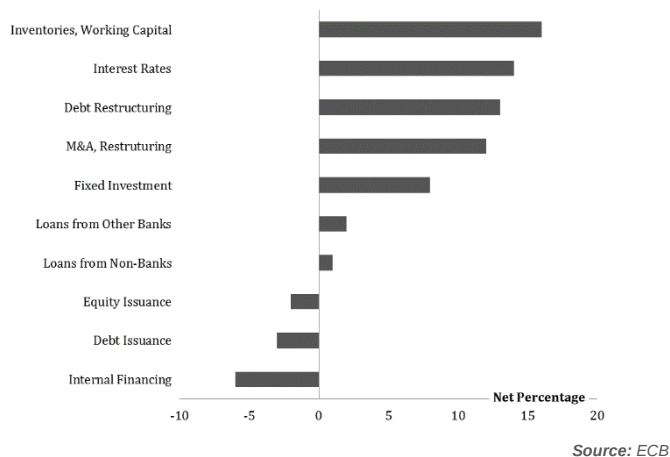


Source: ECB

¹ A positive net percentage number signifies tightening bank credit; a negative net percentage number signifies easing credit.

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

³ A positive net percentage signifies increased demand; a negative net percentage signifies decreased demand.

1.7 Factors Affecting Loan Demand: April 2016⁴

1.8 Global Comparison – High Yield Issuance

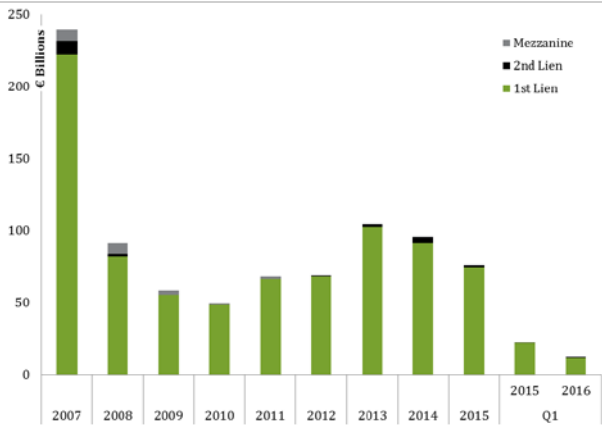
€ Billions	2016	2015					Prior		
	Q1	Q1	Q2	Q3	Q4	Full Year	2014	2013	2012
United States	31.08	61.21	70.78	29.70	30.26	192.0	185.7	197.0	213.3
Asia Pacific	25.53	9.57	10.76	13.54	6.60	40.5	38.0	42.0	30.2
Europe	14.55	41.72	35.04	18.39	20.03	115.2	124.7	121.3	81.9

Source: Dealogic

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

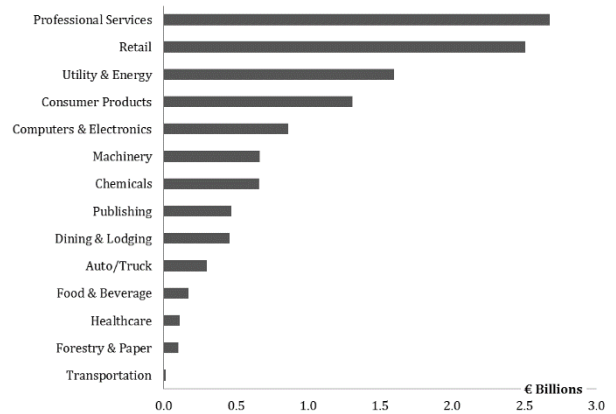
2 Issuance – Leveraged Loans

2.1 European Leveraged Loan Issuance By Type



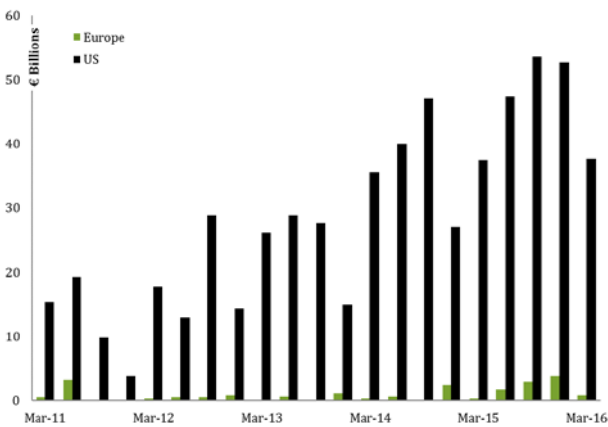
Source: Dealogic, Thomson Reuters LPC

2.2 European Leveraged Loan Issuance by Industry



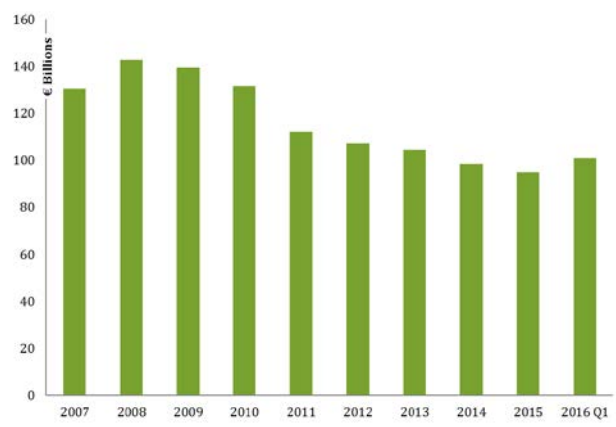
Source: Dealogic

2.3 Forward Pipeline of Leveraged Loan Market



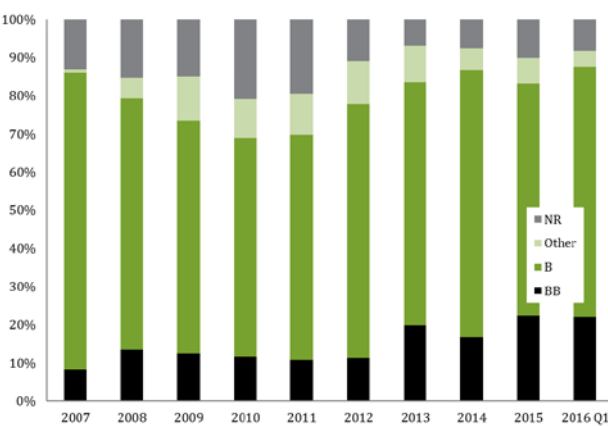
Source: Standard & Poor's LCD

2.4 ELLI Total Institutional Loans Outstanding



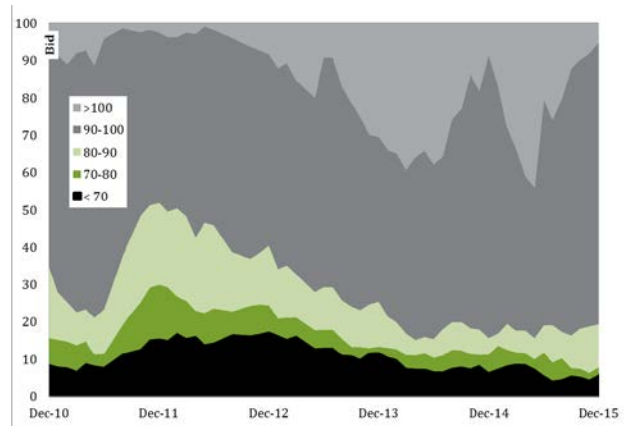
Source: Standard & Poor's LCD

2.5 ELLI Ratings Diversification



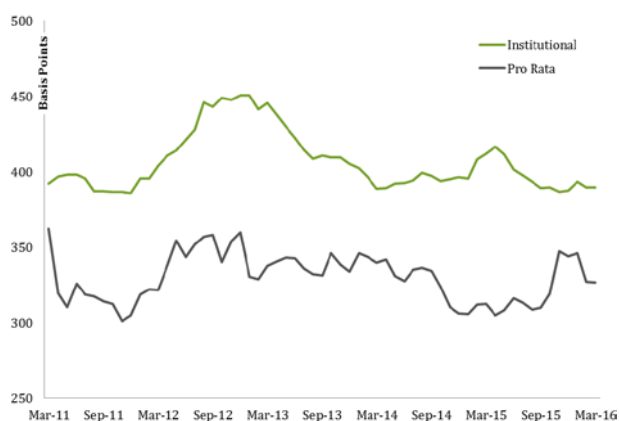
Source: Standard & Poor's LCD

2.6 Leveraged Loan Secondary Market Bids



Source: Thomson Reuters LPC/SMI

2.7 Institutional and Pro Rata Spreads



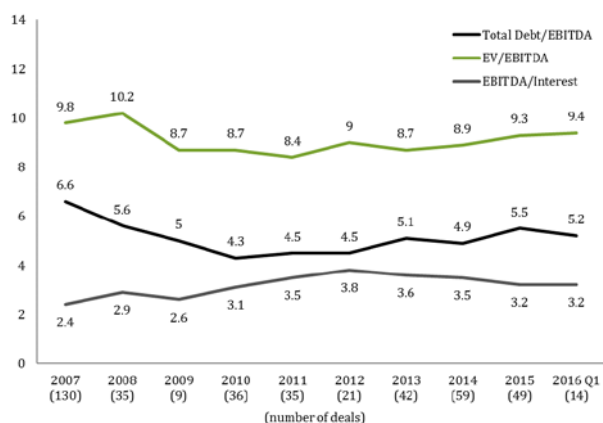
Source: Dealogic, AFME, SIFMA

2.8 Mezzanine Spreads



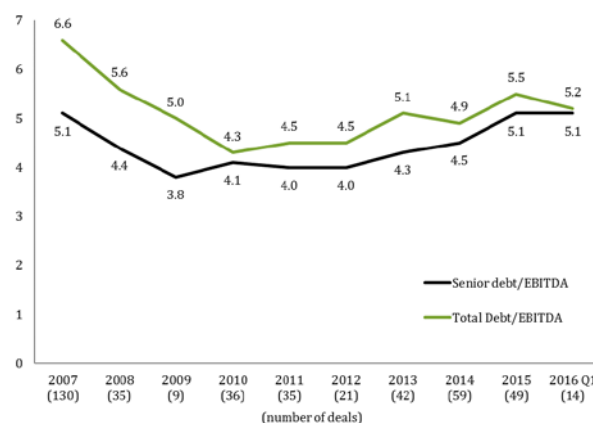
Source: Dealogic, AFME, SIFMA

2.9 Evolution of Debt, Enterprise Value (EV) and Interest Cover Multiples at Time of Transaction (Median)⁵



Source: Fitch Credit Opinions Database

2.10 Evolution of Senior Debt vs. Total Debt Multiples at Time of Transaction (Median)⁶



Source: Fitch Credit Opinions Database

2.11 Actual Senior and Mezzanine Loan Recovery Rates⁷

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)	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	45.4
2009	25,593	20,798	38	50	2004	102	4	26	6.8
2010	14,022	8,823	16	66	2005	538	5	108	40.4
2011	12,259	6,387	11	54	2006	371	5	74	1.3
2012	10,850	6,190	10	61	2007	449	5	90	33.4
2013	13,973	9,880	15	61	2008	350	4	87	21
2014	13,250	8,765	11	67	2009	2,958	25	118	32
2015	1,461	759	3	100	2010	1,886	11	171	37
LTM March 2016	1,669	759	4	100	2011	822	5	164	40
					2012	959	6	160	61
					2013	650	4	162	58
					2014	246	3	82	62
					2015	527	2	263	45
					LTM March 2016	527	2	263	45

Source: Fitch Leveraged Credit Database

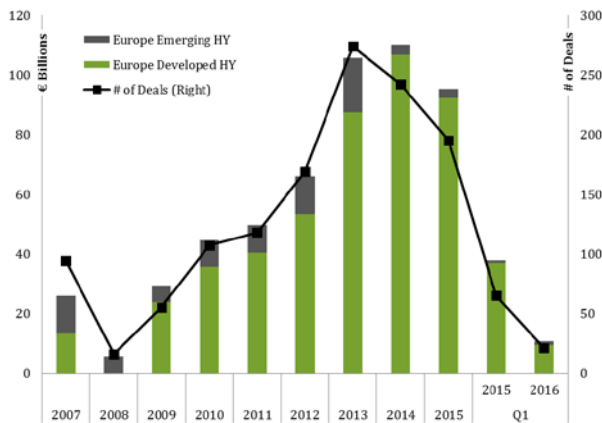
⁵ Primary market transactions

⁶ Primary market transactions

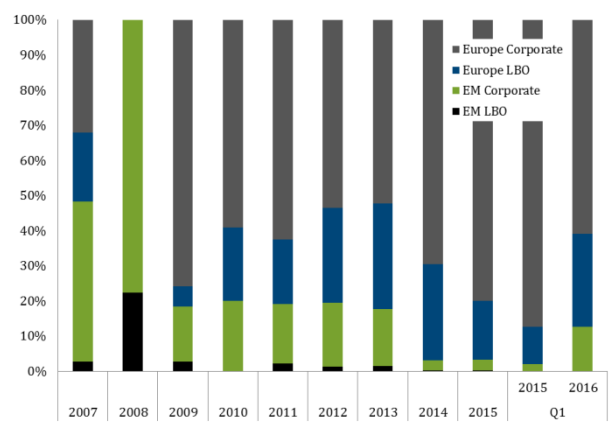
⁷ Median recovery rates: median cash realised (cash or cash pay debt received) recoveries.

3 Issuance – High Yield Bonds Overview

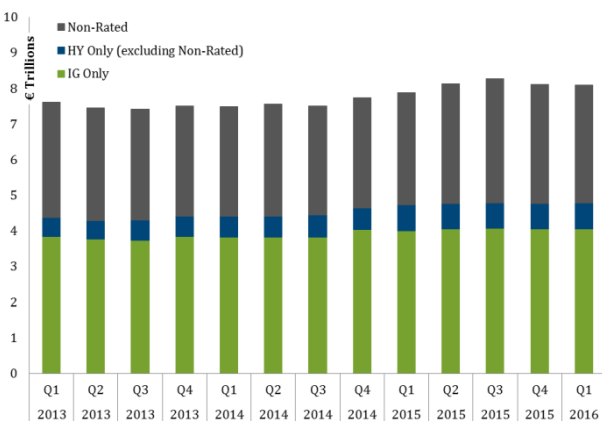
3.1 European High Yield Issuance



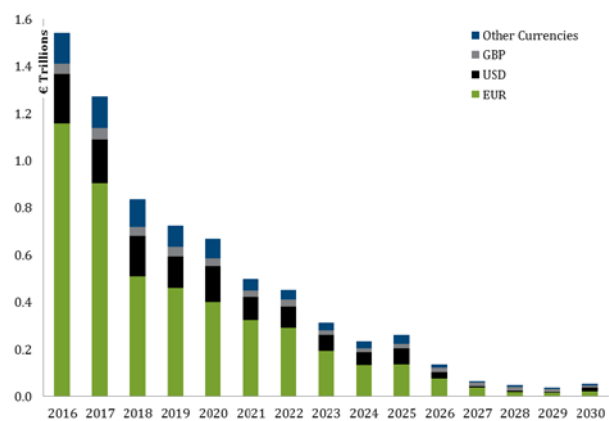
3.2 European High Yield Issuance



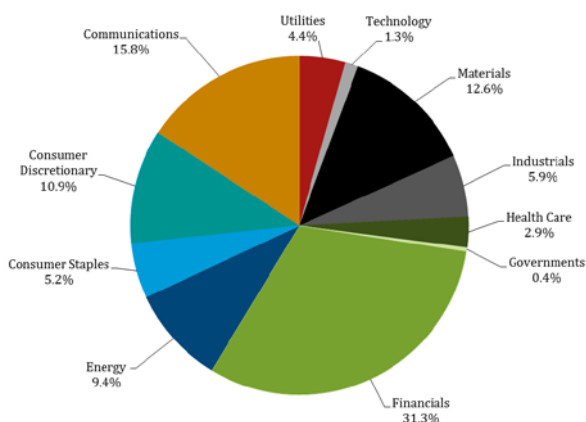
3.3 European Corporate Bonds Outstanding



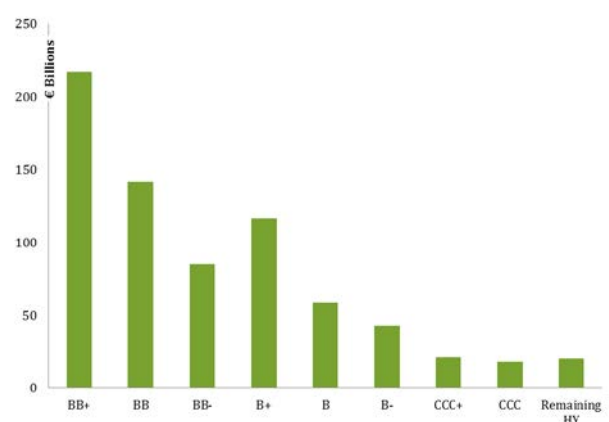
3.4 European Corporate Bonds Maturity Wall



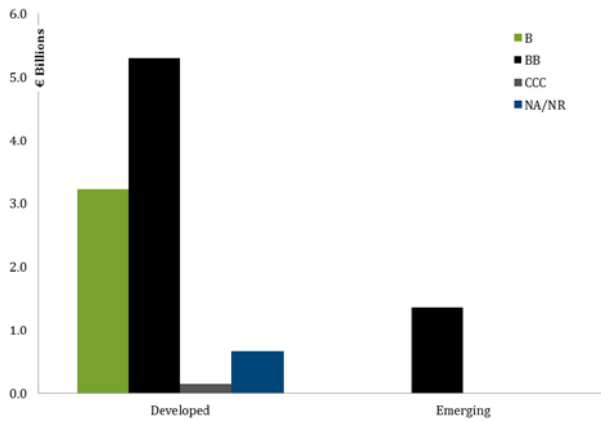
3.5 European Corporate HY Bonds Outstanding By Sector



3.6 European Corporate HY Bonds Outstanding by Current Rating

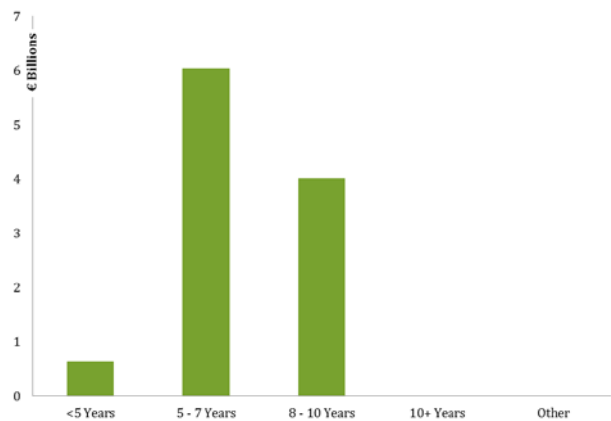


3.7 European Corporate Bond Issuance by Rating



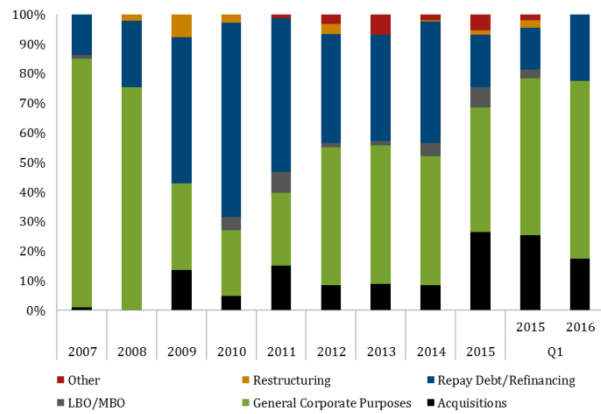
Source: Bloomberg, AFME, SIFMA

3.8 European Corporate Bond Issuance by Tenor



Source: Bloomberg, AFME, SIFMA

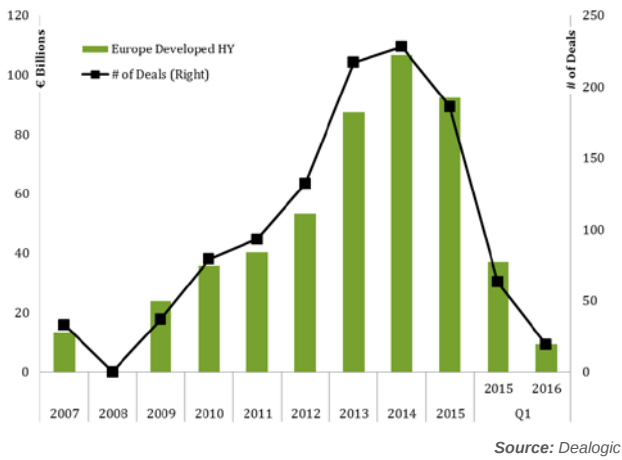
3.9 European HY Use of Proceeds



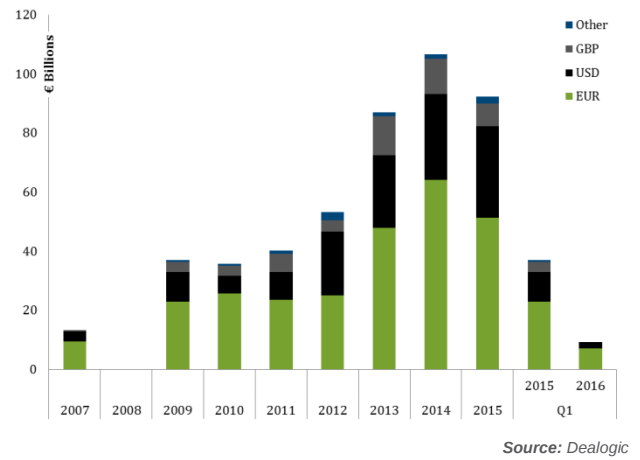
Source: Bloomberg, AFME, SIFMA

4 Issuance – European Developed Market High Yield Bonds

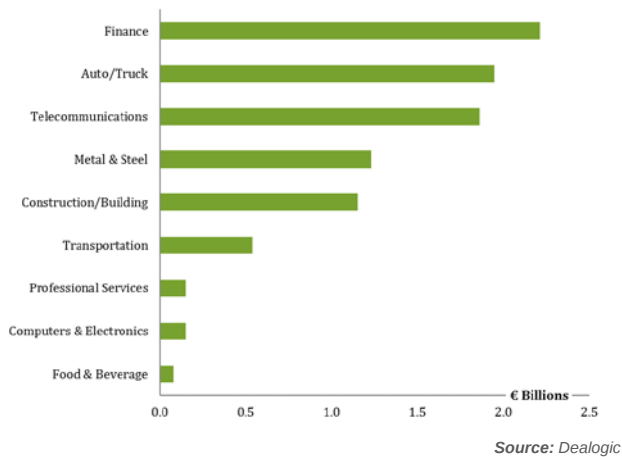
4.1 European Developed Market HY Bond Issuance



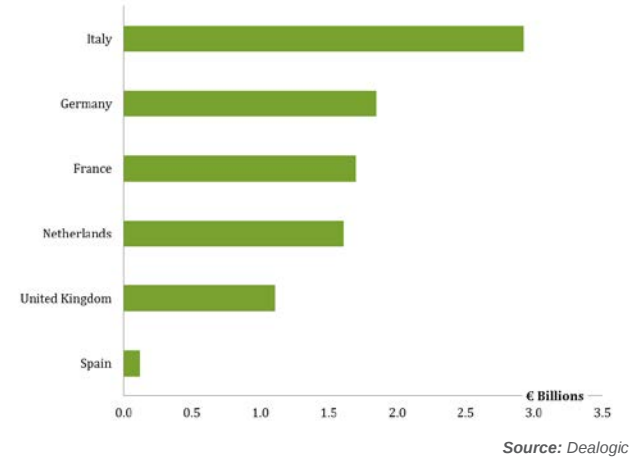
4.2 European Developed Market HY Issuance by Currency



4.3 European Developed Market HY Issuance by Industry



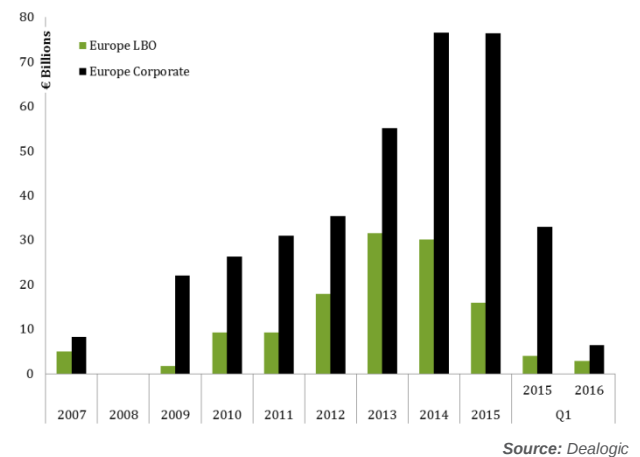
4.4 European Developed Market HY Issuance by Country of Risk



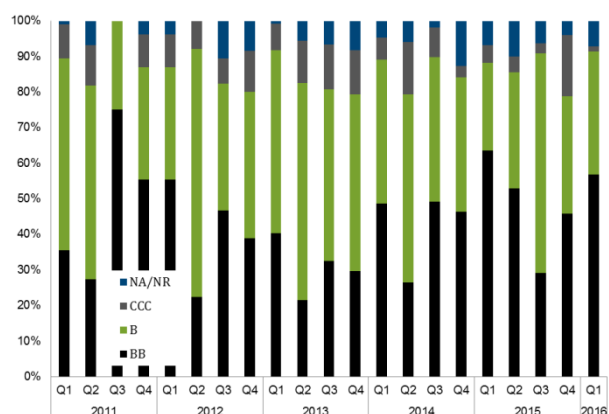
4.5 European Developed Market HY Issuance, Fixed vs. Floating



4.6 European Developed Market HY Issuance, Sponsored vs. Corporate

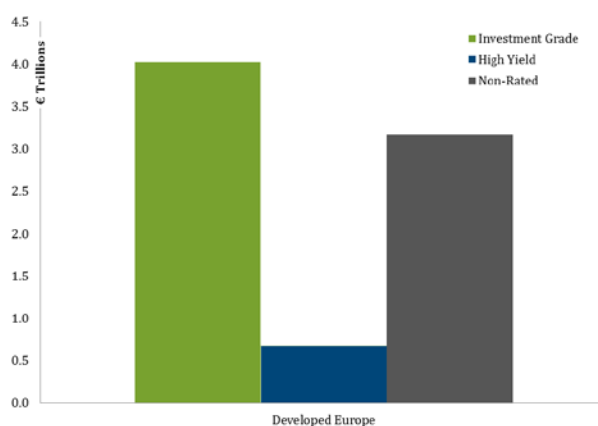


4.7 European Developed Market HY Rating Distribution at Issuance



Source: Dealogic, AFME, SIFMA

4.8 European Developed Market Corporate Bonds Outstanding



Source: Dealogic, AFME, SIFMA

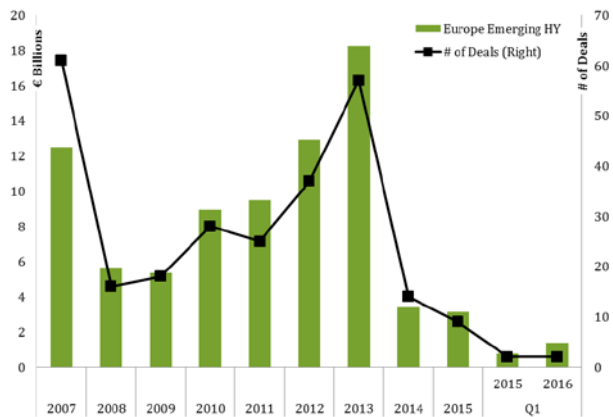
4.9 European Developed Market HY Bond Issuance

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moodys	S&P	Fitch
La Financiere Atalian SA - Atalian Global Services	Professional Services	12/01/2016	EUR	150	7.25	B2	B	
Telecom Italia SpA	Telecommunications	13/01/2016	EUR	750	3.63	Ba1	BB+	BBB-
Labeyrie Fine Foods SAS	Food & Beverage	03/02/2016	EUR	80	5.63		B	B+
Onorato Armatori SpA	Transportation	05/02/2016	EUR	300	7.75	Ba2	BB-	
WFS Global Holding SAS	Transportation	05/02/2016	EUR	100	9.50	B2	B	
			EUR	140	12.50	Caa1	CCC+	
Gaudi Synthetic 2015-I Designated Activity Co	Finance	18/02/2016	EUR	122	10.00	NA	NA	NA
Credito Valtellinese Scarl - Creval	Finance	26/02/2016	EUR	30	1.50	NA	NA	NA
Teamsystem SpA	Computers & Electronics	01/03/2016	EUR	150	3M EURIBOR +800			
ThyssenKrupp AG	Metal & Steel	01/03/2016	EUR	750	2.75	Ba2	BB	BB+
Lincoln Finance Ltd	Finance	10/03/2016	EUR	1,250	6.88	B1	BB+	BB-
			USD	400	7.38			
CNH Industrial Capital LLC	Finance	14/03/2016	USD	500	4.88	Ba1	BB	
Dry Mix Solutions Investissements SAS	Construction/Building	15/03/2016	EUR	150	3M EURIBOR +550	B1	B	
ThyssenKrupp AG	Metal & Steel	15/03/2016	EUR	100	2.75	Ba2	BB	BB+
Faurecia SA	Auto/Truck	16/03/2016	EUR	700	3.63	Ba3		BB
HeidelbergCement AG	Construction/Building	21/03/2016	EUR	1,000	2.25	Ba1		BB+
Intelsat Jackson Holdings SA	Telecommunications	21/03/2016	USD	1,250	8.00	B1	B-	
Constellium NV	Metal & Steel	23/03/2016	USD	425	7.88 (P)	B2	B+	
Fiat Chrysler Automobiles NV	Auto/Truck	23/03/2016	EUR	1,250	3.75	B2	BB	BB-

Source: Bloomberg, Dealogic

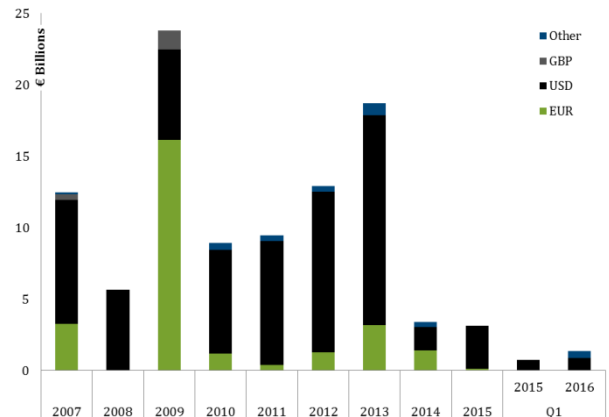
5 Issuance – European Emerging Market High Yield Bonds

5.1 European Emerging Market HY Bond Issuance



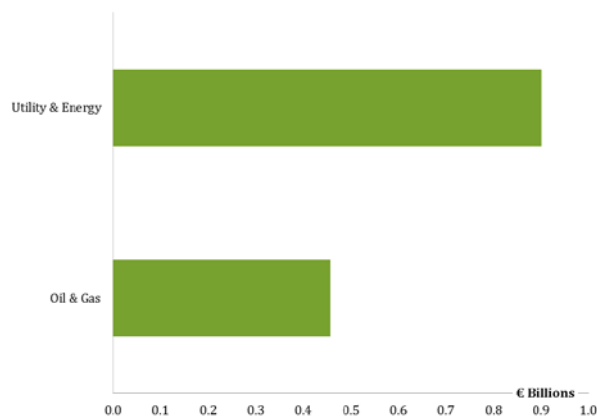
Source: Dealogic

5.2 European Emerging Market HY Bond Issuance by Currency



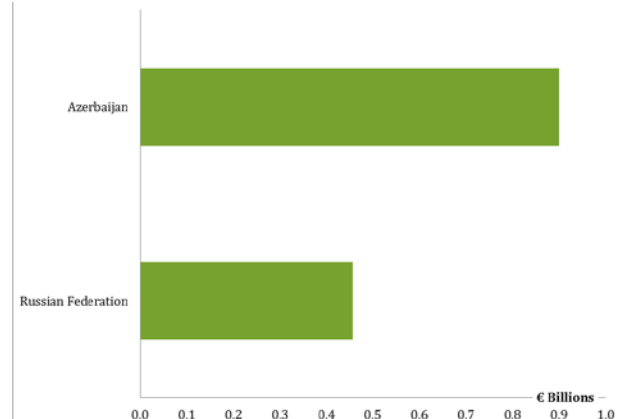
Source: Dealogic

5.3 European Emerging Market HY Issuance by Industry



Source: Dealogic

5.4 European Emerging Market HY Issuance by Country of Risk



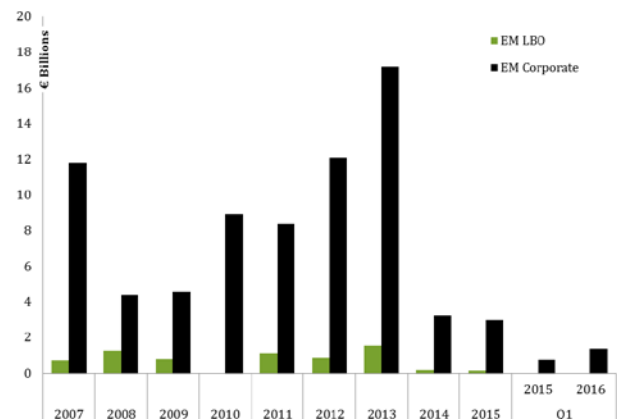
Source: Dealogic

5.5 European Emerging Market HY Issuance, Fixed vs. Floating



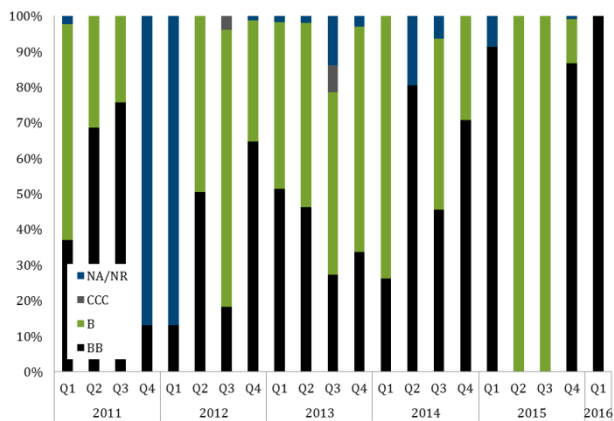
Source: Dealogic

5.6 European Emerging Market HY Issuance, Sponsored vs. Corporate



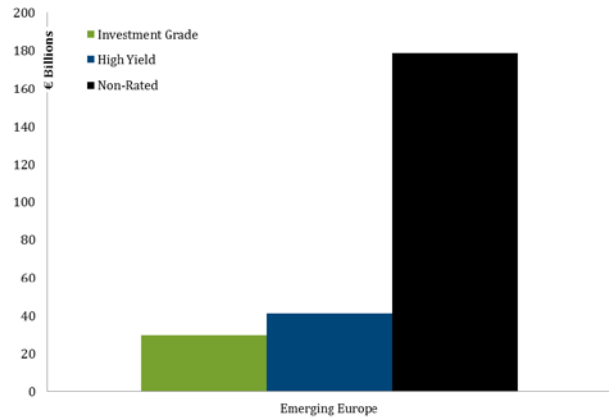
Source: Dealogic

5.7 European Emerging Market HY Rating Distribution at Issuance



Source: Dealogic, AFME, SIFMA

5.8 European Emerging Market Corporate Bonds Outstanding



Source: Bloomberg, AFME, SIFMA

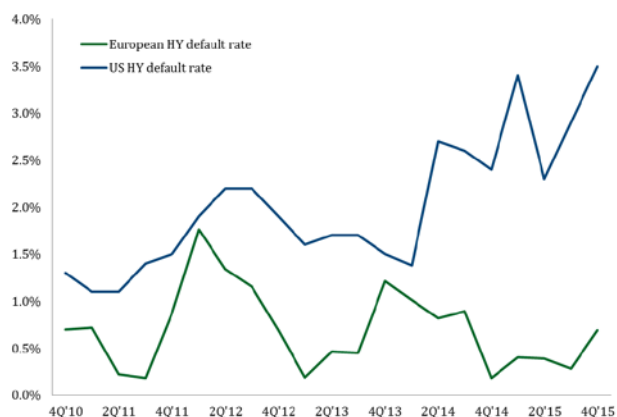
5.9 European Emerging Market HY Bond Issuance

Issuer	Industry Group	Date	Currency	Amount (Millions)	Coupon	Moody's	S&P	Fitch
Gazprom OAO	Oil & Gas	16/03/2016	CHF	500	3.375	Ba1	BB+	BBB-
Southern Gas Corridor CJSC	Utility & Energy	17/03/2016	USD	1,000	6.875	Ba1		BBB+

Source: Bloomberg, Dealogic

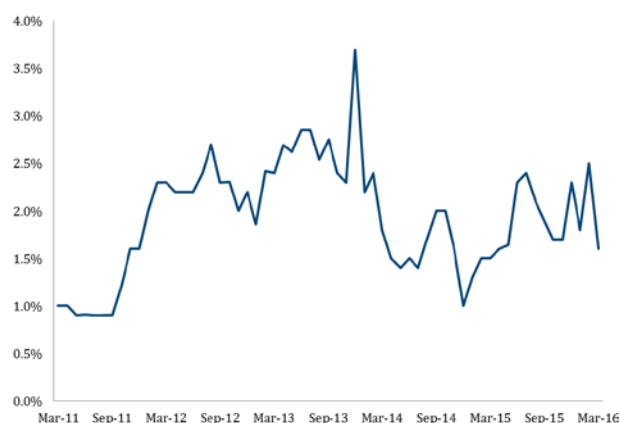
6 Credit Quality

6.1 European and US HY Default Rate⁸



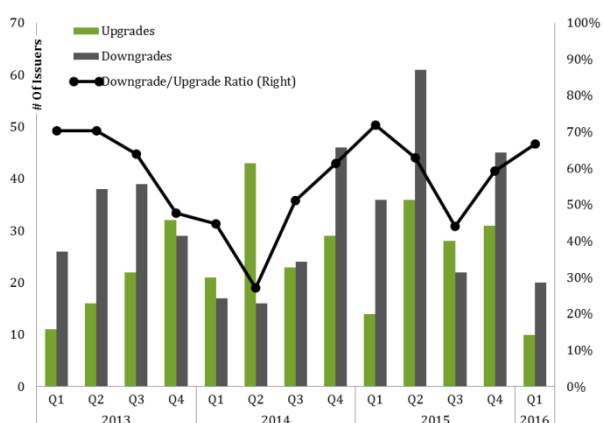
Source: Fitch Leveraged Credit Database

6.2 European HY Default Rate



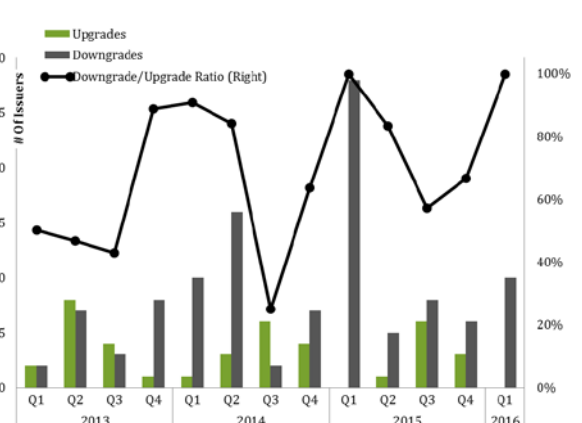
Source: Standard & Poor's

6.3 Developed Europe Issuer Rating Actions⁹



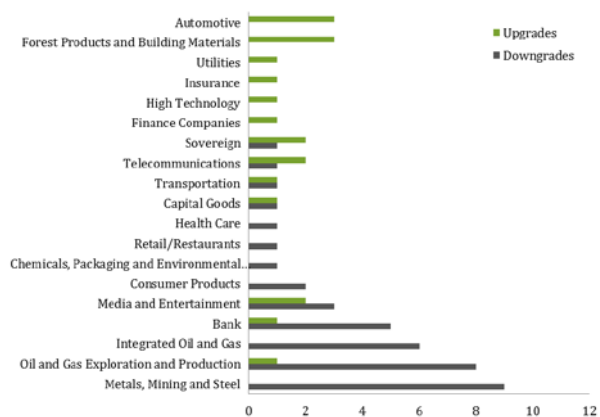
Source: Standard & Poor's

6.4 Emerging Europe Issuer Rating Actions¹⁰



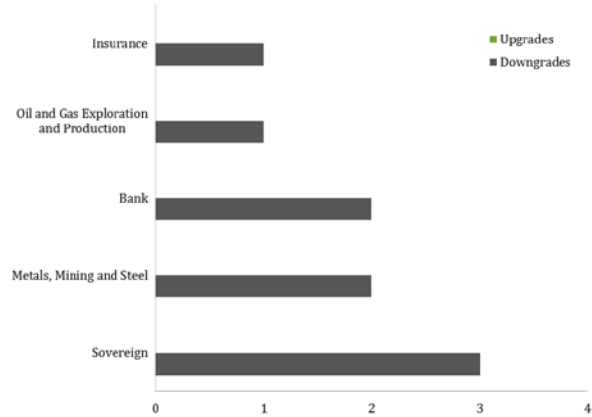
Source: Standard & Poor's

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

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

⁹ Numbers include both corporate and sovereigns.

¹⁰ Numbers include both corporate and sovereigns.

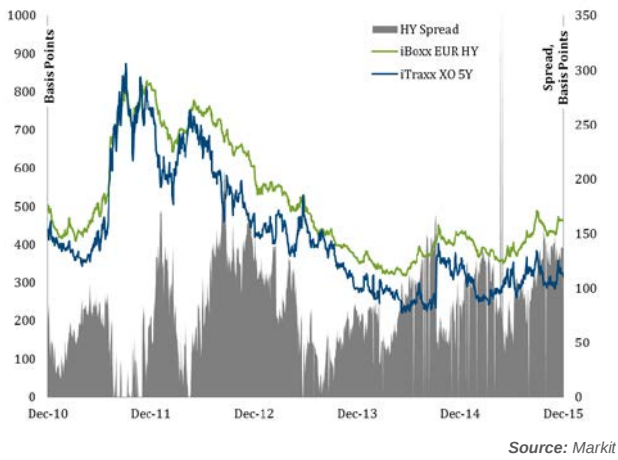
6.7 European Defaults

Issuer	Industry Group	Country	Date	Reported By	Reason
CB Intercommerz Ltd.	Bank	Russia	February 2016	S&P	Regulatory intervention

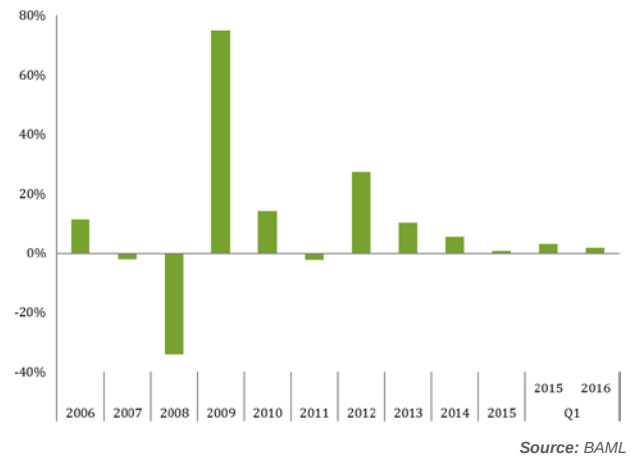
Source: Standard & Poor's

7 Relative Value and Total Return

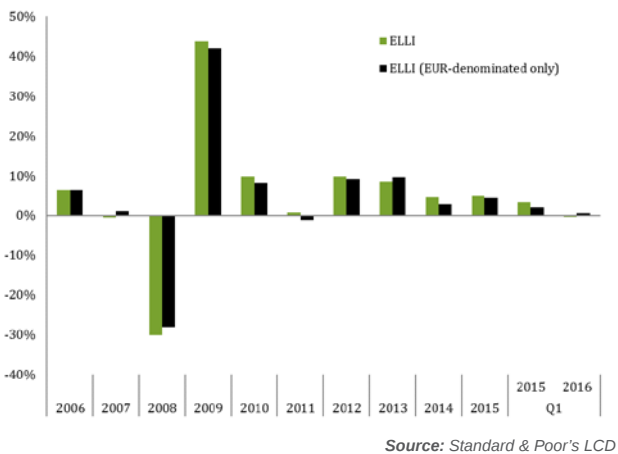
7.1 Relative value: European HY Bonds, Cash vs. Synthetic



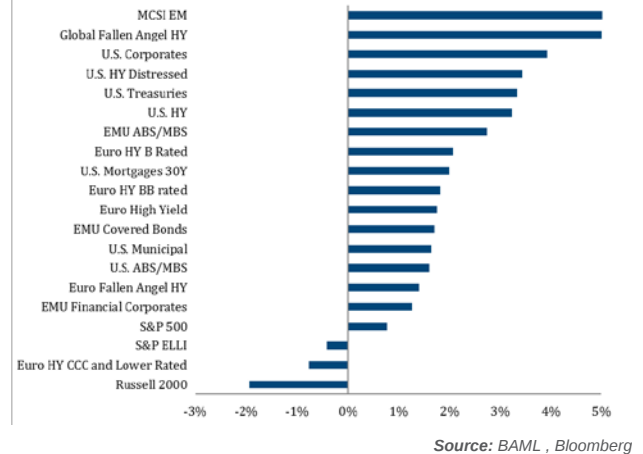
7.2 European HY Bond Total Return



7.3 European Leveraged Loan Total Return



7.4 Asset Class Total Return, Quarter



Summary of the Methodologies Adopted for this Report

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 2nd 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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