

European High Yield & Leveraged Loan Report

European Leveraged Finance

Q1: 2019





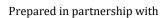




Table of Contents

Та	ble of Contents	2
Hi	ghlights and Market Environment	4
	Issuance Highlights	
	Market and Economic Environment Issuance: Leveraged Loans	
	Issuance: High Yield Bonds	
	Returns & Credit Quality	
1	Leveraged Finance Overview	8
	1.1 European Leveraged Issuance by Type	
	1.2 European Leveraged Issuance Percentage	
	 1.3 European Leveraged Average Deal Size 1.4 Bank Credit Standards 	
	 1.5 Factors Affecting Bank Credit Standards: April 2019. 	
	1.6 European Leveraged Issuance Percentage	
	1.7 Factors Affecting Loan Demand: April 2019	
2	1.8 Global Comparison – High Yield Issuance	
2	2.1 European Leveraged Loan Issuance By Type	
	 2.1 European Leveraged Loan Issuance by Type	
	2.3 Forward Pipeline of Leveraged Loan Market	10
	2.4 ELLI Total Institutional Loans Outstanding	
	 2.5 ELLI Ratings Diversification 2.6 Institutional, Pro Rata and Mezzanine Spreads 	
3	Issuance – High Yield Bonds Overview	
J	3.1 European High Yield Issuance	
	3.2 European High Yield Issuance by Sponsor	
	3.3 European Corporate Bonds Outstanding (IG and HY only)	
	 3.4 European Corporate Bonds HY Maturity Wall: 1Q 2019 3.5 European Corporate HY Bonds Outstanding By Sector: 1Q 2019 	
	 3.5 European Corporate HY Bonds Outstanding by Sector: 1Q 2019 3.6 European Corporate HY Bonds Outstanding by Current Rating: 1Q 2019 	
	3.7 European Corporate Bond Issuance by Rating: 1Q 2019	
	3.8 European Corporate Bond Issuance by Tenor: 1Q 2019	
	3.9 European HY Use of Proceeds	
4	Issuance – European Developed Market High Yield Bonds	
	 4.1 European Developed Market HY Bond Issuance	
	 4.3 European Developed Market HY Issuance by Industry: 1Q 2019 	
	4.4 European Developed Market HY Issuance by Country of Risk: 1Q 2019	13
	 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 	
	4.8 European Developed Market Corporate Bonds Outstanding: 1Q 2019	
	4.9 European Developed Market HY Bond Issuance	
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: 1Q 2019 	
	5.4 European Emerging Market HY Issuance by Country of Risk: 1Q 2019	
	5.5 European Emerging Market HY Issuance, Fixed vs. Floating	
	 5.6 European Emerging Market HY Issuance, Sponsored vs. Corporate 5.7 European Emerging Market HY Rating Distribution at Issuance 	
	 5.7 European Emerging Market HY Rating Distribution at Issuance 5.8 European Emerging Market Corporate Bonds Outstanding: 1Q 2019 	
	5.9 European Emerging Market HY Bond Issuance	
6	Credit Quality	17
	6.1 Developed Europe Issuer Rating Actions	
	6.2 Emerging Europe Issuer Rating Actions	
	 6.3 Developed European Industry Rating Actions by Number of Ratings: 1Q 2019 6.4 Emerging European Industry Rating Actions by Number of Ratings: 1Q 2019 	
	 6.5 European High Yield Default Rates	
	6.6 European Leveraged Loan Default Rates	17
	6.7 High-Yield bond CDS spreads vs. liquidity-stress index and HY bonds rated B3 neg and lower in Europe	
7	6.8 European Defaults	18 19

Table of Contents

7.1	Relative value: European HY Bonds, Cash vs. Synthetic	.19
7.2	European HY Bond Total Return	.19
	European Leveraged Loan Total Return	
	Asset Class Total Return: 1Q 2019	
	ary of the Methodologies Adopted for this Report	
Annex.		.24

Highlights and Market Environment

Highlights

Issuance Highlights

European leveraged finance issuance (leveraged loans and high yield bonds) increased to \notin 41.9 billion in 1Q'19, a 19.0% increase from \notin 35.2 billion in 4Q'18 but a 53.8% decrease from \notin 90.6 billion in 1Q'18. This quarterly increase was driven solely by an increase in high yield bonds issuance, while issuance of leveraged loans declined. The high yield bond share of leveraged finance market issuance increased to 40.5% in 1Q'19, up from only 19.7% in 4Q'18 and up from 27.5% in 1Q'18.

Market and Economic Environment

According to the April 2019 European Central Bank lending survey, credit standards remained broadly unchanged for loans to enterprises while credit standards for housing loans and consumer credit tightened in 1Q'19.

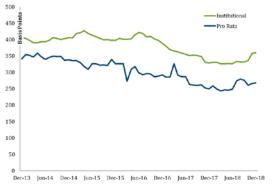
Credit standards remained broadly unchanged for loans to small and medium-sized enterprises (SMEs) and continued to ease for loans to large firms in 1Q'19.

Bank's cost of funds and balance sheet constraints contributed substantially to a tightening of credit standards on housing loans and consumer credit in 1Q'19.

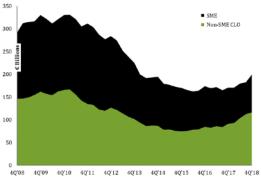
Net demand for loans to enterprises remained unchanged in 1Q'19 while net demand continued to increase for housing loans and consumer credit. The main factor positively impacting net demand in 1Q'19 was the relatively low general level of interest rates and fixed investment.

"European leveraged finance issuance (leveraged loans and high yield bonds) totaled €41.9 billion in 1Q'19" "Leveraged loan issuance totaled \in 24.9 billion on 41 deals in 1Q'19"





Source: Dealogic, AFME, SIFMA



European CLO Outstanding

Issuance

Issuance: Leveraged Loans

Leveraged loan issuance, including first lien, second lien, and mezzanine financing, decreased to \notin 24.9 billion in the first quarter of 2019, a 11.9% decrease from \notin 28.2 billion in 4Q'18 and a 62.1% decrease from \notin 65.7 billion in 1Q'18.

Most of the leveraged loans issued in 1Q'19 were 1st lien loans (\notin 24.4 billion or 98.1% of total). One 2nd lien loan (\notin 0.1 billion) and no mezzanine loans were financed in 1Q'19.

Pricing spreads for institutional loans widened by 25 basis points (bps) q-o-q and by 58 bps y-o-y while spreads for pro rata loans widened by 12 bps q-o-q and by 36 bps y-o-y.

In 1Q'19, \notin 7.4 billion of amend-and-extend ("A&E") loans were financed, down 3.1% from \notin 7.6 billion in 4Q'18 and by 51.9% from \notin 15.4 billion in 1Q'18. No loans has been amended to reduce pricing ("A&R")in the first quarter of 2019, down from \notin 0.6 billion of A&R loans in 4Q'18 and down from \notin 0.4 billion in 1Q'18.

The top three sectors accounted for over half of leveraged loan issuance in 1Q'19; the leading sector was auto/truck (\notin 7.4 billion or 29.7% or total), followed by healthcare (\notin 3.1 billion, 12.6%), and professional services (\notin 2.7 billion, 11.0%), with the balance split between 14 other sectors.

Over one third (37.0%) of deals financed in the first quarter of 2019 were issued for refinancing and/or repayment of debt, down from 66.7% in 4Q'18 and down from 42.0% in 1Q'18. Refinancing and/or repayment of debt were the largest use of proceeds in 1Q'19 with €9.2 billion, followed by leveraged buyouts with €6.5 billion or 26.2% of the total, and acquisitions with €5.7 billion or 22.8% of the total.

European CLO outstandings, including SME deals, decreased by 1.4% to €196.2 billion in 1Q'19 from €198.9 billion in 4Q'18 but increased by 14.7% from €171.0 billion in 1Q'18. Non-SME CLOs outstanding increased to €118.3 billion in 1Q'19, up 1.7% from €116.3 billion in 4Q'18 and up 27.6% from €92.8 in 1Q'18. SME CLOs outstanding decreased to €77.8 billion in 1Q'19, down 5.7% from €82.5 billion in 4Q'18 and down 0.5% from €78.2 billion in 1Q'18.

Source: AFME, SIFMA

Issuance: High Yield Bonds

"Primary high yield issuance totaled $\in 17.0$ billion on 38 deals in 1Q'19" Primary high yield issuance totaled €17.0 billion on 38 deals in 1Q'19, a 145.1% increase from €6.9 billion on 22 deals in 4Q'18 but a 31.9% decrease from €24.9 billion on 71 deals in 1Q'18. In developed market Europe, €10.4 billion of high yield bonds were issued, up 49.8% from €6.9 billion in 4Q'18 but down 46.4% from €19.4 billion in 1Q'18. In emerging market Europe €6.6 billion in high yield bonds were issued in 1Q'19, up from no issuance in 4Q'18 and up from €5.5 billion in 1Q'18.

In the first quarter of 2019, average deal size in developed market Europe increased by 49.8% to €471.5 million from €314.7 million in 4Q'18 and by 33.9% from €352.1 million in 1Q'18. Average deal size in emerging market Europe was €412.1 million in 1Q'19, up 19.1% from €350.7 million in 1Q'18.

The leading use of proceeds for high yield bonds issuance in 1Q'19 were general corporate purposes with €6.3 billion, which was up 126.8% from €2.8 billion in 4Q'18 but down 22.7% from €8.2 billion in 1Q'18. In emerging market Europe, €4.9 billion was issued for general corporate purposes in 1Q'19, up from no issuance for this purposed in 4Q'18 and up 28.0% from €3.8 billion in 1Q'18. High yield issuance for refinancing and/or repayment of debt in developed market Europe increased to €2.4 billion in 1Q'19, representing 22.7% of all issuance, a twofold increase from €1.2 billion (17.0% of total) in 4Q'18 but a decrease of 55.1% from €5.2 billion (27.0% of total) in 1Q'18.

Three sectors accounted for over two thirds (69.1%) of the total high yield issuance volume in 1Q'19 in developed market Europe: the finance sector led issuance with €3.0 billion (28.9% of total), followed by telecommunications with €2.7 billion (25.7% of total), and metal & steel with €1.5 billion (14.5% of total). In emerging market Europe the top three sectors were: finance (€2.7 billion or 41.1% of total), followed by telecommunications (€1.4 billion, 20.7%) and auto/truck (€0.7 billion, 10.0%).

The proportion of USD-denominated issuance increased to 52.4% of all issuance in 1Q'19, up from only 8.8% in 4Q'18 and from 43.1% in 1Q'18. USD-denominated issuance in developed market Europe decreased to €0.8 billion, or 7.2% of issuance, up 23.3% from €0.6 billion (8.8% of total) in 4Q'18 but down 86.3% from €5.5 billion (28.3% of total) in 1Q'18. Of high yield bonds issued in emerging market Europe, €5.2 billion (79.0% of total) was denominated in USD, up from no issuance in 4Q'18 but down 0.9% from €5.3 billion (94.9% of total) in 1Q'18.

"S&P 500 Index led returns in 1Q'19 with 7.3% y-o-y"

"Four European high yield bond issuers defaulted in 1Q'19"

Returns & Credit Quality

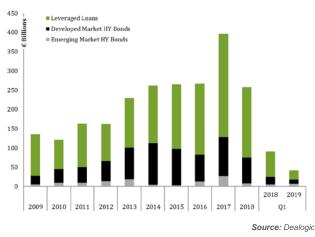
Of the 20 analysed asset classes, 17 recorded positive yearover-year (y-o-y) returns in the first quarter of 2019. S&P 500 Index led y-o-y returns with an increase of 7.3% in 1Q'19, followed by U.S. High Yield Index with a 5.9% gain yo-y and U.S. Municipal Index with a 5.2% gain y-o-y. The worst performing asset class was the MSCI EM Index with a decrease of 9.6% y-o-y in 1Q'19, followed by Euro HY CCC and Lower Rated Index with a 4.1% loss y-o-y, and U.S. HY Distressed Index with a 2.7% decrease y-o-y.

As of March 2019, S&P reported the trailing 12-month speculative-grade default rate at 2.0%, an increase from 1.9% end-December 2018 but a decrease from 2.1% end-March 2018. Moody's reported the trailing 12-month speculative-grade default rate in March 2019 to be 0.9%, down from 1.3% end-December 2018 and down from 3.1% end-march 2018.

Four bond-related defaults were reported in the first quarter of 2019, three in developed market Europe and one in emerging market Europe. The most common reason for default in 1Q'19 was distressed exchange.

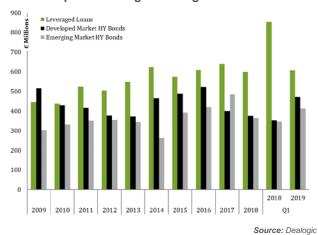
According to Standard and Poor's, in 1Q'19 downgrades exceeded upgrades in developed market Europe (26 downgrades to 13 upgrades), a much worse ratio than 39 downgrades to 27 upgrades in 4Q'18 and the 20 downgrades to 22 upgrades in 1Q'18. In emerging market Europe, there were 4 upgrades and 2 downgrades by S&P in 1Q'19 compared to 3 upgrades and 2 downgrades in 4Q'18 and 11 upgrades and no downgrades in 1Q'18. Three sectors accounted for over a third (40.0%) of all the rating actions in 1Q'19: retail/restaurants led the number of rating actions (1 upgrade, 7 downgrades), followed by media and entertainment (1 upgrade, 5 downgrades), and bank (3 upgrades, 2 downgrades).

1 Leveraged Finance Overview



1.1 European Leveraged Issuance by Type

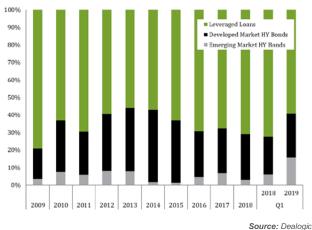
1.3 European Leveraged Average Deal Size



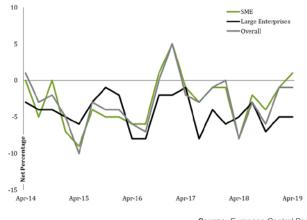
1.5 Factors Affecting Bank Credit Standards: April 2019²

35 Costs to Bank Capital Position entage Industry or Firm-Specific Outlook 25 Per General Economic Situation and Oulook 15 N Bank's Risk Tolerance 5 Bank's Liquidity Position 0 Bank Access to Market Financing 0 -5 Risk on Collateral Demanded .2 -15 Competition from Market Financing -2 I Competition from Non-Banks -25 Competition from Banks-14 Net Percentage -5 -35 Apr-14 Apr-15 -15 -10 -5 Source: European Central Bank

1.2 European Leveraged Issuance Percentage

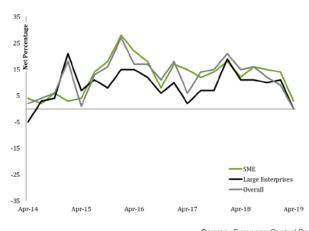


1.4 Bank Credit Standards¹



Source: European Central Bank





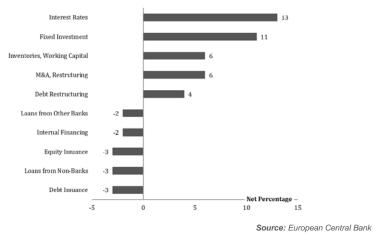
Source: European Central Bank

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

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

1.7 Factors Affecting Loan Demand: April 2019⁴



1.8 Global Comparison – High Yield Issuance

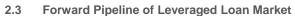
	2019	2018				2017					Prior Years			
						Full					Full			
€ Billions	Q1	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year	2016	2015	2014
United States	48.0	38.4	32.1	34.9	10.4	115.8	58.5	62.6	51.2	48.0	220.3	192.0	187.6	164.4
Europe	17.0	24.9	25.4	17.7	6.9	74.9	35.3	34.5	19.4	38.6	127.9	82.1	97.8	112.4
Asia Pacific	29.0	18.3	12.7	8.2	11.3	50.5	20.2	23.2	21.7	11.5	76.6	27.1	25.2	27.1

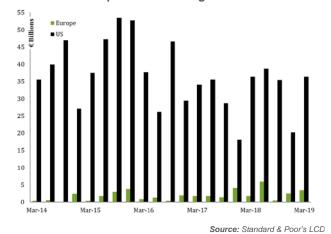
Source: Dealogic

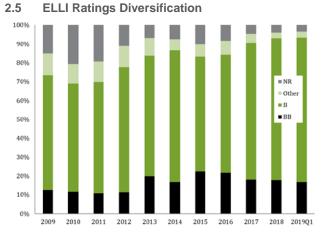
⁴ A positive net percentage signifies a factor that contributed to higher demand; a negative net percentage signifies a factor that contributed to lower demand.

2 Issuance – Leveraged Loans

2.1 European Leveraged Loan Issuance By Type

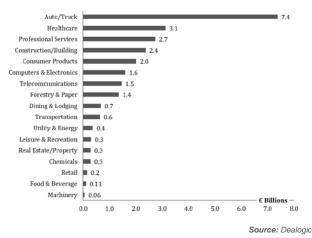




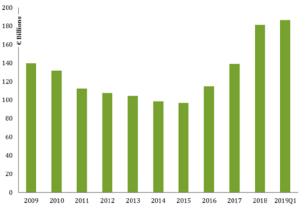


Source: Standard & Poor's LCD

2.2 European Leveraged Loan Issuance by Industry: 1Q 2019

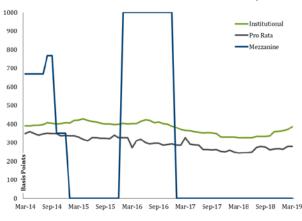


2.4 ELLI Total Institutional Loans Outstanding



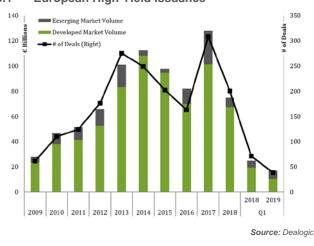
Source: Standard & Poor's LCD

2.6 Institutional, Pro Rata and Mezzanine Spreads



Source: Dealogic, AFME, SIFMA

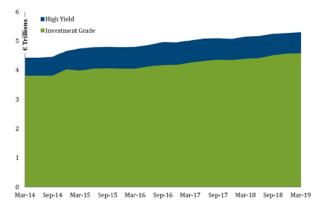
3 Issuance – High Yield Bonds Overview



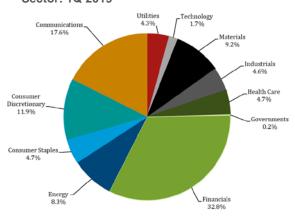
3.1 European High Yield Issuance







Source: Bloomberg, AFME, SIFMA

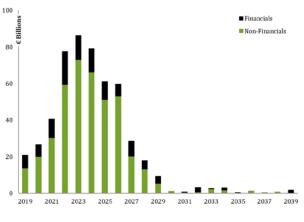


^{3.5} European Corporate HY Bonds Outstanding By Sector: 1Q 2019

3.2 European High Yield Issuance by Sponsor

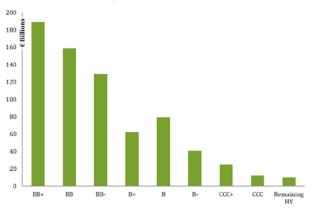


3.4 European Corporate Bonds HY Maturity Wall: 1Q 2019



Source: Bloomberg, AFME, SIFMA

3.6 European Corporate HY Bonds Outstanding by Current Rating: 1Q 2019



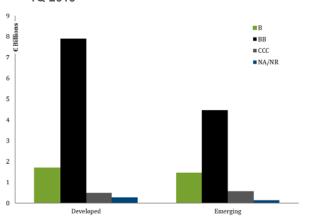
Source: Bloomberg, AFME, SIFMA

Source: Bloomberg, AFME, SIFMA

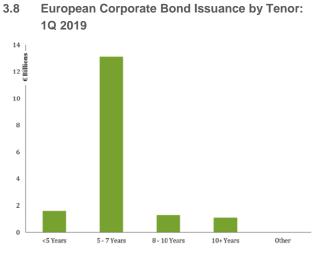
Issuance – High Yield Bonds Overview



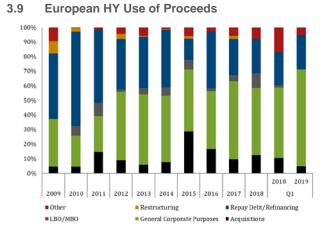
3.7



Source: Dealogic, AFME, SIFMA



Source: Dealogic, AFME, SIFMA

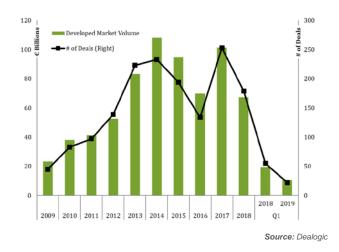


Source: Dealogic, AFME, SIFMA

European High Yield & Leveraged Loan Report Page 12

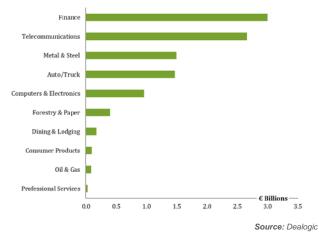


4 Issuance – European Developed Market High Yield Bonds

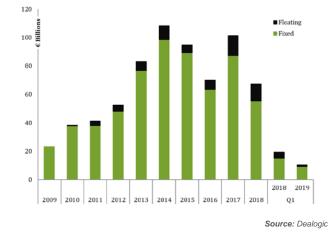


4.1 European Developed Market HY Bond Issuance

4.3 European Developed Market HY Issuance by Industry: 1Q 2019



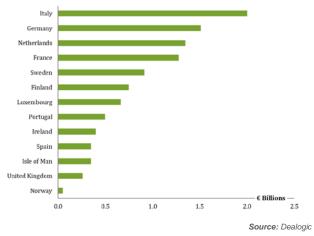




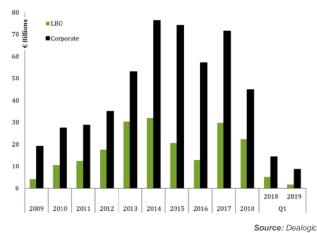
4.2 European Developed Market HY Issuance by Currency



4.4 European Developed Market HY Issuance by Country of Risk: 1Q 2019



4.6 European Developed Market HY Issuance, Sponsored vs. Corporate

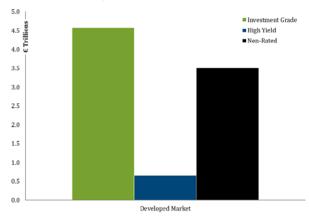


European High Yield & Leveraged Loan Report Page 13

Issuance – European Developed Market High Yield Bonds



4.8 European Developed Market Corporate Bonds Outstanding: 1Q 2019



Source: Bloomberg, AFME, SIFMA

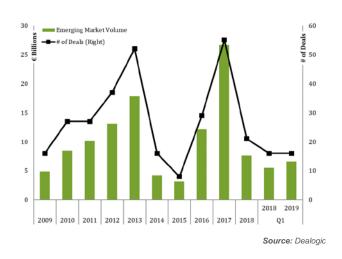
4.9 European Developed Market HY Bond Issuance

				Amount			
lssuer	Industry Group	Date	Currency	(Millions)	Coupon Moodys	S&P	Fitch
Telecom Italia SpA	Telecommunications	08/01/2019	EUR	1,250	4.00 Ba1	BB+	BB+
Abanca Corporacion Bancaria SA	Finance	11/01/2019	EUR	350	6.13 Ba3	NR	BB+
Millennium BCP	Finance	24/01/2019	EUR	400	9.25 B3	CCC+	B-
Stonegate Pub Co Financing plc	Dining & Lodging	30/01/2019	GBP	150	3M LIBOR +625 B2	B-	NR
Smurfit Kappa Acquisitions Unlimited Co	Forestry & Paper	30/01/2019	EUR	400	2.88 Ba1	BB+	BB+
Parts Europe SA	Auto/Truck	30/01/2019	EUR	175	3M EURIBOR +550 B3	В	NR
Quant AB	Professional Services	06/02/2019	EUR	28	3M EURIBOR +600 NR	NR	NR
Dometic Group AB	Consumer Products	13/02/2019	SEK	1,000	2.00 NR	NR	NR
ThyssenKrupp AG	Metal & Steel	18/02/2019	EUR	1,500	2.88 Ba2	BB	BB+
Volvo Car AB	Auto/Truck	20/02/2019	SEK	2,000	3M STIBOR +230 Ba1	BB+	NR
Rexel SA	Computers & Electronics	26/02/2019	EUR	600	2.75 Ba3	BB-	NR
Playtech plc	Computers & Electronics	28/02/2019	EUR	350	4.25 Ba2	BB	NR
Banco BPM SpA	Finance	01/03/2019	EUR	750	2.00 Ba2	NR	NR
Nokia Oyj	Telecommunications	04/03/2019	EUR	750	2.00 Ba1	BB+	BBB-
Siccar Point Energy Bonds plc	Oil & Gas	06/03/2019	USD	100	9.00 NR	NR	NR
Faurecia SE	Auto/Truck	13/03/2019	EUR	500	3.13 Ba1	BB+	BB+
Millicom International Cellular SA	Telecommunications	14/03/2019	USD	750	6.25 Ba2	NR	BB+
Axactor SE	Finance	22/03/2019	EUR	50	3M EURIBOR +700 NR	NR	NR
Volvo Car AB	Auto/Truck	26/03/2019	EUR	600	2.13 Ba1	BB+	NR
Gamigo AG	Computers & Electronics	26/03/2019	EUR	10	3M EURIBOR +775 NR	NR	NR
incoln Financing SARL	Finance	27/03/2019	EUR	750	3.63 B1	BB+	BB-
incoln Financing SARL*	Finance	27/03/2019	EUR	600	3M EURIBOR +387.5 B1	BB+	BB-
Caixa Economica Montepio Geral	Finance	27/03/2019	EUR	100	10.50 Caa2	NR	B-

* denotes multiple tranches of the deal

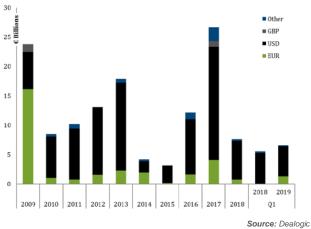
Source: Dealogic

5 Issuance – European Emerging Market High Yield Bonds



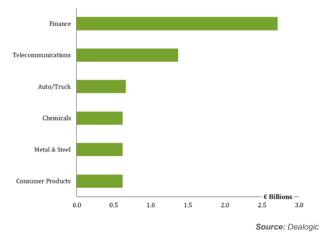
5.1 European Emerging Market HY Bond Issuance



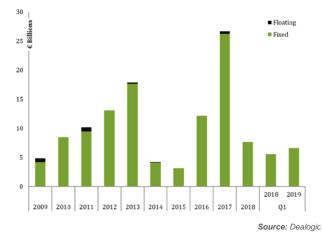


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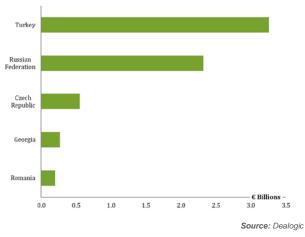
5.3 European Emerging Market HY Issuance by Industry: 1Q 2019



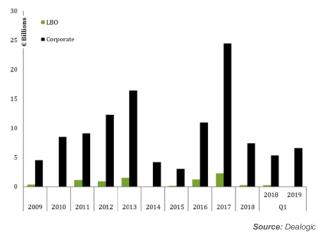
5.5 European Emerging Market HY Issuance, Fixed vs. Floating



5.4 European Emerging Market HY Issuance by Country of Risk: 1Q 2019



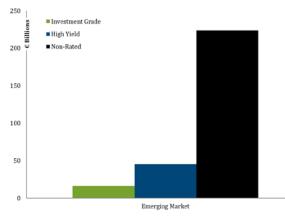
5.6 European Emerging Market HY Issuance, Sponsored vs. Corporate



Issuance – European Emerging Market High Yield Bonds



5.8 European Emerging Market Corporate Bonds Outstanding: 1Q 2019



Source: Bloomberg, AFME, SIFMA

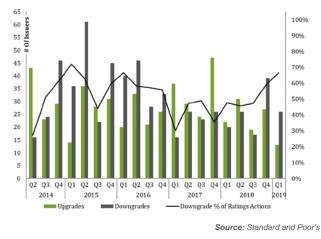
5.9 European Emerging Market HY Bond Issuance

				Amount			
Issuer	Industry Group	Date	Currency	(Millions)	Coupon Moodys	S&P	Fitch
Yapi ve Kredi Bankasi AS	Finance	09/01/2019	USD	400	13.875 Caa1	NR	NR
Yapi ve Kredi Bankasi AS*	Finance	09/01/2019	USD	250	13.875 Caa1	NR	NR
Digi Communications NV	Telecommunications	07/02/2019	EUR	200	5.000 B1	BB-	NR
Credit Bank of Moscow	Finance	12/02/2019	EUR	500	5.150 NR	BB-	BB-
Turk Telekomunikasyon AS	Telecommunications	21/02/2019	USD	500	6.875 NR	BB-	BB+
KOC Holding AS	Auto/Truck	05/03/2019	USD	750	6.500 Ba2	BB-	NR
EuroChem Finance dac	Chemicals	06/03/2019	USD	700	5.500 Ba3	NR	BB
Yapi ve Kredi Bankasi AS	Finance	07/03/2019	USD	500	8.250 B1	NR	BB-
Sisecam	Consumer Products	07/03/2019	USD	550	6.950 Ba2	NR	BB+
Credit Bank of Moscow	Finance	18/03/2019	USD	500	7.121 NR	BB-	BB-
Sisecam	Consumer Products	19/03/2019	USD	150	6.950 Ba2	NR	BB+
Turkiye Vakiflar Bankasi TAO - VakifBank	Finance	21/03/2019	USD	600	8.125 B1	NR	B+
PPF Arena 1 BV	Telecommunications	21/03/2019	EUR	550	3.125 Ba1	BB+	BBB-
Tinkoff Bank AO	Finance	22/03/2019	RUB	10,000	9.500 NR	NR	NR
Bank of Georgia Group plc	Finance	22/03/2019	USD	100	11.125 NR	NR	B-
Silknet JSC	Telecommunications	26/03/2019	USD	200	11.000 B1	NR	B+
Evraz plc	Metal & Steel	26/03/2019	USD	700	5.250 Ba2	BB+	BB+

* denotes multiple tranches of the deal

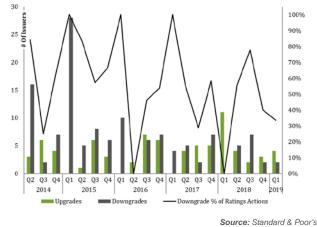
Source: Dealogic

6 Credit Quality

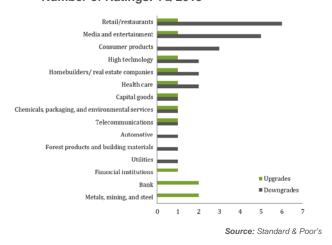


6.1 Developed Europe Issuer Rating Actions⁵

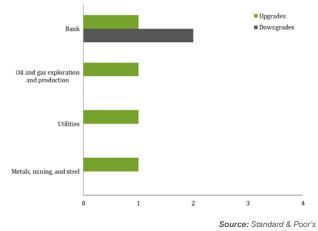


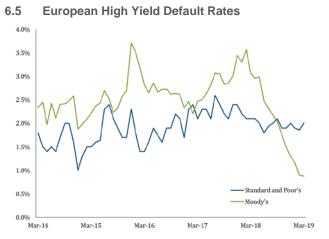


6.3 Developed European Industry Rating Actions by Number of Ratings: 1Q 2019



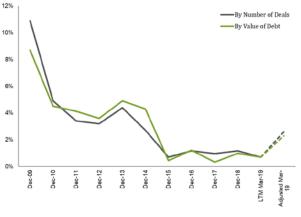






Source: Standard & Poor's, Moody's

6.6 European Leveraged Loan Default Rates⁷

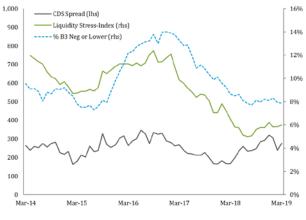


Source: Fitch Leveraged Credit Database

⁵ Numbers include both corporate and sovereigns.

⁶ Numbers include both corporate and sovereigns.

⁷ 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

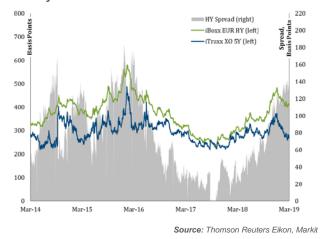
6.8 European Defaults

lssuer	Industry Group	Country	Date	Reported By	Reason
New Look Retail Group Ltd.	Retail/restaurants	U.K.	January 2019	S&P	Distressed exchange
Tsesnabank	Bank	Kazakhstan	February 2019	S&P stresse	d exchange/out-of-court restructuring
Novasep Holding S.A.S.	Healthcare	France	February 2019	S&P	Distressed exchange
Nyrstar N.V.	Metals, mining, and steel	Belgium	March 2019	S&P	Missed interest payments

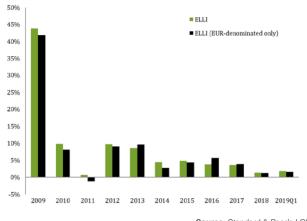
Source: Standard & Poor's, Moody's

7 Relative Value and Total Return

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

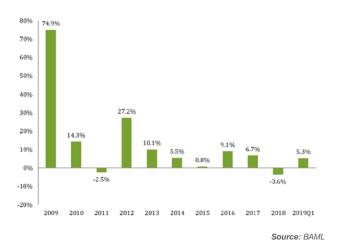


7.3 European Leveraged Loan Total Return



Source: Standard & Poor's LCD

7.2 European HY Bond Total Return



7.4 Asset Class Total Y-o-Y Return: 1Q 2019



Source: BAML , Bloomberg

European High Yield & Leveraged Loan Report Page 19

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 Dealogic. Leveraged loan data are defined primarily as coming from a leveraged or highly leveraged European deal; loan tranches must have subinvestment 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. Totals include issues having a Dealogic "deal nationality/region" as well as "nationality/region of risk" within US, Europe or Asia Pacific. Sovereign, sub-sovereign, and supranational parent issuers are excluded from issuance, as well as ABS/MBS issuers.

2. Issuance – Leveraged Loans

2.1. – 2.2. Leveraged Loan Issuance

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

2.3. Forward Pipeline of Leveraged Loan Market

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

2.4. S&P ELLI Total Institutional Loans Outstanding

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

2.5. S&P ELLI Ratings Diversification

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

2.6. – 2.7. Loan Spreads

Loan spread data are sourced from Dealogic under our criteria for leveraged loans (see Section 1). For purposes of loan spread calculations, deals marketed in the US are excluded. Spreads are a weighted average of spread margin on new leveraged issuance on a rolling twelve months basis, and are typically benchmarked to LIBOR or EURIBOR. Institutional loan spread data are inclusive of 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 \notin 75.0 million; deals on the same day from the same issuer are aggregated for the purpose of meeting this minimum. Deals are shown in EUR amount but

include deals originated in other currencies and are converted to EUR at the exchange rate on the day of the deal. Russian ruble (RUB)-denominated issuance are excluded due to differences in terms and documentation; as of 4Q'10 this criteria no longer applies and may be included on a case by case basis.

3.2. European HY Issuance by Sponsor

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

3.3. – 3.6. European Corporate Bonds Outstanding

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

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

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

3.7. European Corporate Bond Issuance by Rating

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

3.8. European Corporate Bond Issuance by Tenor

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

3.9. European HY Issuance By Use of Proceeds

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

4. Issuance – European Developed Market High Yield Bonds

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

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

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

4.8. European Developed Market Corporate Bonds Outstanding

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

5. Issuance – European Emerging Market High Yield Bonds

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

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

Emerging market European issuance deals are predominantly from Eastern Europe but will also additionally include Turkey, the Russian Federation, Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, Azerbaijan, and Kyrgyzstan. Certain subinvestment 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.

Summary of the Methodologies Adopted for this Report

6. Credit Quality

6.1. – 6.2. European Issuer Rating Actions

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

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

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

6.5. European High Yield Default Rate

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

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

6.6. – 6.7. European Leveraged Loan Default Rate

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

6.8. Leveraged Loan Recovery Rates

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

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

The liquidity stress index is calculated by Moody's Investor Services as the percentage of speculative

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

The percentage of bonds rated B3 negative or lower is sourced from Moody's

6.10. European Defaults

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

7. Cash and Synthetic

7.1. Loans and Bonds, Cash and Synthetic

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

7.2. European HY Bond Total Return

European HY bond total return data are sourced from the Bank of America-Merrill Lynch's Euro High Yield Index (HE00). The index tracks the performance of **EUR-denominated** belowinvestment-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. Fixedto-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 EURdenominated 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 indice

Annex

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London Office

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

Switchboard: +44 (0)20 3828 2700

Brussels Office

Rue de la Loi, 82 1040 Brussels Belgium

Switchboard: +32 (0) 2 788 3971

SIFMA Research

Katie Kolchin, CFA

Justyna Podziemska

research@sifma.org

Frankfurt Office

Skyper Villa Taunusanlage 1 60329 Frankfurt am Main Germany

Switchboard: +49 (0) 69 5050 60 590

AFME

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

Sharon Sung

www.afme.eu

www.sifma.org

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