Citi Fixed Income Indices

December 31, 2017

European High-Yield Market Index

Credit | Multi-Currency



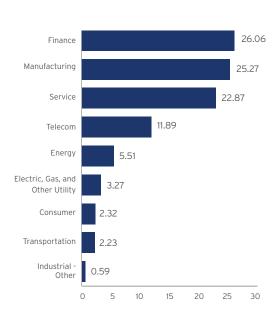
INDEX PROFILE

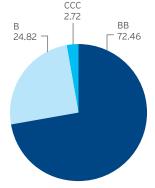
Description	# of issues	Par Amount*	Market Value*	Market Weight (%)	Average Coupon (%)	Average Life (Years)	Yield to Maturity (%)	Effective Duration	OAS (bps)
European High-Yield Market Index	645	340.36	361.81	100.00	4.80	5.65	3.24	3.86	304
EUR	508	285.28	303.43	83.86	4.49	5.72	2.97	3.87	290
GBP	122	51.34	54.61	15.09	6.65	5.35	4.84	3.87	384
CHF	15	3.74	3.77	1.04	3.00	4.89	2.04	3.20	260
Cash Pay	619	327.43	349.61	96.63	4.79	5.51	3.26	3.86	306
Deferred Interest	26	12.93	12.21	3.37	5.05	9.35	2.75	3.96	241
1-3 years	122	68.72	74.15	20.49	5.42	1.97	2.10	1.76	247
3-5 years	209	103.59	110.90	30.65	5.15	4.02	3.55	2.75	334
5-7 years	187	95.17	101.17	27.96	4.45	5.96	3.45	4.25	312
7-10 years	95	57.82	60.87	16.82	3.99	8.00	3.39	6.48	301
10+ years	31	14.56	14.21	3.93	4.93	23.54	4.86	9.64	325
Industrial	415	201.67	212.68	58.78	4.61	5.45	3.48	3.84	321
Utility	75	50.79	54.86	15.16	4.33	5.52	2.67	4.49	263
Finance	155	87.91	94.27	26.06	5.53	6.20	3.04	3.54	288

^{*}In EUR billions

ASSET CLASS AND QUALITY COMPOSITION

(Market Weight %)



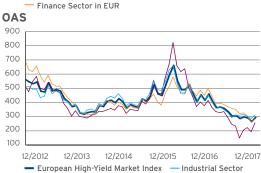


Index Quality: Index quality is defined to be the rating assigned by Standard and Poor's Financial Services LLC ("S&P") when it exists. If a bond is not rated by S&P but it is rated by Moody's Investor Service, Inc ("Moody's"), the S&P equivalent of the Moody's rating is assigned. If a bond is split-rated, that is rated investment grade by S&P or Moody's and high yield by the other, index quality is taken to be S&P equivalent of the investment grade rating.

HISTORICAL INDEX LEVEL

— Utility Sector





- Finance Sector

www.yieldbook.com/citi-indices



Citi Fixed Income Indices



European High-Yield Market Index | December 31, 2017

TOP 10 ISSUERS (By Market Weight)

Description	# of issues	Par Amount*	Market Value*	Market Weight (%)	Average Coupon (%)	Average Life (Years)	Yield to Maturity (%)	Effective Duration	OAS (bps)
TELECOM ITALIA SPA	15	12.64	14.64	4.06	4.38	7.66	1.74	5.88	157
LIBERTY GLOBAL PLC	19	10.16	10.84	3.01	4.95	8.49	4.41	4.66	319
INTESA SANPAOLO SPA	9	8.91	10.31	2.86	6.09	5.16	2.56	4.33	263
GAZPROM OAO	10	6.80	7.25	2.01	3.46	4.58	1.97	4.14	203
CASINO GUICHARD PERRACHON SA	4 9	6.01	6.76	1.87	4.47	4.24	1.74	3.70	191
ALTICE NV	7	6.50	6.74	1.87	6.19	5.76	5.85	3.13	577
TELEFONICA SA	7	5.90	6.53	1.81	4.90	3.98	2.31	3.53	224
UNICREDIT SPA	6	5.53	6.41	1.78	6.32	4.09	2.46	3.60	255
PETROLEO BRASILEIRO SA	8	5.49	6.12	1.70	4.99	7.13	3.11	5.40	282
FIAT CHRYSLER AUTOMOBILES NV	5	5.06	5.74	1.59	4.93	3.90	1.37	3.53	170

^{*}In EUR billions

DESIGN CRITERIA & CALCULATION METHODOLOGY

Coupon:	Fixed-rate, fixed-to-floating rate bonds		
Currency:	CHF, EUR, GBP		
Minimum Maturity:	At least one year Fixed-to-floating rate bonds are removed one year prior to the fixed-to-floating rate date.		
Minimum Market Size:	EUR 5 billion		
Minimum Issue Size:	CHF: 100 million, EUR: 200 million, GBP: 150 million		
Credit Quality:	Maximum quality: BB+ by S&P and Ba1 by Moody's Minimum quality: C by S&P and Ca by Moody's (excludes defaulted bonds)		
Composition:	Securities included: Cash-pay, zero-to-full (ZTF), pay-in-kind (PIK), step-coupon bonds Securities excluded: Convertible bonds		
Weighting:	Market capitalization		
Rebalancing:	Once a month at the end of the month		
Reinvestment of Cash Flow:	At daily average of the local currency one-month Eurodeposit rate, calculated from the actual scheduled payment date of the cash flow through the end of the reporting period.		
Pricing:	Thomson Reuters		
Calculation Frequency:	Daily		
Settlement Date:	Monthly – Settlement is on the last calendar day of the month. Daily – Same day settlement except if the last business day of the month is not the last calendar day of the month; then, settlement is on the last calendar day of the month.		
Base Date:	December 31, 2012		

ACCESS TO CITI FIXED INCOME INDICES

- · www.yieldbook.com/citi-indices
- · The Yield Book
- Citi VelocitySM
- · Bloomberg SBI <GO>; SBBI <GO>
 - European High-Yield Market Index, in CHF SBHESZU
 - European High-Yield Market Index, in EUR SBHEEUU
 - European High-Yield Market Index, in GBP SBHEGBU
- · Other data and analytic vendors and financial news organizations. A full list of those is available in Citi's Index Guide.

CUSTOMIZATION

- · Citi offers flexibility in customizing its family of fixed income indices to meet the most specific investment goals
- · Customization options include sector, industry, geography, currency, maturity, rating, issue size, weighting methodology, and more

LICENSING

Citi's fixed income indices are designed, calculated and published by Citigroup Index LLC and may be licensed for use as underlying indices for OTC or exchange-traded structured products, including ETFs, swaps, warrants, and certificates.

The information and data (collectively, "Index Data") contained in this Citi Fixed Income Indices factsheet (the "Factsheet") is provided by Citigroup Index LLC ("CitiIndex") solely for information purposes with respect to the index discussed herein (the "Index") and nothing in this Factsheet constitutes (a) a recommendation or an offer to sell or a solicitation to deal in any financial product, enter into any transaction or adopt any investment strategy or (b) legal, tax, regulatory, financial or accounting advice. None of Citilndex, its directors, officers, employees, representatives, delegates, contractors or agents (each, a "Citilndex Person") makes any express or implied representations or warranties as to (a) the accuracy, adequacy or completeness of the Index Data, (b) the levels of the Index at any particular time on any particular date, (c) the advisability of purchasing or entering into any financial product the performance of which is linked, in whole or in part, to the Index, (d) the results to be obtained by the issuer of any product linked to the Index or by any other person or entity, from the use of the Index or any data included therein for any purpose, (e) the merchantability or fitness for a particular purpose of the Index, or (f) any other matter. Each Citilindex Person hereby expressly disclaims, to the fullest extent permitted by applicable law, all warranties of accuracy, completeness, merchantability or fitness for a particular purpose with respect to the Index and any Index Data. To the fullest extent permitted by applicable law, no Citilindex Person shall have any liability (direct or indirect, special, punitive, consequential or otherwise) to any person even if notified of the possibility of damages. Citilindex is not under any obligation to continue the calculation, publication and dissemination of the Index nor shall any Citilndex Person have any liability for any errors, omissions, interruptions or delays relating to the Index. Citilndex acts as principal and not as agent or fiduciary of any other person.

The Index reflects the performance of notional investment positions in its constituents. There is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Index merely identifies certain hypothetical investment positions, the performance of which will be used as a reference point for the purpose of calculating the level of the Index. The Index and the information contained in this Factsheet are Citiindex's proprietary material. No person may use the index in any way or reproduce or disseminate the information contained in this Factsheet without the prior written consent of Citiindex. The Index is not in any way sponsored, endorsed or promoted by the issuer or sponsor, as applicable, of any of its constituents.

©2018, Citigroup Index LLC. All rights reserved. Citi, Citi and Arc Design, and Citi Velocity are trademarks and service marks of Citigroup Inc. or its affiliates and are used and registered throughout the world. The Yield Book is a registered service mark of The Yield Book Inc. and is registered in the U.S. and other countries.