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## High yield duration, reassessed

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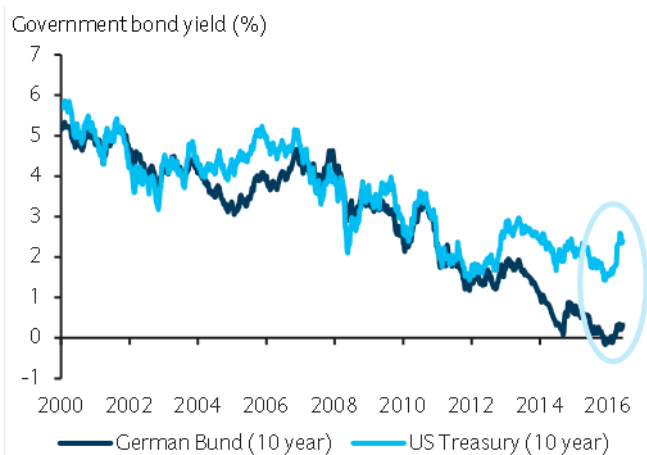
**Rising rates and duration are an increasing concern for HY investors and therefore it makes sense to look at interest rate sensitivity in detail. Comfortingly, we find that European high yield exhibits a much lower empirical duration than the index OAD would indicate. Unsurprisingly, the highest empirical duration is found in longer-dated bonds and BBs. We present a list of bonds with a low empirical duration and attractive spread.**

After decades of ever lower government bond yields since the early 1980s, investors are getting worried about duration as rates started to move slightly wider in Europe and the US (Figure 1). In general, HY bonds should provide good protection in a rising rates environment due to their high coupon. Additionally, HY bond spreads are subject to idiosyncratic credit stories and sector trends and are less macro linked than investment grade.

With the rising rates environment that started in H2 16, however, European HY mutual funds have seen outflows on an aggregate basis while short duration funds and ETFs have seen inflows (Figure 2). Indeed, from May 2016 to present short duration funds and ETFs have seen over \$2bn in inflows, while all other European HY mutual funds experienced almost \$8bn in outflows, according to data collected from EPFR. Going back to January 2015, short duration funds and ETFs increased their share of European HY fund total net assets from 15% to 20%, at the expense of actively managed funds with traditional or longer-dated benchmarks. While some of these changes can be attributed to an expansion of the coverage universe (the number of funds increased from 56 to 101 from January 2015 to present), the impact of the changing rates environment on the duration preferences of retail funds is nonetheless evident.

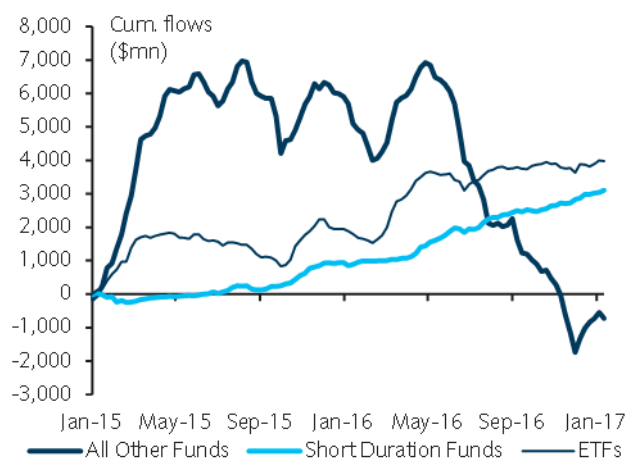
Investors tend to worry about the impact of rates on HY bonds. Therefore, we analyse the duration of European HY by rating and maturity. Additionally, we screen for bonds with a low duration, but attractive spread.

FIGURE 1  
Investors started to worry about rates moves in H2 16



Source: Bloomberg, Barclays Research

FIGURE 2  
European high yield funds flows: Inflows into short term and ETFs, outflows from regular funds



Source: EPFR, Barclays Research

## Empirical study: Theory is not practice

Our focus is not only on estimating the calculated index OAD as calculated by the index providers, but the observed empirical duration. The concept of empirical durations aims to explain bond price moves by using the observed change in rates and bond spreads. For the purpose of our analysis, we define the empirical duration as:

$$Duration_{empirical} = OAD + \beta_{spread} * OAD$$

or

$$Duration_{empirical} = (1 + \beta_{spread}) * OAD$$

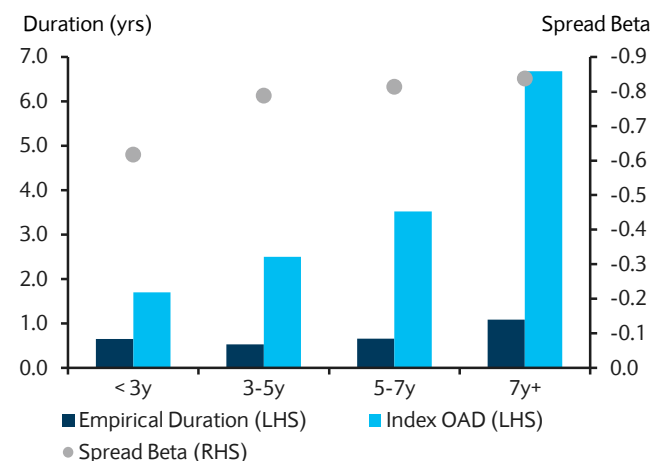
We estimate spread beta using a regression of the weekly spread changes of the HY index versus the weekly spread changes of 5 year rates using a 10 year observation period. As government bond yield, we use the German 5y Bund. OAD is the index duration which is calculated by the benchmark index provider using a DCF model which takes into account the projected cash flows of each individual bond. The term  $(1 + \beta_{spread})$  can be understood as multiplier that reflects the relationship between empirical and calculated duration.

Comparing the different high yield maturity buckets, we find that the observed empirical duration of European high yield bonds is significantly lower than the calculated index duration (Figure 3). This is because the spread beta becomes more negative across maturities resulting in a lower empirical duration compared to the OAD for longer dated bonds.

Looking at the high yield index by rating, we find that the empirical duration is highest for BBs and nearly equally low for Bs and CCCs. While the index OAD shows the same pattern by rating, we note that the empirical duration is much lower than index OAD (Figure 4). Thus, investors could overestimate to the rates impact on BBs by looking the calculated index OAD.

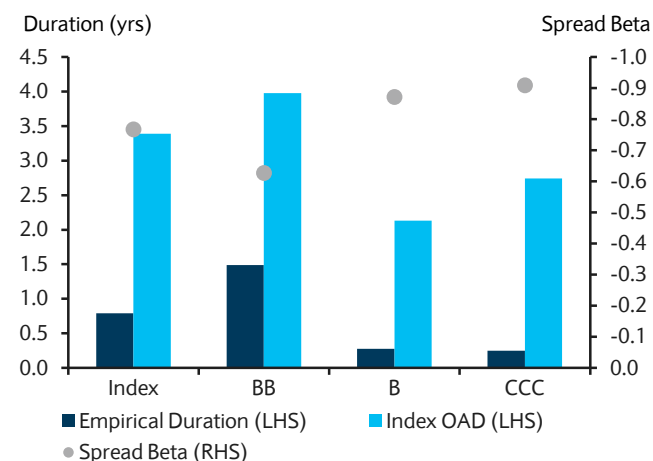
Our findings are in line with a study published by our Quantitative Portfolio Strategy (QPS) team in *Empirical Duration of Corporate Bonds and Credit Market Segmentation*, 25 January 2010. In this publication, QPS finds that the empirical duration over the OAD decreases for lower rated bonds. We make the same observation for European high yield, where empirical duration over OAD is reduced for the lower rating buckets (Figure 4).

FIGURE 3  
Duration (empirical vs. index) by bond maturity buckets



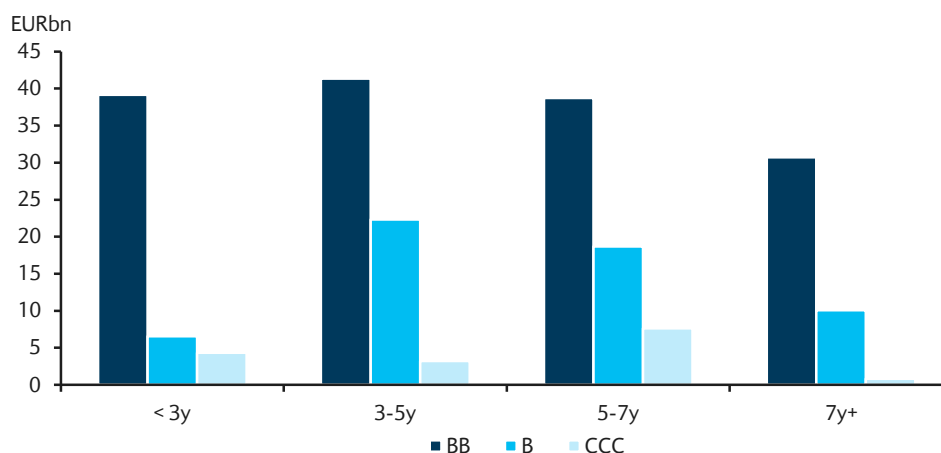
Bloomberg Barclays Euro High Yield ex Financials index.  
Source: BISL, Barclays Research

FIGURE 4  
Duration (empirical vs. index) by rating buckets



Bloomberg Barclays Pan Euro High Yield ex Financials index.  
Source: BISL, Barclays Research

FIGURE 5

**BBs dominate the European HY universe across maturities**

Source: BISL, Barclays Research

One critical factor to our study is the relative impact of the different rating classes to the various maturity buckets we used. As illustrated in Figure 5, while BBs make up a majority of the entire European HY index, and indeed comprise over 60% of each maturity bucket, they particularly dominate the short dated (<3y) bonds, making up 78% of the bonds in this basket. In contrast, Bs make up 33% of the 3-5y basket and 29% of the 5-7y basket. The 7y+ basket is again dominated by BBs, who can more easily issue longer-dated securities.

## Screening for low-duration, high-spread picks

In order to find attractively valued bonds with a low sensitivity to rates, we look for bonds with a low empirical duration to government bonds over the past two years. We screen credits covered by our fundamental analysts for the following criteria and show the results below (Figure 6):

- Empirical duration of less than 3 years
- OAS of at least 300bp (we include higher beta credits)
- Overweight or Market Weight rating by our fundamental analysts

FIGURE 6

**Trade recommendations for high spread and low duration bonds**

Company	Bond	Ccy	Rating	Next call	Next call px	Ask price	OAS (bp)	YTW (%)	OAD
INTRALOT CAPITAL	INLOTG 6% '21	EUR	B1/B	May-17	103.0	101.0	548	5.6	2.0
LOXAM SAS	LOXAM 7% '22	EUR	NR/B	Jul-17	105.3	107.0	311	3.2	0.5
ONEX WIZARD	SIGCBL 7.75% '23	EUR	Caa1/B-	Feb-18	103.9	108.1	337	3.5	1.0
OTE PLC	HTOGA 3.5% '20	EUR	Caa2/B+	N.A.	N.A.	103.0	303	2.6	3.2

Ratings shown are Moody's / S&amp;P. Source: BISL, Barclays Research

FIGURE 7

## iTraxx Crossover vs. iTraxx Main

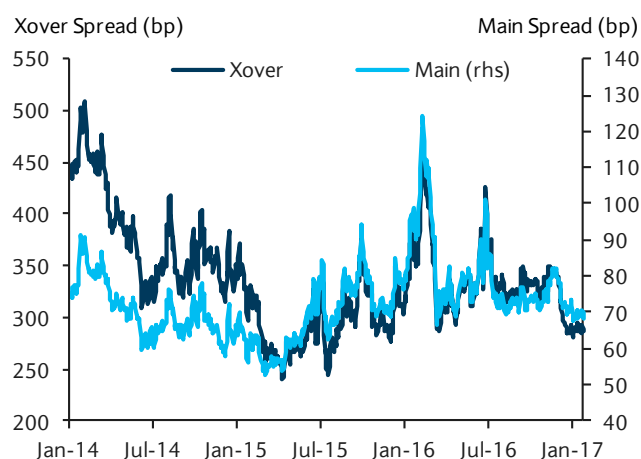
Please click [here](#) to see on Barclays Live. Source: Markit, Barclays Research

FIGURE 9

## Pan-European HY excluding Financials spread by rating

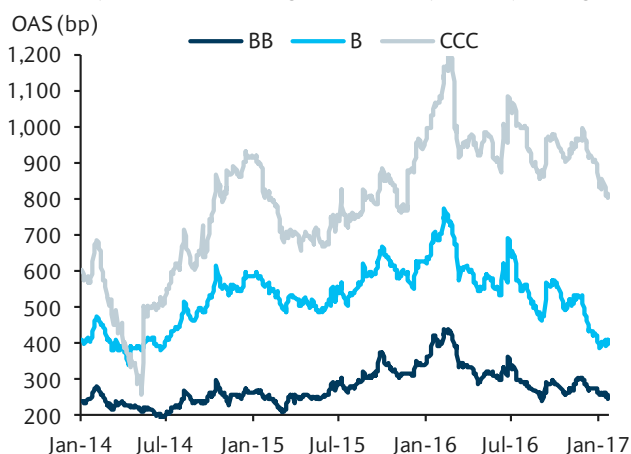
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FIGURE 11

## European HY issuance

Issuers:	All firms, in any European currency		European firms
Market:	Pan-European High Yield		US High Yield
Crcny:	€	£, CHF, other	\$
WTD	0.0	0.0	0.0
MTD	2.7	2.4	0.0
YTD	2.7	2.4	0.0
YoY	204%	-	-
YTD '16	0.9	0.0	0.0

Supply in € bn.

Source: S&amp;P LCD, Bloomberg, Barclays Research

FIGURE 8

## Pan-European HY vs. US HY, both excluding Financials

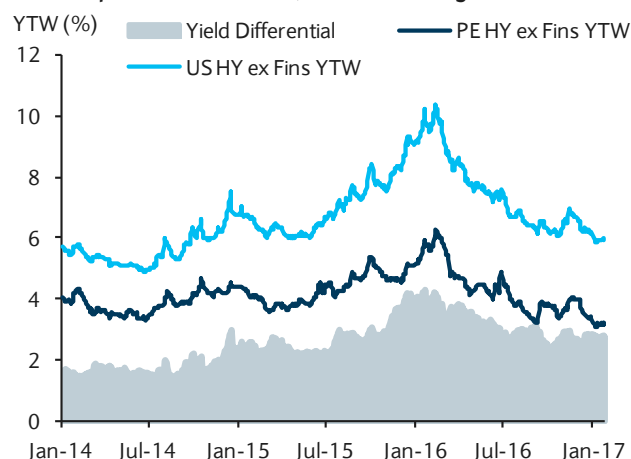
Please click [here](#) to see on Barclays Live Source: Markit, Barclays Research

FIGURE 10

## Pan-European B vs BB and BBB ratios

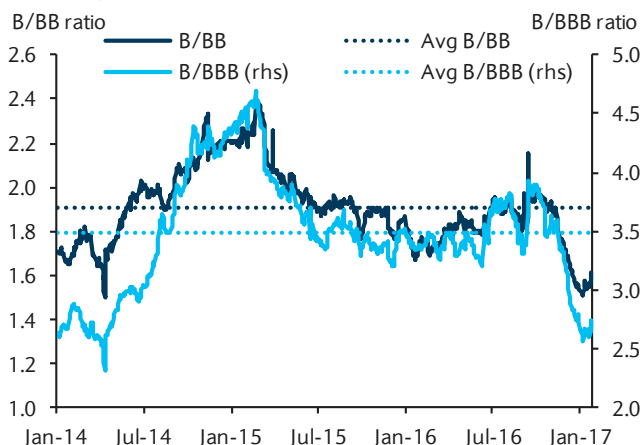
Please click [here](#) to see on Barclays Live. Source: Barclays Research  
Note: HY spreads exclude Financials

FIGURE 12

## European HY issuance monthly trends

Issuers:	All firms, in any European currency		European firms
Market:	Pan-European High Yield		US High Yield
Crcny:	€	£, CHF, other	\$
Year:	2016	2017	2016 2017
Jan	0.9	2.7	2.4
Feb	0.7		
Mar	5.6		0.4
Apr	4.3	0.9	10.4
Mav	7.3	0.5	
Jun	6.1		0.7
Jul	2.8	0.5	0.5
Aug	3.1		
Sep	11.5	1.9	4.4
Oct	4.1	0.6	
Nov	3.0	0.4	0.9
Dec	1.7		

Supply in € bn. Source: S&amp;P LCD, Bloomberg, Barclays Research

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INTRALOT CAPITAL LUXEMBOURG SA, CD/J

INLOTG 6 05/15/21, Overweight (EUR 100.21, 25-Jan-2017)

LOXAM SAS, CD/J/K/N

LOXAM 7 07/23/22, Market Weight (EUR 106.63, 25-Jan-2017)

OTE PLC, CD/D/J/K/L/M/N

HTOGA 3 1/2 07/09/20, Overweight (EUR 101.85, 25-Jan-2017)

SIG COMBIBLOC HOLDINGS SCA, CD/D/J/K/L/M/N

SIGCBL 7 3/4 02/15/23, Market Weight (EUR 107.45, 25-Jan-2017)

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For sectors rated against the Bloomberg Barclays U.S. High Yield 2% Issuer Capped Credit Index, the Bloomberg Barclays Pan-European High Yield 3% Issuer Capped Credit Index excluding Financials, the Bloomberg Barclays Pan-European High Yield Finance Index or the Bloomberg Barclays EM Asia USD High Yield Corporate Credit Index, the analyst expects the six-month total return of the sector to be in line with the six-month total return of the relevant index.

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**Market Weight (MW):** The analyst expects the six-month total returns of the issuer's rand-denominated fixed rate notes or floating rate notes (as applicable) to be in line with the six-month expected total returns the South African Credit Fixed Market Index (CFIX95) or the South African Credit Floating Market Index (CFL020), respectively..

**Underweight (UW):** The analyst expects the six-month total returns of the issuer's rand-denominated fixed rate notes or floating rate notes (as applicable) to be below the six-month expected total returns the South African Credit Fixed Market Index (CFIX95) or the South African Credit Floating Market Index (CFL020), respectively..

**Rating Suspended (RS):** The rating has been suspended temporarily due to market events that make coverage impracticable or to comply with applicable regulations and/or firm policies in certain circumstances including where the Investment Bank of Barclays Bank PLC is acting in an advisory capacity in a merger or strategic transaction involving the company.

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The analyst expects the three-month excess return of the country's index eligible bonds to be less than the three-month excess return of the Bloomberg Barclays EM USD Sovereign Index.

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