

## Capture the Convexity

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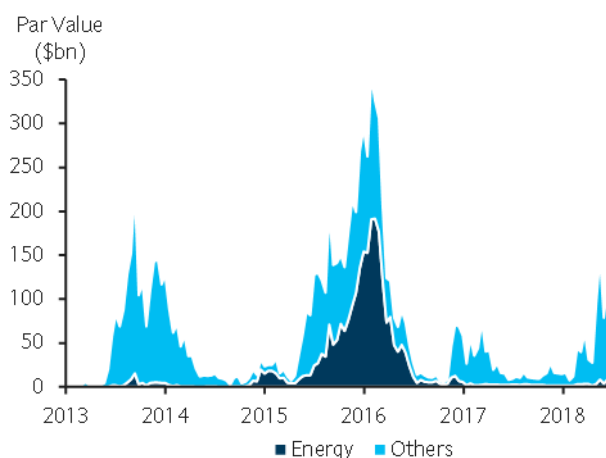
On Wednesday, the Federal Reserve raised interest rates by 25bp for the second time this year and shifted its dot plot higher for the next two years. The hike sent 10y Treasury yields momentarily above 3% and pulled the attention of investors away from the numerous international risks that have been dominating headlines in recent weeks. One side effect of a rising rates environment is an increasing amount of low dollar price debt as long-dated low-coupon bonds that have been issued in recent years recalibrate to the higher risk-free rate.

In the post-crisis era, there have been two other periods during which the amount of low dollar price debt increased; during the taper tantrum in 2013 and when oil prices collapsed in 2016 (Figure 1). Although the reasons for the spikes in low cash price bonds were very different, they presented similar opportunities to take advantage of the convexity profile of low dollar price bonds, as does the current trading environment.

Low dollar price bonds have better convexity profiles than their higher-coupon counterparts. Essentially, once prices drop below a certain level, recovery prospects improve more rapidly for low-price bonds than for higher-coupon securities, limiting the downside for the former.<sup>1</sup> For instance, Figure 2 compares the OAS of a sample bond with its BCDS (a recovery-adjusted spread measure) at different prices. The two spreads are similar when bond prices are above \$85 but diverge meaningfully at lower levels. On a recovery-adjusted basis, the bond looks increasingly attractive, with limited downside at low prices.

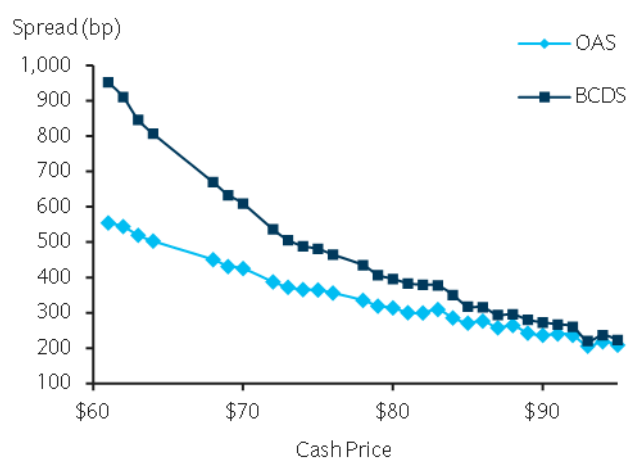
The better convexity of low dollar price bonds has also been evident in practice. In *The New Old Convexity Portfolio*, we demonstrated that low dollar price bonds have been much less sensitive to widening spreads or rising yields than high dollar price bonds, particularly once the former reaches a price of \$85-\$80. We can see the effect that different convexity profiles have on relative value by looking at examples of the performance of low-price and high-price bonds from the same issuer.

FIGURE 1  
Amount of Senior Investment Grade Debt Trading below \$90



Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 2  
OAS and BCDS of a Bond at Different Prices

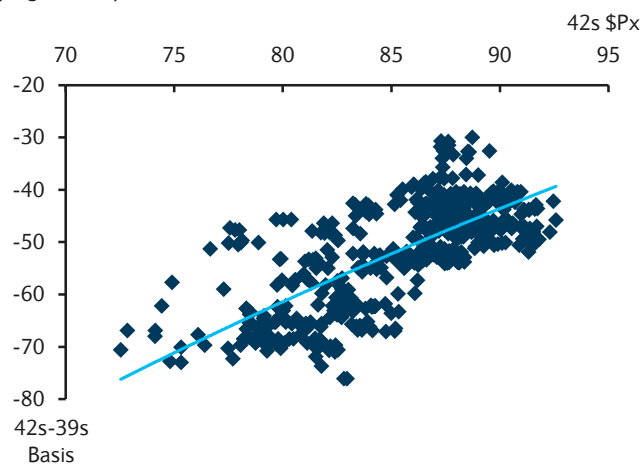


Source: Bloomberg Barclays Indices, Barclays Research

<sup>1</sup> For instance, assuming 40% recovery, the effective recoveries on \$100 and \$120 bonds are 40% (=40/100) and 33% (=40/120), a 7% difference. Suppose that yields rise and the bond prices decline to \$80 and \$100. The effective recovery difference increases to 10% (50% for the \$80 bond and 40% for the par bond).

FIGURE 3

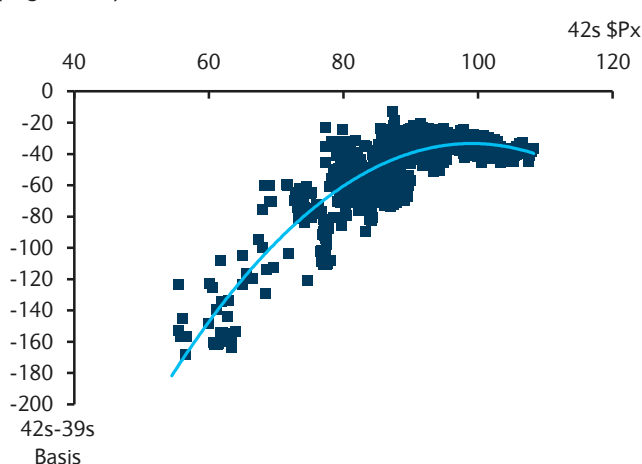
Verizon 3.85s of 2042 (Low Price) versus 7.35s of 2039 (High Price)



Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 4

Cenovus 4.45s of 2042 (Low Price) versus 6.75s of 2039 (High Price)



Source: Bloomberg Barclays Indices, Barclays Research

- Figure 3 compares the spread performance of a low dollar price Verizon bond (the 3.85 of 2042) and a high dollar price Verizon bond (the 7.35 of 2039) between January 2013 and December 2015. The y-axis shows the spread difference between the 2042s and the 2039s, and the x-axis shows the price of the 2042s. During periods when the lower-coupon 2042s traded near par, the basis between the two bonds remained fairly stable. However, when the dollar price of the 2042s moved below \$85, the spread differential between the two bonds increased notably, signifying the outperformance of the low dollar price 2042s.
- Figure 4 shows the same relationship in 2016 for the Cenovus 2042s and 2039s. The outperformance of low dollar price securities becomes more prominent the lower the price gets.

In our view, the current environment presents an opportunity for investors to take advantage of this convexity by switching out of high dollar price bonds into low dollar price bonds. If rates continue to rise or spreads widen, low dollar price bonds should outperform higher-coupon securities; however, their performance should be more in line if yields decrease. Figure 5 presents liquid swaps out of high-price bonds into low-price bonds within the same capital structure.

FIGURE 5

Swaps out of High Dollar Price Bonds into Low Dollar Price Bonds

Ticker	Swap Out of High \$Px				Swap into Low \$Px				OAS Give
	Coupon	Maturity	Price	OAS	Coupon	Maturity	Price	OAS	
PEP	5.5	1/15/2040	119.2	109	3.6	8/13/2042	92.9	98	-11
PM	6.375	5/16/2038	122.0	164	4.125	3/4/2043	93.1	151	-13
RDSALN	6.375	12/15/2038	128.5	124	3.625	8/21/2042	91.5	110	-14
T	6.375	3/1/2041	111.6	242	4.75	5/15/2046	91.0	228	-14
TGT	7	1/15/2038	133.8	138	3.625	4/15/2046	88.8	123	-16
VOD	6.15	2/27/2037	111.2	219	4.375	2/19/2043	90.1	201	-19
KMI	6.95	1/15/2038	114.8	267	5	8/15/2042	93.4	241	-25
APA	6	1/15/2037	110.1	214	4.25	1/15/2044	89.5	189	-25
KHC	6.875	1/26/2039	117.9	239	4.375	6/1/2046	87.7	212	-27
ABIBB	8	11/15/2039	142.5	177	3.75	7/15/2042	88.0	149	-27

Note: Prices and spreads are bid-side and meant to be indicative Source: Bloomberg Barclays Indices, Barclays Research

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ABIBB 3 3/4 07/15/42 (USD 87.89, 13-Jun-2018)

ABIBB 8 11/15/39 (USD 142.08, 13-Jun-2018)

##### APACHE CORP, CD/CE/D/GE/J/K/L/M/N

APA 4 1/4 01/15/44 (USD 89.05, 13-Jun-2018)

APA 6 01/15/37 (USD 109.42, 13-Jun-2018)

##### AT&T INC, A/CD/CE/D/J/K/L/M/N

T 4 3/4 05/15/46 (USD 91.00, 13-Jun-2018)

T 6 3/8 03/01/41 (USD 111.18, 13-Jun-2018)

##### KINDER MORGAN ENERGY PARTNERS LP, CD/D/GE/J/K/L/M

KMI 5 08/15/42 (USD 93.15, 13-Jun-2018)

KMI 6.95 01/15/38 (USD 114.56, 13-Jun-2018)

##### KRAFT HEINZ FOODS CO, A/CD/D/J/K/L/M

KHC 4 3/8 06/01/46 (USD 87.70, 13-Jun-2018)

KHC 6 7/8 01/26/39 (USD 117.43, 13-Jun-2018)

##### PEPSICO INC, A/CD/CE/D/J/K/L/M

PEP 3.6 08/13/42 (USD 92.73, 13-Jun-2018)

PEP 5 1/2 01/15/40 (USD 119.19, 13-Jun-2018)

##### PHILIP MORRIS INTERNATIONAL INC, A/CD/CE/D/J/K/L/M

PM 4 1/8 03/04/43 (USD 92.57, 13-Jun-2018)

PM 6 3/8 05/16/38 (USD 121.62, 13-Jun-2018)

##### SHELL INTERNATIONAL FINANCE BV, CD/D/J/K/L/M/N

RDSALN 3 5/8 08/21/42 (USD 90.86, 13-Jun-2018)  
RDSALN 6 3/8 12/15/38 (USD 128.04, 13-Jun-2018)

**TARGET CORP, A/CD/CE/D/E/J/K/L/M**  
TGT 3 5/8 04/15/46 (USD 88.62, 13-Jun-2018)  
TGT 7 01/15/38 (USD 133.69, 13-Jun-2018)

**VODAFONE GROUP PLC, A/CD/CE/D/J/K/L/M/N**  
VOD 4 3/8 02/19/43 (USD 89.94, 13-Jun-2018)  
VOD 6.15 02/27/37 (USD 110.94, 13-Jun-2018)

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