

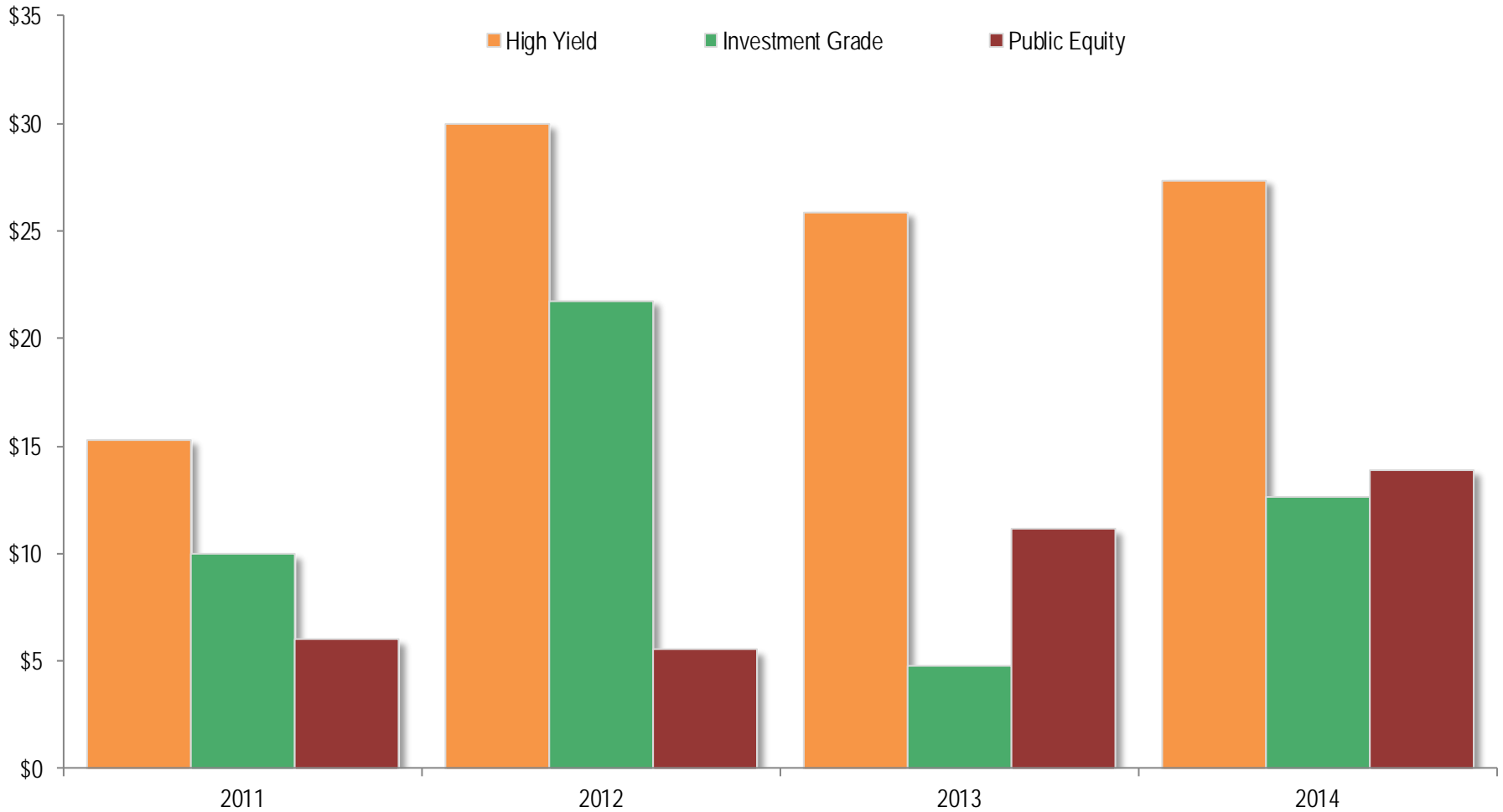
## IPAA: Managing Debt in Troubled Times – Surviving 2016

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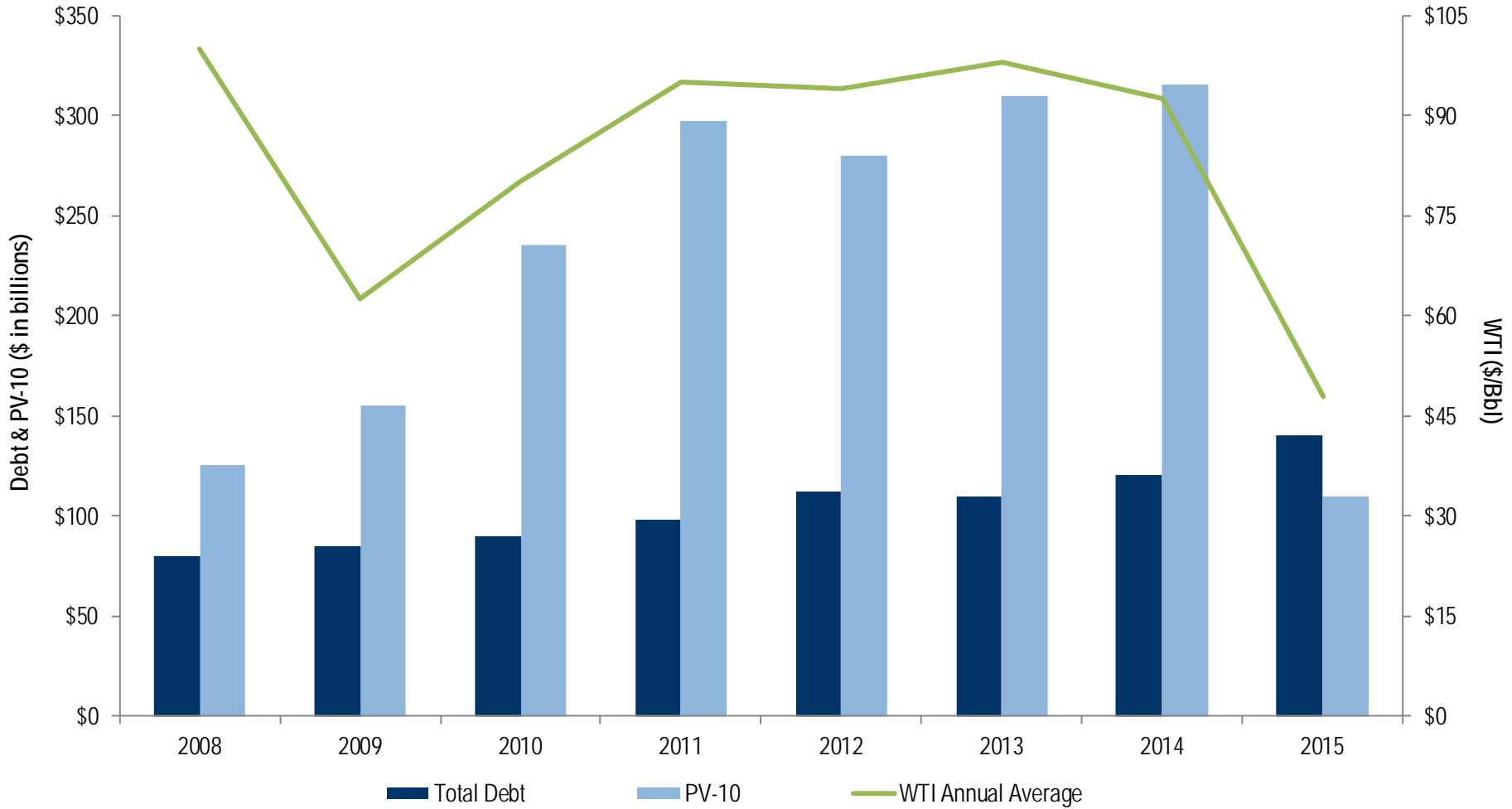
# Public Capital Markets E&P Issuance

E&P High Yield, Investment Grade and Public Equity Issuance (\$bn)



# U.S. Oil & Gas – Eroding Asset Coverage

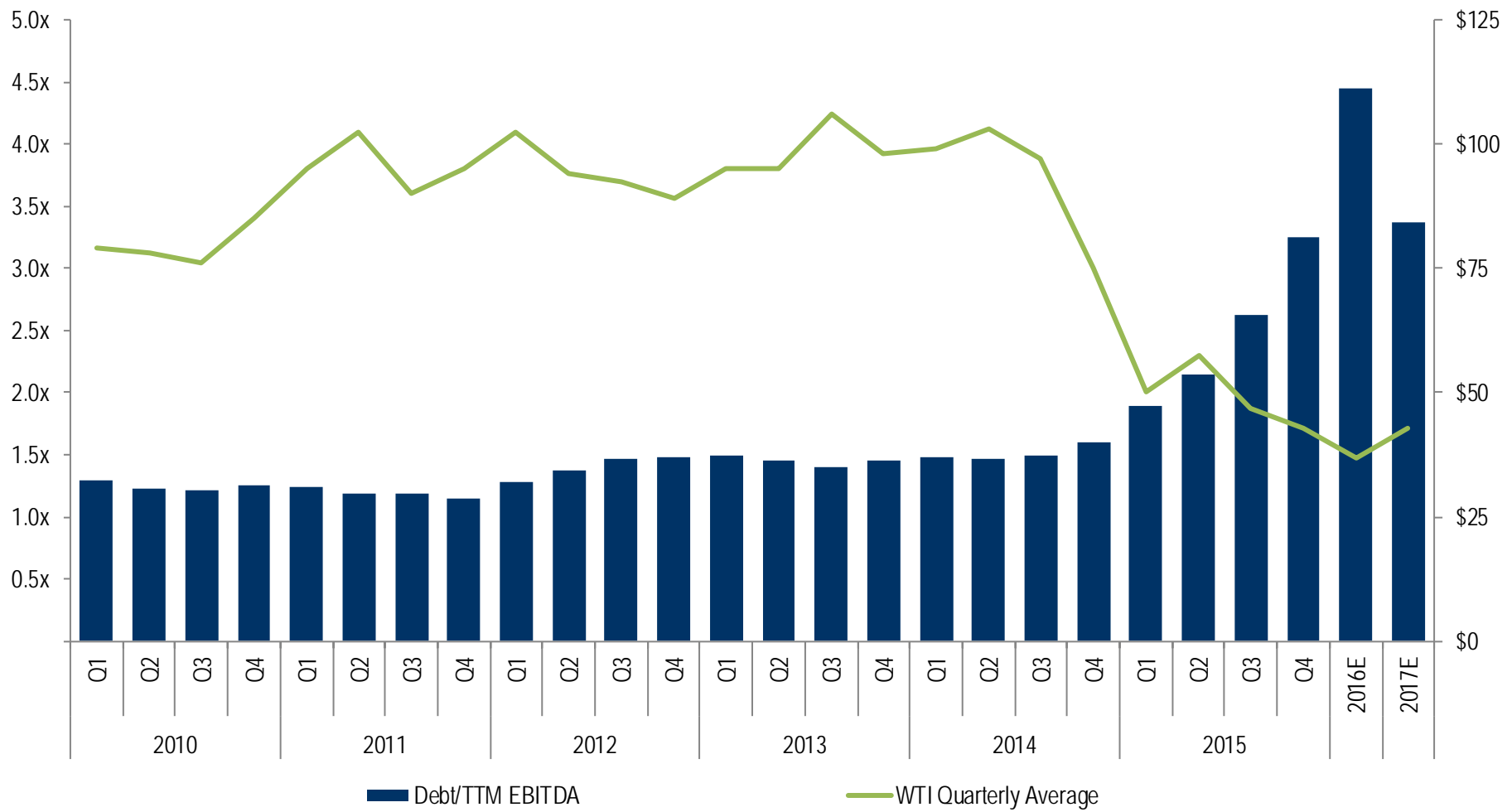
Total Debt vs. PV-10 <sup>[1]</sup>



[1] Aggregate of 19 public E&P companies (APA, APC, AR, CLR, COG, COP, CXO, DVN, EOG, EQT, FANG, HES, MRO, NBL, NFX, OXY, PXD, RRC, XEC); PV-10 After Tax; Source: EnerCom

# U.S. Oil & Gas – Cash Flow Based Leverage

## Debt to TTM EBITDA <sup>[1]</sup> <sup>[2]</sup>

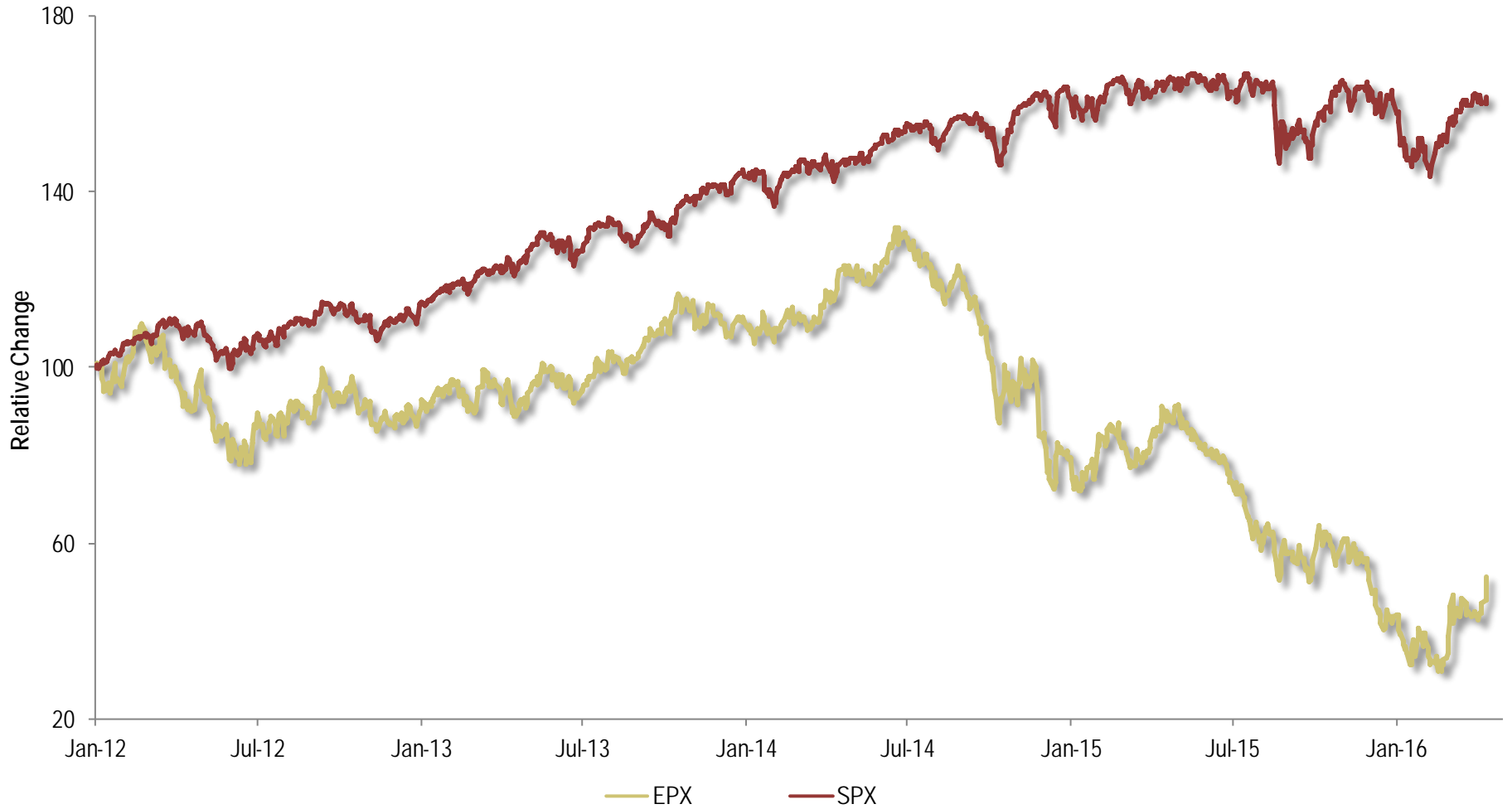


[1] Debt/TTM EBITDA is an aggregate of 48 Large, Mid, Small, and Micro cap companies

[2] Q4 2015 Debt numbers are a mix of actuals and holding debt constant. 2016 and 2017 debt numbers assume no change from Q4 2015; Q4 2015 EBITDA numbers are a mix of actuals and Bloomberg estimates, 2016 and 2017 are Bloomberg estimates; Source: EnerCom

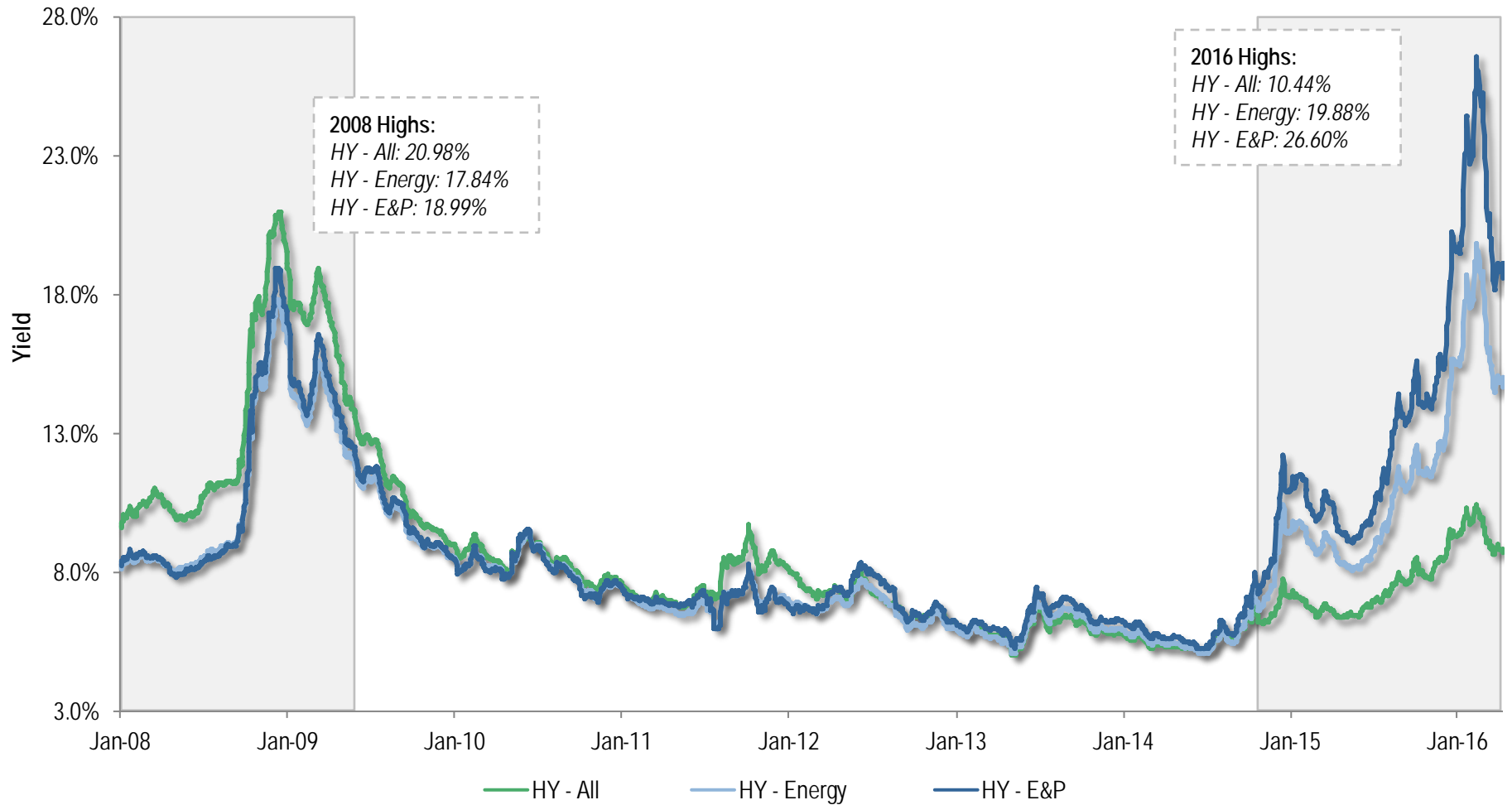
# E&P Equity Market Performance

E&P Index vs. S&P 500 Index



# E&P High Yield Market Performance

## Historical High Yield Index Yields



## Select Producer Trading Levels

	Amount	Ratings	As of 7/15/2014		As of 11/30/2014		As of 2/11/2016		As of 4/14/2016	
			Price	YTW	Price	YTW	Price	YTW	Price	YTW
Newfield Exploration 5.625% Sr Notes due '24	\$1,000	Ba3 / BB+	109.625	4.223%	100.875	5.489%	79.063	9.331%	97.719	5.979%
Antero Resources 5.375% Sr Notes due '21	\$1,000	Ba3 / BB	103.813	4.270%	93.438	6.817%	76.688	11.126%	97.250	5.965%
Concho Resources 5.500% Sr Notes due '23	\$1,550	Ba2 / BB+	106.500	4.122%	98.000	5.805%	83.000	8.756%	98.875	5.698%
Range Resources 5.000% Sr Sub Notes due '23	\$750	B1 / BB+	105.250	3.580%	99.125	5.151%	73.563	10.469%	90.000	6.840%
Diamondback Energy 7.625% Sr Notes due '21	\$450	B2 / BB-	109.500	5.454%	103.938	6.335%	96.313	8.482%	104.856	6.043%
Gulfport Energy 7.750% Sr Notes due '20	\$600	B2 / B+	109.000	5.140%	99.000	7.963%	86.000	11.695%	102.250	6.767%
Rice Energy 6.250% Sr Notes due '22	\$900	B3 / B-	102.875	5.487%	91.000	7.875%	71.375	13.293%	97.500	6.761%
SM Energy 5.000% Sr Notes due '24	\$500	B3 / B+	101.688	4.649%	87.000	6.948%	41.000	20.527%	71.000	10.578%
Oasis Petroleum 6.875% Sr Notes due '23	\$400	Caa1 / B+	110.438	5.084%	89.000	8.798%	46.000	23.005%	82.500	10.566%
Whiting Petroleum 5.750% Sr Notes due '21	\$1,048	Caa2 / B	111.188	3.270%	93.000	7.150%	43.000	27.650%	77.500	11.938%
Denbury Resources 5.500% Sr Sub Notes due '22	\$1,250	Caa3 / CCC+	101.250	5.245%	87.000	7.846%	17.000	50.012%	52.375	19.143%
Approach Resources 7.000% Sr Notes due '21	\$230	Caa3 / CCC	104.500	5.928%	84.000	10.439%	17.000	59.900%	50.000	24.624%
Chesapeake Energy 5.750% Sr Notes due '23	\$384	Caa3 / CC	110.313	4.075%	104.500	4.781%	13.000	56.543%	44.181	21.707%
Bonanza Creek Energy 6.750% Sr Notes due '21	\$500	Ca / CC	106.625	3.921%	90.000	8.884%	29.000	41.521%	29.000	41.522%

# E&P Public Capital Issuance

E&P High Yield, Investment Grade and Public Equity Issuance (\$bn)





# E&P Universe: Distressed Exchanges, Missed Coupons, Defaults & Bankruptcies

## E&P Defaults and Distressed Exchanges

	2014		2015		2016	
	Volume (\$mm)	Count	Volume (\$mm)	Count	Volume (\$mm)	Count
Defaults	\$0.0	0	\$10,628.7	14	\$7,443.4	4
Distressed Exchanges	\$0.0	0	\$13,201.8	17	\$1,496.8	6

## Missed Coupon Payments

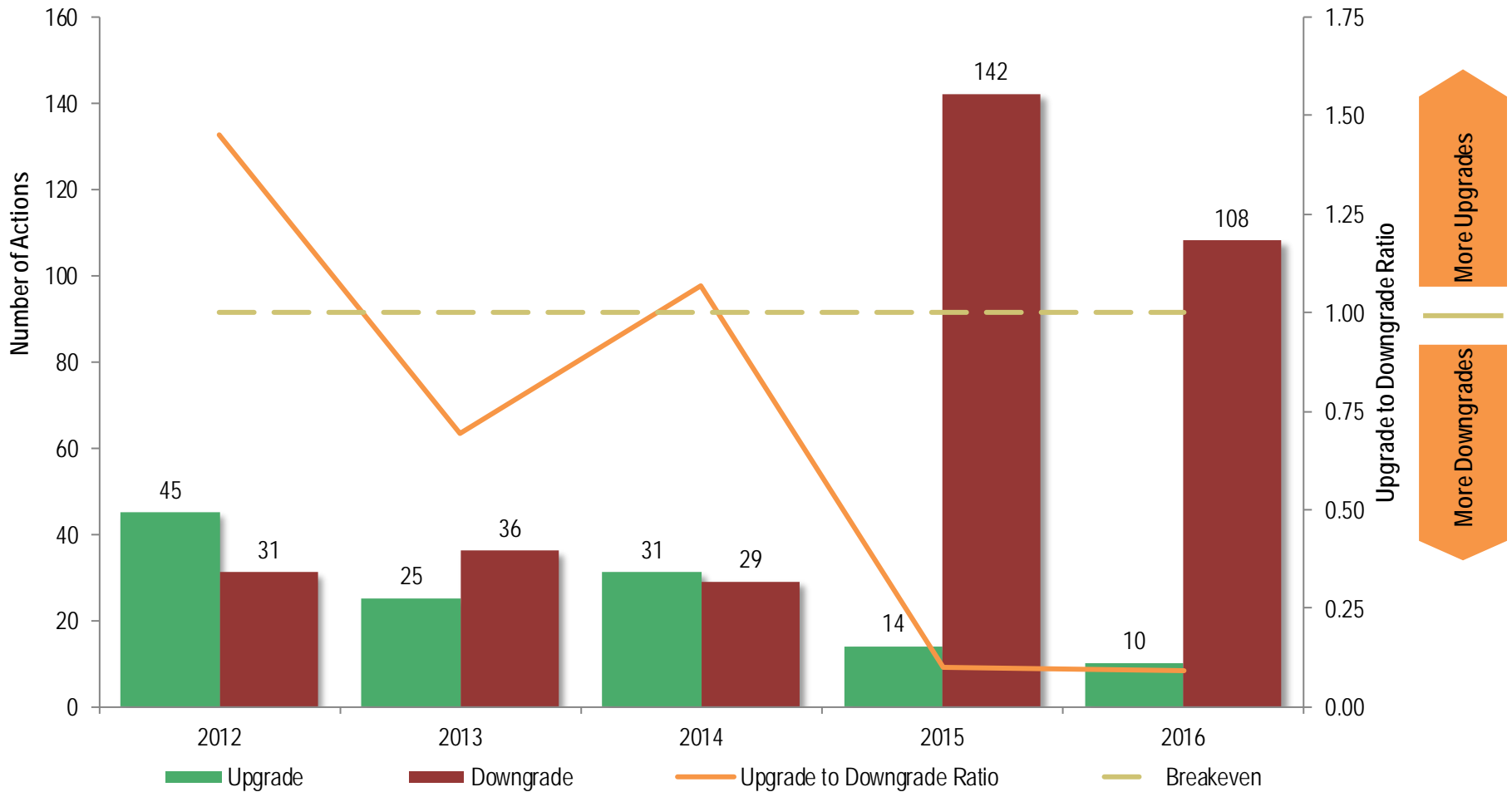
Issuer	Delayed Debt Payment	Auditor Going Concern Qualification
SandRidge Energy	2/16/2015	✓
Chaparral Energy	3/1/2016	✓
Midstates Petroleum	4/1/2016	✓
Ultra Petroleum	4/1/2016	✓
Goodrich Petroleum		✓
Penn Virginia		✓

## Filed Chapter 11

Issuer	Filing Date
Quicksilver Resources	3/17/2015
American Eagle Energy	5/8/2015
Saratoga Resources	6/18/2015
Sabine Oil & Gas	7/15/2015
Samson Resources	9/17/2015
Swift Energy	12/13/2015
Magnum Hunter	12/17/2016
Venoco	3/18/2016
Energy XXI	4/14/2016

# Rating Actions in the E&P Sector

## Rating Action Activity Since 2012



## Spring BB Redetermination Season – Lender & Borrower Requests

- While the number of issuers seeking covenant relief is relatively small (but increasing), a number of common elements across the requests have emerged
- In exchange for covenant relief (principally leverage and coverage), pricing across the grid has markedly increased with lenders seeking additional protective provisions, including anti-cash hoarding and reductions in various investment & debt baskets

	Denbury <sup>[1]</sup>	Gulfport	Legacy	CRC	Eclipse	Private	Clayton Williams	
Amendment Date:	2/17/16	2/19/16	2/19/16	2/23/16	2/24/16	3/1/16	3/8/16	
BB Reduction:	\$1.6 to \$1.5bn	-	\$900 to \$725mm	\$3.0 to \$2.3bn	-	\$295 to \$280mm	\$450 to \$100mm	
<b>Borrower Requests</b>	<b>Covenant Relief:</b>							
	Leverage	X		X	X		X	
	Interest Coverage	X		X	X	X	X	
	Current Ratio							
	<b>Spending / Basket Approval:</b>							
	CapEx				X			
	Bond Repurchase	X		X	X			
Debt / Lien Incurrence		X	X	X	X		X	
<b>Other Requests:</b>								
LC Limit Increase					X			
<b>Lender Requests</b>	<b>General Requests:</b>							
	Pricing Grid Increase	75.0 bps	-	50.0 bps	75.0 bps	50.0 bps	-	75.0 bps
	New Pricing Grid Range:	(200-300 bps)	(150-250 bps)	(200-300 bps)	(250-350 bps)	(200-300 bps)	(200-375 bps)	(225-325 bps)
	Mortgage Threshold Increase	80% to 85%		85% to 90%	80% to 85%	80% to 90%		
	Anti-Cash Hoarding	X		X	X	X		
	Added Covenant(s)				X			
	13 Week Cash Flow Reporting				X			X
	Deposit Account Control Agmt.	X						X
Basket Reductions / Eliminations			X	X	X		X	

## Spring BB Redetermination Season – Lender & Borrower Requests (cont'd)

	Private	Range	Whiting	Company A	Company B	Company C <sup>[1]</sup>	
Amendment Date:	3/15/16	3/17/16	3/25/16	In Market	In Market	In Market	
BB Reduction:	-	-	\$4.0 to \$2.75bn	-25%	-15% Increase	-15%	
<b>Borrower Requests</b>	<b><u>Covenant Relief:</u></b>						
	Leverage		X			X	
	Interest Coverage				X	X	
	Current Ratio						
	<b><u>Spending / Basket Approval:</u></b>						
	CapEx						
	Bond Repurchase						
	Debt / Lien Incurrence			X	X	X	
<b><u>Other Requests:</u></b>							
LC Limit Increase							
<b>Lender Requests</b>	<b><u>General Requests:</u></b>						
	Pricing Grid Increase	-	-	50.0 bps	50.0 bps	TBD	50.0 bps
	New Pricing Grid Range:	(175-275 bps)	(125-225 bps)	(200-300 bps)	(200-300 bps)	TBD	(175-275 bps)
	Mortgage Threshold Increase			80% to 90%		80% to 90%	75% to 90%
	Anti-Cash Hoarding				X	X	X
	Added Covenant(s)					X	
	13 Week Cash Flow Reporting						
	Deposit Account Control Agmt.			X		X	X
Basket Reductions / Eliminations							

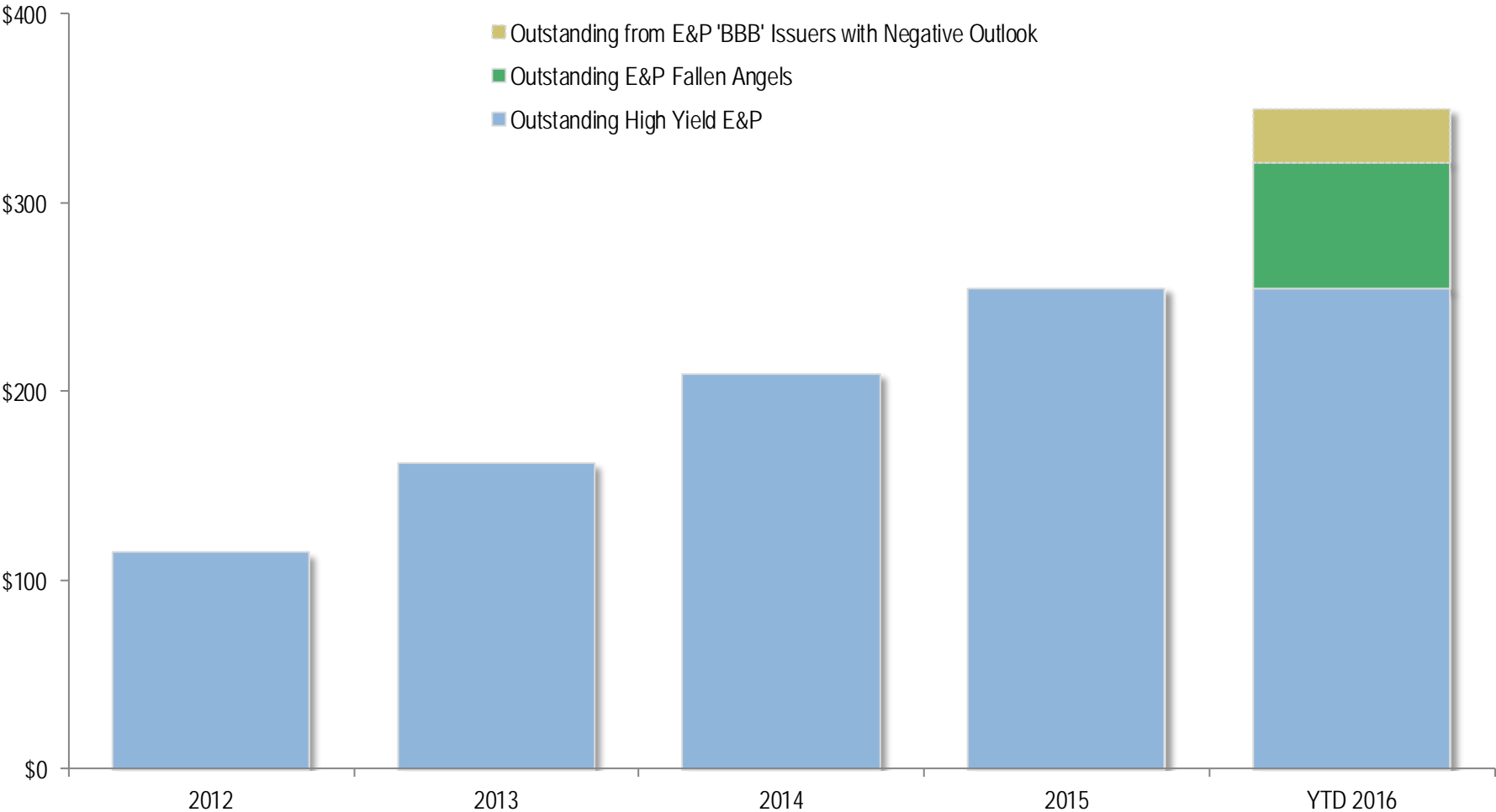
[1] BB Reduction reflects the decrease in commitments, not borrowing base, for Company C

## Fallen Angels Join the High Yield Market

Recent Rating Actions					
Fallen Angels					
<i>\$mm</i>	Bonds	Ratings		Average Bond Price	
Issuer	Outstanding	Previous	Current	July 2014	Current
<b>Moody's</b>					
Anadarko Petroleum	\$17,257	Baa2 / BBB	Ba1 / BBB	125.082	98.712
Canadian Oil Sands	\$1,962	Baa3 / BBB-	Ba3 / BBB-	112.250	97.786
Cenovus Energy	\$6,075	Baa2 / BBB	Ba2 / BBB	102.250	88.637
Continental Resources*	\$5,800	Baa3 / BBB-	Ba3 / BB+	109.172	90.625
Devon Energy*	\$9,425	Baa1 / BBB+	Ba2 / BBB	105.750	90.922
Encana Corporation	\$6,012	Baa2 / BBB	Ba2 / BBB	116.600	87.405
Hess	\$5,650	Baa2 / BBB	Ba1 / BBB-	134.012	100.605
Marathon Oil	\$6,300	Baa1 / BBB	Ba1 / BBB-	116.316	94.428
Murphy Oil	\$2,250	Baa3 / BBB	Ba3 / BBB-	110.535	80.614
Southwestern Energy*	\$3,867	Baa3 / BBB-	B1 / BB+	116.490	84.729
<b>S&amp;P</b>					
Newfield Exploration	\$2,450	Ba1 / BBB-	Ba3 / BB+	106.375	95.667
Issuers with 'BBB' Rating and Negative Outlooks					
<i>\$mm</i>	Bonds	Ratings		Average Bond Price	
Issuer	Outstanding	Current	Outlook	July 2014	Current
Apache Corporation <sup>[1]</sup>	\$8,831	Baa3 / BBB	Negative	111.690	98.734
Canadian Natural Resources <sup>[1]</sup>	\$11,462	Baa3 / BBB+	Negative	118.790	95.372
ConocoPhillips	\$25,693	Baa2 / A	Negative	125.667	105.732
Noble Energy	\$6,190	Baa3 / BBB	Negative	113.800	95.947
Repsol Oil & Gas	\$1,854	Baa3 / BBB-	Negative	113.500	96.982

# Potential High Yield Supply on the Rise

Outstanding High Yield Volume (\$bn)



# Disclosure

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