Independent Refiners: The Crack Ate My RINs--Policy And Profit Implications

Independent Refiners

- **Key Takeaway.** In what may be a surprise to some, most Independent Refiners now enjoy a net benefit from Renewable Identification Numbers (RINs), based on our analysis. This reflects a distinct change from 2013 when RINs negatively impacted refiner's profitability. Today, realized crack spreads and capture rates are weaker versus historical crack spread indices, and the playing field remains uneven. However, bottom line performance appears positive for most of the Independent Refiners across our coverage universe as the vast majority of the cost of RINs is embedded in the crack spread. Consumers now bear the majority of RINs costs – like a tax. Our conclusion is Independent Refiners should focus less on the specific impacts of RINs (though the program could use some tweaks, in our view) and more on establishing a level competitive playing field for biofuels and fossil fuels on taxes and emissions. Investors should not spend much time and effort on the risks to refining margins historically posed by RINs.

- **Things Change.** According to our analysis, oil price changes accounted for 87% of the average change in Gulf Coast gasoline prices when measured against significant changes in 2013 RINs prices. In 2017, oil price changes accounted for less than 30% of the average change in Gulf Coast gasoline prices. In 2013, Gulf Coast gasoline prices and Louisiana Light Sweet (LLS) crude oil prices possessed a correlation of 0.785 with R^2=62%. YTD in 2017, Gulf Coast gasoline and LLS crude prices possess a weaker correlation of 0.649 with R^2=42%. We analyzed significant swings in RINs prices and changes in wholesale Gulf Coast gasoline prices in 2013 and 2017. In 2017, changes in RINs accounted for over 70% of the average change in Gulf Coast gasoline prices. This compares to an immaterial impact in 2013 on average Gulf Coast gasoline prices. We believe it is undeniable that today's crack spread incorporates a majority of the cost of the RINs.

- **Policy Implications.** The Independent Refiners bore the brunt of the first wave of RINs in 2013 but have since turned the tide. With RINs costs now being "passed along" to consumers, the incentive for Independent Refiners to aggressively fight against RINs may wane. There are plenty of other issues within the Renewable Fuel Standard (RFS) program that create opacity and deserve adjustments – a subject for a different note. RINs are now effectively a tax on consumers but do not generate any funds for the U.S. Treasury – probably not the best outcome. In classic political theory, a policy's survival is enhanced if it delivers concentrated benefits while diffusing its costs – and that is where we believe the RINs market is today.

- **Unlevel Playing Fields.** Operational issues associated with RINs and point of obligation (POO) exist. Merchant Independent Refiners remain relatively disadvantaged versus their more integrated peers. These disadvantages will/have narrow(ed) as the financial incentive to "build out" wholesale infrastructure persists. More aggressive product exports also lower compliance costs. Finally, the EPA can/has offer(ed) RINs relief for disadvantaged units, a trend we expect will continue.

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Please see page 7 for rating definitions, important disclosures and required analyst certifications. All estimates/forecasts are as of 11/16/17 unless otherwise stated. 11/16/17 17:00:25 ET

Discussion

RINs and share prices positively correlated in 2017 but not in 2013.

Ever since Q1 2013 when RINs prices increased 10-fold from less than a dime to over 70¢ each in just over two months, most, including ourselves, have considered RINs as detrimental to crack spread realizations and a drag on earnings and cash flows. Certainly in mid-2013, RINs prices leapt above $1.40 and both refining margins and refining equities declined. In a major shift fully evident in 2017, we and others have noticed that movements in RINs prices appear to have less of an impact on investor attitudes towards the sector and share price performance. The following table highlights the differing impacts in 2013 and 2017. Notably, the refining sector's share price performances enjoy a positive correlation with changes in RINs prices. The strongest correlations are generally seen with companies that possess significant wholesale/retail operations, ANDV, MPC and PSX. Refiners with less or lower wholesale/retail operations generally see weaker, but still positive correlations, DK, HFC, PBF and VLO. CLMT, which does not possess significant wholesale/retail ops, is the exception. We believe that CLMT's share price performance has been more tied to a restructuring of the company and less so to specific refining fundamentals.

Independent Refiner Equity and RINs Price Correlations 2013 and 2017 YTD

Ticker	2013	2017
ANDV[1]	0.38	0.77
CLMT	0.51	0.70
DK	0.22	0.43
HFC	(0.12)	0.48
MPC[1]	0.11	0.65
PBF	(0.18)	0.40
PSX[1]	(0.15)	0.66
VLO	(0.30)	0.49
Average	0.06	0.57

[1]Integrated wholesale/retail ops
Source: Bloomberg and Wells Fargo Securities, LLC estimates

RINs mostly embedded within crack spreads in 2017.

The Independent Refiners in our coverage universe continue to consistently and persistently call out RINs as an impediment to realized crack spreads – and they are. However, we and they are less likely to cite actual bottom line impacts and cash losses directly tied to RINs – as RINs costs are being passed along to consumers.

Capture Rates Have Suffered While Consumers Increasingly Bear the Burden

RINs Cost Evolution	2013	2017	2017
% of RIN reflected in crack spread	10%	50%	85%
Refining capture rate including RINs	78%	73%	75%
Refiner % of RINS costs	90%	52%	17%
Consumer % of RINs costs	10%	48%	83%

Source: Bloomberg, EPA, company reports and Wells Fargo Securities, LLC estimates

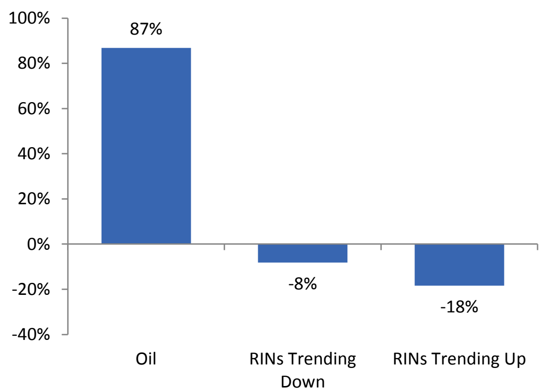
Based on our analysis, the price of a RIN is now embedded in the crack spread. Anecdotally, several Independent Refiners, most notably Marathon Petroleum (MPC), have for some time stated their view that the RINs are in the crack spread and that the focus on changing POO misses the mark and efforts should be focused elsewhere. Other Independent Refiners have been more vocal that RINs were a continuing drag on earnings and cash flows, as they remain in select cases. In all fairness, the 17% of RINs costs we estimate are borne by the Independent Refiners are unevenly distributed. We recognize that several smaller Independent Refiners that we do not cover and specific units of others are more exposed to the RINs obligations given a lack of wholesale and retail blending capacity, local market characteristics and limited trading opportunities. We sympathize with these disadvantaged companies and units, but reiterate this appears to now be the minority position within the sector. We expect the Environmental Protection agency (EPA) to continue issuing small unit exemptions to those plants that are most disadvantaged.

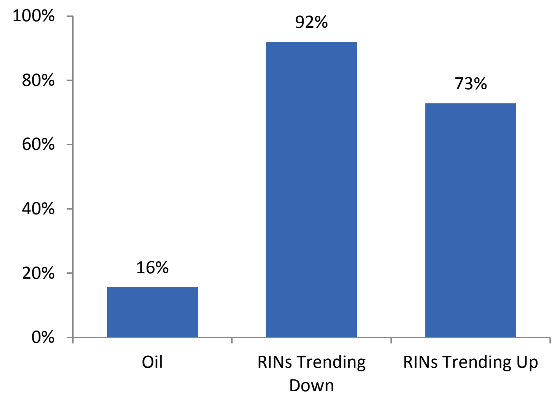
The Analysis

We selected 2013 and 2017 as our comparison years for the impacts of RINs. We chose 2013 because that is the first year that RINs clearly affected refining margins and investment decisions. We selected 2017 because it is the current year and the one in which the change in market conditions is most clear. For the following analysis, we identified periods within the years where significant changes (both up and down) in the price of RINs occurred within a short timeframe – usually within 10 to 15 days.

Changes in RINs prices nearly fully reflected in gasoline prices in 2017.

Components Affecting Gasoline Prices in 2013 and 2017 Y-T-D





Sources: Bloomberg and Wells Fargo Securities, LLC estimates

In 2013, even when RINs prices experienced significant movements, it was the changes in LLS crude oil prices that accounted for almost all of the changes in the price of Gulf Coast gasoline. RINs were an additional expense borne by the refiners and very disruptive to earnings and cash flows. By 2017, a much different environment had unfolded. Significant changes in RINs prices were directionally matched to a meaningful portion of the changes in Gulf Coast gasoline prices. By contrast, underlying moves in crude oil were resulting in a decreased impact on gasoline prices. Crude oil remains the single most significant cost component of refined products. However, rapid changes in RINs prices are immediately reflected in wholesale gasoline prices. This bolsters our view that the RIN is fully embedded in the gasoline crack spread.

Correlations of RINS and Crude Oil with Gulf Coast Gasoline

LLS/Gasoline	Correlation	R-squared
2013	0.785	62%
2017	0.649	42%

Sources: Bloomberg and Wells Fargo Securities, LLC estimates

Crude oil's correlation with Gulf Coast gasoline has weakened from its relationship in 2013.

The Comparisons

Following from the 2013 and 2017 comparisons that we believe unequivocally demonstrate that the RINs are now embedded in the crack spread. Our next step was to compare how refining profitability has evolved in the world of RINs. We elected to focus only on the gasoline and corn-based, ethanol, D6 RINs for our analysis. We recognize that the RINs market is far from that simple and straightforward – hence one of the biggest problems with RINs. We also did not include changes in ethanol prices, but we believe given the mandate for 10% blending (E10) that ethanol, like crude oil, is a pass-through cost. We believe our analysis, while basic and gasoline/ethanol focused, is fair and representative of the conditions that exist and changes that have occurred in recent years.

Analysis focused on D6 gasoline/ethanol components.

Our analysis is based on a comparison of three types of refiners with varying levels of refining and wholesale/retail integration (full / partial / negligible) represented by 100% / 50% / 0% designations in 2013 and 105% / 55% / 15% in 2017. The increase in integration reflects how the RINs market has incentivized adding blending capacity (i.e., capture the RINs value / minimize RINs costs) since 2013. Funding or dropping-down this capacity expansion via MLP subsidiaries has also improved the bottom line of the Independent Refining sector.

For comparisons sake, we assumed that each refiner in our three scenarios would generate 250,000 barrels per day (bpd) of gasoline. Converted to gallons results in 10.5 million gallons per day (mmgpd). U.S. retail gasoline generally contains 10% ethanol. Thus for every 9 gallons of gasoline 1 gallon of ethanol is required. So the RINs obligation for 1010.5mmgpd of gasoline totals about 1.17 million RINs per day.

We settled on a $12.50/bbl gasoline crack as a level that approximates a mid-cycle Gulf Coast gasoline margin to keep the comparisons equivalent. We converted the per barrel crack to gallons; $0.30/gallon. In 2013, the average RINs price was $0.59. For 2017, we decided to use the most recent RINs price of approximately $0.85.

Believe 85% of the RINs reflected in 2017 crack spread.

In 2013, we estimate that the RIN was nominally affecting the crack spread. Our estimate is approximately 10% of the cost of the RIN was reflected in the crack spread – though it may have been closer to zero in H1 2013. For 2017, we made two assumptions about how much of the RIN is reflected in the crack spread; a 50% case and an 85% case. We then embedded the RINs into the crack spreads on a per gallon basis. We believe there is a strong case to be made that the RINs are at least 85% embedded in the crack spread. However, we recognize the opacity of the RINs market, local conditions and the differing opinions within the sector. Thus the 50% scenario remains plausible in some regions and specific locations, in our view.

Refining Assumptions for RINs Comparisons

Assumptions:	
Gallons Gasoline/day	10,500,000
RINs obligation/day (9:1 ratio)	1,166,667
Base Gas Crack - $/bbls	$12.50
Base Gas Crack - $/gal	$0.30
RINs 2013 average price	$0.59
RINs 2017 average price	$0.85
RINs 2013/gal (9:1 ratio)	$0.066
RINs 2017/gal (9:1 ratio)	$0.094
Adjusted 2013 Crack (10% RIN in crack)	$0.304
Adjusted 2017 Crack (50% RIN in crack)	$0.345
Adjusted 2017 Crack (85% RIN in crack)	$0.378

Source: Bloomberg, EPA, company reports and Wells Fargo Securities, LLC estimates

2013 RINs Comparisons

2013 RINs Case - Assumes 10% of RINs in Crack, $0.59 RINs Price in $/day unless indicated			
Wholesale/retail integration	100%	50%	0%
Gasoline sales (gals/day)	10,500,000	10,500,000	10,500,000
Adjusted crack ($/gal)	0.304	0.304	0.304
Gross margin	3,193,833	3,193,833	3,193,833
RINs expense 100% ($0.59/RIN)	688,333	688,333	688,333
Gross margin, net RINs	2,505,499	2,505,499	2,505,499
Retail/wholesale recapture	688,333	344,167	0
Gross margin, adjusted net	3,193,833	2,849,666	2,505,499
Lost margin, net	0	(344,167)	(688,333)

Source: Bloomberg, EPA, company reports and Wells Fargo Securities, LLC estimates

2017 RINs Comparisons – 50% Embedded

2017 RINs Case - Assumes 50% of RINs in Crack, $0.85 RINs Price in $/day unless indicated			
Wholesale/retail integration	105%	65%	15%
Gasoline sales (gals/day)	10,500,000	10,500,000	10,500,000
Adjusted crack ($/gal)	0.345	0.345	0.345
Gross margin	3,620,833	3,620,833	3,620,833
RINs expense 100% ($0.59/RIN)	991,667	991,667	991,667
Gross margin, net RINs	2,629,166	2,629,166	2,629,166
Retail/wholesale recapture	1,041,250	644,583	148,750
Gross margin, adjusted net	3,670,416	3,273,750	2,777,916
Gross margin expansion vs. 2013	476,584	79,917	(415,916)
RINs borne by retail consumers ($/gal)	0.045	0.008	(0.040)

Source: Bloomberg, EPA, company reports and Wells Fargo Securities, LLC estimates

2017 RINs Comparisons – 85% Embedded

2017 RINS Case - Assumes 85% of RINs in Crack, $0.85 RINs Price in $/day unless indicated			
Wholesale/retail integration	105%	65%	15%
Gasoline sales (gals/day)	10,500,000	10,500,000	10,500,000
Adjusted crack ($/gal)	0.378	0.378	0.378
Gross margin	3,967,916	3,967,916	3,967,916
RINs expense 100% ($0.59/RIN)	991,667	991,667	991,667
Gross margin, net RINs	2,976,249	2,976,249	2,976,249
Retail/wholesale recapture	1,041,250	644,583	148,750
Gross margin, adjusted net	4,017,499	3,620,832	3,124,999
Gross margin expansion vs. 2013	823,667	427,000	(68,833)
RINs borne by retail consumers ($/gal)	0.078	0.041	(0.007)

Source: Bloomberg, EPA, company reports and Wells Fargo Securities, LLC estimates

Refining Comp Sheet

Company	Ticker	Rating	Price 11/16/2017	Price Target	Upside Potential	Market Cap ($MM)	EV ($MM)	Capacity Mboed	Avg. Nelson Complexity	2017E Utilization
Andeavor	ANDV	1	$104.79	$127	21.2%	$16,347	$26,985	1,157	10.4	94%
Calumet Specialty Products	CLMT	1	$8.05	$10	24.2%	$618	$2,581	165	NM	81%
Delek US Holdings	DK	1	$28.59	$40	39.9%	$2,329	$3,228	302	9.5	103%
HollyFrontier Corp.	HFC	2	$43.80	$40	-8.7%	$7,765	$9,987	457	12.2	95%
Marathon Petroleum Corp.	MPC	2	$62.01	$60	-3.2%	$30,286	$48,852	1,817	10.7	97%
PBF Energy, Inc.	PBF	1	$32.66	$35	7.2%	$3,594	$6,021	884	12.2	91%
Phillips 66	PSX	2	$92.46	$91	-1.6%	$46,853	$56,943	2,399	11.3	94%
Valero Energy Corp.	VLO	1	$82.12	$87	5.9%	$35,934	$40,097	3,015	12.4	96%
Average					**6.6%**	**$21,127**	**$27,522**	**1,479**	**11.4**	**96%**

Company	Share Price Performance				Consolidated Crack ($/bbl)		Cash Opex ($/bbl)		DD&A ($/bbl)	
	1-wk	1-mo	YTD	QTD	2018E	2019E	2018E	2019E	2018E	2019E
Andeavor	-2.1%	0.9%	19.8%	1.6%	$11.17	$10.98	$5.42	$5.33	$2.78	$2.82
Calumet Specialty Products	-16.6%	3.2%	101.3%	-3.6%	$16.07	$16.02	$11.00	$9.50	$3.51	$3.55
Delek US Holdings	3.1%	8.6%	18.8%	7.0%	$7.49	$8.50	$3.83	$3.90	$1.85	$1.93
HollyFrontier Corp.	3.8%	21.4%	33.7%	21.8%	$10.56	$10.90	$5.90	$5.59	$2.24	$2.77
Marathon Petroleum Corp.	0.6%	11.3%	23.2%	10.6%	$11.26	$11.46	$6.41	$6.49	$4.20	$4.60
PBF Energy, Inc.	5.8%	19.4%	17.1%	18.3%	$8.39	$8.55	$5.42	$5.18	$0.94	$0.97
Phillips 66	-2.1%	1.7%	7.0%	0.9%	$9.08	$9.33	$4.89	$4.89	$1.95	$2.04
Valero Energy Corp.	1.0%	6.1%	20.2%	6.7%	$9.30	$9.80	$3.59	$3.57	$1.84	$1.85
Average	**2.0%**	**11.4%**	**20.0%**	**10.9%**	**$9.35**	**$9.76**	**$5.01**	**$4.94**	**$2.17**	**$2.36**
XOI Index	**-3.5%**	**1.2%**	**-2.5%**	**6.3%**						
SPX Index	**0.0%**	**5.8%**	**-4.2%**	**6.3%**						

Company	EPS		Consensus EPS		P/E		Consensus P/E		EPS vs. Consensus	
	2018E	2019E	2018E	2019E	2018E	2019E	2018E	2019E	2018E	2019E
Andeavor	$7.27	$8.27	$8.34	$9.30	14.4x	12.7x	12.6x	11.3x	-12.8%	-11.1%
Calumet Specialty Products	($0.39)	$0.16	($0.95)	($0.60)	NM	NM	NM	NM	59.0%	NM
Delek US Holdings	$1.16	$1.95	$1.40	$1.69	24.7x	14.6x	NM	16.9x	-17.3%	15.4%
HollyFrontier Corp.	$2.15	$2.72	$2.70	$3.16	20.4x	16.1x	16.2x	13.9x	-20.6%	-13.8%
Marathon Petroleum Corp.	$3.79	$4.86	$4.22	$4.68	16.4x	12.8x	14.7x	13.3x	-10.3%	3.9%
PBF Energy, Inc.	$2.65	$3.55	$2.88	$2.85	12.3x	9.2x	11.3x	11.5x	-7.9%	24.8%
Phillips 66	$5.55	$6.44	$6.30	$6.75	16.7x	14.3x	14.7x	13.7x	-12.0%	-4.6%
Valero Energy Corp.	$5.59	$7.00	$6.29	$6.30	14.7x	11.7x	13.1x	13.0x	-11.1%	11.1%
Average[2]	**$3.48**	**$4.42**	**$3.96**	**$4.24**	**17.1x**	**13.1x**	**13.8x**	**13.4x**	**-13.1%**	**3.7%**

Company	P/CFPS		Gross FCF Yield[1]		EV/EBITDA		Current			
	2018E	2019E	2018E	2019E	2018E	2019E	MC ($/bbl)	EV ($/bbl)	BV/sh	Capex ($/bbl)
Andeavor	6.6x	6.6x	6.4%	7.5%	7.9x	7.6x	$38.71	$63.90	$70.57	$3.58
Calumet Specialty Products	4.9x	3.6x	9.2%	16.8%	8.5x	7.3x	$10.24	$42.78	$2.88	$1.99
Delek US Holdings	7.9x	6.1x	13.0%	7.4%	6.5x	5.5x	$21.13	$29.28	$21.19	$1.54
HollyFrontier Corp.	9.2x	8.1x	7.3%	6.2%	8.5x	7.4x	$46.55	$59.87	$29.41	$1.69
Marathon Petroleum Corp.	6.2x	5.0x	20.4%	11.4%	7.7x	6.9x	$45.67	$73.66	$38.56	$5.33
PBF Energy, Inc.	5.0x	4.4x	8.0%	11.0%	6.5x	5.5x	$11.14	$18.66	$21.04	$2.29
Phillips 66	9.9x	8.8x	6.1%	7.2%	8.0x	7.3x	$53.51	$65.03	$45.77	$2.18
Valero Energy Corp.	8.2x	7.0x	-0.3%	1.4%	6.8x	6.0x	$32.65	$36.44	$46.04	$1.16
Average[2]	**7.7x**	**6.6x**	**9.1%**	**7.4%**	**7.3x**	**6.4x**	**$35.11**	**$47.16**	**$33.67**	**$2.37**

Company	Current						Regular Div.	Div Yield	Short Interest	
	Gross D/C	Net D/C	Debt/EBITDA	Price/Book	ROACE	ROIC	($/sh)	%	Ratio	% of Float
Andeavor	44.4%	29.0%	3.4x	1.5x	7.7%	5.0%	$2.36	2.3%	3.6	2.6%
Calumet Specialty Products	89.9%	88.7%	7.6x	2.8x	2.9%	-5.0%	N/A	N/A	1.7	1.1%
Delek US Holdings	44.5%	18.6%	3.0x	1.3x	1.2%	-0.5%	$0.60	2.1%	7.1	6.9%
HollyFrontier Corp.	29.8%	23.7%	1.9x	1.5x	0.5%	1.5%	$1.32	3.0%	5.5	6.6%
Marathon Petroleum Corp.	39.2%	34.7%	2.1x	1.6x	5.5%	8.1%	$1.60	2.6%	2.2	1.8%
PBF Energy, Inc.	47.7%	43.9%	1.9x	1.6x	0.9%	4.6%	$1.20	3.7%	9.3	14.9%
Phillips 66	29.5%	23.1%	1.7x	2.0x	4.5%	5.6%	$2.80	3.0%	3.1	1.5%
Valero Energy Corp.	28.8%	11.0%	1.5x	1.8x	18.4%	22.3%	$2.80	3.4%	5.0	4.4%
Average[2]	**36.6%**	**25.8%**	**2.0x**	**1.6x**	**5.2%**	**6.9%**	**$1.72**	**3.0%**	**5.4**	**6.0%**

Source: Company reports, Bloomberg, and Wells Fargo Securities, LLC estimates

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