

*Energy Firms' Performance Dispersion and  
Their Recovery Since 2015: The Opportunity for  
Small-Cap Value Reversion*



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## **Abstract**

A dive into the inner workings of small-cap energy firms and their performance from 2015 to present. How have these firms suffered and why? The focus of this research is to discover if there is an opportunity for these firms to recover and revert towards their historical performance relative to large-cap firms and the WTI Crude Index. Focusing on the events of 2015, macro tailwinds, and the industry as a whole, I hope to discover the fate for small-cap energy firms as a result of their history in 2015.

Prior to 2015, many energy companies with heavy exposure to oil have been relatively successful. The ability for these companies to have flexibility in their cost structure provided by the existing oil prices allowed firms to continue expanding, researching, and developing new capabilities. With the price volatility that occurred in 2015 and the newly established relatively stable price has prompted record number of companies to file for chapter 11 bankruptcy and restructure. This paper is intended to analyze the new landscape these firms are competing in and determine whether they are in a position to sustainably compete within the market.

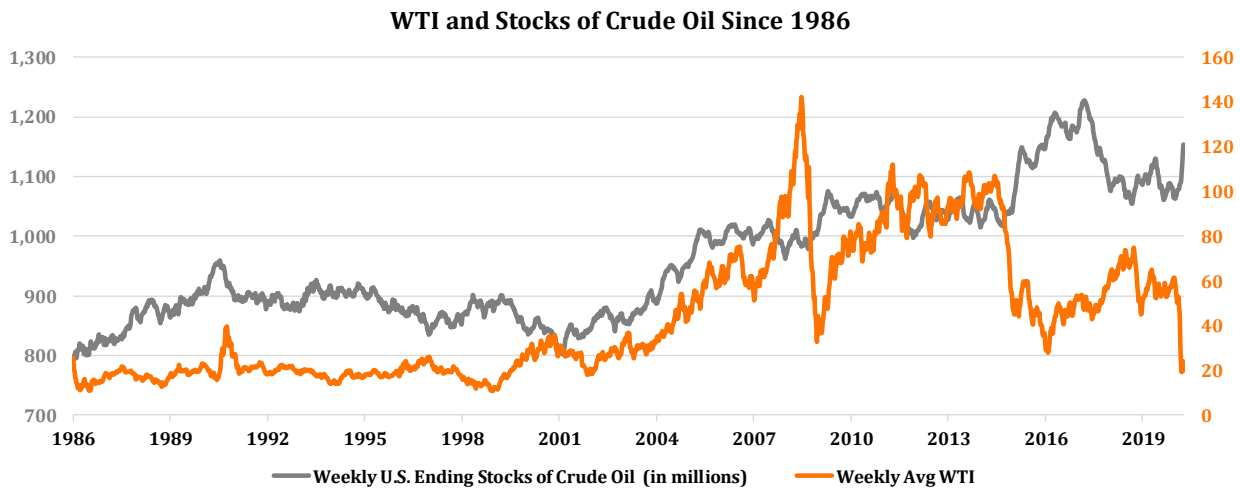
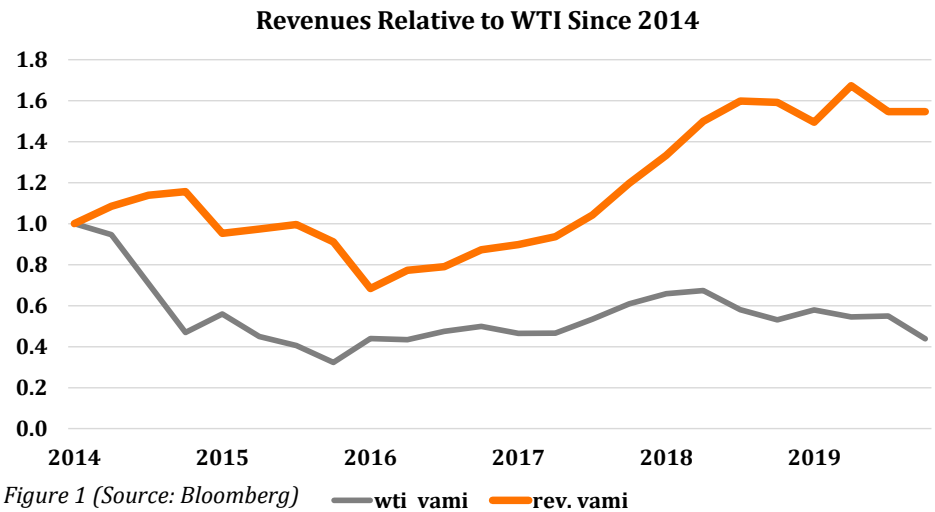
These companies' performances since 2015 have varied greatly from the few that were barely affected to those that were liquidated completely. The noticeable trend in the firm's sub-industry and size brings questions to the table that imply a new normal may have been established. Will companies that have had weaker performances, in regards to the total return in the market, continue to lag behind or do they offer an attractive opportunity for value investors.

Though there has been turbulence in the market due to the economic effects of COVID-19, this report does not extend into the current market, yet it is highlighted in the outlook section of this report. The time frame of this report is predominantly from 2015 to late 2019, with a brief outlook on the economic environment in 2020 and its impact on the study.

## Macro-economic Environment

The data set that I began using was the 16 firms that are classified as exploration and production companies within the S&P 600 Energy Index. This subset of companies, although relatively small to how many firms are in the energy sector, are specific to three requirements I determined were necessary. Their market cap had to be under two billion to classify it as a small-cap firm, they had to have the majority of their line of business in exploring and producing oil and/or petroleum, and lastly, were tracked in a major index in order to readily compare them to their comps and the overall index. In order to fully understand the history of this sub-set of companies, I took a step back and analyzed the overall landscape they were competing in over the last several years. Looking at *Figure 1*, we can see the contrast between crude oil inventories and WTI. An interesting thing to note is that during the span between 1986 and 2006, inventories grew by 200 million barrels, and grew again by over 200 million barrels just between 2015 and 2017 (*Figure 2*). This shows how rapidly the supply significantly exceeded

the demanded and thus caused WTI prices to drop. As a result, on a top-line basis in 2015, average revenues for these firms fell, but have since increased given production increases while WTI has remained relatively stable (*Figure 3*).



### WTI and Stocks of Crude Oil Since 2013

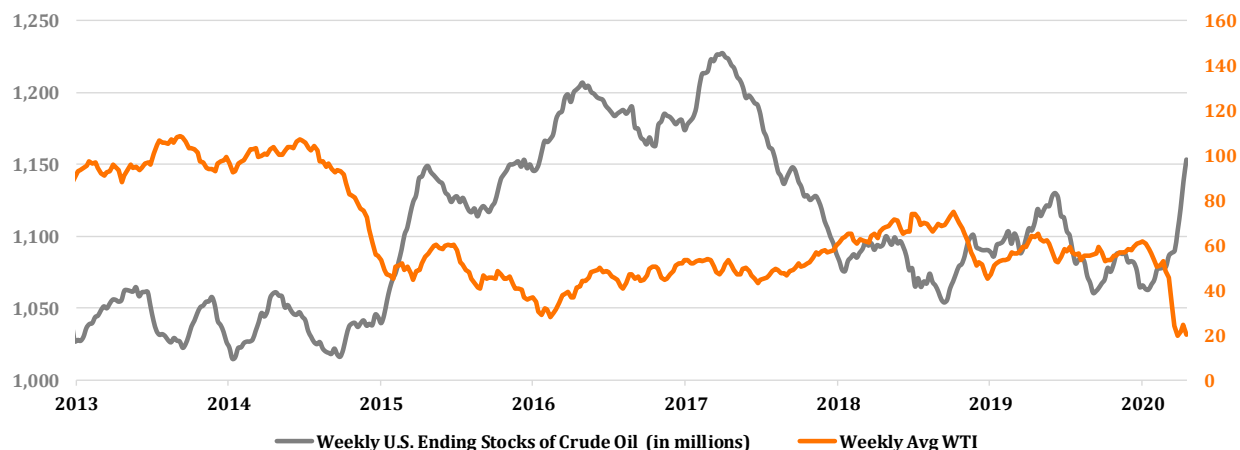


Figure 3 (Source: St. Louis Fed)

Looking back at indexed performance of sub-industries in the energy sector that have exposure to oil, I found that there was a noticeable trend relative to WTI price. Shown in the figure showing Performance by Sub-industry in the appendix, the indexed performance shows how well Refining and Marketing companies have performed over the past 10 years. What is also noticeable is that both exploration and production, and equipment and services performed similarly over the past 10 years. One would be led to believe this would continue to be true, but if these same companies were broken down by size instead of sub-industry, a different story unfolds. The figure showing Performance by Sub-Industry since 2010 shows small-cap companies have struggled the most, yet have also seen the greatest performance. This is likely due to the increased risk they entail and therefore have higher betas relative to WTI and the overall market. Another interesting note is the ability for fully integrated firms to be the least impacted from events much like 2015, compared to small and mid-cap firms.

### Performance by Size

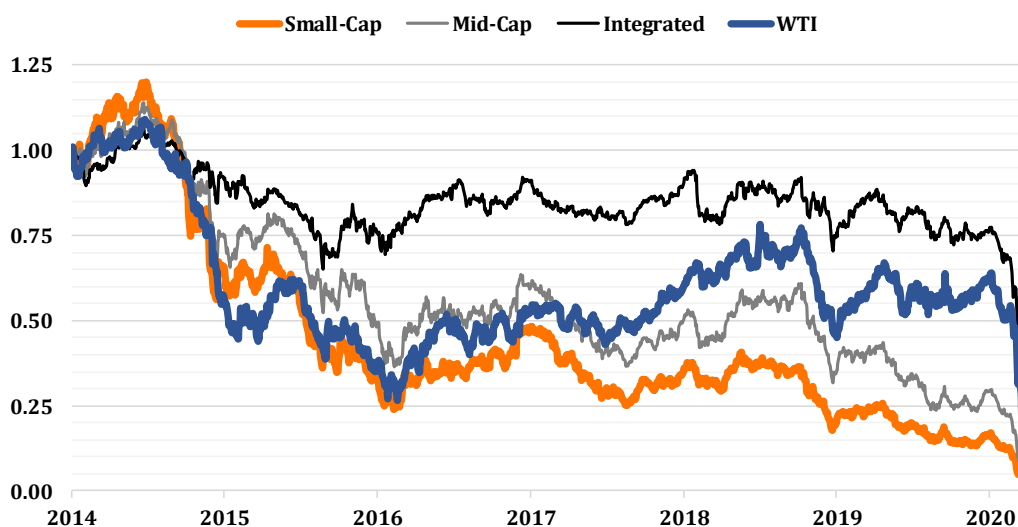


Figure 4 (Source: Capital IQ)

### Performance by Sub-Industry

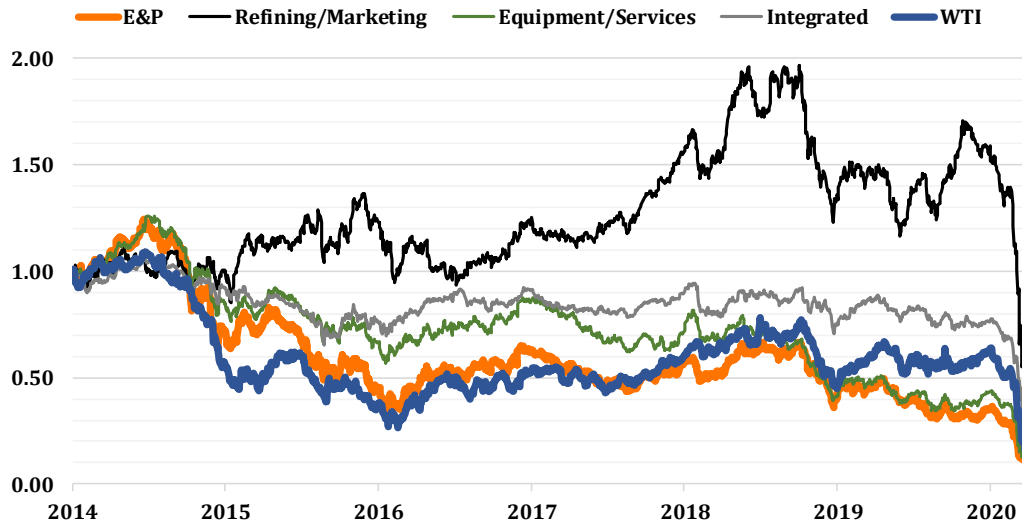


Figure 5 (Source: Capital IQ)

The overall size of the balance sheet of integrated firms opens up the number of levers that can be pulled in high volatility events. These firms benefit from integrated supply chains, increased liquidity and stronger relations with customers. On the contrary, I was interested in how the events in 2015 affected specifically small-cap companies and whether they have been able to adapt to the current environment. In order to do so, I first looked at similar data, but indexed from 2014 to see how their performance was affected since the large volatility in WTI. Here I saw that small-cap companies have only been doing even worse since this date (Figure 4). The slow decrease in the indexed price from 2017 to recently suggest that the market sentiment is pessimistic of their financial strength in the new environment and overall potential return in an upside case. Now that I knew small-cap firms have indeed been struggling and market sentiment was not on their side, I began exploring which subindustries told a similar story since 2015. As I anticipated, the capital-intensive exploration and production industry has merely tracked the performance in WTI (Figure 5). One would have been better off investing in a WTI ETF assuming no annual fees and a rolling base of future contracts. Combining both of these sub-sets of companies, I looked at small-cap exploration and production companies in order to analyze their financial structure going into 2015, their current financial positioning and whether there was a case that these firms were undervalued solely due to sentiment rather than their financial capability.

# Fundamental Analysis

In order to analyze the financial health of small-cap exploration and production companies, I first looked at how the firms themselves were investing in their business in order to see what their sentiment was in terms of potential growth. A good signal for this was how much of their top-line revenues they were investing into capital expenditures to grow their business. Whether it was through new materials to extend the life of existing equipment, opening new drills, expanding on current sites or other means that a business found to expand through an increase in fixed assets. Looking at *Figure 6*, we can see the shock that occurred post-2015 due to the drop in WTI and has since created a new industry normal.

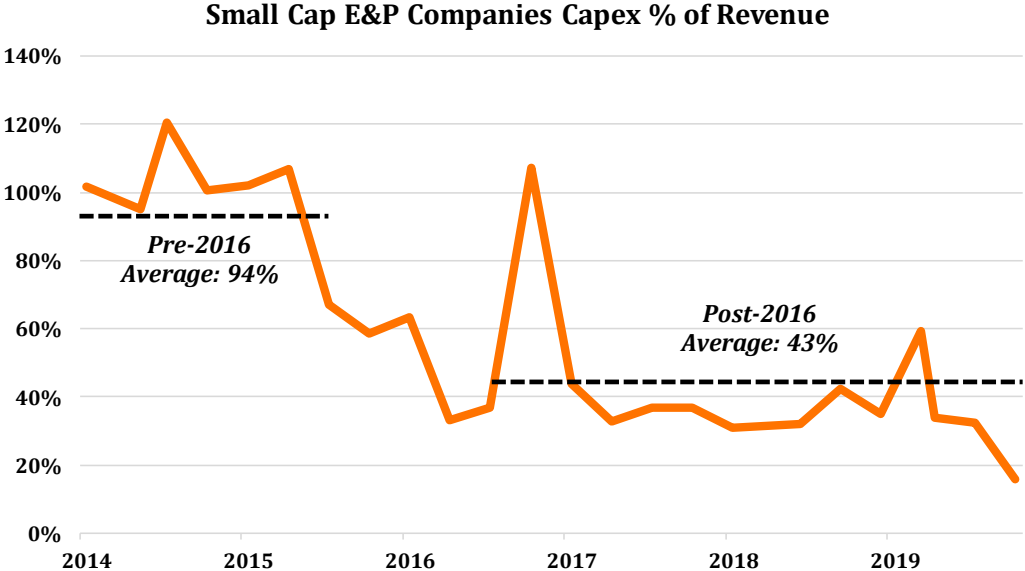


Figure 6 (Source: Bloomberg)

Where companies used to spend about 94% of top-line revenues in early 2014, prior to a decline in revenues, this average is now 43% for the last three years. This tells me management is no longer projecting to expand at the rates that they once were, and are unable to maintain a high cost of exploration as their margins have been squeezed due to the lower WTI price. This view implies that the projected growth for small-cap exploration companies has since decreased from pre-2015 levels and would be an indicator that justifies a lower share price. On a positive note, though gross margins were squeezed, they have since been able to recover back near their normal levels of 30%-40%. The downside case, from 2015 through 2016 where gross margins remained below 20%, is a risk an investor in these firms must be wary of. If WTI were to drop by another 50% as it did between August of 2014 and January of 2015 (\$100 to \$50), the impact it would have to their gross margins would be very similar. To show the operating income affect the drop in WTI catalyzed, we can see two very important notes. First looking at historical operating margins, we can see that they drop severely due to the shock in price, but have since recovered from those levels. To break down the biggest operational expenses, I first found that the average firm reduced the

employment of about 1/3 of their firms. Regardless on the outlook of oil and the potential for these companies, the cost to achieve their existing scale, if desired, must be accounted for as obtaining and retaining talent is not cheap. Another note is that asset impairments were the greatest influence in the impact to their operating margins. Due to accounting standards, once the price of WTI decreased for a substantial period of time, the book value of the assets had to be impaired since their future value was significantly cheaper than their current book value. After these one-time impairments, their operating margins have seemed to returned to normal. Although this may be seen as a positive, these asset impairments have lowered their asset base and has implicitly increased their leverage levels. With an implied increase in leverage, and a lower estimate for forecasted revenues from their assets, their existing investments that once seemed profitable are now in question.

On the note of forecasts, we can look at historical and current exploration costs per barrel in order to see how firms are expanding. The dramatic decrease in exploration costs per barrel produced shows that firms are no longer seeking to expand their production and are highly dependent on their current asset base and geographic footprint. For those that have not significantly improved their well efficiencies, and have control over their asset base, in a downside case, dilution of companies and consolidation of assets is very likely. Now looking at pre-tax margins per BOE in Figure 7, it is clear the impact WTI has had on the ability for these firms to sustainably profit from producing at new levels. While they were able to restructure expenses through capex cuts, slashing dividends, and terminating employees, the current margin per BOE gives much less room for a downside case than there was in 2014.

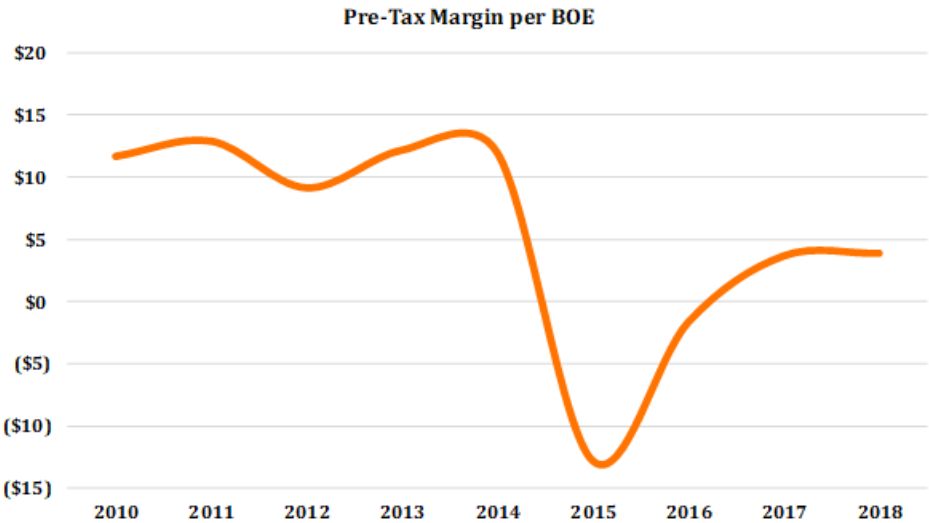


Figure 7 (Source: Bloomberg)

On the leverage and solvency end, it is important to be aware if these firms are fundamentally stronger than they were prior to 2015 so that they have the ability to wear another price shock in the future. Unfortunately, the opposite is the case with very few exceptions. On both the short term and the long-term



end, after firms saw spikes in their leverage and ran into liquidity issues as they pulled from their revolvers, their coverage ratios and leverage ratios are still higher than they were before 2015. Shown in *Figure 8*, and in *Figure 9*, the current leverage and solvency measures have not improved. Now since these are balance sheet numbers, possibly these firms have increased their earnings potential and therefore can afford this new level of leverage.

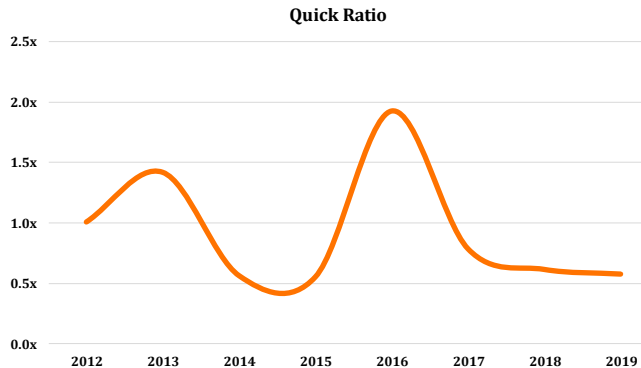


Figure 8 (Source: Capital IQ)

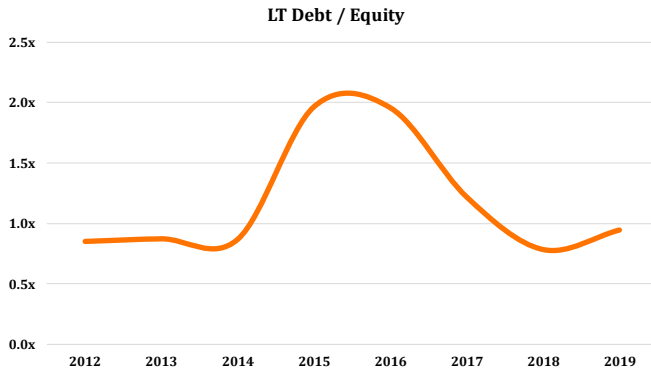


Figure 9 (Source: Capital IQ)

This is also not the case in this instance as shown in *Figure 10*, today's average total debt / EBITDA levels are actually higher than they were from 2012 to 2014. From 2012 to 2014 they were about 2.3x and today they average at about 2.8x. This is worrisome as these companies though they have recovered from the events of 2015, are not positioned defensively to protect themselves from a similar event. As stated earlier, a 50% decrease in WTI would prompt liquidity issues and thus prompt a large pull of cash from revolvers which occurred in 2015. If prices are to drop again, I would expect many bond covenants to be broken and eventually cause several default and bankruptcies.

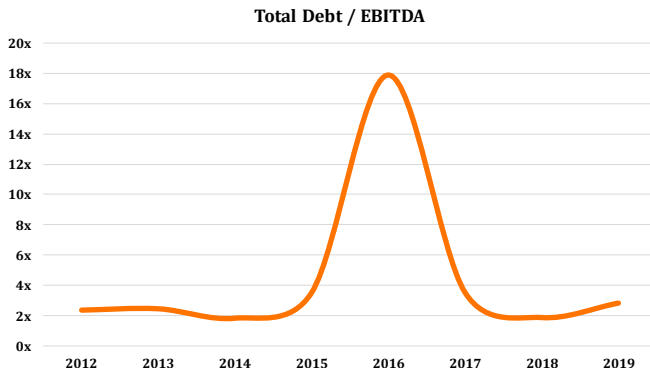


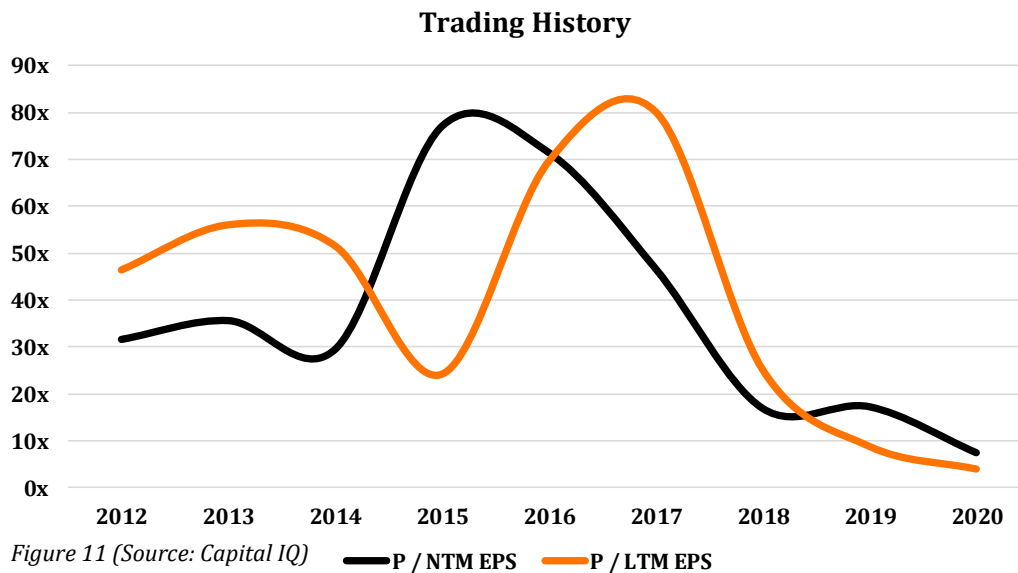
Figure 10 (Source: Capital IQ)

As stated earlier, a 50% decrease in WTI would prompt liquidity issues and thus prompt a large pull of cash from revolvers which occurred in 2015. If prices are to drop again, I would expect many bond covenants to be broken and eventually cause several default and bankruptcies.

For this reason, many of these companies are rated between B and CCC+. This very poor credit rating is justified given their history with volatile earnings and the risks involved with that unpredictability. Unfortunately for these firms, the capital-intensive nature of producing oil combined with high cost of debt and volatile top-line with limited visibility in the short and long-term, my outlook for these firms is very pessimistic. This view is supported by the fundamentals that I just spoke about, but in order to see where these firms are currently trading at, I can uncover whether they are truly trading below what they could actually be worth. To do so without explicitly forecasting fundamentals of each firm, I will look at historical trading multiples as the upside case, trading multiples during 2015 as the downside case and current trading multiples as base case.

## Trading Multiples

As I looked at their current and historical trading multiples, I looked at both backwards facing and forward-facing multiples in order to see how they traded relative to what occurred in 2015, and what investors expected. Shown in *Figure 11*, when there is a spike in P/LTM EPS, the EPS declined at a greater rate than the share price did. This is seen in 2016 and 2017 as their multiples were very high as a result of very minimal EPS posted for the year. On the other hand, when there's a spike in P/NTM EPS, the forecasted EPS growth is bearish. Therefore, when these charts are combined, you can see that the P/NTM EPS has reasonably predetermined the P/LTM EPS of the following year. Therefore, when there is a large gap between the two, there is reason to worry since there is a discrepancy in the historical EPS and forecast EPS and the share price should adjust accordingly.



Fast-forwarding to today, the low multiple is a good sign to signify that it is currently trading very cheap, although the very thin gap between P/NTM EPS and P/LTM EPS may suggest that there is little room for upside and the downside case of a 50% cut in WTI would sky rocket both multiples again from a large hit to EPS. Another important note to point out is that 60% of firms in the data set recorded negative earnings in 2016, and 40% recorded negative EPS in 2017. Along with those firms, 27% of the firms in the data set posted consecutive fiscal years with negative EPS. Albeit they are trading near all-time lows with regard to pricing multiples, their low NTM projected multiples bring hesitancy in any positive outlook for value reversion to pre-2015 trading multiples.

## Outlook

An upside case could be made for this sub-set of firms, but it would be very highly dependent on the rebound of WTI. Operational efficiencies have been made and volumes have increased in order to return to pre-2015 levels, but there seems to be no other catalyst for growth. Their financial strength has recovered, yet is actually worse than pre-2015. Although operational efficiencies and improved well designs have dramatically increased the output per well, the challenge to maintain a healthy asset base arises. On the downside case, the current financial strength and capabilities of these firms are very similar to their position in 2015. In the event of a large drop in WTI prices, there could be large amounts of consolidation, restructuring and liquidation. Two of the firms in this sub-set actually restructured their capital structure and turned existing debt into new equity. Looking back at what occurred in 2015 with bankruptcies, in *Figure 12*, we have seen a slight slowdown in filed bankruptcies yet this number has begun increasing recently. Not only does this cause worry as it shows how strongly correlated they are to existing WTI prices, in *Figure 13* we can see the total debt accumulated from these filings. In Q3 of 2019, the average amount of debt per filing was \$465 million whereas in Q2 and Q3 of 2016 it was \$1,200 and \$600 million respectively.

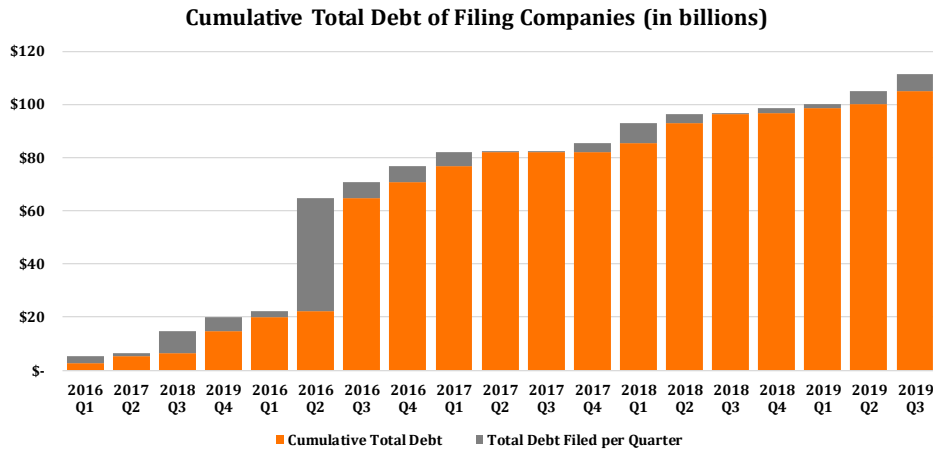


Figure 12 (Source: Haynes and Boone)

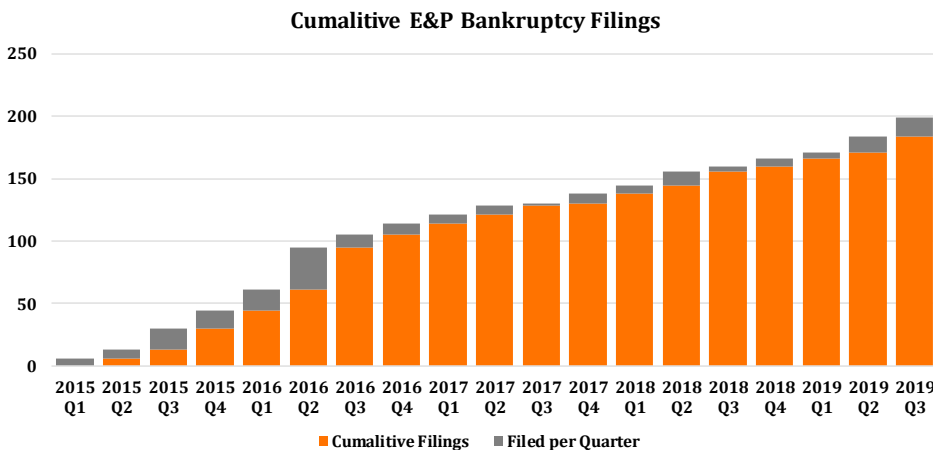


Figure 13 (Source: Haynes and Boone)

## **Conclusion**

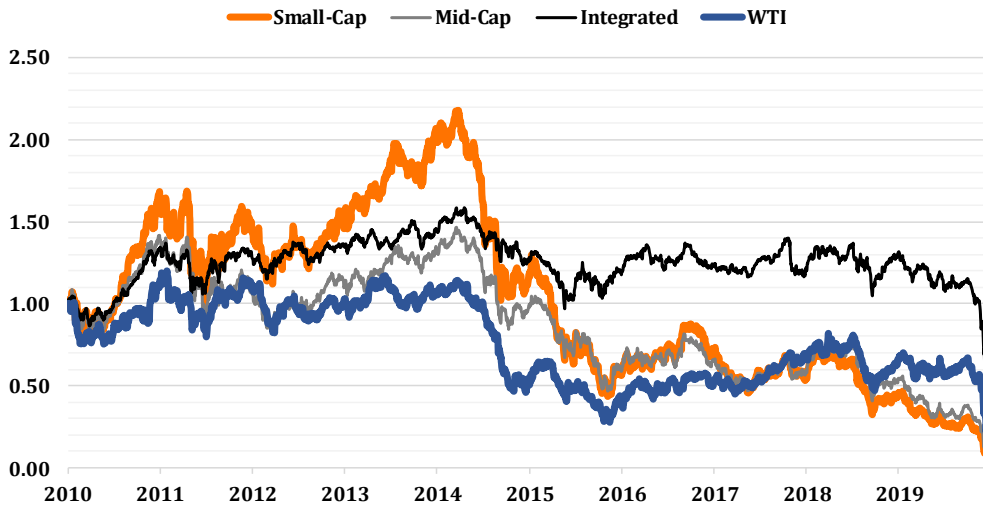
For various reasons that have already been stated, the insignificant improvement in financial strength, operational efficiencies and the lack of a catalyst for growth suggest that these firms have little upside potential. Their pre-2015 performance was something that was unique to its circumstances, and the environment has changed to the point of no return, unless, the WTI price allows these firms to do so. There is fundamentally greater risk as an investor, to have exposure to a single one of these firms than to be exposed directly to the WTI price. Even at their seemingly low prices, forward multiples seem to be priced in and the only room for upside is implicitly through WTI. I strongly believe if there is any shift in WTI towards the downside, its' impact on these firms will be amplified much greater than if it shows upside. While staying within the scope of this report, these firms do not show significant upside and are in danger of repeating history in the event of a downward shift in WTI.

## Appendix

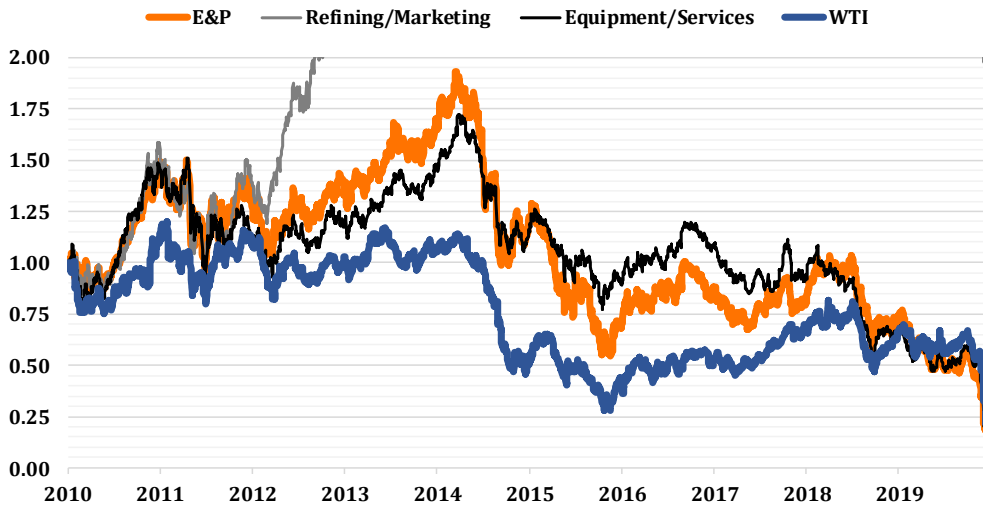
### Companies in Study:

Bonanza Creek Energy, Inc.	NYSE:BCEI
Callon Petroleum Company	NYSE: CPE
Denbury Resources Inc.	NYSE: DNR
Gulfport Energy Corporation	NasdaqGS: GPOR
HighPoint Resources Corporation	NYSE HPR
Laredo Petroleum, Inc.	NYSE: LPI
Oasis Petroleum Inc.	NasdaqCM: OAS
PDC Energy, Inc.	NasdaqGS: PDCE
Penn Virginia Corporation	NasdaqGS: PVAC
QEP Resources, Inc.	NYSE: QEP
Range Resources Corporation	NYSE: RRC
Ring Energy, Inc.	AMEX: REI
SM Energy Company	NYSE: SM
Southwestern Energy Company	NYSE: SWN
Talos Energy Inc.	NYSE: TALO
Whiting Petroleum Corporation	NYSE: WLL

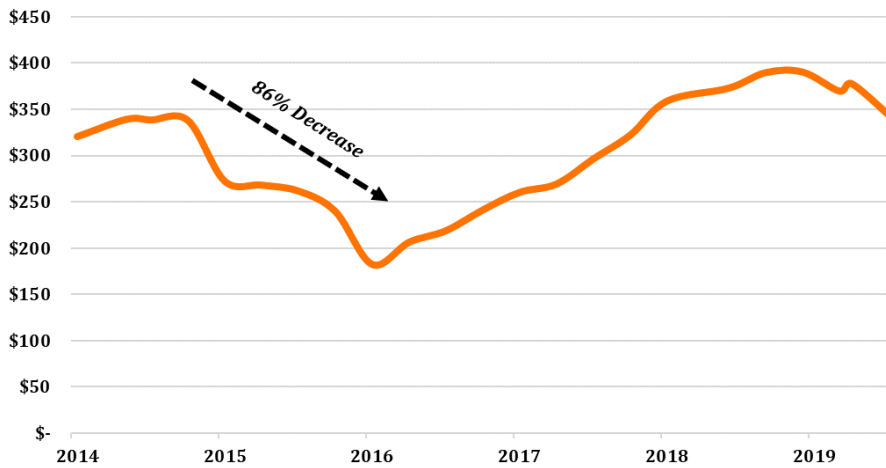
### Performance by Size



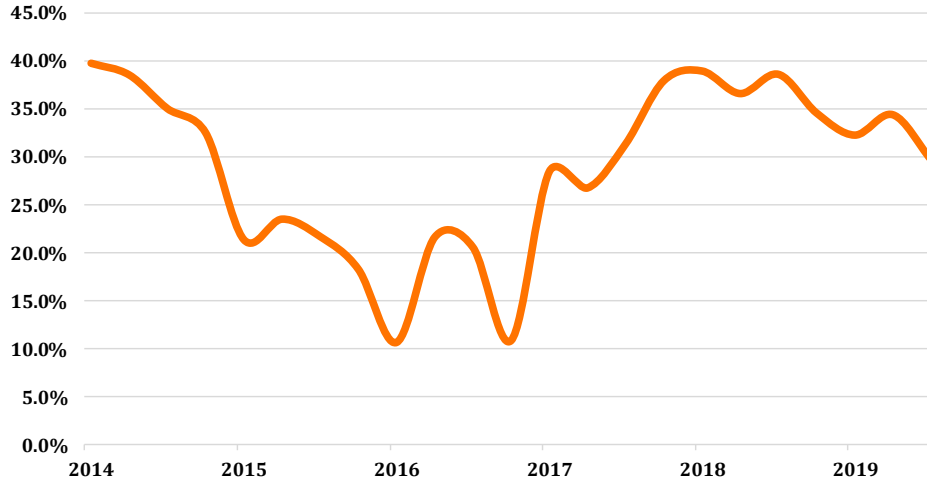
### Performance by Sub-Industry



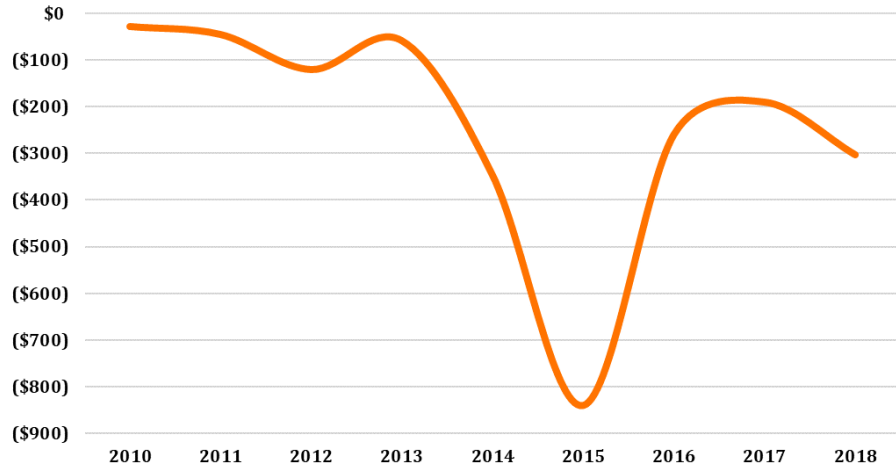
### Small Cap E&P Average Revenues (In Thousands)



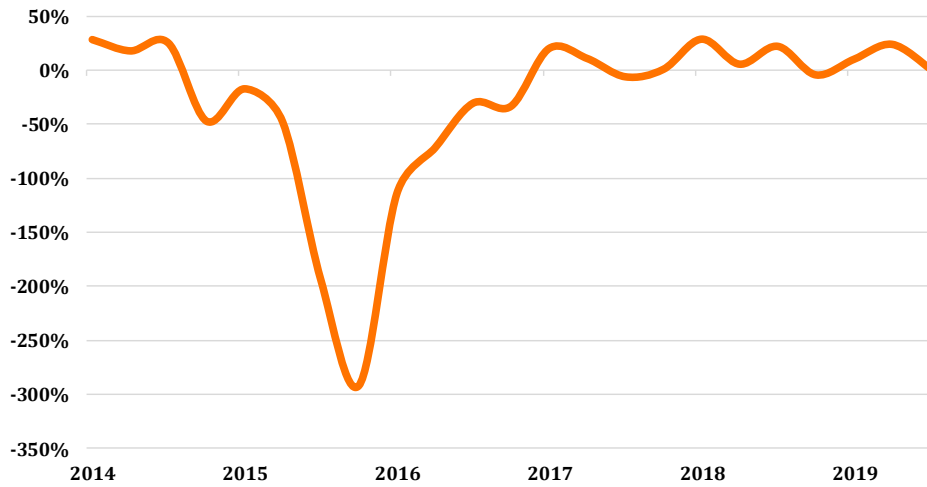
### Small Cap E&P Gross Margins



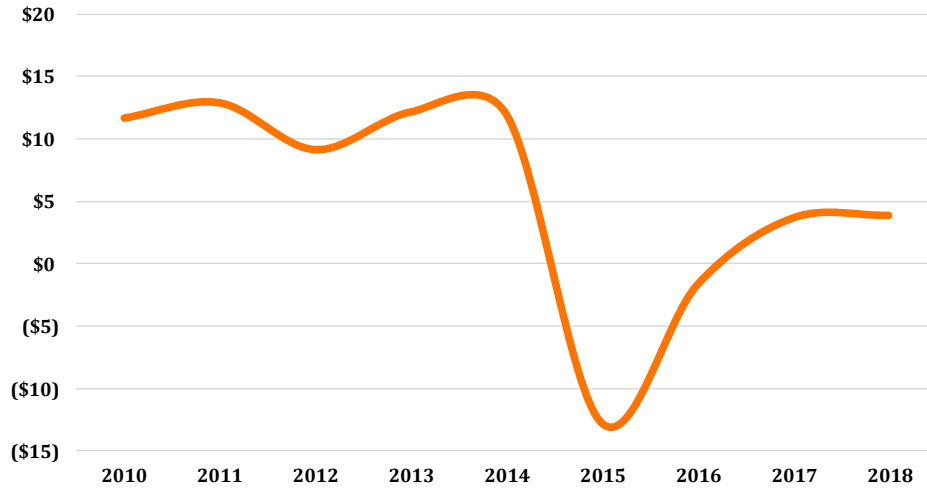
### Write-Off/Impairment of Assets (After Tax, In Thousands)



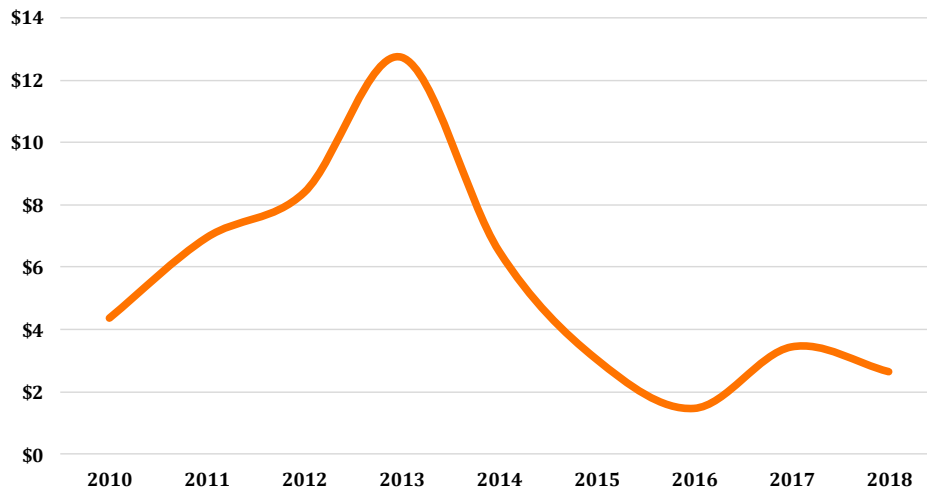
### Small Cap E&P Operating Margins



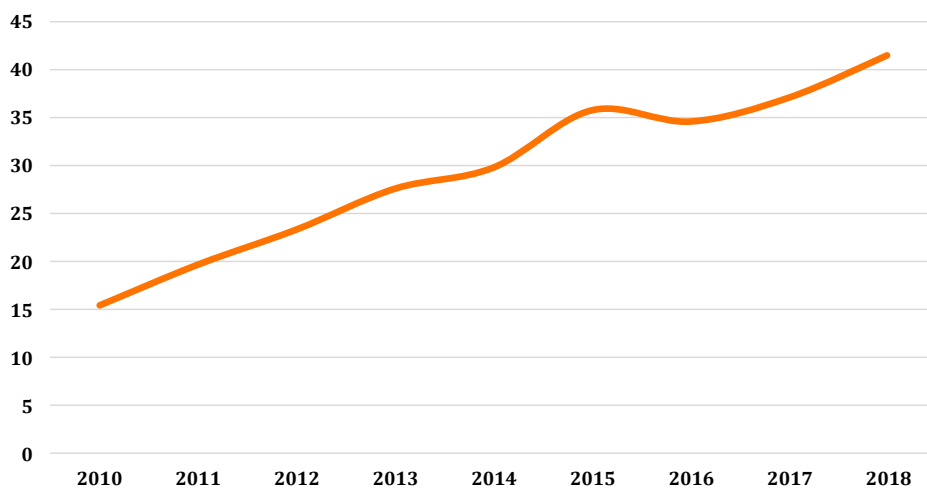
**Pre-Tax Margin per BOE**



**Exploration Cost per Barrel Produced**

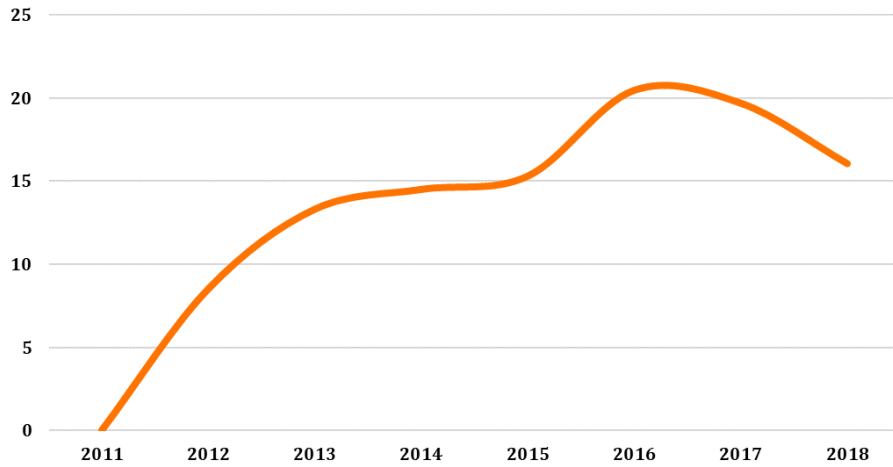


**Annual Production - MMBOE**

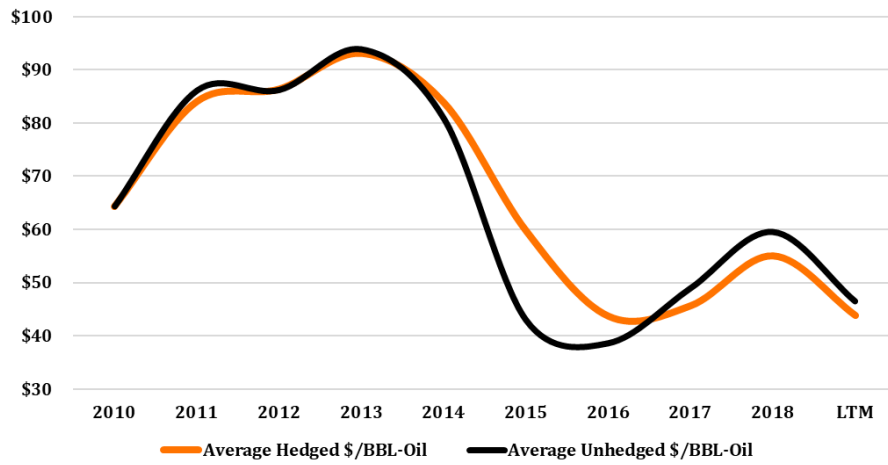




**Oil Volume Hedged MBBL/Day (For Following FY)**



**Average \$/BBL-Oil Prices**



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