The Recent Oil Price Decline and M&A in the U.S. Oil and Gas E&P Sectors

By Kuang-Chung Hsu and Zhen Zhu

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See footnotes at end of text.

INTRODUCTION

Slightly more than a year ago, crude oil prices started to decline from about $100 a barrel to the current level of around $30. The O&G industry did a self-destruction due to the widespread use of new technologies in drilling and production, thus leading to surging production and low prices. Contributing factors also include lower demand due to the slowdown in developing economies, especially China along with OPEC implementing a strategy of keeping oil prices low in hopes of driving U.S. shale producers out of business. A year has passed since the start of the oil price decline, and the prospect of higher oil prices in the near to medium term does not look bright. During the low price environment in the past year, U.S. domestic production did not slow down much, world oil demand was still weak, and major OPEC countries did not cut production to boost prices in order to maintain their market share. In the meantime, low cash reserve oil producing countries such as Venezuela needed to generate more production to fill their budget hole resulting from low prices. All of these paint a bleak picture for oil prices in the next couple of years.

Low oil prices have no doubt fashioned a difficult situation for the U.S. oil and gas industry. For example, 83% of the 129 publicly traded companies on the Oil & Gas Journal list of 150, reported net losses for the 2nd quarter of 2015[1]. The price of oil is also perceived to provide a harsh environment for the O&G E&P sector as it worsens balance sheets of the E&P companies, reduces their borrowing base, and weakens the liquidity of many lower rated E&P companies. In addition, low oil and gas prices decrease the asset values of the E&P companies, lowering the return on drilling programs. However, the E&P companies cannot simply stop their drilling program to respond to low prices. Faced with the shrinking asset base and trapped by the low liquidity, many E&P companies may look to raise capital by selling non-core assets.

On the other hand, low oil and gas prices may provide an excellent opportunity for the cash-rich companies and private equity funds to find bargain prices, to build up their reserve assets by buying up some assets available for sale by less well-to-do companies, and in some cases, simply buying up some companies at the brink of bankruptcy due to low liquidity.

In our earlier article[2], we presented some stylized facts about the U.S. oil and gas E&P sector's M&A activities and postulated some factors behind the M&A activities. Our evidence suggested that the oil and gas prices, especially the oil price, were behind the M&A activities in the longer term, even though production helped to shape M&A wave patterns at the individual shale level. That article, however, was written before the oil price decline in the last quarter of 2014. In this article, we look at how M&A activities in the U.S. oil and gas E&P sectors responded to the low oil price environment during the last year.

OVERALL M&A ACTIVITIES

Figure 1 plots the overall M&A transaction count for the sample period (2013:1-2015:8). Prior to October 2014, the start of the oil price decline, the number of M&A transactions fluctuated around an average value of 50 transactions per month. Oil prices during the period stayed relatively stable, hovering around $100/Bbl. However, when oil prices started to decline in the last quarter of 2014, the number of M&A transactions declined at the same time.

A closer look at the relationship between oil prices and M&A activities suggests that for the short period prior to the oil price decline, there was little connection between the oil price and M&A on the monthly basis, while for the period of declining and lower oil price, the oil price – M&A connection was high. This can be observed from the scatter plot below (Figure 2) and the correlation statistics from Table 1.

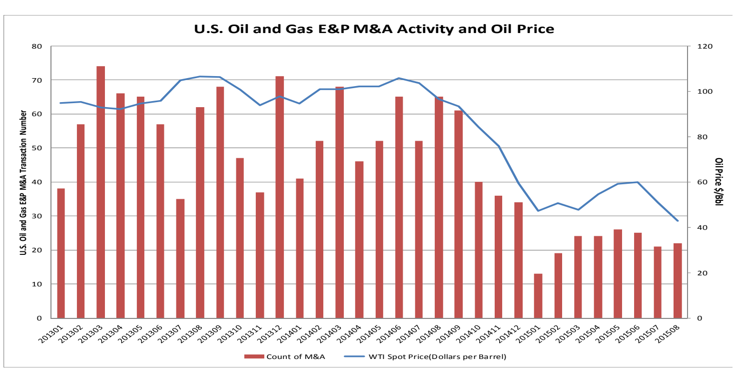

Figure 1.

Figure 2 shows that for the sub-period of the stable

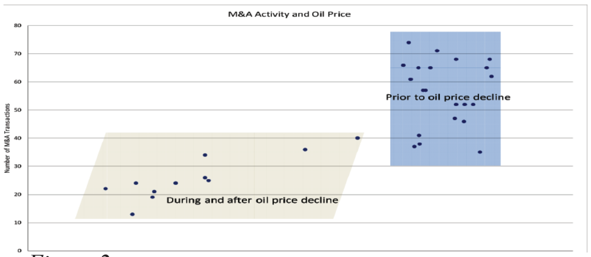

Figure 2.

and high oil prices (prior to October 2014), M&A fluctuated and was not closely related to oil prices. Howver, the declining oil price was accompanied by a decline in M&A activities. The correlations between oil prices and overall M&A activities along with some sub-categories of M&A in Table 1 suggest that there were little significant correlation between oil prices and M&A activities prior to oil prices declinimg, but the correlation between oil prices and the M&A categories increased substantially with the exception of the traditional M&A activities.

The traditional M&A definition refers to the combination of the businesses to form a new business entity (Merger) or one business acquiring another business (Acquisition). In the E&P industry, M&A activities are defined more broadly to include transactions in specific O&G assets such as acreages and other properties and royalties. In our data set, about 8.3% of the total 1462 transactions were traditional M&As. 35% of all transactions were related to acreages, 54% were related to acreages and other assets, and only 2% were transactions related to royalties. Table 1 shows that M&A in the traditional sense is not quite related to oil price, but the oil price decline caused the selling and purchase of the acreages/assets/royalty to decline significantly.

	Correlation With Oil Price		
	2013:1 to 2015:8	**2013:1 to 2014:9**	**Post 2014:9**
Traditional M&A	0.27	-0.12	0.28
Acreages	0.76	0.03	0.66
Property	0.82	-0.04	0.79
Royalty	0.08	-0.23	0.32
Total M&A	0.82	-0.04	0.87

Table 1: Correlation of M&A Activity with Oil Price

GEOGRAPHICAL M&A PATTERN

Figure 3 shows the M&A pattern for each of the eight regions. In general the M&A activities slowed down and the pattern changed in most of the regions when oil prices started to decline. An exception may be for the region of Ark-La-Tex. A statistical test in Table 2 reveals that the average number of M&A transactions was significantly lower in the period of lower oil prices after October 2014.

Region	**Up to 2014:9**	**After 2014:9**	**t for mean difference**
Ark-La-Tex	2.89	3.00	-0.147
Eastern	5.43	2.45	3.03*
Gulf Coast	10.67	4.73	5.75*
Gulf of Mexico	3.00	1.40	3.15*
Midcontinent	10.90	4.20	5.41*
Multi Region	3.52	2.56	1.41
Permian	7.75	3.45	3.85*
Rockies	10.43	5.09	4.14*
Total	53.67	24.73	8.15*

One-tail critical value at 5% is 1.77.

*First period sample mean is statistically significantly higher than the second sample mean.

Table 2: Test for Differences in Transaction Number Up to and After Sept 2014

DIFFERENT MOTIVATIONS FOR M&A DURING HIGH AND LOW PRICE ENVIRONMENTS

There are differences in the motivations for M&A in the oil and gas E&P sector when prices are at high or low levels. When oil and gas prices are high, the return to investment is perceived to be high. Therefore, E&P companies are willing to invest in acreages/assets in order to position themselves for future exploration and development, as development of the E&P program and gaining reserves are the key to the future of an E&P company. The selling companies are usually those who entered and acquired acreages early in the development of the production area. Higher oil prices increase the value of those holdings and enable them to sell the acquired assets at premium prices, which helps them to raise capital for their cap-ex programs. As production in an area starts to ramp up, there would be heightened interest in acquiring acreages/production assets. This can be seen to explain some wave patterns in the M&A activities in the E&P sector.[3]

When oil and gas prices are low, firms are motivated for M&A due to different reasons, depending on their circumstances. Well-capitalized E&P companies are well positioned to take on lower prices and pay bargain prices to acquire assets. For other strong balance sheet companies, especially those integrated oil companies, a low price environment creates an opportunity to reposition their business.

Lower oil and gas prices may also force companies that are in tight cash position to refocus their business on their core assets. Shedding non-core assets may help them become more concentrated and reinvest in their core businesses. Low oil and gas prices could also raise defaults. For example, a recent report by Moody's Investment Service reveals that oil and gas companies have accounted for five of the twelve corporate defaults in the third quarter of 2015.[4] Investors are more cautious in taking on new debt offers in the E&P sector, further exacerbating the tight credit condition. Some E&P companies may have to liquidate their assets.

M&A ACTIVITIES MAY INCREASE IN THE NEXT YEAR OR TWO

So far, the M&A activities in the E&P industry are still very low compared to historical values. There

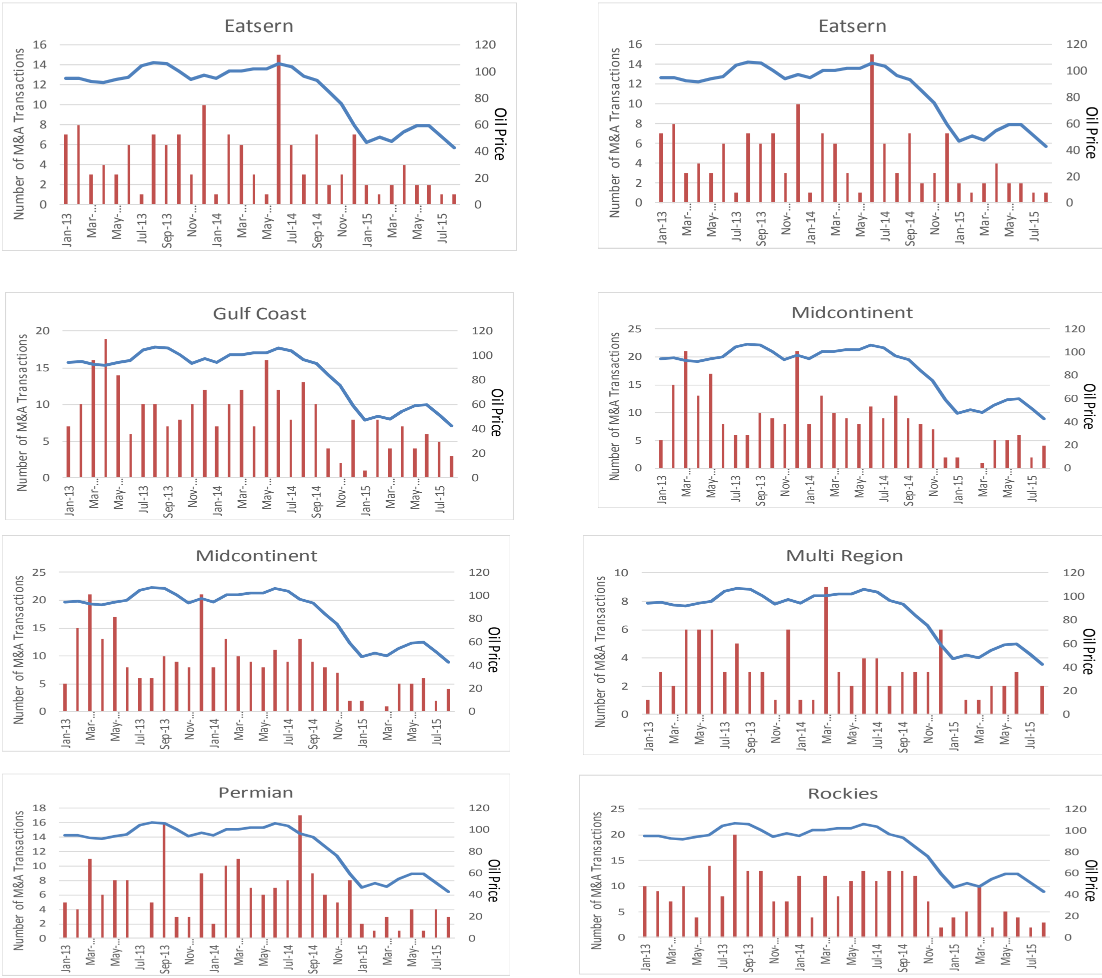

Figure 3.

could be several reasons for this. The low activity may reflect the market's perception of price uncertainty. When price uncertainties are high, investment in the form of the M&A will be dampened. This is certainly consistent with standard financial theories. At present, oil prices are around the $30 range. There is still an uncertainty regarding the direction of the price movement. While there is a possibility that prices may inch higher and pass the $50 mark, the more recent oil price movement to below $30 is still a sign that the market fundamentals are rather weak.

There are reports that the fall borrowing base redetermination has not changed the bases much, which may not be all bad news to the E&P companies who are usually highly leveraged. However, as the banking industry is under increased pressure from regulators to reduce exposure to the oil and gas industry, and the oil and gas industry continues to face difficulties brought by the lower oil and gas prices, it is just a matter of time before credit conditions worsen substantially for the oil and gas E&P companies. Should the oil and gas price continue to remain low for another one or two years, we expect the M&A activities in the E&P sector to climb significantly.

Footnotes

1 See D. Stowers and L. Bell, "2Q revenues drop 35%, income plummets," O&G Finance Journal, November 2015.

2 "Merger and Acquisition Activities in the U.S. Oil and Gas Industry", K.C. Hus, M. Wright and Z.Zhu, IAEE Energy Forum, 2nd Quarter, 2014

3 For more discussions, see K. Hsu, M. Wright and Z. Zhu, "What motivates the M&A activities in the U.S. oil and gas E&P sector?" working paper, 2015.

4 See U.S. corporate default monitor – third quarter 2015: Default rate to hit four-year high during 2016," Moody's Investors Service. October 2015.

5 See M. Adams, "Fall redeterminations leave companies to fight another day," Oil & Gas Finance Journal, November 2015.