

Reaves Asset Management

Energy Sector Outlook

November 2015

Summary

Fundamentally, mid-to-large capitalization energy companies that have healthy balance sheets have likely bottomed in relative underperformance versus the S&P 500 Index¹. While it is not our goal to precisely call a bottom in either the equities or commodity prices (if we were right, it would have been dumb luck!) our sense is that we are close to the lows on a relative basis and that the sector should see a period of outperformance as the market anticipates commodity markets transitioning from oversupply to balance.

That said, the energy and oil outlook differs from prior cycles in that a balanced market will most likely not mean a return to the high prices of 2011-2014. Instead a lower, more “mid-cycle” type environment is likely, where OPEC² member countries continue to produce near maximum levels while U.S. producer cost structures adjust and where low-cost operators prosper while high-cost operators go bankrupt.

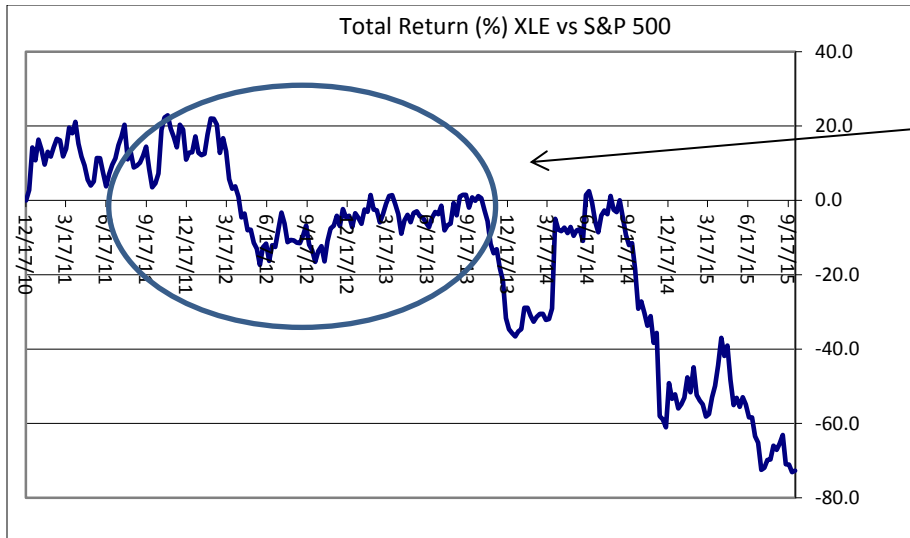
In this environment we prefer low-cost producers that are dominant in a specific region. Not only are they the only ones able to prosper and grow in a lower price environment, but they are potential acquisition targets for larger firms that are starved for growth. We expect that industry consolidation will add value in the energy services and energy infrastructure markets, but see less upside for these subsectors than for producers because infrastructure and service companies do not have the ability to cut costs or benefit from efficiencies to the degree that upstream companies have.

Brief History

On a total return basis, the S&P 500 has outperformed the energy sector for four years in a row. While the relative performance became extreme in late 2014 and in 2015, as a result of commodity price weakness, the sector had already been undergoing an exodus of capital (we use the XLE³, which is an ETF⁴ representing a broad swath of energy producers for the purpose of our comparative discussion, but the trend is the same for subsector ETFs with a narrower focus). This underperformance occurred during a period of very high commodity prices, excess return generation, rising dividends, healthy buyback programs and a shale technology revolution. Part of that capital flight found its way into higher yielding infrastructure MLPs which, on aggregate, had growing domestic project backlogs; thus offering investors both yield and growth. But the bulk of the capital appears to have left the sector, presumably under the assumption that the cycle had peaked and it was time to take profits and deploy the capital elsewhere.

In mid-2014 it became clear that demand growth was slowing just as supply growth was accelerating, especially in North America. The high prices of prior years were unlikely to last without OPEC cutting production. Instead OPEC did the opposite, opting to defend market share, and attempted to force an industry rationalization of productive capacity through price, a policy that remains in effect today.

Since September 2014 the XLE has underperformed the S&P 500 by about 50% on a total return basis. The ETF's dividend yield has never been higher. Yields on some of the major integrated oil companies with the longest price and dividend histories have also never been higher, especially relative to treasuries. Sentiment is very bad. There is concern that oil prices will continue to decline, to as low as \$20 per barrel (/bl), according to at least one investment bank.



While the greatest underperformance of the XLE vs the S&P 500 has been in the past 12 months, outperformance peaked well before that, in 2011.

Source: Bloomberg

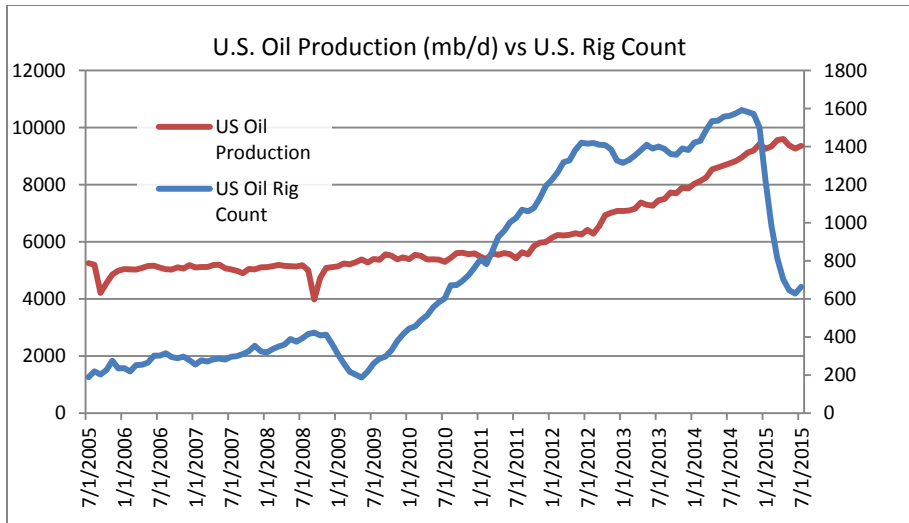
With this as a backdrop, we look at the underlying factors that should drive relative performance over the next 12-18 months including commodity prices and valuations which support our conclusion that the sector is actually quite attractive at present.

Production Outlook

In contrast to some of the more extreme Wall Street calls of late, our outlook for oil prices is generally sanguine, especially for domestic grades like West Texas Intermediate (WTI)⁵. We expect prices to recover over the next 18 months into low \$60/bl range from the mid \$40s/bl now. Our outlook is partly dependent on whether a deal with Iran on their nuclear program culminates in a large supply addition to the market in 2016 (more below). Without Iranian production coming back, we think the market will be balanced in 2016 and undersupplied in 2017.

The primary reason for our expectation that markets will come into balance is that global non-OPEC production is starting to decline. The longer prices remain depressed and the deeper the reduction in drilling activity, the more protracted the decline in production will become.

North America is the front line of this phenomenon and where capital cuts have been the fastest and where we are seeing the first stages of production decline. Our best guess is that by mid-2016 U.S. production will decline by about 500 kb/d⁶ versus the mid-2015 production of about 9.5 mb/d⁷. However, North America is also where the greatest strides are being made in well productivity enhancement (i.e. more production per rig), efficiency gains, and service cost reductions. This has three ramifications: 1) the oil price at which low-cost operators can break-even has been coming down rapidly, 2) North America will be the first place to see increased capital spending and production stabilization if prices recover, and 3) price-driven capacity rationalization will have to come from regions that have higher structural costs than onshore North America. For instance, basins such as deep water Gulf of Mexico, North Sea and various international areas of higher-risk politically or long-dated complex projects should see reduced activity even at oil prices were North American activity has started to recover.



Source: Bloomberg, Baker Hughes

The U.S. oil rig count has fallen sharply. It is highly likely that production will fall as a result, regardless of rig productivity gains.

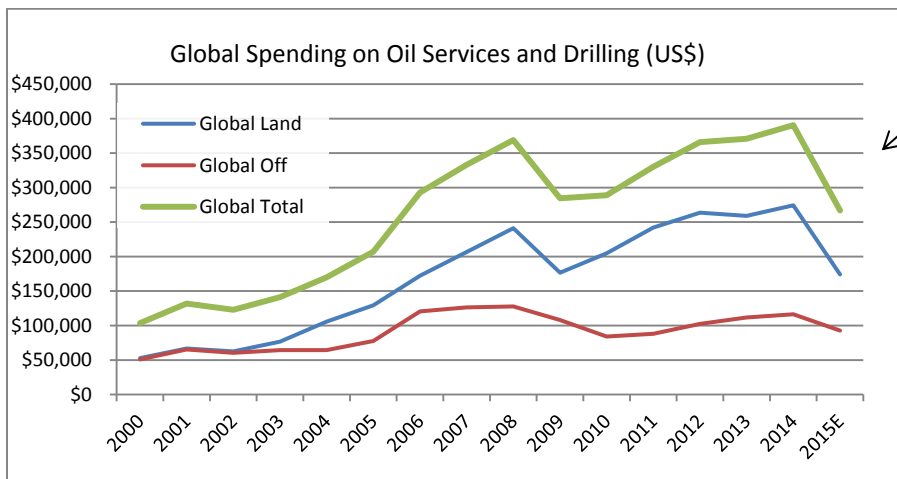
Outside North America, non-OPEC production volumes have been static for the past several years. This clear trend is despite an environment where oil prices exceeded \$90/bl for three of the four past years. With an amalgam of plusses and minuses, nearly all the world's oil volume growth over the past several years has come from North America, Saudi Arabia and Iraq.

Non-OPEC, Non-North America Oil Production (mb/d)					
	2010	2011	2012	2013	2014
FSU	13.55	13.61	13.62	13.88	13.85
Asia	7.77	7.67	7.82	7.67	7.75
Europe	0.14	0.14	0.14	0.14	0.10
Latin America	4.08	4.22	4.18	4.17	4.40
Middle East	1.70	1.62	1.46	1.35	1.33
Africa	2.59	2.50	2.27	2.30	2.33
non-OECD	29.82	29.82	29.49	29.51	29.75

Source: International Energy Agency

Non-North America, Non-OPEC production has been essentially flat despite robust spending.

Lack of growth is not for a lack of capital spent on increasing productive capacity. Global budgets outside the North America and OPEC rose for five straight years, reaching a record \$390.5 billion in 2014.



Source: UBS

Production has been flat despite the fact that global spending was very high during the 2010-2014 period.

Our conclusion is that spending will not be enough to offset natural field declines. While prior year spending should ensure minimal decline in 2015, the reduced energy directed investment we are seeing this year will certainly affect output capacity in 2016 and beyond.

We expect non-OPEC production to be about 57.35 mb/d in 2016, down 550 kb/d from 2015. For 2017 we assume that prices will recover somewhat, justifying further investment in productive capacity in North America, which should bring 2017 production up somewhat from 2016, but still below the estimated 2015 peak.

World Oil Production (mb/d)	2010	2011	2012	2013	2014	2015 E	2016 E	2017 E
North America	14.08	14.54	15.86	17.20	19.00	19.65	19.23	19.15
Europe	4.16	3.85	3.46	3.32	3.30	3.35	3.20	3.14
Pacific	0.61	0.52	0.56	0.48	0.50	0.45	0.51	0.52
OECD	18.85	18.91	19.88	21.00	22.80	23.45	22.93	22.81
FSU	13.55	13.61	13.62	13.88	13.85	13.93	13.78	13.78
Asia	7.77	7.67	7.82	7.67	7.75	7.95	7.79	7.71
Europe	0.14	0.14	0.14	0.14	0.10	0.10	0.10	0.09
Latin America	4.08	4.22	4.18	4.17	4.40	4.53	4.67	4.76
Middle East	1.70	1.62	1.46	1.35	1.33	1.23	1.13	1.12
Africa	2.59	2.56	2.27	2.30	2.33	2.28	2.23	2.21
non-OECD	29.82	29.82	29.49	29.51	29.75	30.00	29.70	29.67
Total NON-OPEC	52.84	52.78	53.36	54.69	56.95	57.90	57.34	57.36

Source: International Energy Agency, Reaves Asset Management

E = Estimated

Demand Outlook

Under any reasonable economic scenario, demand is still growing. As a result of lower prices, demand growth has been robust in 2015, especially in North America. While we do not expect a repeat of that growth rate in 2016, as the novelty of lower prices will have worn off and new vehicles tend to be more efficient than those they replace (about 70% of crude oil demand is transportation-related in North America), growth should still be greater than the rate of supply addition.

Of course emerging markets and China, which have been an important engine of demand growth over the past ten years, have slowed. As China matures, demand has shifted from highly energy-intensive growth toward consumption growth and efficiency gains. As a result, we believe China will be structurally less energy intensive per unit of GDP⁵ growth on a go-forward basis than it has been over the past ten years. This structural reduction in the rate of growth will most likely limit the extent to which demand growth can drive a recovery in oil prices and is why a return to the highs of 2011-2014 is unlikely.

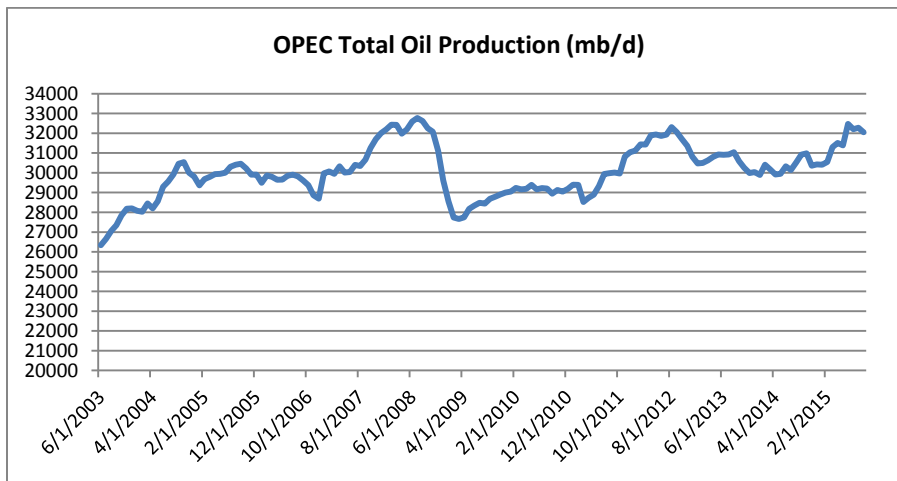
We expect that worldwide demand should grow about 1.5 mb/d in 2015, or 1.5%, versus an increase of just 700 kb/d, or 0.8%, in 2014. Demand for oil in 2016 should grow at a slower rate than in 2015 but still a meaningful 1.0-1.3 mb/d, or 1.0-1.5%, above current levels. This would place overall 2016 worldwide oil demand at about 96.0 mb/d. This outlook is predicated on consensus global economic growth expectations adjusted for our estimate of demand uplift in reaction to lower prices.

World Oil Demand								
	2010	2011	2012	2013	2014	2015 E	2016 E	2017 E
North America	24.12	24.07	23.62	24.09	24.07	24.30	24.57	24.69
Europe	14.7	14.37	13.74	13.70	13.37	13.57	13.76	13.83
Pacific	8.1	8.13	8.59	8.32	8.16	8.16	8.19	8.22
OECD	46.92	46.56	45.95	46.10	45.60	46.03	46.53	46.74
Asia	19.66	20.28	21.13	21.98	22.53	23.31	24.15	24.88
Middle East	7.32	7.37	7.68	7.93	8.18	8.32	8.53	8.75
Latin America	6.04	6.29	6.40	6.64	6.81	6.87	6.94	7.01
FSU	4.15	4.43	4.49	4.76	4.88	4.73	4.87	4.97
Africa	3.3	3.32	3.65	3.83	3.89	4.02	4.26	4.35
Europe	0.68	0.69	0.68	0.65	0.67	0.68	0.69	0.69
non-OECD	41.15	42.37	44.03	45.77	46.96	47.92	49.45	50.64
Total Demand	88.07	88.93	89.98	91.87	92.56	93.95	95.98	97.38

Source: International Energy Agency, Reaves Asset Management
E = Estimated

OPEC

The balancing item between supply and demand is OPEC production, which is essentially a function of Saudi policy, at present. For the past thirteen months, the policy has been to preserve market share regardless of price. We see no reason to think this policy will change over the next eighteen months. The Saudis' public comments imply their strategy is working and should continue despite the material revenue decline experienced by OPEC producers. In fact, if the rig count is any indication, Saudi Arabia is trying to sustain and possibly increase its productive capacity.



Source: International Energy Agency

OPEC is producing at maximum capacity. However, this does not include material production from Iran due to sanctions and Libya because of political crisis.

That said, Saudi Arabia needs an estimated \$90+/bl oil to balance its budget. While Saudi production costs are among the lowest in the world, the cost of its welfare and defense state is one of the highest. In 2015, Saudi Arabia will likely outspend revenue by \$127 billion. We expect that even in the context of higher production, higher prices, and flat spending (highly unlikely given the country's rapid population growth and recent increased military spending) the kingdom will outspend its revenues by close to \$100 billion per year in both 2016 and 2017. This should draw down currency reserves from over \$700 billion at the beginning of 2015 to just over \$400 billion by the end of 2017, still a comfortable level, but with a trajectory that is not sustainable.

Saudi Arabia Budget Model (,000 U.S.\$)					
	2013	2014	2015	2016	2017
Average Production (mb/d)	9.52	9.67	10.18	10.25	10.25
Internal Consumption (mb/d)	3.01	3.15	3.27	3.37	3.47
Exports (mb/d)	6.51	6.51	6.91	6.88	6.78
Export Price	\$116.43	\$96.50	\$50.00	\$60.00	\$60.00
Oil Revenue	\$276,600	\$229,387	\$126,098	\$150,770	\$148,559
Other Revenue	\$25,000	\$25,000	\$12,500	\$15,000	\$15,000
Total Revenue	\$301,600	\$254,387	\$138,598	\$165,770	\$163,559
Official Budget	\$218,700	\$228,000	\$229,300	\$229,300	\$229,300
Actual Spending	\$247,600	\$293,000	\$279,300	\$279,300	\$279,300
Planned Surplus/Deficit	\$82,900	\$26,387	-\$90,702	-\$63,530	-\$65,741
Actual Surplus/Deficit	\$54,000	-\$38,613	-\$140,702	-\$113,530	-\$115,741
Year End Value of Sovereign Wealth Fund	\$771,613	\$733,000	\$592,298	\$478,768	\$363,027

Even at \$60.00/bl oil, Saudi Arabia is likely to be far from balancing its budget.

Meanwhile, reserves are declining rapidly.

Source: Consulate of Saudi Arabia, Reaves Asset Management

Putting all this together, because demand should continue to rise while non-OPEC production should fall, the “OPEC Call”, the amount OPEC must produce to balance the market, should rise to 31.80 mb/d in 2016 and 32.87 mb/d in 2017. The call is higher for both years than today’s OPEC production of 31.5 mb/d indicating that, unless there is more production from areas that are shut in by sanctions or war (Iran and Libya), the market is likely to be undersupplied.

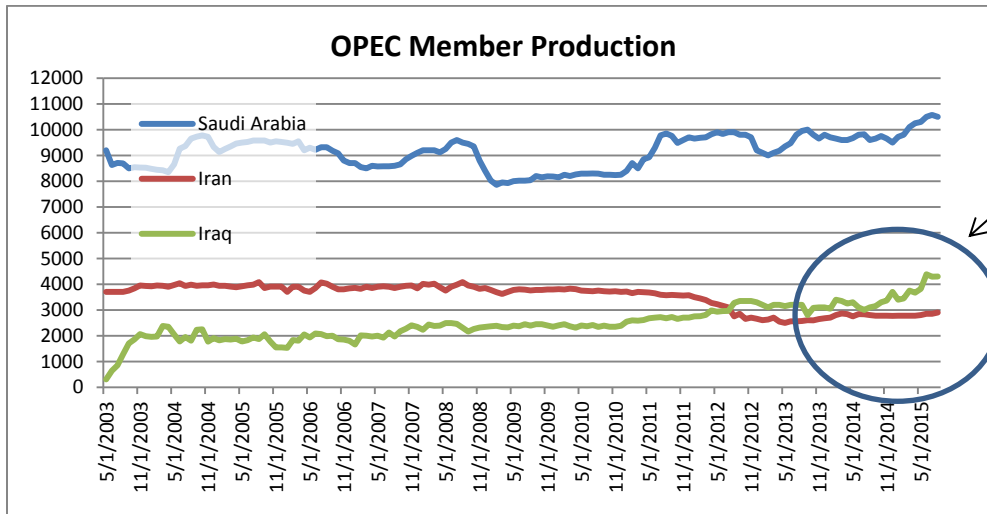
World Oil Production (mb/d)	2010	2011	2012	2013	2014	2015 E	2016 E	2017 E
North America	14.08	14.54	15.86	17.20	19.00	19.65	19.23	19.15
Europe	4.16	3.85	3.46	3.32	3.30	3.35	3.20	3.14
Pacific	0.61	0.52	0.56	0.48	0.50	0.45	0.51	0.52
OECD	18.85	18.91	19.88	21.00	22.80	23.45	22.93	22.81
FSU	13.55	13.61	13.62	13.88	13.85	13.93	13.78	13.78
Asia	7.77	7.67	7.82	7.67	7.75	7.95	7.79	7.71
Europe	0.14	0.14	0.14	0.14	0.10	0.10	0.10	0.09
Latin America	4.08	4.22	4.18	4.17	4.40	4.53	4.67	4.76
Middle East	1.70	1.62	1.46	1.35	1.33	1.23	1.13	1.12
Africa	2.59	2.56	2.27	2.30	2.33	2.28	2.23	2.21
non-OECD	29.82	29.82	29.49	29.51	29.75	30.00	29.70	29.67
Total NON-OPEC	52.84	52.78	53.36	54.69	56.95	57.90	57.34	57.36
OPEC	29.19	29.88	31.30	30.46	30.28	31.25	31.81	32.95
NGL	5.25	5.81	6.28	6.26	6.38	6.63	6.83	7.07
Total Supply	87.28	88.46	90.94	91.41	93.60	95.78	95.98	97.38

The “OPEC Call”, the amount of oil OPEC needs to produce to balance the market, is highlighted in yellow and is above current OPEC production for 2016 and 2017.

Source: International Energy Agency, Reaves Asset Management.
E = Estimated

A big unknown is how the Obama administration’s deal with Iran will affect global supply. We await further developments since Iran must show compliance with rules set out by nuclear watchdogs and will only be able to export oil when compliance is satisfied. If all this happens, the consensus view is the country will add about 500 kb/d of additional production to the market immediately, mostly from existing offshore storage. The government of Iran says that production will subsequently rise to over 1 mil b/d by the end of 2016. While probably optimistic, these numbers are large enough to offset production declines in North America next year, effectively keeping the market somewhat oversupplied. Under a more robust Iranian volume scenario, our expectation for market recovery would be pushed out one year. This is the primary risk to our call.

However, we should note that it is also possible the Saudis will entertain a willingness to be a bit more flexible and to “make room” for Iranian barrels, effectively cutting their own production while still claiming market share victory and saving face. While this may not seem like an obvious outcome, there has been precedent for such cooperation in the past between these gulf powers when it comes to oil policy.



Iran produced about 4.0 mb/d before sanctions were put in place. Their government believes it can get back to that level of production if sanctions are lifted.

Source: International Energy Agency

By mid-2016, without the impact of Iran, we expect the market to be undersupplied, justifying higher prices. Futures prices tend to discount a forward outlook well in advance of the event, so the impact of lower supply and higher demand should be seen in commodity strip prices by earlier in 2016 and should set the stage for relative recovery in oil sensitive shares versus the S&P 500.

Strategy

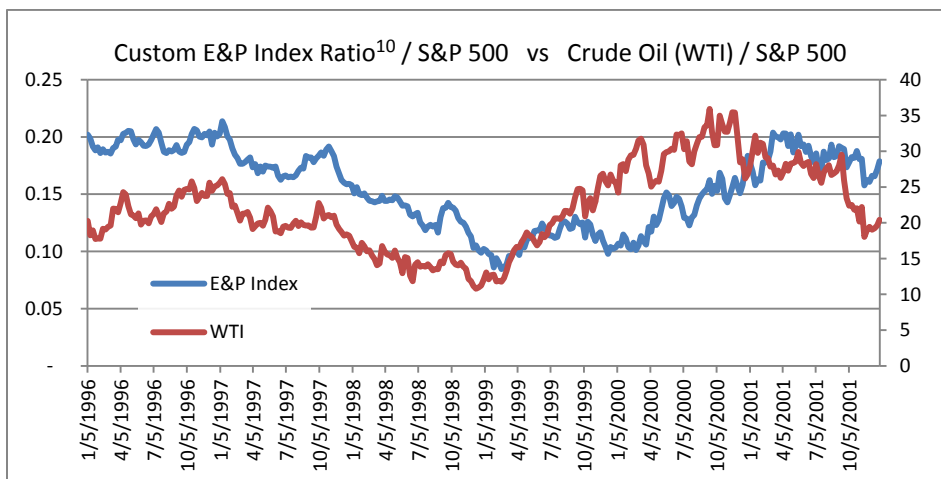
One of the reasons there has not been more interest in the energy sector is that valuations do not look all that attractive. For instance, the average large-cap domestic producer (\$10 bil mkt cap +) trades with an enterprise value that is 8.5x consensus 2016 EBITDA⁸ and 7x 2017 consensus EBITDA. This is well above the historical 4-6x multiples. Forward consensus estimates have been declining and probably still don't reflect the current 24-month commodity strip. We believe many investors expect further negative news flow and so are avoiding the sector.

However, cyclical industries tend to look most expensive when they are nearing the bottom of the cycle and most inexpensive when nearing tops. When oil prices were very high in 2011, the energy market peaked on a relative basis to the S&P 500 even though stocks looked cheap and business conditions were excellent. During the next three years, despite moderate valuations, excellent growth and solid fundamentals, the sector underperformed. In fact, conditions were about as good as they can get for the sector. There was very little global spare production capacity, and between sanctions in Iran and the “Arab spring” upheaval, there was no reason to think OPEC wasn't in full control of the market. The sector still underperformed. For every unit of earnings growth, the sector was losing a unit of multiple.

The opposite conditions apply now. Oil prices are at about the same level as at the time of greatest uncertainty during the 2008 financial crisis. But at that time conditions were such that there was reasonable possibility of complete financial and societal collapse. That is not the case today. Admittedly,

productive capacity is higher now than it was then, but this is in the process of reversing. And, more importantly, demand is much higher now than it was in 2008.

The environment of the late 90s had some similarities to today. Oil prices had been cut in half mostly because Saudi Arabia had upped production and engineered oversupply. At the time it was trying to punish Venezuela for adding too much capacity and taking market share. Prices fell from about \$25/bl to just above \$11/bl from late 1996 to early 1999 (inflation adjusted the price fell from a peak of \$38.00/bl at the end of 1996 to \$16.00/bl in November of 1998, or -58%). During 1996, the year prior to the Saudi decision, energy equities mostly underperformed the S&P 500 despite rising commodity prices. During the next three years, energy relative performance (as measured in the chart below) mirrored that of absolute changes in oil prices, finally bottoming in early 1999 and then recovering commensurate with oil prices. The key similarity is that once there was visibility on supply reduction, oil prices reversed and energy stocks outperformed. In that case, supply reduction was catalyzed by a new government in Venezuela that wanted a strong OPEC. In this case, we believe it is being catalyzed by the reduction in global investment capital.



In the chart to the left we compare a Custom E&P Index to the price of oil (WTI), both vs the S&P 500 Index. This custom index was created by Reaves for this commentary only.

Source: Reaves Asset Management's Custom Exploration & Production Index¹⁰, Bloomberg (data)

While we see recovery, that does not mean we think that a return to prices or the level of activity experienced in 2012-2014 is likely. Demand growth looks to be slower. This is due to global population growing at a slower pace, the impact of efficiency gains, and market share gains by renewables. On the other hand, some supply can come back relatively quickly, as North American shale does not need long lead times to ramp. The net of this is likely to be a structurally lower oil price, one that allows low cost producers to make money, while not pricing out demand. We think that an oil price in the mid \$60/bl range does this.

In this context, resource producers with dominant acreage positions in key shale plays have the ability to adopt new technology and push down costs at a very rapid rate. Equity and debt markets have proved open to them, even during periods of upheaval. Furthermore, those with the balance sheet strength will be able to take added advantage of weakness in others via mergers and acquisitions. Producers are also likely themselves to be acquisition targets for major oil companies that are poor in growth opportunities, but rich in cash.

Some of the need to become bigger is already evident in the oil services industry with the number two and three players prospectively combining, creating a more concentrated oligopoly (Halliburton is buying Baker Hughes). This should help improve price preservation of services and tools and allow the industry to tackle bigger projects more efficiently.

Megacap integrated oil companies are also attractive at present. Yields are about as high as they have been for the group, indicating that investors are concerned that persistent low oil prices will impact credit quality. While these fears are partly justified in that all but one of the global majors currently have to lever their balance sheets to meet both capital commitments and pay the dividend, we think investors are underestimating the ability of such companies to cut costs in order to remain profitable in a lower price environment.

A less robust oil market means the need for additional infrastructure will be less acute. Thus, we are less interested in energy infrastructure companies, although some companies operating in the best regions with the lowest cost structures should thrive. We also believe that smaller, less well capitalized companies with too much debt and resource positions that are not in the best plays will struggle to survive. Caution is advised in the high-yield debt space.

Final Thoughts

One way we gauge investor sentiment is through our clients. We are fortunate to manage money for a variety of different investors and their decisions give us insight into market psychology. The group that has tended to be most successful is our base of experienced individual clients. Many of these investors have seen a lot of business and market cycles and tend to invest counter-cyclically. Because they are investing their own money, not losing money is generally more important than making money. Thus, they tend to be most interested when a sector has undergone upheaval. We have been getting inquires as to whether we can build energy-only portfolios for some of these people. That's a good sign!

¹ *The S&P 500 Index is a capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.*

² *OPEC (Organization of Petroleum Exporting Countries) is an international organization headquartered in Vienna, Austria that was established in 1960.*

³ *XLE (Energy Select Sector SPDR) seeks to provide investment results that, before expenses, correspond generally to the price and yield performance of the energy sector of the S&P 500.*

⁴ *An ETF (exchange traded fund) is a marketable security that tracks an index, a commodity, bonds or a basket of assets like an index fund. Unlike mutual funds, an ETF trades like a common stock on a stock exchange.*

⁵ *GDP (gross domestic product) is one of the primary indicators used to gauge the health of a country's economy. It represents the total dollar value of all goods and services produced over a specific time period; you can think of it as the size of the economy.*

⁶ *West Texas Intermediate (WTI) is a popular oil price benchmark. WTI is the underlying asset in New York Mercantile Exchange's oil futures contract. This type of oil has low sulfur content (sweet). The U.S. Department of Energy maintains historical data for this oil price.*

⁷ *kb/d is Thousands of barrels per day*

⁸ *mb/d is Millions of barrels per day*

⁹ *EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) is an approximate measure of a company's operating cash flow based on data from the company's income statement. Calculated by looking at earnings before the deduction of interest expenses, taxes, depreciation, and amortization.*

¹⁰ *Reaves Asset Management's Custom Exploration & Production (E&P) Index is equally weighted and composed of Anadarko Petroleum, Apache Corp., Devon Energy, Marathon Oil, Murphy Oil, and Occidental Petroleum. This index was created for the purposes of this commentary only and it was developed to reflect the years prior to January 1, 2000 as a similar third-party benchmark is not available for the same period. All of these companies existed during the reference period and survive today.*

This commentary has been prepared solely for informational purposes and is not to be construed as providing investment services or recommendations. Opinions and estimates are as of a certain date and subject to change without notice. Past performance does not guarantee future results. Any investments may not be suitable for everyone. An investor should consider investment objectives, risks, charges and expenses carefully before investing.

For Further Information Contact:

Rowland O. Wilhelm
Vice President, Director of Sales & Marketing
Reaves Asset Management
10 Exchange Place, Suite 1810
Jersey City, NJ 07302
Phone: 201.793.2383
Fax: 201.332.8593
E-mail: rwilhelm@whreaves.com

Thomas M. Grimes
Institutional Sales
Reaves Asset Management
10 Exchange Place, Suite 1810
Jersey City, NJ 07302
Phone: 201.793.2384
Fax: 201.332.8593
E-mail: tgrimes@whreaves.com