AlixPartners

Energy & Process Industries

FEBRUARY 2017

GLOBAL OIL & GAS INDUSTRY OUTLOOK FOR 2017

The three Rs—restructurings, realignment, and some rebuilding

Optimism appears to be rising for a rebound in oil prices in 2017, yet the industry will continue facing challenges, thanks to weak demand and lingering fallout from the past several years. For most oil & gas companies, the coming year will bring more restructurings, continued M&A activity as players shuffle assets, and—for some that take proactive steps—an opportunity to rebuild based on a stronger foundation.

AT A GLANCE

1 OPTIMISM IS RISING, WITH MANY HOPING PRICES WILL MARCH HIGHER

- Most oil & gas players have smartly used the past two years to reduce costs, but there is more work to do.
- We believe this year will be characterized by three Rs: continue restructuring, more realignment through M&A, and finally, for some, a year of rebuilding.

2 OUR OIL & GAS PLAYBOOKS FOR 2017

- Upstream companies should plan conservatively on oil prices and accept nothing less than a high-performing organization.
- Oilfield services and equipment companies should cautiously approach market share gains and proactively raise capital.
- Downstream companies should take a page out of the upstream book and focus on more aggressive cost-optimization strategies.

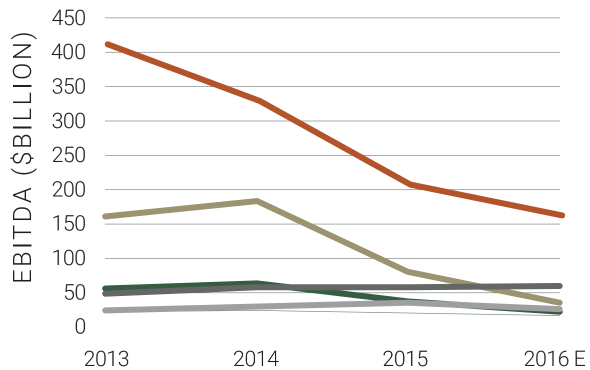
The past two years have brought big changes to the global oil & gas industry. Until a recent uptick, Brent and West Texas Intermediate (WTI) crude prices had remained below $50 a barrel since late 2014. An OPEC agreement to cut supply by a modest, 1.2 million barrels per day—less than 2% of global production—has helped, but significant damage had already been done. Low crude prices during most of the past two years have led to waves of restructuring that resulted in 134 bankruptcies (primarily in North America), an estimated 350,000 job losses globally, annual reductions of more than $100 billion in capital spending, and operating cost reductions of more than $15 billion a year.[1]

Large integrated companies, upstream exploration and production companies, and oilfield services and equipment players (which posted record profits just prior to 2014) have experienced the sharpest declines (figure 1). So far, the downstream sector has been spared from much of the fallout. In fact, it initially even benefited from lower input costs. Now, however, as refined-products markets become flooded and margins for those products begin to shrink, even downstream players are likely to face pressure.

But overall, optimism seems on the rise, especially in light of the recent OPEC agreement. Many industry players hope that oil prices will continue their march higher and that activity levels will quickly recover to precrash levels. We believe the coming year will be characterized by three Rs: continued restructuring, more realignment through mergers and acquisitions, and, for companies that continue taking proactive actions to build sustainably profitable operating models, finally a year of rebuilding.

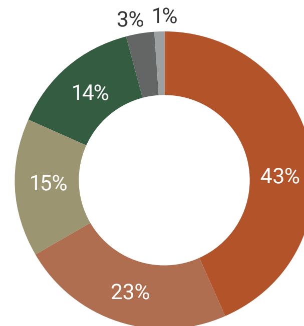
FIGURE 1: INDUSTRY PROFITABILITY AND JOB LOSSES

Global industry profitability (2013 to 2016)



TOTAL PROFIT DECLINE (2014 TO 2016E)

Global job losses (as of May 2016)



Total job losses = 351,410

Source: S&P Capital IQ; "Oil & Gas Job Cuts Top 350,000 Worldwide," Oil & Gas Financial Journal, May 11, 2016

[1] S&P Capital IQ, November 2016; "Oil and Gas Job Cuts Top 350,000 Worldwide," Oil & Gas Financial Journal, May 11, 2016; AlixPartners analysis based on S&P Capital IQ and Bloomberg data

CHANGES IN SUPPLY AND DEMAND

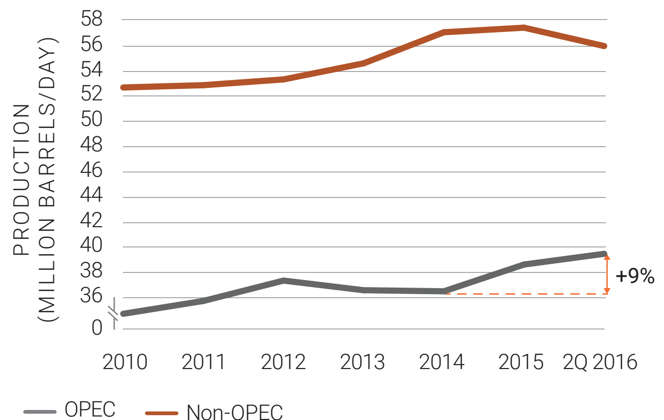
The supply of oil worldwide continues to evolve because of a number of factors, the most significant being the growing influence of North American shale developers. Spurred by the high oil prices of the early 2000s, shale has fundamentally changed the game—especially for the upstream oil & gas segment. Onshore shale development is far more dynamic than conventional production (both onshore and offshore). Companies are able to quickly start and stop projects, and technological and business innovations have reduced operational costs.

Meanwhile, Middle East national oil companies (NOCs) still enjoy the dual advantages of ample reserves and lower development and production costs. Conventional offshore and remote fields also remain important parts of the worldwide supply picture, though their lengthy lead times and high capital expenditure requirements—the latter 5 to 10 times greater than those of onshore shale developers—put them at a significant disadvantage when it comes to attracting capital.

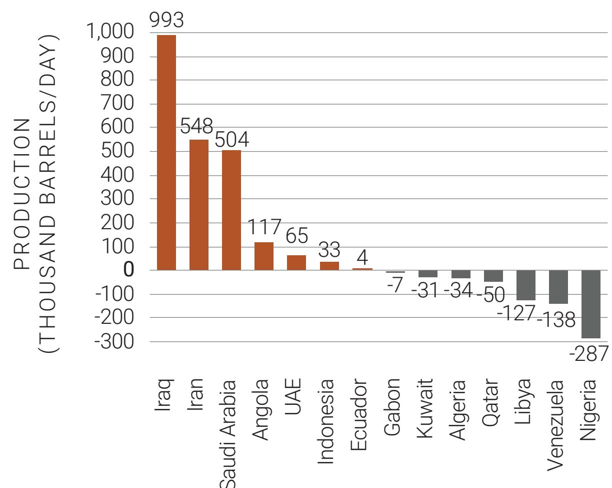
Changes in global production volumes from 2014 to 2016 reflect all of those dynamics (figure 2). As non-OPEC market share initially increased during this period—primarily because of the success of US shale producers—Middle East producers in response began leveraging their then low-cost position to increase supply. Yet as demand growth from China continued to slow and oil prices fell, North American shale volumes decreased as companies responded by rapidly scaling back drilling and completion activities.

FIGURE 2: GLOBAL OIL SUPPLY AND PRODUCTION

Global oil supply



OPEC production change (2014 to 2016)



Net increase: approximately 2 million barrels/day

Sources: International Energy Agency (IEA) Oil Market Report, August 2016, IEA Annual Statistical Supplement 2014; OPEC Monthly Oil Market Report, July 2016

Growth in oil demand globally for the next year or two is likely to be moderate at best, primarily because of what many economists are forecasting as tepid economic activity worldwide. We have already seen oil demand level off in many developed countries—with recent growth in natural gas and renewables as well as the growing impact of efficiency measures taking their toll on demand. As the industry narrative begins to shift from "peak oil"—the beginning of the end of the supply of oil—to "peak-oil demand," we expect to continue to see jockeying for market share, primarily among Middle East NOCs and North American shale producers.

The Middle East's reliance on oil revenues to support national budgets continues to be a key factor in virtually all decision making. However, the recent period of low oil prices—and especially the advent of the disruptive North American shale sector—galvanized some NOCs to sharpen their focus on profitability over production. Specifically, the combination of lower oil prices and a new generation of leadership at many NOCs is leading to several remarkable transformations, primarily in the Persian Gulf countries. Saudi Arabia has said it plans to list Saudi Aramco on three public stock exchanges—London, Hong Kong, and New York—in early 2018, and Abu Dhabi has started reorganizing the Abu Dhabi National Oil Company to become more integrated and increase efficiency. In addition, while Middle East NOCs were continuing their upstream developments, many used the opportunity that came with low prices to reduce costs. For instance, they sought substantial discounts from their contractors and suppliers and took other virtually unprecedented steps to reduce general and administration costs.

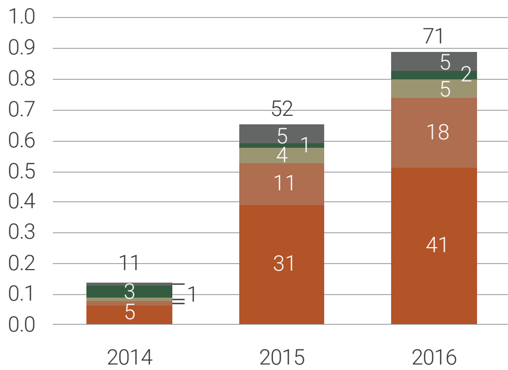
The North American upstream sector has seen production decline by almost 1 million barrels per day from its peak level in June 2015, and costs have fallen by approximately 30%.[2] Those cost reductions have moved North American shale lower along the crude supply curve, but only a portion of the gains are likely to be permanent. Reductions in oil field services and equipment (OFSE) costs have significantly helped the upstream industry operate during a period of low oil prices. But as oil prices recover, those equipment and services costs will also rise, acting as a counterbalance to E&P profitability. For example, North America has a high number of drilled but uncompleted wells which companies will likely begin completing as oil prices rise. The resulting uptick in demand for all of the associated services for completing those wells will more than likely trigger a snap-back in service costs, which in turn would erode the internal rate of return on project investments. The margin erosion will vary by basin, but for a new well in the Permian Basin—the most active area in the Lower 48—we estimate that a 10% increase in service costs would roughly offset a 10% increase in WTI prices. Upstream companies will need effective strategies to manage that dynamic to make sure their profitability grows as industry activity levels increase.

[2] AlixPartners analysis based on EIA US oil production data; EIA/IHS Report: Trends in U.S. Oil and Natural Gas Upstream Costs, March 23, 2016

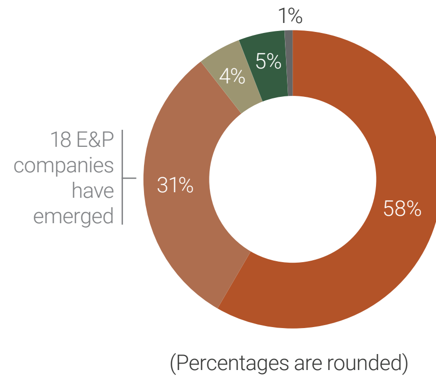
A TRANSFORMED UPSTREAM SECTOR

FIGURE 3: INDUSTRY BANKRUPTCIES

Bankruptcies announced



Bankruptcy status (2016)



(Percentages are rounded)

- E&P
- OFSE
- Drilling
- Midstream
- Refining

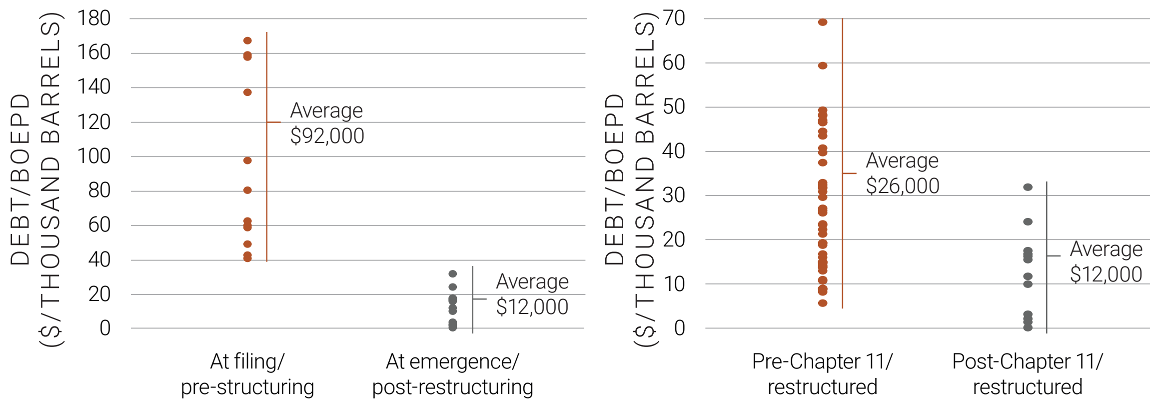
- Bankruptcy
- Emerged/reorganized
- Liquidated/out of business
- Dismissed
- Case consolidated

	2014	2015	2016
Liabilities ($ billion):	$0.69	$18.2	$34.4
Number of companies:	11	52	71

Source: S&P Capital IQ, November 2016

Independent E&P operators and OFSE providers have fared the worst from low oil prices, in part because they lack the downstream margins that cushioned the integrated majors during the downturn. Reductions in capital expenditures (CAPEX) and operating expenditures (OPEX) have improved the liquidity of some companies, yet those reductions have proved insufficient for others, including many struggling with expiring risk-containment hedges and heavy debt loads. The more than 100 oil & gas companies that have declared bankruptcy in the US since 2014 represented more than $50 billion in liabilities, and they included 10 in the drilling segment, 30 in oil field services, and 77 in E&P (figure 3).

FIGURE 4: DEBT PER BARREL FOR E&P COMPANIES



Sources: Capital IQ, August 2016, AlixPartners' analysis

Notes: 1. Based on a sample of 12 E&P companies that either filed Chapter 11 and emerged from bankruptcy as a stand-alone company or completed a financial restructuring since the beginning of 2015. 2. Based on a sample of 49 publicly reporting E&P companies that have not filed Chapter 11 since the beginning of 2015. 3. BOEPD = barrels of oil equivalent per day.

E&P companies that have already restructured their debt—through either Chapter 11 bankruptcy or an out-of-court process—have a competitive advantage in some ways, given their lower leverage levels. By our analysis, E&P companies that have undergone a restructuring have an average debt load of $12,300 per barrel of oil equivalent per day (BOEPD).[3] By contrast, publicly traded E&P companies that have not begun any formal or out-of-court restructurings carry, on average, more than twice as much in leverage: $25,800 in BOEPDs (figure 4).[4] Clearly, any company that has not yet addressed its balance sheet in the current environment should reckon with that reality.

[3] Based on a sample of 12 E&P companies that either filed for Chapter 11 and emerged from bankruptcy as stand-alone companies or completed financial restructurings since the beginning of 2015

[4] Based on a sample of 49 publicly reporting E&P companies that have not filed for Chapter 11 since the beginning of 2015

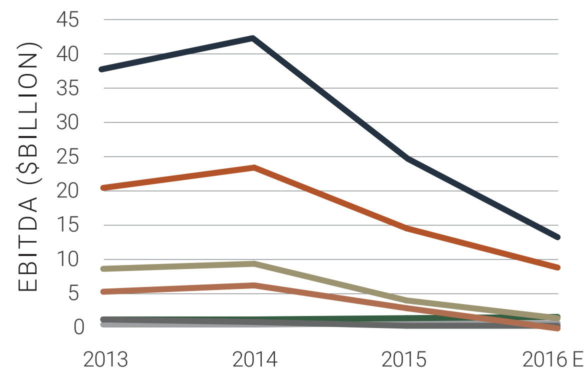
Restructurings at E&P companies likely—and for competitive reasons—will continue in 2017. Some companies may try to “grow” their way out of their balance sheet problems, but that’s probably not a realistic solution. Production growth through drilling and well completions or through the acquisition of weaker competitors draws on a company’s liquidity and may bring additional debt. Furthermore, increased production volume in today’s market, which is currently oversupplied, puts downward pressure on prices—at the same time that any increase in demand for rigs puts upward pressure on rig prices and other services costs. The result is a compound effect of higher input costs and lower output prices, squeezing margins from both sides. Many E&P companies with uncompetitive debt-to-production loads may be forced to concede that simply waiting for a potential rise in prices is not an option.

The OFSE sector has also been hit equally hard—if not harder—in the past couple of years, especially companies that provide onshore services and equipment and drilling services (figure 5).

Looking forward, perhaps the most realistic opportunity for most OFSE players is to use 2017 to position themselves for an anticipated recovery in services demand in 2018, primarily from North American shale players looking to complete their inventories of already drilled wells and from Middle East NOCs that are continuing their investment programs—albeit at lower service levels. Similar to the E&P sector, OFSE players that improve both their capital structures and their operational structures will be better positioned to benefit during the hoped-for rebound.

FIGURE 5: OFSE SECTOR PROFITABILITY

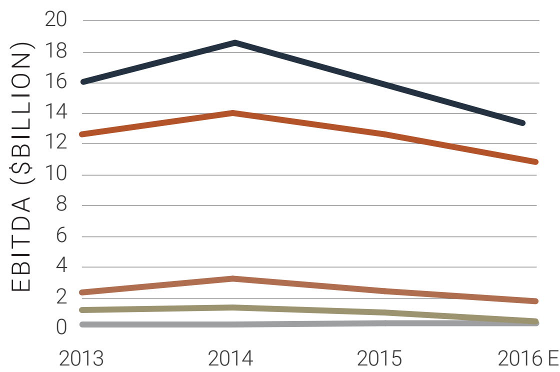
Global OFSE-onshore profitability



TOTAL PROFIT DECLINE (2014 TO 2016E)

Diversified equipment and services	-62%
Drilling and production-related equipment	-94%
Engineering and construction (EPC)	26%
Onshore drilling, completion, and workover	-85%
Seismic acquisition and processing	-70%
Natural gas compression services	7%
Total onshore	-68%

Global OFSE-offshore profitability



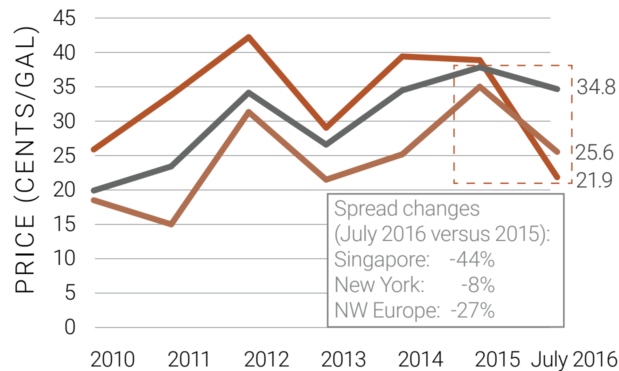
TOTAL PROFIT DECLINE (2014 TO 2016E)

Offshore drilling	-23%
Offshore equipment and services	-45%
Offshore marine services	-68%
Total offshore	-30%

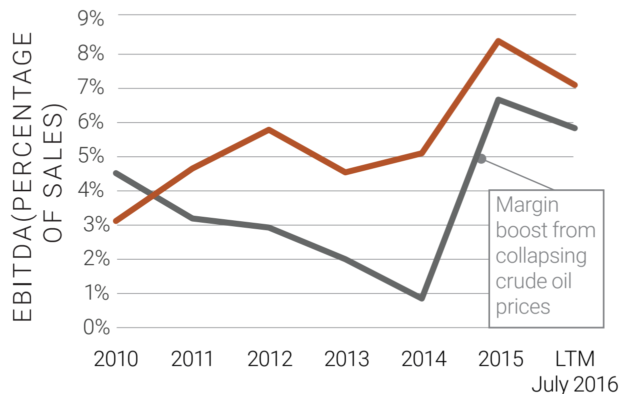
Source: Capital IQ, August 2016

FIGURE 6: SHRINKING CRACK SPREADS AND DOWNSTREAM PROFITABILITY

Average gasoline crack spreads
(2010 to 2016)



Downstream profitability
(2010 to 2016)



Singapore (crude: Dubai/Oman)
New York (crude: Brent)
Northwestern Europe (crude: Brent)

North America
Europe

Sources: US Energy Information Administration, Bloomberg

DOWNSTREAM PLAYERS FEEL THE EFFECTS

As noted earlier, the downstream sector initially benefited from lower crude costs. In fact, refiners enjoyed a collective $10-billion increase in profit margins in 2015 compared with 2014.[5] Since then, though, ample product supply and lower demand have resulted in a glut of refined products, which is reflected in shrinking crack spreads (the difference between the price of crude oil and the refined petroleum products extracted or "cracked" from it). The decline has been steepest in Asia (figure 6), where refined products from China are contributing to the current oversupply in the region. Meanwhile, Europe continues to suffer from both lackluster demand and a supply cost disadvantage compared with refineries in the Middle East and North America.

To date, US refineries have benefited from ample low-cost natural gas and associated natural gas liquids, strong domestic crude production, a dramatic decline in crude prices, and a large domestic market with strong demand. As a result, they have been able to retain higher margins compared with refiners in other markets. But as excess inventory puts downward pressure on product prices, even the US refiner margins are being squeezed. And although crack spreads in the US have declined less than they have in Asia or Europe, refiners in the US borrowed heavily for their investments, and many are now saddled with high interest payments and decreasing earnings. Moreover, through the years, ownership of many refineries in the US has moved from integrated majors to independent refiners, and many of those smaller companies now face reductions in their cost structures. Several recently announced mergers indicate that consolidation is beginning in this sector as margins shrink.

Worldwide, the continued planned increase in refining capacity will likely put additional downward pressure on margins. (Refiners have announced more than 7 million barrels per day of announced capacity additions from 2016 to 2020 despite some project cancellations and delays of late.[6]) As a result, players will have to more aggressively address their cost structures and balance sheets in the coming several years.

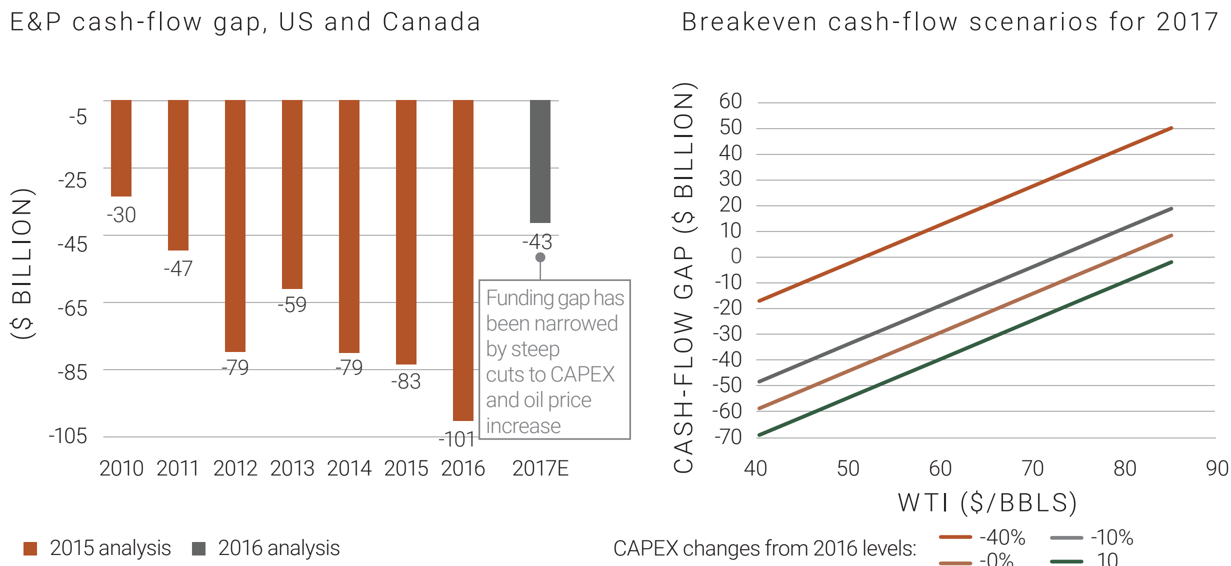
[5] EIA, Bloomberg, AlixPartners analysis
[6] S&P Capital IQ; AlixPartners analysis

PLAYBOOKS FOR OIL & GAS

Most of the players in all the sectors of the oil & gas industry—and especially the upstream sector—have used the crisis of the past two years as an opportunity to reduce costs. But there's still more work to do. For instance, at $50 per barrel for crude, E&P companies in North America still face a deficit in cash flow from operations (less CAPEX and interest payments) of nearly $43 billion, which must be funded somehow. The US upstream industry would need oil prices to climb to $80 per barrel and stay there for cash flows to become truly "healthy."[7] Unless and until prices reach that point, many upstream players will have to further reduce their capital spending and/or address their balance sheet leverage. How much CAPEX might they need to cut? To close the funding gap at current prices, we estimate that another 40% from year-end 2016 levels would be necessary (figure 7). And of course, further reductions in upstream spending would only exacerbate the plight of OFSE players.

In today's challenging and, in many ways, unprecedented environment, we believe each sector faces specific imperatives.

FIGURE 7: E&P CAPEX SPENDING AND THE PROJECTED FUNDING GAP



Note: Based on 134 E&P companies in Canada and the United States; funding gap based on cash from operations less interest expense and CAPEX.
Source: S&P Capital IQ, August 2016

$80

The US upstream industry would need oil prices to climb to $80 per barrel and stay there for cash flows to become truly "healthy."

[7] S&P Capital IQ; AlixPartners analysis

THE PLAYBOOK FOR UPSTREAM COMPANIES

1. Plan conservatively on commodity prices. Given recent developments in global supply and demand, planning very conservatively—for instance, planning for oil prices at $45 per barrel in 2017—is a reasonable approach that may offer potential upside.

2. Keep spending levels within internally generated cash flow. Although companies should certainly evaluate ad hoc opportunities to finance growth, including likely M&A opportunities, focusing on repairing balance sheets is a prudent move that will ensure long-term competitiveness.

3. Segment, or "high-grade," your properties in order to establish core positions, including those from which you can take advantage of local scale or geologic knowledge. Given the complexity and diversity of the onshore plays in particular, companies that focus on areas where they understand the geology and can leverage that knowledge may be more likely to emerge as winners.

4. Focus on optimizing ROI. Make needed investments in data, analytics, and good old-fashioned financial analysis to fully assess and optimize critical components such as initial well productivity and estimated ultimate recoveries to generate the highest returns possible.

5. Lower break-even cost levels. By focusing on such areas as digitization, automation, repeatable well and equipment designs, strategic sourcing, creative partnerships with service providers, lean production operating principles, zero-based budgets, and individual well profitability, companies can squeeze out higher returns and turn money-losing projects into successful ones.

6. Reposition talent for the highest-return opportunities. Develop the cross-functional alignment that your company needs to reduce cycle times and improve outcomes.

THE PLAYBOOK FOR OFSE COMPANIES

1. Approach market share gains cautiously. Given that growth in most basins is likely to be low, companies should approach investments in growth cautiously so as to avoid driving their prices even lower and to avoid investing in growth before demand returns.
2. Be nimble. Proactively size the organization and infrastructure in line with internally generated cash flow, and continue the restructuring of balance sheets that are overleveraged and uncompetitive.
3. Standardize pricing processes and prepare for the upside. Watch pricing carefully to be able to capture upside opportunities as they materialize. Take the time to fully understand "as-bid" versus "as-delivered" job – profitability variances, and attack the sources of variance.
4. Optimize job operating costs. Aggressively manage labor utilization of billable and nonbillable employees, and implement standard job operating procedures to improve profitability. Consolidate and test the market for all purchased goods and services.
5. Improve asset management, repair, and maintenance practices. Implement a comprehensive maintenance program, and develop a better understanding of the economic trade-off between repairing existing equipment and investing in new.
6. Drive accountability profit and loss closer to the operating level. Define the local management and support roles needed based on business activity drivers like job count or rig count. Provide field locations with simple management metrics that support the daily decision making that can curb costs such as underutilized labor and overtime pay.
7. Be opportunistic about raising capital. During the past 24 months, oil & gas companies have had various opportunities to proactively raise debt or equity. By and large, companies that proactively raised capital during those periods have proved to be the most nimble at targeting investment opportunities as prices have stabilized. The window to raise equity to reduce leverage on the balance sheet appears to be currently open.

THE PLAYBOOK FOR DOWNSTREAM COMPANIES

1. Double down on operating and organizational costs. As margins become more pressured, as they likely will become, take a page from the upstream playbook, and focus on more-aggressive cost optimization strategies.
2. Aggressively and rapidly source all suppliers. Many downstream players have not yet aggressively reviewed their supply bases or opportunities for reducing their supplier costs for purchased materials and services. Traditional strategic sourcing can miss such market compression opportunities because it can take too long to get through the process.
3. Take action on unprofitable customers. Analyze profitability levels from individual customers, segment them, and optimize prices accordingly—particularly for unprofitable customers.
4. Carefully ration capital expenditures. Review and value-engineer all capital spending to adequately cover all mandatory and regulatory costs while focusing on only the highest-value discretionary projects. Use value-engineering and strategic-sourcing capabilities to leverage excess capacity in equipment and services as a way of stretching capital.
5. Be open to M&A. This is especially true for complementary assets that build scale or preferential positions. We're likely to see more asset sales and combinations as smaller players that are overleveraged become vulnerable.

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These are the moments when everything is on the line – a sudden shift in the market, an unexpected performance decline, a time-sensitive deal, a fork-in-the-road decision. But it's not what we do that makes a difference, it's how we do it.

Tackling situations when time is of the essence is part of our DNA – so we adopt an action-oriented approach at all times. We work in small, highly qualified teams with specific industry and functional expertise, and we operate at pace, moving quickly from analysis to implementation. We stand shoulder to shoulder with our clients until the job is done, and only measure our success in terms of the results we deliver.

Our approach enables us to help our clients confront and overcome truly future-defining challenges. We partner with you to make the right decisions and take the right actions. And we are right by your side. When it really matters.

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