Deloitte.

Phoenix rising

The oilfield services sector transforms again

Contents

Executive summary

In the oil and gas value chain, the oilfield services sector is an essential partner for exploration and production companies, providing drilling, completion, production, supply, and logistical support services—both onshore and offshore. During the 2014-2016 downturn in oil prices, which led to a decline in upstream development activity, the oilfield services sector was hit hard by reduced revenue, canceled or renegotiated contracts at lower rates, and massive personnel layoffs. This report examines the impact the downturn has had on the oilfield services sector and discusses strategies that oilfield services companies are beginning to implement to improve their performance in the emerging oil market recovery and be more resilient during future price cycles.

Signs of an upturn in the oil and gas industry seem to be emerging, with oil prices rising above the $50 threshold beginning in late 2016 and the Baker Hughes rig count growing 42 percent since June 2016 in North American shale plays. In many cases, shale producers have substantially cut their breakeven costs below $50 per barrel.[1] [2] In response, the oilfield services sector has seen some recovery in revenues from North American shale regions and oilfield services companies are developing strategies and service offerings to take advantage of the upturn.

The report's principal findings include the following:

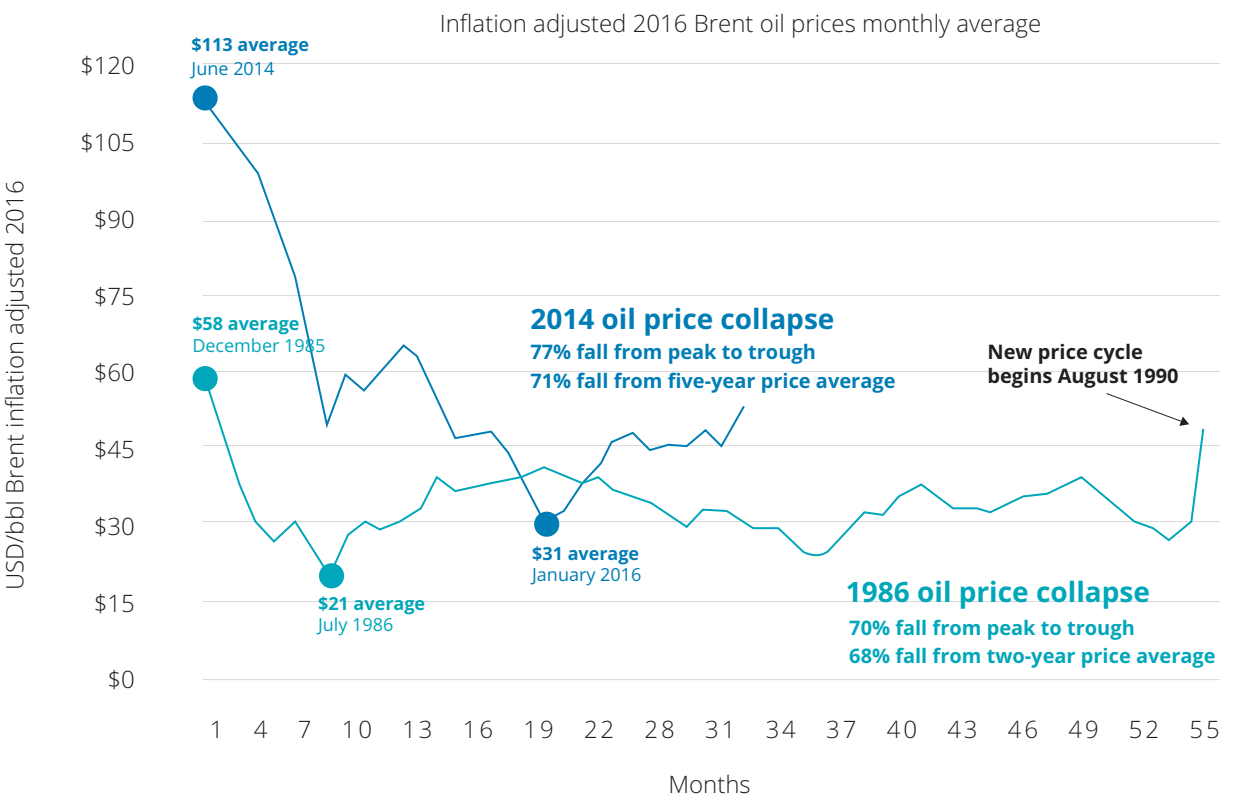
- Between 2014 and 2016, 36 percent of oilfield services companies ceased operations; revenues contracted by almost 55 percent; and job losses reached over 50 percent in some subsegments.[3]
- Oilfield services companies that were the most resilient during the downturn had operations that were more geographically dispersed and had a greater presence in service segments like offshore operations that benefited from longer-term contracts. Larger services companies—with broader and deeper technological capabilities applicable to diverse operating conditions— were more likely to have these characteristics, although some smaller companies also outperformed the group of companies that were examined.
- Company strategies going into the recovery can be discussed in three broad categories:
  - Prioritize services that achieve ongoing cost reductions for upstream operators, in particular those related to achieving business process and integration efficiencies.
  - Reorganize and redesign business processes to reduce internal costs within the service company.
  - Develop new products and services in existing or adjacent markets.

The big picture

The oil and gas industry's capacity for innovation and its ability to adapt during severe, sectoral contractions is the main catalyst for recurring transformation, refined over decades of price cycles. The most recent price collapse in June 2014 marked the beginning of yet another severe industry contraction, now halfway through its third year. For decades, whenever low oil prices occurred, the consequences were often harsh, paring industry growth with bankruptcies, corporate sales, and layoffs. But this particular price cycle has earned its own distinction—both by the length of time it persisted and by the depth oil prices fell.

The oilfield services sector is as much exposed to the impacts of commodity price volatility as the upstream sector, but generally has a shorter time frame to stabilize cash flow since the sector does not usually hedge prices. When commodity prices fall, oilfield services sector revenue typically falls more quickly than it does for exploration and production (E&P) operators because producers reduce purchases and renegotiate or cancel short-term supply and service contracts. This can force oilfield services companies to take swift, and often draconian, measures to cut costs and protect cash flow.

Figure 1. The 2014 oil price collapse closely matched the 1986 collapse

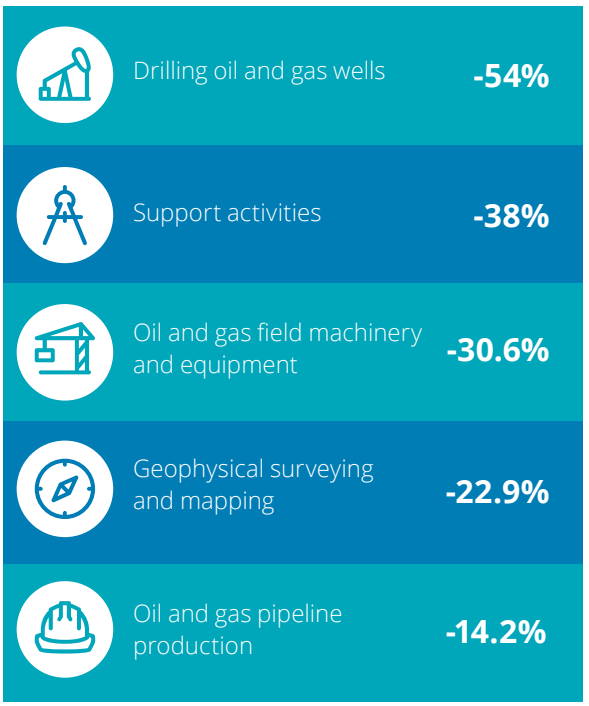


Source: St. Louis Federal Reserve Economic Data (FRED)

Exemplifying the speed and depth of cost cutting by the oilfield services sector, large-scale layoffs began in October 2014, barely three months after crude oil prices started to fall. As of August 2016, the oilfield services sector had significantly reduced its US headcount across each subsector.

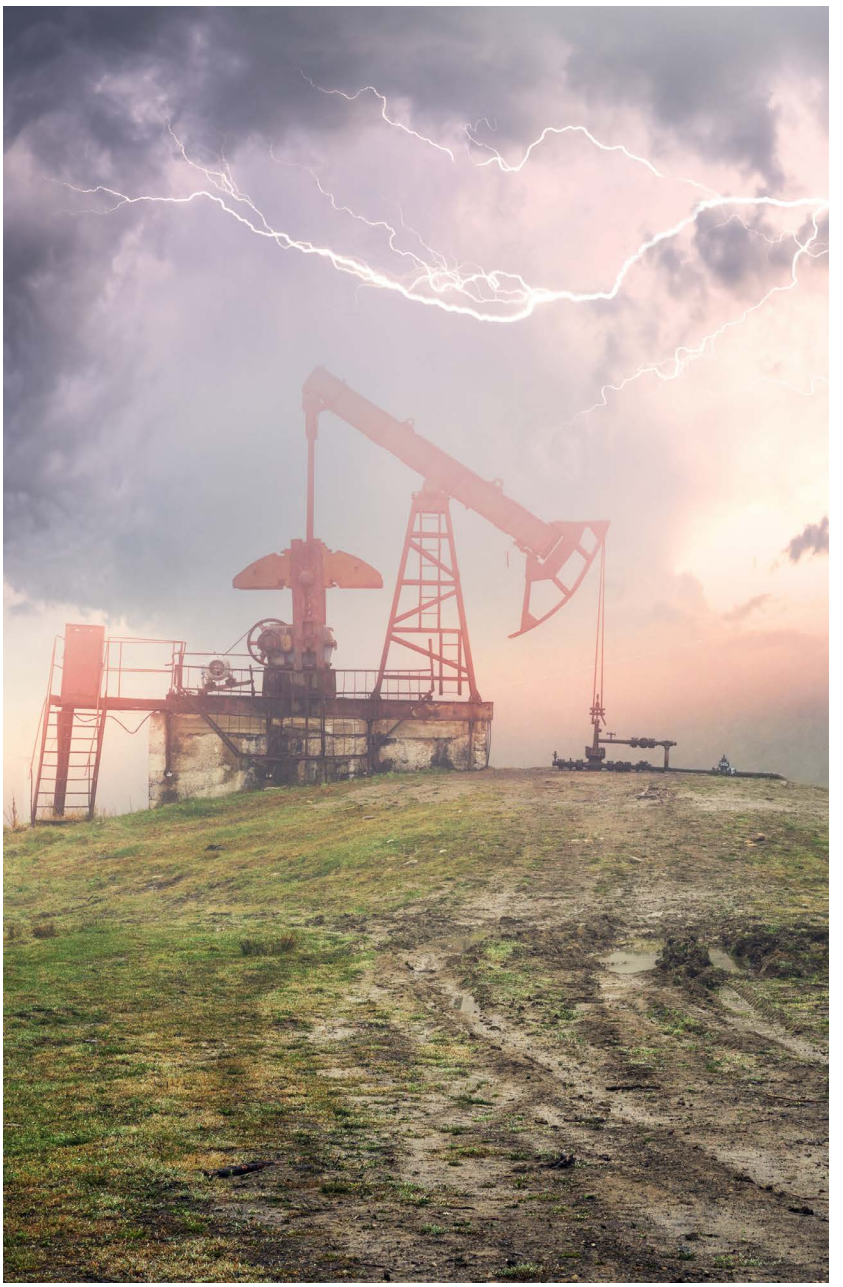
In contrast, E&P operators had only laid off approximately 15 percent of their US personnel.[4] The upstream sector generally has more options to protect cash flow in the short term by maximizing production and settling commodity hedges. Without similar support, the oilfield services sector was more immediately exposed to the severity of the downturn.

Job losses by subsector as of March 2016



Employment for all US employees reported by US-based and global companies employing US personnel.

Source: Bureau of Labor Statistics



A brief history

The oilfield services sector went through a transformation in the 1980s after many large upstream producers outsourced a considerable amount of their E&P drilling and field operations to smaller, specialized firms. During the 1990s, many producers increased activity in remote and offshore locations as well as more challenging sub-surface environments. Those business conditions presented the oilfield services sector with the opportunity to become inventors and innovators—finding solutions for the upstream sector's more complex needs.[5] In the 2000s, accelerating global oil demand drove up oil and gas prices to a level at which it became economically viable to experiment with new technologies to penetrate source rock—multi-stage, high-pressure hydraulic fracturing combined with horizontal drilling. Oilfield services companies partnered with their customers to develop these and related technologies, which gave rise to the unconventional shale revolution. Independent US oil companies focused on North America led the development of shale gas and tight oil resources.[6]

The major integrated oil companies (IOCs) and a number of national oil companies (NOCs) followed their lead, moving into shale production activity to take advantage of its shorter production cycle, capital payback time, and high resource potential. But IOCs and NOCs still dominate the large-scale conventional and offshore drilling arena, which is appealing to the oilfield services sector as long-term contracts are more prevalent, providing relatively stable revenue streams. Long-term contracts can function as a type of hedge for oilfield services companies during price downturns.

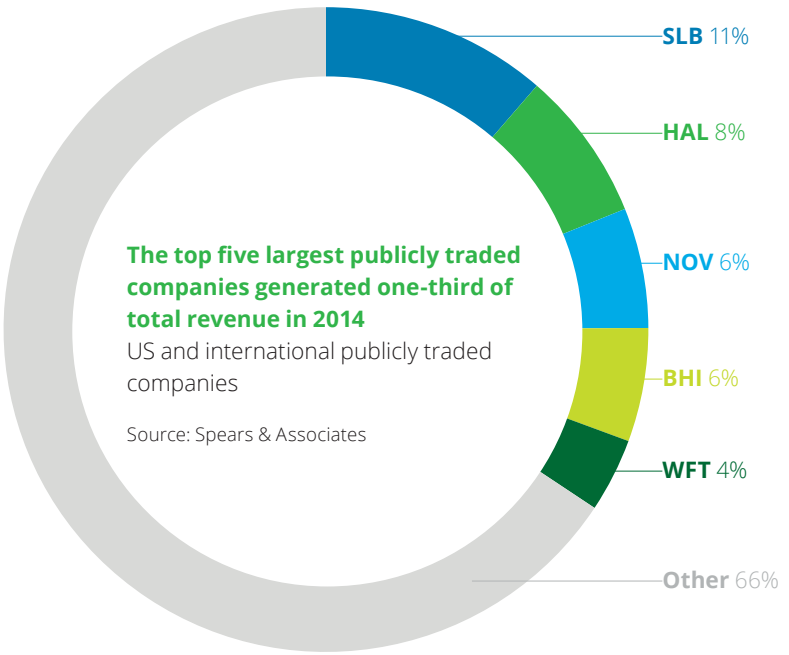
A common theme throughout these periodic transformations has been cost. It was more cost-effective for the upstream sector to transfer certain functions to the oilfield services sector in the 1980s. Later, the cost of developing highly sophisticated technology became feasible with high oil prices. As the oilfield services sector enters the next recovery, we discuss how it sets out to once again transform its business model to include innovative ways to lower costs for customers by tapping an underused resource: business process efficiency.

The oilfield services sector before the June 2014 price collapse

14,294 number of companies operating

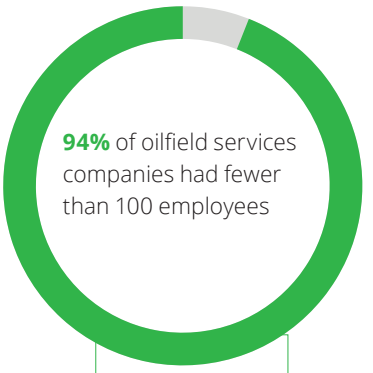
The number of individual contractors is unknown but estimated to be over **14,000**

Dominated by a few large companies in a space of an enormous number of small, private companies and contractors



The top five largest publicly traded companies generated one-third of total revenue in 2014
US and international publicly traded companies

Source: Spears & Associates



94% of oilfield services companies had fewer than 100 employees

0–4	**56%**
5–9	**13%**
10–19	**11%**
20–99	**14%**
100–499	**3%**
500+	**2%**

Firm # of employees

An industry upturn begins

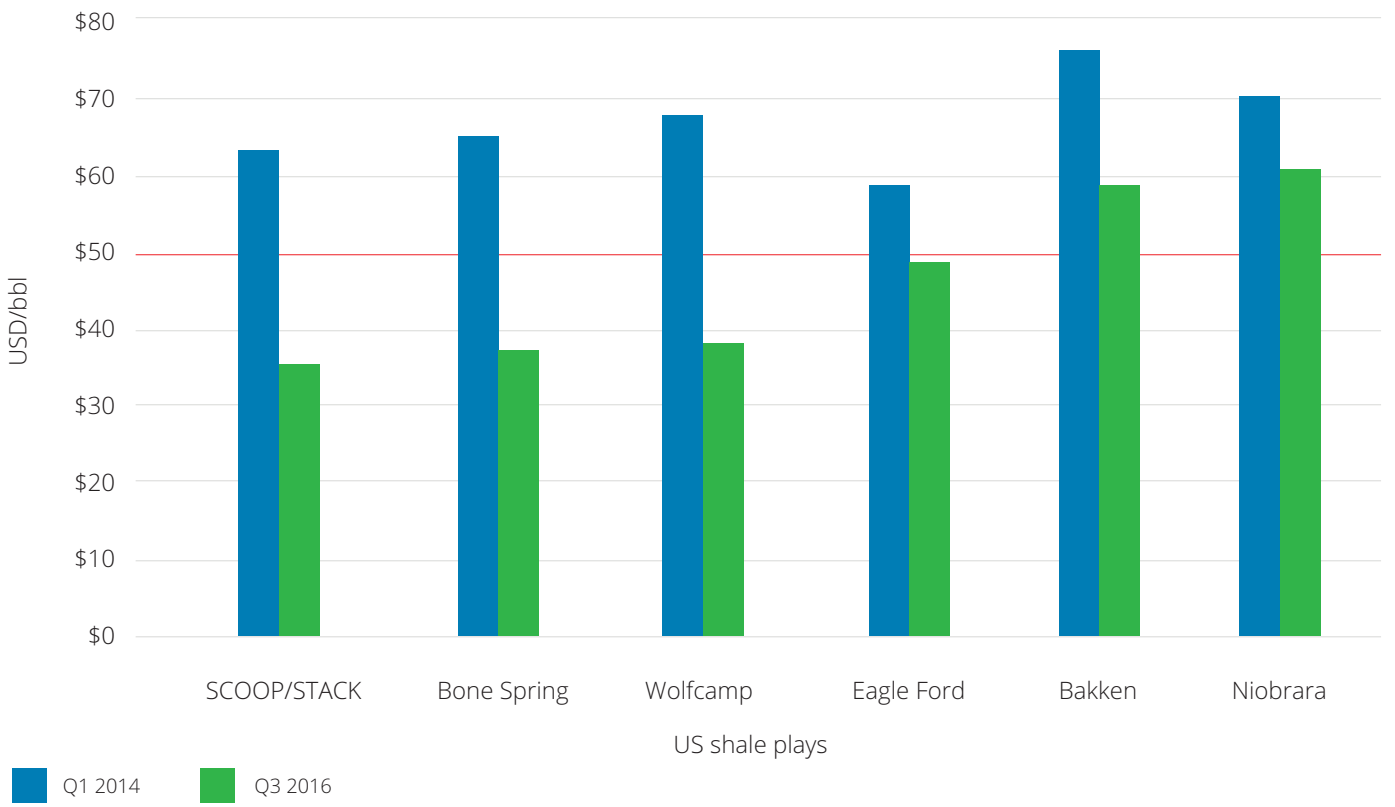
As of June 2016, oil prices had stabilized and breakeven prices in a number of US shale plays had fallen below market prices, setting off a return to rig deployment. Several oilfield services companies reported rising market activity related to shale drilling in the second half of 2016 and re-employment began. For these reasons, the consensus is that the oil and gas industry is likely seeing the first signs of a recovery. As of early 2017, prices have been relatively stable, having moved above $50 per barrel. Even though a rapid return to the oil price and drilling activity level prior to the downturn seems unlikely, the oilfield services sector is seeing improved sales in specific market segments, particularly those related to services for shale-focused producers.

What are the signposts?

Oil prices stabilized in the $45–$50 range beginning in June 2016 and then moved above the $50 level after the OPEC production cutback agreement in November 2016. Full-cycle investment costs should be below these market price levels to justify ongoing investment (figure 2).

Before the oil price downturn, North American shale plays were in higher-cost regions, with a weighted average breakeven price ranging from $65–$70 per barrel in first-quarter 2014. As of third-quarter 2016, shale plays (with the exception of Niobrara and Bakken) were showing signs of recovery in activity, having driven costs down. When the average breakeven prices in the shale plays fell below the oil price range of $45–$50 per barrel, drilling and production activity began to rise as measured by the Baker Hughes US rig count. Over the past six months, the Baker Hughes US rig count rose 42 percent from May 2016, the lowest level of active rigs deployed since 2014. Even with this increase, the rig count remains far below the number deployed in 2014 before the price collapse.

Figure 2. Weighted average breakeven prices have fallen substantially from the first quarter of 2014 to the third quarter of 2016 in four out of six shale plays

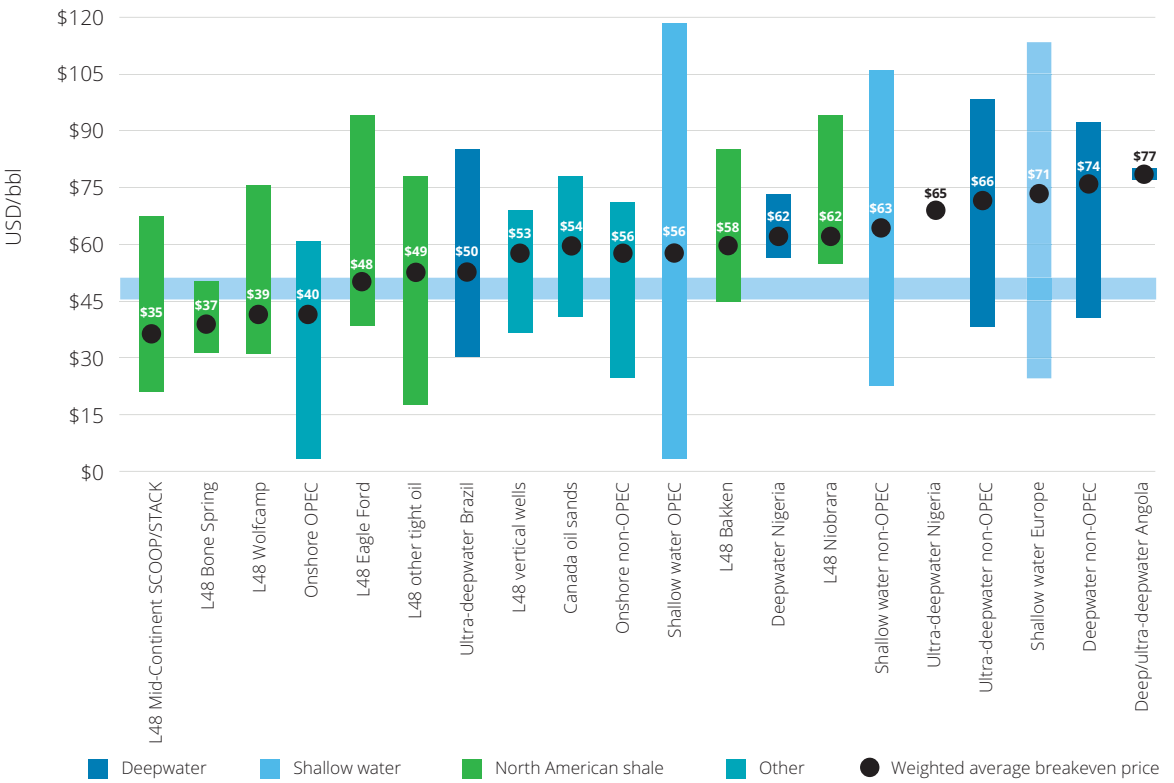


Note: Assume Brent price of $50 per barrel.
Source: Wood Mackenzie

However, in contrast, the Baker Hughes international rig count has continued to fall to its lowest level since 2006. Offshore shallow, deepwater, and international drilling plays with weighted average breakeven prices were well above the current oil price range (figure 3). High-weighted average breakeven prices in international drilling regions correlate strongly with a 10-year low number of international drilling rigs in service (figure 4).

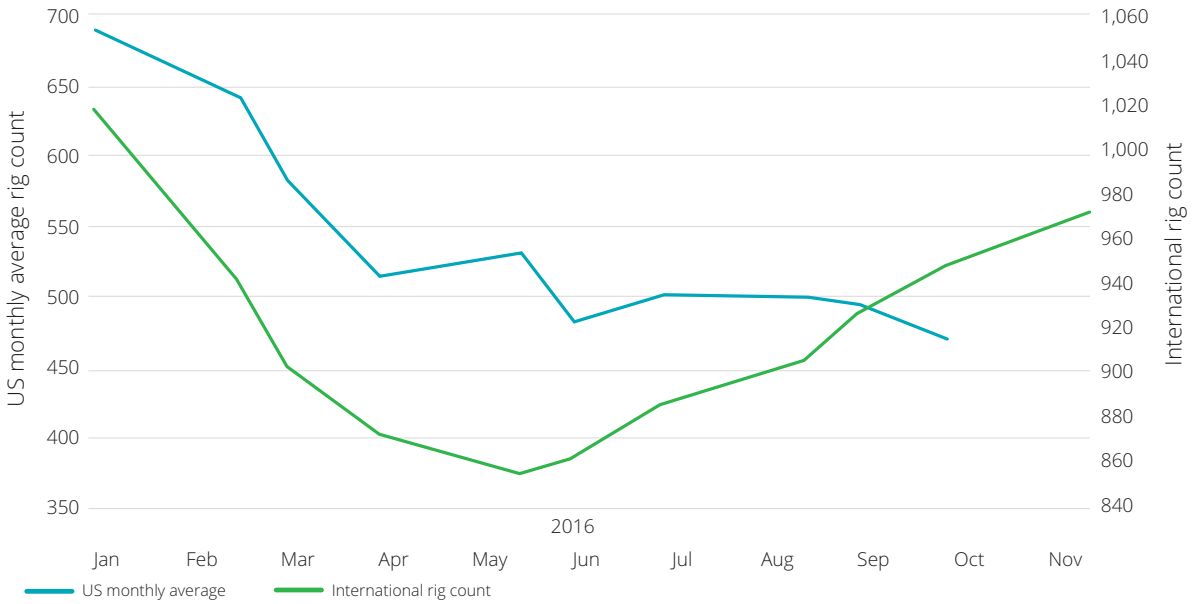
Likewise, increasing rig count activity in specific US shale plays correlates with a weighted average breakeven price below $50 per barrel. Consequently, a number of oilfield services companies are reporting improved market activity. For instance, Helmerich & Payne disclosed in its fourth-quarter earnings call that 32 of its rigs have returned to service and the company has rehired a number of rig operators.

Figure 3. Drilling activity is recovering in plays with breakeven costs below oil prices



Source: Wood Mackenzie

Figure 4. The US rig count recovery is ahead of global activity



Source: Baker Hughes Rig Count

Several oilfield services companies are not only reporting rising sales, but are also rehiring employees. The Bureau of Labor Statistics' November 2016 employment figures for the sector disclosed an addition of 2,500 oilfield services employees, confirming company announcements. With what seems like the beginning of an industry upturn at hand, a look back at the magnitude of this long, sectoral contraction underscores the difficult environment this sector has been operating in during the past two-and-a-half years.

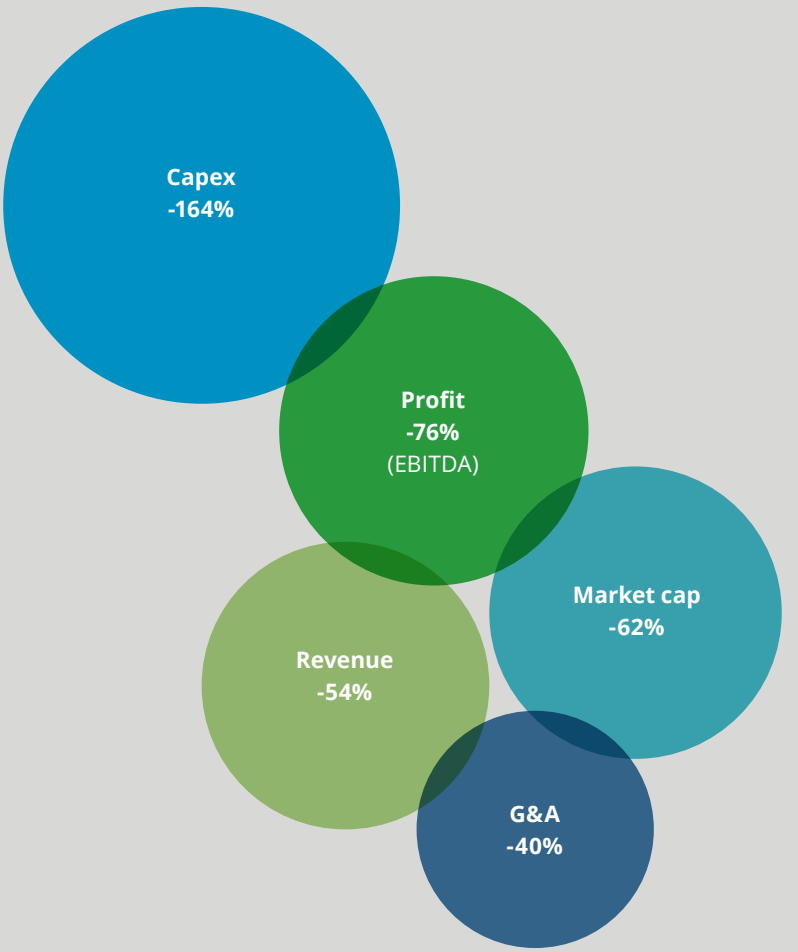
Estimated number of US and global publicly traded companies

2014: **583**
2016: **373**

Sources: CapIQ 2014 and 2016 data

The financial performance over the last two years has severely declined for the 371 surviving oilfield services companies.

Q2 2014–Q2 2016



Attributes for survival through the downturn

Description of the peer group

To assess whether particular types of oilfield services companies were more resilient than others during the 2014–2016 downturn, we analyzed a group of 56 oilfield services companies for which financial data about individual market segments and the percent of revenue derived from four major geographic regions was available. Revenue size, number of market segments, and diversity of location for their markets were the three determinants selected to make up the framework of a financial analysis to provide a clearer understanding of whether those determinants, or strategic positions, made companies more resistant to the downturn (analysis for second-quarter 2014 to third-quarter 2016) (table 1).

Table 1: Strategic parameters test

	Category	Description
Company size: *2015 annual data*	Small	*Less than $1 billion*
	Midsize	*$1 billion–$5 billion*
	Large	*Greater than $5 billion*
Market diversity: *Total 32 market segments*	Low	*1–2 market segments*
	Moderate	*3–9 market segments*
	High	*Over 9 market segments*
Geographic diversity: *Global operational span*	Single focus	*95%–100% revenue from one region*
	Moderately diverse	*50% revenue from one region*
	Globally diverse	*Greater than 10% and less than 50% from four regions*
Regions: *Where in the world*	North America	*Canada and the US*
	Latin America	*Mexico, Central and South America*
	Europe/Africa/CIS	*CIS is Russia and the former Soviet Union constiuents republics*
	Middle East/Asia	*Diverse*

Sources: Spears & Associates and Deloitte analysis

The most distinctive pattern showed two dominant business models relating to size and market segments. The majority of these companies, 37 out of 56 in the sample, focused on just one or two market segments, developing a speciality in a specific service or product (figure 5, green shading). The alternative model, primarily employed by the largest companies, targeted the entire upstream value chain via multiple market segments (figure 5, gray shading). However, companies of all sizes were geographically diverse, suggesting that large amounts of financial and physical capital are not a requirement for successful global operations.

Profitability and profit stability during the downturn

Did company size, geographic diversity, or number of market segments play a role in protecting profitability or stability of profits through the downturn? The following sections look more closely at each of these attributes.

Figure 5. Companies of all sizes have few market segments but only the largest companies have over nine market segments

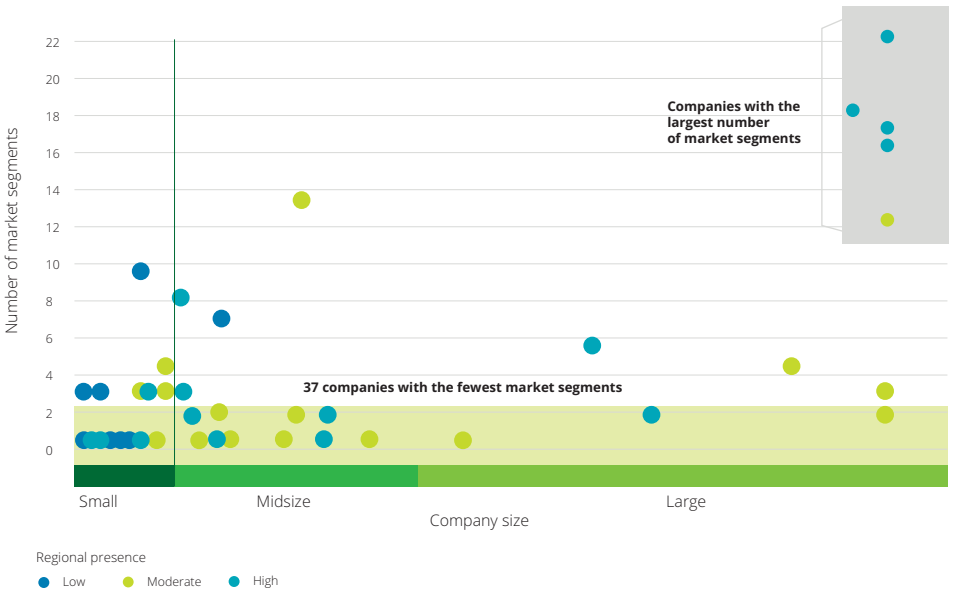
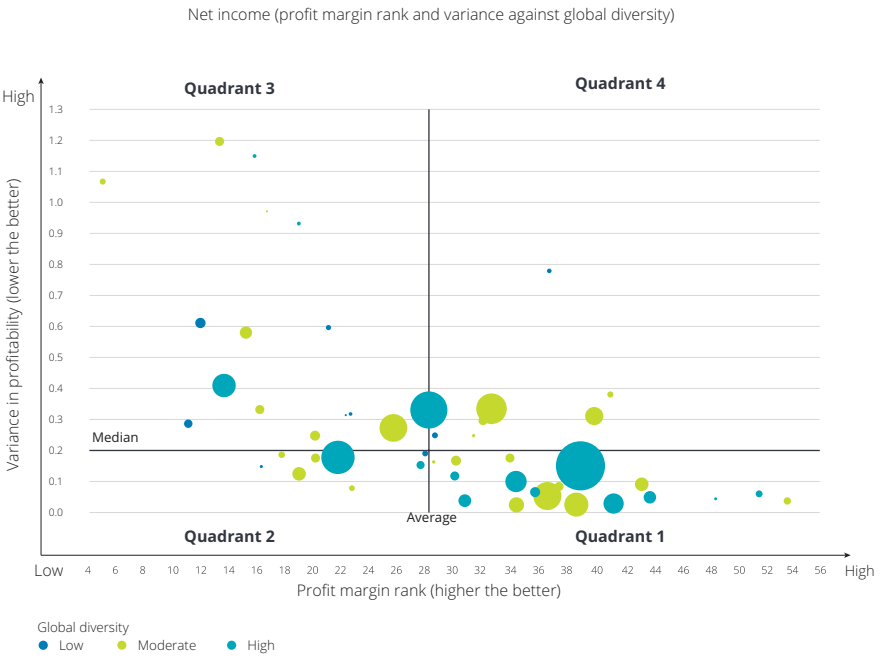


Figure 6. The relatively most profitable companies with the most stable earnings in quadrant 1 were of all sizes and geographically diverse



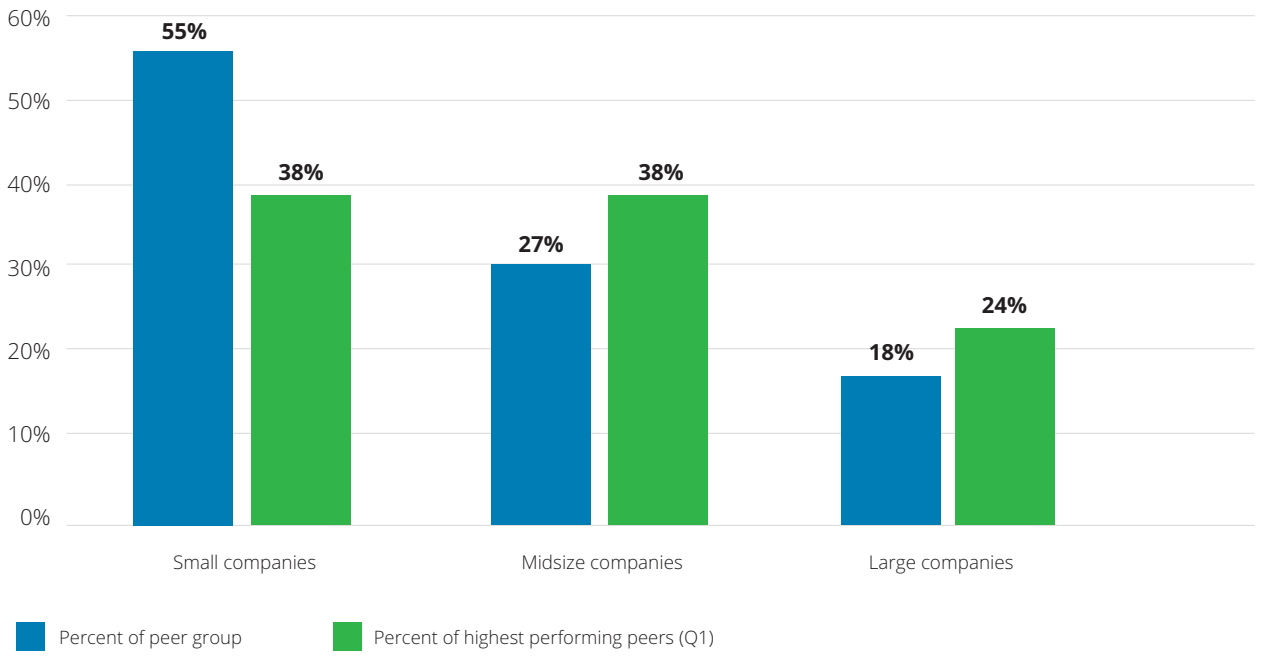
Note: The X axis represents a ranking of 56 oilfield services companies' net income as a percent of total revenue. The Y axis is the standard deviation from average net income as a percent of total revenue for each company. Oilfield services companies with above-average performance as measured by profitability and long-term profit stability over the downturn are in quadrant 1.

Company size

We might expect to see roughly an equal representation in each quadrant of all three company sizes in the same proportion as the entire group if company size were not a key factor driving performance. But that was not the case. Twenty-four percent of large companies were in the top-performing quadrant, but large companies only made up 18 percent of the entire sample (figure 7). Additionally, 38 percent of midsize companies were in this quadrant, also overrepresenting their 27-percent share of the peer group. Small companies made up 55 percent of the peer group as a whole but only 26 percent of the most successful companies were in quadrant 1. We infer that the size of companies seems to have been an important factor driving both profitability and stability of profits. However, one caveat should be noted. The three highest-ranked companies for both profitability and stability of profits were small companies. Although they may not represent their respective revenue size group in terms of having a larger presence in this quadrant, their highest performance rank leads us to conclude that other factors were also likely involved in successfully weathering the recent downturn.

Figure 7. Midsize companies represented 27% of the peer group but made up 38% of the best performing peers

(Refers to figure 6, quadrant 1)



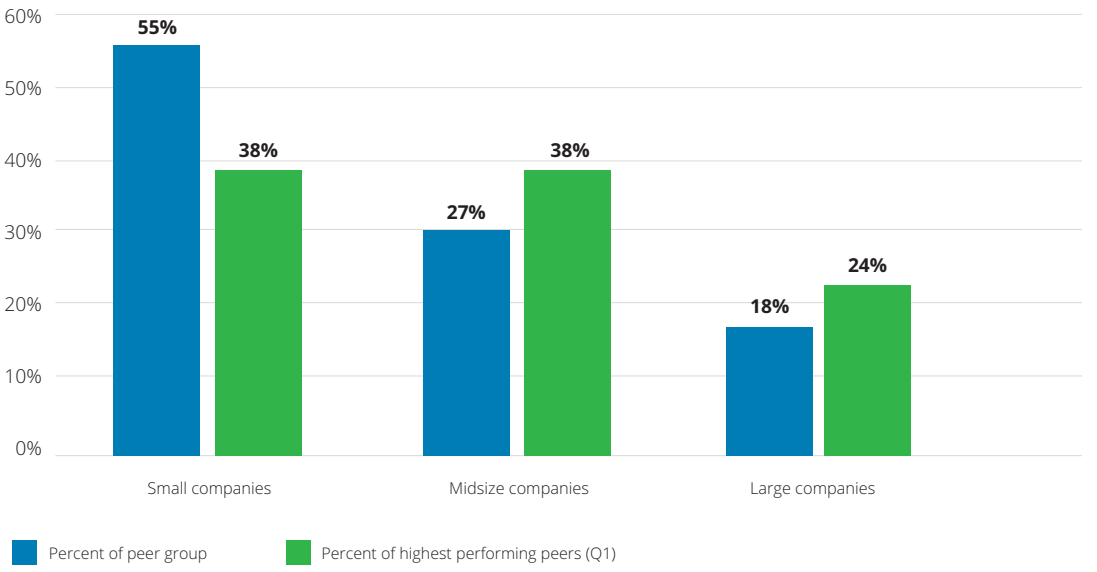
Sources: CapIQ and Spears & Associates

Global diversity

Of the 21 companies in quadrant 1 (figure 6), only two focused on a single region. The other 19 companies were fairly evenly split between highly globally diversified (operating in all four major regions) and moderately globally diversified (operating in two to three major regions) (figure 8). Operations located across the world typically have two benefits: 1) any geopolitical or local market disruptions in a region can often be offset by operations in others; and 2) upstream operators, mostly IOCs and NOCs working internationally, often offer longer-term contracts due to higher capital requirements, drilling commitments, more complex logistical conditions, and scarcer local infastructure availability in areas of the world not as developed for oil and gas production as North America. Ninety percent of the occupants of quadrant 1 were moderately to fully globally diverse, which we can conclude was likely a strong determinant for more resilient performance through the downturn. Two small, single-focused companies were the only exceptions to global diversity as a determinant for relatively higher profitability. One company was in the contract compression services market segment—the only one out of 32 market segments that did not experience any revenue decline during the downturn. The other company operated in the offshore production segment associated with long-term contracts. All the companies in quadrant 1 either targeted offshore production or were globally diverse, both strategies associated with long-term contracts.

Figure 8. Globally diverse companies represented only 27% of the peer group but made up 43% of the best performing peers

(Refers to figure 6, quadrant 1)



Sources: CapIQ and Spears & Associates

Market segments

Companies serving few (one to two) market segments represented 64 percent of the entire sample, but 76 percent of quadrant 1 (figure 9).

However, large companies, as noted in figure 7, were almost exclusively associated with serving a high number of market segments and likely performed better due to size. Therefore, one might expect the number of market segments correlating to large companies to be a determinant of success because a wide portfolio of services could compensate for declining sales in market segments more adversely impacted by a downturn. But midsize companies having few to moderate numbers of market segments were also overrepresented in the best performing quadrant. Five large companies were in quadrant 1 (figure 6), but only one had a high number of market segments. Two were moderately diversified and two had few market segments. In other words, although only large companies had high numbers of market segments, not all large companies have served multiple market segments. All five large companies, regardless of the number of market segments, were either moderately to fully globally diversified and/or operated in the offshore production region. Long-term contracts associated with international and offshore operations most likely accounted for much of the difference.

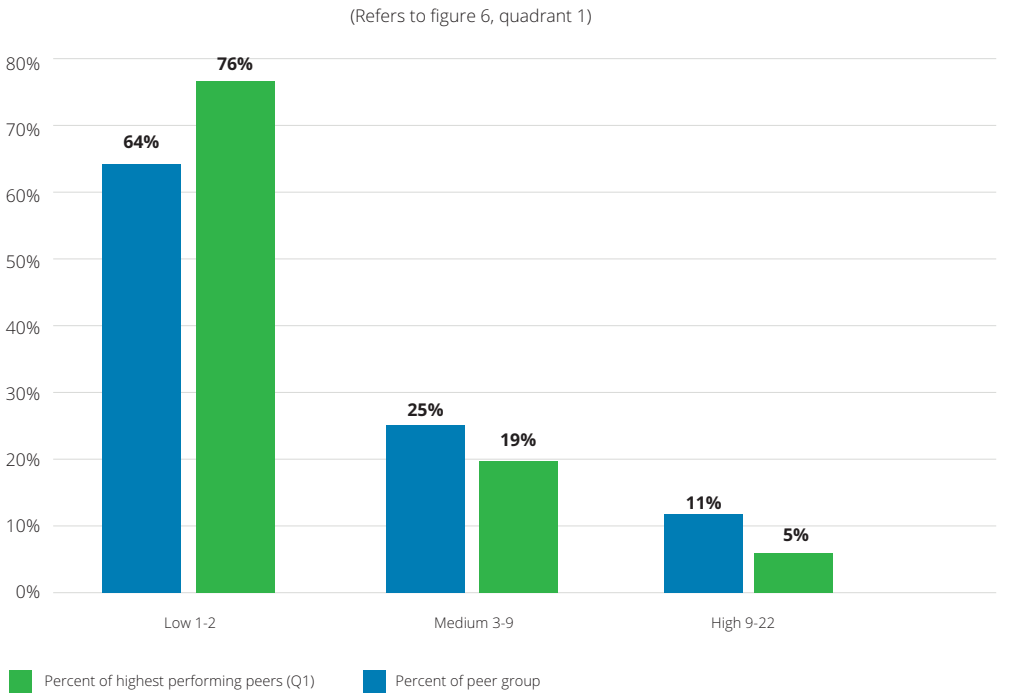
Putting it together

In the recent downturn, the dominant factors supporting more resilient performance were:

- Size: large and midsize companies fared better than small companies
- Geographic diversity: global dispersion of markets served
- Focus: a low number of market segments served

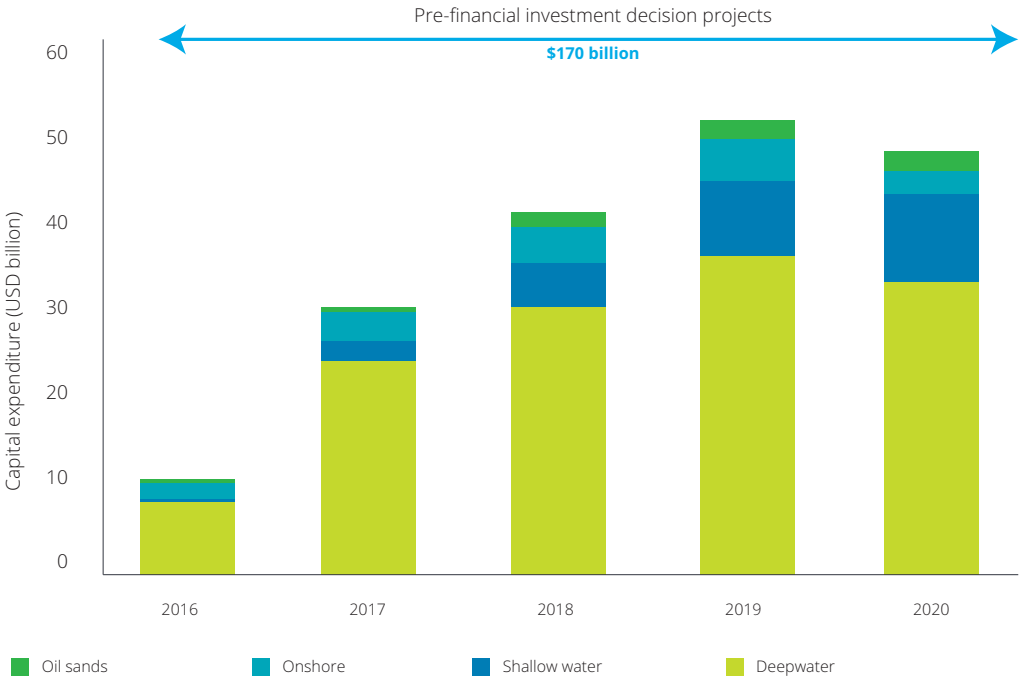
An underlying feature tying these three strategies together was the presence of long-term contracts. Small companies are the largest category in the oilfield services sector and tend to serve few market segments. Those that were geographically dispersed fared well, but those that focused on the North American shales market did not. The difference was likely an offshore focus involving long-term contracts as well as production activity in a diverse portfolio of geographies. Not surprisingly, major IOCs and NOCs have been actively pursuing North American shale plays for their short production cycle. These upstream producers have found short-term contracts to be much more beneficial during downturns and have canceled $170 billion worth of projects that would have long-term contracts associated with them (figure 10).

Figure 9. Companies with few market segments represented 64% of the peer group, but made up 76% of the best performing peers



Sources: CapIQ and Spears & Associates

Figure 10. Canceled projects for high breakeven price regions will continue until costs decline



Sources: Wood Mackenzie

In summary, long-term contracts for oilfield services companies went hand in hand with geographic diversity and market segments associated with large and midsize companies that had an offshore or international target. Small companies with fewer market segments were among the highest performers in the downturn. However, geographic diversity and market segments commanding long-term contracts, such as offshore projects, seemed to make a difference. Long-term contracts seem to have been a safety net during this downturn, functioning as a type of hedge for the oilfield services sector.

Preparing for the recovery: Strategies for sustainable success and how they work

As the oil and gas markets begin to recover, the oilfield services sector needs to go through another transformation by developing strategies to prosper in the upturn and remain robust through future price cycles. We gained insight into these strategies by analyzing positioning statements from a majority of the 56 oilfield services companies in our sample in their quarterly earnings calls or company presentations. These statements discuss how companies intend to alter or enhance their products and services in an attempt to better assure market share and revenue growth in 2017 and beyond. From the positioning statements, we identified seven types of strategies that fall into three categories.

A unifying theme across these strategic choice categories is the recognition by oilfield services companies that sustainable success will likely depend on meeting and anticipating customer needs. This imperative is clearly shown in the three strategy categories:

- Oil and gas companies should sustainably lower their cost base, since the lower commodity price environment is expected to continue over the next few years. Oilfield services companies can play a key enabling role in this by designing and offering deep business process improvements in their customers' operations, including services integration, bundling, and smart technology deployment.
- A focus on internal cost containment within oilfield services companies can enable them to sustain profitability in a lower-price world and continue to offer value to customers.
- Oilfield services companies seem more motivated to optimize their market, geographical, and contractual portfolios in alignment with core strengths and customer needs in order to remain focused on sustaining profitability through the cycles.

1 Cost containment for customers as a market differentiator

Strategy 1: Advanced technology to lower customer costs
Strategy 2: Innovative business process efficiencies to lower customer costs
Strategy 3: Integrate value chain offering or bundle offerings to lower customer costs

2 Internal cost-containment initiatives

Strategy 4: Increase internal business process efficiencies to support balance sheet improvements or lower prices for customers

3 Traditional business model changes or market strategies

Strategy 5: Expand or add new market offerings
Strategy 6: Pursue long-term contracts
Strategy 7: Add or expand market offerings to non-energy sectors

Category 1: Cost containment for customers as a market differentiator

Strategy 1—Advanced technology to lower customer costs

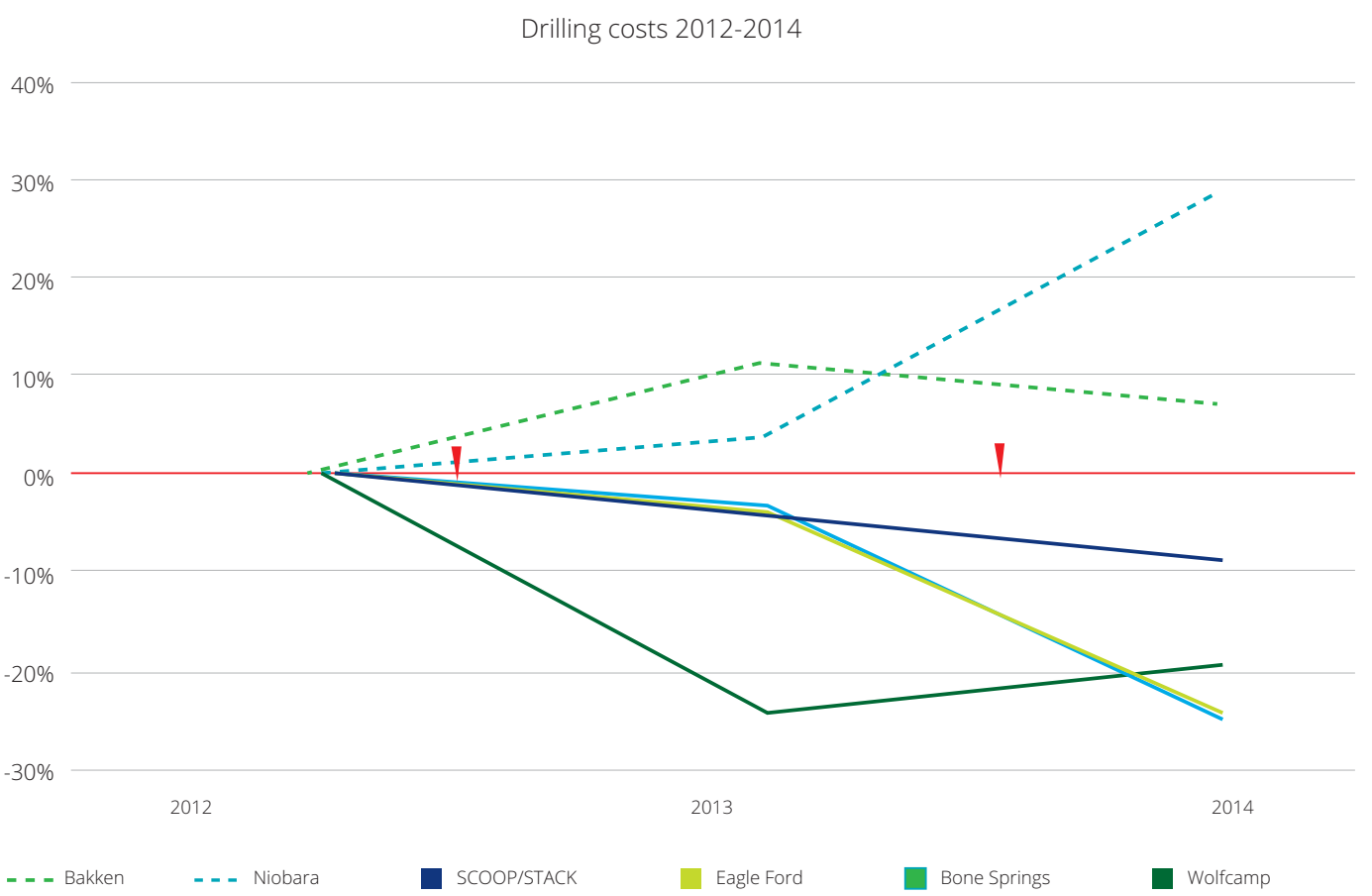
Before the downturn, a focus on outcome efficiency drove growth and capital efficiency. Now, technology can be offered as a cost-containment tool because producers' need for capital efficiency may take precedence to survive through the remainder of this downturn as the sector moves into a recovery.

Over the years, the oilfield services sector took the lead as the industry's inventor and innovator, so it is likely no surprise that the most predominant positioning statement cited by 27 oilfield services companies continued a long-held, highly successful strategy to increase outcome efficiencies using technology to find, develop, and produce hydrocarbons.[8] When oil prices were high, outcome efficiencies were important for producers focused on growth, but cost inflation began to squeeze margins. Eventually, the oil price collapse accelerated their need to drive down costs as a means for survival.

One of the clearest and most quantifiable examples that the oilfield services sector's advancing technological improvements is making a significant impact on drilling efficiencies is shown in figure 11. From 2012 to 2014, oil prices were high, but drilling costs were falling. A look at this time frame is more indicative of technology's impact because vendor costs were escalating and producers were drilling less productive prospects, two inputs that would be a counterforce for lowering costs.

Six out of 33 oilfield services companies cited this approach without an adjunct strategy for combining technological advancements with market segment integration, logically because they had few market segments. One of these companies, Subsea 7, an oilfield services company operating within a single-market segment (offshore construction services), announced its intention to not only add technological capabilities, but also bundle offerings to integrate products within the segment—a variation of market integration suited for a single-market segment business.[9]

Figure 11. Shale operaters brought down driling costs when oil prices were still high—except in the Niobrara and Bakken



Sources: Wood Mackenzie

Strategy 2—Innovative business process efficiencies to lower customer costs

The second most cited positioning strategy was to offer business process improvement services as a market differentiator to lower upstream producers' cost. Operational efficiency is becoming more prominent as an important tool, something possibly not given much scrutiny until recently.

Companies' positioning statements emphasized the fact that, as the oilfield services sector continues to develop technology to drive down costs by increasing outcome efficiencies, one less tangible and often overlooked tool is business process improvement. It includes lean manufacturing principals applied to oil and gas production, project management skills development, segmented or holistic process realignments, and market segment integration. These subcategories of business process realignment focus on increasing capital efficiency (i.e., driving down customers' costs). Innovative business process efficiencies offered as a new type of product include both standardization and specialty designs "fit for purpose."

Upstream companies may often put a process in place to mitigate an expense, but, in fact, it can accomplish the opposite goal. For instance, some shale operators may keep one or two extra frac pumps on hand in the event of a malfunction—otherwise known as redundancy. Standby costs and schedule delays can occur when waiting for a replacement, so having pumps on location ready to be deployed seems to be the right solution. However, an alternative business process method suggested by an oilfield services company was to use all frac pumps but have a service-level agreement to replace any non-working pumps within a short period of time along with coverage for most of the associated standby charges if a breakdown occurs. Adding the horsepower from two additional operating frac pumps, rather than holding one in standby status, could yield 30 or more extra frac stages per month per frac spread. This process change would make more efficient use of resources from other third-party services and equipment companies and accelerate the speed to production, thereby lowering input costs.

"We are also seeing growing demand for other recently introduced offerings designed to address the stress our customers are under in the current environment."

—Jose Bayardo, chief financial officer and strategic vice president, National Oilwell Varco

In an effort to help customers enhance process efficiencies, some oilfield services companies are beginning to offer products and services that are designed to increase business process efficiencies for their customers. For example, National Oilwell Varco (NOV) signed a cooperation agreement with GE Oil & Gas to work on cost efficiencies for its completion and production market segment. The purpose was to offer floating production storage and offloading (FPSO) topside modules with the capability of rapidly fitting designs to specific customer needs, reducing time and complexity—which translates to lowering customer costs. In other market segments, NOV has introduced services to assess and review methods to enhance operational efficiencies, such as infield certifications, rig performance assessments, and equipment storage and reactivation services.[10]

Strategy 3—Integrate value chain offering or bundle offerings to lower customer costs

Using advanced technology to drive outcome efficiencies—combined with market integration and business process improvements—could help producers contain costs much more effectively, if not exponentially.

The five largest companies with multiple market segments targeting the entirety of the upstream production cycle combined two positioning strategies—developing advanced technology and integrating all market segments—to offer products and services across the entire value chain. Integration of full-cycle market segments can offer additional cost savings to producers, although some may continue to select vendors individually along the value chain in an attempt to negotiate lower prices. Market segment integration can reduce costs for the upstream producer because it is intended to drive business process efficiencies by collaborating with customers at the start of a project, optimizing workflow procedures through the value chain, and integrating the workflow plans and operational technology with digital technology. This is a holistic approach to wringing out more efficiencies to cut costs further than the traditional method of using technology in isolation.

The largest oilfield services companies are filling out their market segments by developing a new business model that offers products and services directed at the entire production cycle. The acquisition of Cameron International by Schlumberger is an example of this. Cameron's wellhead and surface equipment, flow control, and processing technology complemented Schlumberger's reservoir and well technology offerings to create end-to-end offshore drilling and production system services. The central strategic rationale cited by Schlumberger for this business combination was to significantly cut producers' costs with efficiencies gained from technology advances, and, specifically, to integrate the pore-to-pipeline market segments. Offering a complete cycle of products and services helps wring out

more cost savings with step-change improvements to customers' overall business operations.[12]

Merger and acquisition activity during industry downturns often occurs to lower the combined companies' internal costs. Yet in this downturn, recent mergers among the largest companies were principally about transforming their own business models—as exemplified by the Schlumberger and Cameron acquisition—to ultimately offer end-to-end, integrated products and services that can substantially reduce customers' internal costs, which is a key market differentiator.

"By being invited to the table to contribute, complementing what they are doing, I think we can achieve improvements in design and engineering costs out of the system before we go to implementation. And by factoring in our implementation or execution capabilities in the design, I think we can also simplify and streamline the execution part of the work as well." [11]

—Paal Kibsgaard, chief executive officer, Schlumberger

FMC Technology and Technip's combination and Baker Hughes' merger with GE Oil & Gas also followed this strategy and will likely transform the sector as it did during the shale revolution and for the same reason—upstream producers found it more cost-effective to hand off technology development to firms with the expertise, but retained a collaborative role in its development. What's different this time? Companies are integrating market segments to capture more efficiencies.

Category 2: Internal cost-containment initiatives

Strategy 4—Increase internal business process efficiencies to support balance sheet improvements or lower prices for customers

Oilfield services companies are seeking sustainable cost reductions in internal operations and service delivery through business process improvements, integration, and technology to support future profitability and competitiveness.

Oilfield services companies are applying business process realignments to reduce costs in their internal operations to reach cash flow neutrality as a baseline. However, for some companies a secondary objective of this strategy is to lower internal costs using these same sustainable process realignments to increase margins. By doing so, companies have the option to lower prices for their customers and gain market share.

The Technip–FMC Technologies merger anticipated capturing cost savings related to the two companies' synergies, as well as constructing an end-to-end "all under one roof" product and service offering that integrates market segments, driving costs down further for its customers than technology could do by itself. But the company emphasized that the third pillar of cost containment was to reorganize its internal processes to lower costs even more from its own system and pass those savings on to customers. TechnipFMC recognized pricing concessions were not sustainable unless it also lowered its own costs.[13]

"Our customers are expecting us to be proactive and help them in this process, which cannot be based on further pricing concession but requires some fundamental rethinking of the way we work and how we integrate the different pieces."

—Thierry Pilenko, chairman and chief executive officer, TechnipFMC

Aker Solutions, a Norwegian-based oilfield services company, is positioning itself to lower internal costs with process efficiency gains, so that cutting prices for customers will not shrink margins but rather help gain market share.[14] Forum Energy Technologies is also addressing its own internal efficiencies to lower costs and pass a portion of the savings on to its customers.[15]

Perhaps surprisingly, only 25 companies announced a position to lower their own costs by implementing business process improvements while 26 companies intended to offer some form of these initiatives as a product or service to their customers. It is possible that the remaining eight companies did not consider implementing internal efficiency gains as a market differentiating strategy, but rather as simply "smart business."

Category 3: Traditional business model changes or market strategies

Strategy 5—Expand or add new market offerings

An important component of strategic choice is which markets or market segments to serve. The new lower-price business environment has motivated some oilfield services companies to expand in the market segments where they can be most competitive.

Twenty-six companies planned to expand a market segment currently offered with complementary products and services rather than add and integrate

new market segments. All of the largest companies announced this strategy, as did a majority of midsize and small companies.

For instance, Superior Energy Services is adding more frac trailers to its fleet and has set a goal of having 750,000 horsepower by the second half of 2017.[16] Teledyne Technologies' research and development segment is developing enhanced technology for its subsea operations.[17]

This strategy is not necessarily new, although it varies by method such as purchasing an existing equipment or service line, acquiring a competitor with similar offerings, or developing new product enhancements in house.

Strategy 6—Pursue long-term contracts

Securing long-term contracts for services can be an attractive hedge against lower or more cyclical oil prices. Several oilfield services companies are emphasizing continued focus on securing these types of deals.

Having long-term contracts in place may be a sound strategy during a normal sectoral downturn, but this one has seemed anything but normal. Not only has the depth of this cycle been unprecedented, its duration has also been much longer than anticipated. Some contracts do not guarantee a specific level of revenue as they are tied to a commitment-of-services clause at evergreen rates. In this case, accepting less money is preferable to none, but projects under consideration normally undertaken with long-term contracts are increasingly being canceled (figure 10). IOCs and NOCs have not brought their average breakeven prices down in regions typically associated with long-term contracts such as international and deepwater offshore plays (figure 3). Until then, acquiring new, long-term contracts may prove difficult.

Yet, 17 companies in our sample intend to pursue long-term contracts, as stated in their positioning statements. Our findings noted that this strategy was foundational to resiliency during this downturn; we anticipate that it may prove more difficult to obtain long-term contracts in the near term. But as the recovery matures, they should again prove their merits. Long-term contracts give oilfield services the financial assurances they need to mobilize their resources to frontier drilling areas of the world. In addition, offshore projects are long in construction time and high in costs, requiring those same financial guarantees, especially for companies' lenders and investors. Contract terms may change in light of the financial deadweight imposed on producers because this downturn continued for so long. But under normal circumstances, the advantages for both sectors were never in dispute.

Strategy 7—Add or expand market offerings to non-energy sectors

Offering services to market segments outside the oil and gas business can provide additional protection against full exposure to oil price cycles.

It is not uncommon to add a step-out product offering, using the company's established expertise and resources in an effort to compensate for deteriorating revenues during a sectoral downturn. It would seem like a logical decision, but surprisingly, this positioning strategy was the least cited: only six companies were either already engaged in non-energy markets and planning to expand or adding a new business line. The following two examples were taken from company earnings calls in 2016.

Mitcham Industries leases advanced seismic equipment and also designs, manufactures, sells, and services specialized equipment for the marine segment of the seismic industry. The company developed a platform for port security monitoring, offshore platform monitoring for vessel intrusion, and diver detection for non-energy businesses and governments. This was only one of several pursuits, but counterbalancing its energy sector customer base was the strategy.[18] Fugro, a Netherlands-based company providing geo-intelligence and asset integrity solutions, is positioning to expand its market offerings well beyond the oil and gas sector, such as wind farms, nuclear power plants, bridges, and railways.[19]

A strategy to add or expand into non-energy segments seems practical, but companies citing this approach had capabilities in place to develop offerings for other business sectors. In other words, a non-energy product or service could be developed more cost effectively as a step out from one already in place rather than as a greenfield development, which, in a contracting business environment, would pose an enormous risk.

Looking forward: Renewed transformation as a key to sustainable success in the oilfield services sector

After three years of intense stress on the activities, financial performance, capacity, and strategies of oilfield services companies—both in North America and around the globe—the sector should position itself for yet another transformation to take advantage of the impending industry recovery and to be more resilient during future price cycles. Long-term contracts provided a safety net in the past but may prove to be less available in the near future. Now, the opportunity to fill a critical customer need for further cost reductions with innovative business process efficiency methods seems the highest priority and one of the most important strategic market differentiators for the oilfield services sector.

This approach is a marked departure from relying exclusively on past strategies by, once again, offering customers a different kind of innovation. The North American shales is one of the few regions in the world where production activity has returned; this proves that costs driven below crude oil prices can spur the industry's recovery. Waiting for oil prices to return to previous high levels may no longer be an option. Transformation is part of the oilfield services sector's history, and companies have identified business process efficiency methods as an additional market offering to help customers sustain a resilient future so both sectors can prosper through these market cycles.

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Let's talk

John England
US Energy & Resources Leader
Deloitte LLP
jengland@deloitte.com
+1 713 982 2556
@JohnWEngland

Andrew Slaughter
Executive Director
Deloitte Center for Energy Solutions
Deloitte Services LP
anslaughter@deloitte.com
+1 713 982 3526

Scott John
Principal
Deloitte Consulting LLP
scjohn@deloitte.com
+1 713 982 3150

Mike Hatch
Managing Director
Deloitte Services LP
mikehatch@deloitte.com
+1 713 398 4152

Key contributors

Stephanie Brush
Manager
Market Insights
Deloitte Services LP

Vivek Bansal, Senior Analyst, Market Development, Deloitte Support Services India Pvt. Ltd.
Chris Newton, Senior Manager, Deloitte Consulting LLP
Deepak Vasantlal Shah, Assistant Manager, Market Development, Deloitte Support Services India Pvt. Ltd.

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