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# *2017 Oil and Gas Trends*

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**Adjusting business  
models to a period  
of recovery**

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# *About the authors*

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# Introduction

The character of Chuck Noland, played by Tom Hanks, says near the end of the film *Cast Away*, “...because tomorrow the sun will rise. Who knows what the tide could bring?” He makes this observation after having survived on a desert island for four years before being rescued and returned to civilization. If you’re a top executive in an oil and gas company, more than likely you’re feeling the same way right about now — optimistic but extremely cautious.

Much of the oil and gas industry has survived an especially tough few years with weak demand and low prices. It has been difficult to make strategic decisions and plan for the future. Only now is the sector beginning to emerge from its upheaval. If there is hope on the horizon, we must, like Noland in *Cast Away*, remain mindful of the risk.

For instance, although prices appear to be recovering — Brent crude was up around 90 percent in 2016 to just over US\$50 per barrel — they are still well below \$115 per barrel, the post-recession high-water mark reached in March 2011. As a result, even as companies begin to view new investments in resource development as more attractive, the upstream oil and gas sector must move gingerly. Continuing price improvements will probably be slow, and supply may be constrained by the cutbacks in reserve development projects over the last few years.

The oil price collapse, which began in June 2014, triggered a wave of cost reduction among upstream businesses. Global oil and gas companies slashed capital expenditures by about 40 percent between 2014 and 2016. As part of this cost-cutting campaign, some 400,000 workers were let go, and major projects that did not meet profitability criteria were either canceled or deferred. These steps, combined with efficiency improvements, are beginning to bear fruit for the industry. A growing number of projects can break even at oil prices in the high \$20s. One good example is Statoil’s Johan Sverdrup field in the North Sea, where the break-even price of development costs has been reduced to around \$25 per barrel. That would have been unthinkable a few years ago.

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# *Green shoots of recovery*

In the near future, the recent oil price gains — which are due to a rebalancing of supply and demand fundamentals, partly accelerated by OPEC's recent decision to cut production — are expected to remain in place. That expectation is behind a number of positive industry forecasts: According to Barclays's latest E&P Spending Survey, oil and gas industry capital expenditures are expected to increase by as much as 7 percent in 2017. In addition, global rig counts, particularly in the U.S., have been on the rise since the middle of 2016, according to Baker Hughes. Moreover, we are seeing the green shoots of a recovery in M&A as companies have pursued asset deals in recent months.

It's possible that we might see a spike in oil prices sometime in the next five to 10 years — if, because of the hiatus of investment in major projects since 2014, the industry finds it difficult to meet increasing demand. The resulting uncertainty would no doubt be welcomed by traders, who have largely avoided the oil market during its price plunge. An uptick in trading activity could in itself drive up oil prices significantly in the three- to five-year time frame. Oil and gas companies will need to ensure that their business models are prepared to manage and benefit from this volatility.

As oil prices recover, can international oil companies (IOCs) hold on to the benefits of cost reduction? Some cost escalation is inevitable. For example, oil-field services (OFS) companies will likely start taking back price concessions they gave IOCs when the market collapsed. This could add as much as 15 percent to the price of producing a barrel of oil, which in turn would allow OFS company operations to get back to break-even levels.

But upstream companies will have to be diligent about containing other expenditure increases, particularly in the supply chain and resource development arenas. That may prove difficult, because the wave of worker layoffs eliminated significant experience, knowledge, and skills. The loss of these capabilities could push development project costs up

substantially if they are not carefully monitored. Smart IOCs will embrace new digital initiatives as a means of offsetting expense escalation and furthering the cost and efficiency improvements they have already achieved.

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# *Regional shifts*

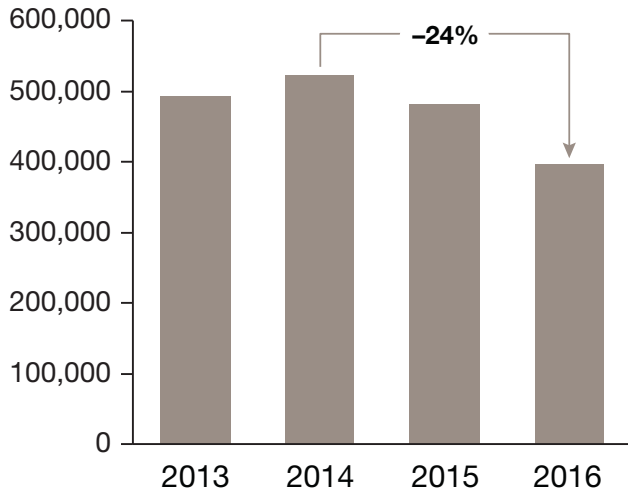
A great deal of the activity in the oil and gas sector is focused on OPEC countries and the U.S., but other regions may also play a key role in the coming years. For instance, in Latin America, the investment environment is improving. Some domestic oil and gas industries are on the upswing, creating jobs. A prime illustration is Mexico, where energy reform is opening the door for nontraditional operators to establish a presence in the country. In the recent deepwater auction in that country, companies successfully bidding for acreage included China's Offshore Oil Corporation, Australia's BHP Billiton, France's Total, American firms Chevron and ExxonMobil, and Japan's Inpex.

Other hydrocarbon hot spots include offshore Egypt, where BP recently acquired a stake in Eni's giant gas field Zohr, and the Caspian Sea, home to Kazakhstan's Kashagan reserves, the world's largest oil-field discovery in the past 30 years, where commercial production resumed at the end of 2016. As oil prices rise, private equity is likely to have a bigger hand in the industry. This is already evident in two recent high-profile deals in the U.K.'s North Sea: Siccar Point Energy's acquisition of OMV's assets and Chrysaor's decision to pick up divested assets from Shell.

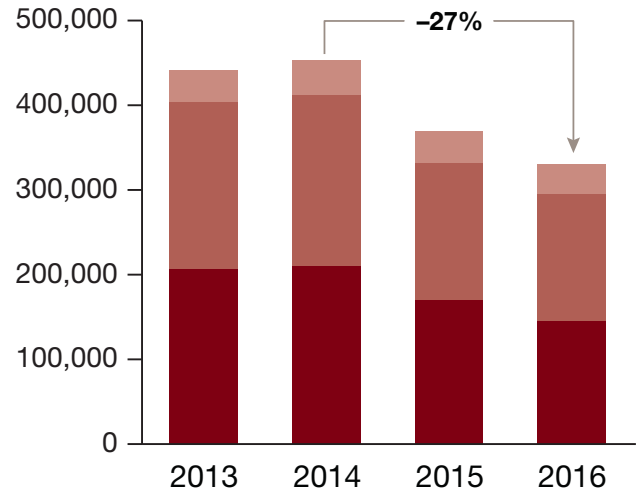
Exhibit 1

Oil price jitters resulted in a loss of critical talent

**Number of U.S. employees in upstream oil and gas**



**Number of U.K. offshore employees in upstream oil and gas**



Direct employment  
Indirect employment  
Induced employment

Source: U.S. Bureau of Labor Statistics; Oil & Gas U.K. Economic Report 2016; Strategy& research

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# *Looking ahead*

So if you are an oil and gas executive peering out over 2017 and beyond, you will face structural and cultural issues internally; many companies do not have the talent, organizational framework, systems, processes, or attitudes to be sufficiently flexible and innovative in an evolving and uncertain marketplace. You should be prepared to pursue new drilling and extraction technologies and to increase your research into sustainability and clean energy. To start planning for the future, oil and gas leaders in all segments might consider some fundamental questions: Do I have the right business models in place? How can my company develop new capabilities and in what areas? How should asset portfolios evolve? What type of technology plays should I invest in?

As companies address these challenges, we see a number of business models and strategic responses emerging between now and 2020:

## ***1. Corporate strategic objectives will increasingly focus on sustainable profitability***

The recent and extended oil price downturn once again highlighted the urgency for companies to have plans for profitability under a number of different price scenarios. Although profitability is always a key metric, in the oil and gas industry, growth in production and reserves has often been more important. However, the shock of low prices and the strong possibility that interest rates will rise in the near future, increasing the cost of debt, has elevated free cash flow from earnings to priority status.

Generally, the super majors already have profitability and capital efficiency hardwired into their corporate DNA. Other firms — such as national oil companies (NOCs) in the Middle East, which tend to emphasize production volume targets — will have to adapt. For such companies, a new focus on cost efficiency and profitability will require a significant shift in corporate culture and outlook, and ultimately a realignment of company portfolios. Indeed, the recent report that Shell is considering the sale of its interests in the super giant Majnoon and West Qurna fields in Iraq, where profit margins under the terms of the technical service contracts are low, may reflect such a trend.

## ***2. Differentiated capabilities will become a key factor for future success***

In recent years, the oil and gas sector has been characterized by a diverse range of operating environments, including onshore unconventional reservoir production and frontier exploration in increasingly challenging and remote environments. Although the super majors have traditionally sought to participate in all environments, even these companies do not have the skills — or corporate culture — to compete in all situations anymore. In fact, the U.S. unconventional sector is dominated by companies, such as Chesapeake Energy, EOG Resources, and Whiting Petroleum, that have tailored their operating models to the unique demands of unconventional production.

Similarly, in recent years, smaller exploration and production companies with particular sets of capabilities — for instance, a laserlike focus on cost efficiency — have been able to acquire mature assets and outperform the super majors in specific segments. Such specialization will likely become more commonplace in the future. In fact, the sector's current uncertainties make it imperative for companies of all sizes to identify the capabilities that are critical to profitable growth, and even survival, and allocate capital accordingly.

Recent M&A activity in the O&G sector suggests the emergence of operating models built around specific capabilities. For example, at the heart of GE's recent acquisition of Baker Hughes is an effort to create a business focused on more efficient well operations through automation, enhanced imaging, and data analysis. And the just-completed combination of Technip and FMC Technologies has fashioned a company whose core capabilities will be subsea engineering and equipment.

## ***3. New business models and forms of partnership will emerge***

The evolution of the oil and gas sector from one dominated by large, generalist companies to one featuring specialists in narrower aspects of the operating environment will require companies to establish new ways to collaborate, ways that leverage the specific skill sets of each organization. In our view, the model of a single integrated company discovering and developing an oil or gas field, and operating it until it is depleted, is being replaced by alliances and changes in ownership designed to ensure that the company most able to extract value manages the field in relevant stages of its life.

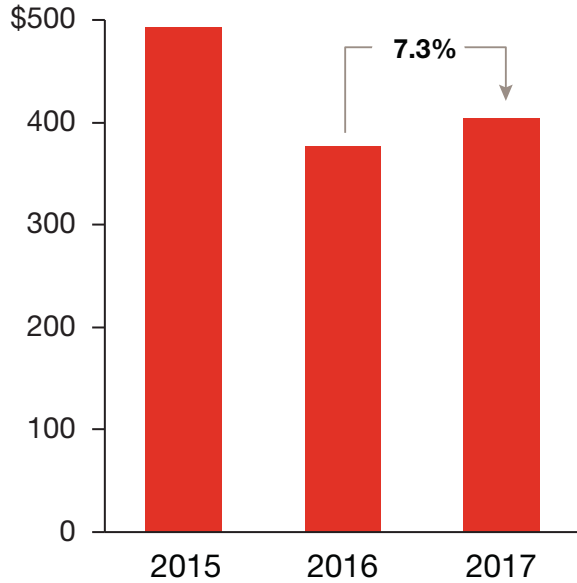
*The model of a single integrated company discovering and developing an oil or gas field, and operating it until it is depleted, is being replaced.*

Exhibit 2

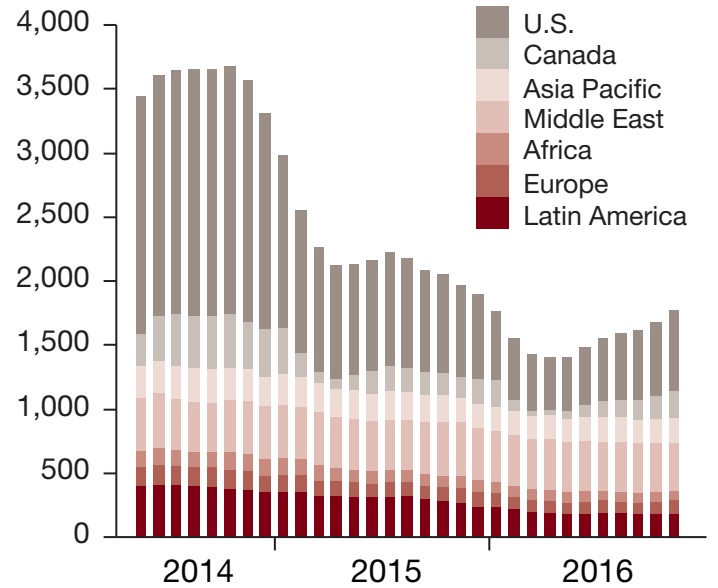
Energy companies are increasing production activity in response to higher oil prices

**Global oil and gas capex**

US\$ billions



**Number of global rigs, June 2014–Dec. 2016**



Source: Barclays 2017 E&P Spending Outlook; Baker Hughes; Strategy& research

This is illustrated by the emergence of exploration specialists like Kosmos Energy and of mature production players like EnQuest in the North Sea. And BP's recent alliance with Kosmos to seek assets in Mauritania and Senegal is a good example of a major IOC leveraging the technical exploration skills of a smaller rival. Moreover, the relationship between oil and gas companies and OFS outfits will continue to evolve in a similar direction. The major OFS companies, such as Schlumberger and Halliburton, already offer integrated field management solutions that oversee and operate assets on behalf of companies, and others, such as Petrofac, manage day-to-day operations. However, although it is critically important, developing new collaboration and partnership models will not be easy for some established companies — particularly for some Middle East NOCs, which tend to prefer full control over their assets.

#### ***4. As business models evolve, portfolios will be reviewed for coherence and resilience***

Portfolio evaluation should strive for more than simply using divestment to generate cash. It should be seen as an opportunity to radically restructure the business based on forecasts of future conditions and to ensure that the projects the company is undertaking match the organization's capabilities. For example, in reassessing their portfolios, some companies may choose to diversify in preparation for a low-carbon environment. France's Total has taken this step by implementing a plan that requires one-fifth of its asset base to be focused on low-carbon technologies and by acquiring a battery manufacturer to spearhead its efforts in electricity storage. Similarly, Dong Energy, originally an oil and gas producer, is shifting its focus to renewable energy, using its legacy fossil fuel businesses to generate cash flow for the development of offshore wind farms.

The need for portfolio evaluation will become increasingly pressing as companies participate in the wave of consolidation we expect to see in the sector over the coming year or more. In the recent past, oil price volatility (specifically, concerns about how low prices might go) has made it difficult for buyers and sellers to come to agreement on oil-field valuations. However, now that prices have recovered somewhat — and there is a growing sense that a price floor in the vicinity of \$50 per barrel has been set — the pace of deal making is picking up. In recent transactions, Total and Statoil completed multibillion-dollar deals for Brazil's sub-salt deepwater oil reserves, while Exxon has bid on Papua New Guinea's InterOil and Noble Energy acquired assets in the U.S. Permian basin from Clayton Williams. Going forward, we expect that companies will increasingly focus on asset deals to build their portfolio in a cost-effective way.

For upstream companies, M&A opportunities represent a critical part of portfolio reevaluation. This approach can be used to divest noncore assets and to recalibrate company strategy and direction to best profit from the wave of change coursing through the industry. In some cases, M&A can be a fulcrum for transforming a company — as was the case with Shell’s \$70 billion deal to buy Britain’s BG Group in 2016, a move that greatly expanded Shell’s position in the natural gas market. Or M&A can be used to bolt on less ambitious but equally promising new capabilities, which was the purpose of several deals over the past few years by Total and Statoil that give these companies a foothold in renewable energy.

### **5. Companies will explore new forms of technology deployment**

Companies will need to examine the role that digital technologies can play in improving their performance. New applications will certainly be developed to support back-office and shared functions, where rewards are modest, but technology adoption will also have to go well beyond these obvious implementations. Digitization should be a lever for innovation that improves productivity and efficiency in the field. For instance, robotics are likely to become more commonplace in the industry, handling complex and repetitive tasks such as connecting pipes and replacing broken machinery, which in turn will reduce labor requirements.

In some cases, technology will be acquired through partnerships. GE has announced an array of agreements with large and small oil companies to implement digital devices, databases, and sensors that could predict equipment breakdowns before they occur and expand exploration and production efficiency in deep sea and offshore oil platforms.

### **6. Innovative approaches to retaining and recruiting talent will be essential for long-term success**

The human cost of restructuring within the oil and gas sector has been enormous. Downsizing, which has been both cyclical and harsh, has deprived the industry of some of its smartest veteran talent while scaring away new recruits. Yet there are still opportunities that oil and gas companies must not pass up.

From a management perspective, now is the time to recruit new talent from pools of highly capable men and women, casting a net in a range of global regions. Younger employees expect somewhat less traditional

*For upstream companies, M&A opportunities represent a critical part of portfolio reevaluation.*

workplaces — they are seeking more collaboration and open communication and less top-down decision making. Oil and gas companies need to engage with these recent graduates because they can provide the new ideas that will make the future easier to navigate. With so much innovation in the sector, it shouldn't be hard to engage younger employees, but companies need a clear and attractive story line to do so.

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# *The industry's future*

We are acutely aware that oil and gas executives have their hands full during this upheaval, and that there may be more pain to come. But the industry has proven over time its ability to innovate and to reinvent itself. Despite a tough two years, the sector has successfully brought costs down in order to operate in an environment of radically lower oil prices. With the right actions, a more flexible and robust sector can emerge, one that is prepared to get the most value out of existing and yet-to-be-discovered fossil fuel reserves while making an orderly transition to a lower-carbon world. In other words, the industry's future lies on the optimistic side of *Cast Away's* mixed message.

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