

Oil & Gas Practice

A winning OFSE agenda for current times

Oil-field-service and -equipment companies are facing unprecedented structural headwinds. The sector must transform itself to regain investor confidence and attract the new talent that it needs.

by Thomas Seitz, Nikhil Ati, Ignacio Fantaguzzi, and Clint Wood



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The oil-field-service and -equipment (OFSE) sector is struggling, with shareholder returns falling well below those of other sectors and revenue and margins under considerable pressure in most markets (Exhibit 1). The days of sustained outsourcing and rapid growth that resulted in the industry booming in the 20 years up to 2014 are over, and the future is clouded with demand and environmental uncertainties. The COVID-19 crisis has made the situation worse, with the OFSE sector hit by both the associated oil-price weakness and deeper cuts to operator capital expenditures, creating an unprecedented crisis for the industry.

Having been at the forefront of industrial and technological innovation, the OFSE sector has what it takes to remerge stronger from the current downturn. In this article, we review the industry context, take a look at the likely future, and discuss how the sector can react and succeed in the next normal.

Industry context and structure

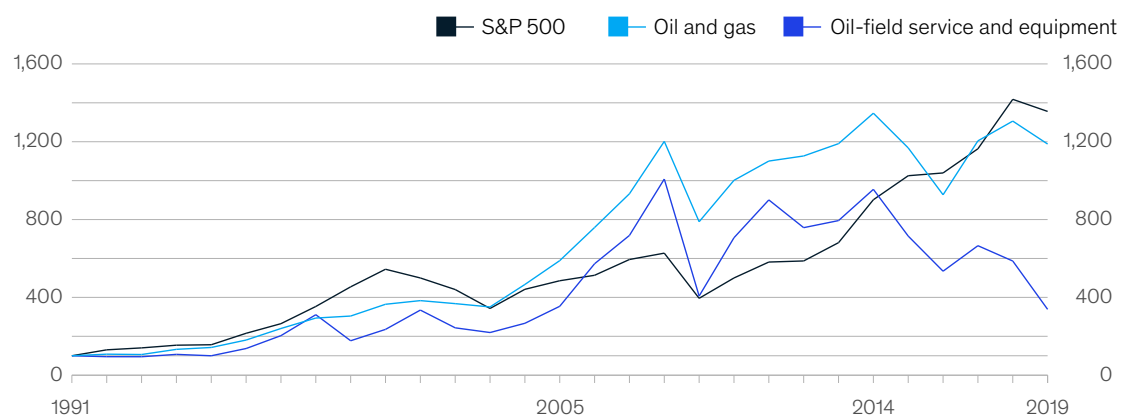
The OFSE sector is a complex constellation of markets and value chains that all operate differently based on the combination of geography, business model, and well life cycle. That has led to the industry growing to encompass more than 40 subsector value chains and more than 100 services delivered by thousands of companies with different business models. Innovation in the sector has generated significant value, but much of it has been ceded to customers or competed away, given recent overcapacity and limited barriers to entry in many areas.

Looking at the sector's history, from 1990 to 2005, total returns to shareholders (TRS) were largely in line with those in other oil and gas sectors and the S&P 500 index. OFSE companies invested in capacity and technology consistent with growing demand forecasts, which also encouraged

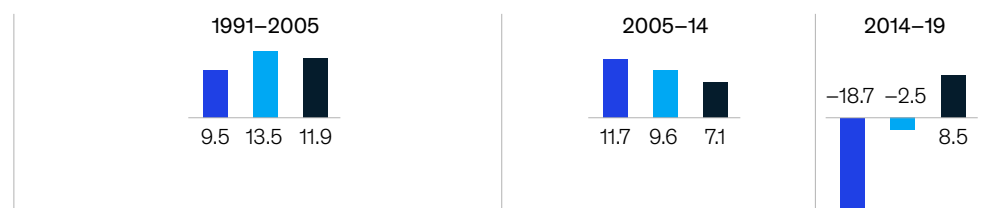
Exhibit 1

Since 2014, total returns to shareholders have fallen more for oil-field service and equipment than for the S&P 500 and oil and gas operators.

Total returns to shareholders by sector, index (100 = Dec 1990)



Total annual returns to shareholders by sector, %



Source: Refinitiv Eikon; S&P Capital IQ

operators to focus on exploration and reserve accretion. There was steady growth, and OFSE companies could command premium pricing based on technology, efficiency, and reputation.

From 2005 to 2014, strong upstream capital-expenditure growth of approximately 12 percent compound annual growth rate led revenue in the oil and gas sector to jump from around \$300 billion to more than \$1 trillion, while market capitalization peaked at around \$380 billion in 2014 (Exhibit 2). That was underpinned by technological innovation and scale economies across deepwater, horizontal, and extended-reach drilling, alongside the more widespread use of unconventional techniques, which unlocked fresh resources at increasingly competitive rates.

The combination of activity growth, good industry structure, and profitable pricing resulted in the OFSE sector's TRS outperforming those of other oil and gas sectors and the S&P 500 by around 12

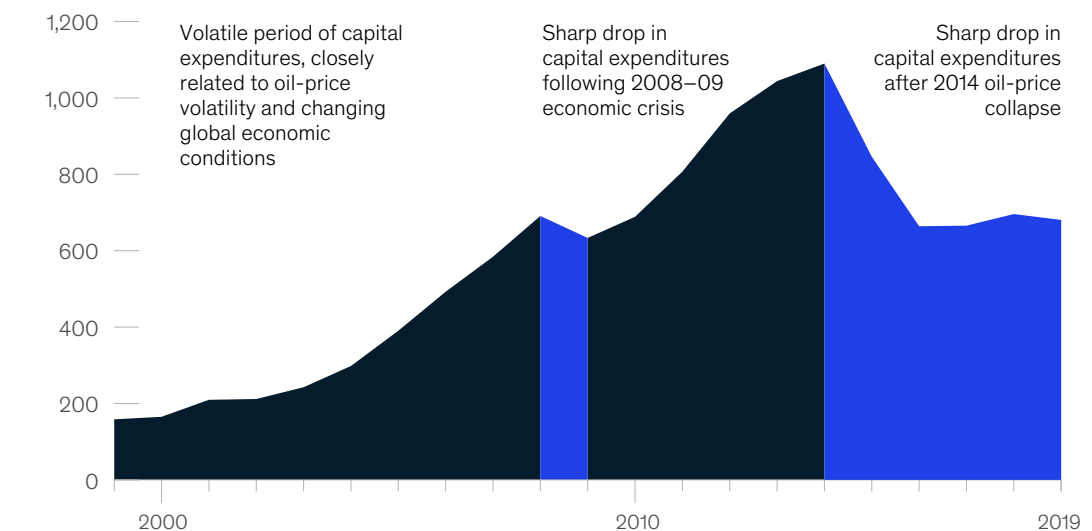
percent. However, toward the end of the period, proliferation of regional players and unconstrained capacity additions by the large OFSE companies destroyed the industry conduct and created several issues that have been playing out ever since.

Following the golden years for the OFSE sector, a slump of around \$450 billion in global capital expenditures in upstream sectors *since 2014* has slashed the sector's revenue and led to significant overcapacity. A sustained drop in oil prices saw operators demand a similar drop in OFSE costs. And operators pivoted from focusing on growth to focusing on cash flow, mostly by switching to short-cycle, unconventional plays. Margins were squeezed, particularly in capital-intensive services, and market capitalization had more than halved, to around \$150 billion, by 2019. The annual TRS from 2014 to 2019 was in negative double digits, compared with growth in the low single digits among operators. A flood of secondhand equipment has made matters worse, but the sector continues to innovate and cut costs.

Exhibit 2

Capital expenditures in upstream oil and gas grew by around 12 percent per annum from 2005 to 2014, leading to overcapacity.

Total capital expenditures by oil and gas majors for upstream segments in 1999–2019, \$ billion



Source: Annual reports

Since the industry began in 1980, it has, in fact, come full cycle. The OFSE sector now faces several structural issues that must be dealt with:

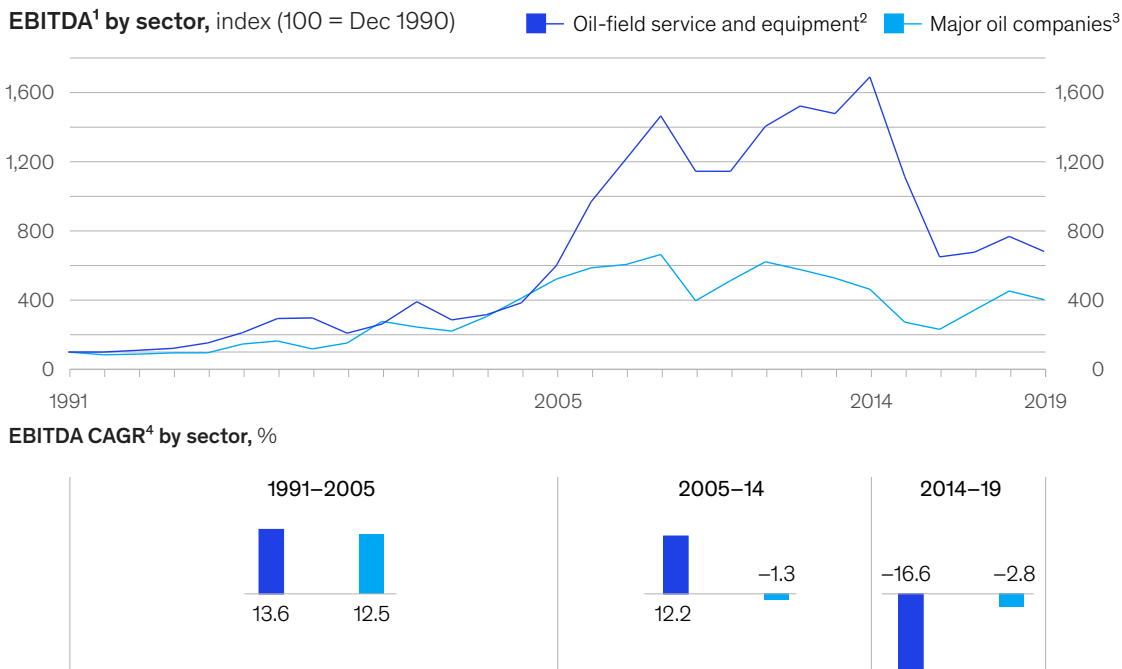
- **Fragmentation and low barriers to entry.** Changing operator behavior, a wide availability of capital, and declining technological differentiation has led to a dramatic increase in the number of OFSE companies, which has increased the level of competition. In some markets, services have become commoditized.
- **Inefficient value-share models between operators and OFSE companies.** Industry commercial models, typically time and material contracts, have proven to be inefficient through up- and downcycles. Exhibit 3 highlights how

OFSE companies typically end up capturing a higher share of the value created (which, in turn, shows up as poor capital return for operators) during boom years, whereas operators tend to fare better (and OFSE companies run out of money) during bust years. Given the cyclical nature of the industry, new commercial-model envelopes become highly critical.

- **Slow pace of response.** Some subsectors have struggled to respond quickly enough to a more challenging business environment, resulting in significant value erosion. For example, after the 2014 price crash, the offshore-drilling sector took almost a year to begin rationalizing its fleet, resulting in a significant burn rate on cold-stacked rigs.

Exhibit 3

In 2005–14, margins were better for oil-field service and equipment than for major operators, but the sector has struggled to create value since then.



Note: Adjusted for different accounting and disclosure policies.

¹Earnings before interest, taxes, depreciation, and amortization.

²Sample includes 10 asset; 7 equipment; 5 engineering, procurement, and construction; 4 integrated; and 2 service companies.

³Combined EBITDA for 6 largest upstream international oil companies.

⁴Compound annual growth rate.

Source: S&P Capital IQ; McKinsey analysis

Overall industry outlook and challenges

As we look to the next decade, there are several trends that are likely to impact the OFSE industry negatively:

— Oil and gas macrotrends:

- **Plateauing oil demand in the 2030s.**

McKinsey's Energy Insights research indicates that oil demand is expected to flatten in the 2030s (Exhibit 4). If the world aligns behind the 1.5- or 2.0-degree warming scenario, peak demand could be reached much sooner. The plateauing demand and seeming oversupply of oil will be likely to keep prices depressed for

the foreseeable future, with further downside potential in an accelerated-transition scenario.

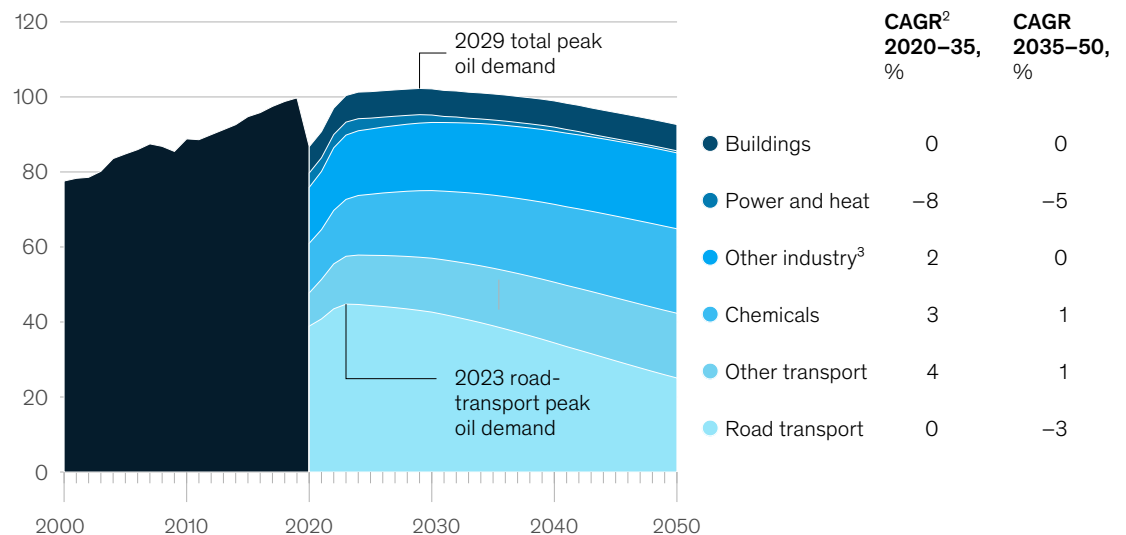
- **Capital deployment away from the sector.**

Poor returns over recent years mean that several leading investors are seeking more attractive opportunities elsewhere. Some key investors (particularly in Europe and the US West Coast) are also giving growing weight to environmental, social, and governance considerations (Exhibit 5). A step change in the OFSE sector's financial performance and an improvement in sustainability criteria are both required to avoid the risk of investors leaving for good (as seen in the coal sector).

Exhibit 4

After a long period of growth, global oil demand is predicted to peak around 2030.

Global oil-demand outlook by sector,¹ million barrels per day



¹Includes biofuels, natural-gas liquids, and oil produced through pyrolysis. Forecasts after COVID-19 crisis based on muted-recovery scenario.

²Compound annual growth rate.

³Includes agriculture, iron, refining, steel, and oil and gas sector use.

Source: Energy Insights by McKinsey

Exhibit 5

There are two distinct ideological camps when evaluating the influence of environmental, social, and governance concerns on investment decisions.



High ESG¹ influence

Nordic countries

"I believe the Nordics are leading the way for ESG, but we're still only 20–30% of where we need to be."
Investment manager, Norway

Europe

"Any fund with >\$750 million in Europe needs an ESG-dedicated team to evaluate deals independently alongside the deal team, otherwise limited partners won't take them seriously."
Private-equity manager, United Kingdom

United States

"The managers that want to work with us will need to care about ESG and begin to report proactively. Results are being asked for, and managers must comply."
Senior managing director, university-endowment-asset allocation, California

¹Environmental, social, and governance.
Source: Expert interviews; McKinsey analysis



Low ESG influence

Middle East

"During my time there, I never saw ESG be considered in making an investment decision."
Associate principle, Abu Dhabi

Asia

"Asia is behind Europe and America as far as ESG. Many financial institutions don't have a framework at all. Europeans may complain about people just checking boxes, but honestly, we're not even to that point."
Investment director, Singapore

United States

"We have no ESG mandate. No formalized process or checklists. What we do care about is sustainability of returns. We take a 20- to 30-year investment horizon and think about all the risks that a project may have."
Private-equity director, Texas

— Continued changes in customer landscape and behavior:

- **Shrinking customer and asset bases.** Weakness in the oil and gas market is putting increased pressure on the cash positions of some independent operators, which is likely to lead to further industry consolidation. Operators are also high-grading their portfolios and selling off their most marginal assets. That will mean fewer customers (with more bargaining power) and more OFSE overcapacity.
- **Extreme margin focus.** With most operators not expecting much improvement in prices, cost cutting will continue to be a priority. That will maintain pressure on OFSE margins and is

expected to intensify further as plateauing oil demand approaches.

- **Shorter decision cycles.** An increased volatility of oil prices has forced operators to shorten planning cycles significantly, shifting from long-cycle megaprojects to short-cycle, manufacturing-type execution. Succeeding in such a volatile market will require OFSE companies to develop a new set of commercial and operational capabilities rooted in fast decision making.
- **Limited price differentiation.** A large number of service options in the market, inflated by low barriers to entry, combined with operators' increasing focus on margins means limited potential for price differentiation related to improved technology and product innovation.

- **Talent refresh.** Attracting talent, particularly from younger generations, has become tougher for the oil and gas industry and the OFSE sector. There has also been a rapid shift in the technical expertise required, away from work in the field to analytics (which requires new expertise). Continuing to attract the best new talent is one of the biggest challenges the sector faces.
- **Regionalization.** A rising importance of local markets has benefited those companies with a local presence. Specialist, high-volume, local, unconventional markets (mainly North America) and local content requirements elsewhere have led to the emergence of new, structurally advantaged, local service companies. In the United States, as much as one-third of cementing, two-thirds of fracking, and one-half of coiled tubing are already in the hands of regional players.
- **Higher OFSE operating costs because of increasingly complex product lines.** A complex set of offerings, involving the spread of investment over a wide range of subsectors, has developed over time in response to customer needs. That has contributed to low returns and led to underutilized assets. The sheer (and growing) range of possible solutions across sectors, from unconventional onshore to deepwater, means that OFSE companies must cut back and simplify the range of products offered to ensure profitability.

We believe that the companies that successfully emerge from the current crisis will not be those that expect a new cycle to return but will be those that prepare for and embrace fundamental change. OFSE companies that hesitate to reinvent themselves risk being marginalized or targeted for acquisition.

Five actions to succeed in the next normal

While the full impact of the described challenges may not yet have fully materialized, OFSE companies need to adapt and prepare by laying the foundation

for a holistic transformation. Although the answers will be different in each sector, a winning recipe will focus on five actions:

- **Identify and focus on competitive advantage.** Where are you best positioned to win? Where can you make money that others cannot?
- **Define the long-term portfolio position and make bold moves.** What would you like your portfolio to look like ten years from now? What do you need to do to make that happen?
- **Align the operating model with goals and become more efficient.** What change is needed to maximize value and achieve efficient service delivery?
- **Change the historical industry dynamic.** How can you prevent future overcapacity and develop a mutually beneficial relationship with your customers?
- **Target markets associated with the energy transition.** How can you capture value in the fast-growing sector of non-fossil-fuel energy?

Each company is likely to have a different approach attuned to their competitive strengths. Some will continue to be core oil and gas players, while others will pivot toward green energy.

Identify and focus on competitive advantage

OFSE companies need to define their sources of competitive advantage and focus on activities that leverage them. To do that effectively, companies should build independent perspectives of their relative strengths through a combination of market-landscape analysis, benchmarking, and interviews with key stakeholders.

Competitive advantage could come from access to highly skilled labor or proprietary information, alongside manufacturing cost base, market access, and brand image. Lessons can be learned from the steel industry, which has already passed through the phase. For example, ArcelorMittal focused on its key advantage of operational excellence by first

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acquiring assets with structural advantage (such as those in insulated markets, allowing backward integration into advantaged raw-material supply) and then cutting costs and improving operations.

Define the long-term portfolio position and make bold moves

The sharp cuts in operator capital expenditures since 2014 have forced OFSE companies to cut capacity and become more streamlined. However, most have left their overall footprints little changed, leaving significant potential for portfolio rationalization. When doing so, OFSE companies should consider taking the following actions:

- **Target specific geographies and assets.** Regional differences are becoming ever more pronounced in technological requirements, local content rules and preferences, and even the purchasing behavior of individual customers. With a shrinking customer base and high-grading of asset portfolio, OFSE companies would be well served to align themselves with the most resilient opportunities. To make the right choices, a clear proprietary market outlook needs to be combined with a sound understanding of capabilities and the competitive environment. Today, it is not enough to have a global strategy: regional or basin-specific strategies are now required.
- **Reduce the portfolio of offerings.** OFSE companies will need to avoid (as much as

possible) commoditized products unless they can deliver them cheaper and faster than the competition. They can consider divesting from low-margin noncore or bespoke products. The focus would be on being distinctive, not a thinly stretched, one-job-stop for all.

- **Explore M&A.** Current market conditions mean that following an inorganic, acquisitive approach, with defined growth targets in mind, will be faster and more efficient than organic growth. A proper estimation of synergies and complementarity of products and services are important. We believe that a bold strategy would work best: using bolt ons is a good way to grow, but OFSE companies should not dismiss industry-shaking opportunities. As Eleanor Roosevelt said, “The future belongs to those who believe in the beauty of their dreams.”
- **Strategically partner with other OFSE companies.** The OFSE sector is complex, with numerous specializations. That creates opportunities for effective alliances to provide enhanced offerings for customers.

For the OFSE sector to avoid overly complex portfolios in the future, strong controls (typically underpinned by strict, independent business-case-review processes) are needed for product additions. Lessons can be learned from the chemical industry, which has had success in driving customer-backed portfolio rationalization.

Align the operating model with goals and become more efficient

To deal with rapid change, organizations must become more agile and responsive. That is best done by using networks of small, cross-functional teams that are organized to deliver efficient go-to-market models in line with operators' decision workflows—instead of by using a consistent structural approach across all service categories.

Such models should enable short-cycle decision making and will need to be supported by dynamic talent models. They have the ability to reconfigure and repurpose quickly in response to external changes, as seen among several regional OFSE companies in North America. To achieve these models, companies can take the following actions:

- ***Convert to agile.*** The most difficult part of an agile transformation is moving away from a traditional functional structure toward one of a network of teams that align to deliver a go-to-market approach consistent with a customer's workflow.
- ***Leverage digital and other technologies.*** Innovative tools can unlock step-change improvement in organizational efficiency by simplifying and digitizing processes and leveraging analytics during decision making.
- ***Invest in business models that incorporate digital capabilities.*** Companies that can effectively introduce digital services and analyze data will gain insights, cut costs, and improve service quality—and thus improve margins. There is significant potential in new business models that include fully online services and e-commerce-based platforms, with logistics as an outsourced function. The OFSE sector is seeing competition from nontraditional technology companies, which potentially stand to capture a disproportionate share of value as the shift toward digital accelerates. That makes it imperative for traditional players to innovate if they want to avoid the risk of being marginalized.
- ***Consider multiskilling.*** Some OFSE areas, especially in service delivery, would benefit greatly from multiskilling (for example, mud logging and measurement-while-drilling operations can be performed by the same people).
- ***Develop incentives to attract top talent.*** Benefits such as flexible schedules and home-based working, which are popular among younger generations and have proven viable during the COVID-19 crisis, can increase OFSE companies' attractiveness for employees. Given good leadership and management structures, remote and flexible working could open roles to a wider demographic, creating potential for new working collaborations (such as project teams made up of part-time students across multiple countries).

Change the historical industry dynamic

Consolidation and collaboration is another option to overcome structural challenges. There are several potential OFSE areas that could benefit from them, particularly as some customer needs converge around standard solutions:

- ***Examine technology programs and build partnerships.*** Despite significant investment by the OFSE sector, recent innovation has generated low returns, with companies ceding most of the gains to their customers. By rethinking technology programs, companies might find ways to boost returns, and there is a clear case for increased partnering with operators to develop new technologies jointly.
- ***Collaborate across the industry.*** There are many collaboration opportunities, including the joint development and implementation of data standards or other benchmarks and the use of shared infrastructure (such as facilities and logistics), that could provide advantages for the OFSE sector.
- ***Develop new commercial models.*** OFSE companies pride themselves on mastering

complex engineering and industry-first solutions, often with little regard to potential profitability. Companies need commercial models that will address that and allow for more through-cycle collaboration and risk–reward consideration.

- **Consider overcapacity.** Overcapacity and commoditization can be eased by OFSE companies getting rid of old and less efficient equipment.
- **Set up credible constraints to overinvestment.** OFSE companies have often been fixated on growth for its own sake (often to meet Wall Street targets), leading to a splurge of investment on innovation and a constant influx of new entrants that undermine returns. Constraints on overinvestment, including niche divestment, should be set up to avoid those issues.

Target markets associated with the energy transition

OFSE companies could develop new services or products for the fast-growing low-carbon-energy sector. To be successful, they may need to develop (or acquire) new capabilities, possibly through partnerships with technology companies or other specialists. Several potential options exist, and several others are likely to emerge:

- **Midstream services.** OFSE companies can expand into midstream services—for example, by converting drill ships for use in floating liquefied natural gas or floating production storage and offloading to move into pipeline-infrastructure services.
- **Downstream infrastructure and services.** Refinery and biorefinery analytics and control systems are potential downstream target areas for OFSE companies.

- **Power services.** OFSE companies can explore power services, such as offshore wind-farm maintenance, for opportunities.

- **Areas supported by the energy transition.** The move to low-carbon energy affects several areas (such as carbon capture, utilization, and storage; green and blue hydrogen; advanced biofuels; energy-efficiency improvement; and electric-vehicle infrastructure) that might also offer potential value for OFSE companies.

Moves into those areas will require robust strategies and detailed business plans. Examples of companies that have already attempted them should be analyzed closely to understand modes of failure and success. OFSE companies will need to be able to expand into new areas while retaining strong organizational focus on existing businesses.

In addition, OFSE companies are likely to face increasing pressure from investors and customers to decarbonize their operations. To oblige, they will need to set up emissions targets and develop credible pathways to achieving them.

Altogether, the challenges that face the OFSE sector are unprecedented and complex. Surviving will not be easy as the oil and gas sector slowly reaches full maturity and the energy transition continues. But for OFSE companies that plan and adapt well, there will be opportunities, including in high-tech areas, lower-cost oil and gas operations (which may rebound in the 2020s), and the support of new, expanding areas, such as offshore wind, hydrogen, and biofuels. Once the COVID-19 pandemic has passed, energy demand and investment will continue to grow. OFSE companies need to be open to capturing the value in that growth—wherever it materializes.

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