

# OFSE quarterly: Continued rise of North American shale amid increasing oil prices

As oil prices rise to levels not seen since 2014—primarily due to geopolitical risk and production cuts—we expect to see further improvements in the OFSE sector and a renewed emphasis on North American shale.

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### Quarterly perspective on oilfield services and equipment (OFSE): Q1 2018

At the time of writing, Brent has risen to \$76 per barrel, while West Texas Intermediate (WTI) is hovering around \$70 per barrel. For Brent, this is the highest level seen since the downturn in 2014 and can be attributed at least in part to an increase in geopolitical risk and Organization of Petroleum Exporting Countries (OPEC) production cuts over the last quarter. In particular, production from Iran—which reached 3.8 million barrels per day in March and has held steady since the second quarter of 2017—is in jeopardy as a result of the recent US sanctions. Also playing a part is Venezuela’s plummeting domestic production—down to 1.49 million barrels per day (the country’s lowest levels since 1988), from 1.65 million barrels per day in the fourth quarter of 2017. OPEC’s and Russia’s subsequent decision to raise production by 1 million barrels per day has done little to ease prices, though that may change if the cuts bring compliance levels back down to the intended levels—in spite of US shale production growth potentially complicating this further. Meanwhile, WTI prices have remained constant, partly as a result of the continuing dominance of North American shale, and of the Permian in particular. Production from North America is slated to continue to grow, potentially widening the differential between WTI and Brent even further. Many of the majors have set their sights on continuing to develop North American shale, including extensive work planned from Chevron and ExxonMobil. The Gulf of Mexico is also a promising area for future production, with a number of substantial discoveries in the Norphlet reservoir.

Overall, we’ve seen muted growth that has kept pace with demand. Looking forward, we expect that global non-OPEC growth in crude and condensate will increase by 1.1 million barrels per day, while US crude and condensate will grow by 1.2 million barrels per day. OPEC has finally decided to increase production to manage oil prices in spite of the

upcoming Saudi Aramco IPO, which may put a wrench in plans as high oil prices would benefit the initial share price. Worldwide, we expect demand to grow by 1.2 million barrels per day, while demand from Organisation for Economic Co-operation and Development (OECD) countries will experience a slight reduction after higher-than-average demand resulting from colder weather this winter.

Though operator capital expenditures are down from the fourth quarter of 2017 as a result of typical seasonality, OFSE market activity is strong. Over the same quarter in 2017, operator capital expenditures are up 25 percent. North American rig counts are also rising, driven by the Permian’s near-unstoppable growth. The outlook for rig activity offshore in North America is more complicated, though recent substantial discoveries in the Gulf of Mexico are undergoing evaluation prior to potential development. A further increase in oil prices should stimulate additional investments outside North America, and services companies are poised to take advantage of that.

Meanwhile, quarterly OFSE revenue is down by 4.1 percent, the first quarter-on-quarter decrease since the third quarter of 2016. Much of that loss is driven by engineering, procurement, and construction (EPC) and integrated services, which have declined by 7.6 and 4.3 percent, respectively. However, all areas except EPC are delivering revenue growth over the same time of the previous year. Returns are back to January 2015 levels for the OFSE sector, though services companies saw extremely favorable performance, with a 24.1 percent margin change over the previous quarter. In earnings calls, integrated companies laid out their strategies for addressing their falling margins.

### Oil-market development

Ongoing instability in the Middle East, coupled with the freefall in Venezuelan production, has contributed to the highest oil prices since December 2014, but the anticipated growth of US shale

threatens to keep prices lower than may be the goal for OPEC.

- At \$76 per barrel, Brent spot prices have risen to levels not seen since December 2014, in part because of tensions in the Middle East and the recent US sanctions against Iran (Exhibit 1). This instability has driven up oil prices, and there is little indication that this trend will reverse course at this time. After prompting OPEC and Russia to jointly agree on boosting production by 1 million barrels per day and ahead of Saudi Aramco's IPO, it seems likely that the Kingdom is hoping for oil prices to climb higher. Saudi Crown Prince Mohammed bin Salman confirmed this, stating that "we believe oil prices will get higher in this year and also get higher in 2019, so we are trying to pick the right time," referring to the IPO. WTI is hovering around \$70 per barrel, also its highest level since December 2014, and the price differential between WTI and Brent has grown to \$5 per barrel. However, our long-term view maintains that oil prices will decline after this temporary spike, reaching \$58 per barrel for Brent and \$51 per barrel for WTI by 2022.
- While overall global supply is stabilizing, much of which is led by OPEC's efforts, the United States has seen continued shale growth, which is likely to continue. The Energy Information Administration (EIA) predicts that US shale production will rise by another 145 thousand barrels per day in June, reaching a record-setting 7.18 million barrels per day. Much of that will come from the Permian, where output will reach 3.28 million barrels per day, nearly half of total US shale production. Multiple exploration and production (E&P) companies have capitalized on this growth over the quarter. ExxonMobil highlighted its shale success in the earnings release for the first quarter of 2018, with "27 operated rigs in the Permian and four operated rigs in the Bakken. Permian and Bakken unconventional production has experienced 18 percent growth year-over-year." Total US crude production has continued to rise, up to 10.3 million barrels per day in the most recent EIA data, and the IEA expects that 2018 US crude production will increase by 1.3 million barrels per day over last year's production figures.
- The US Gulf of Mexico is emerging as a promising location for future production, with several majors focusing their efforts in the area, which is encouraging for OFSE providers. Shell has just reported its sixth oil discovery in the Norphlet reservoir, with 800 feet of net oil pay in the Jurassic Norphlet. Also in the Norphlet reservoir is Total's major Ballymore discovery, which encountered 672 feet of net oil pay, and Chevron's discovery of more than 670 feet of net oil pay in the same area. Chevron has four additional areas of potential interest—Anchor, Ballymore, Tigris, and Whale—which could be subject to further evaluation and potential development. Beyond the Norphlet discoveries, Shell has also discovered the Whale deepwater well, currently under evaluation, and reached FID to develop the Vito deepwater field. Vito is expected to reach an average peak production of 100,000 barrels of oil equivalent per day.
- As noted in OPEC's monthly oil-market report, total OPEC production has held firm at roughly 31.9 million barrels per day since 2016, though fluctuations have happened at the member level. In particular, higher production in Saudi Arabia and Algeria was offset by decreased crude production in Venezuela, Gabon, and Nigeria. Venezuela played a particularly big role in offsetting increased production from other members, as its production has plummeted to 1.49 million barrels per day—its lowest level since 1988, excluding the PDVSA strike of 2002–03—from 1.65 million barrels per day in the fourth quarter of 2017, according to OPEC's most recent figures.



These falling production levels caused production cut compliance to rise above 100%, and OPEC's decision to boost production ahead of its planned meeting in December highlights how the group is trying to manage oil prices and supply. However, the growth of US production to record levels could undermine OPEC's efforts thus far. Further complicating the outlook for OPEC production are the recent US sanctions against Iran, which puts Iran's consistent monthly output of 3.8 million barrels per day in jeopardy.

- Looking forward, we expect that global non-OPEC growth in crude and condensate will increase by 1.1 million barrels per day, while US crude and condensate will grow by 1.2 million barrels per day. Worldwide, we expect demand to grow by 1.2 million barrels per day. The most recent IEA figures reveal that non-OPEC supply is 59.06 million barrels per day—1.36 million barrels per day higher than a year ago.
- According to the IEA, the first quarter saw oil demand reach 98.1 million barrels per day, up from 96.5 million barrels per day in the first quarter of 2017. However, first-quarter oil demand decreased slightly from the fourth quarter of 2017, which saw demand reach 98.5 million barrels per day. In the future, the IEA's forecast for global oil-demand growth for 2018 remains at 1.5 million barrels per day—for a total of 99.3 million barrels per day—with OECD demand expected to encounter reductions after a first-quarter demand spike resulting from unseasonably cold weather throughout the US this past winter. Another factor in future energy demand is the trend toward renewable energy, made more rapid by substantial decreases in cost. As a result, the IEA expects renewable-electricity generation to increase by more than one-third by 2022. We also expect that approximately 20 million barrels per day of oil demand will be displaced by 2050 because of the electrification

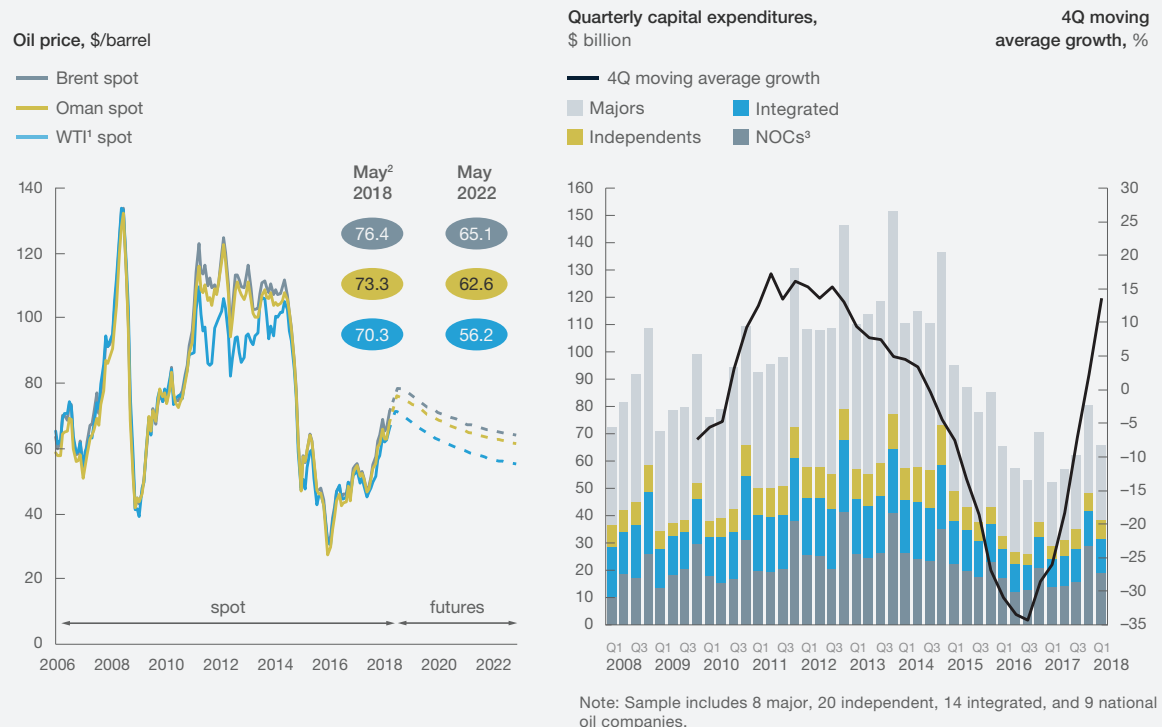
of cars, buses, and trucks in leading regions. We further anticipate that 80 percent of the global net capacity additions of generation between now and 2050 will be renewable-energy sources.

### OFSE market activity

Though first-quarter operator capital expenditures are down over the previous quarter, the increase in oil prices has led OFSE companies to express optimism for activity in the rest of 2018.

- Though operator capital expenditures are down quarter over quarter compared with the fourth quarter of 2017, this is to be expected, as the end of the year sees companies using up their annual budgets and the beginning of the year sees a restrained start to the year's activities. From the fourth quarter of 2017, total operator capital expenditures fell from \$80 billion to \$66 billion, an 18 percent loss. However, when we compare the first quarter of 2018 with the first quarter of 2017, capital expenditures are up by 25 percent (Exhibit 1). The increase in oil prices could further contribute to greater capital expenditures as development gets under way.
- Looking for growth, companies have set their sights on the Middle East, Russia, and North America. In Schlumberger's earnings call, CEO Paal Kibsgaard announced that "with Libya and Nigeria producing at near-full capacity, Venezuelan production in free fall, the potential of new sanctions against Iran, and rising geopolitical risks, the only major sources of short-term supply growth to address global production decline and strong worldwide demand are Saudi Arabia, Kuwait, the UAE, Russia, and the US shale oil industry." Weatherford EVP and CFO Christoph Bausch announced that "we expect Eastern Hemisphere revenue to increase sequentially, driven by seasonal activity increases in the North Sea and Russia, project commencements in Asia, higher

**Exhibit 1** Oil prices continue to rise through the first quarter of 2018, with a usual cyclical fall in capital expenditures.



<sup>1</sup>West Texas Intermediate.  
<sup>2</sup>Average daily price May 1–21, 2018.  
<sup>3</sup>National oil companies.

McKinsey&Company | Source: Bloomberg; S&P Capital IQ; McKinsey analysis

completions, drilling and dock construction activity in Saudi Arabia, increased activity in Iraq and India as we commence work on new contracts and increased product sales in Oman.”

- According to Baker Hughes, the North American onshore-rig count averaged 1,090 in April, compared with an average of 1,104 in the fourth quarter of 2017. The US rig count was 1,011 as of May 4, 2018, up from 909 at the December end of the fourth quarter, while Canada’s rig count was at 82 (down from 134 in the fourth quarter) for the same time period. The Permian remains the most active basin in terms of rigs, with 458 at

the time of writing. The next most active North American basin is the Eagle Ford, with 76 rigs.

- Globally, we are seeing strong rig-count growth in onshore, though the April numbers have slipped by three compared with the December 2017 average (Exhibit 2). The bulk of new onshore rigs have appeared in the United States, but the Middle East has also been a positive story. We have seen some new offshore-rig contracts in APAC; however, the overall offshore-rig count is still well below where it was a year ago, and we are expecting a prolonged period of depressed activity. An area of contention, as far as offshore goes, is offshore Gulf

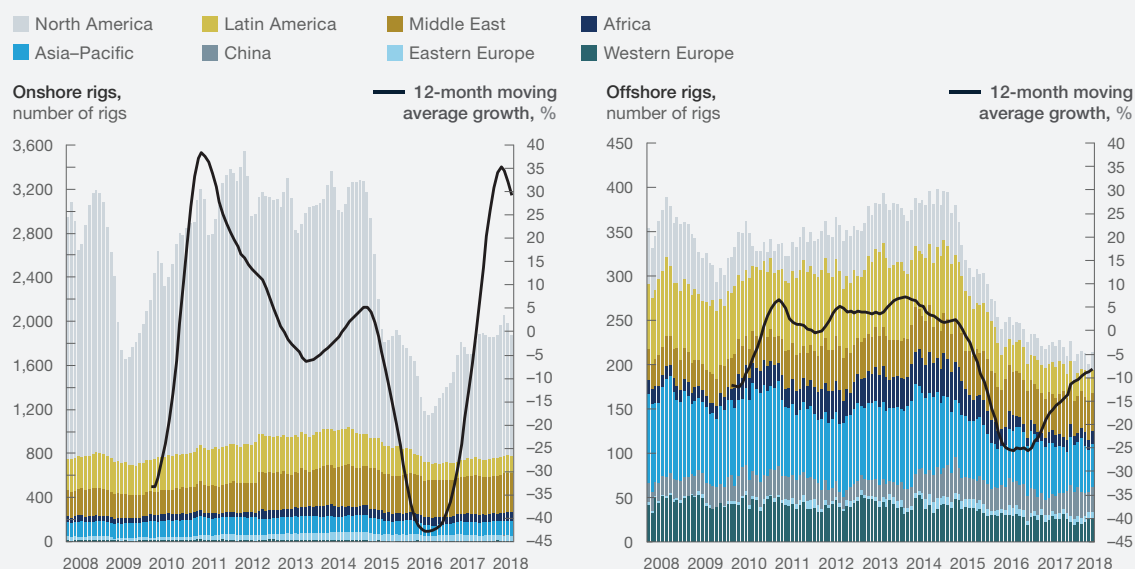
of Mexico rig demand. Transocean CEO Jeremy Thigpen is optimistic, stating in the company's earnings call that "In Mexico, there are a handful of opportunities which could materialize into deepwater drillship contracts before year-end. In fact, we would not be surprised to see some deepwater activity commencing in Mexico later this year and steadily increasing through 2019 and into 2020." However, rig counts for Mexico remain fairly stagnant for now: the number of contracted jack-ups is down to 20, from 22 last quarter, with only two working floaters as of the time of writing. Part of the stagnant growth in the region may result from the upcoming Mexican election in July. Leading candidate Andres Manuel Lopez Obrador has implied that he will review existing licensing contracts and will request that current president Nieto cancel two acreage offerings for the second half of 2018 should he win in July. That is causing E&P companies to hold off on development in the area.

## OFSE market performance

Revenue decline for OFSE companies indicates that the oil-price increase has not yet resulted in improved business.

- Overall, quarterly revenue is down by 4.1 percent for OFSE companies, the first quarter-on-quarter decrease since Q3 2016 (Exhibit 3). Much of that loss is driven by EPC and integrated services, which have declined by 7.6 and 4.3 percent, respectively. The squeeze on day rates has been ongoing (despite higher oil prices), which has contributed to this decline and is cause for concern. Still, all areas except EPC are delivering revenue growth over the same quarter the previous year.
- Overall, returns to shareholders plummeted in the first quarter of 2018, though we began to see signs of a recovery in April. The OFSE sector as a whole has returned to its January 2015

**Exhibit 2** Q1 2018 saw strong rig count onshore



McKinsey&Company | Source: Baker Hughes rig count; McKinsey analysis

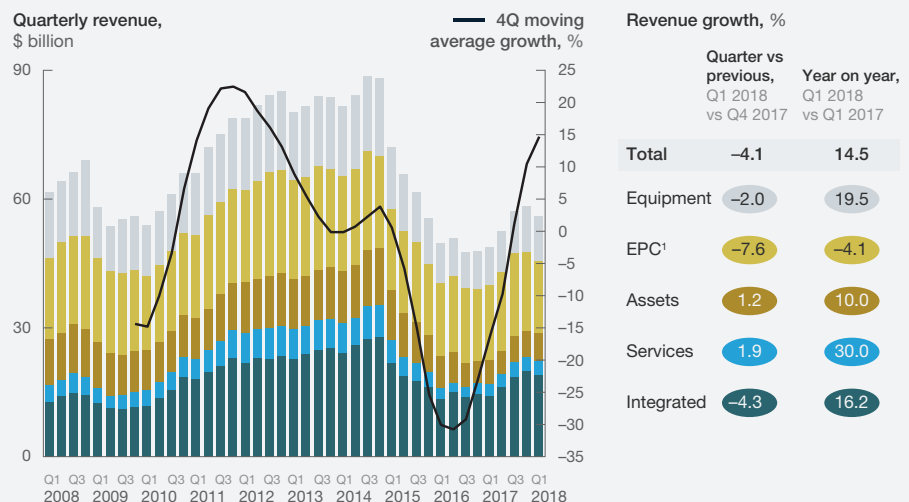
levels in its total returns to shareholders, but services companies are the big winners, with a 24.1 percent margin increase over the previous quarter, and equipment has also delivered growth in margins (Exhibit 4). Assets, EPC, and integrated companies have declined over the previous quarter, and even over the previous year, with assets margins falling 7.3 percent. In earnings calls, integrated companies laid out their paths for increasing margins, with Halliburton citing a three-pronged strategy that targeted pricing, utilization, and technology.

- **Integrated services.** Integrated-services revenue is up 1.9 percent over the previous quarter, and up 30 percent over the same quarter last year. Schlumberger experienced 14 percent growth in revenue over the past year but a 4 percent

decline over the previous quarter. Kibsgaard was optimistic about future growth from North American land, stating “we expect drilling activity in North America land to continue to grow in volume and complexity in the coming quarters as more of our customers move towards longer horizontal laterals.” This seems to be in line with other integrated-services strategies. Halliburton achieved \$5.7 billion in revenue in the first quarter, representing a 34 percent increase compared with the first quarter of 2017, and the company’s CEO credits the robust market for North American shale as the cause, stating that “North America’s shale oil has moved from swing producer to base-load supplier to meet growing global demand. Nothing is more evident of this change than our customers actively redirecting spending from international non-OPEC opportunities towards

**Exhibit 3**

Revenues have seen the first quarter-over-quarter decline since the third quarter of 2016.

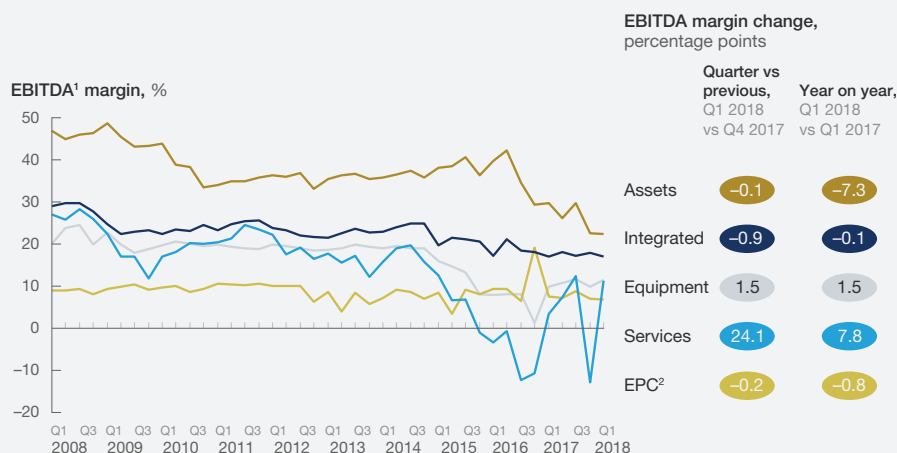


Note: Revenue as announced, adjusted for different accounting/disclosure policies. Sample includes 12 equipment, 10 EPC, 21 assets, 3 integrated, and 7 services companies. Integrated companies include Schlumberger, Halliburton, and Baker Hughes (a GE company); services companies include Weatherford, Superior Energy Services, Key Energy Services, Basic Energy, Calfrac Well Services, Trican Well Service, and C&J Energy Services. Integrated QoQ growth reflects the group's growth excluding the effects of the merger of Baker Hughes and General Electric Oil & Gas. <sup>1</sup>Engineering, procurement, and construction.

McKinsey&Company | Source: S&P Capital IQ; McKinsey analysis

#### Exhibit 4

Assets' margins continue to decline, with other categories showing general fluctuation.



McKinsey&Company | Source: S&P Capital IQ; McKinsey analysis

North America. This shift in capex allocation is largely driven by the shorter cycle return and lower risk profile North America shale provides.” Schlumberger is moving forward with the Eurasia Drilling acquisition, indicating its desire to expand more fully into the Russian market with a total drilling system instead of the purpose-built downhole offerings the company had offered to Russia in the past. Elsewhere, Schlumberger encountered difficulty with its US land-pressure pumping, which was affected by weaker-than-expected activity and softer pricing.

- Services (midsize and smaller companies).** Weatherford’s earnings before interest, taxes, depreciation, and amortization (EBITDA) is back in shape, which has led to a huge spike in the services margin. Its poor fourth-quarter EBITDA resulted from noncash impairments and asset write-downs, with exceptional costs totaling

\$49 million, including a negative effect related to deferred revenue recognition on a project in Kuwait as a result of a delay in timing between recognition of revenue and costs, provisions for bad debt, bonus plans, and exceptional credits that did not repeat from the third quarter. The improved EBITDA resulted from better product margins, which benefited from a favorable sales mix, lower personnel and other support costs, and the timing of revenue and cost recognition related to deliveries in Kuwait. Lower depreciation expenses resulting from asset impairments had also been recorded in the previous quarter. For Nabors Industries, an increase in average day rates in the United States also contributed meaningfully to the margin improvement.

- Equipment.** Equipment revenue is down 2 percent over the previous quarter but up 19.5 percent from the same time last year.



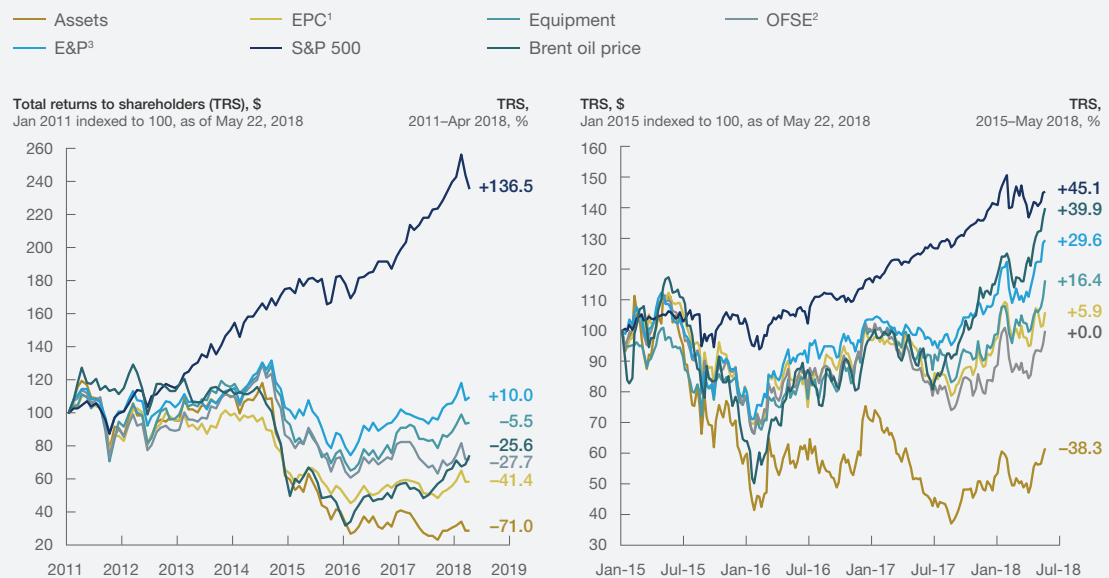
Margins are up 1.5 percent from the previous quarter and 1.5 percent from the first quarter of 2017. From January 2015, total returns to shareholders are up 16.4 percent.

- **Assets.** For assets, total revenue is up 1.2 percent on the quarter and 10 percent on the year, while margins were down 0.1 percent on the quarter and 7.3 percent on the year. However, total returns to shareholders are down 38.3 percent since January 2015, the poorest performance by far of any OFSE sector. Looking forward, Transocean CEO Jeremy Thigpen foresees a return to higher demand for offshore projects. “If oil prices can remain constructive for the next few months, we believe that operator budgets for 2019 could reflect a return to offshore projects sanctioning for 2019 and beyond as the

deepwater space has become a more compelling investment proposition for our customers. In a harsh environment market, opportunities in Norway, the UK, and Canada remain strong. We continue to see day rates strengthening for high-specification assets with customers more frequently seeking to sign multiyear fixtures with base day rates now approaching, if not exceeding, \$300,000 per day.” Helmerich & Payne expressed similar outlooks for rigs and day rates, stating that “Given the tightening market conditions for FlexRigs and the value proposition we provide for customers, we expect increases in average day rates for our rigs in the US land-spot market to accelerate during the next few months.”

- **EPC.** EPC providers are seeing book-to-bill ratios at 6.9:1 in the first quarter, up 0.66

**Exhibit 5** Returns to shareholders crashed in the first quarter of 2018, although April is showing signs of a recovery.



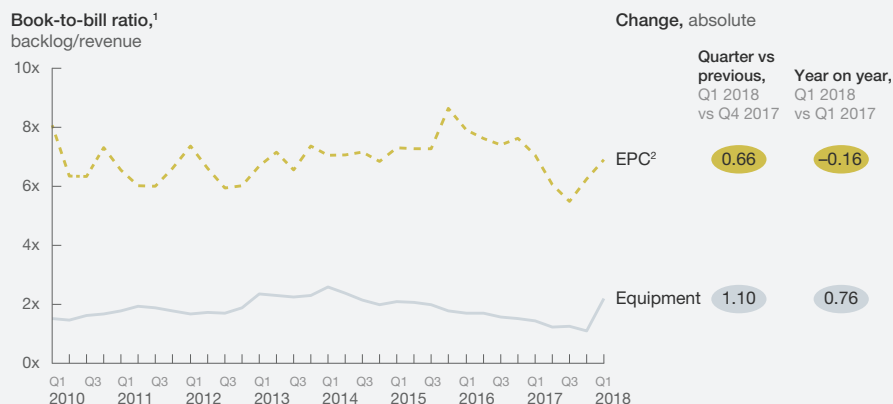
<sup>1</sup>Engineering, procurement, and construction.

<sup>2</sup>Includes asset, EPC, equipment, and services companies.

<sup>3</sup>Exploration and production. Includes majors, NOCs, integrated, and independent companies.

## Exhibit 6

EPC sees strengthening book-to-bill ratios, with equipment following the positive trend in the first quarter of 2018.



<sup>1</sup>Revenue and backlog as announced, adjusted for different accounting/disclosure policies. Sample includes 6 equipment (Aker Solutions, Dover, Dril-Quip, National Oil Varco, Oceaneering, and Oil States International) and 6 EPC (Fluor, KBR, McDermott, Saipem, Subsea 7, and TechnipFMC).

<sup>2</sup>Engineering, procurement, and construction.

McKinsey&Company | Source: S&P Capital IQ; company filings; McKinsey analysis

compared with the fourth quarter and down 0.16 from the same time in 2017. Quarterly revenue is down by 7.6 percent, though it is only down 4.1 percent from the previous year. Margins have fallen by 0.2 percent, down 0.8 percent from the same time the previous year. ■

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