

Nikhil Ati,
Marcel Brinkman,
Ryan Peacock,
and Clint Wood

Oil-field services sector gears up for a recovery ... but is not there yet

Oil & Gas December 2016

Stabilizing oil prices stimulated activity in some areas, which fed through to the OFSE sector, helping support the market. Emerging consensus amongst OPEC countries is likely to position the market for recovery; however, execution remains a challenge.

Quarterly perspective on oil field services and equipment: December 2016

OPEC agrees on reducing production in principle but execution could be challenging

The third quarter of 2016 ended on a positive note in the oil markets with Brent peaking at \$53.76/barrel on October 10 driven by agreement in principle amongst OPEC members over the need to cut supply—reversing the Saudi-led policy of market share expansion that set prices tumbling two years ago. However, widespread concern that details of the agreement would be hard to achieve came to the fore in late October as members debated the level of cuts, sending prices back south. In September's Algiers meeting OPEC agreed to limit production to between 32.5–33 million barrels/day, the latest (October) production number has risen to 33.8+ million barrels/day. The deal agreed to by OPEC members in the meeting at Vienna on November 30 is a positive sign and will lead to near-term recovery in prices. However, we remain cautious about the group's ability to manage overall supply in the market and believe the journey to regaining market control will prove far longer and more challenging than what many expect. Overall, prices fell marginally in Q3, from \$52.34/barrel on July 1 to \$50.75/barrel on September 30, and at the time of writing this article Brent was trading at around \$50/barrel after falling to a low \$44.43/barrel on November 14.

Near-term demand growth continues to remain sluggish with talks about longer-term peak demand discussions emerging

Developments on the demand side include the IEA cutting its global demand outlook to 1.2 million barrels/day this year and next, down from 1.8 million barrels/day in 2015, which is lower than expected given current price levels. The news reflects slowing global growth, rising efficiency, and emerging alternatives. When combined with historically high inventories, we expect this will keep the market oversupplied into 2018 and prices in line with or below our "lower-for-longer" scenario. Looking further ahead, there appears to be a growing consensus that oil demand may peak by 2030–40, as backed up by recent announcements from Shell, OPEC, the IEA, and other industry observers. This outlook is largely dependent on adoption of

electric vehicles (EVs) and battery technology improvements, so there may be some backtracking if unexpected political policies slow such a transition in some countries, but the trend is global and has considerable momentum behind it. In the near term, however, the demand growth is likely to dwindle to around 1 million barrels/day per year, according to most industry watchers.

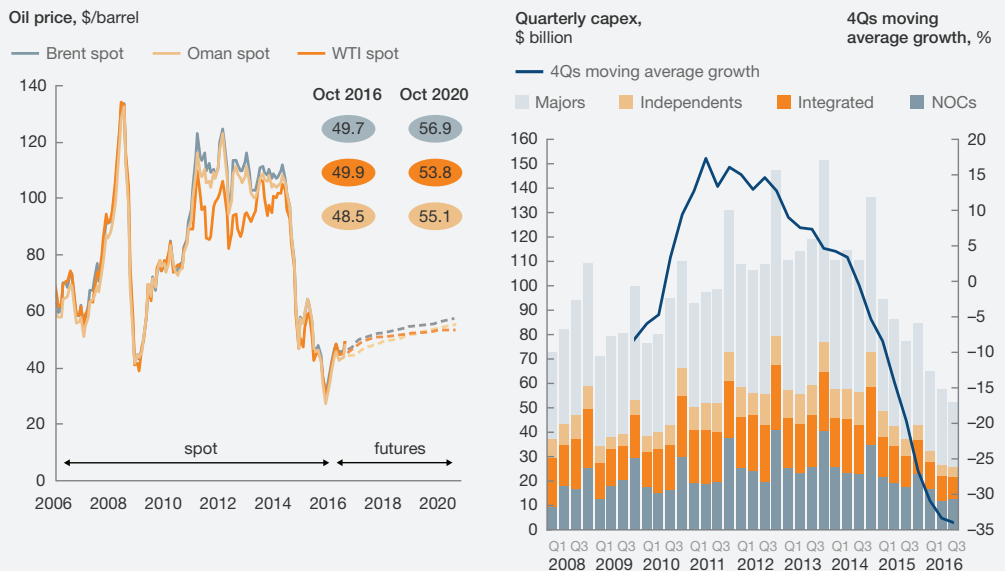
Market activity

EP capex—downward trend eases (Exhibit 1)

Operator capex in Q3 fell again to around \$50 billion—compared to just under \$75 billion in Q3 2015 and about \$105 billion the year before that. This represented a fall on the year of around –35 percent, little changed on the second quarter. Majors and integrated operators were responsible for the bulk of the decrease, while NOCs bucked the trend and managed to increase spending by 12 percent. Some companies took advantage of competitive prices and invested heavily in anticipation of an upturn, with Noble, for example, raising capex from \$69 million last quarter to \$472 million in Q3 with much of it directed toward the US onshore. There is little sign that spending will pick up next year, with oil majors such as BP and ENI indicating they will maintain low capex levels until at least 2018. In addition to low prices, political uncertainty is making it even more difficult for operators to make investment decisions in some key oil producing countries. The corruption probe in Brazil continues to unfold and has pretty much put a stop to Petrobras’ growth plans in the short-term. In Angola, uncertainty around

Exhibit 1

Oil prices have started to stabilize through Q3 2016, while E&P capex has reduced further.



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

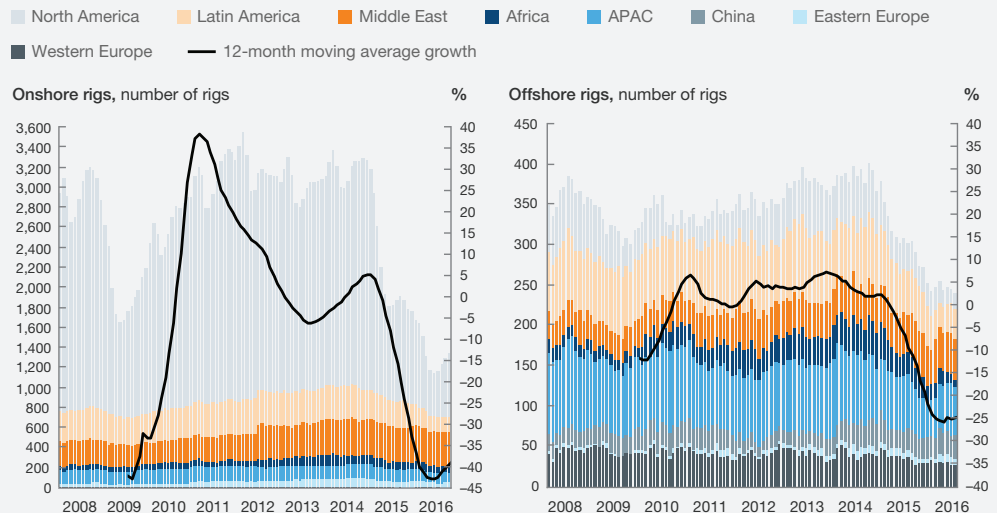
state monopoly Sonangol's plans has become even more evident after its recent Cobalt block sale pull-back, with the market being cautious about the appointment of Isabel Santos—the Angolan president's daughter—as head of Sonangol. Above all, the unexpected outcome of the US elections could yield some far-reaching implications for the market.

Rig count—US onshore market growth continues; little change elsewhere (Exhibit 2)

The North American onshore rig count moved firmly into positive territory, building on the slight second quarter rise, as stabilizing oil prices encouraged some operators to start drilling again. The total number of rigs rose from 458 in June to 521 in July, and on up to 630 in September, according to Baker Hughes' rig count data. Onshore rig count totals elsewhere in the world, however, showed little change. June's total of 717 edged down slightly to 713 in September, with only slight variations on a regional basis. This brought the overall onshore total up to 1,344, from 1,175 in June. Offshore rig counts fell from 244 in June to 240 in September, retracing the rise of just four in the second quarter, with both figures likely to have been influenced by seasonal factors—suggesting there could be worse to come this winter as contracts continue to roll off. Looking further ahead, in our most likely “slow recovery” market scenario (where oil prices will stay low for now and recover to \$65–\$75/boe by 2020), floater rig numbers are projected to remain broadly flat until 2020, while jackups are expected to see only minimal increases over the same period. However, Mark Mey, chief financial officer of Transocean, which owns the largest offshore fleet, insisted that he was expecting rental rates to drop no further as utilization stabilizes in the coming months.

Exhibit 2

Onshore rig counts have risen marginally, while offshore counts have remained stable through Q3.



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

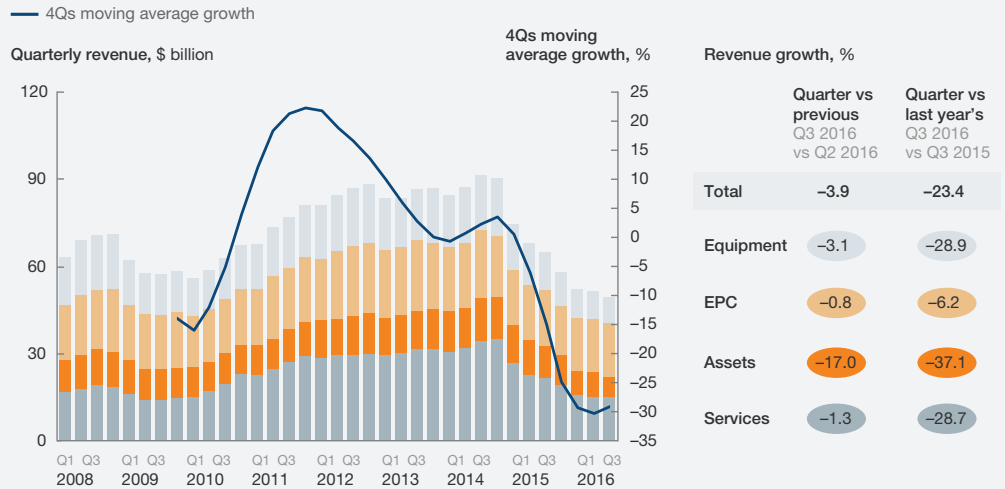
OFSE market performance

Downward trend stabilizes

Overall oil field services and equipment (OFSE) revenue fell 23.4 percent year-on-year, just slightly down on the 25.6 percent rate of decline seen in Q2, with all sectors contributing to the fall (Exhibit 3). Revenues were down 3.9 percent in Q2, little changed on the 4.1 percent decrease seen between Q1 and Q2—which was half the 9.5 percent fall seen the previous quarter—indicating a stabilization of revenue decline. Assets showed the biggest quarterly decline, while services and EPC showed little change. Margins were also under pressure, with all sectors seeing falls versus the previous year (Exhibit 4). Assets fared worst after gaining ground in Q2.

Exhibit 3

OFSE revenues have stabilized through Q3 2016, although sectors perform varyingly.



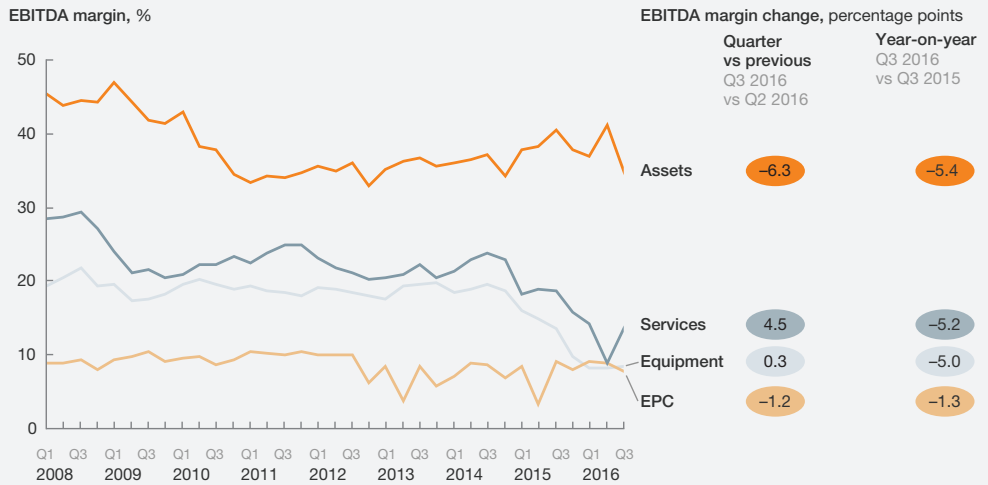
Note: Revenue as announced—adjusted for different accounting/disclosure policy. Sample includes 14 equipment, 10 EPC, 27 assets, and 9 services companies.

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

Services: Services revenue fell 28.7 percent on the year, compared to 31.3 percent in Q2 and 41.1 percent in Q1. On a quarterly basis revenue fell 1.3 percent compared to Q2 2016—which is a slight improvement on the Q2 quarterly decline rate and much lower than the 18 percent contraction seen between Q4 2015 and Q1 2016. This suggests the contraction may have bottomed out, with activity beginning to stabilize around this new level. Falls in margins, on the other hand reversed, with margins rising 4.5 percentage points after a 5.2-percentage-point fall between Q1 and Q2, although this was largely due to a sharp bounce back at Baker Hughes as it cut costs in the wake of its failed merger, with its EBITDA margin rising from -30 percent in Q2 to +13 percent in Q3. This pulled average service margins up to 5.2 percentage points below last year's levels at the end of the quarter, compared to a 3.8-percentage-point annual fall last

Exhibit 4

Margins are showing some stabilization in Q3 2016.



Note: Revenue as announced—adjusted for different accounting/disclosure policy. Sample includes 14 equipment, 10 EPC, 27 assets, and 9 services companies.

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

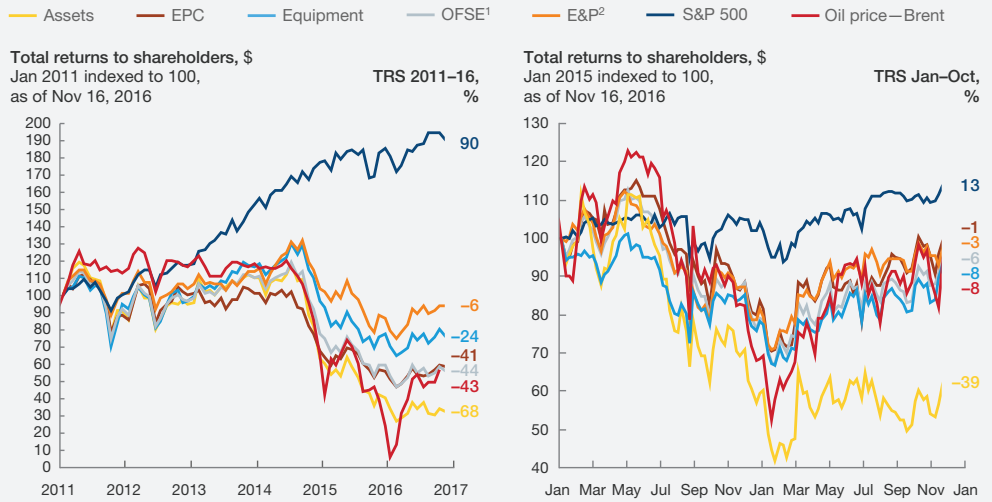
quarter, and relative stability earlier in 2015 when revenue falls were more easily absorbed by rapid cost cuts.

Equipment: Q3 2016 revenue fell by 28.9 percent on the year—a slight improvement over the 33.9 percent drop in Q2. Compared to the previous quarter revenue fell 3.9 percent, after a 5.4 percent fall between Q1 and Q2. Margins were down 5.0 percentage points on the year, but gained 0.3 percentage points compared to Q2, building on a slight rise in Q2, helped by increased summer activity. Margins increased to 8 percent, up from 7.2 percent in the previous quarter—an 8-year low. The increase came despite a falling backlog, clearly indicating that manufacturers cannot sustain operations and cover the cost of capital at current EBITDA margin levels. Furthermore, equipment companies had achieved an average margin of 20 percent between 2008 and 2015, and while part of the margin erosion may remain, manufacturers have indicated they are likely to push prices up and recover some of the lost ground as soon as activity increases. Equipment companies saw a 10 percent fall in shareholder returns since January 2015, outpaced only by assets (Exhibit 5).

Assets: Q3 2016 revenue fell 37.1 percent on the year, an acceleration on the 30.4 percent contraction in Q2, compared to a year earlier, which could reflect a worsening situation as more rigs end contracts and are either rehired at lower rates or lie idle. Revenue declined by 17 percent compared to Q2—up sharply from just 3.4 percent quarterly fall in Q2, and closer to the falls seen in Q1, which was the worst quarter so far and roughly double the quarterly falls in Q3 and Q4 2015. Compared to a year ago, margins fell by 5.4 percentage points compared to Q3 2015, a reversal of the 3.2-percentage-point annual rise in Q2 2016. Compared to Q2, margins fell 6.3 percentage points, reversing the 4.3-percentage-point quarterly rise in Q2, which built on counter-cyclical rises in the first three quarters of 2015. This means asset margins have dropped back below the 40 percent-plus seen in Q2, which was their highest level since 2009, despite the recent abysmal business conditions. On the other hand, returns to shareholders since January 2015 from the asset category remain by far the worst OFSE performer, losing about 43 percent (Exhibit 5).

Exhibit 5

Returns to shareholders have stabilized from Q2 2016.



¹Includes asset, EPC, equipment, and services companies.
²Includes majors, NOCs, integrated, independent.

McKinsey&Company | Source: Capital IQ; EIA

EPC: EPC companies saw revenue stabilizing further with just a slight fall of 0.8 percent compared to Q2, after a quarterly decline of 5.4 percent in Q2 compared to Q1—and an unexpected quarterly rise of 7.7 percent in Q1, helped by diversification. Revenue was just 6.2 percentage points lower than Q3 2015, an improvement on the 11.9-percentage-point Q2 annual fall. Margins performed similarly, losing only 1.2 percentage points on the quarter and 1.3 percentage points compared to Q3 2015. Order backlog ratios have been falling this year, with book-to-bill ratios down from almost nine in Q4 2015 to around six by Q3 this year.

OFSE convergence—how combined capabilities could impact OFSE value chain

M&A: Continued convergence

The announced deal between GE Oil & Gas and Baker Hughes looks to continue the convergence of complementary business models in the OFSE space. If successful, the combination would create a large, listed player, which GE believes could be better placed to compete with rivals like Schlumberger and Technip-FMC. GE proposes owning 62.5 percent of the new company, which will have combined estimated revenue of \$32 billion, while Baker Hughes shareholders will own 37.5 percent. The deal came hot on the heels of Technip's \$14 billion merger with FMC in May, which followed the acquisition of Cameron by Schlumberger. The progressive convergence of business models could have far-reaching implications for independent OFSE companies and operator/supplier relationships, which we explore in more detail below. However, so far actual consolidation activity has been low during this downturn, which is potentially a reflection of structural oversupply in the market.

Rationale behind the deals

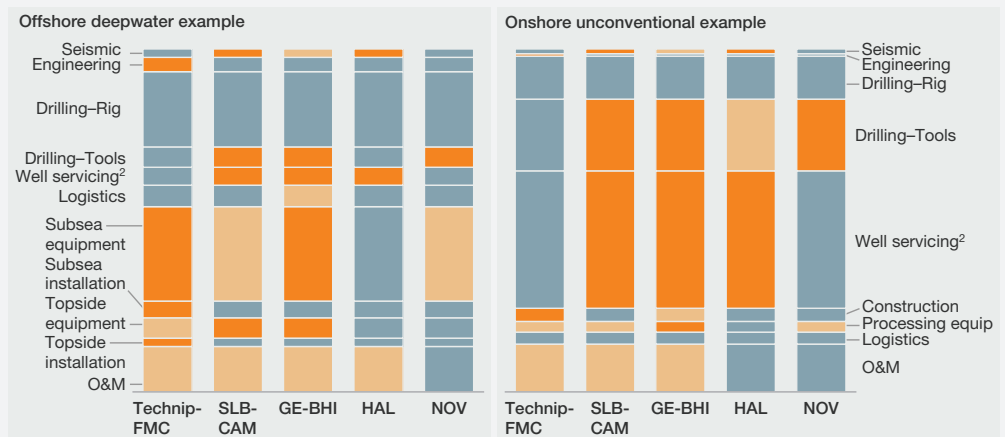
Of the major announced OFSE transactions, three (Schlumberger-Cameron, Technip-FMC, and GE-Baker) are focused on integrating service and equipment portfolios that open doors for new value delivery options in the OFSE space. A high-level review of the combined potential portfolio suggests a differing rationale and value-chain coverage across each of the deals (Exhibit 6).

Exhibit 6

Overview of top service and equipment companies offshore value chain coverage

Addressable project lifecycle cost, % of total capex and opex, example projects¹

Partial presence Full presence



¹Based on total capex and opex spend on Atlantis, Thunder Horse, and Appomattox projects for offshore deepwater, and Permian tight oil for US unconventional.

²Includes field intervention (well stimulation, wireline, artificial lift services, and others) and drilling services.

McKinsey&Company | Source: Company websites; Rystad DCube; McKinsey analysis

- The Schlumberger–Cameron combination is geared toward integrating SLB’s reservoir and well technologies (seismic, drilling and completions, and production) with Cameron’s portfolio of surface, drilling, processing, and flow control technologies, further building upon the rationale of the OneSubsea JV. The combination bets upon the benefits of integrating life-of-field service and equipment offering, and will be an interesting concept to watch particularly in onshore, shallow offshore.
- The Technip–FMC combination aims to provide integrated front-end engineering, equipment, and installation services for operators, betting most importantly on engaging the operators early in the project life cycle (particularly in greenfield deepwater) to influence its relative competitiveness. Early announced results have been promising; however, we believe that for the combination to be effective in all resource/project plays, Technip–FMC will have to provide further clarity into other resource specific offerings (eg, unconventional services).
- The GE–Baker combination creates a portfolio quite similar in nature to the Schlumberger–Cameron tie-up, albeit much smaller. The deal seems to be driven as much by the combination logic as by the implications of post-Halliburton deal fallout for BHI and creating future options for GE.

Implications for operators and the OFSE sector

We analyze the potential implications of the announced deals across four broad operator categories—NOC, mature offshore excluding the US Gulf of Mexico, greenfield deepwater and unconventional (including US shallow water), and the OFSE sector.

- **The NOC segment** has traditionally been inclined toward collaborating with large service companies for access to the latest technology. We don’t anticipate that behavior to change significantly and believe that NOCs will continue to engage with all service companies as before, and thus effectively manage their competitive and technological portfolios.

- **The mature offshore segment** serviced by independent O&G companies has been one of the most cost conscious given the need to maintain competitive margins. This segment has traditionally relied on smaller/local OFSE companies apart from the larger players. None of the announced deals have a clear value proposition for this segment and thus may have limited impact on the current supplier landscape.
- **The deepwater greenfield projects** in today's low-price world are most challenged as they are increasingly being pushed toward the right side of the cost-curve, in spite of some impressive cost reduction initiatives taken by operators. The challenges are compounded due to the inherent risk associated with large-scale capital investments in the current uncertain environment. We believe that this segment will see the most competitive interactions as all three companies target to offer integrated solutions aimed at reducing break-evens through lower cost and higher recovery. While Technip-FMC have the advantage of a few proven concepts and getting in early in the project planning phase, the SLB-CAM combination offers a higher value-chain coverage, especially over the life of field.
- **The unconventional market** may not see significant change in the supplier landscape and operator behavior, unless one of the (announced) combinations offers some unique integrated solutions aimed specifically at further improving efficiency and recovery beyond what the operators are already targeting through the current supply chain.
- **Independent OFSE players** may be forced to adapt to the changing landscape in certain submarkets as described above. In particular, we believe that some independent service/equipment companies may naturally align with the relevant combination (eg, engineering company with SLB-CAM, or drilling service company with Technip-FMC), whereas others may be pushed more toward later life project spend. There also exists a possibility that the offshore drillers—particularly those focused on deepwater development projects—may see further “commoditization” of their relationship with operators.

While these mergers are potentially beneficial for the industry in the long run, each of the concepts still needs to be proven and further strengthened through upgraded resource-specific offerings. □

Nikhil Ati is an associate partner in McKinsey's Houston office, where **Ryan Peacock** is the oilfield services manager of Energy Insights, McKinsey Solutions, and **Clint Wood** is a partner. **Marcel Brinkman** is a partner in the London office.

The authors wish to thank Jeremy Bowden, Francine Fleming, and Dimitar Kostadinov for their contributions to this article.