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# Prosperity postponed

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Some stability returned to the OFSE sector in Q1 2017, with strong US onshore performance offsetting moderate decline elsewhere. However, prosperity has not yet arrived as oil prices went sideways.

## Quarterly perspective on oil field services and equipment: May 2017

The first quarter of 2017 was a major test of OPEC's ability to enforce policy and control the market. It was successful in the former but, even after the latest news of an extension to its November 30 agreement out to April 2018, it has not entirely managed to assert market control. While OPEC has achieved close quota compliance, the resulting price recovery proved an opportunity for US producers to justify a rapid increase in output on the back of improving technology and falling costs. This additional production has already offset half of OPEC's cut, and was reflected in a steady rise in the onshore US rig count—up another 200 on the quarter, and up over 60 percent on the low seen in May last year.

Nevertheless, OPEC and Russia are making an impact on stock levels globally, and pundits are split down the middle over likely market direction—with rising LTO output, technological advances, rising Libyan and Nigerian output, and questions over longer term demand among the bearish factors, and falling stocks, close OPEC/non-OPEC quota adherence, and rising Asian demand striking a more bullish tone. These opposing factors have caused uncertainty and explain the recent volatility. OPEC's latest extension announcement may be enough to balance these opposing factors once again, supporting and stabilizing prices.

Despite the resurgent US onshore, upstream activity and investment elsewhere remained suppressed, with international rig counts down slightly. Weak forward crude price sentiment—reflected in a flat forward curve—has been particularly discouraging for offshore FIDs, which remain thin on the ground, with most spot rig demand coming from brownfield projects. This has meant mixed fortunes for OFSE companies, depending primarily on their exposure to the US onshore.

Overall, OFSE revenue fell slightly on the quarter, but this was largely due to a continuing poor performance from assets, which are most exposed to the depressed offshore, with services and EPC back in positive territory. Margins were up compared to Q4, and even up on the year for services and equipment—apart from assets, which are still suffering as higher-priced

contracts expire. Returns to shareholders moved up with the oil price through Q4, but have fallen back significantly since the beginning of this year.

Looking ahead, surging US onshore investment and production is forecast to continue, even with prices at less than \$50 per barrel. OPEC's latest market intervention extending the cuts into 2018 pushed prices back up above \$50 per barrel—enough to encourage US shale drillers to expand even more. Should shale production gain a hold outside the United States, the game could be over for OPEC—but that hasn't happened yet.

OPEC/Russia's latest intervention should keep prices in the \$50–\$60 per barrel range for a while, although the downside risk does seem to be growing, largely as a result of continued cost reductions in US LTO—which could in turn eventually prompt OPEC to switch on the taps again and have another go at eliminating the competition. Alternatively, OPEC might be tempted to double the cuts, which could send markets the other way. If LTO continues to surprise to the upside, OPEC may have to double the cuts just to keep prices where they are now.

### Oil market development

#### Price volatility returns as rapid growth in US LTO production partly offsets tight OPEC compliance

- The first quarter initially saw very stable prices in a tight range either side of \$55 per barrel for front-month Brent, as traders sat back and assessed the impact of the OPEC/non-OPEC agreement on November 30—which aimed to cut 1.8 million barrels per day from the cartel's output in the first six months of 2017.
- However, since early March prices have become more volatile, with Brent moving in a range a few dollars either side of the \$50 per barrel mark, despite high levels of compliance with OPEC's November agreement—largely because US LTO production has risen even more sharply than it did in the boom times of 2014. This has resulted in repeated US crude stock builds, making it difficult for OPEC restraint to make as much inroad into the high global inventory levels as had been hoped, although stocks have been falling elsewhere—particularly floating storage. The cartel's latest move, with Russia, to extend the existing cuts into next year, should maintain a slow stock draw and stabilize prices.
- Sharp cuts in US shale operators' costs and judicious hedging has allowed them to make money at lower prices, and production is expected to keep rising quickly. Some recently finished wells in the Permian region yielded 70 percent returns at first-quarter prices, according to EOG Resources chief executive officer Bill Thomas. In April, the US Energy Information Administration upped its forecast for 2018 US crude production by almost 2 percent to an average 9.9 million barrels per day, compared to 8.9 million barrels per day in 2016.

- The crude market was also rattled by threats to longer-term demand, specifically linked to transportation policy in developing markets such as China and India, which increasingly appears to be favoring electric vehicles on air-quality grounds. The diesel emissions scandal has also had an impact. However, near-term demand for oil in Asia is growing strongly, especially in countries such as Vietnam and the Philippines.
- Quota adherence to OPEC's November 30 deal has been high, although this is partly undermined by resurgent supply from Libya, as well as the US LTO. While prices slipped back in early May, Saudi Arabia and others claim stocks are now falling steadily. The International Energy Agency's head of oil industry and markets, Neil Atkinson, said in April that if OPEC extends or increases its cuts into the second half of 2017—which it has now done—demand will significantly exceed production—by as much as 2 million barrels per day in July, according to Goldman Sachs.
- Saudi Arabia's energy minister, Khalid al-Falih, was positive on market direction: "I believe the worst is now behind us, with multiple leading indicators showing that supply-demand balances are in deficit and the market is moving towards rebalancing," he said. Indeed, according to commodity heads at banks like Citigroup and Goldman Sachs, the global oil market is now rebalancing rapidly. There has been some evidence of this just recently, with US crude stocks falling by 5.2 million barrels in the second week of May, the biggest reduction this year; others say this had been expected, but the US production increases had not. OPEC's own monthly oil market report said that production from non-members would rise 64 percent faster than previously forecast this year, driven mainly by US shale, making it difficult for OPEC cuts to keep up with production growth.
- Overall, prices fell over the quarter, with Brent down from \$58.70 per barrel on December 31 to \$53.79 per barrel on March 31, while at the time of writing, Brent was trading at around \$52 per barrel. The forward curve steepened slightly on the quarter, but remained relatively flat, with April 2021 at a premium of just \$2.50 per barrel to April 2017. This reflects weak longer-term sentiment, and is a key factor in discouraging operators from moving forward with major offshore projects.

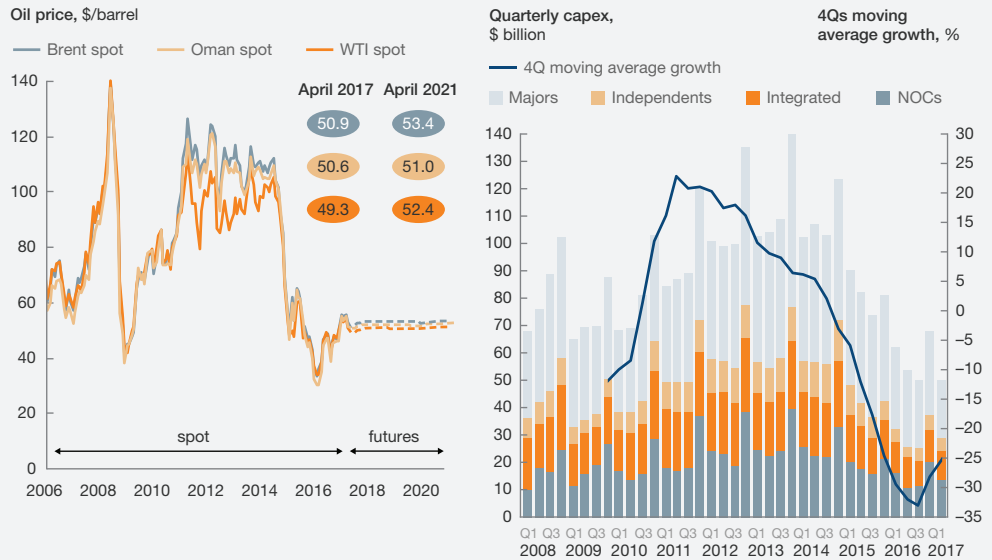
### OFSE Market Activity

#### EP capex—capex slips back on the quarter but remains on upward trajectory (Exhibit 1)

- Operator capex in Q1 2017 fell back versus Q4 in line with the seasonal pattern, and also remained below Q1 2016. Nevertheless, it was above the summer quarters for 2016, and could well show a year-on-year rise next quarter as investors slowly loosen the purse strings in anticipation of more stable prices. The quarter saw capex of \$48 billion, compared to \$65 billion in Q4 and \$60 billion in Q1 2016. This represented a fall on the year of around 19 percent, compared to an annualized fall of 17 percent in Q4 2016 and 32 percent in Q3 2016.

## Exhibit 1

Oil prices stabilized in Q1 2017, while E&P capex saw a seasonal drop.



Note: Sample includes 7 major, 18 independent, 14 integrated, and 7 natural oil companies.

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

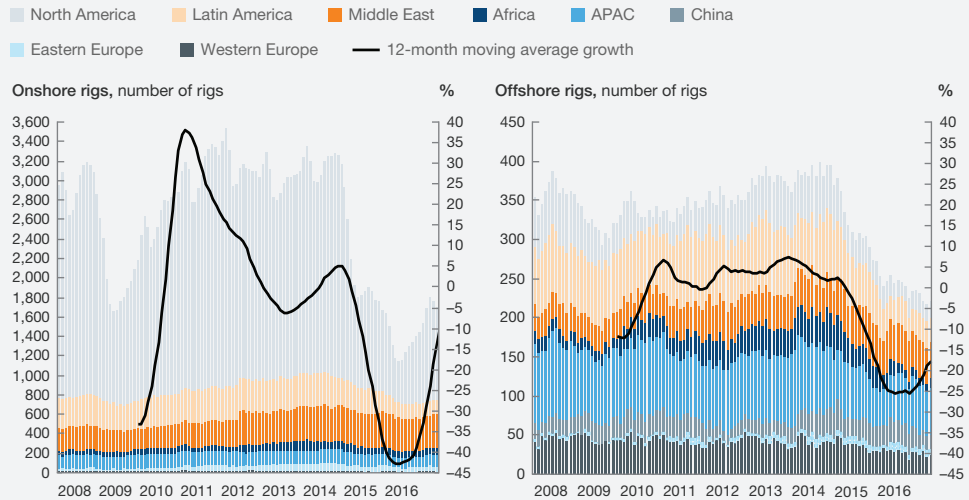
- The bulk of the rise is expected to go to the US onshore sector. North American drillers plan to lift their 2017 outlays by 32 percent to \$84 billion, compared with a rise of just 3 percent for international projects, according to analysts at Barclays. EOG Resources, for example, plans to boost spending by 44 percent this year to between \$3.7 billion and \$4.1 billion. Pioneer is eyeing a 33 percent increase to \$2.8 billion.
- Among the majors, Shell, Chevron, Total, and BP are reducing or holding flat on 2017 spending. Only ExxonMobil is pushing up its budget, planning to spend \$22 billion this year compared to \$19.3 billion last year. Major project FIDs outside the United States were limited to Exxon's Liza offshore Guyana, and Total's go-ahead for a \$500 million investment in Argentine shale gas—its first major new project since 2014. However, even outside the United States, capital spending is expected to rise as 2017 progresses—provided prices don't fall back.

### Rig count—US onshore market growth continues; offshore stable (Exhibit 2)

- The North American onshore rig count continued to track higher, according to Baker Hughes, with the price stability around \$55 per barrel from December to March encouraging operators to start drilling again. Active rigs rose to 1,066 in February, before settling back slightly to 1,022 in March—up from 818 in December and well over double the low of 423 seen in May. However, apart from in Asia-Pacific—where onshore rig numbers rose from 105 in December to 122 in March—numbers throughout the rest of the world showed little change despite higher crude. Overall, the strong US performance pushed the global onshore rig total up over the quarter, with December's total of 1,537 rising to 1,768 in March—up from a low of 1,150 in May 2016.
- The majority of US onshore activity continued to be focused in the Permian, with a rise of 78 to 342 in the rig count there between December and the end of April. However, the growth in oil-focused rigs is now expanding to other provinces, with a jump in the Cana Woodford

## Exhibit 2

Onshore rig counts continue to show recovery, while offshore counts have started to stabilize.



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

from 36 to 55, and from 40 to 76 in the Eagle Ford. Gas rig numbers have also been rising, although at a slower pace, with the Haynesville, for example, seeing active rigs rise from 27 to 38. The outlook for this year remains strong, despite recent price volatility, with many US LTO producers having cut costs sufficiently to be profitable drilling at well below \$50 per barrel oil.

- The offshore rig market, however, saw a modest slide in numbers as major projects, initiated when prices were high, reached completion, while new projects remain limited and on tight budgets. The global total fell from 235 in December to 221 in April. The falls were across the board, including in North America, which had seen a slight rise in Q4. The longer contract lead times for offshore work means there is a more delayed response to improving market conditions than in the US onshore.

### OFSE market performance

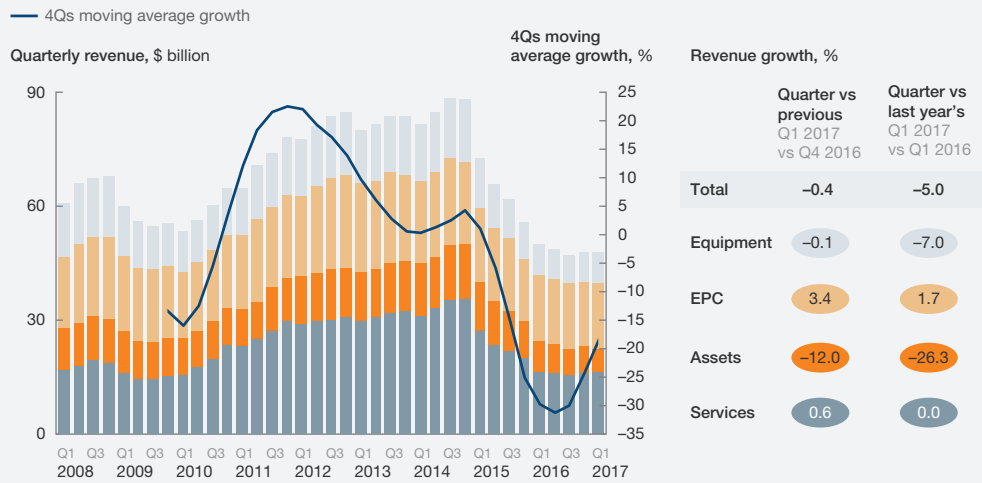
#### Stabilizing revenue signals end to market contraction

Overall OFSE revenue was steady, edging down just 0.4 percentage points compared to the previous quarter, after growth of just 0.3 percentage points last quarter—which followed two straight years of sharp declines (Exhibit 3). Further evidence of a stabilization came from the year-on-year revenue decline, which eased to just 5.0 percentage points, compared to 15.7 percentage points last quarter. However, after a sharp bounce following the OPEC deal, returns to shareholders across OFSE have declined again, with assets faring particularly badly.

Margins were mixed (Exhibit 4). Assets are now clearly faring worst, largely down to strong exposure to the offshore sector and depressed rig market. Companies exposed to the US onshore market are best placed, including some service companies, along with a number of equipment providers. EPC margins were up slightly and equipment margins bounced back after particularly poor results from NOV in Q4, helped by exposure to US shale. The upturn in US activity may be starting to reverse the margin squeeze for some, according to a recent survey for the Federal Reserve Bank of Dallas. It found that 75 percent of drilling companies

### Exhibit 3

OFSE revenues remained stable through Q1 2017, although the asset segment declined.

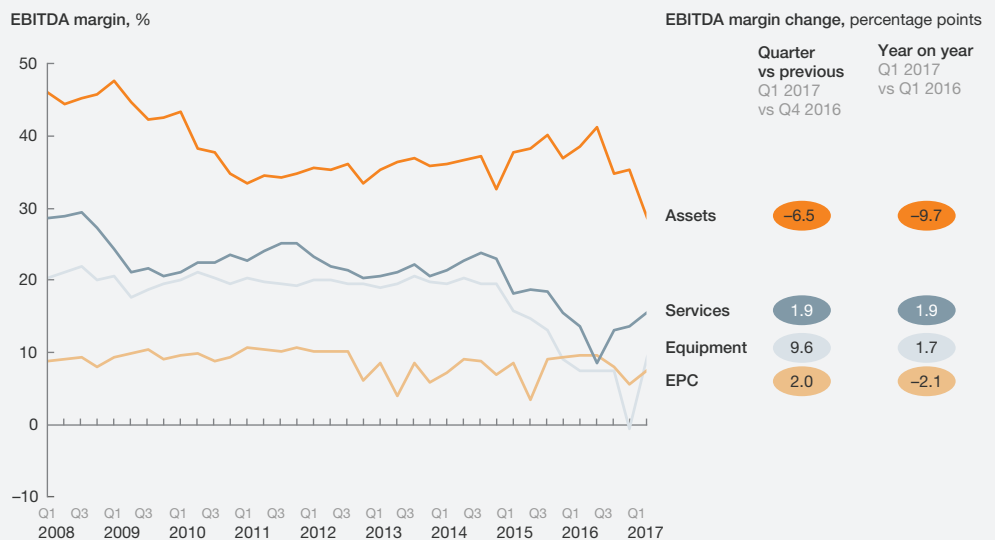


Note: Revenue as announced—adjusted for different accounting/disclosure policy. Sample includes 12 equipment, 10 EPC, 25 assets, and 9 services companies.

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

### Exhibit 4

Assets margin continued to decline through Q1 2017, while services started to recover.



Note: Revenue as announced—adjusted for different accounting/disclosure policy. Sample includes 12 equipment, 10 EPC, 25 assets, and 9 services companies.

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

and 62 percent of well completion groups expected prices for their services to rise this year, by an average of 8–9 percent. Offshore, however, margins remain under downward pressure.

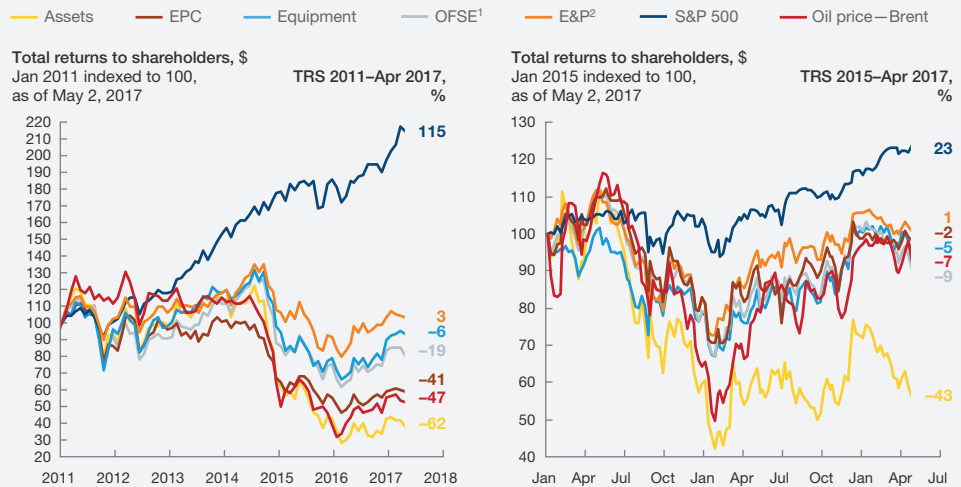
**Services:** Service revenues were almost unchanged compared to Q4 and also unchanged on the year, after a 17.7-percentage-point fall in Q4, indicating the sector has now bottomed out. Capex spend in the pipeline from operators should boost revenue further as the year progresses. The flatter trajectory came after a quarterly rise of 3.0 percentage points for Q4, the first rise in eight quarters, which marked the end of the market contraction. Margins were

up 1.9 percentage points on the quarter—helped by a bounce-back in profitability in the wake of merger activity—after a 0.8-percentage-point dip in Q4; and are also up 1.9 percentage points compared to Q1 2016—the first annualized rise since Q1 2015. However, the slight rise disguises a mixed picture for individual companies, with fortunes largely dependent on exposure to the US onshore. “We are in the midst of a unique and challenging cycle with very different dynamics between the North American and international markets,” said Jeff Miller, Halliburton’s president. Even with strong US exposure, shares in Halliburton and Schlumberger have both clocked up double-digit declines so far this year, in line with the sector, on concerns that the costs of capacity expansion could keep margins under pressure, even as revenue expands. Paal Kibsgaard, Schlumberger chief executive, referred to “headwinds around one-time reactivation cost in the coming quarters.”

**Equipment:** Greater US onshore activity saw revenue for equipment flat on the quarter, after a slight rise in Q4, but the yearly change was just –7.0 percentage points—a dramatic improvement on –17.5 percentage points in the fourth quarter, signaling a sharp slowdown in market contraction. There was a slight improvement in the book-to-bill ratio, and margins rebounded by 9.6 percentage points, after a slight 2.1-percentage-point decline last quarter, and were up 1.7 percentage points on the year before—quite a showing, but largely down to very poor results in Q4 from NOV. Margins now stand at about 10 percent, up from around zero last quarter. The return of hiring in the US onshore, and reactivation of equipment mothballed

### Exhibit 5

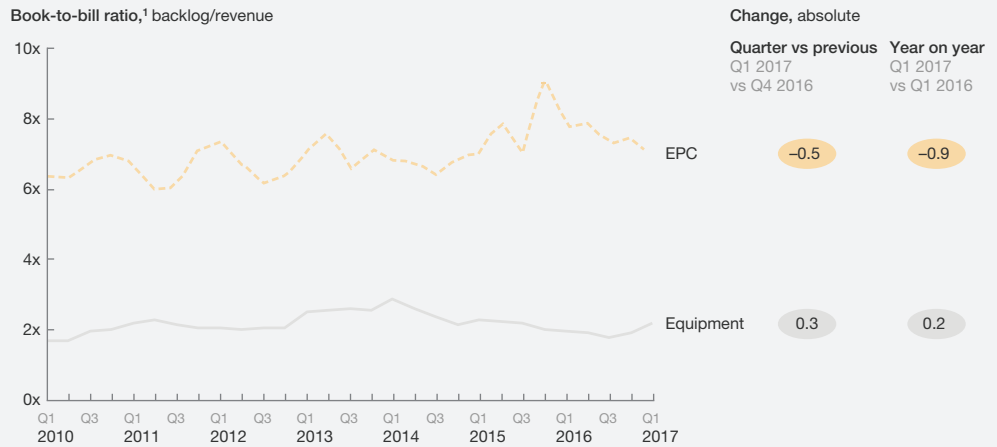
Returns to shareholders saw a correction in Q1.



<sup>1</sup>Includes assets, EPC, equipment, and services companies.  
<sup>2</sup>Includes majors, NOCs, integrated, and independent.

## Exhibit 6

Book-to-bill ratios indicate a downward trend for EPC and a small recovery for equipment.



<sup>1</sup>Revenue and backlog as announced—adjusted for different accounting/disclosure policy. Sample for Q1 2017 includes 6 equipment (NOV, Aker Solutions, Oceaneering, Dover, Drill-quip, Oil States) and 7 EPC (Subsea 7, TechnipFMC, Saipem, McDermott, KBR, Fluor Corporation, JGC) companies.

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

during the downturn, is beginning to put upward pressure on costs there, which could cap margin gains after this quarter. To cover any cost rises and achieve the average 2008–15 margin of about 19 percent, prices will have to rise substantially. As with other categories, returns to shareholders from equipment companies fell back through the quarter, after recovering to January 1, 2015, levels at the beginning of the year (Exhibit 5).

**Assets:** Of all the categories, assets is still most mired in the downturn, with the greatest exposure to offshore, where lucrative contracts awarded during the era of \$100 per barrel oil are continuing to expire, while the scarce amount of new work available is coming with much tougher terms and conditions. This resulted in a 26.3-percentage-point revenue fall on the year in Q1—not much of an improvement on the 27.2-percentage-point decline in Q4 and 35.5 percentage points in Q3 2016. And on a quarterly basis it fell another 12.0 percentage points after a 2.2-percentage-point rise in Q4 2016 (boosted by particularly strong results from BW Offshore). The stock markets are certainly not pricing in a positive outlook (Exhibit 5). The asset sector has fared by far the worst, losing 47 percent since January 1, 2015, with 14 percent of that since January 1 this year. Asset margins were down 6.5 percentage points on the quarter and down almost 10 percentage points compared to Q1 2016, which has brought them to historic lows at around 25 percent—which is still the highest of all categories, largely due to the capital intensity of the business.

**EPC:** EPC companies saw quarterly revenue rise of 3.4 percentage points, after a 3.1-percentage-point fall in Q4, making it the best performing sector of the quarter. EPC revenue now stands up 1.7 percentage points on the year, showing a steady improvement over recent quarters. Margins are up on the year, after steadying in Q4, but were still down slightly compared to Q1 2016. Order backlog ratios are down again, but only slightly, to levels just below where they were before the downturn in 2014 at a little under 7x (Exhibit 6). □



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