The Norwegian oilfield services analysis 2018
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Introduction

Welcome to the 2018 edition of EY’s annual review of the Norwegian oilfield service (OFS) industry. In this report, we quantify the size and development of the industry and analyze the dynamics across the value chain.

EY teams have been conducting the Norwegian OFS analysis every year since 2006, and the report is developed and expanded each year in line with the development of this large and diversified industry. EY annual reports covering the UK- and the Dutch-based OFS industries are also issued.

In the 2018 edition, the OFS company database has been updated to reflect the addition of new legal entities to the empirical data set as well as removal of those entities no longer predominantly serving the oil and gas (O&G) industry. EY’s database now holds a total number of Norwegian-registered OFS companies in excess of 1,200.

We hope you find this report informative and useful and we welcome any feedback you may have.
Executive summary

The fall in revenues has somewhat flattened out
The 2014–15 downturn in the Norwegian OFS industry continued through 2017, but with diminishing strength. The strong growth in revenues in the period 2011–14 when oil prices averaged well above US$100 per barrel has been reversed, and current aggregate revenues are now back to 2007 levels. Last year, we observed how the impact of the plunge in the oil price had a somewhat lagged effect on some of the OFS segments. We believe now that the companies’ books for 2017 reflect a more or less legacy-free backlog of projects and that the full impact from the market downturn is reflected in the figures.

2017 has been yet another challenging year for all parts in the entire OFS value chain. However, the sharp decrease in revenues from 2015 and 2016 have somewhat flattened out in 2017, as revenues fell by 12.9% compared with 26.5% in the last year. Companies in all of the OFS segments have proved to be adaptable to the new market conditions, as efficiency gains have somewhat mitigated the impact from lower revenues on profit margins. The aggregate OFS EBITDA margin decreased by 0.8ppt to 7.0% in 2017, whereas revenues fell by 13.3%. We note, however, that the EBITDA margin has been driven down by cost inflation and hence declined for several consecutive years.

The decline has impacted all OFS segments
The prolonged weak market conditions have resulted in repercussions in all OFS segments. Percentage-wise, the exploration and production (E&P) drilling segment is again the most challenged segment, as revenues fell 18.3% in 2017. This is primarily driven by the oversupply of capacity and hence lower day rates that are still driven by lower oil price estimates. The largest segment in terms of revenue – engineering, fabrication and installation – experienced a 10.9% decrease in revenues, driven by less order intake and lower-paying contracts. The third heavyweight, operations, experienced a drop in revenues of 12.4%.

Assets are now reasonably valued and more aligned with the current market conditions
The consequences of the prolonged low oil price continue to force impairments upon the OFS industry, which are especially noticeable in the asset-heavy segments. Combined impairments for all segments peaked at NOK23b and NOK22b in 2015 and 2016, respectively. Presumably, the NOK45b write-down of assets in the last two years has been sufficient for now, as impairments were reduced to NOK8b in 2017. Impairments are down to 2014 levels, suggesting that 2018 levels will be lower still.

The more reasonable asset values have given rise to a recovery in the aggregated EBIT margin. In 2017, the aggregate OFS EBIT margin ended a long-lasting downward trend and increased by 2.5ppt to -3.5%.
The OFS industry is highly diverse in terms of revenues and number of employees. However, we note that the trend of convergence toward smaller companies observed last year has changed. In 2017, the relative share of large companies increased slightly. Large companies generally provide a wide range of services across the value chain, and many of these are global players. Small companies tend to be more specialized and focus on a narrower part of the value chain and specific technologies.

Aggregate profit margins have been on a downward slope for several consecutive years, driven by a cost inflation that has arisen alongside the significant growth in revenues up until 2014. In 2017, the large companies managed to turn this trend and improve the EBITDA margin by 0.1ppt. This has, however, not been sufficient to turn the overall EBITDA margin that decreased 0.8ppt in the period. The EBITDA volatilities over time for each company size segment are indicative of the typical risk profiles. Smaller companies often have few and relatively larger accounts contributing to their earnings, as well as a limited coverage of medium- to long-term contracts. They are also often exposed by concentration geographically, either within their home market or toward specific export regions. As companies gain size, they are better positioned to allocate resources across a wider range of clients, OFS segments and geographical areas, and even toward markets outside the oil and gas industry.

Cost programs starting to pay off

The cost inflation we observed up until 2014 has challenged OFS companies’ ability to generate profits now that older and lucrative contracts have been swapped with lower paying through work. Consequently, industry operators have initiated several cost-saving programs in order to align with the E&P companies’ lower-for-longer regimes. These have been complex processes for adjusting assets, manufacturing and human resources capacities. As a result of large restructuring programs, we have observed a net job reduction of more than 35,000 employees. This is equivalent to a 27% reduction of jobs from the peak in 2014.

The overall cost levels have come down significantly in the last two years, and new development projects have regained competitiveness in the capital allocation battle. Recent efficiency gains are likely to be sustainable, but could potentially challenge the classical supply and demand analysis for offshore services. With more efficient assets and processes, these efficiency gains may offset some of the expected increase in the demand for offshore services.
After moderate growth in 2018, capex on the Norwegian Continental Shelf (NCS) is expected to increase in 2019, driven by high activity in field development. The outlook from 2020 and onward is more uncertain, and Norwegian Petroleum Directorate (NPD) forecasts a moderate decline in overall spending levels. We note that even with solid growth in 2019, the level of investments are expected to remain significantly below pre-crisis levels for the foreseeable future. Going into the 2020s, new discoveries (or substantially higher oil prices) are needed to maintain positive growth in NCS capex.

We estimate that the overall OFS revenues increased by 3% in 2018 compared with 2017, getting aggregate OFS revenues above NOK300b again. We see growth increasing to 8% in 2019, before stabilizing at a more normal level of 3% going forward. Segments exposed to NCS capex, e.g., yards and rig companies, are expected to see double-digit growth. To some extent, this is because revenues have fallen to such low levels that an increase is needed to get back to normal levels. Maintenance and modification (M&M) companies are also expected to benefit from the return to normalized maintenance schedules after several E&P companies delayed maintenance during the downturn.

The profitability of the OFS industry has declined during the past downturn, but we expect some improvement going forward. Still, several segments experience overcapacity, putting downward pressure on margins. In particular, “asset-heavy” segments such as rigs and offshore vessels are still struggling with low day rates – a situation we expect to remain for most of our forecast period.
The downturn in the Norwegian OFS industry continued in 2017 and all regions have seen their revenues decline from 2016 to 2017.
The downturn still prevails in all regions, but with diminishing strength

Regions and clusters
The Norwegian OFS industry is present in every region in Norway, with the southern part of the country accounting for the most activities and the largest share of companies and employees. However, as the geographic analysis is based on headquarter location only, the activities in Northern Norway, via subsidiaries and branches, is likely to be underestimated.

The downturn in the Norwegian OFS industry continued in 2017 and all regions have seen their revenues decline from 2016 to 2017. However, the decline in revenues has somewhat flattened out as all regions reduced the year-over-year decline in both absolute and relative terms. Rogaland and Eastern Norway, the two largest OFS regions in Norway, experienced a decline in revenues of NOK14.6b and NOK14.0b compared with NOK34.6b and NOK19.9b of last year, respectively. Eastern Norway experienced a reduction of 11 legal entities from 2016 to 2017, whereas Rogaland remained unchanged with 461 legal entities.

All regions, except for Eastern Norway and BTV, saw their net profit improve compared with last year. Still, all regions recorded a negative net profit. We believe the improvements to be a result of a more or less legacy-free backlog of projects that significantly impacted the 2016 figures in negative manner.

All regions recorded a net reduction in the number of OFS employees in 2017, except for Hordaland and Trøndelag, who recorded a net increase of 125 and 7 employees, respectively. In total, the workforce within the Norwegian OFS industry experienced a reduction of 4,203 employees in 2017. About 84% of the job cuts occurred in Agder, BTV and Eastern Norway.

In terms of petroleum production, the North Sea remains the major oil and gas producing sector, followed by the Norwegian Sea. The Barents Sea, located around the Arctic Circle, contains the Snøhvit and Goliat as production fields, and the upcoming Johan Castberg field. Operational support for the fields connected to these regions will be a key activity driver for years to come.

<table>
<thead>
<tr>
<th>Regions</th>
<th>Number of legal entities</th>
<th>Employees (No. 1,000)</th>
<th>Revenue (NOKb)</th>
<th>CAGR 2013-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agder</td>
<td>65</td>
<td>5 631</td>
<td>17</td>
<td>-25.5 %</td>
</tr>
<tr>
<td>BTV *</td>
<td>74</td>
<td>8 607</td>
<td>21</td>
<td>-9.7 %</td>
</tr>
<tr>
<td>Eastern Norway</td>
<td>168</td>
<td>18 104</td>
<td>64</td>
<td>-8.5 %</td>
</tr>
<tr>
<td>Hordaland</td>
<td>193</td>
<td>12 633</td>
<td>34</td>
<td>-13.1 %</td>
</tr>
<tr>
<td>Møre</td>
<td>149</td>
<td>9 906</td>
<td>34</td>
<td>-11.5 %</td>
</tr>
<tr>
<td>Northern Norway</td>
<td>33</td>
<td>907</td>
<td>1</td>
<td>-10.2 %</td>
</tr>
<tr>
<td>Rogaland</td>
<td>461</td>
<td>37 644</td>
<td>114</td>
<td>-10.8 %</td>
</tr>
<tr>
<td>Trøndelag</td>
<td>56</td>
<td>3 146</td>
<td>9</td>
<td>-16.0 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1 199</td>
<td>96 578</td>
<td>293</td>
<td>-12.1 %</td>
</tr>
</tbody>
</table>

*Buskerud, Telemark and Vestfold
Reservoir and seismic segment seeing indications of recovery

About the segment
The reservoir and seismic segment includes Norwegian legal entities that operate seismic vessels for data gathering; companies that consult, analyze, interpret and display seismic data; and companies that manufacture and supply equipment for gathering and analyzing seismic data acquired for the E&P clients.

Key financials

Reservoir and seismic
- Since 2014, total revenue has declined by 47.4%. Due to the link with E&P company exploration activities, the revenue development in this segment was impacted early in the cycle. Aggregate revenue in 2017 indicates continued weak demand for seismic data.
- In 2016, the revenue for multi-client services was, for the first time ever, higher than contract. Seismic companies focus more on multi-client seismic data since these have historically provided better returns, in addition to enabling companies to keep their vessels utilized as demand cooled off. Competition in this market is growing, resulting in companies taking higher risk with lower pre-funding.
- The exploration costs on the NCS were reduced by approximately 15.8% during 2017. The costs are expected to increase by approximately 21.8% during 2018, with a further expected increase in 2019.
- It is expected that the market situation for the seismic companies will be difficult also for some time to come, but the outlook is more positive. Tender activity is up, and there are indications that exploration activity is returning to higher levels, which is also shown by stronger backlogs. This has yet to materialize in higher revenues; however, it is expected to benefit the segment going forward. Due to reduced costs of new projects because of increased effectiveness and better utilization of the fleet, the aggregate EBITDA margin has increased by 8.7ppt to 37.4% in 2017.
- The multi-client late sales have picked up during 2018, which is seen as quite normal in periods of rising oil price.
Rough market conditions for offshore drillers in 2017, but the bottom may have been reached

About the segment
The E&P drilling segment includes companies that own, operate or own and operate drilling rigs, as well as companies that deliver systems, products and services to these rigs and the wells being drilled. We have divided the segment into three subsegments: well service companies, rig companies and rig equipment companies.

Well services
The subsegment includes companies that offer products, services and integrated project management for drilling and well construction, as well as intervention and other operations over the life cycle of a well.
• The steep decline in revenues from 2016 seems to have somewhat flattened out, as aggregated revenues for the well services subsegment fell by 1.5% in 2017. The five largest companies, comprising approximately 62% of the total revenue, are the most significant drivers for the overall decline in revenue, as these companies saw their combined revenues decrease by 1.6% in 2017.
• There are signs that last year’s plunge in profitability may be short-lived, as both the aggregated EBITDA margin and ROCE (Return on Capital Employed) increased in 2017. The EBITDA margin, driven by continued net cost reductions, increased by 0.8ppt to 5.1% in 2017. The profitability improvement is primarily driven by the five large size companies in the subsegment that increased their combined EBITDA margin from 1.1% in 2016 to 2.3% in 2017. However, companies in the medium-size segment have managed to retain a highly competitive EBITDA margin of 11.5%, only 0.5ppt down from 2016.

Top five companies (2017 revenues)
1. Schlumberger Norge AS
2. Halliburton AS
3. Baker Hughes Norge AS
4. Archer AS
5. Weatherford Norge AS

Key financials
The Norwegian oilfield services analysis 2018

Rig companies
The subsegment includes companies that own and operate offshore drilling rigs. Several of the rig companies have their rig assets registered abroad, which likely impacts the relevance of the ROCE part of the analysis for this subsegment.

- Offshore rig companies have been through a severe downfall the last two to three years, as day rates have remained depressed in the aftermath of the oil price plunge in 2014. We saw that lower oil prices had a lagged effect on offshore drillers, as drilling activity remained high in 2015, when the oil price continued the freefall from 2014. This was mainly due to continued development and infill drilling done by rigs that were already in place, long-contract durations and high reimbursement clauses. Now that the oil price has recovered somewhat faster than first anticipated, we see that the impact on offshore drillers yet again has a lagged revenue contribution. This may be attributed to rig demand being more tied to oil prices that the E&P companies plan for the future, rather than the excess cash these companies gain when there is a discrepancy between planning prices and actual oil prices. Nevertheless, with increased planning prices for 2019, the positive effects are likely to emerge within the rig companies subsegment in the next year or two.

- Final figures for 2017 confirm that older contracts have been replaced with lower day rates and that rig managers are striving to keep their assets active. Aggregated revenues in the subsegment decreased by 26.8% in 2017 and are now 44.9% down from the peak in 2015. Consequently, the aggregated EBITDA margin decreased by 1.7ppt to 9.0%. As an asset-heavy industry, large impairments are inevitable during an industry downturn. In 2015 and 2016, we saw that rig operators wrote down their combined asset base by NOK13.7b and NOK5.2b, respectively. Presumably, this is sufficient for now. Impairments were down to NOK1.6b in 2017, which is significantly lower than the three preceding years. Current depreciations are back to 2012 levels and have hovered around ~5% of total revenues over the last five years.

- We believe the demand for offshore rigs is now facing a two-sided reality, where recent efficiency gains are challenging the simple supply and demand model. Most of the true efficiency gains are sustainable and important contributors to lower development costs, making offshore developments more competitive in the capital allocation battle. However, these improvements imply that each rig is able to cover a higher share of demand. Consequently, the current overcapacity may be even more severe than a simple supply and demand analysis can indicate.

- 2018 has been a year with mismatch between budgets and actuals, and we observe that some rig managers are more reluctant to disclose fixture rates. However, those that have been announced suggest the bottom has been reached. Benefited by reactivation costs for cold stacked rigs, day rates for active rigs may be in for a rise.

Top five companies (2017 revenues)
1. Songa Offshore Rig 2 AS
2. Songa Offshore Rig 3 AS
3. Kca Deutag Drilling Norge AS
4. Seadrill Norway Operations Ltd.
5. Saipem S P A Filial Av Utenlandsk Foretak

Key financials

Average leading edge day rates

NCS drilling activity

Source: Norwegian Petroleum Directorate
Rig equipment

The subsegment comprises companies that offer systems and equipment for rigs and topsides.

- As the offshore rig market is still struggling to balance the drilling vessel overcapacity, companies in the rig equipment subsegment are challenged by muted new build markets. Although the segment took a hard hit last year, when aggregated revenues plunged by 63.1%, these continued further down by 25.0% in 2017. This indicates that almost 80% of the aggregated revenues generated in 2015 have vanished. Despite significant cost cuts, the net revenue reduction has overwhelmed the profit margins. The aggregated ROCE and EBITDA margin turned negative in 2017 at -5.0% and -0.8%, respectively.

- The subsegment is highly consolidated as the three largest companies comprise 78.4% of the combined subsegment revenue. Consequently, these three companies are the primary drivers for the overall financial development in the subsegment. The decrease in profitability is solely driven by the three largest companies as the combined EBITDA margin for these three companies dropped by 6.7ppt to -2.5%, whereas the margin for companies in the medium- and small-size segment actually improved year over year in 2017.

- In order to regain business and more sustainable activity levels, the rig equipment companies are highly dependent on new deliveries. However, we observe the demand for rigs has remained depressed throughout 2018 despite signs the market for day rates have bottomed out. We believe rig new builds will remain depressed, as an increase in demand for rigs will probably absorb current excess capacity first, by means of reactivating stacked rigs. In addition, a focus on drilling efficiencies is also expected to somewhat offset a short- to medium-term increase in the demand for new rigs from the yards.

- Meanwhile, and as we wait for the new build market to regain activity, the offshore OEMs are focusing on servicing the aftermarket and upgrading the automation aspects of their products and solutions. Opportunities within fixed drilling rigs on offshore production installations are also expected to increase.

- The land drilling market is also trending in rig equipment companies’ favor, as general land drilling specifications are increased as a consequence of extreme length laterals requiring bigger and stronger land rigs. However, it is uncertain to what extent these developments will benefit the offshore-oriented rig equipment companies based in Norway.

Top five companies (2017 revenues)
1. National Oilwell Varco Norway AS
2. Mhwirth AS
3. Cameron Sense AS
4. International Research Institute Of Stavanger AS
5. Proserv Norge AS

Key financials

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, NOKb</th>
<th>EBITDA</th>
<th>ROCE</th>
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<tr>
<td>2013</td>
<td>60</td>
<td>30</td>
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<td>2014</td>
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<tr>
<td>2017</td>
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<td>-20</td>
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Forecasted jack-up deliveries

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<th>Uncontracted</th>
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<tr>
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<td>3</td>
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<tr>
<td>2019E</td>
<td>39</td>
<td>7</td>
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<td>2020E</td>
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<tr>
<td>2021E</td>
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Forecasted floaters deliveries

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<th>Contracted</th>
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<td>3</td>
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<tr>
<td>2019E</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>2020E</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>2021E</td>
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<td>0</td>
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Source: IHS-Petrodata, Wells Fargo Securities
The shipyard subsegment is still challenged by the shortfall of new orders and a material decrease in demand for offshore vessels.
Less high-margin contracts awarded for EFI companies in 2017 affects profitability

About the segment

The engineering, fabrication and installation (EFI) segment includes Norwegian legal entities involved in equipment supply, manufacturing, construction and installation of offshore oil and gas production units, both surface (topside) and subsea.

We have divided the segment into five subsegments: shipyards; larger engineering, procurement, construction and installation (EPCI)/yards; subsea; consultants and engineering houses; and workshops and product suppliers.

Key financials

Segment composition (2017)

Ship yards

The subsegment includes shipyards that construct offshore vessels such as PSV, AHTS and OSCV vessels.

- The shipyard subsegment is still challenged by the shortfall of new orders and a material decrease in demand for offshore vessels. After a 4.5% increase in aggregated revenues in 2017, current levels are still 39.3% lower than the peak in 2014.
- Despite the slight increase in revenues in 2017, aggregated profit margins are characterized by underutilized capacity and overruns on construction projects. These effects are reflected in the EBITDA margin that fell by 2.6ppt to -4.1% in 2017. Consequently, the ROCE has been declining alongside profit margins, further affected by a significant increase in capital employed in 2014 and 2015. Since the peak in 2012, the ROCE has decreased by 24.9ppt to -6.8% in 2017.
- There is still a need for retirement of offshore vessels to balance these markets, and the process will likely cause continued shortfall in new orders from these segments to the shipyards. Norwegian shipyards had a record low orderbook already in 2015 and have been forced to look for orders in other segments such as fishing vessels, well boats and service vessels for the aquaculture industry, and ferries/yachts, which now accounts for approximately half of the Norwegian shipyards’ order books.

Top five companies (2017 revenues)

1. Vard Group AS
2. Kleven Verft AS
3. Myklebust Verft AS
4. Ulstein Verft AS
5. Umoe Mandal AS

Key financials
Larger EPCI/yards

The subsegment includes companies that offer EPCI of production and processing modules and facilities. Companies in the subsegment are also major M&M contractors for offshore topside facilities and onshore processing and receiving terminals.

- Over the last two to three years, the E&P companies’ cost-cutting regimes have dominated the market for the EPCI/yard subsegment. Despite a recovering oil price, revenues decreased for the fourth consecutive year in 2017 by 16.2%, and are now at levels that are 43.6% below the peak in 2013.

- Profit trends indicate some of the cost-cutting processes during the market downturn remain with the companies. Profit margins for the EPCI/yard companies defied the revenue development in 2017 and improved. A net reduction of 19.3% in the total operating cost base increased the aggregated EBITDA margin by 3.5ppt to 4.5% in 2017. Current levels are now only slightly below those we observed in 2012-13, when the industry enjoyed an oil price in the range of above US$100 per barrel.

- A depreciating asset base has given rise to better ROCE that increased by 16.1ppt to 12.9% in 2017. As for the aggregated EBITDA margin, this is slightly below the levels we observed in 2012-13. The subsegment has proved to be adaptable, as we now see that companies are adjusting to a more cost-efficient environment. However, efficiency gains aside it is still worrying how the pipeline of new projects is decreasing now that several contracts on major fields such as Martin Linge, Aasta Hansteen and Johan Sverdrup are in the completion phase. On the medium- to long-term horizon, there are a few major projects such as Castberg, Johan Sverdrup phase 2 and Snorre 2040, which have been recently awarded to their respective EPCI contractors.

- Investments in new and existing facilities are key drivers for the EPCI/yard contractors going forward. Expected NCS capex presented by the NPD reflects a challenging period for the companies in the subsegment when the current portfolio of ongoing projects are completed. Investments are expected to increase by 11.2% from 2017 to the short-term peak in 2019-20.

- The NCS capex split from the NPD indicates further that investments are expected to decrease significantly for new and fixed floating facilities, whereas the investment level for new subsea facilities are expected to increase over the next two years and stabilize at higher levels. These absolute values are, however, small compared with capital allocated to development wells that makes up approximately 40% of the total NCS capex.

Top five companies (2017 revenues)
1. Aibel AS
2. Kværner AS
3. Apply Sørco AS
4. Coast Center Base AS
5. Westcon Yards AS

Key financials

NCS capex split in main categories

Source: Norsk Petroleum
Subsea
The subsegment includes companies that engineer and fabricate subsea equipment and companies within subsea umbilicals, risers and flowlines (SURF) and inspection, maintenance and repair (IMR).
- The subsea subsegment has experienced a somewhat lagged impact from the downturn in the OFS industry. When the North European subsea capex plunged 40% in 2015, revenues in this subsegment decreased only 11.6%. The investment level has continued to decrease, and we have seen the impact has started to materialize in the subsea operators’ books over the last two to three years. Revenues have decreased for three consecutive years and fell 9.4% in 2017. Current levels are now 37.3% lower than the peak in 2014.
- Up until 2014, the subsegment has been characterized by a strong revenue growth and a corresponding cost inflation. Revenues are now back to 2008 levels, and the profit trends have reversed after the 2016 uplift. Aggregated EBITDA margin decreased by 5.7ppt to a periodic all-time low of 3.6%. In the same period, the ROCE decreased by 7.5ppt to -1.7%.
- The challenging market conditions have forced the subsea companies into cost-cutting processes in order to regain competitiveness. Although many of these programs are yet to be reflected in the suppliers statutory accounts, significantly reduced development costs at the E&P operator level are clearly showing the effects. These cost improvements are primarily achieved through an optimization of the subsea architecture, which has been enabled by increased collaboration between equipment providers and installation providers. Through achieving integrated procurement, fewer subsea production system interfaces and less complexity, both engineering/service costs and general project capex levels are improved. The requirements, though, are early engagement by the subsea companies and a change in the way in which E&P companies approach and plan their field development.
- Now that current backlogs are more or less legacy-free, sanctioning of new subsea wells will be essential for the subsea segment in the coming years, and the outlook for the NCS looks better. We believe several delayed projects are now lined up for the green light, and are likely to be profitable now that the overall cost level has come down.
- In 2017, the orderbook for subsea trees nearly doubled from 2016. Wood Mackenzie’s forecast for the period 2018–21 implies a significant increase in the order for subsea trees, and expects that the average for the forecast period will be in the 250 to 270 trees per annum range.

Top five companies (2017 revenues)
1. Aker Solutions AS
2. Fmc Kongsberg Subsea AS
3. Technip Norge AS
4. Subsea 7 Norway AS
5. Deepocean AS

Key financials

North European subsea capex

Source: Wood Mackenzie
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Top five companies (2017 revenues)
1. DnV GL AS
2. Cognizant Oil And Gas Consulting Services Norway AS
3. Omega AS
4. Dr Ing A Aas-Jakobsen AS
5. Wood Group Norway AS

Key financials
- Revenue, NOKb
- Profitability, %

Shipyards Larger EPCI/yards Subsea Consultants and engineering houses Workshops and product suppliers

Consultants and engineering houses
The subsegment includes companies that supply skilled personnel and consultants to the E&P operators and OFS companies.
- After a 36.1% decrease in revenues in 2016, the development has somewhat flattened with a 6.0% decrease in 2017. From the peak in 2014 revenues are now nearly halved. The EFI consultants subsegment’s was affected by an internal merger in 2016, where one of the subsegments’ largest companies was merged into a subsea company. Revenues that were included in the subsegment’s in 2015 have, therefore, been included in the subsea subsegment in 2016. A rough estimate suggest the merger reduced EFI consultant’s revenues in 2016 by approximately 2.5b.
- The aggregated EBITDA margin took turn and improved 2.3ppt to 1.8% in 2017. The consultants and engineering houses have managed to cut costs significantly, with a net reduction of 45.5% since the peak in 2014, whereas the net reduction in 2017 was 8.0%.
- The personnel expenses have been reduced by 42.6% since the peak, as the total workforce has been reduced by ~4,500 workers, equivalent to a 37.8% decrease from the peak in 2013.

Workshops and product suppliers
The subsegment includes companies that design, develop, fabricate and sell products and systems to offshore installations, rigs and vessels.
- Lower rig activity and backlog decrease have characterized the performance of the workshops and product suppliers the last two to three years. Total revenues decreased by 14.7% in 2017 and are now ~40% lower than the peak in 2014.
- Profit margins have been declining continually since 2011, due to strong price pressures. Following the decrease in revenues since 2014, both ROCE and EBITDA margin have turned negative. The companies in the subsegment have met the downturn with intensified cost cuts as they managed to reduce net costs by 15.1% in 2017 and 21.1% in 2016. This is primarily driven by direct opex that are now 37.6% lower than the peak in 2014. The aggregated EBITDA margin is now -0.1%, which is 0.1 ppt lower than that for last year.
- In line with decreasing profit margins, ROCE dropped below zero in 2016 and has remained unchanged at -4.0% in 2017. The latest drop is somewhat cushioned by a decrease in capital employed.
Profit margins have been declining continually since 2011, due to strong price pressures.
Cost optimization on the agenda to recover from the weak market

About the segment
The operations segment includes entities that support oil companies in the production phase. We have divided the segment into three subsegments; offshore logistics, maintenance and modification (M&M); and production.

Key financials

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, NOKb</th>
<th>EBITDA, %</th>
<th>ROCE, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>215</td>
<td>54%</td>
<td>33%</td>
</tr>
<tr>
<td>2014</td>
<td>105</td>
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<td></td>
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<tr>
<td>2015</td>
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<tr>
<td>2016</td>
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</tr>
<tr>
<td>2017</td>
<td></td>
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</tr>
</tbody>
</table>

Segment composition (2017)

- **Revenue**
  - Small <NOK100m: 33%
  - Medium NOK100m-NOK1,000m: 13%
  - Large >NOK1b: 54%

- **Number of companies**
  - Total: 105
  - Small <NOK100m: 12
  - Medium NOK100m-NOK1,000m: 215

Offshore logistics
The subsegment includes companies that own and operate offshore vessels, helicopter companies and supply bases:

- Lower day rates and short-time horizon contracts led to a revenue decline of 16.7% in 2017. The continually changing market made the companies seek ways to operate more efficiently, while at the same time reducing clients’ costs. Cost optimization and resource utilization remained a challenge, and the companies in this subsegment experienced a decreased EBITDA of 32.1%.
- In order to improve the liquidity situation for this subsegment, companies went through restructuring negotiations in 2016-17. As this appears to be a continued trend in 2018, there are indications the companies are still in the process of concluding new terms with their respective lenders.
- The weakening demand in the market for offshore supply vessels (OSVs) and anchor handling tug supply (AHTS) continued throughout 2017, and there was a notable trend of both scrapping and selling overabundant vessels. Impairments peaked in 2016, and despite decreasing aggregated impairment value for 2017, it was still 14 times higher than the average pre-2014 for this segment. Tangible assets for the segment decreased by 14% as a consequence of an overall reduction in the fleet.

Top five companies (2017 revenues)
1. Heli-One (Norway) AS
2. Bristow Norway AS
3. CHC Helikopter Service AS
4. Farstad Supply AS
5. Siem Offshore Rederi

Key financials

<table>
<thead>
<tr>
<th>Year</th>
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<th>EBITDA, %</th>
<th>ROCE, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>55</td>
<td>20%</td>
<td>-10%</td>
</tr>
<tr>
<td>2014</td>
<td>45</td>
<td>15%</td>
<td>-20%</td>
</tr>
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<tr>
<td>2016</td>
<td>25</td>
<td>5%</td>
<td>-10%</td>
</tr>
<tr>
<td>2017</td>
<td>15</td>
<td>0%</td>
<td>-15%</td>
</tr>
</tbody>
</table>
Maintenance and modification
The subsegment includes companies offering maintenance and modification (M&M) for offshore installations, including surface treatment, passive fire protection and inspection services:
• A group-internal merger in 2016, where one of the largest companies of the subsegment merged into a subsea company, was the primary reason for the 2015-16 drop in revenue for this segment. The slight revenue decline of 3.3% in 2017 can be explained by lower day rates as a consequence of renegotiated medium- to long-term contracts.
• Through cost optimization, the companies experienced an increased EBITDA of 11%, which in turn resulted in an aggregate profit margin of 5.1%. Thus, in order to meet the operators’ demand for a reduction in hours spent on M&M work, the companies reduced their personnel expenses further by 4.1%.
• M&M companies have experienced deferrals and postponements in the project pipeline since the operators went into cost-saving mode. A recovery in the oil price indicates that many of these projects are expected to resume.

Production
The subsegment includes companies that are active in production, supporting equipment and services, such as floating production storage and offloading (FPSO) units, facility management, waste management, communication and production operations:
• The subsegment’s margins continue the relatively stable performance, despite a revenue drop of 10.7% in 2017. EBITDA decreased by 1.3ppt, and ROCE decreased by 4.8ppt. The stable EBITDA margins demonstrate the subsegment’s ability to cut costs and adjust to fit the current market conditions.
• Although the industry is experiencing a challenging environment, the companies have been less exposed to the operators’ decreased capex budgets. However, this year’s revenue drop (-12.9% overall vs. -10.7%) is closer to the revenue drop across all segments than it was in the last year (-26.5% overall vs. -11.3%). The FPSO market appears to have been the main driver behind the subsegment’s continued revenue decline in 2017.
The delay in revenues can be explained by the deadlines for disposal execution being set for a later date.
Good future earning potential within decommissioning to be expected

About the segment
The decommissioning segment includes companies that primarily offer services related to the decommissioning of offshore installations. However, decommissioning-related services, such as plugging and abandonment (P&A) and infrastructure removal, form an integral part of the strategic and operational focus of many OFS companies, which have operational focus primarily in other segments.

Decommissioning
- In 2017, a total of seven companies had decommissioning as their core business. As mentioned in the segment introduction, the number of companies with partial revenue within decommissioning is significantly higher.
- The subsegment revenues declined by 2.9% in 2017 – an improvement from the 31.6% decline experienced in 2016. Although the companies reported lower levels of activity, well-performed projects led to increased profit margins, and EBITDA experienced a 4.5ppt growth.
- Medium-sized companies are the most impacted group, measured by the year-on-year revenue decrease. This indicates the ability to win new contracts as a key revenue driver for the segment, as opposed to any big-scale advantages.
- The relatively stable revenues must be seen through the ever increasing lifetime of NCS fields due to technological enhancements. The prolonged lifetime delays decommissioning activities in the short term, but increases the long-term prospects as the number of disposal projects accumulates.

Top three companies (2017 revenues)
1. AF Decom AS
2. AF Offshore Decom AS
3. Gmc Decom AS

Shutdown and disposal costs on the NCS
Source: Norwegian Petroleum Directorate
Introduction
Overall, revenue growth for the Norwegian oilfield services industry seems to have turned in 2018. The outlook for 2019 is more positive compared with several past years. We estimate a healthy growth of 8% for the industry as a whole, driven by increasing investments on the NCS. For 2020, we expect a continued growth, albeit at a slower pace of 3%. We expect a double-digit growth in 2019 for the segments driven by NCS investments and maintenance, including rig companies, yards and M&M. The offshore logistics segment is still held back by overcapacity in offshore supply, which also impacts growth at workshops and product suppliers, many of which were suppliers to yards, building rigs and offshore vessels.
Growth across all segments

Reservoir and seismic
For the reservoir and seismic segment, we see revenue growth of around 11% in 2018, after a steeper-than-expected fall of 5% in 2017. We expect a continued, although slower, growth in 2019 and 2020. The oil price decline of late 2018 has made the outlook for oil companies’ exploration budgets more uncertain, which could potentially constrain spending on seismic data.

Exploration and production drilling
The exploration drilling and well services segments are expected to return to growth. NCS rig count is expected to increase somewhat, although rig rates are not expected to return to pre-crisis levels. The rig equipment segment is expected to receive some support from aftermarket services, and we expect revenue growth from a low base.

Engineering, fabrication and installation
We forecast growth across the board for EFI companies. EFI consultants and yards are benefitting from the pickup of activity on the NCS, while increased focus on tie-in developments leads to growth for subsea companies. The growth of workshops and product suppliers is more moderate due to a lack of investments in new rigs and offshore vessels.

Operations
Delayed platform maintenance is expect to increase revenues for M&M companies, while offshore logistics is still struggling with overcapacity of PSV and AHTS vessels. The production subsegment has historically shown less correlation with the overall industry growth, but we still expect some pickup in growth in 2019 for this subsegment as well.

Norway OFS revenue growth rate forecast

![Chart showing revenue growth rates for different segments over 2018, 2019, and 2020.]

- **Reservoir and seismic**: 11% (2018), 7% (2019), 3% (2020)
- **Exploration and production drilling**: 7% (2018), 3% (2019), 4% (2020)
- **Engineering, fabrication and installation**: 4% (2018), 6% (2019), 7% (2020)
- **Operations**: 10% (2018), 8% (2019), -2% (2020)
- **TOTAL**: 10% (2018), 5% (2019), 3% (2020)
UK
2017 was rather tough for the UK OFS sector. Yet there are signs in 2018 indicating that the bottom has been reached: upstream margins have improved and capital structures repaired; the transfer of upstream assets to operators focused on the North Sea continues; the number of projects reaching FID has increased; significant cost restructuring has been completed; and investor appetite in private OFS companies has picked up.

However, while opportunities are certainly increasing for the more nimble companies in the UK, it is uncertain when these factors will be realized in increased activity levels and it is unlikely that the overall activity is going to return to 2014 levels anytime soon. This makes it all the more important to have a clear strategy for long-term growth, whether through developing and implementing new technology, expanding geographic presence, diversifying into adjacent markets or driving consolidation and building scale. The ability to partner with customers in their preferred ways and offer multiple commercial models will also be a critical differentiator and might even be the key to survival for many contractors.

With margins still tight, these long-term imperatives need to continue to be balanced with rigorous cost discipline. Focus will need to remain on exiting unprofitable or subscale activities, ensuring that cost-savings are sustainable, managing liquidity carefully and resolving any legacy issues with capital structures. The challenges facing management in navigating through this period don’t look like abating anytime soon.

NL
Over the past few years, the exploration and production spending levels have remained low, putting pressure on the market for OFS. Consequently, margins in the sector have been squeezed and many companies focused on short-term transformations with immediate cash results. The number of employees dropped severely. Moreover, the oil price seems to have stabilized on a new, lower level (~US$60 per barrel), hampering investments in new more difficult reservoirs and impacting OFS project pipeline.

Going forward, we expect that OFS companies will continue to focus on cost discipline, including managing headcount, but the focus of (Dutch) OFS companies will shift toward more structural transformations, such as creating more integrated offerings and innovating in technology and commercial arrangements, in order to sustainably (out-)perform in this new lower oil price environment.

There are signs sentiment could be turning. 2018 was a low point for exploration, but there appears to be a renewed confidence and appetite for exploration across the North Sea region. Moreover, capex levels are expected to increase in 2019, albeit at moderate levels. Price levels in the OFS sector are projected to improve but still remain affected by overcapacity in many subsegments. In addition, we observe an appetite of privately backed or owned investors, eager for North Sea assets, who are breathing new life into the region and also bringing a ruthless focus on cost control. Renewable energy will continue to provide market opportunities to exploit knowledge, technology and assets. The question is whether the Dutch OFS companies can benefit from this “cautious optimism” in the short term and strengthen their position in the value chain, since it is unlikely overall activity is going to return to 2014 levels anytime soon.

Given its strong heritage and innovative and flexible character, the Dutch OFS industry will remain a significant factor in the Dutch economy and continue to play an important role in the global oil and gas industry. Through focusing on innovation, sustainability and consolidation, companies are looking to lay the foundation for future success in the Dutch OFS industry.
Method

Data collection
Accounting information is publicly available from the Brønnøysund Register Centre. The companies’ business addresses as available in the register have been used to reflect the entities’ geographic location. The number of companies included in the analysis will vary somewhat depending on the availability of financial information.

In order to analyze economic activity by geographic location and across the OFS value chain, we have used the stand-alone financial statements of individual legal entities. As a result, large corporations have been analyzed through their constituent individual companies and not as a consolidated group. Intercompany transactions are not eliminated when financial figures are aggregated. In addition, the revenues of subsidiaries owned by a Norwegian holding company, but registered abroad, are not captured. The year 2017 figures have been modeled based on previous years’ where annual reports were not available by the time this report was prepared.

Location
The regions used in the analysis have been chosen to reflect and illustrate the main clusters of OFS companies in Norway.

The regions are Rogaland, Hordaland, Agder, Møre (Møre og Romsdal and Sogn og Fjordane), BTV (Buskerud, Telemark and Vestfold), Trøndelag, Northern Norway (Nordland, Troms and Finnmark) and Eastern Norway (Oslo, Akershus, Oppland, Østfold and Hedmark).

Value chain segments
Each company in the OFS portfolio has been reviewed individually and an assessment has been made with regard to the company position in the value and supply chain.

The value chain has the following categories:
- Reservoir and seismic
- E&P drilling
- EFI
- Operations
- Decommissioning

Each of these categories are further broken down into subsegments to capture the huge diversity within the industry. Many of the companies will offer products and services in more than one segment in the OFS value chain. However, each company has only been categorized to the value chain segment in which they generate the majority of their revenues. For larger industrial conglomerates with multiple subsidiaries, each of the group companies have been allocated to its respective best fit OFS segment.

Inclusion criteria
A company is defined as a Norwegian OFS company if:
- At least 50% of its turnover is generated in the O&G sector
- It is a Norwegian-registered company

Some companies may have previously had more than 50% of its turnover generated from the O&G sector but do not meet the definition of a Norwegian OFS company in a particular year. Such companies may still be included in this year’s database to alleviate comparisons over time. As an example, shipyards are included in 2017 even though the share of turnover generated in the O&G sector is reduced and not all companies will meet the definition of a Norwegian OFS company this year.

Company size definition
- Large companies: revenues of more than NOK1b
- Medium-sized companies: revenues between NOK100m and NOK1b
- Small companies: revenues of less than NOK100m

Forecasting model
We have estimated the revenue development for 2018-20 using a forecasting model with both quantitative and qualitative factors. The model is based on several approaches, which differ between the subsegments. These approaches include:
- Analysis of historical correlations between OFS firm revenues and macroeconomic variables
- Financial reporting and forward guidance of listed OFS companies
- Market analysis of certain subsegments
- Discussions with industry experts

Calculations
EBIT = earnings before interest and tax
Adjusted EBIT = EBIT + impairment
EBITDA = adjusted EBIT + depreciation and amortization
Capital employed = Total assets - (financial long-term and short-term investments + cash) - (trade creditors + tax payable + public duties payable)
ROCE = adjusted EBIT/capital employed
CAGR ( = ([ending value/beginning value]^(1/# of years)) – 1)
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