The Norwegian oilfield services analysis 2014
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The oilfield services (OFS) industry is one of the largest industries of mainland-Norway, with around 122,000 employees and NOK453b in total revenues from almost 1,100 companies. The industry has grown significantly in recent years due to an exploration and production (E&P) spending boom on the Norwegian continental shelf (NCS), where investments grew by 67% from 2010 to 2013, as well as increased global spending on offshore oil and gas E&P equipment, where Norwegian OFS companies are key suppliers. Total Norwegian OFS revenues increased by 28% in this period, and the number of employees rose by 21%.

The EY Norwegian oilfield services analysis 2014 shows an all-time high activity level for the industry in 2013. The activity has been driven by the development of several new fields, large projects on major mature fields like Troll and Ekofisk, a high exploration well count and robust exports.

Spending by E&P firms appears to have reached a peak in 2014, both globally and on the NCS. Analysts now forecast cuts in global E&P capital expenditure by 20%-25% from 2014 to 2015, while recent forecasts from Statistics Norway and the Norwegian Petroleum Directorate (NPD) point toward a 15% decline in NCS investments in 2015. The decline is caused both by the increased costs in the industry over the past few years, which have reduced the profitability of new developments, and the fall in oil price since mid-2014.

The deteriorating outlook for the OFS industry can be seen in the share price development of listed firms. In the second half of 2014, share prices of energy equipment and service firms on the Oslo Stock Exchange fell by more than 40%, compared to the Norwegian stock market as a whole, which fell by less than 10%.

Toward the end of 2013, we observed a shift in the E&P companies’ emphasis from volume growth to profitability. According to some E&P majors, cost increases during the boom had put pressure on the profitability of new field developments even with oil prices at US$100 per barrel. When the oil price abruptly fell toward US$50 per barrel at the end of 2014, this only added to the pressure to cut costs.

The exports of Norwegian OFS firms have traditionally been directed toward global offshore developments. In recent years, US land unconventional oil production has experienced strong growth in investment and activity level. US shale oil production has grown from an estimated 1.5 million barrels of oil per day (mbopd) in 2012, to close to 3.5 mbopd by 2014 according to the Energy Information Administration (EIA).

Unconventional oil offers an alternative source of supply to high-cost offshore developments such as the Arctic, deep and ultra-deep offshore investment projects, and may thus provide an additional restraint to the growth outlook of Norwegian OFS firms.

Based on current forecasts for E&P spending and guidance from listed OFS firms, we expect revenues in the industry to fall in 2015 following a small increase in 2014. Firms with robust order books and exporters benefiting from a weakening Norwegian krone, may to some extent be sheltered from the worst impact in 2015. However, the outlook for 2016 is uncertain also for these firms if oil prices remain at the current levels.

Consequently, 2014 has resulted in the Norwegian OFS companies restructuring their personnel and equipment capacities and collaborating across the OFS segments and with their customers to form new and more integrated service offerings and technologies in the relentless effort to increase the cost efficiency of tomorrow’s energy production. We expect that consolidation and restructuring are themes that will continue to dominate the agenda in 2015.
EY has been conducting the oilfield services (OFS) analysis every year since 2006, and the report has been developed and expanded each year in line with the growth of the industry it seeks to cover. In addition, EY has issued a report that covers the UK-based OFS industry, and these reports are now being expanded to cover other oil and gas regions.

In the 2014 report, we have added approximately 300 companies to the analysis and included more thorough analysis on the subsegments, so we believe this year’s edition is the most comprehensive analysis on the Norwegian oil services sector to date.

We hope that you find the report useful and we welcome any feedback you may have.

The Norwegian OFS analysis 2006–13 revenues (NOKb)

The stand-alone financial statements of each legal entity have been used to capture the financial and non-financial information included in our analysis of the sector. Large corporations have therefore not been analyzed as a group, but as the sum of their stand-alone legal entities that form the group. We have taken this approach in order to show a more detailed demographic view with regard to location and activities across the value chain. Intercompany transactions are therefore not eliminated when aggregating financial figures.

Each company has been linked to one geographic region only, based on the company’s business address.

Companies have also been linked to a single segment of the OFS value chain, based on each company’s main activity within the sector. Most companies will have activities in several geographic regions as well as across the value chain; however, this is not accounted for in this analysis.
Revenues in 2013 have grown while profit margins have remained stable

Revenues up from 2012

Industry revenues increased by 9% which is slightly below the 10% growth from 2011-12. Although revenue growth was observed in all segments, exploration and production drilling contributed most with a year-on-year increase of 20%.

5,000 new direct employees in 2013

The number of people directly employed in the OFS sector increased by 4% in 2013, compared to a growth of 8% in 2012. The growth is driven by the exploration and production drilling segment and the engineering, fabrication and installation segment, both at 5% each, while the reservoir/seismic experienced a decrease in employee numbers.

Rising operating costs in 2013

Operating expenses saw a rise of 10% from 2012-13, which is in line with the corresponding revenue increase. However, cost of goods has increased more than labor costs and other operating costs, as well as relative to the increase in revenues.

Stable profitability

Average EBITDA margin has remained stable at 13% both in 2012 and 2013. The overall accumulated EBIT for all OFS companies in 2013 was NOK39b, giving an EBIT margin for the year of 9%.
The oil services sector is of great significance to the Norwegian economy

The Norwegian OFS industry is made up of 1,070 companies, of which 50% are characterized as small (annual revenue less than NOK100m), 41% as medium (annual revenue between NOK100m and NOK1b), and 9% as large (annual revenue more than NOK1b).

There is a considerable diversity in companies with respect to revenues and number of employees. Large companies in the industry 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 or specific technologies.

In 2013, the OFS industry directly employed 122,000 people and had a combined turnover of NOK453b. The small companies have the highest revenue to employees ratio, with 10% of total industry revenues at only 5% of total employees. Conversely, the medium sized companies have the lowest ratio, with 30% of industry revenue and 36% of total employees. The OFS industry is of great significance to the Norwegian economy, directly employing 5% of the Norwegian workforce.

Profit margins for the industry as a whole have remained stable at around 13% EBITDA over the last three years. However, profit margins are lower for small companies, generating average profit margins in the 5%-8% EBITDA range. Conversely, medium sized and large companies generate average margins in the 12%-15% EBITDA range.
Stable EBITDA development and continued value creation in the OFS industry

EBITDA

Aggregated EBITDA has increased by 26% from 2009 to 2013. After a short dip in 2011, EBITDA resumed growth in 2012. EBITDA margins have been relatively stable the last three years, albeit lower than the levels in 2010.

EBITDA drivers

By decomposing the drivers behind EBITDA, we find that revenue and labor cost correlate well over the interval, with a growth of 27% and 33%, respectively.

Cost of goods, which the industry reduced after the financial crisis, has been reversed, and negatively impact the industry EBITDA for 2013. This has mainly been driven by larger companies across the segments, and is a consequence of group structures and associated intercompany pricing arrangements.

Value creation

Value creation (EBITDA + labor costs) has grown steadily from 2009-13, totaling 31% over the period, and with a 7% increase year-on-year for 2013.

The growth in value creation per employee has only been 8%, of which 3% was from 2012-13. This has mainly been driven by companies in the reservoir/seismic segment.

Labor costs

Total labor cost has grown by 33% during the period. This is explained by an increase in the labor force and in the cost of labor. The labor force grew by 21% during the period, reaching 122,000 in 2013. Labor cost per employee grew at a slower pace of 10% during the period, on average 2% per year, which corresponds with the average inflation rate over the period.

Hence, the increase in total labor cost should be interpreted as a result of increased activity in the sector and not as an increase in the relative cost of labor.

The Norwegian oilfield services analysis 2014
Weakening demand for seismic services

About the segment
The companies in the reservoir/seismic segment provide services that include operation of seismic vessels for data gathering purposes, companies that analyze, interpret and display seismic data, and companies that supply equipment for gathering and analyzing seismic data.

We have divided the segment into two subsegments:
1. Seismic interpretation and consultants
2. Seismic equipment

Segment highlights
- Revenues in the segment had a strong growth over the period 2009-13, with a 9.6% CAGR, but with a clear reduction in growth year-on-year for 2013.
- Reservoir/seismic is the segment that is most decoupled from the general E&P value chain, as this segment is the most sensitive to changes in oil company exploration spending. The 2.2% year-on-year revenue growth for 2013 is the lowest for all segments in our analysis.
- Despite the relatively healthy EBITDA development since 2011 for the reservoir/seismic segment (likely a consequence of more efficient vessels and streamers as well as substantial improvement in data resolution, quality and analysis), the ROCE has not seen the same uplift. This indicates considerable investments in companies own balance sheets in 2013, most of which are multi-client data libraries. Accumulated depreciation and amortization for the segment grew from 9.7% of revenues in 2009 to 17.4% of revenues in 2013.
- None of the companies that operate seismic vessels have these vessels on the balance sheets of entities included in this analysis. They are either placed in the holding company or in foreign registered affiliates.
- According to NDP, 2.8 million common depth point (cdp) km was acquired on the NCS in 2013, compared to 2.1 million cdp km in 2012, and 1.2 million cdp km in 2009. The majority of the cdp km growth is due to the 3D seismic increase where up to 16 streamers are towed in parallel. The sailing length for seismic vessels have over the last two years been relatively stable on approximately 0.2 million km.
- A large part of segment revenues are generated from activity outside the NCS. Operations in the Americas grew significantly in 2014, driven by growth in North American onshore production. Revenues from Asia declined, while revenues from the NCS and UKCS remained relativity stable.
- Despite the small company category making up 40% of the total company count in the reservoir/seismic segment, they only contribute 3% of revenue in 2013, which indicates a segment with considerable technology and capital asset barriers.
**Seismic interpretation and consultants**

The subsegment scopes companies that analyze and interpret seismic data and surveys and provide related software and consulting services.

- Total revenues fell by 23.9% in 2013 after a period of stable growth. The drop in 2013 is mainly due to negative development in revenues from multi-client sales, in addition to fewer companies in the subsegment from 17 in 2012 to 13 in 2013, a reduction of 24%. Number of employees was reduced from 522 to 416, a year-on-year headcount drop of 20.3%.
- There is a high degree of consolidation in the subsegment, with the top five largest companies accounting for 77.8% of the subsegment revenues.
- Despite the 23.9% reduction in revenue, the subsegment EBITDA contribution has been stable year-on-year, thus increasing the EBITDA margin from 38.1% to 48.1%. However, the substantial increase in depreciation and amortization for the subsegment of 162% from 2012 to 2013, reduces the EBIT margin from 30.6% to 22.3%, and subsequently reduces the subsegment ROCE. Margins are also supported by the reduction in employees from 689 in 2009 to 416 in 2013. Also, the average cost per employee has increased.

**Top five companies (2013 revenues)**

1. Fugro Multi Client Services AS
2. Fugro Geotechnics AS
3. Landmark Graphics AS
4. Spectrum ASA
5. Roxar Software Solutions AS

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**Seismic equipment**

The subsegment comprises Norwegian legal entities that operate seismic vessels, deliver equipment to the vessels and process and prepare the seismic data acquired to the E&P clients.

- Revenues in the subsegment have increased 48.3% from 2009-13, and the profit margin has developed positively, from 18.5% EBITDA margin in 2009 to 31.5% in 2013.
- The main driver behind improved profitability has been increased productivity, manifested by an increase in revenue per employee within the subsegment. A factor that contributes to the productivity increase is more efficient acquisition of seismic data due to implementation of new technology. This is further supported by the trend of the proportion of costs represented by renting of ships (relatively stable over the period) and costs for data processing and data storing (increased).
- The number of employees in the subsegment has fallen with 13.2% from 2,313 employees in 2009 to 2,007 employees in 2013.

**Top five companies (2013 revenues)**

1. PGS Geophysical AS
2. TGS Nopec Geophysical Company ASA
3. CGG Marine (Norway) AS
4. Westerngeco AS
5. Multiklient Invest AS
Strong historical growth at the expense of profitability

About the segment
The exploration and production drilling segment comprises companies that own and/or operate drilling rigs, as well as companies that deliver products and services to these rigs.

We have further split the E&P drilling segment into three subsegments:
1. Rig companies
2. Rig equipment
3. Well services

Segment highlights
- The E&P drilling segment experienced high year-on-year growth in 2013. Revenues increased by 19.6%, which is substantial when compared to the 4.0% CAGR for the segment from 2009 to 2012. The revenue growth trend is driven by all subsegments, but in particular by a strong rig equipment contribution.
- The growth was also a consequence of an increase in mobile unit drilling activity in 2013 on historically high average day rates. Both exploration drilling and development drilling activities went up, with the most notable increase seen in the number of exploration wells, up by 17 to 59 wells from 2012 to 2013.
- Number of employees has increased by 35.0% from 2009-13, reaching 26,189 in 2013. The year-on-year growth from 2012-13 was 4.8%, which together with the 19.6% year-on-year revenue increase can explain why both the EBITDA margin and the ROCE broke the negative downward trend for the segment in 2013.
- Despite the revenue increase from 2009-13 for the E&P drilling segment of 34.5%, the absolute EBIT contribution is NOK14.2b for 2009 and NOK14.4b for 2013.
- The exploration and production drilling segment comprise a total of 194 companies, of which 13% are large. These large companies contributed to 77% of the segment revenue.

Key financials

Segment composition (2013)

NCS drilling activity

Source: NPD
Rig companies
The subsegment comprises companies that own and/or operate offshore drilling rigs. Few of the rig companies have rigs on their Norwegian balance sheets, which limits the relevance of ROCE analysis.

- Revenues grew by 18.2% from 2012-13, reaching NOK55b, compared to a CAGR of 4.8% for the years 2009-12.
- Both EBITDA margins and ROCE rebounded in 2013, after two years of negative trend. A strong market demand for offshore drilling equipment and services, especially for deepwater and harsh environment, is one key driver for this development.
- The drop in revenue in 2012 is primarily caused by changes in the legal set-up of one of the main NCS rig contractors and its financial reporting of international revenues to its Norwegian subsidiaries. The remainder of the subsegment contributed with an increase in revenues by 7.0% from 2011-12. Thus, revenue growth in the subsegment has been more stable in the period 2011-13.
- The number of active rigs on the NCS has grown from 29 rigs in 2010 to 37 in 2014 (average in year). Based on current contracts, the NCS active rig count is expected to reach 43 in 2015. Prior to the NCS operators cost reduction program and the recent oil price decline, the forecast for active rigs on the NCS indicated 48 rigs in 2015.
- The subsegment has experienced an increase in number of employees from 7,000 in 2009 to 8,800 in 2013, a 26% growth over the period. During 2014, an estimated 5,000 OFS job cuts have been announced, of which approximately 600 are in the rig companies subsegment. This indicates an expected reduction in activity level for 2014.
- Because rig costs make up a considerable part of the overall offshore field development budgets for operators, technology improvement has been a major part of suppliers’ and operators’ R&D focus. These efforts combine increased drilling penetration rate and up-time and reduced trip-out requirements. Moreover, handling equipment has been developed to allow for parallel work processes, which is particularly beneficial for deep- and ultra-deep operations. Current tailor-made NCS mid-water rigs under construction have ambitions of increasing the well construction efficiency by 20%.
- Despite this, the rate of penetration (ROP) on the NCS has not improved over the last decade. ROP increased in the years 1998-2003, from around 80 to 120 meters per day (mpd). From 2005 however, ROP has developed negatively, down from around 80 to 70 mdp. Difficult drilling conditions, older rigs, the NCS’ unique 2/4 personnel schedule and less focus on efficiency are among the reasons pointed out by well service companies.

Top five companies (2013 revenues)
1. North Atlantic Norway Ltd
2. Seadrill Offshore AS
3. COSL Offshore Management AS
4. Transocean Offshore (North Sea) Ltd NUF
5. Dolphin Drilling AS

Rig companies have seen stable revenue growth and in 2013 profit margins rebounded after three consecutive declining years. The cost focus from operators has led to contract terminations and temporary suspension of rigs on the NCS, as well as general day rate pressure internationally, which indicates that the 2013 profitability level will be short-lived.
Rig equipment

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

- Revenues in the rig equipment subsegment increased by 28.2% in 2013, reaching NOK44b. The growth of employees year-on-year was 10.0%, up to 6,220 in 2013. The subsegment activity level is strongly dominated by export markets.

- The five largest companies in the subsegment account for 93.5% of revenues in this subsegment.

- The EBITDA margin, which stabilized in the 16%-20% band in the period 2008-12, was reduced to 12.0% in 2013, equal to the 2007 margin level for the subsegment. The ROCE trend moved from a high point of 22.7% in 2009, to three steady years on 17%, before declining further down to 13.5% in 2013, on the basis of a nominal year-on-year EBIT decrease of 9.1% to NOK4.9b and a nominal capital employed increase of 13.7% to NOK36.1b.

- Consequently, the subsegment observed a nominal EBIT contribution low point in 2013, despite the considerable revenue growth.

- Original equipment manufacturers (OEM) of drilling packages and surrounding clusters of highly specialist and technology focused suppliers, have captured and maintained a major share of the market for drilling packages to the international floater and high specification jack-up rig market. On the basis of very high technology, quality, efficiencies and functionality barriers new entrants have had limited success with widening the competition.

- The fleet of offshore drilling units has increased steadily over the last decade. Continuous new orders to the yards were only interrupted by the financial crisis and the corresponding negative effect on the oil price toward the end of 2008. As the oil price recovery period did not exceed the OEMs average order book duration, the activity level remained, and further accelerated in 2010 as new build orders for deep and ultra-deep rigs increased. Moreover, the recent shift of floater construction from Singapore and Korea to Brazil and China has further strengthened the main rig equipment OEM suppliers, as inexperienced yards depend heavily on their engineering and technology expertise.

- As seen in the lower right graphs, the global order book for jack-ups and floaters is approximately at the same aggregated level at the end of 2014 as it stood at the beginning of the year. This indicates confidence in the activity level for the short and medium term for the subsegment. However, the current commodity price levels and the cost focus for operators are likely to challenge the historic floater order rate required to maintain the current capacity and activity level in the longer term.

Global demand for high-specification offshore drilling equipment is currently under pressure as a consequence of the current cost focus and oil price level. A considerable fleet renewal program must be implemented to avoid a supply surplus in the short to medium term.
Well services
The companies in the well services subsegment offer products, services and integrated project management for drilling and well construction, as well as intervention and other well operations over the life cycle of the well.

- Revenues for the well services subsegment grew year-on-year by 12.8% to NOK38.6b in 2013. This compared to a CAGR of 8.0% in the period 2009-12.
- The “big four” well service players (Schlumberger, Halliburton, Baker Hughes and Weatherford), in addition to Archer, constitute 62% of revenues within the subsegment, scoping a total of 109 companies.
- The EBITDA margin has trended downward from the high point of 21.8% in 2010 to 12.0% in 2012. A year-on-year increase up to 12.5% broke the trend in 2013. An increase in capital employed, in combination with declining margins, have resulted in a declining ROCE until 2012. An EBIT margin improvement year-on-year from 7.1% to 7.8% in 2013 (nominal EBIT contribution growth of 24.3%), combined with a modest capital employed increase of 3.7% resulted in a ROCE growth year-on-year for the subsegment from 7.5% to 9.0% in 2013.
- The EBITDA margin has been impacted by increasing labor costs as compared to the revenue increase. The growth factors displayed in the right graph shows how cost per employee has grown more than revenue per employee in the period 2010-13 compared to 2007-10.
- The lower right graph compares revenues and EBITDA margin for the five largest companies versus the rest of the well services subsegment. This illustrates that the large companies have experienced a stronger growth than their smaller peers, but also that the growth has come at the expense of profit margins.
- The well services subsegment had a year-on-year increase in number of employees up to 11,179 of 5.5% in 2013. During 2014, companies within this subsegment have announced job reductions totalling approximately 650, constituting a 5.8% personnel reduction on the basis of the 2013 employee count.
- The Halliburton acquisition of Baker Hughes, announced in November 2014, was a clear efficiency of scale motivated transaction. This is likely to be the start of consolidation efforts as an OFS industry response to the current market conditions, and subsequently will add further pressure on the overall head count in the industry.

Top five companies (2013 revenues)
1. Schlumberger Norge AS
2. Halliburton AS
3. Baker Hughes Norge AS
4. Archer AS
5. Weatherford Norge AS

The well services subsegment is dominated by a group of large integrated well services companies operating on a global scale. Relative to their smaller NCS peers, they have grown considerably over the last four years, but have seen profitability decline.
High historical investment activity on the NCS has driven growth

About the segment
The engineering, fabrication and installation segment comprises 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:
1. Subsea
2. Larger EPCI/yards
3. Ship yards
4. Consultants and engineering houses
5. Workshops and product suppliers

Segment highlights
• The engineering, fabrication and installation segment is the single largest segment in the OFS analysis. The revenues of the segment are driven by the CAPEX spending on the NCS, which has increased by 67% since 2010, but also to a great extent by equipment and system export.
• Revenues have increased by 20.3% in the 2009-13 period, and the number of employees by 19.2%. EBITDA margins have remained fairly stable since 2011.
• This suggests that the potential impact of the award of several yard contracts to Asia in 2012-13 is yet to be seen. We believe this is due to a combination of contract durations in this segment as well as a high share of Norwegian deliveries to the projects at the outbound yards (some projects up to 60%).
• Several of the ongoing projects are reaching completion in 2015, with CAPEX levels pointing downwards by an estimated 15% from 2014 to 2015. New projects are required to sustain activity levels. Johan Sverdrup will have a particularly significant impact on this segment, especially with the high share of contribution to the Norwegian industry.

Key financials

Segment composition (2013)

CAPEX - Norwegian continental shelf

Source: SSB
Subsea

The subsea subsegment comprises companies that engineer and fabricate subsea equipment and companies within subsea umbilicals, risers and flowlines (SURF) and inspection, maintenance and repair (IMR).

- Subsea has developed into an increasingly important sector on the NCS. Approximately 50-55 new subsea tiebacks are forecasted in the period 2014-20, and most of the fields developed on the NCS in the last ten years have been developed as subsea fields.

- The growth in subsea developments is driven by a high number of smaller discoveries and the awards in predefined areas (APA scheme) that supports exploration close to existing infrastructure. This is evident by the strong growth in revenues of 38.7% since 2010. The main reason for the growth story is high subsea CAPEX growth in 2011 and 2012, both on the NCS and for deepwater export markets such as Brazil, West Africa and the Gulf of Mexico (GOM). However, as seen in the lower right graph, subsea CAPEX on the NCS is expected to decline after 2013. This suggests that the decline in subsegment revenues from 2012 to 2013 may continue, if not offset by an increasing export volume.

- A large part of future growth is expected to be in regions outside of Norway, especially in deepwater regions such as Asia Pacific, Brazil and West Africa. Africa is already among the top three largest geo markets for the major international subsea OEMs based in Norway, and is one of the markets with the highest forecasted growth.

- EBITDA and ROCE have improved since 2010. The volatility in ROCE is predominantly an impact from the asset-heavy SURF niche, which is dependent on stable installation/field development activities. Fields such as Gullfaks, Alvheim, Snorre, Tyrihans and Visund have contributed to ongoing NCS activities in the SURF niche during this period.

- Subsea developments such as Ormen Lange, Maria and Snøhvit will support the activity level on the NCS within SURF going forward. However, these projects are likely to be under review and evaluated against the current volatile oil price, which makes the short and medium term order horizon for the SURF players more uncertain.

- The IMR niche is less vulnerable to delays or cancellations of new investments and will continue to benefit from the increased share of production coming from subsea fields. This is a consequence of tieback length, which increases in line with technology development, enabling more remote and deeper fields to be tied back to existing infrastructure.
Larger EPCI/yards
The subsegment comprises companies that offer engineering, procurement, construction and installation (EPCI) of production and processing modules and facilities. Companies in the subsegment are also major maintenance and modification contractors for offshore topside facilities and onshore processing and receiving terminals.

- The larger EPCI/yard subsegment experienced strong revenue growth of 95.4% from 2010 to 2013. In the same period, the number of employees grew by 34.3%, which partially explains the corresponding trends for EBITDA and ROCE.
- However, from 2011 margins and ROCE have developed negatively. This is likely to be caused by increased use of contracted personnel after the activity level growth from 2011 to 2013. The increased competition from Asian suppliers on new contracts contributes as well, in particular for the service and installation suppliers to the main construction yards. Construction projects awarded to Asian yards include Gina Krog, Valemon, Ivar Aasen and Aasta Hansteen.
- However, projects such as Gudrun and Edvard Grieg, and significant modification on existing topsides like Ekofisk, Elfdisk, Draugen, Valhall and Troll, have supported the NCS activity level in the period. In addition, companies within this subsegment have delivered equipment, modules, jackets, engineering and hook-up services to the contracts awarded to Asian yards, in some cases estimated to be 50%-60% of the total project value.
- Both labor costs per employee and revenues per employee have shown volatility in the period. Labor cost per employee had a CAGR of 4.6% vs revenues per employee CAGR of 6.7% during the period 2009-12. The year-on-year change in 2013 shows labor cost per employee declining by 23.2% and revenues per employee increasing by 8.3%.
- Revenues grew by 25.3% in 2013, compared to the number of employees growing by 8.0%. This development could be explained by an increasing use of facilities and yards outside Norway through subsidiaries or strategic cooperation agreements. This increases the project cost efficiency and adds support to the 2013 EBITDA level for the larger EPCI/yards subsegment.
- Number of employees grew year-on-year 8%, to 9,833. Announced job reduction during 2014 for this subsegment is approximately 1,800, which if executed, will be a 18.3% reduction from the 2013 employee numbers.
Shipyards
The subsegment comprises shipyards that construct offshore vessels such as platform supply vessels (PSV), anchor handling tug supply vessels (AHTS) and offshore subsea construction vessels (OSCV).

- The offshore vessel niche is increasingly important for Norwegian-based shipyards. In 2012 and 2013, offshore vessels accounted for more than 80% of the entire order backlog for Norwegian shipyards.
- Revenues decreased from 2009-11, before increasing again. Revenues declined by 23.5% in the period 2009-11, and grew by 18.3% from 2011-13.
- Few new offshore vessels were ordered in the aftermath of the financial crisis. Global utilization bottomed out in 2011, which gave rise to new orders and revenue increase in 2011-13. Increasing average fleet age, improved fit for purpose design and more efficient vessels are drivers for the order of increase experienced toward the end of 2011.
- In contradiction to revenues, EBITDA margins and ROCE both peaked in 2011. Actual EBITDA was also at a high point in 2011, which indicates that the profitability is sensitive to the order intake rate. This allows the companies to focus on project management and efficient execution when the market is down.
- The balance sheets decreased toward 2011 as previous years’ strong order books were completed at a higher pace than the order replacement rate. Post 2011 this trend is reversed, as the balance sheets are dominated by work in progress (WIP) and working capital (WC), which grow as new orders are translated into active projects. The profitability for this subsegment is also possibly affected by delivery dates, as project contingencies are released and add or subtract to the bottom line for the accounting year.
- There has been a trend to construct the hulls in low cost countries, particularly Eastern Europe, and then outfit the vessels in Norway. This is likely to have added complexity and additional challenges to many of the projects in the period.
- We also see an increasing trend where Norwegian ship design companies and yard groups with their own ship design sell design, technology, and equipment packages to international offshore shipyards - similar to the development observed in the rig construction market. Whilst this trend reduces the overall revenue potential for Norwegian-based shipyards, it facilitates a more favorable allocation of the project risk.

Top five companies (2013 revenues)
1. Vard Group AS
2. Kleven Verft AS
3. Ulstein Verft AS
4. Havyard Group ASA
5. Simek AS

Norwegian offshore vessel construction, design and technologies have over time captured a significant market share within the international offshore E&P market. However, Norwegian-based yards are experiencing increased competition from international yards with a lower cost base, in particular for the construction scope of the projects.
Consultants and engineering houses
The engineering consultants subsegment includes companies that supply skilled personnel and consultants to the E&P operators and OFS companies.

- Revenues grew by 40.9% from 2010 to 2013, compared to a corresponding growth in the number of employees of 24.0%. This could indicate that engineering consultancy companies have managed to improve their rates as demand for their services has increased. Further, the development can be explained by an increase in the number of independent consultants, not included as a part of the consulting companies’ employees.
- At the same time, the subsegment has been able to contain labor costs development, with labor cost per employee having a CAGR of 3.0% in the period 2010–2013, compared to revenues per employee, which had a CAGR of 4.4%. The smaller companies have had a higher labor cost increase compared to the larger companies. In total, this has resulted in a stable profitability over the period, and with improved capital discipline, a corresponding positive ROCE trend.

The industry cost focus shift since the beginning of 2014 is expected to impact the consultants’ market negatively, both with respect to activity level as well as profitability pressure.

Top five companies (2013 revenues)
1. DNV GL AS
2. Aker Engineering & Technology AS
3. Frontica Advantage AS
4. Frontica Business Solutions AS
5. Omega AS

Workshops and product suppliers
Companies in the workshops and product suppliers subsegment design, develop, fabricate and sell products and systems to offshore installations, rigs and vessels.

- The revenues increased by 15.9% in the period 2010-13, whilst the number of employees increased by 12.2%. The year-on-year revenue increase was 7.9% up to NOK71.4b in 2013.
- Profitability has declined steadily since 2010, explained by increasing cost of goods sold (making up 55.3% of revenue in 2013) and increasing labor costs (24.8% of revenue).
- The increase in labor costs is both a volume and a price effect; personnel cost per employee increased by 10.8% from 2011 to 2013 and the number of employees increased by 8.2%. Considering all segments in the OFS analysis, the picture is reversed; with personnel cost per employee growing by 5.4% and the number of employees growing by 12.0%.
- The workshop and product supplier subsegment is the largest subsegment measured by revenue. It is also export oriented, particularly toward rig and vessel yards in Southeast Asia.
Historically stable development, but challenges expected going forward

About the segment
The operations segment comprises entities that support oil companies in the production phase, including support vessels, modification and maintenance of the production units and logistical services.

We have further split the operations segment into three subsegments:
1. Offshore logistics
2. Maintenance and modification (M&M)
3. Production

Segment highlights
- Revenues in the operations segment increased by 31.3% during 2009-13, with a year-on-year increase in 2013 of 6.0%. The growth has been driven by a general increase in offshore support demand; both in the number of producing fields as well as the life extension of ageing installations.
- The number of employees has grown by 19.1% over the same period, reaching a total of 28,545 employees in 2013.
- 2013 halted the declining EBITDA margin, with an uptick from 16.2% in 2012 to 17.1% in 2013. The companies in this segment are dependent on medium to long term contracts. This is evident by the segment hitting a profitability low point of 6.9% EBIT margin in 2011, before recovering to 9.7% in 2013.
- The current cost reduction focus by E&P operators is likely to challenge both activity levels and profitability levels in the short to medium term.

Key financials

![Graph showing key financials over the years 2009-2013](image)

Number of producing fields on the NCS
increased by 88% in the period 2000-13

![Graph showing number of producing fields on the NCS](image)

Segment composition (2013)

![Pie chart showing segment composition](image)

<table>
<thead>
<tr>
<th>Number of companies</th>
<th>Revenue (NOKm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small &lt; NOK100m</td>
<td>149</td>
</tr>
<tr>
<td>Medium NOK100-1,000m</td>
<td>117</td>
</tr>
<tr>
<td>Large &gt; NOK1,000m</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: NPD
Offshore logistics
The subsegment comprises companies that own offshore vessels such as PSVs, AHTSs and OSCVs, providers of helicopter logistics and supply base and logistics companies.

- Revenues in the offshore logistics subsegment increased year-on-year with 7.6% in 2013, up 31.9% since 2009. The EBITDA margin decreased in the same period. In 2013, the declining profitability trend turned around, as a consequence of increasing activity levels, whilst other operating costs for the subsegment remained stable.
- Offshore logistics is a capital-intensive subsegment, and the number of offshore supply vessels has increased by 69% in the period 2003-13, up to a total of 611 vessels in 2013.
- As seen in the middle right graph, average monthly spot rates have been volatile in the period. This is also true when comparing day rates month by month between the different years. The utilization rate for OSVs has been relatively stable over the last five years, with the market being capable of absorbing new tonnage. The current drop in demand for rigs, combined with additional tonnage being brought to the market, will likely lead to imbalance in supply and demand, affecting both day rates and utilization.
- Aggregated subsegment revenues have been stable in the period, so the volatile day rates have had limited effect on the subsegment overall. The main reasons are the length of supply vessel contracts and the fact that the subsegment comprises not only shipowners.
- Six of the seven largest offshore supply shipping companies have vessels on their Norwegian balance sheets included in this report. These had combined 2013 revenues of NOK8.5 billion, with EBITDA margin, EBIT margin and ROCE at 67.6%, 32.3% and 7.0%, respectively. The companies thus contributed to 23.9% of the subsegment total 2013 revenue.
- The three largest offshore helicopter logistics companies had a combined 2013 revenue of NOK5.4 billion, with EBITDA of 2.6%, thus contributing 15.3% of the subsegment total 2013 revenue.
- The three largest supply base and logistics companies had a combined 2013 revenue of NOK2.8 billion, contributing to 7.8% of the subsegment total 2013 revenue. EBITDA was 8.4%.
- Norwegian-based offshore supply companies are well positioned in the international marketplace within offshore oil and gas production. However, as the current E&P cost focus is an international phenomenon that particularly may hit offshore Arctic and harsh environment development and exploration, it is expected that the international demand will be as uncertain as the case is for the domestic market on the NCS.
Maintenance and modification
The subsegment comprises companies that offer products and services for maintenance and modification (M&M) of offshore installations, including surface treatment, passive fire protection and inspection services.

- Revenue within the M&M subsegment has increased by 35.4% in the period 2009 to 2013, with a year-on-year growth in 2013 of 7.3%. Number of employees increased from 13,836 in 2012 to 14,793 in 2013.
- EBITDA margin has shown a gradual decline during the period, from a high of 10.0% in 2009 to a low of 7.1% in 2013.
- In addition, capital employed has grown by 51.6% during the period, outpacing revenue growth. This resulted in increased downward pressure in ROCE margin, from 23.3% in 2009 to 14.7% in 2013.
- The average salary cost per employee has grown by an average 4.1% per year since 2009. Growth in 2013 was 6.6%. A labor intensive subsegment, M&M personnel cost made up 49.5% of revenues in 2013. Meanwhile, revenue per employee has been relatively flat between NOK1.5m in 2009 and NOK1.6m in 2013. Out of the estimated 5,000 OFS job reductions announced in 2014, approximately 1,500 are expected to be in the M&M subsegment.

Top five companies (2013 revenues)
1. Aker Solutions MMO AS
2. Bilfinger Industrier Norge AS
3. Beerenberg Corp. AS
4. Kaefer Energy AS
5. IKM Testing AS

Production
Companies in the subsegment offer services required in the production phase, such as waste handling, communications and services related to processing.

- The revenues for the subsegment have grown from 2009 to 2013 by 22.5%, with no change in the NOK12.3b subsegment aggregated revenue from 2012 to 2013.
- Profitability as measured by EBITDA margin dropped from 22.5% in 2010 to 15.4% in 2011, and has since stabilized to around 14%. Other operating costs have driven this development, increasing from 17% of revenues in 2009 to 24% in 2012. In 2013 the rate dropped to 20%, but an increase in cost of goods made the EBITDA year-on-year growth less significant.
- Personnel cost for this subsegment has been stable at an average of 32% of the revenue for the last decade. With a total of 4,778 employees, the subsegment has revenue per employee of NOK2.6m.
- The normalized ROCE has been stable at around 5% over the period from 2009 to 2013. The actual ROCE was negative in 2011 because of an extraordinary transaction write-off for one of the subsegment companies.

Top five companies (2013 revenues)
1. APL Norway AS
2. Franzefoss Gjenvinning AS
3. SAR AS
4. Aker Contracting FP ASA
5. Sodexo Mobile Units AS
Decommissioning market growth, but still in its infancy

Decommissioning
The decommissioning segment is not split into any subsegments.

Key financials

Segment composition (2013)

Top five companies (2013 revenues)
1. AF Offshore Decom AS
2. AF Decom AS
3. Oceaneering Nca AS
4. Scanmet AS
5. Cutting Underwater Technologies AS

Segment highlights
- Decommissioning and plugging & abandonment (P&A) form an integral part of the strategic and operational focus of many Norwegian-based OFS companies, which currently have primary operational focus in other segments, and are thus not included here.
- Despite growth in both 2012 and in 2013, the decommissioning segment is still small and the awaited decommissioning wave is yet to be seen. However, the net cash flow for some fields is declining, and a mid- to longer term lower oil price level and more cuts in field operating cost lead to earlier installation retirement than currently planned.
- Costs of phasing out the 500 installations on the NCS is estimated to be NOK160 billion (not including concrete gravity-based structures). Decommissioning in the UK is forecasted to cost £30-35 billion in the period up to 2040 (source: Norwegian Environment Agency).
- There are currently four significant yards with permission to receive decommissioned offshore installations; AF Miljøbase Vats (AF Decom), Kværner Stord, Lutelandet Offshore and Scanmet AS in Hordaland.

Possible decom projects on the NCS (August 2014)
- Ekofisk - four platforms (ConocoPhillips)
- Ekofisk G (ConocoPhillips)
- Jotun B (ExxonMobil)
- Varg, Rev and Gyda (Talisman)
- Valhall (BP)

Source: offshore.no
The Norwegian oil field services analysis 2014
Southern Norway remains the hub of Norwegian OFS activity

Region/clusters
The Norwegian OFS industry is present in every region in Norway, with the southern part of Norway accounting for the largest share of companies and employees.

Several discoveries in the North of Norway have been made in recent years, which has led to increased optimism for significantly higher oil and gas activities in the northern part. Although revenues have increased with an annual growth of 16% CAGR since 2009, the actual activity growth lags behind expectations. Based on the interest in the Barents Sea exploration licenses by E&P operators over the last years, the forecasted growth is well founded, but the timing will depend on when global oil markets stabilize, and the corresponding recovery rate. As this report is based on data sources where company registered addresses are by headquartered location, the absolute activity level in northern Norway is likely to be underestimated.

Activity is highest in the southern part of Norway, and indicators suggest that this region will continue to be the most important region for the OFS industry in the years to come. Most discoveries, fields under development and operating fields, are still in the North Sea. According to the Norwegian Oil & Gas Association, more than 70% of investments in new fields are being directed to the North Sea.

<table>
<thead>
<tr>
<th>Regions</th>
<th>Companies (No.)</th>
<th>Employees (No. 1,000)</th>
<th>Revenue NOKb</th>
<th>Revenue CAGR 2009-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agder</td>
<td>68</td>
<td>9</td>
<td>53.3</td>
<td>6%</td>
</tr>
<tr>
<td>BTV*</td>
<td>74</td>
<td>11</td>
<td>30.1</td>
<td>5%</td>
</tr>
<tr>
<td>Eastern Norway</td>
<td>143</td>
<td>15</td>
<td>73.0</td>
<td>7%</td>
</tr>
<tr>
<td>Hordaland</td>
<td>183</td>
<td>17</td>
<td>51.9</td>
<td>8%</td>
</tr>
<tr>
<td>Møre</td>
<td>109</td>
<td>12</td>
<td>52.1</td>
<td>1%</td>
</tr>
<tr>
<td>Northern Norway</td>
<td>22</td>
<td>1</td>
<td>1.8</td>
<td>16%</td>
</tr>
<tr>
<td>Rogaland</td>
<td>412</td>
<td>51</td>
<td>175.2</td>
<td>8%</td>
</tr>
<tr>
<td>Trøndelag</td>
<td>59</td>
<td>6</td>
<td>15.9</td>
<td>5%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>1,070</td>
<td>122</td>
<td>453.4</td>
<td>6%</td>
</tr>
</tbody>
</table>

* Buskerud, Telemark and Vestfold

The Norwegian oilfield service industry (size of circle indicates the regions share of total revenues) Distribution by official registered company headquarter post address

The Barents Sea
- Potential future dev.: 2
- Fields under dev.: 1
- Fields in production: 1

The Norwegian Sea
- Potential future dev.: 10
- Fields under dev.: 1
- Fields in production: 17

The North Sea – South
- Potential future dev.: 5
- Fields under dev.: 0
- Fields in production: 14

The North Sea – Central
- Potential future dev.: 5
- Fields under dev.: 7
- Fields in production: 21

The North Sea – North
- Potential future dev.: 9
- Fields under dev.: 3
- Fields in production: 29

The North Sea – Central
- Potenential future dev. 5
- Fields under dev. 7
- Fields in production 21

The Barents Sea
- Potential future dev. 2
- Fields under dev. 1
- Fields in production 1

The North Sea – South
- Potential future dev. 5
- Fields under dev. 0
- Fields in production 14

The North Sea – North
- Potential future dev. 9
- Fields under dev. 3
- Fields in production 29
Activity going forward

The outlook for the industry has deteriorated over the past year. Investments by E&P companies on the NCS, which is a major demand driver for Norwegian OFS firms, are expected to decline by 15% in 2015 following an increase of 3% in 2014. If oil prices remain at the January 2015 level of around US$50 per barrel, there is a risk of further cuts to this estimate.

The decline in the NCS investment follows several years with high activity. Many large field developments, such as Ekofisk, Martin Linge, Goliath, Edvard Grieg and Valemon, are now past their peak in annual expenditures, while the pipeline of new projects is more limited prior to the Johan Sverdrup development toward the end of this decade. In 2014, only one plan for development and operations (PDO) was submitted, while the PDOs for the Maria, Vette and Johan Sverdrup developments are expected to be submitted during the beginning of 2015.

Looking beyond 2015, the outlook depends on how the oil price will develop. At the prevailing prices as of January 2015, developments of fields such as Johan Castberg in the Barents Sea are probably not profitable. Reducing costs and increasing productivity in the OFS industry may to some extent reduce the break-even prices of some developments, but even accounting for this oil prices need to be closer to US$70-80 per barrel to avoid further declines in NCS investments from 2016 onwards. This was confirmed by forecasts released by the Norwegian Petroleum Directorate (NPD) in January 2015, in which NCS investments were projected to fall by another 8% from 2015 to 2017, before increasing somewhat toward 2019.

Exports constitute another key demand driver for the Norwegian OFS industry. Large E&P firms have recently announced cuts in the 2015 CAPEX budgets, and analysts expect that global E&P CAPEX spending will fall by 20%-25% in 2015 (measured in US$). As measured in NOK, this will constitute a much smaller decline, since if the US$/NOK rate stays at around 7.50 for the remainder of 2015, this will imply an almost 20% increase in the US$/NOK from 2014. Hence, the global E&P spending in 2015 would then only experience a decline of 5%-10% measured in NOK.

Our analysis of the currency effect for the Norwegian OFS sector’s revenue and margins is based on a high level review of export-oriented revenue and non-NOK contracts on the NCS, adjusted for currency hedging and instances where a company’s cost base is in a foreign currency. In addition, the weakening of the Norwegian krone improves the competitive position of Norwegian firms.

Effects on the OFS industry

The worsening outlook has varying implications on the different segments of the OFS industry. Several EFI and M&M firms have already announced job cuts, and are experiencing diminishing order books at the start of 2015. At the same time, segments with longer contracts and larger order books can expect to be shielded from the worst developments at the beginning of 2015. However, once contracts expire, these companies can expect a more challenging market with lower prices. This is what was observed following the financial crisis and the oil price collapse in 2008. Total revenues in the OFS industry continued to grow in 2009 before declining in 2010. The full effects of the current downturn may therefore not be visible in the companies’ financial accounts until 2016.
Growth deteriorating and margin pressure in the OFS industry

**Sum of OFS segments**
- Based on available sources such as quarterly reporting from listed OFS firms and expected relationships between macro variables and individual segments, we have made projections for the activity levels in the OFS industry in 2014 and 2015. These forecasts are uncertain, but our aim is to provide some guidance on key industry trends.
- Overall, we project a growth in total revenues of 4% in 2014 and a decline in 2015 of 7%. This is down from the 9% growth rate observed in 2012-13. 2014 thus appears to be a preliminary peak in total revenues.

**Reservoir/seismic**
- Revenues in the segment have historically been correlated with next year’s exploration expenses, which indicates that segment revenues declined in 2014 (based on expected 2015 exploration expenses). On the other hand, a large part of the segment revenues are generated from operations outside the North Sea, where operations in North America have been a high growth area.
- Aggregated, listed reservoir/seismic groups have delivered stable 2014 revenues, giving an indication of the overall segment performance.
- Combined, we expect a slight decline in aggregated segment revenues in 2014 and EBIT margins moving down from the high values seen in 2012-13, to a more normalized level slightly below 25%. The E&P spending cuts, as well as guidance from listed firms, indicate that revenues will decline in 2015.

**E&P drilling**
- The number of E&P wells drilled on the NCS decreased from 225 in 2013 to 220 in 2014, as there were five fewer production wells being drilled in 2014 compared to 2013.
- Rig rates remained stable through 2014, mainly due to continued operations under contracts signed in previous years, as few new rigs were chartered during the year.
- The rig rates are generally considered to be under pressure. In recent months, several rigs have been sitting idle in quays along the coast. Rigs under construction will also add to supply over the coming years, whereas demand will at best remain mostly flat. Still, three quarters of the currently active rigs on the NCS have contracts lasting throughout 2015. The contract prices are mainly denominated in US$, which means that 2015 revenues in this subsegment will obtain a boost from the weakening NOK. Still, there is a risk that the E&P companies will terminate contracts to cut drilling costs or renegotiate better terms, providing a downside risk to our 2015 revenue forecast.
- High global new-build activity for rigs has boosted revenues and backlog for rig equipment players. The current strong rig order book supports revenue growth in the rig equipment subsegment for 2015. However, the outlook beyond 2015 seems less certain, as the rig new-build market is expected to experience order draught and current new-builds contracts and options could be canceled.
- We project a modest revenue growth for the segment in 2014, before revenues decline slightly in 2015. We expect margins to develop negatively in both years.

**Engineering, fabrication and installation**
- We expect revenues in the segment to grow slightly in 2014, before decreasing in 2015. The decline is strongest in NCS-exposed subsegments, such as yards, which could see revenues drop by as much as 30%. More export-oriented subsegments such as subsea will benefit from the weakening currency that partly offsets falling global demand.
- Margins are expected to fall somewhat with lower activity. However, historical relationships suggest that EBITDA margins are not strongly correlated with activity levels, and we therefore do not forecast material decrease in profitability.
Considering shipyards, activity has been stable through 2014, however revenues have been lower compared to 2013. Current order books of close to 70 vessels, with a total value of approximately NOK35b gives confidence in 2015 and 2016. However, approximately 90% of the order book value comes from OSV, and Norwegian yards have already experienced cancellations of OSV due to the current market situation.

**Operations**
- E&P NCS operators have previously announced cuts in spending on maintenance and modifications, and we expect a decline in this subsegment in 2015, following a stagnant 2014.
- The offshore logistics subsegment is forecasted to experience a small decline in revenues. However, offshore vessels are still being built, with new-builds annually adding almost 10% to the fleet in some niches. This increase in supply into a market with stagnating demand will put pressure on margins. Combined with high financial leverage in this subsegment, we expect some challenging years for offshore supply vessel owners.

**Decommissioning**
- To some degree, the segment is negatively correlated with the rest of the OFS industry, as the optimal date of decommissioning a facility could be moved closer when the oil price outlook deteriorates.
- We expect to see stable growth in 2014 and 2015, at approximately the same rate as observed in 2012-13.
Accounting information is publicly available from the Brønnøysund Register Center. The companies' business addresses as registered by the same register have been used to reflect the entities' geographic location. The number of companies included in the analysis will vary somewhat due to lack of available financial information.

We have used the stand-alone financial statements for each legal entity to obtain the information used in our analysis. As a result, large corporations have been analyzed as a series of individual companies and not as a consolidated group, in order to get a more detailed demographic view with regards to location and activities across the supply chain. 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. A limited number of annual reports were not made available by the time this report was prepared, in which case 2013 figures have been modeled based on previous year.

A company is defined as a Norwegian OFS company if:

• At least 50% of its turnover is generated in the oil and gas sector.
• It is a Norwegian registered company.

Categorization
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/seismic
• E&P drilling
• Engineering, fabrication and installation
• Operations
• Decommissioning

Each of these categories is further broken down into subsegments to capture the huge diversity in the industry.

Companies have been categorized according to the value chain segment in which they generate the majority of their revenues.

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 (Sør- and Nord Trøndelag)
• Northern Norway (Nordland, Troms and Finnmark)
• Eastern Norway (Oslo, Akershus, Oppland, Østfold and Hedmark)

Calculations

• EBIT = pre-tax operating profit
• Capital employed = total assets – financial long-term investments – (trade creditors + tax payable + public duties payable)
• ROCE (Return on Capital Employed) = EBIT/capital employed
• Cash-conversion-cycle: CCC = DIO + DSO – DPO
• DIO and DPO calculated by use of COGS, DSO by use of sales
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHTS</td>
<td>Anchor Handling Tug Supply</td>
</tr>
<tr>
<td>Avg.</td>
<td>Average</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compound Annual Growth Rate</td>
</tr>
<tr>
<td>CAPEX</td>
<td>Capital Expenditures</td>
</tr>
<tr>
<td>CCC</td>
<td>Cash-Conversion-Cycle</td>
</tr>
<tr>
<td>DIO</td>
<td>Days of Inventory Outstanding</td>
</tr>
<tr>
<td>DPO</td>
<td>Days of Payable Outstanding</td>
</tr>
<tr>
<td>DSO</td>
<td>Day of Sales Outstanding</td>
</tr>
<tr>
<td>EBIT</td>
<td>Earnings Before Interest, Taxes (Pre-tax operating profit)</td>
</tr>
<tr>
<td>EBITDA</td>
<td>Earnings Before Interest, Taxes, Depreciation and Amortization</td>
</tr>
<tr>
<td>EFI</td>
<td>Engineering, Fabrication and Installation</td>
</tr>
<tr>
<td>EPCI</td>
<td>Engineering, Procurement, Fabrication and Installation</td>
</tr>
<tr>
<td>E&amp;P</td>
<td>Exploration &amp; Production</td>
</tr>
<tr>
<td>IMR</td>
<td>Inspection, Maintenance and Repair</td>
</tr>
<tr>
<td>M&amp;M</td>
<td>Maintenance &amp; Modifications</td>
</tr>
<tr>
<td>MPD</td>
<td>Meter per Day</td>
</tr>
<tr>
<td>NCS</td>
<td>Norwegian Continental Shelf</td>
</tr>
<tr>
<td>NOK</td>
<td>Norske krone/Norwegian Krone</td>
</tr>
<tr>
<td>NPD</td>
<td>Norwegian Petroleum Directorate</td>
</tr>
<tr>
<td>OEM</td>
<td>Original Equipment Manufacturers</td>
</tr>
<tr>
<td>OFS</td>
<td>Oilfield Services</td>
</tr>
<tr>
<td>OPEX</td>
<td>Operating Expense</td>
</tr>
<tr>
<td>OSCV</td>
<td>Offshore Subsea Construction Vessel</td>
</tr>
<tr>
<td>PSV</td>
<td>Platform Supply Vessel</td>
</tr>
<tr>
<td>ROCE</td>
<td>Return On Capital Employed</td>
</tr>
<tr>
<td>ROP</td>
<td>Rate Of Penetration</td>
</tr>
<tr>
<td>SURF</td>
<td>Subsea Umbilicals, Risers and Flowlines</td>
</tr>
<tr>
<td>WC</td>
<td>Working Capital</td>
</tr>
<tr>
<td>WIP</td>
<td>Work in Progress</td>
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</table>
## Appendix: EBITDA per subsegment and size

<table>
<thead>
<tr>
<th>Subsegment</th>
<th>Size</th>
<th>2009 EBITDA (%)</th>
<th>2010 EBITDA (%)</th>
<th>2011 EBITDA (%)</th>
<th>2012 EBITDA (%)</th>
<th>2013 EBITDA (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reservoir/ Seismic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultants</td>
<td>All</td>
<td>27%</td>
<td>27%</td>
<td>43%</td>
<td>38%</td>
<td>48%</td>
</tr>
<tr>
<td>Equipment</td>
<td>All</td>
<td>18%</td>
<td>27%</td>
<td>17%</td>
<td>35%</td>
<td>31%</td>
</tr>
<tr>
<td><strong>E&amp;P drilling</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rig companies</td>
<td>Small</td>
<td>-10%</td>
<td>13%</td>
<td>27%</td>
<td>51%</td>
<td>17%</td>
</tr>
<tr>
<td>Rig companies</td>
<td>Medium</td>
<td>20%</td>
<td>27%</td>
<td>20%</td>
<td>24%</td>
<td>25%</td>
</tr>
<tr>
<td>Rig companies</td>
<td>Large</td>
<td>14%</td>
<td>11%</td>
<td>12%</td>
<td>7%</td>
<td>13%</td>
</tr>
<tr>
<td>Rig equipment</td>
<td>Small</td>
<td>9%</td>
<td>14%</td>
<td>3%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Rig equipment</td>
<td>Medium</td>
<td>7%</td>
<td>9%</td>
<td>15%</td>
<td>15%</td>
<td>13%</td>
</tr>
<tr>
<td>Rig equipment</td>
<td>Large</td>
<td>19%</td>
<td>20%</td>
<td>21%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>Well services</td>
<td>Small</td>
<td>4%</td>
<td>5%</td>
<td>4%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>Well services</td>
<td>Medium</td>
<td>17%</td>
<td>18%</td>
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<td>20%</td>
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<td>15%</td>
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<td>10%</td>
</tr>
<tr>
<td><strong>Engineering, fabrication and installation</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Subsea</td>
<td>Small</td>
<td>4%</td>
<td>3%</td>
<td>5%</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>Subsea</td>
<td>Medium</td>
<td>10%</td>
<td>7%</td>
<td>6%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Subsea</td>
<td>Large</td>
<td>10%</td>
<td>11%</td>
<td>8%</td>
<td>9%</td>
<td>13%</td>
</tr>
<tr>
<td>Larger EPCI/Yards</td>
<td>Small</td>
<td>-15%</td>
<td>-42%</td>
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<td>-20%</td>
</tr>
<tr>
<td>Larger EPCI/Yards</td>
<td>Medium</td>
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<td>-3%</td>
<td>2%</td>
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<td>6%</td>
</tr>
<tr>
<td>Larger EPCI/Yards</td>
<td>Large</td>
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<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>6%</td>
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<tr>
<td>Ship yards</td>
<td>Medium</td>
<td>1%</td>
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<td>-1%</td>
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<tr>
<td>Ship yards</td>
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<td>14%</td>
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<td>8%</td>
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<tr>
<td>Consultants</td>
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<tr>
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<td>7%</td>
<td>4%</td>
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</tr>
<tr>
<td>Consultants</td>
<td>Large</td>
<td>8%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Workshops and product suppliers</td>
<td>Small</td>
<td>9%</td>
<td>5%</td>
<td>6%</td>
<td>8%</td>
<td>7%</td>
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<td>5%</td>
</tr>
<tr>
<td><strong>Operation</strong></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Offshore logistics</td>
<td>Small</td>
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<td>21%</td>
<td>14%</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>Offshore logistics</td>
<td>Medium</td>
<td>34%</td>
<td>28%</td>
<td>28%</td>
<td>26%</td>
<td>29%</td>
</tr>
<tr>
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<td>Large</td>
<td>17%</td>
<td>17%</td>
<td>16%</td>
<td>17%</td>
<td>21%</td>
</tr>
<tr>
<td>Maintenance &amp; Modification</td>
<td>Small</td>
<td>9%</td>
<td>6%</td>
<td>8%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Maintenance &amp; Modification</td>
<td>Medium</td>
<td>11%</td>
<td>8%</td>
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<tr>
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<td>Large</td>
<td>9%</td>
<td>10%</td>
<td>8%</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Production</td>
<td>Small</td>
<td>1%</td>
<td>6%</td>
<td>3%</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td>Production</td>
<td>Medium</td>
<td>28%</td>
<td>26%</td>
<td>18%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Decommissioning</strong></td>
<td>General</td>
<td>All</td>
<td>11%</td>
<td>13%</td>
<td>8%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Note that figures for subsegments with a small number of companies within a size class has been excluded.
About EY

An integrated international network of oil and gas professionals

Scale
- 200 professionals in Norway focusing on clients within the oil and gas sector.
- North Sea Team established for seamless support to clients operating across the North Sea.
- An established global network of more than 10,000 experienced professionals supported by 15 oil and gas centers of excellence situated in key locations for the industry.

Oil and gas expertise
- EY has been advising the oil and gas sector for more than 100 years.
- EY ranks first among all organizations in providing external audit services to public companies (including oil and gas companies) in the Fortune 1000.
- Our capabilities are focused around energy centers of excellence and include:
  - Transaction Advisory
  - Assurance
  - Advisory
  - Taxation

EY’s Global Oil & Gas Centers

Europe, Middle East, India and Africa
5,100 professionals

Asia-Pacific and Japan
1,400 professionals

Americas
3,500 professionals
Thought leadership

EY’s Global Oil & Gas Center keeps you updated with monthly thought leadership publications, exploring the latest developments within the sector. Our deep industry knowledge can help you anticipate trends, manage regulatory changes, drive down costs and compete more effectively.

**Fuelling the next generation: A study of the UK upstream oil and gas workforce**

As part of the Oil & Gas Industrial Strategy, EY was commissioned by Oil & Gas UK, OPITO and BIS, to produce a report identifying the current workforce profile and the employment disciplines that will be in greatest demand over the next two to five years.

**Spotlight on oil and gas megaprojects**

*Spotlight on Megaprojects* kicks off a series that explores capital projects in the oil and gas industry. We researched the performance of 365 oil and gas megaprojects and found that 64% are facing cost overruns and 73% are reporting schedule delays. Take a closer look at why this happens and what we can do to help.

**Global oil and gas tax guide 2014**

The Global oil and gas tax guide summarizes the oil and gas corporate tax regimes in 74 countries and also provides a directory of EY Oil & Gas tax contacts. Our guide can help our clients implement local legislation, which varies greatly from general corporate tax regimes.

**Navigating geopolitics in oil and gas**

Geopolitics is a central concern for the oil and gas sector and can be viewed as a source of both risk and opportunity. The trend toward more nationalistic and assertive political behavior indicates global instability is on the rise. So it is no coincidence that one of the top risks facing oil and gas companies, as identified by EY in our most recent risk study, was geopolitics.

**Global oil and gas reserves study**

The Global oil and gas reserves study is a compilation and analysis of certain oil and gas reserve disclosure information as reported by companies in their annual reports filed with the United States (US) Securities and Exchange Commission (SEC) or in their publicly available annual reports.

**Global oil and gas capital confidence barometer**

EY’s Capital Confidence Barometer is a regular survey of senior executives from oil and gas companies around the world conducted by the Economist Intelligence Unit (EIU). This snapshot of our findings gauges corporate confidence in the economic outlook and identifies boardroom trends and practices in the way companies manage their capital agenda.

**African oil and gas: driving sustainable growth**

Africa is on an upward growth curve, and Africa’s growth is both real and sustainable. Its growth is underpinned by a longer term process of social, political and economic reform that has occurred across much of the continent since the end of the Cold War and the Apartheid era; a period during which regulatory and legal systems strengthened, and many African economies opened up to international trade and investment.

**Competing in the global LNG market**

There’s no denying Canada’s potential in the global LNG market, but success for players won’t come easily. See which factors will determine their competitiveness.
The Norwegian oil field services analysis 2014
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How EY's Global Oil & Gas Center can help your business

The oil and gas sector is constantly changing. Increasingly uncertain energy policies, geopolitical complexities, cost management and climate change all present significant challenges. EY's Global Oil & Gas Center supports a global network of more than 10,000 oil and gas professionals with extensive experience in providing assurance, tax, transaction and advisory services across the upstream, midstream, downstream and oilfield service subsectors. The Center works to anticipate market trends, execute the mobility of our global resources and articulate points of view on relevant key sector issues. With our deep sector focus, we can help your organization drive down costs and compete more effectively.

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