ALL INDICATORS IN THE RED

OPPORTUNITIES IN WORKING CAPITAL MANAGEMENT
Oilfield equipment & services industry performance in 2015: all indicators in the red

With oil prices down 60% from mid-2014, oil & gas industry activity down across the board and operators pressuring their suppliers to offer 15-30% price concessions, 2015 has been a perfect storm for the oilfield equipment and services industry. All indicators were in the red in 2015. Shareholder value shrunk by a third on average, with regional players (Regional Diversified and Focused) hit hardest, in large part due to their lack of scale and their greater focus on the hardest hit resource, US shale. The oilfield industry’s financial

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PROFITS DOWN, NEGATIVE GROWTH, RISK UP
Oilfield industry financial performance dashboard 1)
Source: Capital IQ, Roland Berger

<table>
<thead>
<tr>
<th>Growth</th>
<th>2015</th>
<th>2014</th>
<th>2012-2014 AVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue growth [year-on-year]</td>
<td>-25%</td>
<td>5%</td>
<td>7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Profits</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT margin</td>
<td>8%</td>
<td>14%</td>
<td>14%</td>
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</table>

<table>
<thead>
<tr>
<th>Capital productivity</th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Working capital [as % of sales]</td>
<td>23%</td>
<td>22%</td>
<td>23%</td>
</tr>
<tr>
<td>Asset turnover</td>
<td>0.5x</td>
<td>0.6x</td>
<td>0.6x</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Debt/EBITDA</td>
<td>3.6x</td>
<td>2.2x</td>
<td>2.2x</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Winner’s metrics</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>ROIC-WACC</td>
<td>-13%</td>
<td>-5%</td>
<td>-3%</td>
</tr>
<tr>
<td>Invested capital growth</td>
<td>-7%</td>
<td>-3%</td>
<td>5%</td>
</tr>
<tr>
<td>% of industry earning cost of capital (ROIC &gt; WACC)</td>
<td>3%</td>
<td>34%</td>
<td>38%</td>
</tr>
</tbody>
</table>
performance collapsed in 2015, as demonstrated by the change in the key growth and risk-adjusted profit metrics which in our view set the basis for shareholder value expectations. Invested capital, the sum of debt and equity invested into the oilfield industry, shrunk by 7% in 2015, driven by declines in short-term assets and write-downs of long-term assets to reflect the new “lower for longer” expected oil price and oilfield demand environment. Global Integrated players were the exception, with Schlumberger and Halliburton raising funds to finance large announced acquisitions (Cameron and Baker Hughes). Oilfield industry returns were on average significantly lower than the cost of capital – across all oilfield player types – and the percentage of capital earning its cost of capital fell from about one third in 2014 to virtually none in 2015. Even industry leaders Schlumberger and Halliburton were not able to create value. Consistent with shareholder returns, Regional Diversified and Focused players destroyed the most value on average. Interestingly, despite reports of exaggerated price inflation and fat margins, the overall oilfield equipment and services industry did not earn its cost of capital on average over 2012-2014: the 2015 oil price downturn merely worsened an already unprofitable oilfield equipment and services industry situation.

Turning to conventional P&L and balance sheet metrics underlying our two growth and risk-adjusted profit measures confirms the challenging environment for the oilfield industry. Overall revenues were down by 25% in 2015 – a reflection of steep capital and operating expenditure cuts by operators. EBIT margins as a percentage of revenues were almost halved, significantly cutting into oilfield players’ cash flow. US onshore resources and oil exploration and development activities saw the greatest capital expenditure cuts by oil & gas operators. As a consequence, players exposed to these segments saw the greatest revenue decline (up to 50%) and margin compression – down to negative EBIT margins for the majority of US onshore or oil exploration and development services providers. In contrast, the global uptick in oil production supported demand for production-related equipment and services: oilfield production services suppliers saw the smallest revenue and margin declines – with offshore equipment suppliers like Cameron or Technip actually seeing higher revenues and margins in 2015 while winding down the strong backlogs amassed in the years before the downturn.

The decline in profits drove a sharp increase in solvency risk, with debt to EBITDA ratios increasing from 2.2x to 3.6x, resulting in many players being in breach of debt covenants. Industry participants turned to strict cash discipline, and were on average able to drive working capital down in line with revenues, thereby generating cash to finance investments and strengthen balance sheets.

Despite significant performance challenges, the oilfield industry structure did not change significantly in 2015. M&A activity was down by 50% vs. 2014, and the largest deal, Halliburton’s takeover of Baker Hughes, is now the target of a Department of Justice antitrust lawsuit. A blocking of the deal would remove a mechanism for significant spare capacity reduction in certain service segments. Few bankruptcies were observed and most were concentrated within the most financially challenged industry segments like offshore exploration, offshore drilling, and US hydraulic fracturing. This should change in 2016 if oil prices and industry conditions do not improve.
2) Real growth adjusted by historical rate of inflation: 1.0% p.a. on average
Opportunities in working capital management to navigate the downturn and position for the recovery

As we discussed above, declining operating profits and tightening capital markets forced oilfield suppliers to shift from growth to cash conservation mode. Representing about 40% of the capital invested in the industry in 2014, working capital became a significant potential source of cash. On average, oilfield suppliers were able to reduce working capital in line with revenues in the downturn (stable ratio of ~23% over 2014-2015), releasing nearly USD 22 billion in cash. Overall industry cash flow was negative however, once the USD 10-11 billion of capital raised by Schlumberger and Halliburton to fund planned Cameron and Baker Hughes acquisitions is excluded. Operating cash flow was not sufficient to cover investing activities, which implies that, on average, none of the cash released from working capital ended up on balance sheets.

This poses a significant problem to the industry going forward. With oil prices and industry activity expected to remain stable in 2016, operating profits are unlikely to improve – in fact Q1 2016 will be worse than Q4 2015 – and revenues are unlikely to drop as a sharply over 2015-2016 as they did the year before, making it more difficult for companies to release cash from normal course working capital reductions. Unless step change reductions can be achieved in working capital levels, industry cash flow could come down further in 2016, shrinking cash balances and, along with deteriorating solvency ratios, making it difficult for many oilfield suppliers to comfortably manage the refinancing of debt due in 2016 and 2017 (USD 35 billion in total). Additionally, when oil prices recover and industry activity starts to grow significant amounts of cash will be required to invest in growth working capital – 22 cents for each US dollar of revenue growth on average. Oilfield suppliers with the strongest balance sheet and cash reserves will be best positioned to pounce in such a recovery.
Looking more closely at working capital performance quartiles reveals significant savings opportunities exist across the industry. We analyze working capital levels by business type, recognizing that different equipment and services models exist within the oilfield industry (sometimes within individual company’s portfolios), each with specific types working capital requirements:

- Manufacturers of equipment or materials (e.g. proppants, drill bits)
- Lessors of capital goods (e.g. drilling rig services, supply vessels services)
- Providers of people or knowledge-based services (e.g. directional drilling, casing & tubing)
- Project management services providers (e.g. engineering, procurement, construction and maintenance services)

The analysis demonstrates that top performing businesses consistently achieve ~10% better working capital levels as a ratio of sales vs. median levels, with the greatest gaps in accounts receivable and inventory levels. Inventory management in particular is a significant issue for companies with equipment or materials manufacturing businesses: median inventory levels at 30% of sales represent significant amounts of stranded cash.

To identify savings opportunities, suppliers first need to map out the location of working capital in their businesses, and adjust the amount of capital that is structural i.e. relates to their business strategy and cannot be improved without a change in direction – for example, since National Oil Companies (NOCs) typically require longer payment terms, suppliers with significant NOC exposure will carry more receivables. The non-structural remainder of working capital can be benchmarked to identify optimization opportunities. In our work, we have found that many multi-regional onshore players lack strong receivables management approaches – a function of the regional nature of the business.

Significant savings can be achieved through harmonization of pricing and terms policies across regions and geographies or improvement of the efficiency and cadence of collection processes. Inventory is also often a rich area to look for optimization opportunities – many companies have maintained ordering levels and buffer stocks consistent with high levels of oilfield activity and associated shortages in materials and capacities. One small cap oilfield supplier was able to reduce working capital spend by half in a matter of months by revamping its procurement and supply chain approaches. If the average oilfield supplier improves working capital to the top quartile performers’ level, up to USD 25 billion of cash could be released – the equivalent of 75% of debt due over 2016-2017 or 18 months of operating profits, as measured based on 2015!

There is much at stake for oilfield suppliers – reducing working capital levels can provide cash to sustain operations for several quarters if the downturn persists. As importantly, it can significantly reduce growth capital needs in the eventual oil activity recovery.
1) Net operating profit after tax, with depreciation added back
2) Includes foreign exchange effects

1) Top performance equal to median of top quartile
2) Bottom performance equal to median of bottom quartile

**ALL CASH RELEASED FROM WORKING CAPITAL CONSUMED IN INVESTING ACTIVITIES**

OFS industry cash flow and cash balance, Q1-Q4 2015 [USD bn]
Source: Capital IQ, Roland Berger

<table>
<thead>
<tr>
<th>EoY 2014 cash balance</th>
<th>Cash from operations ex-working capital</th>
<th>Decrease in working capital</th>
<th>Capex and other investments</th>
<th>Financing activities, other</th>
<th>EoY 2015 cash balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.5</td>
<td>15.9</td>
<td>21.9</td>
<td>-37.6</td>
<td>7.3</td>
<td>48.1</td>
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**INDUSTRY BEST PRACTICES REVEAL WORKING CAPITAL SAVINGS OPPORTUNITIES ON THE ORDER OF 10% OF SALES**

Working capital benchmarking by business type [2015, % of sales]
Source: Capital IQ, Roland Berger

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Leasing</th>
<th>Service</th>
<th>EPCM</th>
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<tbody>
<tr>
<td>57</td>
<td>24</td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td>41</td>
<td>16</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>21</td>
<td>16</td>
<td>12</td>
<td>22</td>
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</tbody>
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**ACCOUNTS RECEIVABLE**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Leasing</th>
<th>Service</th>
<th>EPCM</th>
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</thead>
<tbody>
<tr>
<td>42</td>
<td>24</td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td>30</td>
<td>17</td>
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</tr>
<tr>
<td>11</td>
<td>10</td>
<td>11</td>
<td>10</td>
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</table>

**INVENTORY**

<table>
<thead>
<tr>
<th>Equipment</th>
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<th>Service</th>
<th>EPCM</th>
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<td>42</td>
<td>22</td>
<td>12</td>
<td>15</td>
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</tr>
<tr>
<td>42</td>
<td>22</td>
<td>12</td>
<td>15</td>
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**ACCOUNTS PAYABLE**

<table>
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<th>Equipment</th>
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<tbody>
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<td>8</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
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</table>
Appendix: Roland Berger Winners’ metrics

When developing their expectations of financial performance of a company, investors, both implicitly or explicitly, are analyzing its profitability and growth potential, and adjusting these metrics for risk. Typically, investors will develop a financial forecast to build a free cash flow model. Revenue growth will be used as the growth metric, EBIT margin percentage as the profitability metric, and the cost of capital representing the risk adjustment. We believe the best metric to analyze growth is the real growth in the invested capital of a company, which represents the capital on a company’s books which finances its assets. It is a better metric to measure growth compared to revenues, which is more commonly used. Revenue trends can be misleading due to price volatility, driven by raw material fluctuations or supply and demand dynamics. Invested capital growth measures the growth in assets and represents additional investment into the enterprise, and is not as affected by raw material price changes. We believe the best metric to measure risk-adjusted profitability takes the difference between the return on invested capital (ROIC) and the weighted average cost of capital (WACC). It is better than EBIT margin because it is a normalized metric, which measures not only profitability, but the amount of capital required to generate the profitability. EBIT margins provide no perspective on the capital intensity of a company and therefore may be misleading when comparing companies with different business models.

THE RIGHT METRICS TO MEASURE GROWTH, PROFITABILITY, AND RISK
Source: Roland Berger

\[
\text{Invested capital} = \text{Total Debt} + \text{Total Equity}
\]

\[
\text{Risk-adjusted profitability} = \frac{\text{ROIC} - \text{WACC}}{\text{Invested Capital}}
\]

\[
\text{ROIC} = \frac{\text{NOPAT}}{\text{Invested Capital}}
\]

\[
\text{WACC} = \frac{\text{Cost of Equity} \times \text{Equity} + \text{After Tax Cost of Debt} \times \text{Debt}}{\text{Invested Capital}}
\]

See page 9 for company types
1) Based on 100 publicly traded service companies analyzed over 2004-2013

**OILFIELD SERVICES COMPANY TYPES**

Source: Roland Berger

**SERVICE CATEGORY BREADTH**

- **Focused**: Revenues driven by one service category in select oil & gas basins
  - FTS
  - Trican
  - TGS Nopec
  - Newpark

- **Regional Diversified**: Revenues driven by a broad range of service categories in one or select oil & gas basins
  - Patterson-UTI
  - Basic Energy Services
  - RPC
  - C&J Energy Services
  - Superior Energy Services

**GEOGRAPHIC BREADTH**

- **Single basin**
  - FTS
  - Trican
  - TGS Nopec
  - Newpark

- **All global basins**
  - Helmerich & Payne
  - Transocean
  - FMC Technologies
  - Nalco Champion

- **Category Leader**: Revenues driven by one or multiple service categories across major global oil & gas basins, with a comprehensive technology and product portfolio in each category
  - Helmerich & Payne
  - Transocean
  - FMC Technologies
  - Nalco Champion

- **Global Integrated**: Revenues driven by a comprehensive service category offering across major global oil & gas basins, with the ability to provide integrated services
  - Weatherford
  - Global Integrated
  - Baker Hughes
  - Halliburton
  - NOV
  - Schlumberger
Presenting Roland Berger most recent studies

THINK ACT – THE WINNERS: HOW CHEMICAL COMPANIES DELIVER SUPERIOR SHAREHOLDER VALUE

As part of our extensive strategy work in the chemical industry, we have observed that chemical companies deliver a very wide range of shareholder returns (dividends and capital gains). We thus set out to investigate how chemical companies create value for their shareholders.

THINK ACT – A NEW AGE DAWNS FOR OILFIELD SERVICES

Oilfield services players will need to adapt to a lower oil price environment due to anticipated consolidation in the oil & gas industry and changes in operator buying behaviors. Different oilfield services models can benefit – the most agile players will take advantage of a highly dynamic oilfield services environment over the next few months to evolve and merge as new industry leaders in select categories, with the ability to compete against the giants, Schlumberger and Halliburton.

THINK ACT – REToolING FOR THE “NEW NORMAL” OIL & GAS INDUSTRY ENVIRONMENT

Roland Berger’s recent study describes how oilfield equipment and services suppliers should adapt to survive and succeed in the “new normal” future oil industry environment characterized by lower oil prices and higher volatility and cyclicality. The study discusses how oil & gas operators’ needs are changing in this context and explores four themes that suppliers can embrace to rethink their strategies, operating models, and organizations. The study illustrates that oilfield equipment and services industry leaders who proactively adopted the above four approaches have been performing better than their peers during the downturn. With USD 50 per barrel of oil as the new USD 100, it is time for others to follow.

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