May 2017

Roland Berger Focus

Oilfield Equipment and Services Winners 2016
Annual industry review

Roland Berger

50 YEARS navigating complexity

Management summary

A tough year for the oil and gas industry, 2016 started with prices dipping to sub-30 USD/bbl levels and ended with meek optimism regarding an upcoming recovery. In 2016, virtually no companies returned their cost of capital, industry revenues dropped by 26%, industry EBITDA margins slipped from 20% to 16%, invested capital fell by 10%, and many players broke debt covenants, with the number of bankruptcies doubling from 2015. Despite bleak industry performance, the oil & gas equipment and services industry's stock performance markedly improved in the second half of the year driven by increased investor confidence in an emerging oil and gas recovery and the ability for the equipment and services industry to profitably grow from it. Shareholder value in the sector increased 36% in 2016 compared to 12% for the S&P 500 index.

North America onshore became the hotbed of activity recovery in the second half of 2016 with rig count increasing by 70% between May and December. Equipment and services suppliers with high North America land exposure saw their revenues rise by 21% in the second half of the year. However, this growth was profitless. EBITDA margins hovered around 10% – half of their pre-downturn levels, despite clear improvements in SG&A spending. North American onshore suppliers were unable to materially increase prices, and faced higher incremental costs as they quickly re-commissioned plants, equipment and other assets that had been idling during the downturn. Going forward, North American onshore suppliers have a difficult task: continue to grow while improving margins to achieve acceptable returns, in a low oil price environment.

While the North American oil industry outlook is promising, oil & gas equipment and services companies in this space have a lot to live up to. Falling into old habits will not create winners.

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Photo: zhengzaishuru / iStockphoto

Section 1:

Another tough year, but a recovery in sight

Oilfield Equipment & Services industry performance in 2016.

The year started quite poorly for oil & gas equipment and services suppliers, with WTI oil prices slipping to sub-30 USD/bbl levels and upstream activity falling to a 15-year low in the first quarter. The second half of the year was more promising, with prices stabilizing around USD 50 per barrel, and the joint OPEC and Russia production cuts generating a cautious optimism regarding an upcoming recovery. Overall, the year was even more challenging than 2015, as the backlogs and hedging that had initially supported operators and their spending through much of 2015 dissipated. As a consequence, the oilfield equipment and services industry's financial performance was bleak throughout the year, worsening from already dismal 2015 levels. → A

Virtually no companies were able to return their cost of capital in 2016. Despite the industry stabilizing in the second half of the year, a disastrous first half performance drove revenues down by 26% over the previous year. Industry EBITDA margins shrank from 20% in 2015 to 16% in 2016.

A: Financial metrics summary.
Oilfield industry financial performance dashboard.

		2016	2015	2013-2015 AVERAGE
GROWTH	Revenue growth [year-on-year]	-26%	-25%	-6%
PROFITS	EBITDA margin	16%	20%	21%
CAPITAL PRODUCTIVITY	Working capital [as % of sales]	23%	23%	23%
	Asset turnover	0.4x	0.5x	0.6x
RISK	Debt/EBITDA	5.3x	3.6x	2.7x
WINNER'S METRICS	ROIC-WACC	-18%	-13%	-9%
	Invested capital growth	-10%	-7%	-2%
	% of industry earning cost of capital (ROIC > WACC)	2%	3%	21%

Source: Capital IQ, Roland Berger

Different company types fared differently in the downturn. Regional diversified players shrank the most over the year, losing 38% of their 2015 revenues, driven largely by their lack of scale and their focus on tight oil, the hardest-hit resource. Their EBITDA margins also suffered, falling from 13% in 2015 to 5% in 2016. Global integrated companies saw revenue declines of 33% in 2016 and their EBITDA margins fell from 18% in 2015 to 12% in 2016. Focused players and category killers, many of which operate offshore, fared the best, losing 18% and 23% of revenue respectively and seeing EBITDA margins decline from 21% in 2015 to 19-20% in 2016.

From a regional participation perspective, companies exposed primarily to North America onshore activity (shale and tight oil) had the toughest year. Their revenues dropped 32% from 2015 and their EBITDA margins worsened from 17% in 2015 to 10% in 2016 as deep capital expenditure cuts continued to have the greatest impact on activity and pricing in short-cycle resources. However, North America onshore was the only geographical segment that saw equipment and services revenues go up in both Q3 and Q4 at 7% and 12% respectively, driven by the recovery in US onshore drilling activity (the rig count increased by 70% in the second half of the year). → B

International onshore players, typically a more sluggish segment given their dependency on oil-producing countries' budgets, saw revenues drop by only 6% versus 2015 and EBITDA margins stabilize around 15%, but did not experience a recovery in the second half of the year.

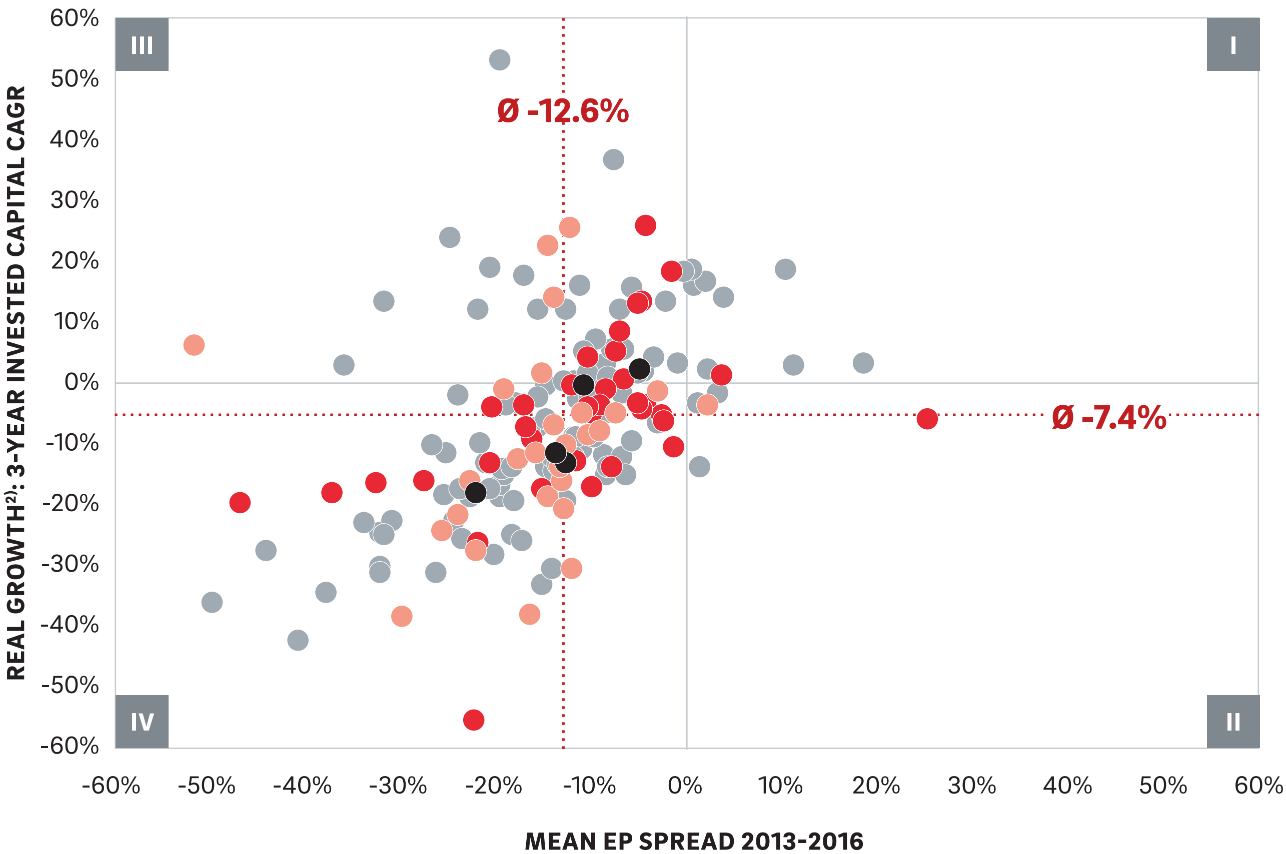
Offshore, which was relatively stable in 2015 driven by the longer-term contract nature of the business, saw revenues collapse by 21% in 2016, with continued deterioration through the year – including a 7% revenue drop in the fourth quarter of 2016. EBITDA margins contracted from 27% in 2015 to 26% in 2016 – less than other segments, but insufficient to cover the huge capital costs of the segment.

Overall, invested capital fell by another 10% in 2016 driven by write-downs and decreased asset investments, a smaller decline than in 2015. Regional diversified companies had the most significant decreases in invested capital of 20%, while other players only decreased their invested capital by 5 to 10%. The continued low investment levels of these companies will challenge their future growth and potentially the sustainability of their model in the long run.

Falling profits continued to challenge companies' solvency. Debt to EBITDA ratios rose from 3.6x in 2015 to a record 5.3x in 2016, triggering significant debt restructuring and interest rate renegotiations with lenders, and over 80 bankruptcies – twice the 2015 number.

Despite bleak financial performance, the industry's stock market performance markedly improved across the board in the last nine months of 2016, driven by increasing investor optimism regarding an eventual oil & gas recovery. Shareholder value increased by 36% over 2016 compared to 12% for the S&P 500 index. During the year, Regional Diversified players' stocks continued to experience the greatest swings relative to overall industry. After declining by more than 50% from the June 2014 peak to January 2016, Regional Diversified shareholder returns increased by 57% through the year reaching 73% of June 2014 levels. Focused companies, which are regional in nature, also recovered significantly throughout the year, seeing a 53% increase in shareholder value. Global Integrated and Category Leaders companies, which had lost the least value coming into 2016, still recovered significantly in 2016. By the end of 2016, shareholder values had reverted to about 60-70% of their pre-downturn levels for all portfolio types – a significant sign of investor confidence in an oil & gas recovery and the ability of the equipment and services industry to benefit from it. → C

B: Winners' matrix 2013-2016[1].
Industry returns below cost of capital; Global integrated and regional diversified players laggards over 2013-2016.

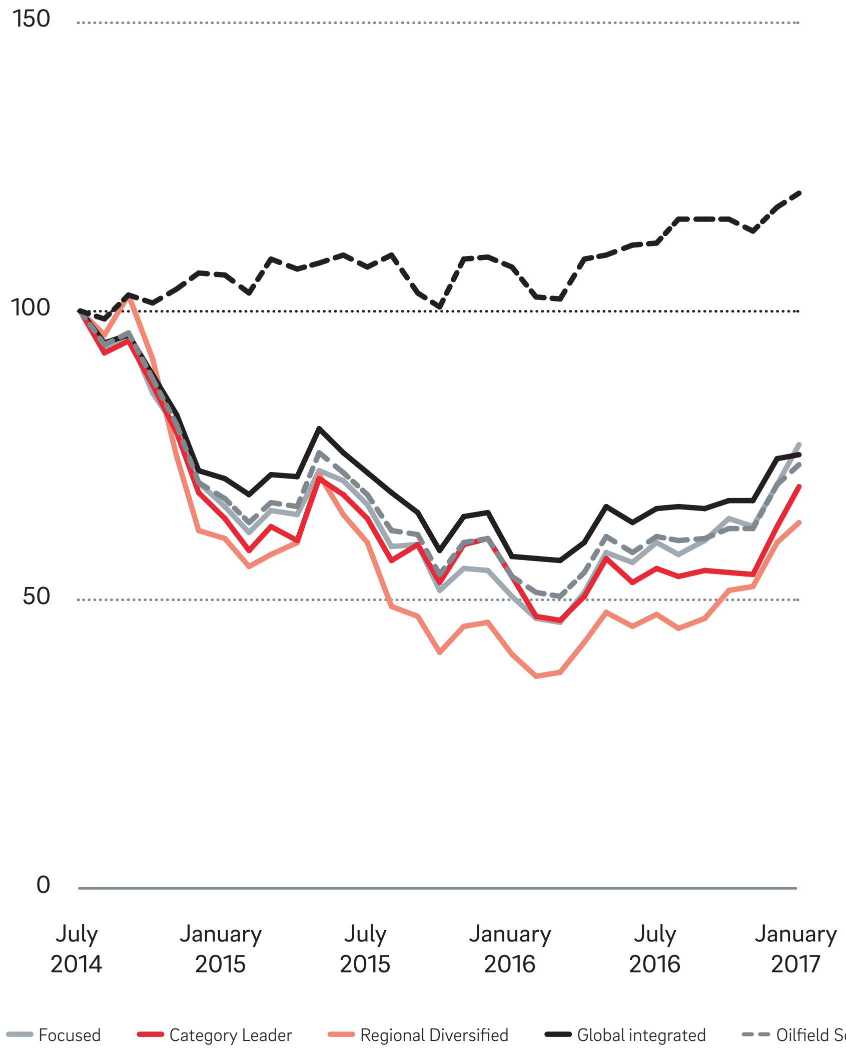


SEGMENT	GROWTH	ROIC-WACC
Global Integrated	-12%	-13%
Category Leader	-5%	-9%
Regional Diversified	-12%	-14%
Focused	-7%	-13%

1) 2013-2016. Includes 178 companies with financials for December 31, 2013-December 31, 2016; 2) Real growth adjusted by historical rate of inflation: 1.0% p.a.

Source: Capital IQ, Roland Berger

C: Shareholder returns.
Oilfield industry total shareholder returns[1] by company type[2] over 2014-2016[1].



TSR[3] [%]	2014-2016	2014-2015	2015-2016
Focused	-23	-50	40
Regional Diversified	-37	-60	38
Global Integrated	-25	-43	25
Category Leader	-31	-46	25
Oilfield Services Index[4]	-41	-49	12
S&P 500	20	8	12

1) Gross value of USD 100 invested on 6/30/2014, accounting for capital gains and dividends; 2) Company types defined in appendix on page 17;
3) 6/30/2014 – 12/31/2016, 06/30/2014 -12/31/2015, 12/31/2015 – 12/31/2016; 4) Roland Berger oilfield index consists of 51 oilfield equipment and services providers

Source: Capital IQ, Roland Berger

Photo: zhengzaishuru / iStockphoto

Section 2:

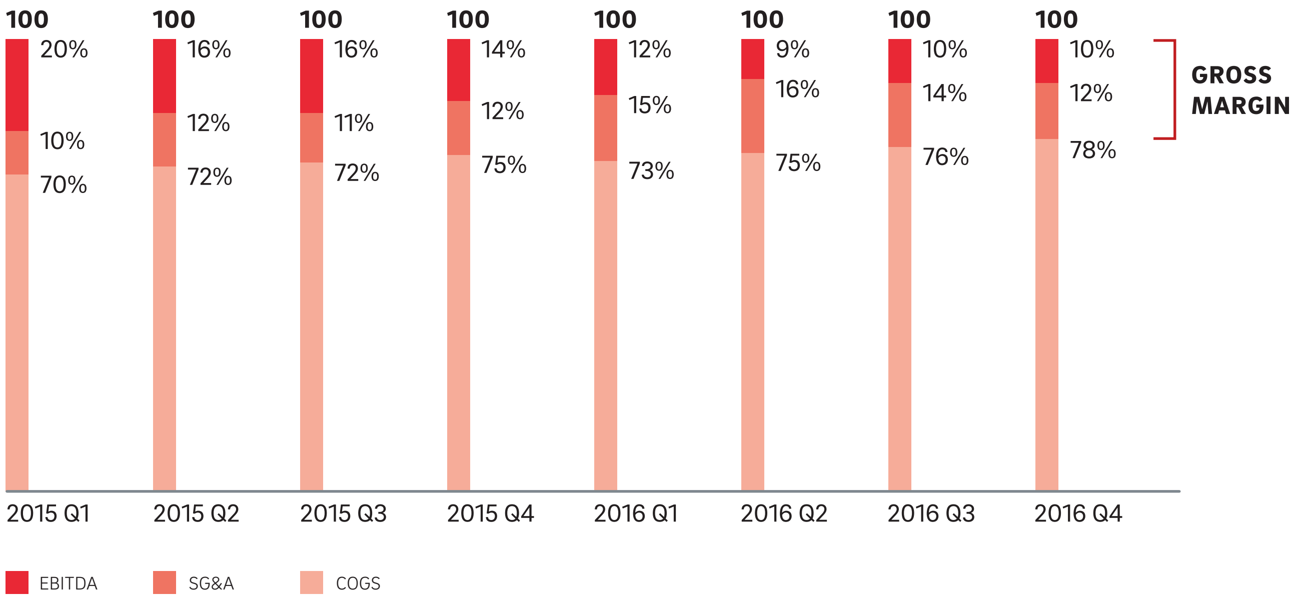
Profitless growth

Achieving profitability in the recovering North American onshore segment.

Many analysts called March 2016 the bottom of the North American oil industry downturn. Indeed, since the second quarter of 2016, oil prices have recovered and oil & gas activity has quickly resumed in North American onshore plays. The US onshore rig count went up from 375 in May 2016 to over 630 by the end of the year. Significant oil discoveries with attractive economics, such as Apache's Alpine Hill discovery, were made. Consistent with the views we elaborated in our 2016 article *Lower for Much Longer – Adam Smith in the Permian*, this augurs a brighter future for the US oil industry. This upturn was reflected in US suppliers' financial performance in the second half of the year: equipment and services providers with high exposure to North American onshore players saw their sales increase by 21% overall – the only geography in which suppliers collectively experienced any quarterly revenue growth in 2016.

However, the recovery in this segment has so far been profitless. EBIT margins have remained deeply in the red for the seventh quarter in a row. EBITDA margins have been flat, hovering around 10% of sales, half of their pre-downturn levels. This happened in spite of reduced SG&A costs, from 16% of sales in the first half of the year to 12% in the second half of the year, a result of continued aggressive cost-cutting measures by North American onshore players. This means gross margin shrank, from 26% in the first half of the year to less than 22% in the last quarter (it was 30-35% before the downturn). → D

D: Financial performance for North American onshore investments.
Cost structure as a percent of sales [USD].



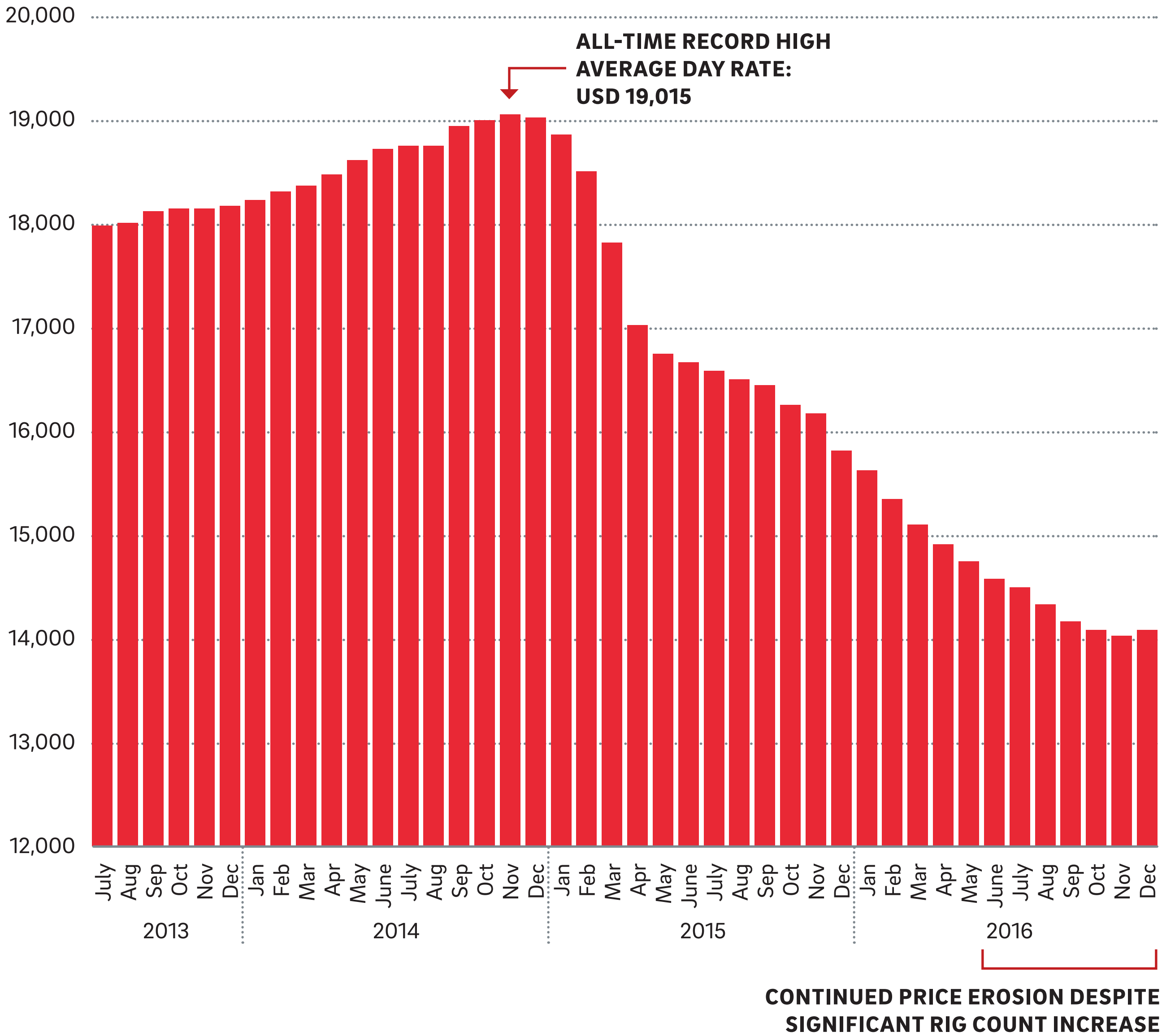
Source: Capital IQ, Roland Berger

What happened? First, in the second half of 2016, suppliers were unable or unwilling to materially increase prices: onshore rig rates, for example, were relatively flat despite a 70% increase in drilling activity. As the industry started to recover in the second half of 2016, suppliers like Schlumberger and Halliburton, among others, made it clear that they were focusing on increasing their volume of activity. Their main objective was to increase the utilization of manufacturing assets or redeploy equipment and crews. Most suppliers remained highly cautious on pricing for fear of driving away customers in a still highly uncertain environment. → E

Second, for the majority of North American onshore suppliers, the cost of incremental business in the second half of 2016 was significantly higher than average. Earnings comments from the third and fourth quarters reveal that suppliers faced particularly high costs to support North American activity growth. The less efficient manufacturing plants, which had been mothballed or downsized had to be brought back online. The less efficient equipment, which had been cold-stacked, under-maintained, and even sometimes "cannibalized" for parts, had to be quickly readied for service. Crews that had been sidelined had to be bid back into the oil industry. In total, this drove faster growth in cost of goods sold than in revenues, negating any EBITDA margin benefits which should have resulted from greater scale and SG&A cost reduction efforts.

Going forward, North American onshore suppliers are facing a difficult task: achieving acceptable financial performance during a period of volume recovery with limited price improvements. While North American activity is expected to continue to increase – as we write these lines a sixteenth week of US rig count increases was just announced – our expectation that oil prices will remain in a USD 45-55 per barrel band means that room to improve pricing will be limited. Even though some pricing increases were successfully executed at the beginning of the year on the back of OPEC-cut related oil price optimism and strong activity, the decline in oil prices in the first quarter has dampened suppliers' leverage with operators. Going forward, suppliers who stick to their old business models face the continued prospect of higher costs as they reactivate the less efficient plants or fleets that were sidelined during the downturn. Instead, suppliers need to sustain the business model, process and technology-driven cost improvements achieved in the downturn, and explore new pricing models which drive "win-wins" with their customers. In general, new approaches need to be pursued for North American onshore suppliers to survive in the lower for much longer crude oil price environment.

E: US average day rate aggregated across all rig classes and all regions.
Average US land rig day rates [USD].



Source: RigData, Roland Berger

Section 3:

Roland Berger Winners' metrics

Appendix.

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). → F

F: The right metrics to measure growth, profitability, and risk.
Definition of economic profit in Winners analysis.

INVESTED CAPITAL
Total Debt + Total Equity

RISK-ADJUSTED PROFITABILITY
ROIC – WACC

ROIC
(Return on Invested Capital)

$$\frac{\text{NOPAT (Net Operating Profit After Tax)}}{\text{Invested Capital}}$$

WACC
(Weighted Average Cost of Capital)

$$\frac{[(\text{Cost of Equity} \times \text{Equity}) + (\text{After Tax Cost of Debt} \times \text{Debt})]}{\text{Invested Capital}}$$

Source: Roland Berger

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. → G

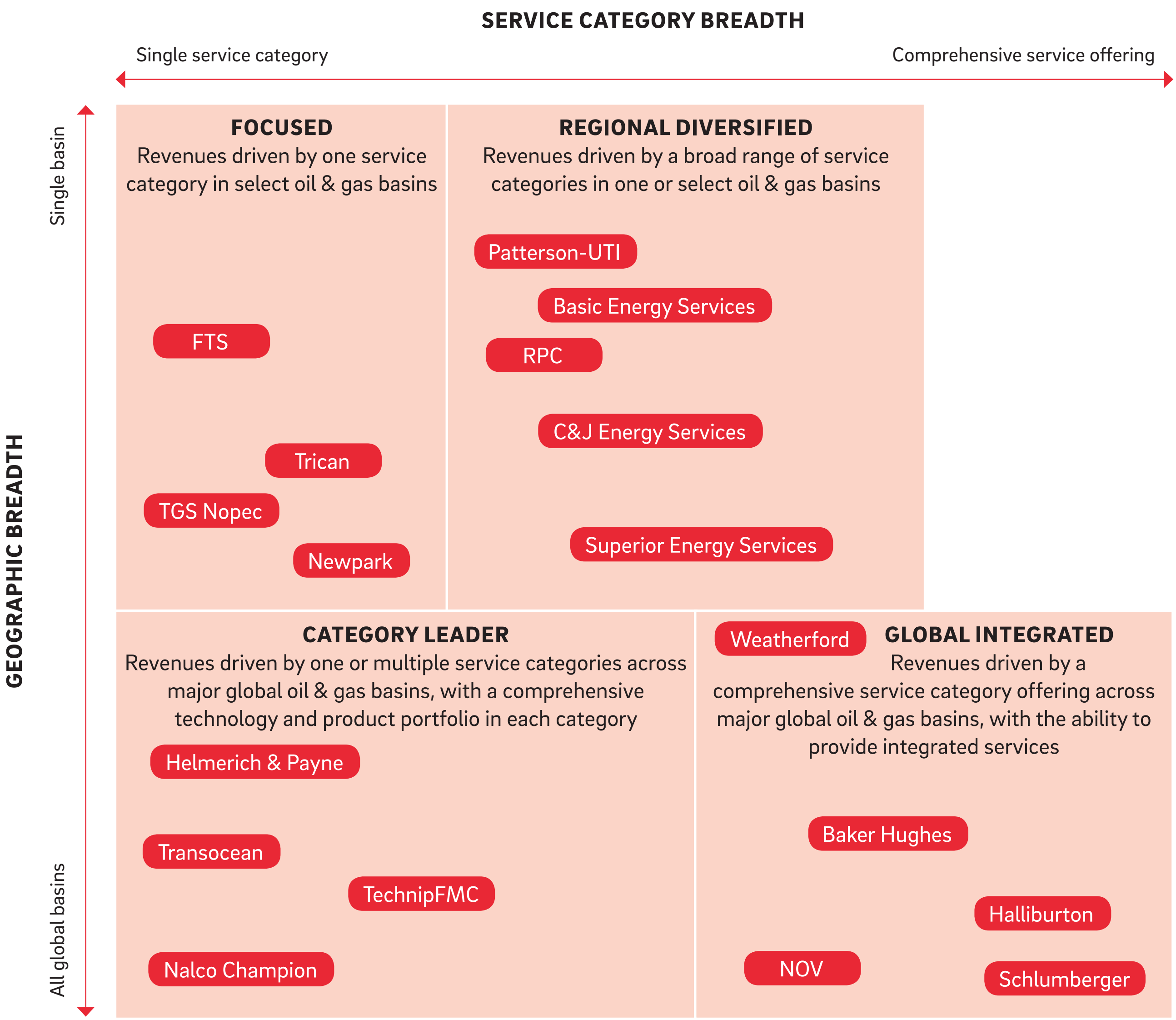
Roland Berger Newsletter
Oilfield Equipment and Services Winners
2015 industry review

2015 was a very challenging year for the oilfield equipment and services industry. Facing a combination of reduced oil & gas activity and price pressures from E&P players, industry players struggled financially – all metrics were in the red. Industry returns were significantly lower than the cost of capital, a worsening of an already unprofitable 2012-2014 period.

Think:Act Booklet
The Winners
How Chemical companies deliver superior shareholder value

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

G: Oilfield services company types[1].



1) Based on 100 publicly traded service companies analyzed over 2004-2013

Source: Roland Berger

Imprint

WE WELCOME YOUR QUESTIONS, COMMENTS AND SUGGESTIONS

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About us

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For half a century, Roland Berger has helped its clients manage change. Looking at the next 50 years, we are committed to supporting our clients conquer the next frontier. To us, this means navigating the complexities that define our times. We help our clients draft and implement responsive strategies essential to success that lasts.

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