

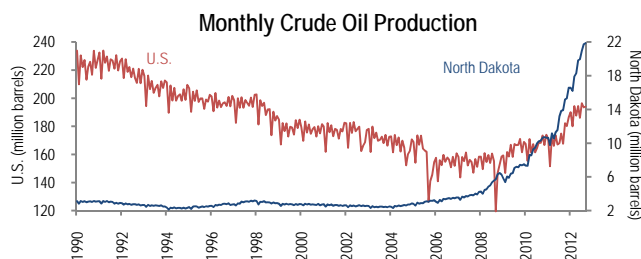
## Capitalizing on the Shale Revolution

With the advancement of shale oil drilling in the U.S., the country's production of crude oil rose in 2009 for the first time since 1991. In September 2012, U.S. oil production hit 6.5 million barrels a day—the highest level in almost 15 years. The high oil prices of the past decade spurred the opening of unconventional resources such as the Bakken Shale, which has boosted North Dakota's output almost sixfold in the past five years to the extent that the state alone now pumps almost as much oil as OPEC member country Qatar.

The U.S. Energy Information Agency expects U.S. total crude oil production to average 6.3 million barrels per day in 2012, up 12.5% from 5.6 million barrels per day in 2011, and to climb to 6.8 million barrels per day in 2013—the highest level of production since 1993. By 2017, the Paris-based International Energy Association (IEA) projects that the U.S. will become the largest oil producer in the world, producing 11.1 million barrels per day and overtaking current oil leaders Saudi Arabia and Russia. By 2030, the U.S. is expected to become a net oil exporter, and, by 2035, the U.S. is expected to be self-sufficient in energy. The IEA also projects that the U.S. will surpass Russia to become the largest natural gas producer by 2015.

With oil production rising to record levels and oil-directed rigs now

Sources: Energy Information Agency; International Energy Association; Baker Hughes



Source: Energy Information Agency

comprising 77% of the total U.S. rig count, compared to only 33% three years prior, companies are reassessing their strategic plans to capitalize on the lucrative opportunities in the current environment:

- Smaller M&A transactions are becoming more common in the industry as large strategic players look for add-on acquisitions that serve specific geographies or offer niche services to fill out or expand their service and product lines.
- Private equity firms are reshuffling their investment strategies, increasing allocations to the energy sector as well as fundraising successfully for funds dedicated solely to energy.

## M&A Spotlight: **NATIONAL OILWELL VARCO**

Serial acquirer National Oilwell Varco (NYSE:NOV), the largest manufacturer of drilling equipment for oil and gas rigs in the U.S., is far in the lead, as it often is, to be the most active buyer in the global oil and gas equipment and services sector in 2012. Aggregate global deal value for 14 acquisitions year-to-date has totaled \$4.7 billion.







With over 300 acquisitions completed in the last 15 years, NOV has grown through acquisitions to become the sector's most dominant player with a \$30 billion market cap. The \$2.6 billion all-cash takeout of fellow manufacturer Robbins & Meyers in August was the company's largest purchase since the \$7.7 billion purchase of Grant Prideco in 2008. The acquisition will expand NOV's offerings of tools, pumps and valves used in oil production.

The rush of deals this year came after NOV's revenues and income both grew approximately 20% in 2011. The company's revenues are currently on pace to jump 30% year over year in 2012, paving the way for another buying spree in 2013. After the Robbins & Meyers deal was announced, NOV's Chief Financial Officer Clay Williams said during a conference call that the company is in a "sweet spot" for mergers and acquisitions and that the company will continue to find and close "attractive acquisitions."

Conditions are ripe for large oilfield service and equipment companies to continue to snap up smaller companies and assets. Other than NOV, this includes Schlumberger, Halliburton and Cameron International, all with substantial capacity to add leverage, particularly considering the improving market outlook, according to analyst reports. The reports further note that new regulations encouraging high-specification equipment, operator

Sources: Capital IQ; Wall Street Journal; Company SEC filings

### Select NOV Acquisitions in 2012

Date	Target	Enterprise Value	EV / EBITDA	Description
Aug 12		N/A	N/A	Modular process equipment
Aug 12		\$2,403	9.5x	Engineered equipment
May 12		\$226	8.1x	Pipes, valves, flanges, fittings
Apr 12		N/A	N/A	Accumulator systems, acid pumps
Apr 12		\$800	N/A	Pipes, valves, fittings, flanges
Feb 12	<b>OOO Interval</b>	N/A	N/A	Russia-based firm
Feb 12		\$670	12.6x	Pipe systems

Source: Capital IQ. Amounts in millions of U.S. dollars.

demand for high-caliber technologies and equipment capable of increasing efficiencies and reducing unplanned downtime, and the ongoing build-out in offshore markets all bodes well for continued growth in the capital equipment space.

## Private Equity Trends

**Dry powder needs to be deployed.** Private equity groups (PEGs) currently hold more than \$400 billion of cumulative capital overhang, or uncalled uncommitments, with nearly \$170 billion attributed to 2007 and 2008 vintage funds that needs to be invested in the next 12 months or be returned. With so much capital chasing too few deals, acquisition prices have increased as a result of overcrowded bidding processes. Additionally, because firms are able to borrow at record low rates today, PEGs also have more flexibility to pay premium prices. If PEGs don't spend the money that they have already raised, it may pose a challenge to future fundraising efforts.

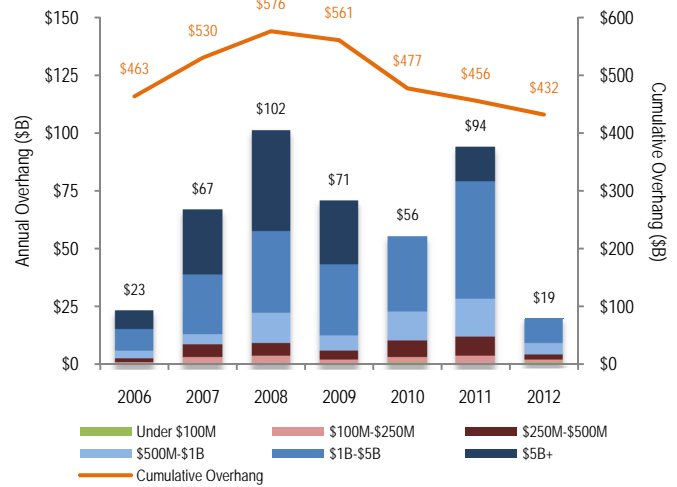
**Overall PE deal making has been declining.** In 3Q 2012, PEGs closed 362 deals totaling \$59 billion, marking the third consecutive quarter of declines in private equity activity. The year 2012 is on pace to be one of the slowest years for private equity deal making since 2009 as macroeconomic factors, globally and domestically, continue to weigh down investment opportunities.

**However, fundraising has been robust, and an uptick in deals is forthcoming.** Contrary to investment activities, fundraising had its third best quarter in the last three years in 3Q 2012, with \$35 billion raised across 28 funds. Given the strength of fundraising and the risk of expiring capital commitments, a notable uptick in investment activities is expected in 2013.

**Veteran leveraged buyout firms are raising energy-focused funds.** PEGs have shown an increasing interest in energy-related deals as underscored by their fundraising activities, especially among notable leaders in the buyout space. Just this year, the Blackstone Group closed its first energy-focused fund at \$2.5 billion in September, KKR & Co. raised \$4 billion for energy and infrastructure funds, Apollo Global Management raised a \$1.4 billion natural resources-dedicated fund, and the Carlyle Group closed its first energy lending fund at \$1.4 billion in November.

Source: PitchBook; LBO Wire; Wall Street Journal; New York Times

Private Equity Capital Overhang by Fund Size



Source: PitchBook

**Midstream is the hottest energy sector for PEGs.** In 3Q 2012, private equity investments in midstream energy companies increased significantly. PEGs committed at least \$5.1 billion to oil and gas gathering, distribution and processing companies. The current gravitation towards the midstream sector is a natural progression for PEGs that have poured billions of dollars into oil and gas exploration and production companies over the past five years. Limited partners are also getting more granular with their commitments, often looking at funds dedicated to niche sectors exclusively. One such fund, EnCap Flatrock Midstream, closed its second fund dedicated solely to the midstream sector at \$1.8 billion in July.

## Out With the Old (Rigs) and In With the New

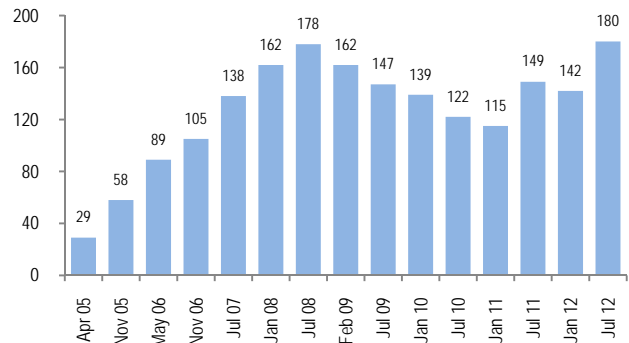
Energy companies are retooling their fleets of aging drilling rigs for the first time in decades, boosting the profits of companies that make the equipment used in deep sea drilling and onshore hydraulic fracturing. The boom for equipment makers stems from both the demand for new drilling rigs and for safety devices (such as blowout preventers) that can withstand harsh environments. This rising demand is being driven by an increase in offshore drilling, sustained high oil prices and greater regulatory requirements after the 2010 Deepwater Horizon oil spill in the Gulf of Mexico, which is prompting drillers to take added safety measures.

Orders for new rigs are at record highs in 2012, and the uptick is likely to continue as many rigs, both offshore and on land, are more than 30 years old and ill-suited for drilling in deep waters and shale formations. Moreover, companies with a newer fleet have generally seen their margins increase, since newer units generally have better utilization and less unplanned downtime, and thus lower unanticipated repair and maintenance costs.

The bottom line is that the long-term rise in oil prices and the world's thirst for new energy sources such as shale has put the oil and gas equipment and services sector in an enviable spot to benefit from the convergence of

Sources: IHS-Petrodata; Wall Street Journal; S&P Oil & Gas Industry Survey (Sep 2012)

Offshore Rigs on Order or Under Construction



Source: IHS-Petrodata

several megatrends: the expansion of deepwater offshore drilling, immense onshore shale opportunities, and an impending replacement cycle of the 30- to 40-year-old rig fleet.

## Select Oil and Gas Mergers and Acquisitions Activity

Date	Target	Acquirer	Enterprise Value	EV / Revenue	EV / EBITDA	Description
<b>Equipment Manufacturing</b>						
Aug 12	Ulterra Drilling Technologies	ESCO Corporation	\$325.0	1.7 x	-	Drill bits
Aug 12	Robbins & Myers Inc.	National Oilwell Varco, Inc.	2,403.2	2.3	9.5 x	Engineered equipment
Apr 12	XXT Incorporated	Enteq Upstream Plc	54.6	3.2	9.5	Mud pulse receivers
Feb 12	NKT Flexibles I/S	National Oilwell Varco, Inc.	670.3	2.5	12.6	Pipe systems
Sep 11	Wenzel Downhole Tools Ltd.	Basin Holdings US LLC	93.6	1.4	4.6	Downhole drilling tools
<b>Equipment Manufacturing Average</b>				<b>2.2 x</b>	<b>9.1 x</b>	
<b>Oilfield Services</b>						
Aug 12	Pure Energy Services Ltd.	FMC Technologies, Inc.	\$312.7	1.1 x	5.4 x	Completion and production
Jun 12	Casedhole Holdings, Inc.	C&J Spec-Rent Services, Inc.	325.8	2.5	10.1	Various well-site services
May 12	Sun Well Service, Inc.	Well Services Ltd.	79.6	2.0	6.1	Well servicing and workover
Feb 12	Flint Energy Services Limited	URS Corporation	1,476.7	0.8	9.3	Production and transport
Jan 12	Vaughn Energy, LLC	DHS Services Pty Ltd.	100.0	2.6	5.0	Electronic surveying instruments
<b>Oilfield Services Average</b>				<b>1.8 x</b>	<b>7.2 x</b>	
<b>Midstream Operators</b>						
Nov 12 A	Rangeland Energy, LLC	Inergy Midstream, L.P.	\$425.0	-	-	Midstream infrastructure
Oct 12	PL Midstream LLC	Boardwalk Pipelines, LP	401.5	-	-	Storage/pipeline transportation
Jun 12	Blackwater Midstream Corp.	ArcLight Capital Partners, LLC	42.5	4.1 x	10.1 x	Bulk liquid terminal storage
Jun 12	Chesapeake Midstream Partners	Global Infrastructure Partners	5,912.2	9.9	15.4	Natural gas gathering systems
Apr 12	Sunoco, Inc.	Energy Transfer Partners LP	6,623.9	0.1	7.4	Petroleum refining/marketing
<b>Midstream Operators Average</b>				<b>4.7 x</b>	<b>10.9 x</b>	

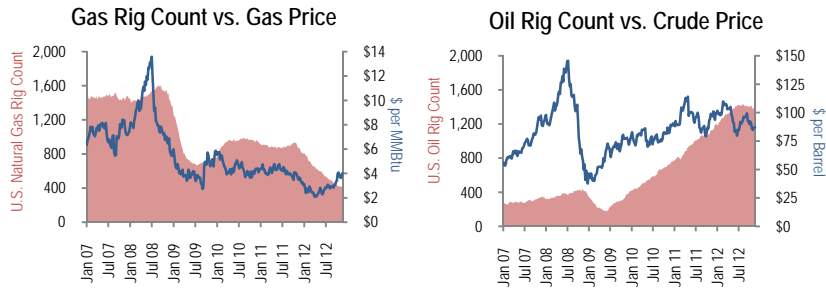
Source: Capital IQ as of December 11, 2012. Amounts in millions of U.S. dollars.

## Public Company Valuation and Performance

Company	Ticker	Share Price	Market Cap	Enterprise Value	LTM		
					EV/Revenue	EV/EBITDA	P/E
<b>Equipment Manufacturing</b>							
National Oilwell Varco, Inc.	NYSE:NOV	\$71.63	\$30,579	\$30,515	1.6 x	7.4 x	12.7 x
Cameron International Corp.	NYSE:CAM	53.10	13,101	13,794	1.7	11.0	20.8
FMC Technologies, Inc.	NYSE:FTI	41.28	9,813	10,792	1.9	15.2	24.4
Weatherford International Ltd.	NYSE:WFT	10.00	7,596	15,169	1.1	5.7	22.2
ShawCor Ltd.	TSX:SCLA	45.31	3,180	2,839	2.0	13.4	26.5
<b>Equipment Manufacturing Average</b>					<b>1.7 x</b>	<b>10.5 x</b>	<b>21.3 x</b>
<b>Oilfield Services</b>							
Schlumberger Limited	NYSE:SLB	\$70.02	\$92,956	\$99,488	2.3 x	9.0 x	17.0 x
Halliburton Company	NYSE:HAL	31.71	29,426	32,237	1.1	5.0	10.2
Baker Hughes Incorporated	NYSE:BHI	41.21	18,118	22,454	1.0	5.5	12.9
Oil States International Inc.	NYSE:OIS	66.81	3,668	4,692	1.1	5.2	8.3
Superior Energy Services, Inc.	NYSE:SPN	18.75	2,957	4,813	1.2	4.2	7.2
<b>Oilfield Services Average</b>					<b>1.3 x</b>	<b>5.8 x</b>	<b>11.1 x</b>
<b>Midstream Operators</b>							
Enterprise Products Partners L.P.	NYSE:EPD	\$51.38	\$45,816	\$62,041	1.4 x	14.5 x	18.0 x
TransCanada Corp.	TSX:TRP	45.52	32,087	54,895	5.9	11.7	23.3
Kinder Morgan, Inc.	NYSE:KMI	33.46	24,695	70,162	7.7	18.3	32.5
Williams Partners L.P.	NYSE:WPZ	51.23	18,196	25,890	3.9	12.2	14.0
Energy Transfer Partners LP	NYSE:ETP	42.99	12,921	22,917	4.0	14.4	8.6
<b>Midstream Operators Average</b>					<b>4.6 x</b>	<b>14.2 x</b>	<b>19.3 x</b>

Source: Capital IQ as of December 11, 2012. Amounts in millions of U.S. dollars, except share price.

## Oil and Gas Rig Count and Spot Prices



Henry Hub natural gas spot price is expected to average \$2.78 per MMBtu in 2012 and \$3.68 per MMBtu in 2013.

WTI crude oil spot price is expected to average \$89 per barrel in 4Q 2012 and \$88 per barrel in 2013.

Sources: EIA; Baker Hughes

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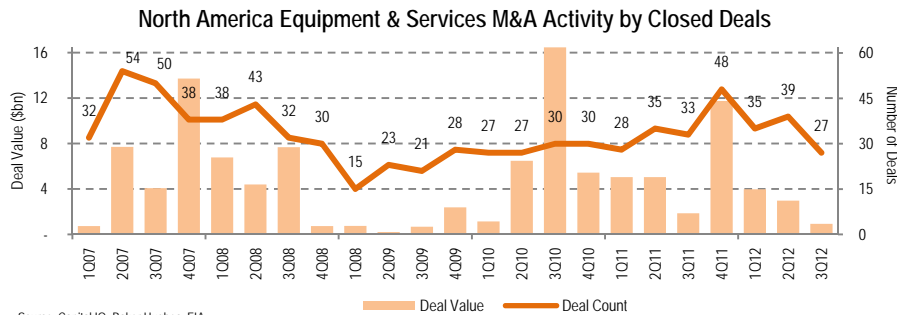
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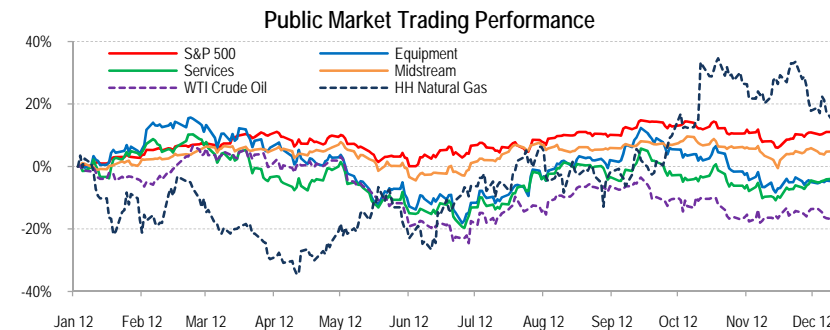
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## Historical Trends and Performance



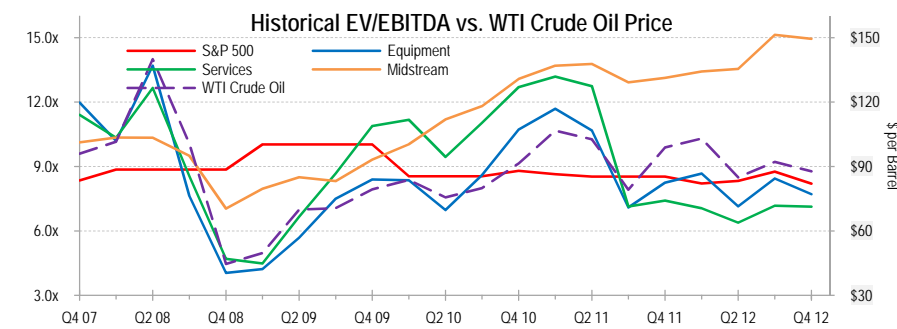
Source: Capital IQ; Baker Hughes; EIA

M&A deal volume is slightly up but aggregate value is down. Through the third quarter of 2012, 101 deals in the sector were closed, compared to 96 deals through the third quarter of 2011. However, aggregate deal value declined 34% to \$7.9 billion for the period from \$11.9 billion the year before. Smaller transactions have been driving deal activity in 2012, with add-on deals increasing to a record 50% of all private equity buyouts.



Source: Capital IQ as of December 11, 2012

Energy stocks weighed down by macroeconomic factors. Energy stocks continued to move in tandem with the price of oil, which has fallen 16.9% YTD, as the current year has been underscored by a reduction in global demand and volatility in oil supplies. Equipment manufacturing (-4.6% YTD) and oilfield services (-3.1% YTD) were most affected, while the midstream sector (+5.2% YTD) had been moving more in line with the broader market index (+11.8% YTD). Natural gas prices were driven to historic lows in early 2012 due to storage surplus but have since rallied in a huge correction driven by increasing gas-fired power demand.



Source: Capital IQ as of December 11, 2012; historical EV/EBITDA multiples are enterprise value weighted

Midstream commanding highest valuations. EV/EBITDA multiples for midstream operators (15.1x as of Q3 2012) have grown to nearly double that of both equipment manufacturers (8.4x) and oilfield services (7.1x). Higher valuations in midstream are being driven in part by a surge in private equity activity in this sector due to a lack of infrastructure and anticipated higher production volumes.

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