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June 2019 Energy Market Update

Red Ink Keeps Flowing for U.S. Fracking Sector

Disappointing Results for U.S. Frackers Continued Through Q1 2019

Another quarter, another gusher of red ink.

Despite investors' growing demands that oil and gas companies rein in spending, the North American fracking sector once again spent more on drilling than it realized from selling oil and gas.

A cross-section of 29 fracking-focused oil and gas companies reported more than $2.5 billion in negative free cash flows in the first quarter of 2019. These results were even worse than in the fourth quarter of 2018, when the same group of fracking-focused enterprises notched $2.1 billion in negative cash flows.

This dismal cash flow performance came despite a 16 percent quarter-over-quarter decline in capital expenditures. But operating cash flows fell even faster, widening the industry's cash flow gap.

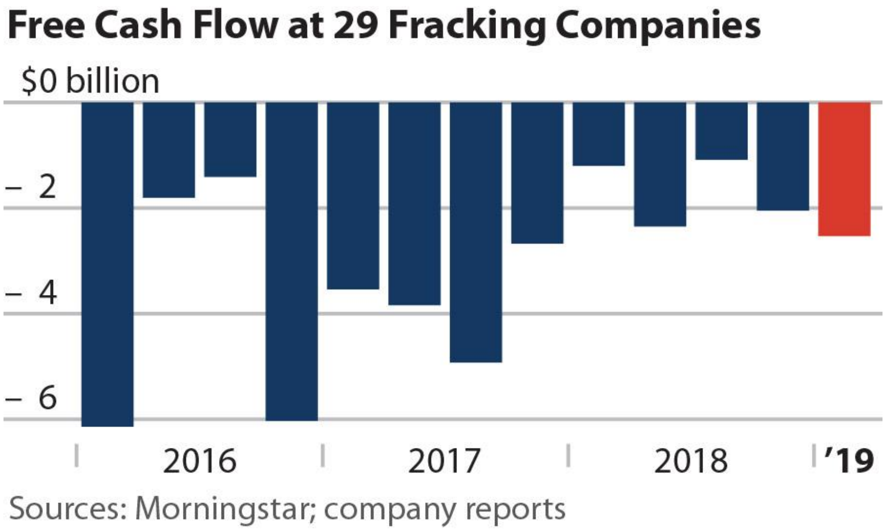
Free cash flow is a crucial gauge of financial health. Positive free cash flows allow companies to pay down debt and reward equity investors. In contrast, negative free cash flows force companies to fund their operations by dipping into cash reserves, selling assets, or raising new money from capital markets.

In the early stages of the fracking boom, investors tolerated negative cash flows from oil and gas producers, believing that the industry would eventually learn to produce cash as well as oil and natural gas. But most frackers never turned the corner. A few companies can now eke out modest positive cash flows, but the sector as a whole consistently fails to produce enough cash to satisfy its

Key Findings

- U.S. fracking-focused oil and gas companies continued their decade-long losing streak through the first quarter of 2019.
- A cross-section of small and mid-sized U.S. E&Ps reported $2.5 billion in negative cash flows from January through March 2019.
- Negative cash flows have soured investors on the sector, constraining the oil and gas industry's ability to tap debt and equity markets.

voracious appetite for capital. From 2010 through early 2019, the companies in our sample racked up aggregate negative cash flows of $184 billion, hemorrhaging cash every single year.



The larger universe of fracking companies suffered even worse results, as a wave of corporate bankruptcies (not captured in this sample) wiped away billions of additional dollars in debt and equity. Since 2015, 174 North American oil and gas producers have filed for bankruptcy protection, restructuring nearly $100 billion in debt, largely through write-offs.

Oil and gas bankruptcies have continued in 2019. At least 8 oil and gas producers have filed for bankruptcy since January, restructuring more than $3 billion of debt.[1] More bankruptcies are all but certain as oil and gas borrowers must repay or refinance several hundred billion dollars of debt over the next six months.[2] Similarly, the oilfield services sector, which relies heavily on the fracking industry for revenues, has gone through nearly 180 bankruptcies involving more than $64 billion in debt since 2015—including, most recently, the insolvency of Weatherford International, formerly the world's fourth-largest oilfield service company, which plans to restructure $7.6 billion in long-term debt.[3]

Because of their negative cash flows, many oil and gas companies have turned to debt and equity markets for capital infusions to keep their businesses afloat. But investors are losing patience with the sector. Consider:

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[1] Haynesboone.com. Haynes and Boone Oil Patch Bankruptcy Monitor. May 16, 2019. Wall Street Journal. Elk Petroleum Files for Bankruptcy Protection. May 23, 2016. Wall Street Journal. White Star Petroleum Seeks Bankruptcy Protection. May 28, 2016.
[2] Reuters.com. Refi wave lurks for energy borrowers on back of higher oil prices. May 31, 2018
[3] Haynesboon.com. Haynes and Boone Oilfield Services Bankruptcy Tracker. May 16, 2019 Houston Chronicle. How Weatherford went from fourth largest oilfield service company to Chapter 11. May 16, 2019

- Oil and gas companies have raised little new money from equity and bond markets since last fall,[4] even though the oil and gas sector faced a wave of debt refinancing by the end of the year.[5]

- A recent survey of oil and gas executives and financial professionals found that "Capital markets—both equity and debt—have fallen significantly out of favor as sources of capital."[6]

- In its bid to buy Anadarko Petroleum, Occidental Petroleum did not tap conventional debt or equity markets. Instead, it obtained more speculative financing from cash-rich Berkshire Hathaway, on terms that were highly favorable to Berkshire's shareholders and led to a steep drop in Occidental's stock price.[7]

Frackers' persistent inability to produce positive cash flows should be of grave concern to investors. A healthy industry would generate enough cash, not only to sustain its own capital spending, but also to pay off debt and reward stockholders—all while maintaining or even increasing its output to support rising stock prices. Until fracking companies can demonstrate that they can produce cash as well as hydrocarbons, cautious investors would be wise to view the fracking sector as a speculative enterprise with a weak outlook and an unproven business model.

Data and Methods

This report tracks the financial performance of 29 U.S.-focused oil and gas exploration and production companies. The analysis started with the list of stocks held as components of the SPDR S&P Oil & Gas Exploration & Production ETF (ticker symbol XOP), and then excluded companies that:

- lacked comprehensive income or cash flow data for 2010 through Q1 2019;

- declared bankruptcy at some point between 2010 and Q1 2019;

- derived significant revenues from midstream (transportation) or downstream (refining and petrochemicals) operations; or

- had significant revenues from exploration and production operations outside the U.S.

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[4] CNN.com. Why oil companies have suddenly gone missing from the bond market. February 5, 2019. Oilprice.com. Only 10% Of U.S. Shale Drillers Have A Positive Cash Flow. May 29, 2019

[5] Reuters.com. Refi wave lurks for energy borrowers on back of higher oil prices. May 31, 2018

[6] Haynesboone.com. Haynes and Boone borrowing base redeterminations survey: Spring 2019. March 12, 2019

[7] SeekingAlpha.com. Berkshire Got a Steal, Anadarko Got a Deal, Occidental Was the Meal. May 6, 2019.

The final list includes 29 U.S.-focused oil and gas exploration and production companies. This report relies on financial data downloaded from Morningstar during May of 2019, as well as previous downloads over the preceding two years. That data is reported here without revision.

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Free Cash Flow, Selected Companies

Company	Symbol	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	Total, 5 Quarters
Apache Corporation	**APA**	(262)	96	64	(25)	(265)	(392)
Anadarko Petroleum Corporation	**APC**	(117)	(505)	33	335	(260)	(514)
Antero Resources Corporation	**AR**	(4)	(266)	(146)	287	67	(62)
Chesapeake Energy Corporation	**CHK**	148	(232)	(57)	(126)	(74)	(341)
Continental Resources	**CLR**	258	11	98	175	(32)	510
Cabot Oil & Gas Corporation	**COG**	117	43	(18)	69	390	601
Callon Petroleum Company	**CPE**	(19)	(79)	(41)	(4)	(119)	(262)
Carrizo Oil & Gas	**CRZO**	(96)	(59)	(64)	(301)	(46)	(566)
Concho Resources	**CXO**	(5)	124	(85)	(198)	(282)	(446)
Denbury Resources	**DNR**	35	69	60	20	(24)	160
EOG Resources	**EOG**	111	258	540	783	(393)	1,299
EQT Corporation	**EQT**	172	(328)	(253)	(346)	500	(255)
Diamondback Energy	**FANG**	(147)	(192)	(173)	(1,407)	(411)	(2,330)
Hess Corporation	**HES**	(190)	(68)	(117)	217	(433)	(591)
Laredo Petroleum	**LPI**	(56)	(50)	(37)	(25)	(78)	(246)
Marathon Oil Corporation	**MRO**	(13)	129	194	171	(100)	381
Matador Resources Company	**MTDR**	(85)	(162)	(563)	(106)	(157)	(1,073)
Murphy Oil	**MUR**	31	(22)	129	(817)	70	(609)
Noble Energy	**NBL**	(204)	(499)	(110)	(130)	(235)	(1,178)
Oasis Petroleum	**OAS**	(26)	22	(77)	(74)	(63)	(218)
PDC Energy	**PDCE**	(174)	(62)	(58)	45	(90)	(339)
Pioneer Natural Resources Company	**PXD**	(314)	66	(106)	(187)	(209)	(750)
QEP Resources	**QEP**	(246)	(186)	27	(78)	(87)	(570)
Range Resources Corporation	**RRC**	62	(101)	32	36	71	100
SM Energy Company	**SM**	(161)	(275)	(80)	(100)	(131)	(747)
Southwestern Energy Company	**SWN**	62	(82)	(17)	(30)	184	117
Whiting Petroleum Corporation	**WLL**	55	99	(67)	48	(47)	88
WPX Energy	**WPX**	(176)	(56)	(129)	(232)	(179)	(772)
Cimarex Energy Co.	**XEC**	41	(43)	(66)	(50)	(100)	(218)
Total, Selected E&Ps		**(1,203)**	**(2,350)**	**(1,087)**	**(2,050)**	**(2,533)**	**(9,223)**

About Sightline

Sightline Institute is an independent, nonprofit research and communications center. More can be found at www.sightline.org.

About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

About the Authors

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Clark Williams-Derry, Director of Energy Finance for Sightline Institute, researches U.S. and global energy markets, particularly in the Western U.S. and Canada. Williams-Derry's recent research has covered the finances of the Dakota Access Pipeline and the proposed Trans Mountain pipeline expansion; liquefied natural gas projects in British Columbia; "self-bonding" for coal mine reclamation; West Coast coal export projects; greenhouse gas accounting for coal export projects; coal industry bankruptcies and the interactions between federal coal leasing policy and coal exports.

Kathy Hipple

Kathy Hipple, a financial analyst at IEEFA, teaches the finance sequence at Bard's MBA in Sustainability and is the founding partner of Noosphere Marketing. Hipple has written extensively about sustainable, responsible and impact finance and investing. As Vice President at Merrill Lynch for 10 years, she placed fixed income securities with international institutional clients, and advised international life insurance companies and pension funds. She later founded Ambassador Media, a local search firm in New York City, and served as its CEO. She has served on several boards, including the national Local Search Association and Bennington County's Meals on Wheels.

Tom Sanzillo

Tom Sanzillo, director of finance for IEEFA, is the author of several studies on coal plants, rate impacts, credit analyses and public and private financial structures for the coal industry. He has testified as an expert witness, taught energy-industry finance training sessions, and is quoted frequently by the media. Sanzillo has 17 years of experience with the City and the State of New York in various senior financial and policy management positions. He is a former first deputy comptroller for the State of New York, where he oversaw the finances of 1,300 units of local government, the annual management of 44,000 government contracts, and where he had oversight of over $200 billion in state and local municipal bond programs and a $156 billion pension fund.