Clark Williams-Derry, IEEFA Energy Finance Analyst
Trey Cowan, IEEFA Oil & Gas Industry Analyst
Ashish Solanki, IEEFA Fellow
March 2021

Institute for Energy Economics and Financial Analysis
IEEFA.org

In a Tumultuous 2020, Shale Firms Slashed Capex To Generate Cash

Weak Demand and Low Prices Sent Capital Spending to its Lowest Level in Over a Decade

Summary

A cross-section of 30 North American shale-focused oil and gas producers spent $158 billion more on drilling and other capital expenses since 2010 than they generated by selling oil and gas, an IEEFA analysis finds. But last year, by cutting capex by $20.6 billion year-over-year, these companies collectively managed to generate $1.8 billion in positive free cash flows—marking the first full year of positive cash results since the dawn of the fracking boom. (See Appendix Table 1.)

Free cash flow—the amount of cash generated by a company's core business, minus its capital spending, or capex—is an important gauge of financial health. Positive free cash flows enable firms to pay down debt and reward stockholders. Negative free cash flows, by contrast, force companies to fund their operations by other means, including dipping into cash reserves, selling assets, or raising new money from capital markets.

Key Findings

- In a tumultuous year for oil markets, shale-focused oil and gas companies cut capital spending to the lowest level since the dawn of the fracking boom.
- By cutting spending, these companies collectively managed to eke out modest positive free cash flows of $1.8 billion despite the downturn.
- Since 2010, these companies had reported negative free cash flows totalling $158 billion.
- Rising oil prices could help these firms continue to generate cash—but only if they restrain spending on new drilling, which would threaten future growth in production.

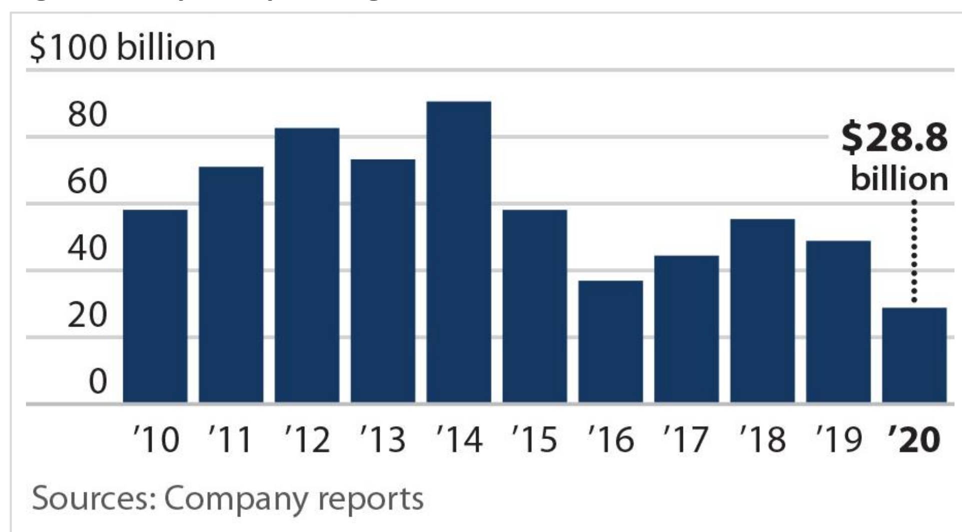
IEEFA's sample of fracking-focused companies racked up negative free cash flows every single year from 2010 through 2019. Last year's positive free cash flows were only possible because shale companies cut their capital spending to the lowest level in more than a decade. Moving forward, restraining capital spending could help the fracking sector generate cash. But low levels of investment also undermine the industry's prospects for growth, reinforcing the perception that the U.S. oil and gas industry has entered a decline.

Cash Flow Results

Through most of 2020, the global COVID crisis buffeted the oil industry with falling sales volumes, low prices, weak revenues, and a wave of bankruptcies.[1] The companies in IEEFA's sample saw cash flows from operations fall to their lowest level since 2016, which was another dismal year for oil prices.

To survive the downturn, IEEFA's sample of shale-focused companies cut their capital spending by 41 percent year over year, from $48.9 billion in 2019 to $28.8 billion in 2020—the lowest level since at least 2010. (See Figure 1.)

Figure 1: Capital Spending at 30 Shale-Focused Firms



Last year's capex cuts continued a trend. Capital spending by fracking-focused companies peaked in 2014. As global oil prices fell in 2015 and 2016, the industry slashed capital spending, but when prices rose in late 2016, capital spending rose once again, reaching a lower peak in mid-2018. The industry's sustained failure to generate cash soured investors on the entire sector, constraining capital inflows from investors and forcing many companies to cut spending. By late 2018, frackers began curtailing capital outlays—gradually at first, but more dramatically over the last three quarters of 2020.

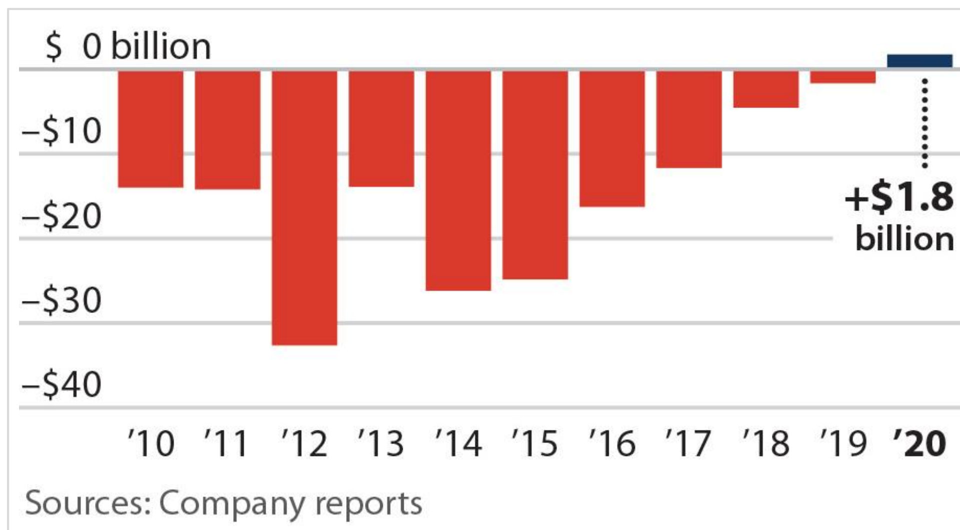
As the industry trimmed spending, its ability to generate cash improved: IEEFA's cross-section of fracking-focused enterprises achieved modest positive free cash flows in five of the last seven quarters, and realized $1.8 billion in positive free cash flows for the full year of 2020. (See Figure 2.)

Yet despite this turnaround, a decade of dismal financial performance casts a shadow over the industry. Last year's positive cash flows represented just over 1 percent of the negative cash flows racked up over the preceding decade. At the same time, the positive free cash flows pale in comparison to the industry's accumulated

[1] Haynes and Boone, LLC. Energy Bankruptcy Reports and Surveys. December 2020.

debt loads. Collectively, these companies owe nearly $90 billion in long-term debt, despite bankruptcies that have erased billions of dollars of liabilities from some companies' balance sheets.

Figure 2: Free Cash Flow at 30 Shale-Focused Firms



Analysis

Global oil markets erupted in turmoil last year. International efforts to contain the COVID-19 virus sharply reduced global oil demand, triggering a steep decline in oil prices and a sell-off in oil and gas stocks. The Standard & Poor's 500-stock index as a whole rose by 18 percent in 2020, but the index's energy sector—which includes oil and gas but not wind or solar—lost more than one-third of its value. By the end of 2020, energy made up just over than 2 percent of the S&P 500's value—down from 16 percent just over a decade ago, and almost 30 percent a few decades before that.

Yet the oil and gas industry's financial underperformance began long before the advent of the coronavirus crisis. Last place has become familiar territory for oil and gas: The industry has placed at the bottom of the S&P 500 in five of the last seven years, and second-to-last in a sixth.

These dismal returns stemmed from mounting financial pressures and a deteriorating outlook for the oil and gas sector. Fracking-focused companies produced bountiful volumes of oil and gas, yet consistently failed to generate enough cash from oil and gas sales to pay for their capital expenses. Other financial challenges weighed down the industry's outlook, including high debt loads, disappointing revenues, declining cash balances, significant accounting losses, asset impairments, and declining cash balances.

As the global COVID crisis unfolded, the U.S. fracking sector shored up its finances by cutting capital spending to the bone. Over the past several months, the combination of restrained spending and high prices has helped lift energy stocks from last year's lows.

Yet capex cuts create longer-term challenges for the industry. Falling capital investment pares back growth prospects for the industry, sending clear signals to investors that North America's oil and gas production is poised to shrink. U.S. oil production fell last year by 332 million barrels, the largest one-year drop in history.[2] The U.S. Energy Information Administration now forecasts another production decline yet again in 2021.[3]

To resume production growth, the U.S. upstream oil and gas industry must substantially boost capex, which would threaten its ability to sustain positive free cash flows. Fracking companies have proven time and again that they can produce an abundance of oil and gas—but they have yet to prove that they can sustain both production growth and healthy cash flows at the same time.

Moving forward, U.S. oil and gas producers face a dilemma. Keeping capital spending in check could improve the industry's cash performance, allowing it to generate the cash flows that investors now demand. Yet falling investment will also constrain production, reinforcing the perception that the U.S. independent oil and gas producers are in decline and are no longer willing or able to make robust investments in their own future.

Meanwhile, the oil and gas sector now confronts unprecedented global headwinds that it didn't face five years ago, when the industry was rebounding from the previous oil bust. Renewable power is now cheaper and far more abundant, and is eating into fossil fuel market share. Rising electric vehicle sales, improving energy efficiency, and plastics recycling will further crimp oil and gas demand. New technologies will make some uses of fossil fuels obsolete. All the while, the world's governments face a growing imperative to curb climate change. Many analysts—and some major oil companies, including Shell and BP—now project that these forces will pinch global oil demand over the coming decade, restraining prices increases and further clouding the prospects for U.S. oil and gas producers.

Despite recent increases in the price of oil, investors would be wise to continue to view shale-focused companies as high-risk enterprises. The potential for improved stock performance may tempt short-term buyers. But long-term investors should be wary of an industry that has produced disappointing results for a decade, and that now faces challenges unlike any that the industry has ever faced.

---

[2] U.S. Energy Information Administration. Crude Oil Production. Accessed March 2021.
[3] U.S. Energy Information Administration. Short Term Energy Outlook. March 2021.

Data and Methods

This report tracks the financial performance of 30 oil and gas exploration and production companies that operate principally in North America. Cash flow and capex data were compiled from quarterly and annual financial filings, supplemented and cross-checked with data from Thomson Reuters and Morningstar. The list of companies included in this report may not match with previous quarterly fracking reports in this IEEFA series. Each quarter, IEEFA adjusts the companies covered in its fracking analysis to account for mergers, acquisitions, and similar events.

Appendix

Table 1: Free Cash Flows, 30 Shale-Focused Oil and Gas Companies (in millions USD)

Source: Morningstar and company financial reports.

Table 2: Capital Spending, 30 Shale-Focused Oil and Gas Companies (in millions USD)

Source: Morningstar and company financial reports.

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

We gratefully acknowledge the research efforts of PJ Connolly, who provided invaluable assistance with data collection, quality assurance, and financial analysis.

Clark Williams-Derry

IEEFA Energy Finance Analyst Clark Williams-Derry served as director of energy finance and research director for the Sightline Institute, a multi-issue sustainability think-tank based in Seattle for 18 years, where his research focused on U.S. and global energy markets. He was also a senior analyst for Environmental Working Group.

Trey Cowan

Trey Cowan, oil & gas industry analyst, is a former equity researcher who has focused on U.S. upstream oil & gas activities and global energy markets. Recently, he was a senior analyst at S&P Global Platts covering rigs, permitting, drilling and production.

Ashish Solanki

Ashish Solanki has conducted research for financial advisory and consultancy firms. A recent graduate of Williams College, he has a certificate in analytics from Harvard Business School and a Bloomberg Market Concepts certificate.

This report is for information and educational purposes only. The Institute for Energy Economics and Financial Analysis ("IEEFA") does not provide tax, legal, investment, financial product or accounting advice. This report is not intended to provide, and should not be relied on for, tax, legal, investment, financial product or accounting advice. Nothing in this report is intended as investment or financial product advice, as an offer or solicitation of an offer to buy or sell, or as a recommendation, opinion, endorsement, or sponsorship of any financial product, class of financial products, security, company, or fund. IEEFA is not responsible for any investment or other decision made by you. You are responsible for your own investment research and investment decisions. This report is not meant as a general guide to investing, nor as a source of any specific or general recommendation or opinion in relation to any financial products. Unless attributed to others, any opinions expressed are our current opinions only. Certain information presented may have been provided by third-parties. IEEFA believes that such third-party information is reliable, and has checked public records to verify it where possible, but does not guarantee its accuracy, timeliness or completeness; and it is subject to change without notice.