MOODY'S ANALYTICS

DEFAULT CASE STUDY

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Chesapeake Energy Corp.

ABOUT

Chesapeake Energy Corp, a US-based shale exploration company with a presence in Texas, Wyoming, and Oklahoma, filed for bankruptcy on June 28, 2020, due to a price war in the oil industry and the COVID-19 outbreak.

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Oil & Gas Sector in Danger: COVID-19 Pushed Chesapeake Energy into Bankruptcy

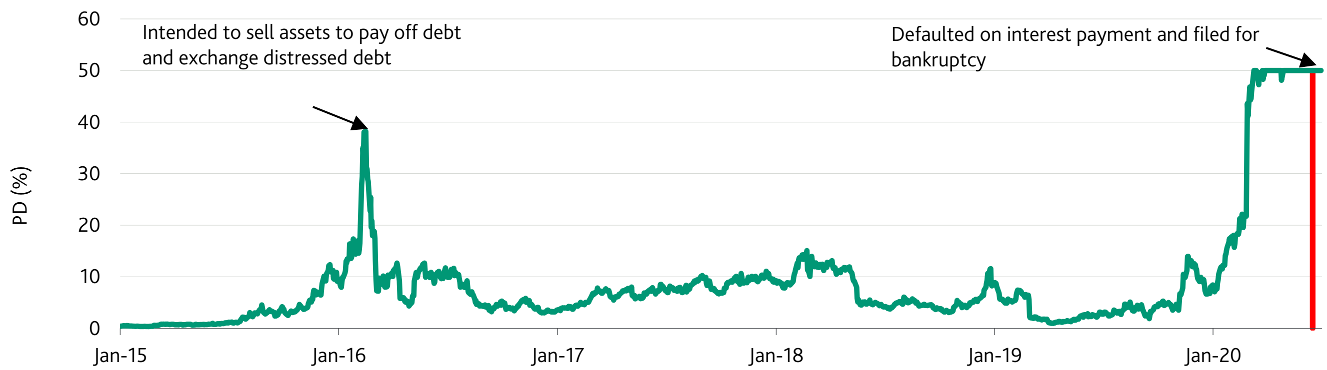
On June 28, 2020, Chesapeake Energy Corp., a US-based shale exploration company, filed for bankruptcy after defaulting on interest payments earlier in the month. The company was considering debt restructuring since April 2020 as it reported a net loss of $8.3 billion in the first quarter of 2020, with debt of about $9 billion. In this report, we use Moody's Analytics public-firm probability of default (PD) metrics to analyze whether this default was foreseeable and to look at possible implications for the Oil & Gas sector more broadly.[1]

[1] Data in this report is drawn from the Moody's Analytics public-firm EDF™ (Expected Default Frequency) model.

What can a credit risk model tell us about Chesapeake Energy?

Chesapeake Energy has been in financial distress since 2019 with high net losses and debt obligations, well before the COVID-19 crisis hit the industry. The company also raised going concern doubts and executed distressed debt exchanges in 2019. Figure 1 highlights some of these recent milestones alongside our one-year probability of default measure.

Figure 1 Chesapeake Energy Corp's One-Year Probability of Default (%)

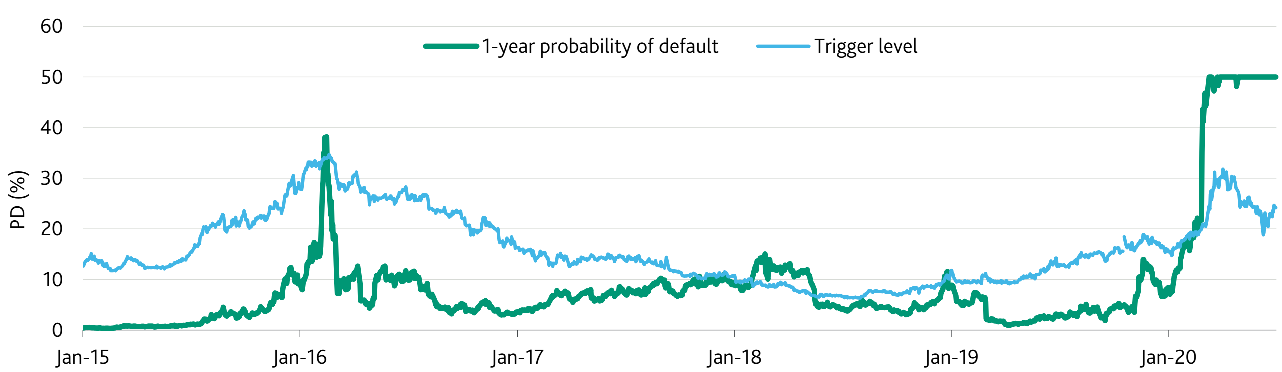


Our public-firm PD metric uses a company's stock price and financial statements as data input. Nevertheless, the company's credit risk trends before this event allow us to assess whether the firm's subsequent default was indicated ahead of time. Chesapeake's one-year PD started rising during the last quarter of 2019 when the company issued going concern and debt default warnings.[2] The stock price hit an all-time low and EDF™ (Expected Default Frequency) reached 50% when the company disclosed its intention to file for bankruptcy[3] in April 2020. Finally, the company defaulted on the interest payments due on June 15, 2020[4] and subsequently filed for bankruptcy.[5]

Signs of credit deterioration

To provide an actionable metric for each firm, we produce an early-warning monitoring "trigger" calibrated by country and industry. This trigger indicates a credit-risk level above which a company may be considered an elevated default risk. Chesapeake's one-year PD first exceeded its trigger level briefly in 2016. It also remained above its trigger level in 2018 for a few months, indicating a high likelihood of default. In the beginning of 2020 it rose steeply, went well above the threshold, and stayed there, signifying an imminent default (Figure 2).

Figure 2 Chesapeake's PD vs. trigger level (%)

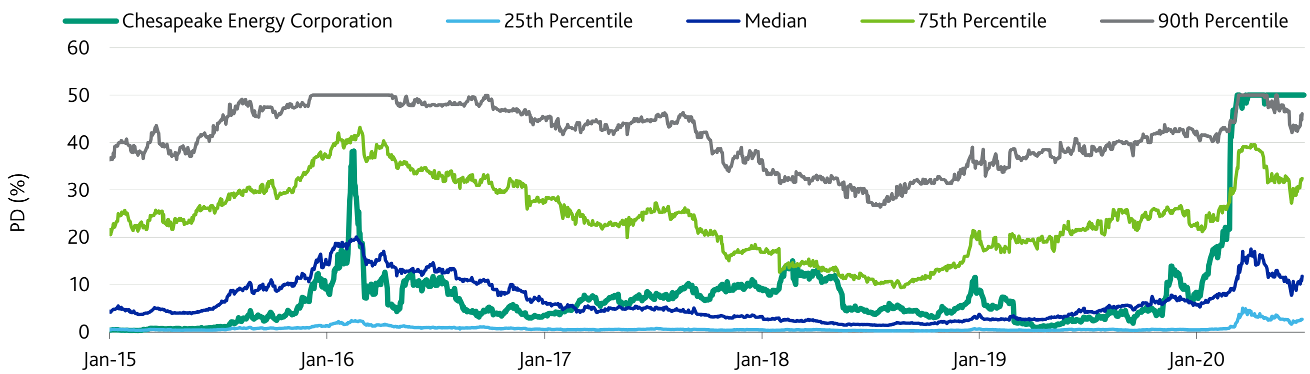


[2] Default Warning
[3] Bankruptcy Consideration
[4] Default
[5] Bankruptcy Filing

Chesapeake's credit risk relative to its peers

We can gain additional insight into a company's credit profile by comparing it with its industry peers; a company performing worse than its peer group may have additional firm-specific issues driving its credit risk higher. Figure 3 shows Chesapeake's PD relative to 227 publicly traded US crude petroleum and natural gas companies. Chesapeake moved above the 90th percentile of the group in March 2020, showing a very high probability of default and confirming that it was among the top 10% riskiest peers. In April 2020, the company's one-year PD reached 50%, the maximum probability of default, and stayed there.

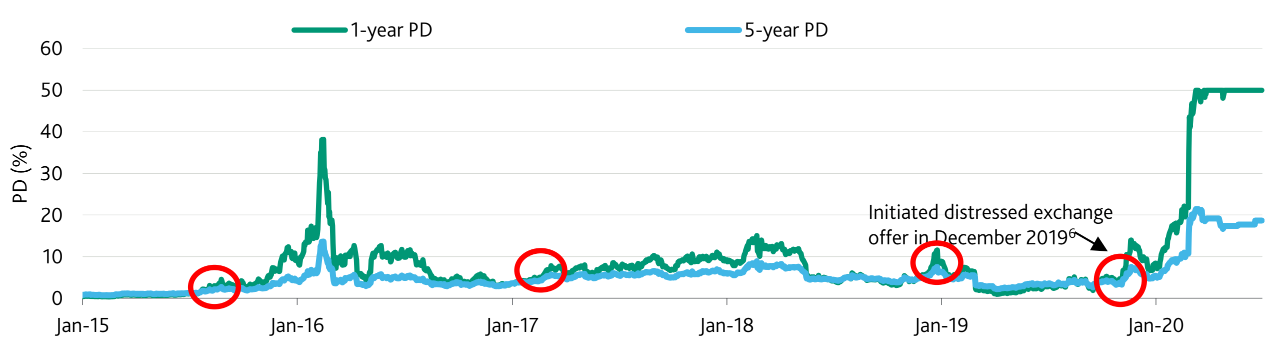
Figure 3 Chesapeake's PD vs. Oil & Gas Industry (%)



Chesapeake's PD term structure

This section shows Chesapeake's one-year probability of default relative to its five-year probability of default. Similar to a bond yield curve, we expect firms with sound credit to have short-term risk that is lower than long-term risk; an inverted PD curve indicates a higher default risk. Chesapeake's term structure has been inverted since the middle of 2015, representing a higher risk because of a sustained downturn in the Oil & Gas industry. Due to sudden price shocks in the oil industry and weaker demand caused by COVID-19, the risk touched a new high in 2020, providing a clear warning sign of the imminent default (Figure 4).

Figure 4 PD term structure (%)



Chesapeake's inverted one-year PD and associated metrics confirm that it experienced its highest level of default risk when it announced that it was considering bankruptcy.

[6] Distressed Exchange Offer

Conclusion

The Oil & Gas sector has already seen several bankruptcies since the coronavirus outbreak, including Whiting Petroleum in the United States, Delphi Energy in Canada, and Freedom Oil in Australia among others. Therefore, the recent announcement from Chesapeake Energy Corp was not a complete surprise. The company's credit metrics also showed elevated default risk—the revenue shock caused by the COVID-19 outbreak exposed the company's existing operational and financial risks. All the firms in the Oil & Gas sector that filed for bankruptcy, or are considering doing so, were already disturbed by the volatility in oil prices; the coronavirus pandemic further intensified the situation. More broadly, the Oil & Gas industry has become more risky as it remains sensitive to situations such as COVID-19.