

# Oil price uncertainty and IPOs

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Oil price uncertainty can affect both firms' investment and financing decisions. The impact of oil price uncertainty on investments in the oil and gas sector is well documented, with the consensus stating that elevated uncertainty causes firms to defer investments in anticipation of better market conditions. On the other hand, the relationship between oil price uncertainty and the financing of oil and gas firms has so far been neglected in the literature. To fill this gap, we study the impact of oil price uncertainty on the most important financing event in the firm's life-cycle – the initial public offering (IPO). Through the IPO, firms raise substantial amounts of funds that have real effects on investment, employment, and growth in the oil and gas sector. Therefore, it is crucial to understand how and why firms change their IPO decisions in response to oil price uncertainty.

Studying the oil and gas sector has several advantages over examining an aggregated market-wide sample. First, oil and gas firms' discount rates are directly linked to oil price uncertainty, where especially upstream producers' cash flows are highly sensitive to oil price changes. Second, we are able to construct a forward-looking measure of uncertainty by using the implied volatility of oil options. Being derived from options prices, implied volatility reflects the forward-looking price uncertainty assessments of traders in futures markets. Third, we can assume that our oil price uncertainty measure is, to a large extent, exogenously determined. This setting allows us to clearly identify the role of uncertainty in the IPO process.

Our analysis is conducted on a sample of 450 completed oil and gas IPOs during the time-period 1/1/1987-12/31/2019. We find that oil price uncertainty exhibits a strong negative relationship to IPO volume. A one standard deviation decrease in the implied volatility results in a 29% increase in the number of quarterly IPOs. The effect is concentrated among the price-sensitive upstream producers. We further report that uncertainty positively impacts the IPO withdrawal decision and increases the value of postponing the offering. In sum, not only oil firms' investment decisions are affected by the oil price uncertainty, but also their financing decisions.

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