## **Oil Price Uncertainty and M&A Activity**

Samuel D. Barrows,<sup>a</sup> Magnus Blomkvist,<sup>b</sup> Nebojsa Dimic,<sup>c</sup> and Milos Vulanovic<sup>d</sup>

The question on the impact of uncertainty on firms' investment activities still unresolved, and the current state of literature offers heterogeneous predictions both on the direction and on the magnitude of the relationship. In general, uncertainty impacts firm investments and, ultimately, M&A activity via the real options and risk management channels. The first strand of literature relates to the time value of the option. The value of waiting to exercise the option increases with uncertainty and leads to the deferral of investments until information becomes more complete. The second strand of the real options literature relates to compound options and opines that conducting investments not only sacrifices the value of waiting options but also results in the acquisition of future investment options. To contribute to this ongoing debate, we examine the impact of uncertainty on firms' investment activities, more specifically, mergers and acquisitions (M&A), using the oil and gas sector as the testing ground.

We investigate the impact of oil price uncertainty on M&A in the oil and gas sector. The main advantage of our approach is that the market prices of inputs and outputs are fully observable. Furthermore, the oil and gas sector is economically interesting to studyas the industry provides the foundation for investment decision making under the conditions of risk and uncertainty. Crude oil represents an output in upstream operations (producers)andaninputindownstream operations (refiners) and observed uncertainty in oil prices should provide a clear direction on the magnitude and direction of future investments. To establish the relationship between the uncertainty and investment we utilize on forward-looking measureofproduct marketuncertainty, namelythe implied crude oil volatility.

We conduct our analysis on a sample of 4,323 merger and acquisitions in the U.S. oil and gassector between 1994 and 2018. We report a negative relationship between product market uncertainty and M&A activity. Our sults hold up after the inclusion of other widely-used uncertainty measures, both at the industry and firm-level.

a College of Social Sciences at KIMEP University, 2 Abai Avenue, Almaty 050010 Republic of Kazakhstan Email:s. barrows@kimep.kz.

b Department of Data Science, Economics and Finance at EDHEC Business School, 24 avenue Gustave Delory, CS 50411, 59057 Roubaix Cedex 1 - France. Contact phone : + 33 (0)3 20 15 45 00. E-mail: magnus.blomkvist@edhec.edu.

c School of Accounting and Finance, University of Vaasa, Wolffintie 34, 65200 Vaasa-Finland Email: nebojsa.dimic@uwasa.fi.

d Corresponding author. Department of Data Science, Economics and Finance at EDHEC Business School , 24 avenue Gustave Delory, CS50411, 59057 Roubaix Cedex 1 - France . Contact phone : + 33 (0)3 20 15 45 00. Email:milos.vulanovic@ edhec.edu.

The Energy Journal, Vol. 44, No. 4