How Sensitive are Oil and Gas Stock Returns to Oil Price Changes?

Torun Fretheim[*] and Marie Steen[†]

This is a working paper and not yet intended for publication. Please do not distribute or cite without authors' consent.

Abstract

We study carbon equities' exposure to oil price changes, based on the Norwegian Oil Fund's investment in such companies. We address this issue against the backdrop of a current global debate on whether funds should divest from oil and gas, and other carbon related companies, and the Oil Fund management's request to its owner to take out oil and gas companies from the Fund's benchmark.

Our findings suggest that the oil price sensitivity of oil and gas equities varies substantially across companies. Consequently, divestment from the fossil fuel industry due to concerns about oil price declines should be conducted on a selective basis. Some oil and gas companies are strongly influenced by the oil price and may therefore cause a severe, negative impact on portfolio performance if or when advancement in renewable technologies and heavy taxes on fossil fuels result in a large oil price decrease. Other oil and gas companies are fairly insensitive to oil price changes. Among the latter we find a number of large, downstream integrated companies. We further find that the oil price sensitivity of large oil and gas companies varies with the global oil price. Finally, our results suggest that oil and gas stock returns are less responsive to oil price changes in times of turmoil, which is positive in a risk management perspective.

[*] School of Business and Economics, UiT – The Arctic University of Norway, e-mail: *torun.fretheim@uit.no*
[†] School of Economics and Business, Norwegian University of Life Sciences, e-mail: *marie.steen@nmbu.no*