OIL PRICES AND UNCERTAINTY OVER THE OPEC MEETING CYCLES: EVIDENCE FROM CRUDE OIL FUTURES RETURNS

Vesa-Heikki Soini, University of Stavanger, +47 968 64903, vesa-heikki.soini@uis.no

Overview

This paper studies the behavior of crude oil futures returns over the OPEC regular meeting cycle. Using data to construct held-to-maturity returns, the paper documents: (i) no statistically significant variation for futures with a short maturity (ii) a sharp and statistically significant increase in returns for futures with longer maturities starting about 15 days before the scheduled OPEC meetings and lasting for 40 days. The pattern is explained by increasing hedging needs of commercial producers, as open interest (number of outstanding contracts) for these assets displays noticable increases shortly before the meetings. Moreover, the pattern lends support to the theory that OPEC operates as a cartel and casts serious doubts to the efficiency of crude oil markets.

Methods

A modification of the standard event study methodology (see MacKinlay (1997)) is used. In particular, this paper uses held-to-maturity returns as the dependent variable instead of daily returns. The rational for this departure in methodology is that event studies were originally designed to measure the impact of a specific event on the value of a firm. The choice of variables and event window reflects the feature that there is no natural end date for firm performance, whereas there is a natural end date for futures contracts. Using held-to-maturity returns as the main variable therefore gives a new perspective for a study of this kind and solves the problem of how to choose the limits for an event window used in the statistical analysis. Secondly, to give a numerical estimate for the excess returns earned around the regular OPEC meetings, this paper employs a simple linear regression.

Results

Two empirical patterns for held-to-maturity returns are documented: (i) no statistically significant variation for futures with a short maturity (ii) a sharp and statistically significant increase in returns for futures with longer maturities starting about 15 days before the scheduled OPEC meetings and lasting for 40 days.

Furthermore, the quantitative result from regression analysis indicate that a futures contract which matures in 12 months earned 1.08% annualized return if the asset was purchased outside the OPEC meeting window, whereas the corresponding annualized return was 11.58% inside the meeting window. Here the meeting window is assumed to start 10 days before the meeting and end 14 days after the meeting.

Conclusions

The conclusion of the paper is that OPEC meetings create a lot of uncertainty in the crude oil markets. This happens because OPEC’s decision to increase or decrease production quota will affect crude oil prices. This uncertainty about the development of oil prices makes commercial hedgers and speculators increase their holdings of crude oil futures around the OPEC meeting dates which has a direct impact on crude oil futures returns. The patterns presented in the paper lend support to the theory that OPEC operates as a cartel and casts serious doubts to the efficiency of crude oil markets.