HEDGER'S RESPONSE TO PRICE CHANGES IN ENERGY FUTURES MARKETS

Marie Bessec, Université Paris Dauphine, Phone +33 (0)1 44 05 44 64, E-mail: marie.bessec@duphine.fr,
Yannick Le Pen , Université Paris Dauphine, Phone +33 (0)1 44 05 44 64, E-mail: marie.bessec@duphine.fr,
Benoît Sévi, Université Grenoble Alpes et CNRS, E-mail : benoit.sevi@gmail.com

Overview

In commodities financial markets, it is common to distinguish between hedgers, who take positions in futures contracts to reduce their risk, and speculators, who engage in futures markets to benefit from a risk premium. The most standard view (Hull, 2015) commonly assumes that hedgers do not speculate, i.e. their positions are not influenced by market prices. The recent paper by Cheng and Xiong (2014) provides strong empirical evidence that hedgers indeed speculate in agricultural futures markets. Using CFTC data on positions by categories of traders, the authors show that 'non-commercial' traders (hedgers) indeed respond to price changes. Hedgers short more futures contracts in response to price increases and reduce their short position as the future price falls.

This result, however, is in line with early equilibrium models of Hirshleifer (1988, 1991) (see also the recent model in Cheng et al. (2015)) which assumes price sensitivity for hedgers. It seems that the result in Cheng and Xiong (2014) supports the view *à la* Hirshleifer, namely that hedgers respond to price changes. In other words, hedgers somewhat speculate in agricultural futures markets. From these two competing theories, it appears that the issue of hedger's sensitivity to commodity prices ultimately resembles an empirical question.

We answer this question highlighting an important limitation of the analysis in Cheng and Xiong (2014) about the frequency at which observations are sampled. From CFTC releases, the positions of traders are publicly available at the weekly frequency, while futures prices can easily be accessed on a daily basis (or even at a higher frequency). For both variables, Cheng and Xiong (2014) aggregate data to create monthly variables thereby loosing much information making their results only moderately robust.

Methods

In our paper, we make use of mixed-data sampling (MIDAS) as developed in Ghysels et al. (2006, 2007) to use higher frequency variables (prices) as explanatory variables for lower frequency variables (positions of traders).

Results

Our empirical analysis investigate the response of 'commercial' (speculators) and 'non-commercial'(hedgers) categories of traders to changes in futures prices for a set of energy commodities quoted on the NYMEX-CME (crude oil, gas, gasoline, heating oil). We compare our estimate with other commodities (agricultural,, minerals, soft) and the behavior of speculators. Our results show that price changes do not have any significant impact on hedger's positions in energy markets. These results are different from those obtained in other commodities markets where hedger's positions are affected by prices changes. On all commodity markets, including energy, speculators increase their net long positions when prices go up.

Conclusions

Our estimates show that financial practices in energy markets are different from practice on other financial commodities markets, when we look at the behavior of hedgers. This specific feature of energy financial markets may be related to the importance of this market, as for instance, an alternative class of investment assets.

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