THE ROLES OF FUTURES MARKET HEDGERS AND SPECULATOR: NYMEX NATURAL GAS AND CRUDE OIL

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Overview

The paper analyses the evolution of natural gas and crude oil hedgers' activities in the NYMEX-traded derivatives and the relations with futures prices and speculators' activities. The derivatives traders are classified according to the Commodity Futures Trading Commission (CFTC). This paper will analyse the activities of natural gas and crude oil traders according to their open interest positions as reported in both the Legacy Commitment of Trader (LCOT) reports and the new Disaggregated COT (DCOT); the inaugural DCOT report was published on September 4, 2009. The analysis will also incorporate information form the relatively new series called Index Investment Data (IIT), which reports the acitivities of swaps dealers and index funds across a range of commodities traded, including both natural gas and crude oil. The LCOT classifies large traders as commercial, non-commercial, and non-reporting. Historically, commercial traders have been evaluated as representing hedging interests, while non-commercial traders, and to a lesser extent the non-reporting traders, are typically viewed as representing speculators. The DCOT aims to increase transparency particularly with respect to the non-commercial classification of large reporting traders. The trader categories for the DCOT are: (1) Producer/Merchant/Processor/User, (2) Swaps Dealers, (3) Managed Money, (4) Other Reportables, and (5) non-Reporting. The IIT data series provide information beginning in December 2007, and they provide an insight into the relative importance of natural gas and crude oil among a range of commodity investments undertaken; a context typically ignored.

The open interest positions of commercial traders in the LCOT and Producer/Merchant/Processor/User in the DCOT are disaggregated into long and short positions held. Non-commercial trader activity in the LCOT and categories 2, 3, and 4 of the DCOT are decomposed into long, short, and spread positions. The spread positions, which capture predominantly calendar spreads, have changed significantly over the past five years, but the effect of this change has yet to be fully analysed and reported on. The non-reporting traders' positions represent the residual open interest positions held by traders with positions too small to require reporting, and these are disaggregated into long and short positions held. The paper sheds light on the issues surrounding these traders and their role in market prices, with special emphasis on the changes in spread trading.

The motivation for this paper is to extend the literature analysing the relations between derivatives market traders and prices and to extend the understanding of the relations among the traders; an issue that is infrequently addressed in the literature. It also aims to assess differneces between the two energy markets. In addition, an element of the motivation for this paper is the following quote: "The key observation underlying this conclusion is that the dispersion of beliefs measures both the excess volatility and the excess volume of trade ***induced by*** the "noisy" liquidity demand of futures ***hedgers***." (emphasis added) (Shalen (1993, p. 406)). Nearly all of the extant literature begins by assuming that speculators are the driving force in these markets and then proceed to ignore the role of hedgers, who continue to dominate the market. The result of most of this literature is typically to find a relation between "speculators" and price and to then stop. It should come as no surprise to anyone that there is some relation between speculators and price. However, without also determining whether or not there is a relation between hedgers and price one cannot arrive at a meaningful conclusion regarding the relative strength of influence among trader classes. Also, as the Shalen quote suggests, there may be reason to believe that even if speculators affect price, they may be acting in response to signals from hedgers, or even confused ("noisy") signals from hedgers.

Methods

The paper analyses the past ten years of trading activity for the Legacy COT data and post-2006 for the Disaggregated COT and focuses on the interaction among all traders and their effect on observed prices. The paper lays out the background of trading in these markets. It also employs modern time series techniques to evaluate the relations among classes of traders and on the observed prices for the NYMEX natural gas and crude oil futures contracts. In addition to the CFTC open interest data, the analysis includes futures prices, trading volumes, and open interest for the NYMEX contracts, sourced from CRB Data.

Results

Preliminary results suggest that natural gas and crude oil hedgers continue to dominate their markets and that speculators tend to follow the lead of hedgers. This results suppost that the theoretical expectation that speculators provide a risk mitigation service to would be hedgers, thus reducing the costs of hedging.

Conclusions

The insights from this paper will help policy makers, researchers, and analysts in their efforts to understand the relations among natural gas and crude oil derivatives traders on the NYMEX, their relative roles in market risk mitigation, and whether or not they require closer scrutiny and regulation.

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