

INVESTOR'S SENTIMENT AND PRICES MOVEMENT IN THE PETROLEUM FUTURES MARKET

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Abstract

This paper analyzes how position-based sentiment of the key investors is related to prices movements in the petroleum futures market, such as the crude oil, unleaded gasoline, and heating oil commodities. By employing the methodology from Wang (2003), we find that hedger's sentiment is negatively correlated with prices whereas speculator's sentiment is positively correlated for the same period of time, which basically do not support for the hedging-pressure theory. Also, by checking the time-lagged effect, we significantly estimate that both investors sentiment move after the price but not vice-versa. Such lagged effect results suggest that the bullish activity of speculator is a consequence of high oil prices rather than a cause in contrast with the widespread argument that high oil prices are caused by speculators' activity.

JEL Classification: G12; G13

Keywords: Investor sentiment; Futures prices; Petroleum futures

Paper Synopsis (Version of an Extended Abstract)

“We do not have a physical bull (oil) market, but we do have a financial bull market....” (Tim Evans, *Business Week*, Apr. 27, 2005)

“Speculators keep oil prices afloat....Many analysts agree this due in large part to the amount of speculative investment money pouring into the market...” (Steve Hargreaves, *CNNMoney*, Jan. 9, 2007)”

Over the last two years, the crude oil and products futures market have been taking great attention. The reason is that, rather than the fundamental issues in the physical oil market, the bullish speculator’s investment is frequently pointed out and appears in major media as a driving factor of the recent high oil price phenomenon. As the oil price movements are much volatile and the fundamentals cannot fully explain the oil price changes, the voice blaming the speculation becomes more persuasive for the high level of oil price.

However, although a quite number of expert’s opinions on the bullish speculation has been suggested, there have been little researches evaluating the hypothesis that bullish speculators cause the high oil price. This paper therefore basically responds the lack of researches and sets up two purposes. First, we will provide initial empirical evidence on the usefulness of trader-position information for evaluating future market movements in the three actively traded petroleum markets-crude oil, heating oil, and unleaded gasoline. To investigate this, a sentiment index was constructed for each type of traders by following Wang (2003). According to Wang (2003), the sentiment index in this paper is different with other sentiment indexes in that this paper’s indexes measure investor sentiment based on actual positions taken by each type of traders, while most sentiment indexes are based on the opinions of financial analysts and newsletter writers. Eventually, the sentiment by type of traders based on trader actual positions allows us to

explicitly analyze if the trader-position information reported by COT of CFTC is useful or not. The second purpose of this paper is to find if bullish sentiment of speculators leads the high petroleum prices. To explore this issue, we use a time-lagged regression model with speculator's sentiment index at time "t" and future price at time "t+1." The result from this lagged model clearly shows the popular voice on blaming bullish speculators in the petroleum markets.

In conclusion, our primary finding is as the followings. First, we find that hedger's position-based sentiment is negatively correlated with prices whereas speculator's sentiment is positively correlated for the same period of time, which basically do not support for the hedging-pressure theory. Secondly, we find that price movements can predict both investors' position-based sentiment only, not vice-versa. This analysis concludes that the bullish activity of investors in the petroleum futures market is a consequence of prices movements rather than a cause, which eventually contradicts the popular belief that bullish speculators lead the high oil prices.