**Futures Perspective**
**Energy Market Analysis**
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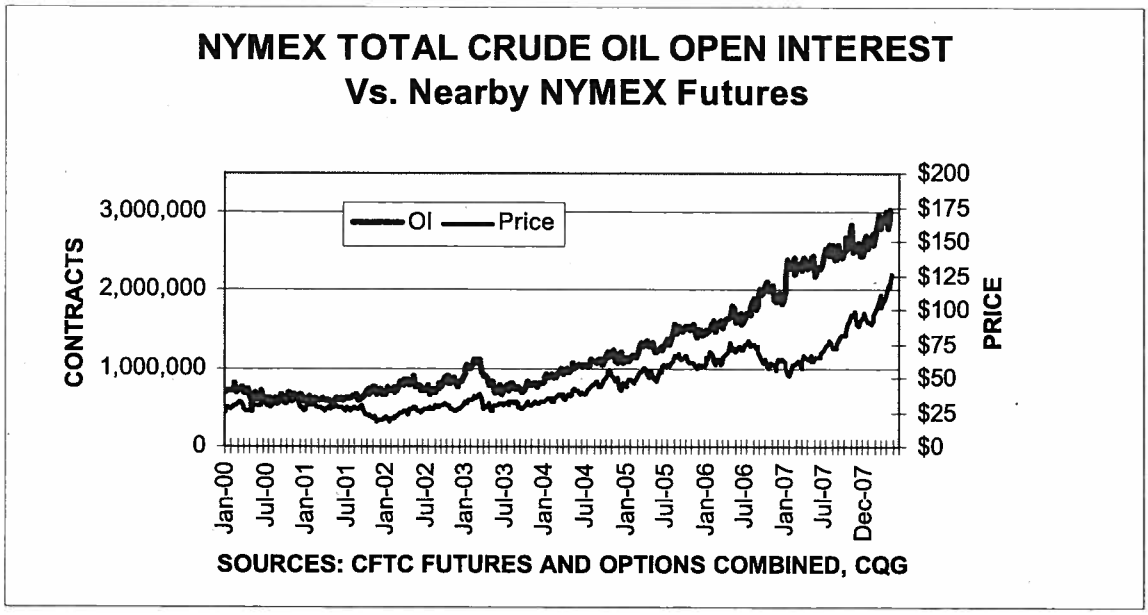
*Question: How much impact has speculation had on crude oil prices?*

## THE GROWTH IN NYMEX TRADE:

As shown in the following chart, the uptrend in crude oil prices over the past five years has been supported by rising open interest in combined futures and options open interest. Between September 30, 2003 and May 6, 2008, open interest has grown from 714,422 contracts to a record 3,035,996 contracts representing more than 3.0 billion barrels of crude oil. While for every contract bought there is one sold, the uptrend in price suggests that the buying has been more urgent and that the buyers have been the price makers, while the more passive scale-up sellers can be considered the price takers. We also note that the 425% rise in open interest over this period has greatly exceeded the corresponding growth in the physical market of some 8.5% over that same span.




The CFTC *Commitments of Traders Report* provides a breakdown of this combined futures and options open interest into three broad categories of trade: commercial traders who use the market primarily to hedge their risk on obligations in the physical market, reportable non-commercial traders who are typically speculative fund managers, and small non-reportable traders who hold relatively small positions. In theory, the reportable non-commercial category would show the activity of "the funds." However, in practice, the lines between these categories are sufficiently blurry that the CFTC has introduced a specific

fund report on a trial basis for some of the agricultural markets in order to make fund activity more transparent.

As a specific example of the blurring between these three categories that may arise over time, we note the case of an investment bank operating either a traditional commodity index fund or an exchange traded fund (ETF). The investor in such a product profits solely on price appreciation, so this is pretty clearly a speculative position, at least in common parlance. But within the CFTC categories, the investment bank's long position may well be considered a commercial hedge of the bank's obligation to the investor.

In addition to questions of classification between the three broad CFTC classifications of traders, we note that many market participants typically classified as commercial "hedgers" are not necessarily running a flat book in the current market environment. To the extent that they may be carrying unhedged inventory or have accumulated a long position in the market in order to either benefit or protect themselves from higher prices, these firms may also be considered to be speculating – they benefit from a further price rise but may be vulnerable to a price decline.

The larger issue here, is that while the price action and the total volume and open interest data for the market can be determined with precision, there really is no data on the motivations of the various market participants. Moreover, we note that the price action itself is an accurate reflection of the flows of buying and selling in and out of the market, but this reflects neither a democratic "one-voter-per-trader" system nor a method of determining "who's right about the fundamentals" at least in the near term. In other words, a larger trader with a mistaken view of the fundamentals can have a larger impact on prices than a small trader with even perfect knowledge of the fundamental conditions of the market might have.

Given the known imperfections of the current system of categorizing open interest, we think the total open interest figures may be the best indication of the extent of speculation of all kinds in the current crude oil market. Opinions will vary as to whether the expansion in open interest rises to meet the criteria to be termed a speculative bubble, but we note that the crude oil market does seem to match many of the characteristics described by Yale economist Robert Shiller in his book *Irrational Exuberance*:

> Irrational exuberance is the psychological basis of a speculative bubble. I define a speculative bubble as a situation in which the news of price increases spurs investor enthusiasm, which spreads by psychological contagion from person to person, in the process amplifying stories that might justify the price increases and bringing in a larger and larger class of investors, who, despite doubts about the real value of an investment, are drawn to it partly through envy of others' successes and partly through a gambler's excitement.

Regardless of whether this definition has been met in all respects, because of the rapid growth in the futures and options market as measured by its open interest, we think it is clear that the trading activity in crude oil has become more dominant relative to the underlying physical market than it has been in the past. These trading flows have the potential, at least in the short run, of either ignoring fundamental shifts in the market or exaggerating them. Over the long run, since speculators or investors only buy so that they may sell at a later time their activity may not have an impact on the longer-term equilibrium price for oil. However, in our view, their intermediate-term flows into and out of the market can drive values further from a sustainable price level than in the past, in effect putting prices on a longer leash. And as long as the open interest is still rising, that leash is still growing longer.

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