

\$100 Per Barrel Crude Oil?

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With oil prices stuck above \$80/bbl, talk of \$100/bbl oil is resurfacing. Has anything changed to substantiate this view?

According to our analysis, nothing fundamental has changed.

1. Supply and demand appear to be well balanced. Global demand for oil has ranged between 84 and 86 million barrels per day over the last twelve months, while supply has run been between 84.5 and 85.5 million barrels per day. Both supply and demand have grown slowly since 2005. In addition, cumulative production has exceeded cumulative consumption since the middle of 2004. Historically, this is a situation in which prices fall; yet prices since the middle of 2004 have doubled.

2. Crude inventories remain well stocked. According to the International Energy Agency, OECD inventories (ex-strategic reserves) are at a 20+ year high of 998 million barrels. U.S. inventories have dipped a bit but remain well above their five-year average for this time of year. Days' supply is about 21 days, well above the seventeen days' supply seen after Hurricane Katrina in 2004. Days' supply has been coming down on a secular (i.e. long-term) basis as inventories

have been better managed. Nonetheless, the days' supply is above the average level of the past ten years.

3. There is abundant spare capacity. At the end of July, OPEC had spare capacity of 3.69 million barrels a day, up substantially from the 3.05 million barrels a day twelve months before. Spare capacity continues to trend higher and is dramatically above the razor-thin extra capacity of 0.5 million barrels a day seen in September 2004.

4. Energy intensity is falling sharply. Consumption has not risen as much in recent years as forecasters expected, because energy intensity (total energy units used per dollar of GDP) has fallen not only in the U.S. but throughout the developed and developing world. According to the Energy Information Agency, from 1980 to 2005, energy intensity in the U.S. and the U.K. was cut by about 40%. China, which still uses four times as much energy per unit of GDP as the U.S., saw its energy consumption ratio decline by over 60% over the same time period. This ratio obviously has much further to fall as China's economy and wealth expands. Even in the developed world, there is room for increased energy efficiency. In 2005, Japan had the lowest efficiency ratio in

the world (about 50% more efficient than in the U.S.). Since then, with higher oil prices and slowing consumption of oil, energy intensity ratios have probably fallen further.

5. Energy consumption is still a small but not trivial portion of personal consumption. Energy expenditure in dollars as a percentage of personal consumption fell sharply from its 1980 peak of 9.5% to a low of 4.25% in 2002. From that low, energy consumption rose to 6.25% in 2005 and has stabilized around that level.

6. Oil prices impact inflation but less than is commonly perceived. Oil is an important driver of inflation since it impacts almost all industries. However, its impact is more closely related to changes in the Producer Price Index than the Consumer Price Index, since global competition often keeps companies from passing along price increases to consumers. In addition, since oil is a small percentage of GDP, it typically takes big increases in oil prices to boost inflation significantly.

What's changed? Speculation. Although oil fundamentals have not changed, speculative activity has surged in the last few years. Prices have been driven by speculative concerns about geopolitical

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risks, political rhetoric about an energy crisis and weather-related fears, among other things. Over the last few years, speculative activity in energy futures and derivatives has increased. The number of outstanding contracts (open interest) in NYMEX (New York Mercantile Exchange) crude oil futures has more than doubled since 2006 to 1.5 million contracts in July 2007. In addition, the volume of unregulated energy swaps has by some accounts quadrupled in the last four years. Speculators remain in a sizable net long position.

Increased speculation is coming under Congressional scrutiny, particularly in the unregulated market. The Commodity Futures Trading Commission, the regulatory body that oversees commodity futures and option trading, is looking into the surge in speculation. As long as there is no fraud or market manipulation, serious changes within the regulated market are unlikely to be made. However, increased oversight by regulators may slow speculative activity going forward.

The hurricane risk is almost over for this year. Will oil prices drop to \$65/bbl or lower?

The hurricane season is coming to a close, and thus far activity has been extremely mild for the second straight year. Should the hurricane season end without any significant activity, oil prices

could weaken and send speculators scrambling for cover. Our analysis suggests there is significant price support in the market at around \$75/bbl; we believe a break below that could send oil prices quickly toward \$65/bbl.

We believe the greatest risk to oil prices is geopolitical.

With tensions growing over Iran's nuclear program and its active support of global terrorism, the risk of military intervention in Iran appears to be increasing. In recent weeks, France's President Sarkozy and Foreign Minister Louchner have openly criticized Iran, expressed concern about the threat posed by a nuclear armed Iran and unabashedly told the world to prepare for war. Germany's, Russia's and China's unwillingness to go along with additional economic sanctions further increases the pressure for military intervention as the effectiveness of sanctions comes into question. However, given the growing unrest with the Ahmadinijad government from within Iran, a "good cop, bad cop" routine may lead to concessions on the nuclear front, if not a change in government. It is almost impossible for us to assign a probability to the possibility of military intervention in Iran or to assess the impact of such an intervention on oil prices. However, given the risks involved, we think it most likely

that any decision to intervene will be pushed further down the road, which could leave oil prices open to a downturn in the near term.

Sources: Bailard Research, Ned Davis Research, Dudack Research, Energy Information Agency, International Energy Agency

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