## THE PRICE OF OIL - PART 2: MARKET MOVING GEOPOLITICAL EVENTS

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Eight years have now passed since the second quarter of 1999 and the price range established by OPEC has been eclipsed by three significant global geopolitical events: (1) the war in Iraq; (2) a decline in reinvestment in oil productive capacity by the National Oil Companies (NOCs), largely excluding the western private sector companies from many exploration and production contracts; and (3) the growth of oil demand in China and India.

In the first quarter of 2003, the invasion of Iraq resulted in a growing anti-American sentiment in many parts of the world, particularly in Muslim oil producing nations. The potential for disruption in supply by terror organizations is deemed to be a very high probability.

A second factor that magnifies the financial impact of the potential for a disruption of supply has been the decline in reinvestment in productive capacity by nearly all of the NOCs. Whatever surplus productive capacity exists across the globe, it exists primarily within OPEC, particularly Saudi Arabia (Figure 1). According to the Energy Information Administration's Erik Kreil, only about 500,000 bbls/day of excess capacity exists outside of OPEC.

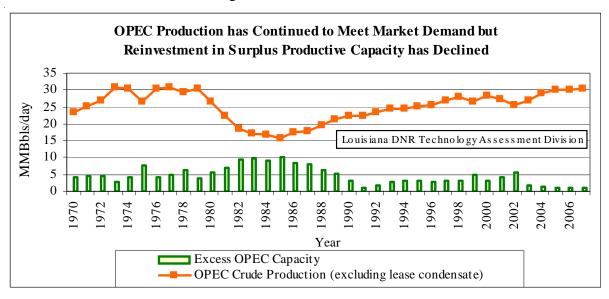


Figure 1. OPEC Production

A third factor exerting its influence over oil prices as we move through 2007 has been the growth in oil demand coming from China and India (Figure 2). This spurt in demand growth further compounds the financial impact on oil prices in light of the potential for disruption of supply (Figure 3).

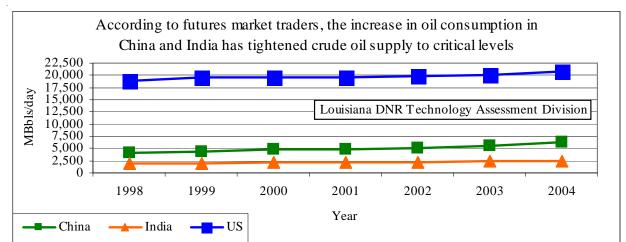
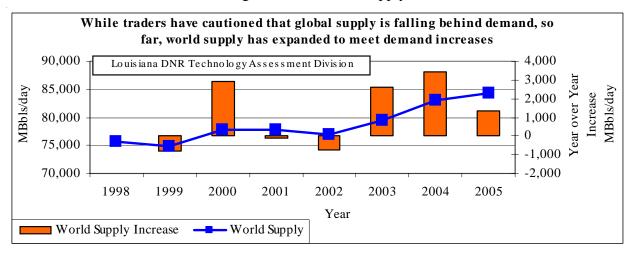


Figure 2. Oil Consumption in China, India and the United States





Following the first quarter of 2003 invasion of Iraq, these geopolitical events have contributed to the shifting of market control over oil prices, this time from OPEC to other factors. These policy issues are the real world factors that the financial behemoths can legitimately speculate on through their proprietary trading operations.

The "Disruption or Terror Premium" can be hypothesized as the difference between the probable new price range of OPEC, which is approximately \$50.00/bbl, and the current spot and futures prices as influenced by the interpretation of these 3 geopolitical events by the financial hedge funds. Today, that premium would approximate \$20.00/bbl.

It is clear that a large number of these autocratic economies rely on single commodities as their source of national income. The world is experiencing a run-up in prices of almost all commodities. These dictatorial powers are basking in the corruption associated with very large and newly found cash flows. They also are reluctant to reinvest in new productive capacity, whether the commodity

be oil and natural gas or metals. On the contrary, it is becoming popular to unilaterally abrogate agreed tax and royalty regimes after foreign investment in property, plant and equipment have already been made by outside investors. Recent examples of this behavior include Russia, Venezuela, Chad, and Bolivia, to name but a few.

In the short term, reduced surplus productive capacity in any commodity type resource results in market price escalation. But in the longer run, deferral of development/production reduces the net present value of the commodity resource to that nation (Figure 4).

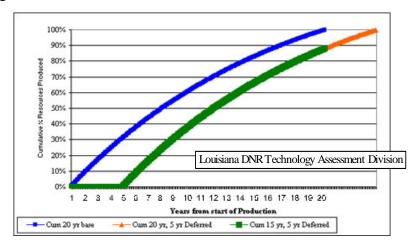


Figure 4. Net Present Value of a Nation's Recoverable Resources

Fortunately, free market economies are not powerless: (1) they will innovatively search for process efficiencies to reduce the quantity of commodity used in a process; and (2) they will search for alternate sources and kinds of raw material, as in the case of oil and natural gas, unconventional sources of supply located in more secure geographic locales.

The Terror organizations who are virulently anti-American are also anti-moderate Arab States. The Gulf Cooperation Council member states, i.e., Saudi Arabia, Kuwait, Bahrain, Qatar, United Arab Emirates, Sharjah, Oman, are viewed as being supported by the U. S. and cooperating with the U. S. To constrain internal unrest, these nations require a "Floor Price" for oil that will sustain growth in Gross National Income/Capita (GNI/Capita). Today, that floor price is likely near the upper end of the newly calculated price range, i.e., \$45.00 - \$50.00/bbl. This potential for destabilization means that these nations cannot afford to allow the market price to fall below the "floor price." This also means that large volumes of unconventional oil resources such as oil sands and oil shales have become economic to develop. Because of the enormous volumes of these unconventional oil resources located within countries with stable legal and regulatory institutions there will not likely be any constraint on oil supply for decades into the 21st Century. And, conversely, because many autocratic oil and natural gas producers have unilaterally abrogated agreed tax and royalty regimes, they are no longer the foreign direct investment target that a constrained raw material supply might otherwise command.

Surplus productive capacity margins will remain constrained since it takes roughly 5 years to develop large new conventional and unconventional oil resources. Therefore, futures prices are likely to remain under the control of the hedge funds and proprietary trading desks of large banks.

In the interim, dramatic improvements in energy efficiencies in China, India, and the U. S. would reduce pressure on oil demand growth (Figure 5).

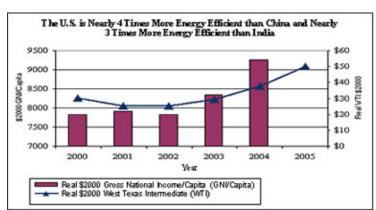


Figure 5. Growth of Gross National Income of China, India and the United States (in Real Inflation Adjusted Year 2000 Dollars)

The uncertain energy supply and price climate created by the price jump in the second quarter of 1999 and the natural gas price jump in 2000 caused a dramatic decline in investment in property, plant and industrial equipment (PPE) in the U. S. As a result, employment growth rates fell by half the rate of growth as in the 1990s.

An enlightened business leadership in the U. S., Canada, and the developed world will soon recognize that energy supply no longer has the stigma of uncertainty for business investment of 7 years ago; that developed nations are a stable and dependable location for PPE investment; that oil prices will likely remain within a price range of \$45.00 - \$50.00/bbl, plus a disruption premium; and there will be a gradual reduction of the disruption premium over time as new investment in unconventional supply accelerates, as well as investment in conventional supply where development options become available.

In the U. S., this potential PPE "boomlet" bodes well for employment growth, with associated growth in skilled labor jobs and skilled labor compensation levels.

