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China Rim Insights

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## Energy: Crude Oil Price Analysis

### Long-Term Demand and Supply Factors Point to Continued Uptrend in Prices; Extreme Price Volatility Expected to Persist

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“...we believe that the most aggressive crude oil price targets calling for \$100 per barrel crude oil within the next three years will prove to be conservative.

“...From a long-term perspective, major new China Rim region buyers of crude oil—China and India—are emerging during a period when worldwide crude oil production is approaching a peak.”

Kevin B. Skislock, Partner and CEO  
Laguna Research Partners LLC  
*Crisis on the China Rim:  
An Economic, Crude Oil, and Military Analysis*  
14 April 2005

***In our 14 April 2005 energy market thesis titled **Crisis on the China Rim: An Economic, Crude Oil, and Military Analysis**, Laguna Research Partners forecasted a long-term increase in the price of crude oil, accompanied by increased volatility in the price of crude. That is exactly what has transpired during the three years since that analysis was issued.***

...yesterday, 03 March 2008, the price of crude oil jumped to USD 103.95 per barrel on the New York Mercantile Exchange ...that broke the inflation-adjusted record of USD 103.76 set in April 1980 ...the non-adjusted, or nominal, price of crude oil at the April 1980 peak was USD 39.50

***The current surge in crude oil prices is being widely attributed to the huge US budget deficit and the plummeting US dollar.***

...as crude prices jumped on 03 March, the US dollar fell to USD 1.5275, a record low, vis-à-vis the euro ...that is the dollar's weakest level since the euro's debut on 01 January 1999 ...also on 03 March, the US dollar fell to 102.62 yen, its lowest level since 28 January 2005

***We continue to believe, though, that factors such as currency fluctuations are simply causing high crude oil price volatility around what we expect will be a stubborn, upward, long-term trend line. As we discussed in **Crisis on the China*****

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***Rim, we expect that steady increases in the per capita consumption of crude oil in both China and India, from levels substantially below the world average, will keep crude prices on that upward path.***

...the worldwide consumption of crude oil is estimated to be 80.3 million barrels per day, or 29.2 billion barrels per year ...the world's estimated population was 6.6 billion as of July 2007 ...the implied per capita consumption of crude oil worldwide, then, is 4.4 barrels

...China consumes an estimated 6.9 million barrels of crude oil daily, or 2.5 billion barrels annually ...as of July 2007, China's estimated population was 1.3 billion ...despite years of powerful GDP growth, implied per capita consumption of crude oil in China is still a meager 1.9 barrels, or just 43.1% of the global average

...we estimate that India consumes 2.4 million barrels of crude oil daily, and 888.0 million barrels annually ...India's population, as of July 2007, is estimated to have been 1.1 billion ...India's implied per capita consumption of crude oil, then, is an estimated 0.8 barrels per year ...this equates to just 17.7% of the world average, and is less than half that of China

...if China was to consume crude oil at a rate equal to the world's per capita average of 4.4 barrels each year, that country would consume and estimated 16.0 million barrels of crude daily, or 5.8 billion barrels annually ...this would represent an increase of 9.0 million barrels per day, or 3.3 billion barrels yearly ...similarly, if India were to consume crude oil at a rate in line with the global per capita average, that country would consume 13.6 million barrels of oil daily, and 5.0 billion barrels of oil each year ...this would represent increases of 11.2 million barrels daily and 4.1 billion barrels yearly versus current consumption levels ...combined, if both China and India were to increase their consumption of crude oil to match the global per capita average, and assuming that demand across the rest of the globe were to remain constant—an unlikely scenario from a long-term perspective—demand for crude oil would increase 20.2 million barrels daily, or 7.4 billion barrels annually ...this represents a 25.2% climb in global demand

***As a matter of perspective, the US consumes an estimated 25.2 barrels of crude oil annually on a per capita basis, 5.7x the 4.4 barrel global per capita average.***

***Further, Laguna Research Partners continues to expect that crude oil supply issues will compound the impact on world crude oil prices caused by a secular surge in crude oil demand.*** In an interview with *ArabianBusiness.com* published on 28 February 2008, Matthew Simmons, chairman and founder of Houston, Texas-based Simmons & Company International, and author of the highly influential *Twilight In the Desert*, reiterated his bleak outlook for the supply side of the crude oil price equation. "I think the supply is showing some very troubling signs that we might well have already peaked and started down," he said. "If we have not, we are very close to it." Commenting on the demand side of the crude

oil price equation, he added, “Demand on the other hand shows absolutely no sign of slowing down because we are now at USD 100 a barrel, which I still think is a preposterously cheap price. It works out at just USD 0.15 a cup. A cup of gas will get a car with six passengers in, with the air conditioning on and go two miles. It is a bargain.”



In April 2005, Laguna Research Partners issued *Crisis on the China Rim: An Economic, Crude Oil, and Military Analysis*. In that study, we detailed a radically new context for analyzing the emergence of the Chinese economy, the impact of that emergence on global energy markets, and the implications of China’s economic rise for the People’s Liberation Army, the ultimate guarantor of China’s energy security. Our *China Rim Insights* series provides our business intelligence and investment research clients with on-going updates to our original *Crisis on the China Rim* thesis.

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I, Kevin B. Skislock, research analyst and the author of this report, hereby certify that all of the views expressed in this research report accurately reflect my personal views regarding the subject issuers and securities. I also certify that no part of my compensation was, is, or will be directly or indirectly related to the specific views expressed in this report.

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