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THEME – LIQUIDITY AND MARKET PRICES

Session 7 – Are underlying prices of oil and carbon all that matter for power and gas?

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Biofuel Dreaming One scenario we, and other punters could easily advance is that late this year, with another 'surprising' warm winter start, crude oil prices in New York can tumble below \$40 a barrel and stay there for a longish while. The rationale is mainly 'supply side' and therefore classic New Economics. World supply of biofuels will giddily ramp up, selon Lehman Bros analysts, to exactly 1.942 Mbd in volume terms by 2012. Curiously enough, the same period would also see surprising growth of oil supply, not only from Saudi Arabia, but it will be the biofuels which exert an increasingly strong moderating influence on oil price sentiment.

Upstream, investors will switch to clean energy. This features expensive windpower, expensive uranium, relatively clean or at least cheap natural gas, and even cheaper if not clean coal, but the 'agrifuels' have center stage in the imagination. Only initially will their feedstocks demand huge amounts of regular food agrocommodities, because new GM fuel plant species could be coming along quite soon, and will help assure a timely and painless Energy Transition away from oil.

The global race for agri-products and water is in any case intensifying, also driven by increasing wealth and meat-eating habits in China and India. World water shortage can only grow, driven by increasing GDP per capita, climate change, industrial pollution and urbanisation, all of them accelerating. Combined with the huge amounts of agri-products that are needed to supply the biofuel boom, pressure on the grains and vegetable oils or oilseeds markets is very surely going to rise. Conversely, but only in theory, fierce competition for fossil energy assets may ease

There is no problem pointing out the terrible weakness of the "soft energy" paradigm or model for ET (not quite the Spielberg variety, but ET for Energy Transition). But the ET dream is now already an article of faith to some, and very surely and certainly underlies investor sentiment in some parts of the New Energy food-fuel complex, or energy agrocommodities space. In turn, this has significant market liquidity impacts

Markets Can Stay Irrational Longer Than You Can Throw Funds at Them

Shifting to biodiesel and bioethanol car fuel blends, and above all raising tarsand output from Canada and Venezuela may slow the growth of demand for gasoline and diesel in the U.S., Europe, and Japan. As explained by Tetsu Emori (chief commodities strategist, Mitsui Bussan), and many other market strategists, this outlook would make another spike of oil prices to their July 2006 peak, over 78 USD/bbl, highly unlikely. The same Tetsu Emori, we can note, forecast Dec. 4, 2005 that oil would rise to 96 USD/bbl in 2006 due to a repeat of 2005-type hurricanes in the Gulf of Mexico. As we know, prices 'only' got to a peak of \$78.40 on July 14, 2006 after a calmer-than-usual storm season in the Gulf of Mexico, but with fire storms of another kind in the eastern Mediterranean. Nothing prevents the two event-series combining, that is geopolitical stress + freak weather due to climate change.

The real world supply/demand fundamentals however do not get much of a peek into the above 'analysis', and the key one for setting summer spikes of oil and petroleum product, and natural gas and electricity prices, is seasonal demand surge. For a host of reasons, world oil demand is now more seasonally variable than ever, being able to shift through 4 Mbd (close to one-half Saudi Arabia's real average export capacity) in a few months. Combined with rising base-level oil demand and increasing depletion, this can only create a context of hyper volatile prices, until and unless oil is simply taken right out of the market pricing system.

After oil, the next ones to go would be natural gas and uranium, with the last being coal, due to its abundance and low cost.

To be sure, oil consumers are surely increasing world use of fuels and part-substitutes derived from corn and sugar cane, and from the oilseeds, in an effort trying to simultaneously cut pollution and hold down oil prices. But as shown in my Presentation (Microsoft .ppt format) this is surely a Fuels Quest. One reason is simply because world demand increase for car fuels, driven by about 75 Million car equivalent units being produced each year, is running at more than world total 2006-level biofuels production. To catch the *Apocalypse Wagon* or global family car, biofuels players will have to run awful hard. Under very optimist scenarios, biofuels could account for 7 percent of global land transportation energy by 2030 according to the IEA- International Energy Agency. This is a key IEA policy for promoting alternatives to oil, to which little serious thought is added regarding capital costs, net energy yields, food price impacts, water needs, GHG emissions, environment impacts, and so on.

`Epoch of Change'

Oil prices in New York have dropped several percent on a year-on-year average price basis, for the year to 10 May 2007, but most surely and certainly will experience a summer surge. This is now 'traditional', just like the 'reverse arbitrage' where Brent prices lead those for WTI, which is no longer the world price benchmark, notably because of its small volume, antiquated physical logistics and general opacity.

What we are concerned about is liquidity, and we can be sure that energy markets will stay very liquid, due to convergence of many short- and long-term trends and factors, both fundamental and cyclical, including ET and galactic amounts of cash being played on energy markets each day. Taking oil alone and including all derivatives, about 1000 Billion USD is played each day on this 'sunset commodity', around 330 times the total value of all daily traded physical oil. Biofuels will add-on to this in a major way, through ripple effects in former food-only agrocommodity markets, now becoming fully energy tradable as instruments in the New Energy complex.

Forecasts of the imminent death of oil are highly exaggerated, for example that we are possibly at an end to the so-called spike, in fact long-term resource driven adjustment in prices of crude and of natural gas we've seen in the past few years. This, and clean energy hopes will attract pension and commodity fund managers to pour yet more money into grains and oilseeds, windpower, solar cells, carbon trading and sustainable realty. This is already happening ! We can therefore swap not only Urals and Brent futures, but also perhaps swap a barrel price of 78.40 USD for a bushel of wheat at 7 USD, or corn at 6 USD, or palm oil at 2750 Ringgit/ton. How long stock market operators treat this as bullish is a matter of conjecture – the most classic possible cause of economic recession being a sharp rise in food prices.

World commodity market liquidity can only grow, at least until we get a recession scenario in place. The question is not whether this liquidity gain is a bad or good thing, because it is sure and certain. We are more concerned with how fast, and the way energy markets operate around this cash spine.

Liquidity Growth and Energy Markets: Chicken and Egg or Golden Goose?

Even in Adam Smith's times coal trading, in several million-ton yearly volumes, was nearly 100 years old. This surely speeded emergence of the coal-based version of the Global Economy, called the Industrial Revolution, with heavy and very long-lasting environmental impacts. Today we have a world-wide industrial and urban revolution about 40% dependent on oil, 33% dependent on coal and 20% dependent on natural gas. Of these, only coal can be considered durable or longer-lasting, making it highly

comparable to uranium, this similarity extending to coal being opaquely-traded like its radioactive cousin.

The last two 'sustainable' fossil fuels are essentially only good for electricity production, unless and until CTL or 'liquified coal' becomes economic in the same way as tarsand oil or the biofuels, neither of which are comparable to conventional onshore oil or natural gas in net energy terms. Electricity demand growth is dependent on fast fossil-energy hungry economic growth: when or if the fossil energy gets sufficiently expensive, electricity demand growth will start to flag. In other words, markets will have to handle or 'mediate' much more expensive, more dispersed, sometimes more dangerous or risky forms of energy, blended into a diminishing stream of conventional fossil energy, in a context of general economic volatility.

Calculating the cut-off and cross-over points on so many graphs and charts is going to be difficult, but rewarding to the right mix of ground-up and top-down analysis. In this respect, nothing at all has changed, except the number of plays possible, and the cash on the tables. The essential problem, however, is going to resurface with insistence: fossil energy depletion and climate change impacts are increasing and serious. ET, or major change in national, regional and world energy mixes is coming about, whether market 'mediated' or not. The present tsunami of cash in the energy markets should not fool us into seeing the big picture, almost surely tending to long-term resegmentation, and reduced-size of future energy markets.

A Few Tentative Conclusions

In pure market logic there is no such thing as an 'underlying price' for energy, but in fact we can relate energy prices to food prices, housing prices and transport prices, as well as to physical, geological and technical factors setting availability.

Food and agriculture, as we know, is now being bundled with energy and at a very fast rate. This is likely unstable, able to go either way, with a lot of collateral damage for market players unaware of real fundamentals.

So-called non tradable natural resources, notably water and iron ore, farmland and bioresources, but also effectively uranium and to some extent coal, will take a bigger place in strategic thinking – not the same thing as market thinking.

Oil will progressively get moved out of trading, simply through depletion and strategic importance. The current approximate 48%-odd of total daily world demand that is traded, much of it in private or opaque markets, will be a high water mark.

Natural gas, for logistic or transport reasons will never become a world-traded commodity despite the energy significance of LNG, for some countries, but for which no real market trading based, transparent pricing exists.

Many, even most of the New Energy renewables (windpower, solar PV, biomass electricity, biofuels) are to some large extent non tradable and/or smaller scale and high cost, reducing downstream market trading potential.

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