



The Absolute Return Letter

September 2009

The Hamster on the Wheel

It is not universally appreciated, but the last 25-30 years have, in general, been staggeringly good to most investors. Technology induced productivity enhancements combined with favourable demographic trends, minimal government involvement, accommodating labour unions and the globalisation of international trade have all contributed to a benign inflationary environment and strong economic growth, leading to arguably the biggest bull market of all times in both bonds and equities.

Changing winds

So much for the good news. The long lasting tail winds have finally turned around, and we now face, and will most likely continue to face, head winds for years to come. The list is long, but some of the most important factors contributing to this change include:

- *The demise of the Anglo-Saxon consumer driven growth model:*

The Anglo-Saxon consumer is exhausted; he has over-extended himself and must reduce his debts for years to come. This may shift the powers from West to East, but only if Asia can drum up sufficient domestic demand to replace the western consumer.

- *The shift from small to big government:*

Ever since Reagan and Thatcher stated that small is beautiful, at least as far as government is concerned, investors across the western world have benefitted. Now, with most OECD countries suffering the implications of the worst crisis since the Great Depression, small is out and big is back in. This has dramatic implications for tax, productivity and hence also for corporate profits.

- *An ageing population:*

Baby boomers (those born between 1945 and 1960) are now retiring in large numbers and will continue to do so for the next 15 years or so, with all sorts of negative implications. As the experience from Japan shows, an ageing population slows down economic growth and becomes a drain on public finances at a time where we can least afford it.

- *Dwindling energy supplies:*

Evidence is growing that the world's largest oil producers either cannot or will not maintain oil supplies at levels sufficient to support continued economic expansion. The facts are few and far between in the world of oil, but there is plenty of circumstantial evidence to suggest that the oil markets are getting tighter and tighter.

In a series of articles over the next few months I will tackle these issues one by one, as they are all critically important. I open this month with

an essay on oil. In March 2004, when crude oil was trading just below \$30, I predicted \$100 prices within the next decade. Please note I made that prediction way before Goldman Sachs made the same projection, for which they got the whole world to sit up and listen. Before I get too carried away, though, it should not be forgotten that Woody Brock, our economic adviser, inspired me to make the \$100 projection back in 2004. Likewise, new research from Woody has inspired me to write this month's letter.

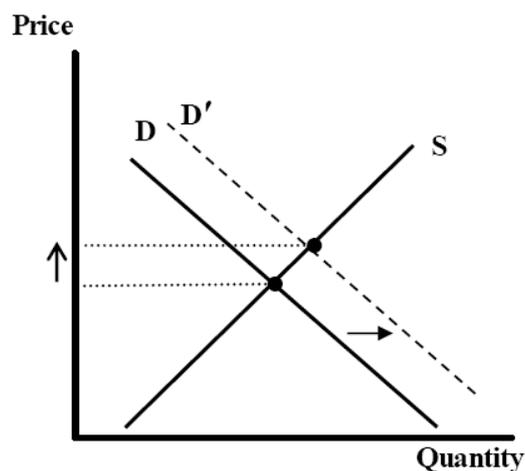
A basic lesson in economics

In order to understand where I want to go with this, please allow me to take you back to the early university days for a minute or two. If you studied economics or finance yourself, you should be very comfortable with the next few paragraphs. If you didn't, don't despair. It is far less complicated than it looks like. It is all about demand and supply and how those factors affect prices.

In a normal environment, the effect on price from a change in demand and/or supply for a given commodity can be illustrated graphically as in chart 1a below¹. The price will adapt to a change in either demand or supply until a new equilibrium has been reached; however, not all commodities behave in the same way. For instance, it has long been recognised that demand for energy products is quite inelastic (note the near vertical demand curve in chart 1b). Few people drive less because petrol prices² jump from 102.9p to 105.9p per litre. Even at the height of the crude oil bull market last summer, when petrol prices approached 120p in the UK, the effect on demand was less dramatic than anticipated.

Intuitively, it is not difficult to understand. The fewer substitutes there are for a commodity, the more inelastic demand is. Until someone invents a substitute which can replace petrol and/or diesel, *and produce it in enough quantity to feed the over 600 million passenger cars that drive the roads of this planet every day*, demand for oil will remain relatively inelastic.

Chart 1a: Price Behaviour with Normal Elasticities



¹ Courtesy of Woody Brock, *Strategic Economic Decisions* (www.sedinc.com).

² A quick translation for our many American readers: Petrol equals gas. Here in the UK, gas is something we naturally produce, when we over-indulge ourselves on onions, cabbage or beans.

Chart 1b: Price Behaviour with Inelastic Demand

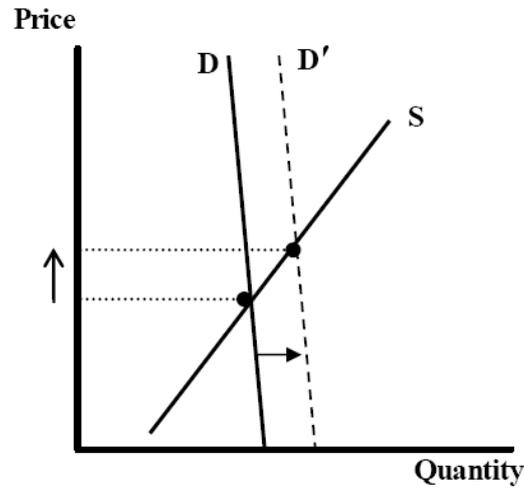
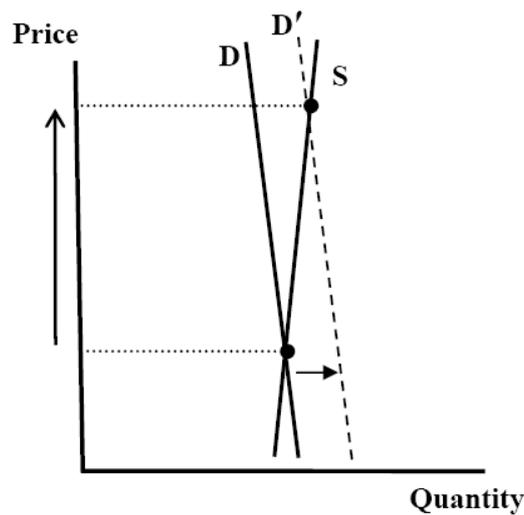


Chart 1c: Price Behaviour with Inelastic Supply and Demand



Source: www.SEDinc.com

Inelastic supply?

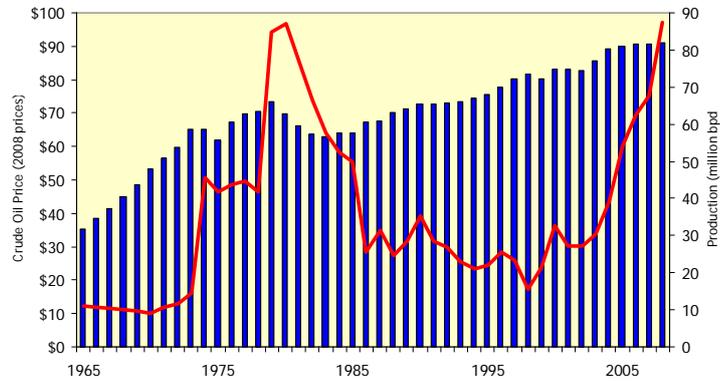
Now we come to the interesting part. When both demand and supply is inelastic (see chart 1c - the demand and supply curves are now both near vertical), the end result may be dramatically increased price volatility. In this scenario, not only do consumers demand virtually the same amount of energy regardless of price, but suppliers (Shell, BP, Total, Exxon, etc.) will deliver the same amount of energy products to the markets, whatever the price. I can already hear you say – *but this makes no sense; any sensible oil company will pump more out if the price can sustain the increased output!*

Theoretically, yes, but you are making two critical assumptions in order to reach that conclusion: You assume that (1) oil companies are capable of producing more oil, and (2) that they have the incentive to do so.

If you take a quick glance at chart 2, you will note that global oil production has been stuck in the 80-82 million barrels per day (mbpd)

range ever since the big bull market in oil prices began in 2004³. In a normal environment, oil producers would take advantage of rising prices by increasing supply, and the subsequent price change would have been much more modest (as illustrated in chart 1a or 1b). The key question is therefore why didn't they raise production?

Chart 2: Crude Oil Prices and Production (1965-2008)



Source: BP Statistical Review of World Energy, 2009

Little appetite for investing

Let's take a closer look at the two assumptions – the latter one first. It is a regrettable fact that the vast majority of the world's oil reserves are in the hands of totalitarian regimes, many of which have shown little or no respect for international law and/or agreements previously entered into. Russia, Iran, Nigeria and Venezuela are all guilty of having changed the rules midstream in recent years, and I am sure I could find many more examples, if I did a little bit of research.

If you were the CEO of an international oil company, would you seriously consider investing the many, many billions of dollars required in any of these countries, given the recent history? Who knows what might happen next? If you are lucky, you will be taxed to death. If you are unlucky, you may end up in a power struggle with Putin such as the one BP suddenly found itself involved in last year in Russia. And if you are having a really bad day at the office, dozens of your staff will either get kidnapped or killed in some obscure country ruled by guns and warlords. No wonder many oil companies have apparently decided that enough is enough in terms of investing in countries run by thugs.

Let's move to the second assumption. Could global output be raised if oil producers wanted to? This is a very tricky question which, at best, can only be partially answered, because there are so many unknowns. Let's have a go anyway.

Is Peak Oil for real?

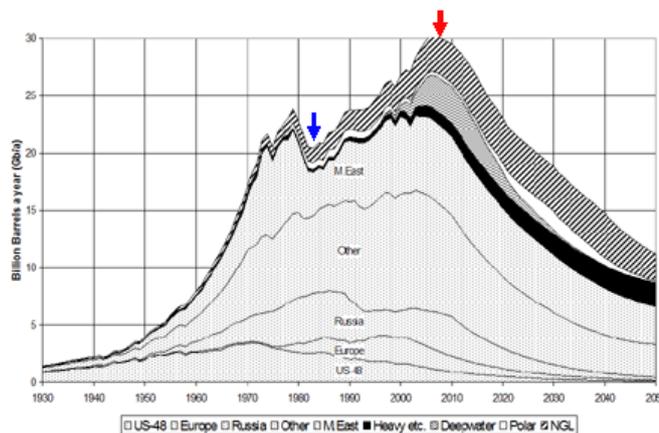
The issue at the centre of this discussion is a phenomenon called *Peak Oil* which you may or may not have heard of. Peak Oil is based on the notion that oil is a finite resource which will ultimately be depleted. In principal, nobody can disagree with that observation. The big question is when, and here the experts disagree.

The idea was originally conceived by Marion King Hubbert back in 1956 whilst working as a geoscientist for Shell in Texas. Hubbert predicted that US oil production would peak around 1970. Most people in the industry found his ideas laughable until 1971, when US oil production actually peaked. Suddenly, nobody laughed anymore. Since

³ I used inflation-adjusted rather than nominal prices, and all prices are annual average prices.

then, a whole host of other countries have experienced the same phenomenon. Here in the UK, production peaked in 1999 and has been declining ever since. Chart 3 below illustrates the phenomenon, but I must stress that the projected peak (the red arrow) is just one of many estimates available.

Chart 3: Peak Oil



Source: www.grinningplanet.com

Can you trust the facts?

The problem confronting the experts is twofold – (a) there are many moving parts in the equation some of which are highly unpredictable, and (b) the information available is of very dubious quality. The last point is best illustrated through a couple of observations.

It is a fact that not a single major new oil field has been discovered in the Middle East since the 1970s. Despite that, official reserves now stand at 754 billion barrels, up from 362 billion barrels in 1980⁴. Back in 1983, Kuwait suddenly bumped up their reserves by almost 40% to 93 billion barrels. Back then, OPEC production quotas were partly based on official reserves, so the reserve adjustment gave Kuwait a higher share of overall OPEC production. No prize for guessing what everyone else did shortly thereafter. By 1988, total OPEC reserves had miraculously increased to 653 billion barrels.

Cheating? Who knows. In a world as murky as the oil they pump up, the facts are few and far between. However, in 2006 during a rare moment of insight, Petroleum Intelligence Weekly got their hands on a report produced by the state owned Kuwait Oil Company back in 2001. In the report, it is clearly stated that actual proven reserves in Kuwait are only half the stated reserves which have stood at around 100 billion barrels (+/- 5%) for the last 25 years⁵.

In another rare glimpse of transparency, and to the dismay of the Iranian leadership, Dr. Samsam Bahktiari, who for many years held a senior position at the National Iranian Oil Company, has publicly stated that the official Iranian oil reserves (138 billion as of the latest count according to BP) are overstated by almost 100 billion barrels⁶. He also went on record to suggest that the current global production level of 81-82 mbpd will drop to about 55 mbpd by 2020 with

⁴ BP Statistical Review of World Energy, 2009

⁵ http://www.energyintel.com/DocumentDetail.asp?document_id=167229

⁶ <http://www.moneyweek.com/investments/commodities/why-we-must-take-peak-oil-seriously.aspx>

enormous consequences to follow. Unfortunately, Dr. Bahktiari has subsequently and quite unexpectedly died, so this trail has gone cold.

Asia will require more oil

One can only guess about the precise size of the reserves left and therefore also when Peak Oil as a global phenomenon will occur. If the majority of experts are to be believed, it should occur sometime between 2015 and 2030. The main problem is that it is likely to coincide with hundreds of millions of people in Asia aspiring to join the middle classes. Americans use nearly 25 barrels of oil per year at present. The average Brit uses about 11, whereas the Chinese manage with 1.9 and the Indians with only 0.8 on average⁷. As the number of cars and air-conditioned homes in China and India grow, one can only imagine the toll it will take on global oil reserves.

The International Energy Agency (IEA) estimates that the world's oil producers need to find 45 mtpd of new output – equal to four new Saudi Arabias - between now and 2030 just to maintain current production levels, in addition to the estimated 20 mtpd which will be required to meet the expected growth in demand⁸. If Peak Oil is only 5 years away, the demand to replace existing supplies will become even larger. This has the potential to create very serious dislocations, political unrest and perhaps even wars. Having said that, it is not my intention to scare the daylights out of you; the track record of forecasting doomsday is quite poor anyway.

The other side of the story

Not everyone subscribes to Peak Oil. The New York Times ran a provocative piece only a good week ago written by the energy consultant Michael Lynch who argues that the Peak Oil discussion is completely misplaced⁹. He builds his case around the argument that supporters of the theory “base their conclusions on poor analyses of data and misinterpretations of technical material”. He also argues that there is still plenty of oil and oil substitutes left in the ground. In another sobering article posted on Reuters.com only a few weeks ago, John Kemp points out that Peak Oil is “the right answer to the wrong question”¹⁰. Kemp argues that the combination of improved technology and higher oil prices will ultimately justify investments in the development of other hydro carbons.

Most experts actually agree that there is plenty of conventional oil hidden under the Arctic, and that it is only a question of time before the technology to drill in these areas will become available at a large scale. The same experts also agree that coal and oil sand deposits are vast and that both can be turned into a substance which can substitute conventional oil – at a price. But then again, that raises other questions, as turning the bitumen rich Canadian oil sands into oil requires huge amounts of natural gas and water, producing plenty of CO₂ along the way. The Copenhagen climate summit cannot come quickly enough.

Better management required

In another twist, I was recently informed that the Germans are now toying with *negative* electricity prices during night hours on weekends, as the wind mills at this particular time of the week can produce sufficient power to supply the entire German market. As wind mills are not equipped with breaks which can control power production in the short term, and as electricity cannot be stored, producers of thermal

⁷ <http://seekingalpha.com/article/158384-does-the-world-have-a-peak-oil-problem>

⁸ “World needs four new Saudi Arabias, warns IEA”, *The Times*, 12th November, 2009

⁹ http://www.nytimes.com/2009/08/25/opinion/25lynch.html?_r=3&pagewanted=all

¹⁰ <http://www.reuters.com/article/reutersComService4/idUSTRE57335G20090804?pageNumber=1&virtualBrandChannel=0>

power (e.g. coal) need an incentive to shut down production which has resulted in the creative pricing structure. Obviously, the human race must become better at managing situations like that. Owners of electric cars should be offered heavy discounts for charging their batteries at 3 o'clock Sunday morning, when nobody else uses the grid. As oil prices rise, we almost certainly will get better at energy management. \$200 oil prices will not, therefore, spell the end of the world any more than \$100 oil prices did.

In the meantime, oil companies will continue to be reluctant to throw money after the oil thugs and *this is the point missed by most oil industry observers*. If the large oil conglomerates are not prepared to commit the hundreds of billions of dollars in new investments required to meet expected global demand growth between now and 2030, then we have to face the consequences of inelastic demand *and* supply (as illustrated in chart 1c).

OPEC's powers will increase

Adding insult to injury, non-OPEC producers will run out of oil first. OPEC accounts for about 40% of global oil production today and that number will almost certainly increase significantly over the next few years. The shift of powers towards OPEC will not please governments in the OECD which will go to great length to ensure that prices are kept at reasonable levels. But what can they do? Ration the consumer's access to oil? It is a possibility, but it is difficult to administrate and extremely unpopular. Go to war? Well, it wouldn't be the first time someone goes to war over oil, so don't discount that option altogether.

A more likely outcome, though, is increased political interference. A clear sign that the US government is set on increasing its control over oil prices came only a few weeks ago when it was announced that, commencing in November, The Federal Trade Commission will begin policing the petroleum industry with penalties for anyone trying to manipulate energy prices¹¹. Another US agency, the Commodity Futures Trading Commission, is expected to decide whether to place trading limits on speculators later this year. Expect this trend towards more regulation to continue. I can already envisage President Obama speaking at the climate summit in Copenhagen about oil being a strategic commodity which must be preserved for future generations.

Regulated energy prices?

Maybe the day is not that far away where oil producing nations – with their arms appropriately twisted behind their backs - agree to prices being regulated with oil and gas exchanges closed across the world so that investors can no longer speculate on the future course of energy prices. An extreme outcome? Not if you believe, as more and more experts do, that Peak Oil is now only a few years away and that the rate of decline on the other side of the peak will be quite steep.

Meanwhile, oil producers remind me of the poor little hamster on the wheel, spinning its tiny legs as fast as it possibly can just to keep up. There is only one problem – the hamster is getting tired - to the point of exhaustion. See for your self what happens next:

<http://video.google.co.uk/videoplay?docid=1569125216323959688>

Expect extreme volatility

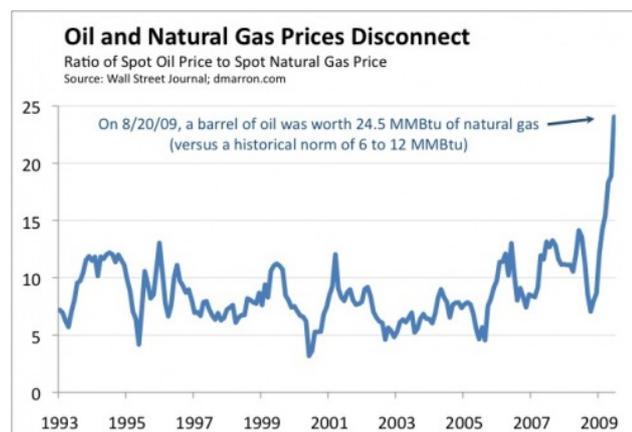
I gave up trying to understand short term movements in the oil price a long time ago. It is a particularly fickle market with many different elements driving prices – some being a great deal more transparent than others. In the short to medium term, I am convinced that the oil price will be extremely volatile. Buying both a put and a call option may not such a bad idea. Longer term, prices will almost certainly go up.

¹¹ *New York Times*, 7th August, 2009

How high can oil prices go then? I have no doubts that the highs experienced last summer will be tested again, as oil markets gradually get tighter and tighter over the next few years, but remember that volatility works both ways and we may visit \$30 before we re-visit \$150 per barrel.

I urge you to take a quick look at chart 4 below. I am being told that one barrel of oil has roughly six times the energy content of one MMBtu of natural gas. You might, therefore, expect the oil price to trade at approximately six times the price of natural gas. In practice, though, oil has traded between six and twelve times the price of natural gas. Recently that ratio has exploded and now stands at well over 20 times (this is for near term delivery; further out the curve, the ratio is about 14 times).

Chart 4: Oil vs. Natural Gas Prices



Source: <http://seekingalpha.com/article/157698-the-disconnect-between-oil-and-natural-gas-prices>

Exactly why that is, nobody seems to be able to explain, but history suggests that the spread will come in again. At current prices, perhaps the right short term strategy is therefore to be long natural gas and short oil. Regardless of this, longer term, oil prices should exceed the levels of last year, quite possibly by some distance. The world struggled to cope with \$150 oil prices, which probably contributed more to the economic downturn than most of us realise. However, human beings adapt and, next time we visit \$150, the effect on the economy will be less dramatic.

Niels C. Jensen

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