What is pushing oil prices lower? What's the difference between Brent Crude or West Texas Intermediate? Will prices stay low and what are the prospects for oil demand growth? Who are the winners and losers? What is the impact of lower oil prices on the economy? Are lower oil prices good for growth? What does the falling price mean for the consumer? US Oils rigs go up as the oil prices rise, so is the real challenge, Sheiks versus Shale or a Western squeeze on Russian resources?

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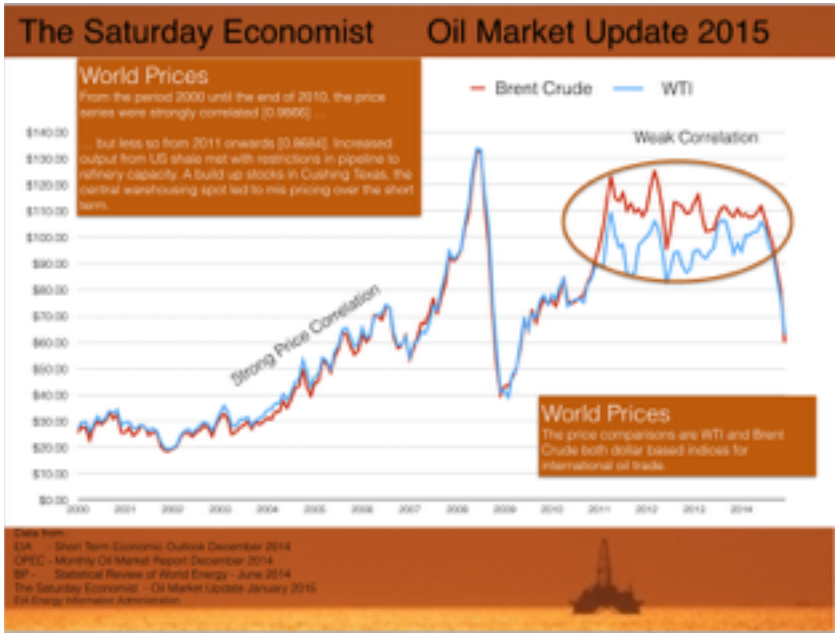
What's the difference between Brent Crude or West Texas Intermediate?

Brent Crude and West Texas Intermediate are the two most often quoted benchmarks for oil prices. Brent Crude - is a low sweet (low density low sulphur content) from the North Sea region. WTI (West Texas Intermediate) is a slightly higher quality US crude. WTI is stockpiled and priced in Cushing Oklahoma. Refining and pipeline constraints have led to price differential opening up between the prices of Brent Crude and West Texas Intermediate.



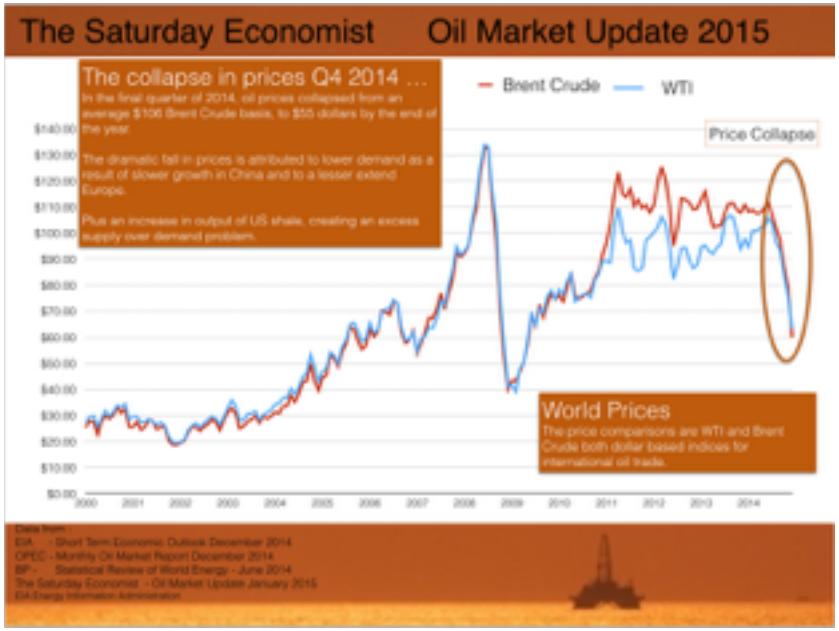
How have the prices varied?

From the period 2000 until the end of 2010, the price series (Brent and WTI) were strongly correlated [0.9866] but less so from 2011 onwards [0.8684].

Increased output from US shale met with restrictions in pipeline to refinery capacity in the Gulf of Mexico. A build up stocks in Cushing Texas, the central warehousing spot led to mis pricing over the short term.

The collapse in prices Q4 2014 …

In the final quarter of 2014, oil prices collapsed from an average $106 Brent Crude basis, to $55 dollars by end of year. The dramatic fall in prices is attributed to lower demand as a result of slower growth in China and Europe plus an increase in output of US shale, adding to the excess supply over demand problem.



But is this really the case? We examine the fundamentals and suggest minor changes in demand and supply do not justify a 50% collapse in the oil price.

"How can we explain a 50% drop in oil prices?"

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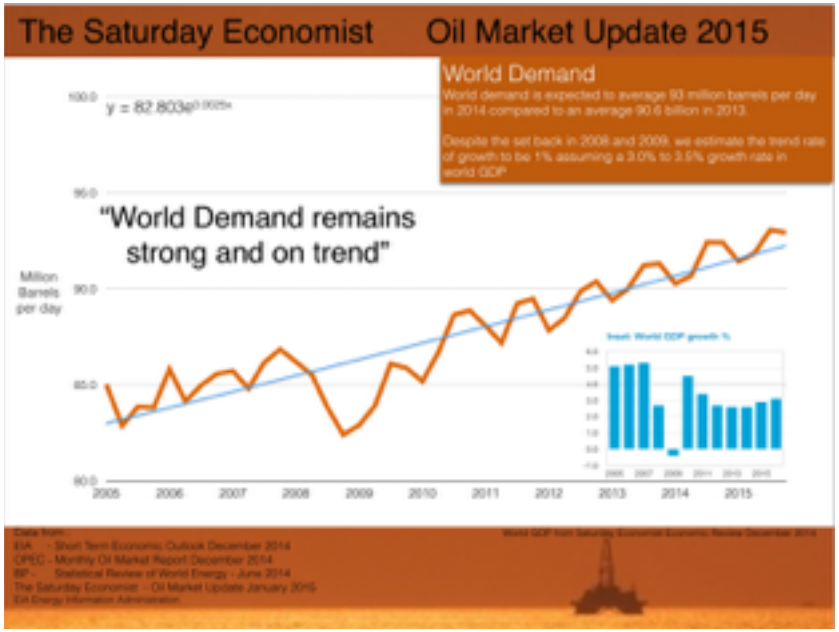
How far is a drop in world demand to blame?

World demand is expected to average 93 million barrels per day in 2014 compared to an average 90.6 million in 2013. Despite the set back in 2008 and 2009, we estimate the trend rate of growth of world oil demand to be 1%.

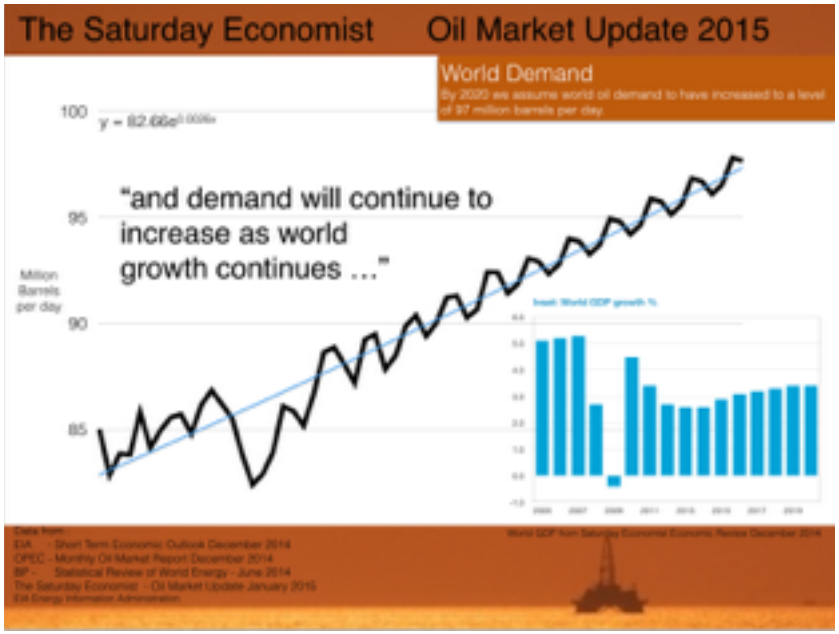
The measured response suggests a demand elasticity of around 0.3%. [Oil consumption as a function of world GDP growth.]



Oil Market Consumption in 2020 …

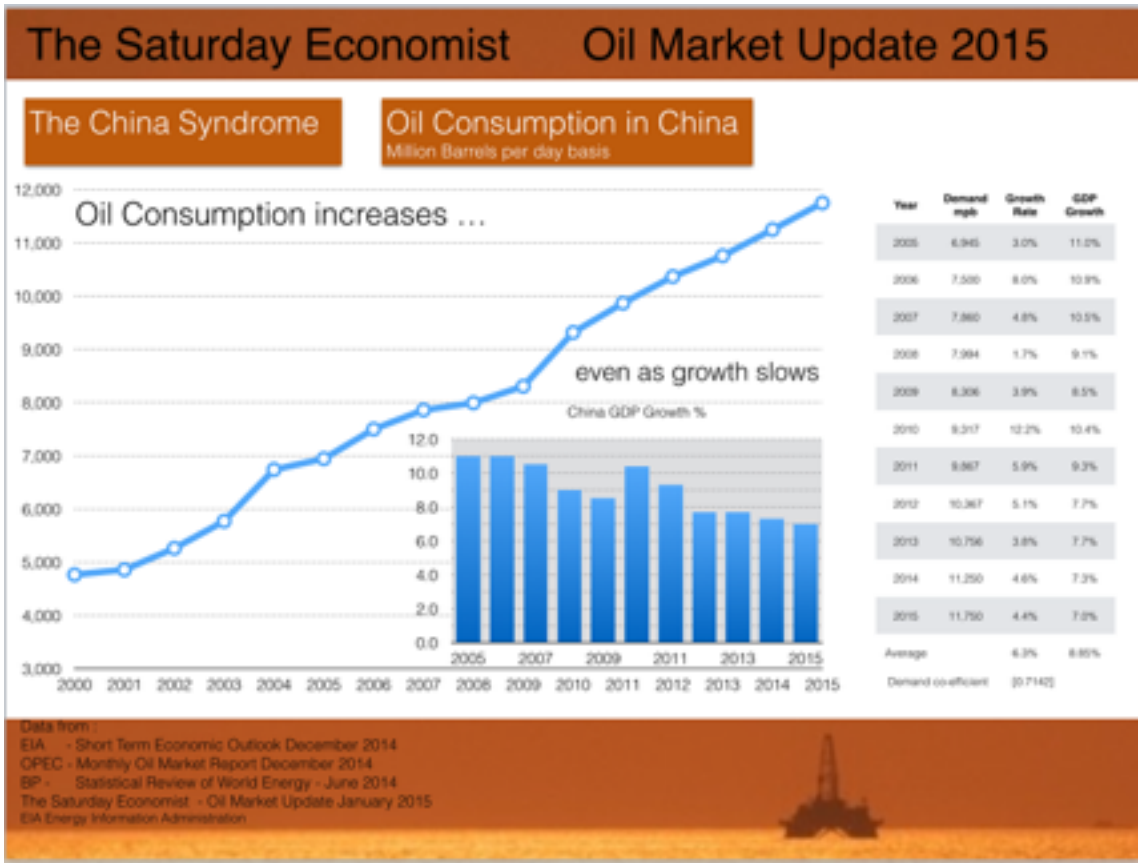
By 2020 we assume world oil demand will have increased to a level of 97 million barrels per day assuming an average 3.0% to 3.5% growth rate in world GDP.

“97 million barrels per day”



So what of the China syndrome?

So if the overall world demand conditions are relatively strong, can we attach any credibility to the suggestion the slow down in China's rate of growth will impact on oil demand and imports?



Well not really.

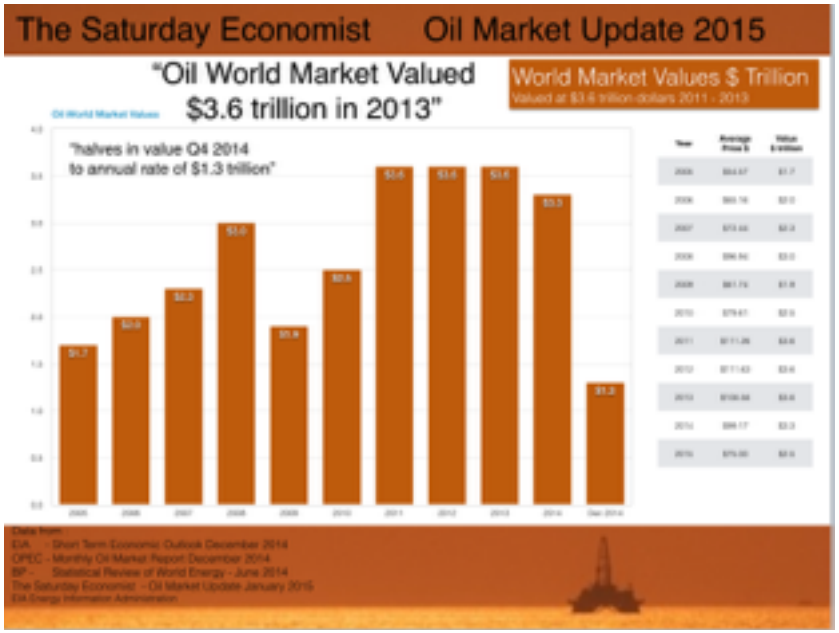
We estimate the demand co-efficient for China oil consumption as a function of growth, to be around [0.7142]. A reduction on growth in the Chinese economy from 7.0% to 7.4% would result in a drop in the rate of growth of oil consumption but by a very small amount approximately 0.3% at worse.

In 2013, the estimated level of consumption in China, was 11 million barrels per day. The implications of the slow down in the Chinese growth rate and oil consumption will create but a tiny drop in the world oil bucket.

China slow down - a tiny drop in the world oil bucket"

World oil market - worth $3.6 trillion Dollars …

We estimate the value of world oil to have been $3.6 trillion Dollars in 2013 falling slightly to $3.3 trillion in 2014. The estimates are based on a consumption rate of 90.3 million barrels per day in 2013 rising to 93 million barrels per day in 2014. The average price we use in our model is just under $109 in 2013 and $100 in 2014.



The collapse in prices - at a cost of $1.6 trillion …

By December 2014 prices had fallen to just over $50 Dollars per barrel. The market collapse was an annualised cost (or benefit) to the world economy of over $1.6 trillion dollars. The squeeze on producers around the world has been intense. The loss of revenue for all oil producers has been dramatic.

So what is the impact on world GDP?

We estimate the market value of oil as a percentage of world GDP to be around 4.9%. In the case of China and the USA, the figure is slightly lower around 4.4%.

A 10% fall in oil prices is worth some 0.5% to the world economy but this can be a cost to producers and a benefit to consumers with a zero sum balance.

Winners and losers?

Winners in the price drop are the strong net importers including China, Japan, Europe and India together with Singapore and other Asia Pacific beneficiaries. The UK will benefit but to a much lesser extent.

Losers in the trade are OPEC particularly the Middle East countries of Saudi Arabia, Iran, Iraq and UAE. Venezuela, Nigeria and Russia are also losers in the price change. Countries with high internal fiscal deficits and / or high external deficits are particularly vulnerable to the oil price shock.

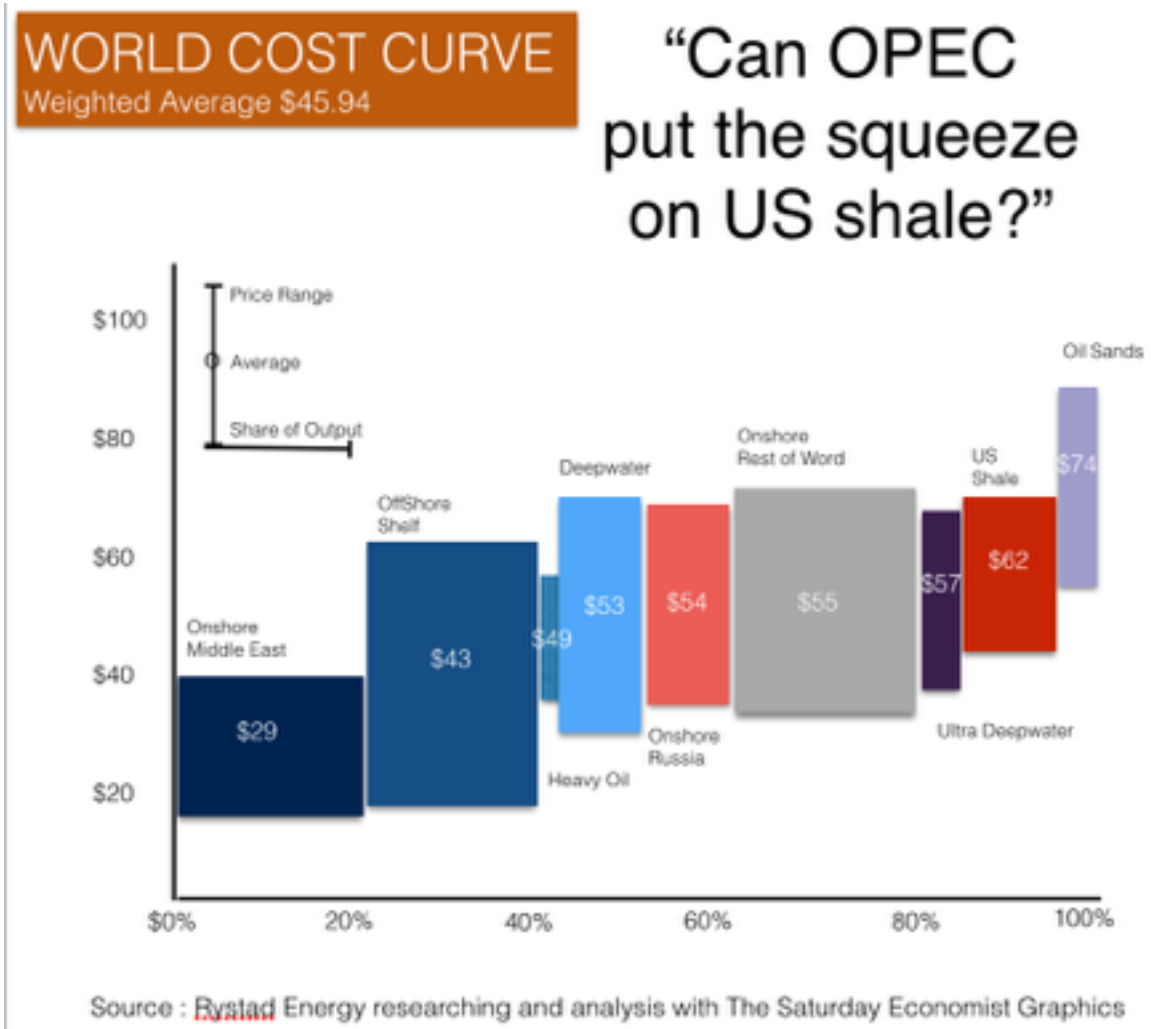
So what of costs?

But most onshore shale rigs have a short draw life with relatively expensive marginal cost of extraction around $62 according to Rystad Energy Research. Some 70% of extraction occurs within the first two years of operation in the case of horizontal rigs.

For oil sands extraction, the processing and cleansing costs add to the cost of extraction. The average cost profile rises to $74 placing particular pressure on some Canadian production.

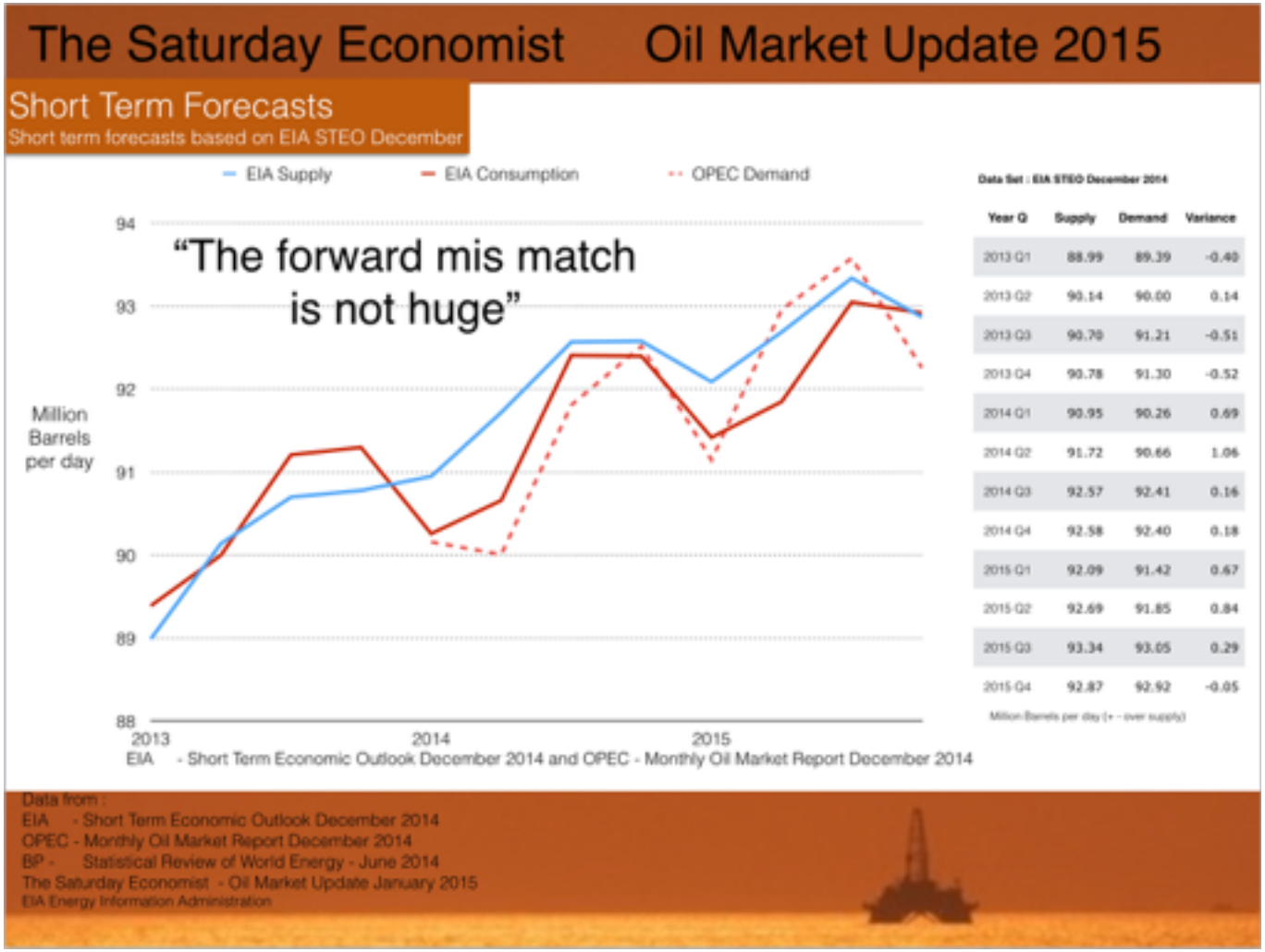
Onshore Russian costs fall to $54 dollars average, similar to deep water oil at $53. Offshore shelf extraction is estimated at $43. All are compared to just $29 average cost of Onshore Middle Eastern oil.

It is suggested the Saudis are happy to see prices fall in the short term, to put pressure on US shale extraction. OPEC will not cut production to match the price imbalance.



The forward supply demand mismatch is not huge …

The forward mismatch between supply and demand is not huge. The latest forecasts from the EIA Short Term Economic Outlook suggest the oversupply will average less than one million barrels per day throughout 2015.



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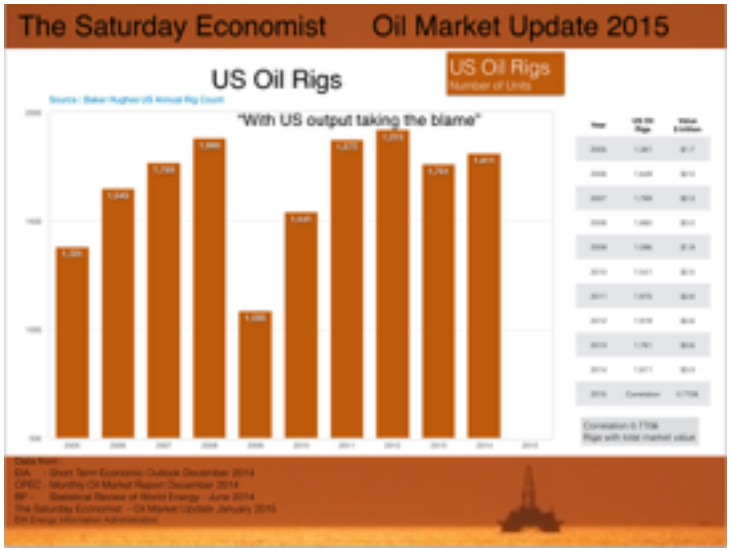
So what of US shale?

The increase in US particularly US shale has been cited as a cause of the oil price collapse. As the oil prices rises, so too does the number of US oil rigs. The number of US rigs is estimated to be 1,800 in 2014 according to the Baker Hughes Oil rig report. As oil revenues fall so too will the number of US oil rigs.

US output is increasing. The EIA estimate the level of crude oil production increased from 6.5 million barrels per day in 2012 to 7.4 million in 2013, 8.6 million in 2014 and 9.3 in 2014. The variance in growth of 2 million barrels per day over the last two years is significant but has to be put in context of a world market of over 90 million barrels per day equivalent. By 2020, we expect world consumption to increase to 98 million barrels per day.

An increase in supply will have an impact on price but a 2% increase in supply does not fully explain or justify a 50% fall in oil prices.



So why the huge price collapse?

Game theory?

In the short term, OPEC is confronted with a loss of market share as a result of the increase in US and Russian oil activity. OPEC is loathe to surrender space in Asian markets to South American oil looking for a new berth as prospects for US imports fall. But does the strategy really justify a loss of world oil revenues to producers of $1.6 trillion annual rate? OPEC is engaging in a race to the bottom of the barrel.

Prices around $50 Dollars per barrel are unsustainable. Recent price moves begin to mirror the 2008 oil price rise, which we identified as more of a speculative bubble rather than a market move based on fundamentals.

The costs of extraction of Middle Eastern oil are low, but it is suggested Saudi Arabia needs $85 Dollar oil to break even at trade level. Iran has a much higher break even price of around $140 per barrel. The Saudis have considerable dollar reserves and can absorb losses over the “medium term” but to what end?

The squeeze on US shale …

The squeeze on US shale is already leading to a reduction in the number of rigs and forward investment plans but any recovery in price above $100 Dollars would simply lead to a restoration of the installations and rates of extraction.

The Putin Put Conspiracy …

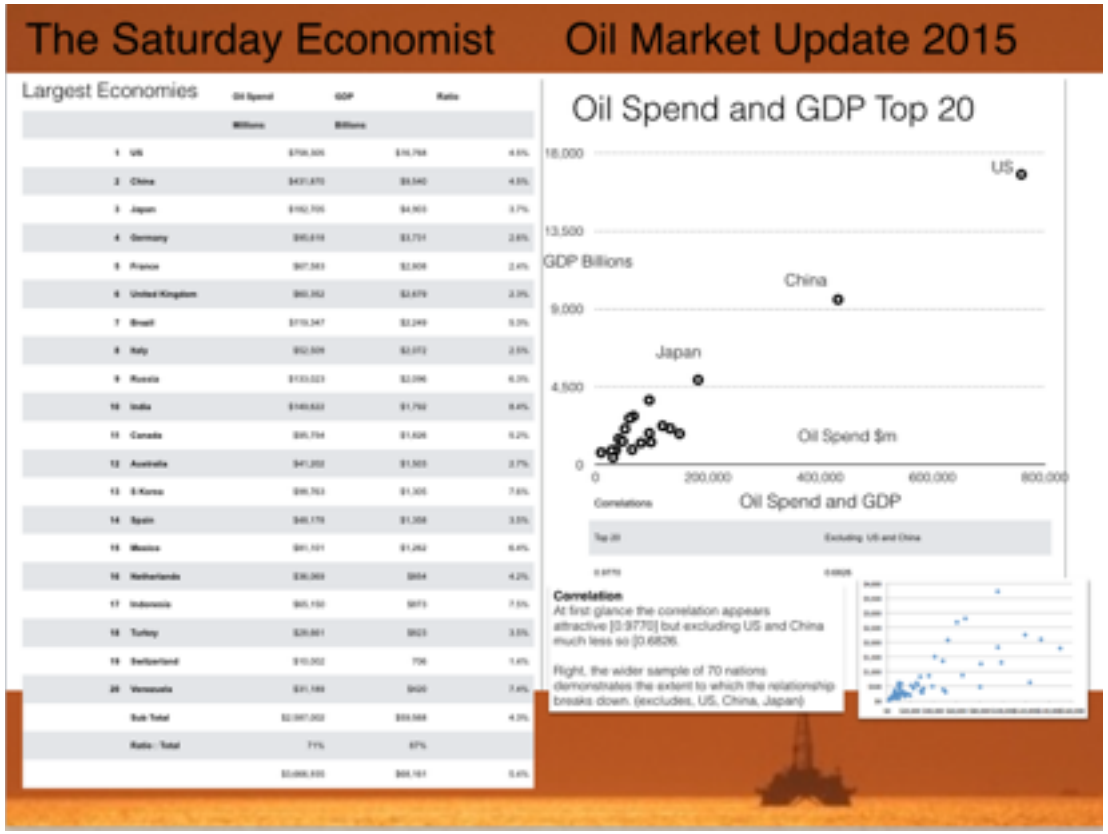
Popular also is the suggestion the Saudis have conspired with the Americans to put pressure on the Russians with such a heavy dependency on oil and gas for exports and dollar revenues.

Sunni versus Shiite …

Equally popular to conspiracy theorists is the suggestion the Saudis wish to pressure the Iranians over the support for the conflicting sides in the Syrian and extended Middle East conflict.

Either way the loss of revenue is a heavy price to pay for geo political pricing policy, which cannot be sustained over a prolonged period. Keynes said “Markets can remain irrational a lot longer than you and I can remain solvent” but “sovereign countries can remain solvent much longer than markets can remain irrational.”

So what is the real impact of lower oil prices?



For net importers …

For net importers lower oil prices mean lower producer prices and retail prices especially in energy utility and transport costs. This is a boost to consumption as real incomes improve and spending can receive a boost. Lower oil prices have a positive impact on growth and employment except in direct and indirect oil industry related sectors.

Sector beneficiaries include, airlines, transport, travel, leisure and entertainment. Losing sectors include energy, energy equipment suppliers particularly those supplying to the oil trade.

Central Bankers …

For central bankers, the pressure reduces to increase base rates as inflation rates fall. Policy makers must be able to see through any short term negative rates of inflation and avoid any panic reaction to an immediate deflationary trend.

Trade Deficits …

Lower oil prices will lead to a fall in trade deficits (or an increase in trade surplus) for net consumers. In the UK, we estimate a 10% fall in oil prices is worth £1billion in trade revenues. Hence a 40% fall in oil prices is worth 0.25% kick to net growth through trade effects alone. An improving trade deficit will have a positive impact on currency as a result of stronger trade and capital flows. Implications of stronger growth may pull forward rates higher.

Fiscal Impact …

Tax revenues may suffer as a direct loss of oil revenues and petrol duty revenues. Lower inflation may produce a fiscal drag effect with lower prices generating a lower tax take. There may be some stimulus to consumption which may provide an offset. For certain economies including India, the fall in oil prices will provide an opportunity to reduce energy related subsidies.

World Impacts …

We use an average 5% of GDP to calculate world impacts. We estimate the value of overall world oil consumption as a percentage of world GDP to be approximately 4.9%. In the case of USA and China, the level is slightly lower at 4.4%.

A 10% fall in prices suggests a 0.5% fall in nominal world GDP. The impact is deflationary. The loss of revenues to producers is a first round impact, which is negative for growth. The reduction in costs to net consumers has a first round gain to trade balance of a commensurate dimension. This, although positive for individual countries, is neutral for world growth.

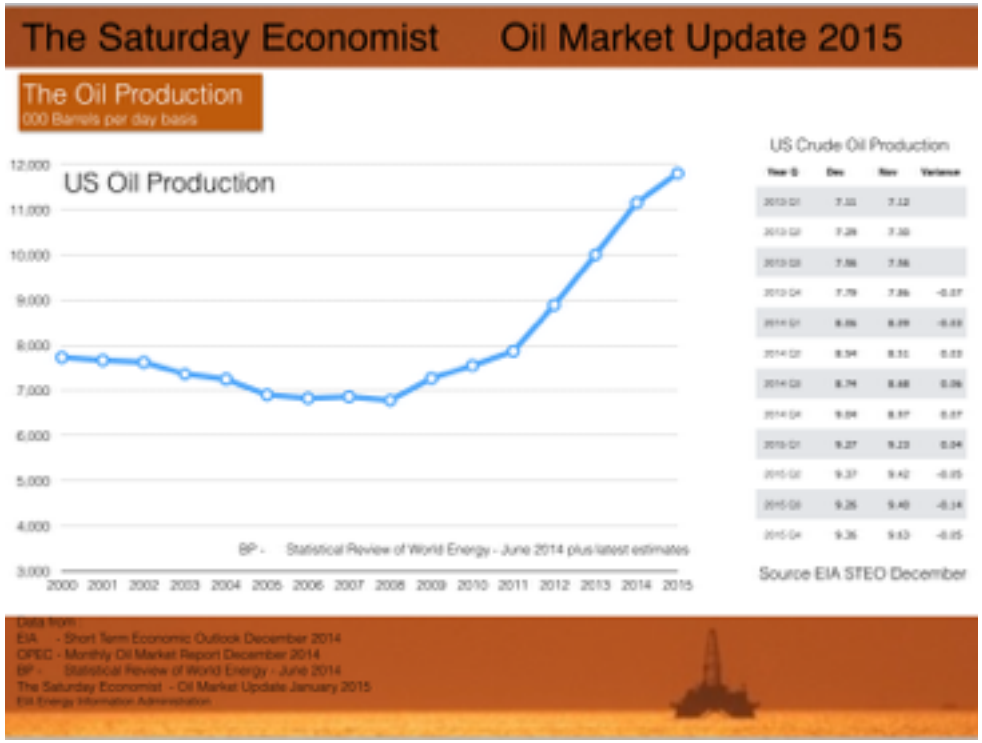
For net consuming nations, lower prices may produce a real incomes benefit, leading to a boost to spending and activity but this is a more measured and delayed response.

The JP Morgan suggestion that “Estimates of growth suggest a $10 fall in oil prices means that oil importing countries grow by an additional 0.5% at the expense of oil exporting countries” reflects the transfer effect as reflected in our GDP profiles. It does not reflect in commensurate growth per se in the consuming states.

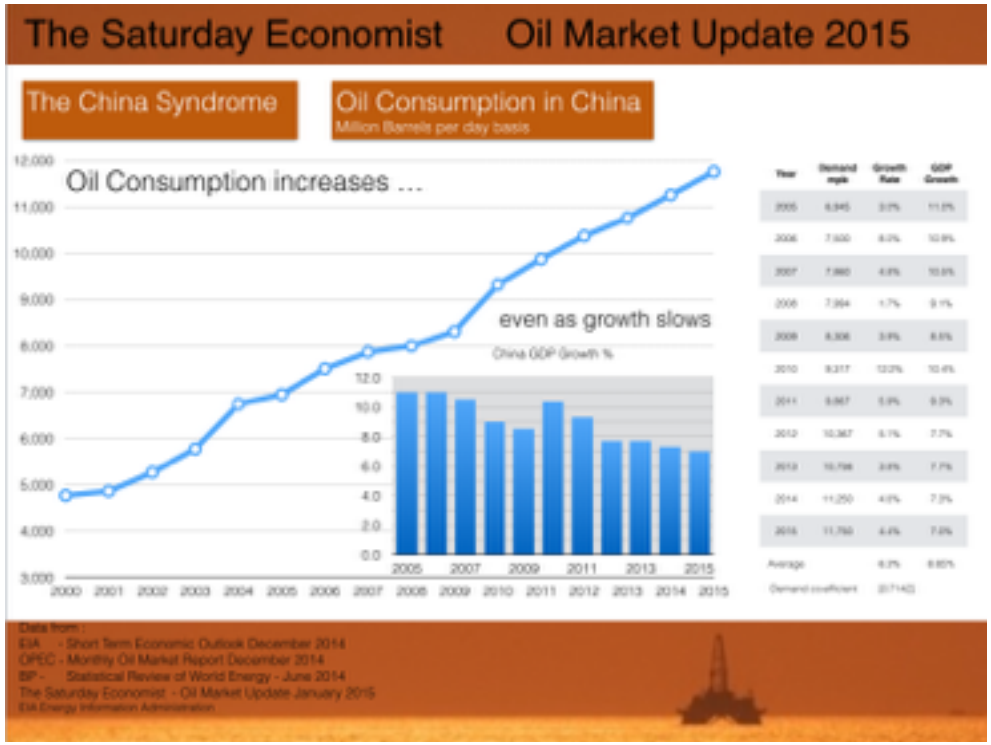
For Net exporters …

The fall in prices has a negative impact on international revenues, capital flows and debt service capability. For those oil producers with internal or external deficits, the impact can be acute. The vulnerabilities of oil-exporting countries can be identified via a fiscal break-even price. That is, the oil prices at which the governments of oil-exporting countries balance their internal budgets.

US Oil production rises ….

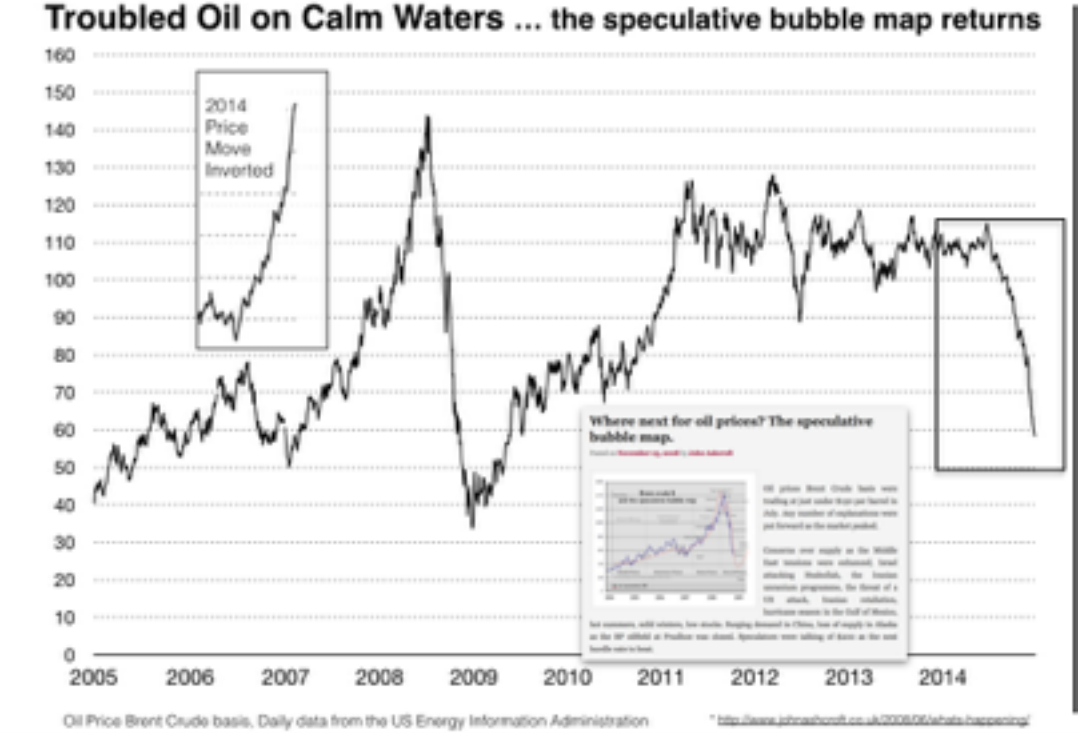


… but so does consumption in China.



Troubled Oil on Calm Waters …the speculative bubble map returns …

In June 2008 as the oil price headed for $200 Dollars per barrel Brent Crude basis, we called the price down. The black gold price move was an exact overlay of the speculative bubble map. We cautioned and advised prices were heading lower.



The downside reaction in 2009 to $40 was a unwind of futures and speculative positions. Fundamentals were little changed. Prices would revert to norm as fundamentals returned.

In 2014, the demand fundamentals are little changed, despite the slow down in world trade. The supply side dynamics from US shale have changed but not that much. The increase in output does not warrant the 50% fall in oil prices.

A wider dimension is at work. Geo political guesswork about, sheiks versus shale, East versus West, the Putin Put, Sunni versus Shiite help the volatility and the players in the market.

The 2014 price move mirrors the 2008 price move. This time the bears not the bulls have the ring but not for much longer. The Speculative bubble map has returned but sooner or later so will the fundamentals.

“The Speculative bubble map has returned but sooner or later so will the fundamentals.”

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Oil Market Update 2015

Data from :

EIA - Short Term Economic Outlook December 2014
OPEC - Monthly Oil Market Report December 2014
BP - Statistical Review of World Energy - June 2014
The Saturday Economist - Oil Market Update January 2015
EIA Energy Information Administration

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