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Lies, damned lies, an oil figures

This article at the link below, proves that you can be wrong, you can also be late and you can be ignorant, but as long as you have money, you can post a story globally in all the major world newspapers at the same time....if you want to...

<http://www.ft.com/intl/cms/s/2/2ded7416-e930-11e4-a71a-00144feab7de.html#slide0>

The oil lobby is a powerful beast! But to give the article its due, it is an equal measure of crap and misdirection leveraged on only a few real facts.

Even idiots know exponential growth is not possible for ever

The world economy is today arguably hovering between deflation and outright depression. Credit growth, money growth and low interest rates are being used by central banks to try to goose the global economy to life. Think tanks around the world are extolling the virtues of economic growth. Yet it is impossible to have continued exponential growth in a finite world. I added the term “exponential” because economists try to avoid using it. They never plan to allow downturns or to end growth at any time, so if they are honest, they would admit they are shooting for exponential growth. Even idiots know this is not possible for very long in a finite world.

But the idiots who are responsible for our current predicament do what they can in order to excuse their mistakes.

Most financial transactions in the marketplace are accretive to the economist’s version of GDP – which is a purely monetary measure of an economy (despite many protestations to the contrary). The aura of extra credit and zero interest rates continues to promote a hollow version of monetary economic growth which in turn creates the illusion of real growth and boosts the value of shares on the world’s stock exchanges.

Deception like this is only possible if financial market operators and banks are allowed to omit contingent but nevertheless material liabilities from their balance sheets. That in turn is how the banks promote the illusion of solvency. There are few banks whose balance sheets would comply with generally accepted accounting principles that haven’t been waived by regulations, and that allows the fraud to continue.

So despite hard times in the oil industry, we still have the spectre of US tight oil (shale) companies who cannot repay their debts – or some of them even meet the interest on their debts – from the sales of oil @ USD50/bbl (WTI). More money is still piling into the oil patch because everything else on the share-market is also over-valued...

<http://www.bloomberg.com/news/articles/2015-04-20/investors-who-see-froth-in-market-go-all-in-for-oil#news/articles/2015-04-20/investors-who-see-froth-in-market-go-all-in-for-oil>

Irrational behaviour rewarded

There is something noticeably wrong with any version of the global economy where irrational behaviour gets so well rewarded. This in turn is only able to happen because the costs and problems are being swept under the carpet. Debt is building at an exponential rate. Leave it under the carpet, or sweep it out into the public gaze...but at any rate, it must one day be addressed. The cure for excessive debt should not be to incur more debt. So we must ask ourselves why this is happening.

The USA started off-shoring its liquidity problems as a result of the costs of the Vietnam War... in 1971 by detaching itself from the gold standard and printing any money it needed in order to transfer a sizeable proportion of the cost of domestic consumption to the international community via the US dollar's reserve currency status. When challenged the Treasury Secretary, John Connolly responded, "It is our dollar, but that is your problem."

Let's face it, in 2008 the Global Financial Crisis was triggered by a debt bust for sub-prime mortgage lending (that had been converted into mortgaged backed securities which were sold as AAA risk rated throughout the world). The ridiculously over-hyped risk attribution was a simple and straightforward fraud on the buyers. The band aid solution was to print trillions and lend it to 22 globally significant (TBTF) banks to grease the wheels of the global financial system. Many were losers but bank executives were winners.

As it became impossible to tell the truth, official lies just get trotted out. With the lowest labour participation rate since 1990 today, the USA now declares unemployment at around 6.4% instead of the real 16+%. Changing the rules every so often does the job.

The surplus of energy is falling

But the reason people are on average getting poorer rather than richer in OECD economies, is because the surplus energy within society (with which to create wealth) is less than it once was. For further reading you may find some answers in Paul Craig Roberts book, "The Failure of Laissez-Faire Capitalism."

It is the absence of surpluses of net energy to create wealth that we lack.

The net energy available from easy to extract oil, gas and coal allowed us to grow an industrial economy leading to the industrialisation of agriculture and the huge shift from the countryside to the cities. From 94% of the population growing or working to get food in 1850, the modern farming systems only require 4-6% of the population to be involved. In 1850 a 60 year old farmer in the USA would have sons to work his few acres. Today the average age of farmers in the US Mid West is almost 60 years and they have huge acreage and tractors of all kinds to do the work. The energy surplus during this era of change, allowed most of the rest of the

workforce to move from production roles into service roles. These are many...education and research, health, social services...none of which produce wealth, but all of which consume the wealth generated by a few “worker bees” taking advantage of capital, labour and energy.

Oil exploration increasingly costs more to deliver smaller if any commercial finds, so exploration and development risk is high – regardless of technological advances. Oil costs far more to produce... in order to provide less net energy.

Oil wells that once cost USD2-3/bbl to extract from Yemen or Syria or Texas are now substantially depleted. At the time of the oil shocks of the 1970's more expensive and difficult fields were discovered and brought into production. For countries like the UK in which producers need at least \$80/bbl to make North Sea oil wells profitable, the problem is also that the output is down from 2.99 million bbls per day in 1999 to 500,000 bbls per day in 2015. Maggie Thatcher claimed an economic miracle, but what it was, was the advent of copious quantities of oil and gas. The UK started producing oil in large volume during the Thatcher years by which time the big oil fields of Texas in the USA consisted in the main of a forest of “stripper” wells (those skeletal derricks and nodding donkeys) producing as little as 1-2 barrels per day each.

A temporary range extender

Although US production peaked in 1970, the decline was temporarily reversed when Alaska's North Slope came on stream at a vastly higher cost. But that peaked and production has since been falling until the “shale oil miracle” appeared. But in truth it is no miracle...just a temporary range extender that was brought into being when oil averaged over USD100/bbl.

The replacement of easy to access conventional oil fields by new expensive and technically difficult fields proved three theories. The first is that we will inevitably reach a global peak in output (on a well, by well, then field by field, then country by country basis) and secondly that humanity has the capacity to extend the time that it will take before we will reach the total peak in liquids of various values, using increasingly expensive, innovative technologies. The third is that there will always be far more oil in the ground than we will ever extract. So humanity's exploitation of oil will have a long tail stretching for as long as innovation, utility and a positive EROEI allow.

Certainly the peak in cheap conventional oil is only visible now in the rear view mirror.

By the time in 2000 that bio-fuels started to become popular we reached the point at which net energy and high cost no longer mattered by comparison to political and economic expediency. Bio-fuels have an energy return on energy invested of 3:1 (at best) so the net energy we derive from energy invested is very low. Far too low to run our industrial society and meet the social costs of having 80% of the population in occupations other than those that actually produce something. So we add into the pot some expensive oil from the polar regions, tar sands, a higher proportion of condensate and gas liquids and more (really hard to get) deep water oil and tight light oil derived from source rock (aka shales) instead of just conventional oil and condensates from pressurised reservoir rock. The cost is higher in monetary cost as well as energy input. Each new initiative seemed always to attract government subsidies. But in the USA today, 60% of all oil could be regarded as high cost and difficult. Bio-fuels and shale oil (taking depletion rates into account) make no economic sense and each costs more

than the revenue the companies get back from other than unwise investors or government boondoggles.

USA financial sector now 27% of GDP

Studies of collapse of past civilisations (the best source being Joseph Tainter's book "The Collapse of Complex Societies") have noted the reliance placed on complexity prior to collapse. It is worth noting that in the USA, the financial sector now accounts for 27% of GDP and most of the government sector is an overhead for the productive sector. We have reached the point where the societal complexity of Western civilisation is un-supportable by the production sector. This is why money printing, increased credit and debt are necessary to preserve the illusion of economic stability and growth.

The oil price today bears no relation to the current cost of production – particularly today, when about 35% of all oil produced in the world is at a loss. But what will happen is that, more and more projects will be deferred until the price goes up and depletion of existing fields reduces the daily oil supplies to a level below demand and inventories decline. Then the price will move higher. The pricing process will never be predictable due to geopolitical events affecting supply on the one hand and the economic climate variables on the other.

The whale oil demise gives a good analogy. Where, as the industry reached its high risk stage, the oil price fluctuated so violently that sometimes whalers made a fortune from their catch, other times they stayed at sea for years searching, only to return and find a glut and low prices. Some of the same elements are present in the fossil oil industry today. But today there is a difference. The world transport systems were not absolutely reliant on any whale oil, nor was the ready availability of massive quantities of whale oil necessary, in order to produce alternatives to whale oil. If you want to get your head around this fact (because this is what may eventually cause financial and societal collapse), you may care to read this fine article...

<http://blog.aee.net/news-is-the-end-really-nigh-for-fossil-fuels-or-is-the-future-simply-advanced-energy>

High energy density scalable batteries

The only thing that can possibly save us is high energy density batteries that are scalable (from cheap and readily available materials). Unless there is such a battery that provides free energy per charge of over 400whrs per litre of dielectric, our society is doomed. It is not that we are short of energy sources because they are plentiful and scalable, but without energy storage to allow us to somehow match the benefits of fossil fuels, our society is doomed because it can never make the transition from fossil fuels. Our predicament...despite the exaggerations and untruths contained in the mainstream media...is that simple.

As an example of poor pricing signals, 22% of the people in the USA who this year have replaced their electric cars, are replacing them with SUVs. Low oil prices today are killing substitutes for oil, as well as setting us up for the next round of higher prices.

This is where the present exponential credit growth phenomenon stands ready to assist in the destruction of our society. I have already pointed out that the growth in global debt has been USD57 trillion over the last seven years. Most of this can never be repaid and for that reason, the arguments as to whether Greece is being fiscally imprudent or not, are just rather

childish. There are few governments if any, that are being fiscally prudent – and certainly none in a sustainable fashion. The sword of Damocles posed by the gigantic, unregulated global derivatives overhang is a huge problem but compared with early 2008 when CDSs were around USD58 trillion, they were USD19 trillion at last count (June 2014). These are the most contagious of undeclared contingent liabilities within the finance sector, so it is one avenue of risk that has abated a bit. The problem is that disclosure is patchy and data is eight months out of date at time of writing.

There are no new easy ways to get oil finds happening. Everything is getting harder to find, to produce and to troubleshoot, whether it is oil, gas, coal, gold, silver, iron ore or bauxite. With the difficulty comes much higher cost for capital cost, financing cost, and operating cost. Accidents causing environmental pollution are harder to stop or mitigate. Few oil companies remain in business when a oil field plays out so cost then falls on society. With the higher cost comes increased energy input requirements.

This article from Gail Tverberg below gives you the dimensions of our problem. She is freshly back from lecturing on the subject in China and plans to expand her reports over the next weeks to flesh the twin problems of resource depletion and economic collapse...both topics have an inevitability about them...

<http://ourfiniteworld.com/2015/04/23/overview-of-our-energy-modeling-problem/>

Blindly leading us into a collapse scenario

I have been analysing the problematic issues associated with oil supply and demand since 2005; and I first corresponded with Gail in 2007. She is doing good work and it will take people like her, who can link risk with financial consequences, to educate those of our leaders who are blindly leading us into a collapse scenario.

My study is with alternatives to oil. What alternatives are there, and do they rate well by comparison with the energy storage qualities of fossil fuels? So I happily defer to Gail's modelling expertise. But those who seem to think that renewable energy sources can stand on their own, are often little more than uninformed and biased supporters of the new technologies...or enthusiasts who realise that one day the fossils won't support us...

<http://blog.aee.net/news-is-the-end-really-nigh-for-fossil-fuels-or-is-the-future-simply-advanced-energy>

As the undertaker in the TV show "Dad's Army" was fond of saying, "We are all doomed!" Yet arguably while there is life there is hope.

Well, I cannot see how even the mythological EESU – performing to the maximum, originally vaunted specification - could even change that outcome soon enough. So as yet I don't know what will.

A mixture of "business as usual" and being locked into QE and ZIRP will ensure that financial collapse is more likely to come before the full impacts from resource scarcity hit. The financial impacts will likely delay the worst impacts of peaking oil and the scarcity of strategic minerals..... by reducing demand.

And that is why we have low commodity prices today, and why the next crash is already baked into the cake. Central banks can delay the inevitable, but only for so long.