HARGREAVEHALE

INVESTMENT BULLETIN

"Blackpool: We have take off "

24th April 2012

About the Investment Bulletin:

- It is issued as a marketing communication.
- In its preparation, we are not obliged by FSA rules to comply with legal requirements designed to promote the independence of investment research; which include a prohibition on dealing ahead of the dissemination of investment research.
- It is not intended to address the circumstances of any particular individual or entity and it does not constitute a personal recommendation.
- The opinions and suppositions contained within the Investment Bulletin are those of the author and are held at the time of issue.
- All information contained in it is believed to be correct at the time of issue but cannot be guaranteed.
- Prices quoted in this newsletter are indicative market prices only. Prices are taken at the times stated.
- The main assumptions we have used are included in the text.
- The bulletin has not been disclosed to any of the companies referred to herein
- The bulletin will be issued on a monthly basis. However, we are not obliged to provide any updates on any of the investments previously recommended. Due to market conditions any opinions and recommendations included in this document may change without notice at any time after the document is issued.

Risk Warning - Please be aware that the capital value of, and the income derived, from any market investment can go down as well as up. Investors may not get back the original amount invested. Significant losses can be made even on 'low risk' investments. Past performance is not necessarily a guide to future performance. If you are not prepared to accept these risks to your capital please do not invest in the securities referred to herein.

Conflicting Interests - Conflicts of interest may affect the objectivity, independence and impartiality of this newsletter. Hargreave Hale Limited, its officers, employees, representatives, associates and directors may have already acted on the information contained in this newsletter and may have previously bought or sold, or may have a material shareholding or other interest in any of the mentioned investments. They may have provided significant advice or investment services in relation to these companies in the last 12 months.

Please read the important information at the back of this newsletter. More information is available on our website www.hargreave-hale.co.uk. Hard copies are available on request at any of our offices, for readers who do not have internet access.

Registered and settlement office: 9-11 Neptune Court, Hallam Way, Blackpool FY4 5LZ
Telephone: +44 (0) 1253 754700, www.hargreave-hale.co.uk
Member and SETS Participant of the London Stock Exchange, Member of the PLUS Market, Member of APCIMS
Authorised and Regulated by the Financial Services Authority, no 209741
Incorporated in England and Wales, Company Number 3146580. Telephone calls may be recorded.

No surprises that various attempts have been made over the years to manipulate the oil price. When oil prices ramped up to 147 dollars a barrel in 2008, the biggest casualty was US oil pipeline giant Semgroup, which went bust after racking up $2.4 billion, yes billion of losses, as a result of a short position rumoured to be equivalent to 20% of US crude oil inventories. Who goosed whom and how and which investment bank, if any, may or may not have been involved would be impossible to guess. We certainly have absolutely no idea, but President Obama seems to think that another such attempt to manipulate the oil price is now underway. He was talking last week about “perceptions of a shortage” of oil, “illegal” manipulation and suggesting that fines per proven manipulation be beefed up from $1 million to $10m a shot. He presented a plan, costed at $52m, to increase six fold the surveillance and enforcement staff of the Commodities Futures Trading Association.

Perceptions of a shortage have recently involved much talk about attacking Iran. This widely dispersed rumour has at least partly been scotched recently by no less than the US military itself. According to a senior spokesman, Iran has fleets of speedboats that can carry machine guns and antiship missiles. Such tactics with the grand sounding name of "asymmetric warfare" could be deadly within the confined space of the Straits of Hormuz, with low cost mines or missiles fired from fast moving speedboats well capable of sinking billion dollar US warships.

However, talk of oil price manipulation and creating perceptions of shortage has a stench of the Ancient Regime about it because of the revolution in energy prices which is now taking place in the US as a result of fracking technology.

So what is fracking, why is it collapsing energy prices worldwide and why is it a disruptive technology sending tremours through industry? Finally why is the British Government so slow in responding to such an opportunity?

Hydraulic fracturing is the process of injecting a combination of water and chemicals into an existing rock layer. Hydraulic fractures form naturally, as in the case of veins or dykes but hydraulic fracturing widens or creates additional fractures which then speed up the migration of gas and petroleum from source rocks to reservoir rocks. Gas includes natural gas, gas derived from coal bed methane, and sandstone. It also includes shale gas.

Shale gas is natural gas trapped within shale formations. Shales have insufficient permeability to allow significant fluid flow to a well bore and until the advent of hydraulic fracking which create artificial fractures around well bores could not be extracted in volume. Now combined with horizontal drilling with lateral lengths up to 10,000 feet, it can be extracted in large volumes.

It is this massive step up in the availability of gas that is transforming the energy outlook for the US. Shale gas fracking has already revived US oil and gas production, yielding an overabundance of natural gas. US shale gas production has risen 14 fold since 2000. As a result, gas prices have collapsed to just over

$2 million BTU'S from $14 BTU'S in 2008. This means that energy costs in the US are creating something of a revolution in competitiveness.

Naturally, there are some losers. Railroads, whose largest revenue earner is coal, are losing out. CSX, the largest US Eastern Seaboard Railroad operator recently revealed that coal shipments to US power stations were down 28% on last year and were seeking to revise their contractual arrangements with power stations for the provision of coal. The economics of building a nuclear power station are being blown out of the water. The economics of being green are being blown out of the water. The economics of being green with a government subsidy become joke material. Obviously it is not great news being a coal producer. Electricity power plants in the US are not wasting too much time converting from being coal fired to being gas fired. One of the biggest operators in the power market, Southern, the largest coal burner in the US is now building three gas fired plants in Georgia. In 2008, Southern got almost 70% of its electricity from coal. Now it is less than half and going down fast. Investors therefore should be generally alive to the downside of investments in coal mines and their suppliers. It should be said that the price of thermal coal and to a lesser extent coking coal has been in significant decline in recent months, overturning the economics of coal mining startups.

But of course there are some very big winners. US chemical businesses are surprising on the upside this reporting season. In the first quarter, oil prices have increased 2%, whilst natural gas prices fell by no less than 26% over the same period. Now that oil prices are starting to fall, the overall reduction in oil and gas based feedstock prices should help margins going forward. Big US ethylene capacity owners such as DOW, or Exxon Mobil should be winners. Ethylene is the building block in the production of many common and important materials, such as chemicals and plastics and it is recovered from natural gas through catalytic cracking at refineries. As natural gas prices fall, so the industrial margins of chemical producers such as DOW should improve.

Contractors are also major beneficiaries. Sempra Energy announced last week that it has received consent to develop a $6 billion liquefied natural gas terminal in Louisiana for Cheniere Energy. The facility will chill natural gas into a liquid that can be shipped on tankers and will enable US based producers of natural gas to export to overseas markets. This plant is likely to be built by 2015 and be the first of many.

The bad news is that even the banks are getting into the action with the launch in May of the world's first cleared financial derivatives contract for liquefied natural gas in advance of a massive expected outflow of LNG from the US in coming years.

Best positioned are US manufacturers, where fuel cost is often a very large component of overall cost. Take as an example Alcoa, the $10 billion market cap manufacturer of aluminium, with a stock price bumping along the bottom at $12 compared with a March 2007 "high" of $47. It has disappointed investors for years, impacted by disappointing aluminium prices, sluggish revenue and limited US recovery, particularly to date in construction and housing. Signs are that activity in construction and housing are picking up but the big problem has always been cost. Figures from the US Aluminium Association suggest that energy represents 30% of the total production cost of primary aluminium. Whilst it is too early for any specific recommendation with a market cap around one third of

sales, miserly margins, selling at 6 times EV/EBITA, this is the sort of US manufacturing business which could benefit from a halving of energy costs in the longer term. As a result, the estimated gross profit margin forecast of just a tiny 10% on 2013 sales could prove unrealistic.

The fact is that the gap in structural costs between the US manufacturing sector and the rest of the world is already closing fast. This is the result of rising productivity particularly in predominantly non union industry sectors as well as rapidly rising wage costs amongst blue collar workers in China, (up 20% in just the last two years.) The estimated structural cost gap between the US and its competitors fell to 17.6% in 2008 from 32% in 2006 and the process is accelerating. Its time to repatriate jobs and energy cost reductions will be the catalyst. Facts back this up. In Obama's state of the Union message two years ago, he suggested that the US needed to increase its exports as a way out of recession. He suggested doubling exports over the next five years. Incredibly with US exports up 34% in the last two years, this target could well be met. Cheap fuel is the key.

And what about the US consumer? Well they are now enjoying the fruits of lower energy costs. They are paying $2 per million BTU's for natural gas compared with their friends in the UK who are paying between $15 and 17 per million BTU's. Terrific. The only good news being that the French consumer is paying roughly 25% more than us. This differential cost between Europe and the US is a staggering figure. Putin, the main gas supplier to Europe at present has expressed extreme concern. You have to look at it two or three times to understand the significance of what is actually happening.

Occasionally the UK has a bit of luck. It happened in the North Sea with oil exploration in the 1970's. It has just happened again. A bit of good news which could change the maths of the UK's fiscal deficit in a major way. This is the confirmation by the International Energy Agency that there are reserves of shale and natural gas onshore UK sufficient for 250 years of consumption. Offshore UK, there could be five to ten times that amount.

But can fracking come to the rescue of the UK? The answer is it can if we can find the right calibre of politican and administrative civil servant to drive the process and make it happen. Driving the process means immediate primary legislation to cut through the “democratic” consent process at regional and national level.

It goes without saying that it would be a sorry business if our Blackpool back office was to be catapulted into Morecambe Bay as a result of any illegal "fracking" activity. But it looks as though such activity will now be legalized. A report released last week commissioned by the UK Government has concluded that despite a couple of minor earthquakes last year in response to fracking in the Blackpool area, fracking is safe subject to tight regulation and seismic monitoring.

The drilling company involved in precipitating last years Blackpool earthquakes, CUADRILLA, estimates that shale exploration in the North West of the UK could contribute £5/6billion to the local economy through job creation and business taxes. According to the British Geological Survey, the UK'S potential onshore and offshore shale reserves are large enough to turn the UK into one of the world's top gas producers. The question remains: is it actually possible that UK politicians

and more particularly the hitherto myopic UK Treasury and Cabinet Office could act for once in a forceful manner and do something about it.

Despite the Government's endorsement of shale gas extraction, the signs are not good that anything much is going to be done quickly. Initially “green” campaigners were supportive of shale extraction. Then they realized that it could undermine the subsidies given to carbon friendly product. Unlike the US, Europe has a heavy regulatory structure which continues to undermine its competitiveness and a bureaucratic structure geared towards energy subsidy. Unfortunately, UK energy policy makers have generally lost the plot.

This week, David Cameron is due to make a speech at Lancaster House, telling no less than 23 international energy ministers that the UK is committed to a ”green” future in which the UK no longer relies on fossil fuels. The keynote of the policy is nuclear power. This policy is falling to pieces. All but one of the UK'S existing nuclear plants is due to close by 2023, whilst new EU carbon restrictions will force nearly one third of the UK'S Coal fired electricity plants to close. Last month, RWE and EON scrapped plans to build two new reactors in the UK. This is not just in reaction to Fukushima, but also in reaction to the utterly shambolic nature of UK energy policy. Centrica has recently warned that it could pull out of its joint venture to build nuclear plants in the UK. The specific problems investors face in the UK is that it has what is known as a ”liberalized” energy policy unlike any other Sovereign state in the world. In the real world, Governments underwrite the cost and risks associated with new nuclear build. Not in the UK. All the market gets is absurd “contracts for difference” for green energy creation but as yet no firm price levels. Energy policy in the UK has been infested for far too long by the green lobby and its lawyers. If the lights actually start going out in 2015, an event which a number of serious commentators are suggesting is a serious possibility, there will at least be a funny side to it. Top of Cameron's agenda on his recent tour of the Far East was apparently an attempt to get Japanese contractors involved in UK nuclear new build. Hopefully not the same contractors who built Fukushima.

We met with Faroe Petroleum this week. This is a well managed North Sea operator with excellent production performance from existing wells in the UK and Norwegian North Sea producing around 8000 barrels of oil per day with an average production life sufficient to justify the current market capitalization. There is limited premium for a largely carried interest in over twenty exploration wells spread over the next five years. Whilst not a specific recommendation at present, there are three drills on large scale exploration wells starting in June, each of which has the ability, if successful, to transform valuations of the company. Clearly all exploration activity is highly risky, but less risky on the downside if you happen to be carried on costs.

We discussed the comparative energy policies of the UK and Norwegian Government. One of the keys of the Faroe's success is its knowledge of Norwegian exploration risk. The Norwegian Government has developed a clear strategy in relation to exploration, it has been very successful in developing fields. It takes the view that the process of exploration should be encouraged as much as possible by Government and payback in the form of taxation on revenues created is worth delaying into the future to encourage the process of exploration. Simply put, for every £1 spent on initial exploration, the Norwegian Government provides 78p. This encourages banks and equity to provide the balance with the payoff deferred until the fields are in full production

when the corporation tax regime kicks in. This encourages activity particularly in marginal fields. By comparison, the UK Government changes the fiscal rules for drilling more or less every budget. The UK Treasury seems obsessed with immediate tax take. There is no sensible longer term strategy which in term discourages investment in longer term exploration investment. Banks, a lot of them as bust as the UK Government, are unwilling or unable to provide the necessary debt on reasonable terms required for initial exploration activity. We are certainly seeing a number of smaller North Sea corporates with proven reserves finding it difficult to deal on sensible terms with the banks.

So if Government continues to be so short term in its energy policy is there any possibility that the UK will be able to move as fast as the US in encouraging the rapid development of fracking, thereby transforming the industrial landscape and making life considerably cheaper for the UK consumer. Not probably under normal circumstances. But circumstances, particularly in Southern Europe, are by no means normal. There is just a chance that the real world will start to intrude on the Alice in Wonderland world of the EEC Green lobbyists and their lawyers. The intrusion will be as a result of money or the lack of it.

Take Spain. Spain has recently been forced to put its green energy subsidy on ice. The Government's Council of Ministers approved a plan to suspend payments to new renewable energy plants, because the scheme had already accrued debts of £20 billion by the end of last year. The suspension will affect all technologies including wind, solar, energy from waste plants etc. Industry minister Jose Soria said: "First and Foremost there is an unequivocal goal through the Government to reduce the deficit and no policy area is apart from that."

Even the Germans are now calling for caps on subsidies for new solar installations. Message to investors: if even the Germans are getting in on the subsidy reduction act, beware any investments in "green" energy companies dependent in part on continued subsidy for their profitability. And it is probably worth remembering that Governments are well capable of imposing retrospective changes to agreed subsidies further down the line. In other words breaking of contracts when it is convenient to do so. The process of subsidy withdrawal is still in its early stages but should accelerate remembering that as the social contract starts to break down in Greece, Spain, France and Portugal, throwing rocks in the street is just a rather more effective form of lobbying than lunching with the right people in Brussels.

There are two smaller companies we have seen recently who could be beneficiaries of falling natural gas prices. Both are UK listed and high risk with operations in the US. The first is Clean Air Power, (high risk) which for many years has been developing a Dual Fuel combustion technology that enables heavy duty diesel engines to operate on a combination of diesel and natural gas. The development stage has been long and arduous, with £30 million spent to date perfecting the technology, collecting 66 patents on the way and partnering with leading truck companies such as Volvo. More recently the Group has entered into a joint venture with a major US truck manufacturer, Navistar to develop the Prostar Class 8 truck run on gas and diesel. Clearly, the economics of such a product have been transformed by the fall in US gas prices and at the same time the US has pledged to speed up the development of Gas storage plants to facilitate availability. The Group is now starting to move out of development stage towards revenue generation with sales of nearly £5m generated last year.

The second UK listed company which could benefit from falling natural gas prices is Iofina, (high risk) which is capitalized at £50m. Iofina has developed a proprietary wellhead extraction technology which facilitates the efficient and low cost extraction of iodine from water associated with natural gas and oil production.

Low US natural gas prices are impacting the economics of natural gas extraction but this extraction process usually has to continue in order for extraction licenses to be retained. As a result, natural gas producers are seeking ways to improve profitability or worst case recover costs. The shale gas extraction process involves significant injections of water, which normally would be regarded as a waste product, if not a potential liability in terms of clean up costs. Iofina is able to offer a profit share on the clean up process, via its extraction of iodine from water. Shale gas extraction is associated with brine rich water which contains iodine. Iodine remains a valuable industrial commodity whose current production is dominated by just two countries, Japan and Chile. Something of a duopoly and prices have been high. Iodine and its derivative products are essential components of many consumer markets, in particular LCD screens, paints, coatings, and in the agricultural industry to prevent weed growth in crops. There must be a possibility that US shale producers seek to joint venture iodine extraction with IOFINA on an increasing scale utilizing the Group's proprietary well head technology.

George Finlay
Director

Hargreave Hale

HARGREAVEHALE

Office Network

Registered Office: 9-11 Neptune Court,
Hallam Way,
Blackpool FY4 5LZ
Tel: 01253 754700

London: Accurist House,
44 Baker Street,
London W1U 7AL
Tel: 020 7009 4900

Blackpool: 4 Neptune Court
Hallam Way,
Blackpool FY4 5LZ
Tel: 01253 621575

Lancaster: 25 Brock Street
Lancaster LA1 1UR
Tel: 01524 541560

Bangor: 2nd Floor,
30 Dean Street, Bangor
Gwynedd LL57 1UR
Tel: 01248 353242

Worcester: Virginia House,
The Butts,
Worcester,
Worcestershire, WR1 3PL
Tel: 01905 723551

Carlisle: 10b Clifford Court
Cooper Way
Parkhouse, Carlisle
Cumbria CA3 0JG
Tel: 01228 515224

Email: bulletin@hargreave-hale.co.uk

Important Information

Hargreave Hale Limited has approved this newsletter. Hargreave Hale Limited is authorised and regulated by the Financial Services Authority and is a Member and SETS participant of the London Stock Exchange, and a Member of PLUS Market and of APCIMS. The company is incorporated in England and Wales, Company Number 3146580. The registered office is: Marsden House, 4-10 Springfield Road, Blackpool FY1 1QW. Hargreave Hale Limited is an associate company of Investec Bank (UK) Limited, which is part of the Investec financial services group. Investec Bank (UK) Limited is also authorised and regulated in the UK by the Financial Services Authority.

Jurisdiction - The information herein is intended for publication to UK residents who are clients of Hargreave Hale Limited and who have read our customer agreement. It is not intended to be published or made available to any person in the USA or any other jurisdiction that would result in contravention of any applicable laws or regulations. Therefore, if it is prohibited to make such information available to you, it is not directed at you and you should not review it. By reviewing the information contained in this newsletter, you confirm that you are satisfied that you are not in contravention of any laws and regulations and that your reading this newsletter is not prohibited.

Risk Warning - The investments or investment services referred to may not be suitable for all investors. Therefore, we recommend that you consult your independent financial adviser at Hargreave Hale Limited prior to taking any further action.

Taxation - Any reference to taxation may not be relevant to all readers as it depends on the individual circumstances of each individual and may be subject to change in the future. Please consult your tax adviser before investing in any product mentioned in this newsletter.

Information - The information contained in this newsletter has been obtained from reputable sources including trading statements, financial statements and other documents issued by companies, published broker research, trade and financial journals, government issued information, trade shows, analyst visits and presentations, other publicly available information. Every effort has been made to ensure it's accuracy, although Hargreave Hale has not independently verified all the information. The accuracy of the information, the reliability of its sources, nor it's completeness cannot be guaranteed, and neither Hargreave Hale Limited nor any if its directors, officers, representatives or employees accepts liability for any loss arising from the use hereof, no representation or warranty, either express or implied is made. Information, opinions and estimates contained in this newsletter reflect a judgement of individual stockbrokers acting for Hargreave Hale Limited at the original date of the opinion's publication by Hargreave Hale Limited and are subject to change, without notice. These opinions are not necessarily those of the company or other stockbrokers acting for the company, who are not obliged to follow recommendations included in this newsletter. We are not agreeing to, nor required to, update any commentary or data contained herein. Therefore, information may not reflect events occurring after the date of publication.

Risk Profiles - The profiles used to categorise investments contained herein are in accordance with Hargreave Hale Limited's customer agreement at the time the opinion is given, which may be subject to change without notice. Copies are available at any of our offices. Shares in the FTSE 100 index are considered lower risk than those in the FTSE 250 index, which in turn is considered lower risk than smaller companies.

Liability - We shall not be liable for any loss or damage arising out of the use of or reliance on the information provided including without limitation, any loss of profit or any other damage, direct or consequential. This does not however exclude or restrict any duty or liability to you that we have under the Act or under the regulatory system.

Distribution of information - The contents of this newsletter cannot be reproduced in whole or in part without consent from Hargreave Hale Limited. If permission is granted you must not distribute any information in this newsletter to any other person without attaching a copy of this 'Important Information' and obtaining the agreement of such other person to comply with the above terms.

Data Protection - We are a registered data user in accordance with the Data Protection Act, and we will treat data we have on you in accordance with that act. Telephone calls may be recorded.

External Interests – Hargreave Hale is an associate of the Investec group of companies, but for the purpose of research documents can be considered as independent from the group as the rest of the group have no influence on the timing or the content of such documents. The Investec group may have a relationship with any of the companies covered in our research which may lead to a conflict of interest. This may involve Investec acting as a market maker or liquidity provider in the company's securities, being lead manager or co-lead manager in respect of a publicly disclosed offering of the company's securities within the last 12 months, providing investment banking services to the company, or being party to an agreement with the company to issue research recommendations. © Hargreave Hale Limited 2012