




ENERGY WORLD

No. 10-Winter 2015 200000 IRR-25 AED-7 USD

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Iran's agenda as the world's largest producer of ethylene products

Oil Woes Slam Income Investors

Petrochemical cooperation on rise between Iran, China

Petrochemical stocks lift Saudi stocks; other Middle East markets mixed

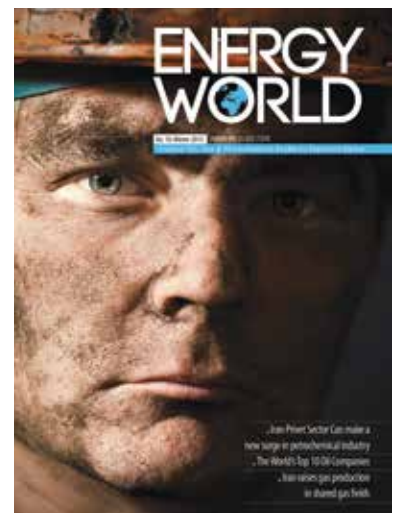
Will falling oil prices curb America's shale boom

The World's Top 10 Oil Companies

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Proprietor : Iranian Oil , Gas and
Petrochemical Products Exporters' Union
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Printed by: Dehkadeh Publishing
Address: No 4, Damavand Mall, Bakhshi
Far St, Damavand St Iran.
Telephone : +98-21-77548470
Print: 5000 copies

Lower crude prices would benefit Iran in long term

Setting oil price in annual budget of countries mainly depending on oil income including Iran is a much disputed issue. Last year, President Rouhani's Cabinet set the oil price of \$100 in its budget; however, the fluctuations in oil price up to \$ 90 per barrel belied the government's rather gross evaluation of the situation as highly unrealistic. This time, however, cabinet set a price of \$72 per barrel in the budget for the next Iranian solar year (beginning March 21 2015), with yet lower prices speculated for oil in the future.

To have a better image of the impacts of cuts in oil prices on Iran's economy and its petrochemical industry, figures would help much in the present purpose. In the first half of the Iranian year (roughly September 2014), Iran earned \$ 6bn from selling and exporting of crude oil, natural gas, and related products; currently, with a reduction of 30 per cent in oil prices, country's income also decreased as \$ 1.1bn per month; on the other hand, in the first 7 months of the current year (roughly October 2014), Iran exported petrochemical value-added products worth of \$ 7bn, which is projected to reach \$ 12bn by March 21 2015. Price plunges would translate into effects on petrochemical products in a course of 2 or 3 weeks. Much of the products manufactured now use as their raw material high-price crude oil, and we have not seen any serious impact of the price reductions on the petrochemical markets. Yet in another occasion, the projected figure of \$ 48bn for crude oil income for the current year would not be materialized as global crude

prices rocked down the bottom. Lower oil prices definitely wield negative effects on Iran's national income, thus posing a challenge as serious as deficits in government budget plan. Yet cuts in oil prices would not hit the petrochemical market as much as would be assumed.

Operation of 5 phases of South Pars giant gas field in Persian Gulf, which would produce at least 200,000 barrels of gas condensates and 125 million cubic meters of natural gas daily, with annual production of 2.5 million tons of liquefied gas and ethane worth of \$ 70m, would help budget plan fill part of deficits.

Global slashed crude prices also would have positive impacts as well; it helps domestic producers to purchase more raw material with less liquidity at their disposal; thus, the value of exported goods decreases; however, on the other hand, the costs of transportation also decrease, making it a possibility to purchase raw material in prices well below the global prices. Oil price cuts restore global economic boom. China and other importers would find a way out of recession, with an ultimate result of improvement in global economy, including Iran's economy. I believe, crude does not play a crucial role in daily lives of the public; some analysts would underestimate the psychological impacts of the price of \$ 72 per barrel for oil in the budget, thus opposing the idea altogether, believing that the government should set yet lower prices for crude. Lower oil prices would communicate the message to world markets that even lower prices would be expected, automatically contributing to further

plunges in oil price.

With setting \$ 72 per barrel for oil in the budget, Iran sends global markets positive signals; it also seeks regulation of its domestic markets; government yet avoided wisely slashes in development budget; instead, it waged attempts to cover deficits in the budget with cuts in public spending and other incomes. Thus, it seems that Rouhani's government have set a more rational trend to manage the current situation. With avoiding higher tax rates and yet eliminating tax exemptions, the government obviously sends signals that it would not plunge the domestic market into recession or deepen the current stagflation, hoping for a growth rate of 2 per cent and more next year. ■



Is the End of the world?

I regret to inform you that the world as we know it is about to end. Perhaps I should qualify that so as not to cause undue alarm: specifically, it is the shipping world that is about to end and only in the sense of 'as we know it'. Of course the engine of world commerce will keep turning.

Forthcoming sulphur regulation, both in emission control areas (ECAs) and globally, is the driver of this transformative change. As an industry we've been addressing environmental issues through regulation for decades. This time is different though. Four factors combine to make it so: the scope – it concerns all vessels, the impact – the industry will need to adopt new fuels; the cost – way beyond what can be absorbed; and the uncertainty – knowing what to do, but not the best way to do it. Each of these is impactful by itself, but taken in combination they will quite literally change the face of the industry. At this point it is worth stopping to consider why these regulations are coming to an industry that many argue already delivers superior environmental performance relative to any other mode of transport. That view may be valid for CO₂ due to shipping's advantage in economy of scale, but not for sulphur emissions. The most common marine fuel has about 1,000 times as much sulphur as what is used in land transportation. It is well documented that sulphur emissions harm the environment and people's health, leading to premature deaths. Like it or not, sulphur regulations for shipping are necessary. By the same token, it would be wise to anticipate the introduction of additional ECAs elsewhere.

Regulatory focus on emissions reduction is unlikely to relent, and sustainability is no longer an option for any industry. With this and the challenges of regulatory compliance in mind, proactivity is the best strategy. Waiting till the eleventh hour to find and implement compliance solutions is to have one foot in yesterday and the other in the grave. Companies that take the initiative by forming partnerships with relevant stakeholders and trialling solutions ahead of time are more likely to find the most efficient compliance solutions. Given the cost implications, this will help them retain or extend their commercial advantage and help them be viewed as a reliable long term partner by their customers. Compelling as the previous two

paragraphs may sound, in reality they only hold true when all shipping companies are compelled to face the same regulatory challenges. That is how it is supposed to be, but that is not necessarily how it is. Enforcement of sulphur regulations, particularly in Europe, is weak. And, as regulatory cost increases it is enforcement, rather than regulation by itself, which is the driver of compliance. Although the general consensus is that most shipping companies will comply, the temptation to cut corners is very real, especially given that markets are already fiercely competitive and the cost of compliance will exceed what can be absorbed. In other words, environmental regulation has, for the first time, direct and ongoing commercial consequences: customers care.

Companies that take their chances on non-compliance stand to realise major cost savings. Over time such savings can distort the competitive landscape and, without an appropriate response from the authorities, will lead to growth in the number of non-compliant operators. Also, the regulations will not have the desired health and environmental impacts, the development of technologies and new fuels to enable compliance will slow down, and compliant shipping companies will suffer. It is these concerns that led to the formation of the Trident Alliance, a network of shipping companies that see transparency and robust enforcement of sulphur regulations as a business imperative. Founded in July 2014, the group now has over 20 members representing around 10% of the industry by fuel consumption. Its membership, covers all sizes of company and segments of the industry.

In recent months we have helped to draw the issue of enforcement out into the open, and it is now a regular headline issue. Awareness is the first step towards a solution. The Trident Alliance members also engage in supporting the development of enforcement mechanisms and technologies. But it does not have to be the case that regulatory problems necessitate regulatory solutions; given the right conditions industry can address the issue itself. The Trident Alliance is currently exploring a transparency initiative with the potential to redress the whole enforcement issue. If the idea bears scrutiny a variation on REM's classic might apply: It's the end of the world as we know it, but we feel fine. ■



Roger Strevens*

*Roger holds an engineering degree from Trinity College Dublin. He has worked in environmental product management and business development roles within the maritime sector since 2006 and, more recently, has taken on the role of Head of Environment at Wallenius Wilhelmsen Logistics. The role is the focal point of environmental activities in the company and is responsible for ensuring WWL maintains its environmental Frontrunner position in the industry. From July 2014 Roger has been serving as Chairman of the Trident Alliance (www.tridentalliance.org), a shipping industry group that is working for robust enforcement and transparency as regards sulphur regulation in order to preserve fair competition. This is a business imperative for shipping companies, which also aligns with environmental and health interests.



The World's Top 10 Oil Companies

The price of a barrel of West Texas Intermediate (WTI) crude oil has fallen from more than \$100 a barrel in late June to less than \$60 a barrel. While the broad outline of the reason for the drop is simple — supply is outstripping demand — the devil, as always, is in the details. Demand is dropping largely because global economic growth has slowed.

The emerging economies of Brazil, Russia, India and China have faltered or gone into reverse. The developed economies of Europe are teetering on the edge of another recession, and U.S. economic growth, though better, is erratic. Add to this lower demand for transportation fuel as automakers build more fuel-efficient vehicles. On the supply side, North American shale oil has dramatically changed the

picture. U.S. crude oil production is at a 40-year high and shows little sign of slowing down. OPEC has said it will not cut production as it fights to keep market share, and Russia needs to produce and sell as much oil as it can to keep its economy from collapsing. Thus, no cut in supply, at least not yet. That potential supply is filled by global proved oil reserves that totaled 1.635 trillion barrels in January 2013. At the



current global consumption rate of about 90 million barrels a day, those global reserves will last about 50 years. Of the top 10 countries holding portions of those reserves, only Canada does not have a national oil company, and the nine that do control 1.23 trillion of the world's total proved reserves. That is about 75% of the world's proved reserves that are off-limits to private oil companies.

Is \$40 Oil Coming?

By comparison, the portion of the world's total proved reserves owned by the 10 largest oil companies is about 75.23 billion barrels, or 4.6%. The world's largest oil companies are in something of a bind. Most made investment decisions several years ago that did not take into account the impact that shale oil would play. In 2009, North Dakota produced just 218,000 barrels of crude a day. Today it produces more than a million barrels a

day. The big oil companies had begun making investments in large and costly offshore oil and gas projects and in Canada's oil sands, because that is where the best opportunities appeared to be. Horizontal drilling and hydraulic fracturing (fracking) had not yet proven their effectiveness. As a result, none of the top 10 companies is much of a factor in the North American shale bonanza.

The massive costs of many of these huge offshore and oil sands projects were justified by an assumption that oil would sell for more than \$90 a barrel. Until June that was still true. Now, however, the situation is different, and Big Oil may run into some cost problems. Still, they do have one big positive — their proved reserves.

Even the largest unconventional producer in the United States, Continental Resources Inc. (NYSE: CLR), claims less than a tenth the proved reserves of the largest of the Big Oil companies. If they must, the top companies can just leave the oil in the ground until the price rises. Many smaller shale producers may have to sell or even file for bankruptcy if prices fall below \$50 a barrel.

The 20 Most Profitable Companies in the World

What follows is a look at the top 10 oil companies in the world based on proved reserves. Proved reserves, by definition, are those that have a "reasonable certainty" of being extracted at current economics. That certainty is often quantified as 90%. Of course, the proved reserves total will rise and fall with new discoveries, production and, obviously, market price. If it is economically feasible to pump a barrel at \$90, it may not be economically feasible at \$50, for example.

The companies in our list are all at least partially publicly traded on a U.S. exchange, even though a couple are controlled by their country's governments. Company data were gathered from S&P Capital IQ. Reserves and production figures do not include natural gas or non-oil liquids. Here are the top 10 oil companies in the world based on proved reserves of oil.

10. Canadian Natural Resources

- Proved Oil Reserves: 3.513 billion barrels

- 2013 Oil Production: 151 million barrels
- Enterprise Value: \$44.24 billion
- Revenues: \$16.482 billion
- Net Profit: \$2.812 billion

Canada's bitumen deposits (oil sands) have pushed the country's proved reserves to the third highest total in the world, 173.1 billion barrels, behind only Venezuela (297.6 billion) and Saudi Arabia (267.9 billion). This company's crude reserves include about 2.7 billion barrels of bitumen and synthetic crude; the rest is conventional crude. The company's CEO has already said that Canadian Natural Resources Ltd. (NYSE: CNQ) would reduce capital spending in 2015 and that he thinks crude oil prices will stabilize in the \$70 to \$75 range. Most of the company's reserves are located in Canada, but it also has assets in the North Sea and offshore of West Africa.

9. ConocoPhillips

- Proved Oil Reserves: 4.779 billion barrels
- 2013 Oil Production: 258 million barrels
- Enterprise Value: \$94.09 billion
- Revenues: \$57.461 billion
- Net Profit: \$9.395 billion

ConocoPhillips (NYSE: COP) spun off its refining and marketing business to Phillips 66 (NYSE: PSX) in 2012 and is now a pure-play exploration and production (E&P) company. Of its total proved reserves, about 2.75 billion barrels are crude oil and 2 billion are bitumen in the Canadian oil sands. Conoco has already announced a cut in 2015 capital spending, most of which will come in its unconventional (shale) plays outside North Dakota and Texas. The company has operations in Alaska, the Lower 48, the North Sea, the Middle East and South Asia.

8. Suncor Energy

- Proved Oil Reserves: 4.372 billion barrels
- 2013 Oil Production: 193 million barrels
- Enterprise Value: \$46.665 billion
- Revenues: \$36.475 billion
- Net Profit: \$2.735 billion

Suncor Energy Inc. (NYSE: SU) is the leading producer of synthetic crude from bitumen in the Canadian oil sands. All but about 330 million barrels of Suncor's reserves are one of these two types. The company

also has assets off the east coast of Canada and in the North Sea, as well as onshore assets in North America, Libya and Syria. The company also owns and operates the largest biofuels plant in Canada, making 400 million liters of ethanol a year.

7. Total

- Proved Oil Reserves: 5.413 billion barrels
- 2013 Oil Production: 426 million barrels
- Enterprise Value: \$149.675 billion
- Revenues: \$212.723 billion
- Net Profit: \$11.56 billion

About 20% of Total's reserves are bitumen from its operations in Canada, but the majority of the France-based company's reserves are in the African nations of Angola, Gabon, Nigeria and Congo. Total S.A. (NYSE: TOT) also holds reserves in the North Sea, Canada, Argentina, Venezuela, the Middle East and Asia. Total is a 50/50 partner with ConocoPhillips in phase two of the Surmont project in Alberta's oil sands. Neither company has revealed the cost of the project, but an estimate in 2010 when the project was announced put the price tag at \$3.3 billion.

6. Chevron

- Proved Oil Reserves: 6.345 billion barrels
- 2013 Oil Production: 632 million barrels
- Enterprise Value: \$210.71 billion
- Revenues: \$204.024 billion
- Net Profit: \$20.7 billion

Chevron Corp. (NYSE: CVX) has less exposure to the Canadian oil sands than many other companies on this list. Of its proved reserves total, only about 750 million barrels are bitumen. Of the remaining 5.6 billion barrels, 1.33 billion are located in the United States, 1.1 billion are in Africa and the rest are counted in Asia, Australia and Europe. Chevron has little exposure to shale oil at present, but it does hold leases in the Permian Basin.

5. Royal Dutch Shell

- Proved Oil Reserves: 6.621 billion barrels
- 2013 Oil Production: 564 million barrels
- Enterprise Value: \$222.906 billion
- Revenues: \$437.974 billion
- Net Profit: \$16.06 billion

Royal Dutch Shell PLC (NYSE: RDS-A) has been shedding assets all year and postponing expensive projects in an effort to improve shareholder returns. The company plans to sell \$15 billion in assets by the end of next year and has already parted with about \$12 billion. The company's E&P head said in late November that the company tests all its projects at a crude oil price of \$70 to \$110 a barrel and that Shell had no plans to increase its divestitures. Oil was priced at around \$80 a barrel then. Now that crude has fallen to around \$60 a barrel, the Anglo-Dutch giant may be rethinking its plans. About 2.15 billion barrels of Shell's reserves are located in the Canadian oil sands.

4. BP

- Proved Oil Reserves: 10.07 billion barrels
- 2013 Oil Production: 733 million barrels
- Enterprise Value: \$133.556 billion
- Revenues: \$373.783 billion
- Net Profit: \$9.229 billion

Since the April 2010 explosion at the Macondo well in the Gulf of Mexico that killed 11 workers and spilled millions of barrels of crude into the sea, BP PLC (NYSE: BP) has sold more than \$43 billion worth of refining, transportation and production assets. The U.K.-based company plans to sell another \$10 billion worth of assets, but it may find current low crude prices to be a serious headwind. BP expects to begin production on its first oil sands project this year and has two more in the works. The company is also a non-operating partner in a few Eagle Ford and Anadarko shale plays.

3. PetroChina

- Proved Oil Reserves: 11.314 billion barrels
- 2013 Oil Production: 932.9 million barrels
- Enterprise Value: \$362.749 billion
- Revenues: \$379.553 billion
- Net Profit: \$21.236 billion

PetroChina Co. Ltd. (NYSE: PTR) is the one of two companies on this list that is controlled by its government. The Chinese government owns about 86% of the company's stock through its ownership of China National Petroleum Company, PetroChina's parent. More than 60% of the

company's proved crude oil reserves are located in China. The company has been a purchaser of foreign assets for about two years, and it is expected to spin off parts of two of its Chinese operating companies next year as part of a plan to dilute government ownership of the company.

2. Petrobras

- Proved Oil Reserves: 11.04 billion barrels
- 2013 Oil Production: 715.4 million barrels
- Enterprise Value: \$142.534 billion
- Revenues: \$146.297 billion
- Net Profit: \$9.083 billion

Petroleo Brasileiro S.A. (NYSE: PBR), or Petrobras as the company is widely known, hit the big time in oil reserves with the discovery of deepwater assets that have jumped the country's total proved reserves to 15th in the world with 13.15 billion barrels, of which Petrobras holds about 85%. The Brazilian government owns 48% of the company's stock and controls virtually every decision the company makes. Petrobras added 1.22 billion barrels to its proved reserves in 2013, but the company's problem is not how much oil it has, rather how much it does or doesn't produce and the price that the government will allow the company to charge for its refined products. Debt levels are climbing too as the cost for developing the company's offshore assets is massive.

1. Exxon Mobil

- Proved Oil Reserves: 11.76 billion barrels
- 2013 Oil Production: 709 million barrels
- Enterprise Value: \$401.5 billion
- Revenues: \$392.843 billion
- Net Profit: \$34.3 billion

Like all but a few of the companies on this list, Exxon Mobil Corp. (NYSE: XOM) holds a good-sized piece of the action in Canada's oil sands. The portion of the company's reserves that are down to bitumen and synthetic crude totals about 4.2 billion barrels. Like its mega-sized peers, operations are spread around the globe. Also like essentially all of its peers, the company has been a late-comer to the shale oil explosion. Still, it is not too late for Exxon and the others to catch up, and the falling price of crude could help them with that. ■



Many small-cap exploration and production companies have had a good run in recent years, but are now getting whacked given their strong connections to oil prices. But the news is not all bad: Philip Juskowicz of Casimir Capital makes a good case for certain micro-cap names. In this exclusive interview with *The Energy World*, Juskowicz discusses four companies with strong narratives, two with defensive assets, and notes that natural gas names could see market love as margins widen.

Your expertise is in the exploration and production (E&P) space. Please give our readers some key investable ideas among those names.

● We've seen a divergence between the micro-cap space and the small-cap space within the oil and gas E&P companies. The micro caps have underperformed substantially versus the small caps over the past couple of years. I attribute that to enthusiasm for shale plays, yet only small-cap companies have the financing necessary to develop those expensive plays. Micro caps missed out on that investor appetite; that's probably why they had underperformed. Given the current oil price environment—uncertainty, downward pressure—the first companies to get hit were the ones with strong exposure to oil prices, even if it was just headline exposure. In fact, my research shows a 58% correlation between the small-cap universe and oil prices, whereas the micro-cap space only vaguely correlates to oil prices. Most small caps are going to be hit regardless of what hedges those companies have in place, whereas many micro-cap companies are one-off value plays, and those

Micro-Cap E&Ps with Less Risky Businesses

value plays are still intact. There is a good case for micro-cap stocks here.

The predominant oil price theory making the rounds is that surging U.S. oil production from old basins and shale plays has reduced America's dependence on imported oil and will keep downward pressure on the oil price for the foreseeable future. Is that how you see it?

● I do. Research we published last week showed that the rig count in areas providing the recent U.S. production surge have to drop ~30% to offset higher rig/well productivity and result in lower production that will, in turn, raise pricing. Given the substantial cash flow industry generated this year and its penchant for overspending, we do not foresee the rig count declining to that extent. To date, we've actually seen such companies announce major increases in both rigs and capex for the Eagle Ford Shale; we have seen moderate to significant declines for the Permian and Marcellus, but not to the 30% area.

Moreover, rig count reductions take months to implement given existing contracts. As a result, we do not expect any impact from rig count reductions—and resultant increase in pricing—until 2016. A much more significant decline in prices would be necessary to result in curtailing existing production, given that front-end capex has already been spent. For example, Cabot Oil & Gas Corp.'s (COG:NYSE) unit cash costs in the Marcellus are ~\$0.75 per 1,000 cubic feet equivalent (~\$0.75/Mcfe); current gas prices are \$3-4/Mcfe.

What are your near- and mid-term crude forecasts?

● I'm significantly below the consensus on The Street. The consensus was \$86/bbl for 2015 and \$92/bbl for 2016. I'm at \$69/bbl in

2015 and \$75/bbl in 2016. Drilling curtailments should help lower production by 2016.

In mid-November, JPMorgan Chase & Co. downgraded its 2015 Brent price by \$33 to \$82/bbl, citing pressures in the Atlantic basin and the inability of the Organization of the Petroleum Exporting Countries (OPEC) members to curtail production. It also lowered its 2016 forecast to \$87.80 from \$120. What are your thoughts on those moves?

● The consensus figures out there are too bullish. It feels good that there's a major bank that has lowered its pricing forecasts. JPMorgan Chase is not saying it's going to be an all-out blowout, but that its 2016 price of \$120/bbl may have been too high. The company has a lot of quantitative people behind those numbers.

JPMorgan Chase also warned us that if there is not a new OPEC agreement in place, crude could slip as low as \$65/bbl in January. Is that likely?

● Over the last three years or so, OPEC has become less relevant, less cohesive and, therefore, less able to dictate world oil prices. If the market thinks that OPEC is falling apart, there could be a psychological impact, but not an actual fundamental impact. I don't think OPEC is acting on the basis of supply/demand fundamentals.

Do you expect the spread between West Texas Intermediate (WTI) and Brent to continue to contract?

● I definitely don't see it widening. If anything, it should narrow or remain status quo. The main factor is that the petroleum industry has become more global. You see that with Saudi Arabia dillydallying to U.S. pricing; you see that with the U.S. moving toward exporting oil; and you see that with more infrastructure being

built in the U.S., which is lessening the gap between WTI, Cook and other benchmark prices.

It was recently reported that Halliburton Co. (HAL:NYSE) has made a takeover bid for Baker Hughes Inc. (BHI:NYSE) How will this merger impact the energy services sector? Do you project any other major M&A news in the coming months?

- The consolidation of two major oilfield service companies can only result in stronger pricing power, notwithstanding any Hart-Scott-Rodino-mandated divestitures. This would hurt explorers and producers (E&Ps).

I expect further consolidation in the oilfield services sector in an effort to compete with the new Halliburton. Any decrease in activity by the E&P space would put even more pressure on the space to engage in mergers

and acquisitions (M&A). A lower pricing environment, which in some cases will constrain E&P balance sheets, should result in M&A activity within the E&P sector, as well.

What themes do you expect to be dominant in the E&P space in 2015?

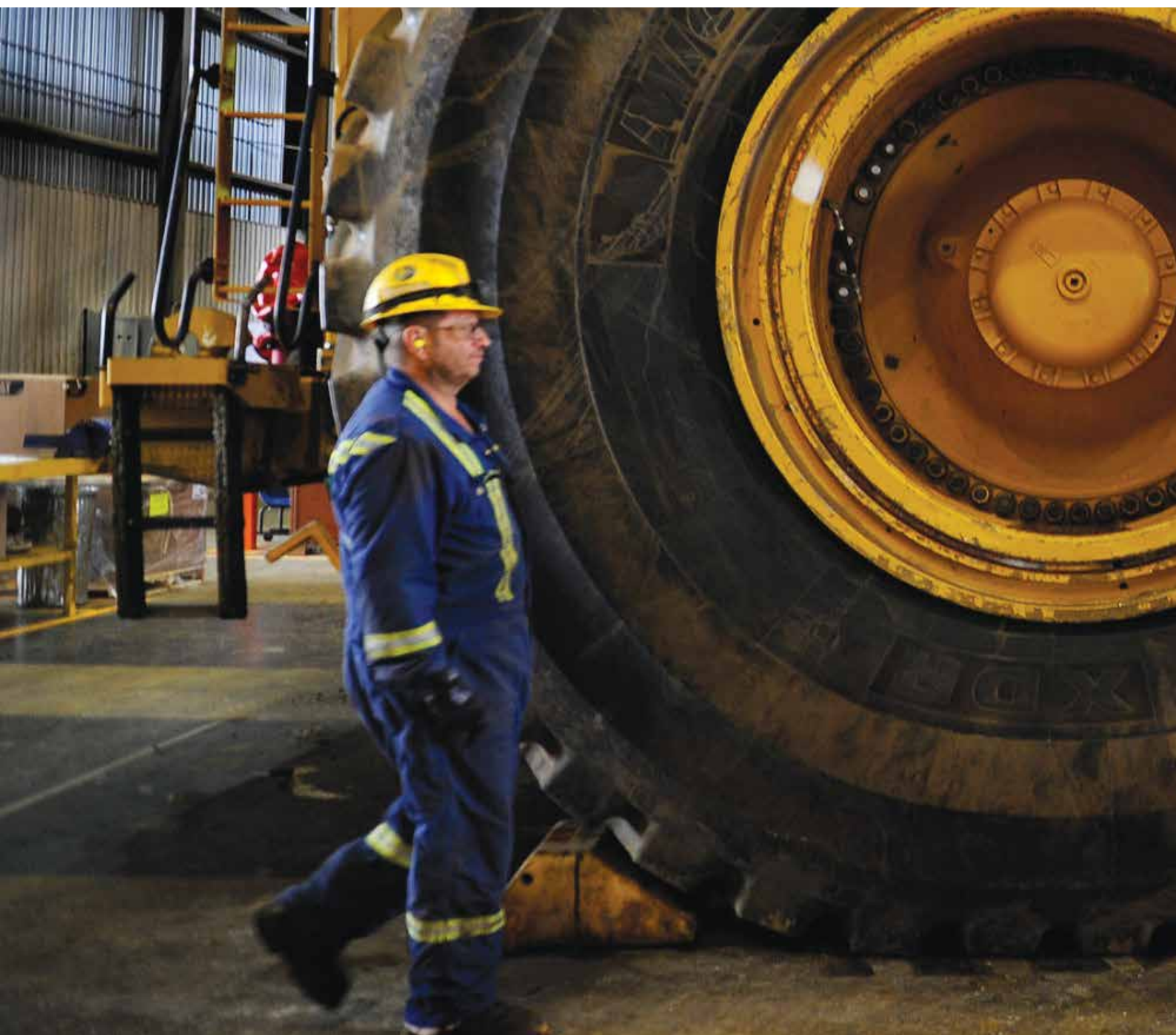
- Number one is that there are value plays in the micro-cap space. These companies have been overlooked in the shale play revolution happening over the past couple of years. Another item for investors to consider is good old natural gas, because lower oil prices have reduced the oil-and-gas spread. On an energy-equivalent basis, not that long ago oil was five times as valuable as gas. That number is now three times. And natural gas generally costs less to drill for and produce. The margins for natural gas companies are going to widen.

Moreover, natural gas has some good demand momentum behind it given that several petrochemical plants and liquefied natural gas facilities (some of the biggest end users of natural gas) are slated to begin production over the next couple of years, while coal-fueled electric generation facilities are being phased out.

We have a Buy rating on Dejour Energy Inc. (DEJ:TSX; DEJ:NYSE.MKT).

It fits both of these criteria—it is a micro cap and most of its reserves are natural gas.

Moreover, Dejour is a value name, in our opinion, making it an ideal investment in an uncertain and volatile pricing environment. Shares are down ~40% since achieving a 52-week high in August, and the company's enterprise value stands at CA\$41 million (CA\$41M), less than half the value of the PV10 of its reserves.



What are your 2015 and 2016 price forecasts for gas?

● They're \$4.16 per thousand cubic feet (\$4.16/Mcf) for 2015 and \$4.50/Mcf for 2016.

If investors are doing their due diligence on micro-cap equities and come across companies with working capital issues, should they consider that a red flag?

● It is a red flag, and I would put those companies down as speculative buys. I had one company modeled as having a negative cash position within a couple of months; my speculative buy assumed the company received a capital infusion. I think that is normal for micro-cap companies. The company doesn't have accounts receivable per se, yet has general and administrative expenses. It's not uncommon to have a working capital deficit.

You recently upgraded your rating on an oil services name. Please tell us about that.

● ENSERVCO Corp. (ENSV:NYSE. MKT) is a relatively small company that provides frack water heating, hot oiling and acidizing services to the E&P universe. I like that the company is increasing its exposure to these defensive types of services. We're in a questionable environment for oil prices. Drillers are being squeezed and rig counts are going down, but even in a down market drillers need someone to pump hot oil down a well to dislodge paraffin buildup or to acidize a well to stimulate production. ENSERVCO has done a good job gaining market share in its existing markets, as well as with making small acquisitions and growing organically into new markets. Additionally, we see Dejour's Piceance Basin assets as low risk given the basin's long-lived, low

cost and stable production (witness two semirecent industry sales to master limited partnerships within this area). Finally, the company gains from geographical diversification due to its Canadian operations.

It recently made a small purchase of 12 hot oiling trucks. How is that material to its top line, if not its bottom line?

ENSERVCO pointed to about \$6M of revenue potential related to that purchase, and that's what triggered my upgrade. The stock recently went down to levels where an upgrade made sense. This is an example of a company being able to develop relationships with much smaller companies so that it can make acquisitions to grow its business.

What is your rating?

● It's a Buy-rated company. I have a



\$2.85/share price target.

What names have you recently launched coverage on?

● I launched coverage on Taipan Resources Inc. (TPN:TSX.V), which operates in Kenya. I have a Speculative Buy rating on the company given that it doesn't have reserves at this point; it has "prospective resources." What I like about the resource is that the first well, which will go down in December, will test a structure that's identical to several geological structures that have proven to be 100+ million barrel (100 MMbbl) discoveries over the past few years. In fact, the company's exploration manager found 1.75 billion barrels in a similar geological structure.

Though Kenya is one of the more established countries in Africa, it is not an established oil production jurisdiction like South Africa or even Egypt. Is the risk of Kenya worth the reward?

● I haven't seen a lot of civil unrest in the exploration areas. People automatically chalk up every country in Africa as being dangerous, but not every country is Sudan. Taipan is a Speculative Buy. It's a risky name and it's going to be years until any success becomes commercial. Tullow Oil Plc (TLW:LSE) is the main player in this East Africa rift play, and Tullow has discovered enough oil to justify the construction of infrastructure, which is estimated at \$4.5 billion (\$4.5B). And Kenya and Uganda are working together to commercialize the resource there.

The other thing I want to point out is that Premier Oil Plc (PMO:LSE), a large company based in the United Kingdom with a market cap of about \$1.9B, paid \$30.5M for a 55% interest in the well that's going to be tested in December—and it's allowing Taipan to operate the well. That investment speaks volumes about Premier's belief in Taipan's prospects in Kenya.

Certainly, Chinese state-owned enterprises have bought a lot of oil and gas assets in Africa. Is there a chance of that happening in this case?

● Chinese firms have traditionally come in after these plays get up and running. That has happened offshore in Brazil, in the Gulf of Mexico, and in the Eagle Ford shale. If China comes in, it would probably be farther down the road.



What is your price target on Taipan?

● It's \$1.10/share.

Are there other stories you'd like to share with us?

● Despite hedges covering 90% of its current oil production at almost \$100/bbl, and the majority of its gas contracted at \$7/Mcf, Miller Energy Resources (MILL:NYSE; MILL:NASDAQ) has seen its stock killed, down 75% since July 1. Yet its production has come up and the company has made significant management changes, which should satisfy frustrated investors.

Miller hired Carl Geisler, former managing director of investments for Harbinger Group Inc., as CEO. At the same time, it's retained former CEO Scott Boruff's deal-making expertise. Miller has done a great job of consolidating assets, acquiring assets, finding new reserves and developing resources. Production should continue to climb. In the latest quarter, Miller produced 3,300 barrels of oil equivalent a day (3,300 boe/d). We calculate its net asset value per share at more than \$7.50. Its midstream and rig assets alone have been appraised at \$175M, and that does not include the value of its reserves. This company has the defensiveness of having real

midstream assets that are strategic in nature, meaning that they're the only production facility in the regions where Miller operates, and it doesn't have to rely on the oil price to maintain the entire net asset value.

Miller recently sold its assets in Tennessee, and now is exclusively an Alaskan play. What did you make of that move?

● It's another example of Miller saving some money on selling, general and administrative expense, and consolidating its focus. It started as a Tennessee company, but production there was about 1% of the company's total production. Shareholders are interested in its Alaskan assets, not Tennessee.

Miller has a nonbinding agreement to buy Buccaneer Energy Ltd.'s (BCGFQ:OTCMKTS) assets in Alaska. How likely is that to happen?

● There's a good chance that a decent portion of the Buccaneer assets go to Miller. It makes strategic sense. These assets should just fit right in to what Miller does, which would be buying distressed assets. And some of the other major oil companies operating there, like BP Plc (BP:NYSE; BP:LSE), are deemphasizing their Alaskan operations. ■

Awash with oil

Jeff Krick*

What's going on in the oil markets ... prices are in free-fall? Many shipping companies being able to buy fuel without having to inflict ever more price increases on their customers.

The United States has been fanatic for self-sufficiency for a long time, it detests being reliant on foreign oil producers and all the risks and difficulties that comes with that, especially buying from some unstable regions. So a huge push comes in the shape of shale oil. From the earliest "nodding donkeys" pushing up a few barrels an hour to the current rich shale oils and producers increasing efficiency in getting it out. The dream of self-sufficiency may still be a dream, but current US shale oil production is at a 30-year-high and increasing year-on-year.

When I started in the business over 40-years ago, OPEC were a force to be reckoned with, every whim was jumped upon – every sneeze diagnosed.. they even managed to close Dutch motorways ! But this was yesterday. Today they are still essentially a cartel of competing oil producers meeting every now and then to set quota output and set target prices (which is essentially price fixing) for the benefit of their members.



But they seemed to have been keeping their heads down for some time now.. reaping the financial benefits whilst the prices continued to climb skyhigh. This group still supplies around 40% of the total world oil demand but that leaves 60% for others and the 'others' are increasing production. No country wants to be so reliant on outside oil.

OPEC member countries each have their own individual financial and political difficulties and they need all the oil dollars they can get their hands on. So they continue pumping like normal. They are unlikely to multilaterally or even unilaterally agree to meaningfully reduce any output to try and support an upturn in the oil prices in the short term. They also need to keep their market share and even increase production to try and maintain the amount of dollars in the falling price scenario.

Some pundits say world oil demand is slowing but what exactly does that mean? Does that mean that next year's total world oil demand will be lower than this year? It doesn't – it means that demand will in fact be higher but it won't be AS high as some oil analysts had predicted... and with the increasing oil production, more and more oil will hit the market.

The fat cats of the oil industry have had it so good for a long time making so many oil dollars, but some oil companies now seem to be at a loss as what to do next by these falling prices.... some even seemed not to have planned for such a scenario.

Interestingly a few oil companies have stated in the past that they need some 'volatility' to make money as the oil prices have been too smooth and stable to make any meaningful profit. So here is that volatility.

So for now... my advice for bunker buyers would be to buy as little and often as you need.... as prices continue to fall...

Jeff has nearly 40 years of bunker buying experience in marine fuels, working as both a bunker broker and bunker trader. He first joined the relatively new bunker buying section at Davies and Newman Shipping Company in 1973, after which he joined the fledgling company Bunkerfuels UK in 1984. ■

James Surowiecki is the author of "The Wisdom of Crowds" and writes about economics, business, and finance for the magazine.

How Low Can Oil Go?

Just in time for Christmas, there's a surprise present for consumers: plummeting oil prices. They have fallen forty per cent since July—gasoline now costs well below three dollars a gallon—saving Americans hundreds of millions of dollars a day. This has been a mini-stimulus for the economy, and one that was almost completely unexpected. Before the summer, prices had been high for years. Despite a lot of geopolitical turmoil and macroeconomic anxiety, the oil market had been remarkably stable, and it seemed possible that, as one study put it, "hundred-dollar oil is here to stay." But in a matter of months all that changed. So what happened? At the most basic

level, it's a simple supply-and-demand story. Europe's continued troubles and a slowdown in the Chinese economy muted the demand for oil. Meanwhile, the U.S. shale-oil boom and a rebound of drilling in Libya boosted supply. "Libya's ramping up of production caught people genuinely off guard," Steven Kopits, the managing director of Princeton Energy Advisors, told me. "That's the kind of thing that's hard to predict unless you have really good intelligence assets on the ground." The result was that the market was producing many more barrels of oil a day than were consumed. As oil was dumped on the market, prices inevitably fell. In the oil market, though, nothing is

simple. The real story of the past few months isn't that oil prices have fallen; it's that they've fallen so far so fast, and that they may still have a long way to go before hitting bottom. That suggests that the stability of the past few years has yielded to a new era of volatility, in which small changes in supply and demand will lead to big price swings. Such volatility is exactly what the history of oil prices would lead us to expect. Commodities are more volatile than other assets—the price of copper fluctuates a lot more than that of a television set—and oil has historically been more volatile than most other commodities; a 2007 study found that in the U.S. it





was more volatile than ninety-five per cent of other products. The biggest reason for this volatility is that short-term supply and demand for oil are what economists call “price-inelastic,” which means that they don’t respond much when the price of oil changes. People don’t immediately start driving less when gasoline prices spike—they just pay more for gasoline. On the supply side, drilling projects take a long time to start up or to shut down, so higher prices don’t immediately translate into more supply, or lower prices into less. This means that the way prices typically return to normal—through increasing supply or diminishing demand—doesn’t really happen in the oil market. So a two- or three-per-cent change in supply, which is about how much the shale boom and the Libyan rebound added to global daily production, can spark a huge move in price.

In recent years, hedge funds and commodity-index funds have put hundreds of billions into the oil market, and studies suggest that this flood of investment may have increased the market’s volatility. By its nature, oil trading is beset by uncertainty. It’s not just the

precarious geopolitics of where most of the world’s oil reserves are. There’s also the fact that predicting future demand requires forecasting the performance of the entire world economy.

You might think that the existence of OPEC would guarantee stability. But OPEC is weaker than it once was, thanks to the emergence of big non-OPEC oil producers, like the U.S. Besides, enforcing stability at a time of falling prices is easier said than done. OPEC’s members face a classic collective-action problem. They’d be better off ultimately if they all agreed to curb production—Saudi Arabia, in particular, would have to cut back—but individually they have a greater incentive to continue pumping. And the Saudis know from history that cutbacks don’t always work. In the early nineteen-eighties, they slashed output in an attempt to prop up energy prices. “They cut production and cut production and cut production, and all it did, more or less, was wreck their economy for the next twenty years,” Kopits said. “This time around, they’re drawing a line in the sand and saying We’re going to keep pumping, and everyone else is

going to have to adjust around us.” The shale-oil boom has added to uncertainty, too. OPEC has no control over what U.S. producers do. And even though shale-oil producers often face higher production costs than traditional drillers do (which should make them quick to cut production when prices fall), many also have debt payments to make and fixed costs to meet if they don’t want to go out of business. So they’re likely to keep pumping, since that keeps revenue coming in until (they hope) the price recovers. But continuing to pump, of course, makes it harder for prices to stabilize.

It would be a mistake for oil producers to expect a return to the high, stable prices of recent years. By the same token, American consumers shouldn’t get too used to cheap gas, since in the long run low oil prices erode the conditions that brought them about. Producers are already starting to adjust: ConocoPhillips just announced that it’s cutting its drilling budget. And, because cheap oil gives everyone an economic boost, eventually it leads to higher demand. We’re awash in oil right now. Soon enough, we may be wondering where it all went. ■

Benefits of energy efficiency investment

There would appear to be a common misconception, unfortunately repeated in many official reports and documents, that a significant part of the measures to reduce specific energy consumption and CO2 emissions of ships are cost effective, and being such could offer net benefits to the sector, as the reduced fuel costs ensure the pay-back of any operational or investment costs.

Much of the commodity shipping sector is highly competitive, more so at the moment. A charterer considering taking a ship on charter to carry his cargo will compare the available ships in order to select the most appropriate ship for the business. The comparison that he makes will likely include all factors, such as draft, beam, length, cargo capacity or deadweight on the available draft, gross or net tonnage (for port charges and canal dues), etc., as well as speed and consumption.

Speed and consumption describe the energy efficiency of the ship, but that description will not always be very accurate, because speed and consumption depend on the draft that the ship will sail at and the trim of the ship, as well as opening the unfortunate but all too common opportunity for the operator to take advantage of predicted bad weather to overdescribe and avoid claims for misdescription.

Speed and consumption are not the only factors that will persuade a charterer that the ship is the most appropriate for the trade. A ship, however, with a better speed and consumption (or energy efficiency) than other ships, will probably be the preferred ship, all other things being equal. Unfortunately, being the preferred ship does not result in a higher freight rate, it just means that the more economical ship is more likely to obtain the business. The most competitive ship will give the charterer an inherent rate that is at least as good, if not better, than the rate obtained by his competitors.

So where do the net benefits end up? The charterer will pass his more competitive position on to the receiver, who will pass the net benefits on down the chain to the consumer. The net benefits do not end up with the shipowner, or the charterer, it just makes them more competitive in this highly competitive market, and therefore more likely to get the business. It is the consumer who gains the benefit.

The Owner of the ship, having spent the money to become more efficient, will end up as having the 'more preferred' ship, but will not otherwise be able to recoup his investment.

This does not take into account the proven fact that increasing efficiency will end up in increased demand, nullifying, to some degree, the efficiencies achieved [2]. But that is another story.■

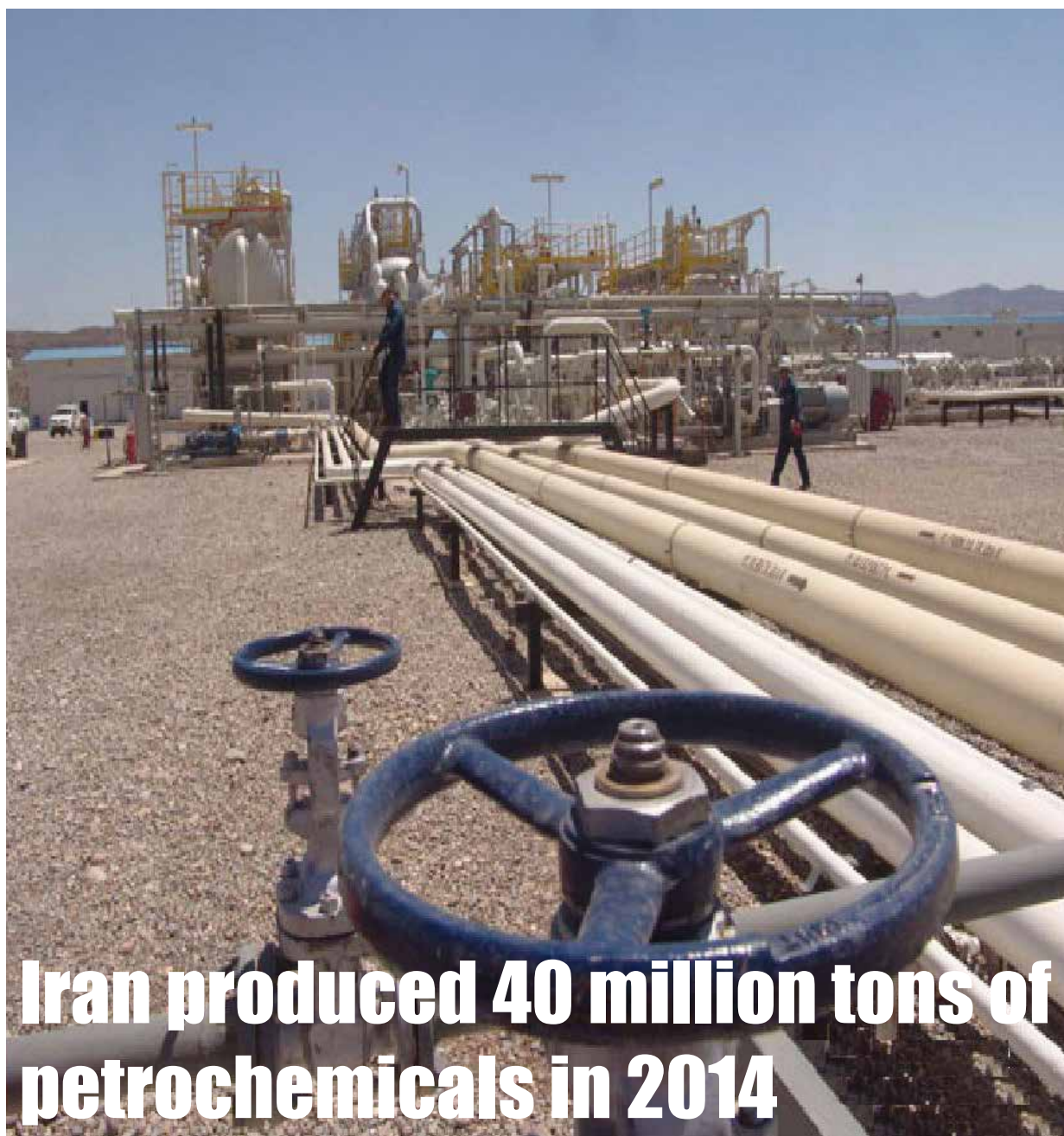


Arthur Bowring*

*Arthur Bowring is the Managing Director of the Hong Kong Shipowners Association and a Maritime Arbitrator and Mediator. He is Chairman of the Labour Affairs Committee of the International Shipping Federation, Vice Chairman of the Special Tripartite Committee, Maritime Labour Convention, 2006 and Spokesman of the Maritime Employers' Group at the International Labour Organisation, and Chairman of the Hong Kong Maritime Services Training Board of the Vocational Training Council. Arthur has a broad shipping background, which includes several years at sea as a deck officer, working as a ship surveyor for Lloyds Register, acting as an oil and dry cargo chartering and owning broker and freight trader for a major international trading house, handling marine insurance placing and claims and working as a consultant, handling investigative work, and claims and project management.

He is Council Member of the Hong Kong International Arbitration Centre, Convenor of the Hong Kong Maritime Arbitration Group, and Fellow and Member of several professional associations and organisations.





Iran produced 40 million tons of petrochemicals in 2014

Iran will soon resume exports of petrochemical products to Europe, which have been banned under the US-led sanctions in recent years.

Iran's Jam Petrochemical Company announced that a consignment of linear low density polyethylene (LLDPE), measuring 2,000 tons with a total value of over \$2 million, will be shipped to Belgium next week. The company says the resumption of petrochemical exports to Europe coincides with the revival of a shipping route for similar exports to Turkey.

International clients - under a tight regime of US-led sanctions - were banned from buying petrochemicals from Iran over the past few years. The ban was lifted last year following breakthroughs in nuclear talks between Iran and the P5+1 group of world powers.

Iran produced 40 million tons of petrochemicals in the last calendar year (ended March 20), with \$9 billion worth of its products being exported.

The country, which is a major oil exporter, plans to increase its petrochemical exports to \$12 billion this year.

Iran has significantly expanded the range and volume of its petrochemical production over the past few years. ■

Iran's agenda as the world's largest producer of ethylene products

An official in Iran's petrochemical industry has said Iran would increase its petrochemical exports to Turkey, Russia and Central Asian countries.

Pointing to Iran's agenda as the world's largest producer of ethylene products, Mohsen Farahi announced Iran's decision to increase its petrochemical products exports to Turkey, Russia, Central Asian countries and the Caucasus. He stated that Iran had exported about 35 million tons of plastic raw materials to Turkey as well as more than 10 tons of polymer products to Central Asian countries and Russia early this year, adding that in total more than 330 tons of petrochemical products were exported since the beginning of the year.

"Last year, over a million and 900 thousand tons of polymer products were exported from the Jam Petrochemical Co. to the world markets," head of Petrochemical Sales and Marketing said, adding that "despite international sanctions, exports of petrochemical products have grown by 34% during the last year."

He noted that in 2013, Jam Petrochemical Co. exported more than 293,000 tons of polymer products to China, as Iran's largest market for polymer. "The figure is equivalent to 37 percent of total polymer exports to China as well as 8% of Iran's Polymer market," Farahi added. ■



Privet Sector Can make a new surge in petrochemical industry

Iran's deputy-minister of oil has said the petrochemical investment found would be established in cooperation with Securities and Exchange Organization (SEO). Abbas She'ri Moqaddam, told reporters during the First International Exhibition on Banking, Insurance, Capital Markets and Privatization, and Sixth Exhibition on Investment Opportunities in Cypress held in Kish Island, that privatization had been completed on petrochemical sector. "A new surge in petrochemical industry would only be possible when the private sector participates in the sector; the conditions have now improved and are favorable to development and we will see a great leap forward in petrochemical industry," he added. "The industry plays as a driving

force behind employment and development in industry is highly important for government," said the deputy-minister. "Iran enjoys a rare and strategic place in terms of having hydrocarbon reservoir, and we would easily meet needs of decades in competitive prices," he added. "The petrochemical industry could produce 40 million tons of products by three future years, to make \$20bn in income," She'ri Moqaddam predicted. "Development in petrochemical industry is among the strategic measures in the attainment of objectives set in national agenda; Iran has all relative advantages of consumer market and educated human force; however, it should be translated into competitive advantage," he asserted. She'ri Moqaddam said that the

ministry had drafted a ten-year plan to attract \$70bn in investments for the industry. "Of \$80bn investment necessary to develop the industry, only a small part has been committed by Chinese finance and National Development Fund," he said. ■





Petrochemical cooperation on rise between Iran, China

Iran and China are willing to increase cooperation on petrochemical fields and research, education, trade, and industry.

In a meeting with dean of School of Economics of China Renmin University head of Iran's Institute for Trade Studies and Research Mohamamd Reza Razavi discussed trade relations of both countries.

Razavi objected on some of Chinese products' low quality and suggested the Chinese producers work to improve their products quality.

Mr. Wang pointed to fast growth of China's economy and hoped for more cooperation between the two by 3 to

5 next years.

They both hoped that with credit cards of Chinese currency Iran export to China will improve.

They also agreed on programs for research cooperation between the two countries to study ways to broaden investment windows.

In the other hand Iran's exports have earned USD 23.2 billion for the country in the six months ending September 22, 2014, an Iranian official says.

Valiollah Afkhemi-Rad, the deputy minister of industry, mine and trade, said late Saturday that the figure shows a 19-percent increase

compared with the same period last year.

Afkhemi-Rad, who is the head of the Trade Promotion Organization of Iran, said earlier this month that the country's foreign trade has witnessed a 22-percent growth during the first half of the current Iranian year (March 21-September 22).

"The volume of the country's foreign trade grew 22 percent to over USD 5 billion during the first six months of the current year," he said.

He expressed optimism that Iran's foreign trade would reach USD 110 billion by March 2015.

Afkhemi-Rad also pointed to Tehran's new plan to provide more support for the Iranian exporters of technical and engineering services as well as high value-added and high-tech products. The country's major export items comprised liquefied propane, methanol and bitumen with the main export destinations, in descending order, being China, Iraq, the United Arab Emirates, Afghanistan and Turkey. ■

Official criticizes petrochemical privatization



A senior National Petrochemical Company (NPC) official says implementation of privatization policies in Iran has caused problems even though the policies were intrinsically acceptable. Mohammad Hassan Peyvandi, deputy chief of NPC said the industry in Iran is in need of comprehensive and precise planning for fulfillment of its development projects, adding that the private sector, especially the Persian Gulf Holding as the chief administrator of Iran's petrochemical industry can play an important part in this regard. He said a powerful private sector can accelerate the growth of the petrochemical industry. 'Iran's petrochemical industry is on the path to growth,' added Peyvandi, addressing a seminar on project management in Tehran on Tuesday. He said smart project management can directly influence the progress of projects, shana.ir reported. The NPC official further called on enhancement of cooperation between all the companies involved with petrochemical projects in the country, adding that all the projects can be completed before their deadlines should the involved sectors cooperate accordingly and operate hand in hand. Iran Petrochemical Commercial Company (IPCC) exported 838 million dollars' worth of petrochemicals during the first four months of the current calendar year which started on March 21.

The exported products, weighing 831,000 tons, mainly included propane and butane.

Iran produced 40 million tons of petrochemicals in the last calendar year, with 9 billion dollars' worth of its products being exported.

The country plans to increase its petrochemical exports to 12 billion dollars this year.

8-Month petrochemical output at 30mt

In related news, petrochemical companies in Iran produced more than 30 million tons of petrochemical products during the first eight months of the current calendar year (started March 21).

Ali-Mohammad Bosaqzadeh, production control manager of the National Petrochemical Company, said the company has so far reached 71% of its production capacity.

He said should the National Iranian Gas Company (NIGC) supply enough feedstock, petrochemical production will exceed 42 million tons up to March next year, shana.ir reported.

Iran produced 40 million tons of petrochemicals in the last calendar year (ended March 20), with \$9 billion worth of its products being exported.

The country, which is a major oil exporter, plans to increase its petrochemical exports to \$12 billion this year.

Iran has significantly expanded the range and volume of its petrochemical production over the past few years. ■






Muhammad Fadhil

Middle East petrochemical markets rattled by OPEC decision

Polymer prices in the Middle East may continue their downtrend as OPEC's decision not to cut production provides no relief to crude futures, whose free-fall drags down values of most commodities, market players said on Friday. At midday, US crude futures slumped by more than \$4/bbl to below \$70/bbl, while Brent was trading a few cents lower at \$72.80/bbl.

Polymer buyers expect at least a \$80/tonne decline in new December offers for polyethylene (PE) and polypropylene (PP). The offers are due to be announced next week.

"We expect more cuts to polymer prices. Nobody will buy a single tonne more than necessary now," a Middle East PE trader said.

Over the past three months, high density PE (HDPE) film prices fell by 2.53%, while PP flat yarn prices declined by 3.5% in the Gulf Cooperation Council (GCC) region,

according to ICIS data.

Suppliers had earlier held back announcing their new polymer offers for December until after the OPEC meeting on Thursday.

But the oil cartel – which includes Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the UAE and Venezuela – decided to roll over its 30m bbl/day production target for the coming six months.

Market players have been pinning their hopes on OPEC to address the glut in crude supply against the backdrop of softening demand amid global economic weakness.

"We cannot understand the OPEC decision. Everybody is now worried and unsure what to do next," a Dubai-based commodity trader said. Brent crude fell to a fresh four-year low immediately after OPEC announced its decision, to settle at

\$74.36/bbl on Thursday.

OPEC's decision is expected to lead to a renewed period of volatility in the upstream and downstream markets in the Middle East, industry players said. "There is a lot of uncertainty now in both the crude and petchem markets," according to a Middle East trader. Dubai-based traders said they are unsure when petrochemical prices will bottom out.

"Petchem prices are headed for a free fall," an Asian based distributor said. Buyers in the Middle East said they will likely purchase petrochemicals on a hand-to-mouth basis due to price uncertainty.

"We will buy only what is necessary. We are holding on to only minimal stocks," according to a polymer end-user based in Dubai.

Crude prices have slumped significantly since early October, when concerns about weakening demand was highlighted following the International Monetary Fund's cut in its global growth forecast to 3.3% for this year and to 3.8% next year.

Global crude production has grown significantly in recent years because of a surge on shale oil supply from the US, while demand from Asia and Europe has started to weaken. Prior to the OPEC talks, Iran, Venezuela and Nigeria led calls for supply cuts as they require oil prices to be above \$100/bbl to balance their national budgets.

Saudi Arabia, the world's largest producer of crude oil, and Qatar were more reluctant to cut output that will stem the oil price decline, wary of losing market share to the US, industry sources said.

These countries could withstand longer period of low oil prices given their large foreign exchange reserves, market sources said.

And, lower oil prices will make the US' shale oil projects uncompetitive due to high production costs. US refiners need crude to remain around \$70/bbl to break even, according to market estimates. ■



Petrochemical stocks lift Saudi stocks; other Middle East markets mixed

Petrochemicals stocks led gains on Saudi Arabia's bourse on Tuesday after an overnight rebound in oil prices encouraged the kingdom's investors to buy back beaten-down stocks, while other Middle East markets were mixed. Saudi Basic Industries (SABIC), the Gulf's largest listed company and one of the world's biggest petrochemical producers, rose 0.9 percent.

Two SABIC units, Saudi Arabia Fertilisers Co (Safco) and Yanbu National Petrochemical Co (Yansab), climbed 0.5 and 5.8 percent respectively. These gains helped the petrochemicals index rise 1 percent from Monday's 17-month low. "Saudi petrochemical producers enjoy strong margins relative to their international peers because their feedstock prices are subsidised, but this advantage diminishes as oil prices fall," said Asim Bukhtiar, head of research at Riyadh Capital.

"At the same time, petrochemical prices will also fall, so there are headwinds for the sector." Oil prices rebounded 3-4 percent on Monday after touching five-year lows that followed OPEC's decision to maintain output and its market share in a battle with non-OPEC and North American producers. But oil gave back some of

these gains on Tuesday, with declines steepening as the day wore on.

Brent crude was down 1.1 percent at \$71.73 at 1136 GMT, down 38 percent from a June 2014 high as a boom in shale oil production and weaker growth in China and Europe weighed on prices, while US Light Crude was at \$67.98. The price collapse had hammered Saudi stocks, with the kingdom's index down about a fifth since mid-September to wipe out most of this year's gains. The benchmark ended 0.3 percent higher at 8,743 points, easing from an intraday high of 8,868 hit in early trade as renewed oil price weakness dented investors' confidence.

"There's frustration among investors - the market right now has an almost one-to-one correlation with oil prices," said Mohammad Omran, a member of the Saudi Economic Association. "The drop is negative in the short term for the economy and capital markets, but it will be positive in the long term because it has severe consequences for the shale oil industry. Non-OPEC oil producers are much more negatively affected."

Elsewhere, Egypt's main benchmark fell for a third day, dropping 0.5 percent to trim its 2014 gains to 35.4 percent as 25 out of 30 stocks declined. "The

market has been seeing weakness since the start of the week - the regional sell-off affected sentiment here," said Mohamed Radwan, director of international sales at Pharos Securities in Cairo.

Foreign investors were net sellers on Tuesday, he said. "People are happy with the performance of the index this year and we're not expecting any catalysts to come before the year-end," added Radwan. Oman's benchmark climbed 2.5 percent to 6,594 points, rebounding from Monday's 12-week low. "We saw almost no foreign institutional selling, which had been one of the main drivers for Oman's drop in the previous 5-6 sessions," said Adel Nasr, United Securities brokerage manager.

Bank Muscat and Omantel were the main supports, adding 2.7 and 4.5 percent respectively. In Qatar, Barwa Real Estate fell 1.5 percent. The stock had been up as much as 5.4 percent after the company said it had signed a deal to sell two plots of land for a combined 5.34 billion riyals (\$1.47 billion) to an unidentified buyer, but then gave back those gains. Doha's measure dropped 0.8 percent to a 21-week low. Bourses in the United Arab Emirates are closed for a national holiday. ■

Global petrochemicals to grow 6.8% from 2014 to 2020

The global petrochemicals market is estimated to grow at a CAGR of 6.8% from 2014 to 2020. Increase in consumption of petrochemicals from major end use industries that include construction, packaging, textile, plastics, healthcare, transportation, and others coupled with encouraging operating conditions is expected to add a lot to the growth. Indian and Chinese governments' initiatives to build petrochemical complexes in the Asia-Pacific region, are also expected to boost growth in the petrochemicals market.

The petrochemical producers will benefit with greater investments in coal mining and the development of alternatives resources such as shale gas. However, a shift towards developing bio-based chemicals, unstable raw material prices, and emerging environmental issues regarding the production and usage of several petrochemicals can become severe restraints for the

growth of the petrochemicals market. Regulatory uncertainty and political interference from local authorities for petrochemicals has resulted in the shift of focus towards developing bio-based alternatives in the region. The global petrochemicals market is divided as: ethylene, propylene, butadiene, benzene, xylene, styrene, toluene, vinyls, and methanol.

Ethylene is considered as the main component for producing several chemicals and their derivatives. It led the market for petrochemicals, accounting for over 25% of the total consumption alone in 2013. Polythene is one of the most important derivatives of ethylene and is mainly used in packaging industry. It is expected that propylene will drive the petrochemicals market during 2014 to 2020. However,

due to capacity addition in the Middle East and Asia Pacific, the expanding gap between demand and supply is expected to put a worldwide pressure on ethylene

prices. The propylene market is expected to make up to US\$172.05 billion in terms of revenue by 2020.

At an estimated CAGR of 10.3%, between 2012 and 2018, methanol is likely to be growing at a faster rate compared to others in terms of volume. The development of methanol is extensively driven by its growing usage in gasoline blending and changing it to olefins (MTO). Increased usage of butadiene in acrylonitrile butadiene styrene and styrene-butadiene rubber is expected to push the demand for butadiene in rest of Asia-Pacific region.

In Asia Pacific region the usage of benzene was the highest in 2013. However, the growth rate of the benzene market is likely to be very slow in terms of volume over the forecasted period.

Based on geographical regions, the petrochemical industry is divided into six segments: North America, Europe, China, Rest of Asia Pacific, Latin America, Middle East, and Africa. ■







The future Bunkers or Beggars?

It has been a month since the collapse of OW and although the dust may not have settled, all eyes are already focusing on the best way to capitalise on new opportunities whilst protecting themselves from becoming the next victim. With this background Energy World have interviewed with Can Ertem.

The collapse of OW Bunkers came as a surprise to many observers. Why was there so little warning things were going wrong?

● It was a surprise but not a big surprise as there were already a number of credit professionals who expressed concerns over how much the business was over-valued, how it was run at the height of aggressiveness and poorly implemented credit policies as well as the misuse of the risk management tools such as derivatives. I cannot comment on the fraud matter at this stage. I think that the credit approved for companies such as Tankoil is just one of the examples of poor judgments. All of us including myself were blinded with the sheer size of that machine and couldn't

immediately see beyond that balloon even though I shared my concerns with a number of people when I spotted negative cash balance of more than USD 400 million on OW's cash flow statement as of 31 December 2013 and on their balance sheet, cash and cash equivalents stood at USD 13.8 million which was less than 1% of its current assets. I truly believe that if they had held above USD 200 million cash and cash equivalents, they would probably been alive now. It would seem apparent that most senior industry people knew the model was not really sustainable indefinitely and, at some point, would start demonstrating weaknesses. It happened suddenly: that was the unexpected part. I must say that I failed this time as opposed to 2008 when I was one of the few people in the market who was able to estimate the exact time of the global shipping market crisis half a year before it hit the sector and I was only a junior analyst with 2 months work experience at that time.

How was the work of credit analysts changed following the OW bankruptcy?

● A. I believe that the people working within bunker credit management no longer have room for the archaic back office attitude of focusing on dated and estimated financial figures. It's obvious credit is going to be less available to the sector in the future due to lack of trust between counter parties. This means they must be chosen after extremely careful credibility assessments. For me credit analysts working in bunker companies now need to work in two ways- to continue to assess and monitor their customers and keep in touch with their credit insurers as well as to make sure that their companies hold sufficient credit lines from their suppliers and bankers. I am not sure if all of the credit analysts in the bunker companies are trained to look after supply credits. However, an organisation like Peninsula Petroleum with a well-diversified credit team, which is having a designated supply credit manager, will most likely enjoy a healthy relationship with its suppliers. Some quite large bunker players with substantial transactions surprisingly operate with only one



designated credit manager. In my opinion they must change this kind of attitude for credit as it is not a joke and they must employ skilled credit professionals and set up well-diversified credit teams. Bunker credit risk management is not a one man job anymore, there is an old Turkish saying "if a person does everything it means he or she achieves nothing". Credit is a serious matter and there should be a multidisciplinary team approach for this. Bunker companies must have well diversified credit team with expertise in supply credits, customers credits, bank credits and insurance company relationship management. I think Peninsula is a good example for that. Integr8 Bunkers also appears to be investing in bunker credit professionals at present. WFS also has a strong and well diversified marine fuel credit team at their offices in London.

Has there been any increase in demand for reports on bunker companies?

● A. Absolutely, we have been bombarded with orders from oil majors and large independents since the OW case. Ocean Intelligence, for some time has been providing 'supplier check' reports, which analyse the operational and financial safety of bunker suppliers along with the quality of the fuels they offer. We have also expanded into enhanced due diligence reports.

What is your view on the bunker market?

● A. The bunker market has always been quite competitive and profit margins haven't been so great, and since 2008 has usually been less than 1% as a large number of owners and operators left the freight market or their financial situations and payment abilities have deteriorated significantly due to poor earnings. At the end of the day, there have been much less credit worthy customers available for bunker suppliers/traders, which resulted in higher competition with less margins and although this has been a vicious cycle the OW fiasco may give people the foresight to break out.

What is going to be the primary challenge for bunker companies in the future?

● I believe the most significant problem for the sector is the nature of the bunkering transactions which are almost always based on account receivables/payables. The balance sheets for the bunker companies show current assets that largely comprise of account receivables while cash and cash equivalents mostly constitutes less than 10% of bunker companies' current assets. Most bunker companies report working capital surplus. However, does it mean they have good liquidity? ABSOLUTELY NOT, and the ratio of cash and cash equivalents should be at least 25-30% of their total

current assets in any financial year. The current situation constitutes a real danger for the bunker industry as after the OW case, oil majors and local suppliers started cutting out their credit lines partially or completely and also reduced their payment terms from 30 to 21 or even to 14 in some instances. On the other hand, the customer's standpoint does not look so rosy due to continued poor earnings as a result of speculative ordering supported by cash rich owners and private equity funds. If bunker companies do not have enough cash and cash equivalents, the situation will keep going from bad to worse. Some people may argue with this statement and say 'OK, but those companies have cash rich principals'. This may be a true argument. However, we do not know for sure if those cash rich principals would have the willingness to inject cash into their businesses if and when necessary. Secondly, I am not sure how reliable and sustainable it is to rely on 'credit matter of trust in principal' as your *modus operandi*.

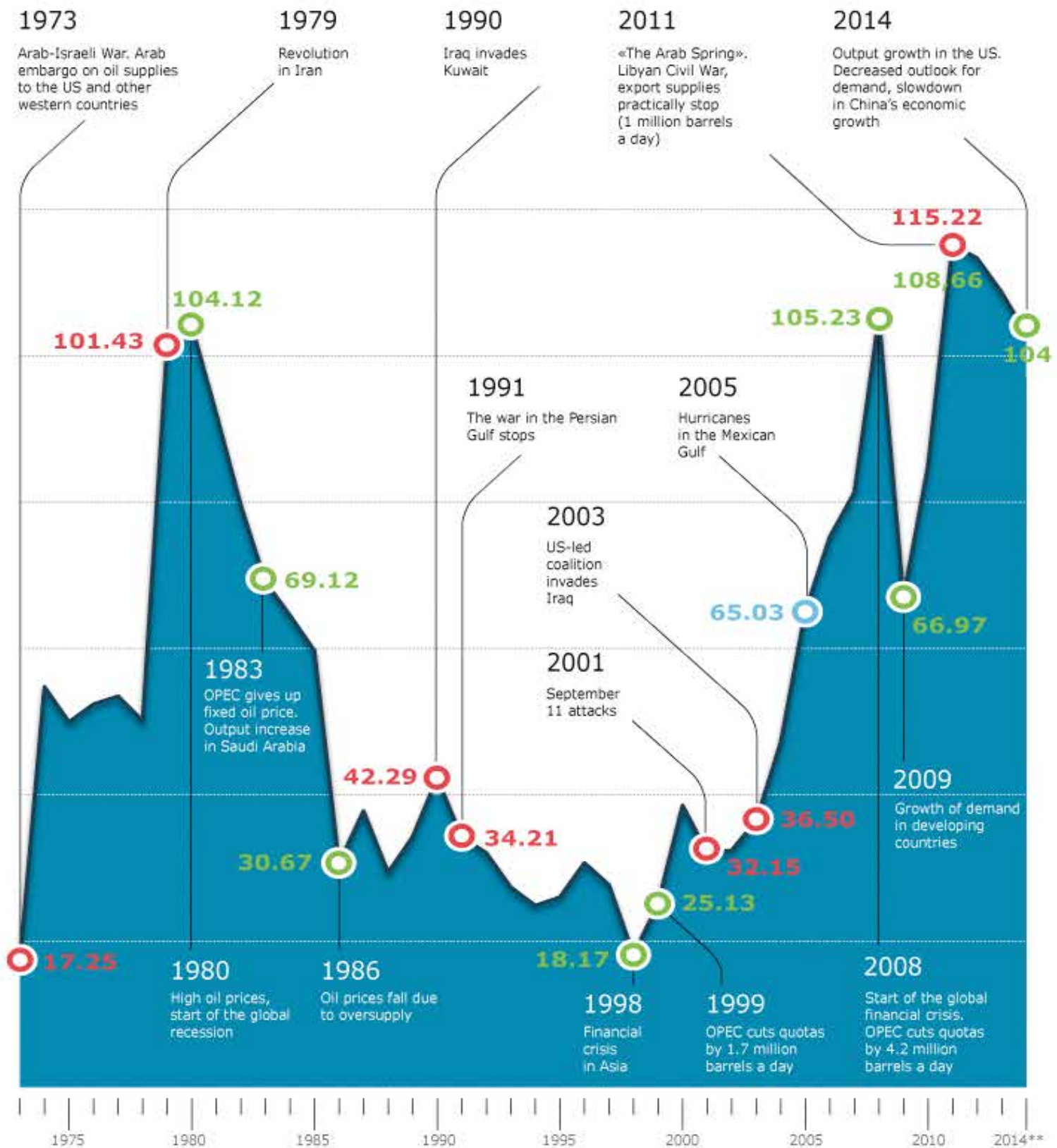
Who will win, who will lose?

● Some independant players, especially small and medium sized, will most definitely come last. The ones to benefit from all this are those companies which form part of a large commodity trading house and are involved in both physical supply & worldwide trading as these kind of structures would have easier access to cash support. Cockett, Bomin, WFS, Mercuria and Chemoil are examples. However I feel that Chemoil parent Glencore may not want to be exposed to the bunker sector in the future. Bomin needs to have a stronger business development policy and possibly a more aggressive trading strategy and also needs to expand its credit team. Cockett has been taking right steps by employing ex OW personnel in quite key locations although I wonder if there will be any chemistry issues as these companies would have had different trading cultures. Cockett should also increase its credit team to cope with the expansion in trading volumes. Integr8 has an interesting structure, being part of the well diversified shipping group, they have a dynamic management team and I think they will be benefiting the post OW situation. ■

Oil prices over 30 years

○ Politics
 ○ Economy
 ○ Nature

Year-average inflation-adjusted oil price, \$ per barrel*
BP statistics in 2013 prices



*1973-1984 Arabian Light crude oil prices, 1984-2014 Brent oil prices

**Average price in ten months of 2014



اتاق بازرگانی
صنایع و معادن تهران

اتاق بازرگانی
صنایع و معادن ایران

سازمان ملی استاندارد ایران

گمرک جمهوری اسلامی ایران

شرکت ملی پخش فرآورده‌های نفتی ایران

جمهوری اسلامی ایران
ستاد مرکزی مبارزه با قاچاق کالا و ارز

جمهوری اسلامی ایران
وزارت نفت



تولید و صادرات در سایه امنیت اقتصادی



نهمین همایش سالانه اتحادیه صادرکنندگان فرآورده‌های نفت، گاز و پتروشیمی ایران 9th Annual Congress Iranian Oil, Gas and Petrochemical Products Exporters' Union

۹ دی ماه ۱۳۹۳ - تهران

Dec. 30th, 2014 - Tehran

مکان: مرکز همایش‌های بین‌المللی صدا و سیما
شروع همایش: ساعت ۱۵



بانک گردشگری
TOURISM BANK



A brief report on the latest activities of Iran's petroleum, gas and petrochemical products exporters syndicate

Within the framework of the statute and aimed to achieve its goals and objectives, Syndicate's activities, for the most part, are comprised of organizing production, export, import, transit, swap and bunkering; providing services and conveniences for the members; investigating and resolving business problems; offering professional advices for revising procedures, instructions, legislations, operational methods in order to facilitate petroleum, gas and petrochemical products' export, swap operation, transit and bunkering; holding the annual congress of Iran's petroleum, gas and petrochemical products exporters, and participating in Iran's international gas and petrochemical products exhibition and other international exhibitions relevant to syndicate's activities. Following comes a brief of syndicate's latest activities:

A: Public Activities

- Holding the syndicate's regular annual public assembly in June 19th, 2014. In this session managerial board's reports, financial statements and balance sheet of 1392 and the budget of 1393 have been passed and investigator's election has been carried out. Doniayeh Eqtesad has been elected as the syndicate's official newspaper, and an increase in membership fee amounting to 20% has been approved.

- Necessary cooperation has been offered to syndicate's affiliate companies including Iran's Petroleum Product's Export Development Fund, and PetroMond Caren, with regard to them holding their assemblies in syndicate's meeting room.

- Following the difficulties affecting oil products' exporters due to inclusion of engine oil to the inventory of petroleum goods that caused the exclusion of this product from tax exemption, and syndicate's continuous efforts contacting numerous times with high ranked officials, finally all types of engine oils and industrial oils have

been excluded from the inventory of petroleum goods according to Economic Council's resolution and their export was exempted from tax.

- Regarding the lack of sufficient work space in syndicate's secretariat and a significant development of the range of syndicate's activities, a new office has been bought, one floor downstairs in the current building, and the necessary work has been done for reconstruction and equipping the unit.

- Recently, the syndicate has established a judicial unit in the secretariat, using the expertise of a judicial advisor qualified in the field of petroleum, gas and petrochemical affairs, in order to provide judicial service and consultations for the members and resolving their judicial problems.

- The technical, supervision and surveillance commission has been established according to the content of clause c of article 11 in syndicate's statute. This commission has the responsibility of assessing member's requests in syndicate, assigning investigators for visiting member companies and investigating the possible infractions and reporting to managerial board. It is worth mentioning that syndicate's specialized commissions at the moment include commissions of oil, paraffin, tar, petrochemical, chemical, gas and petroleum products, swap, transit, bunkering and technical, supervision and surveillance. These commissions are operational arms of managerial board and the deputy director and have the responsibility of investigating and resolving guild problems and providing specialized and professional consultations.

- Since the syndicate has been recognized as the pricing authority by Iran's Commerce Development Organization, Islamic Republic of Iran's Customs Department and Central Bank, the prices of petroleum products will be set by syndicate's specialized commissions and the relevant organizations will be informed.

B: Cooperation with Governmental Organizations

Due to the importance of the role of governmental organizations in economical and commercial planning, making legislations, instructions and operational directives in the field of petroleum, gas and petrochemical industries, the syndicate has put the development of cooperation with these organizations in its agenda; and besides holding numerous meetings with high ranked officials and directors of these organizations, the syndicate does its best to resolve members' guild problems and facilitate laws and regulations concerning petroleum and petrochemical products export. Moreover, it is worth mentioning that members' export problems has been categorized according to the relevant organization and the attempt to resolve the problem would be pursued through in person meetings and contacts between deputy director of the syndicate and the members of the managerial board and officials of the relevant organization. The most important of these cooperations are as follow:

Cooperation with Petroleum Ministry

Sending representatives to the specialized meetings held in petroleum ministry in order to assess the issues in exporting products, transit, swap and bunkering.

Cooperation with Iran's Commerce Development Organization

Participating in specialized meetings held in Iran's Commerce Development Organization including meetings concerning electing exemplar exporter, and also holding Iran's Petroleum, Gas and Petrochemicals International Exhibition

Cooperation with the central organization for preventing goods and currency smuggling

- Holding regular meeting every 15 days with the chief director of the department for preventing petroleum

products smuggling and transport supervision in this organization in order to discuss shared problems and resolving members' export problems.

Thanks to the cooperation with this organization the exportation of instilled fuel oil has entered a new organizational phase, and thanks to the establishment of an elected work group in the commission of oil products and to their representatives visiting second refinement production units and finally to the provincial work groups visits from production units on syndicate's demand, the exportation of this product has approached near total organization.

■ following the problems that have affected exporters due to the ceasing of trucks transporting loads of petroleum products for exportation by police, thanks to the efforts of the syndicate the central organization for preventing goods and currency smuggling released the directives for the procedure of ceasing and investigating oil trucks suspect of smuggling according to which ceasing trucks load with export goods of petroleum products is subjected to certain regulations and must not be stopped without reason.

Cooperation with the National Standard Organization

Necessary cooperation with National Standard Organization has been done concerning determining the standard for petroleum products by sending specialists to the relevant meetings.

Cooperation with National Iranian Petroleum Products Distribution Company

Holding joint meetings with high

ranked directors of National Iranian Petroleum Products Distribution Company, in order to expand the scope of cooperation between two organizations for petroleum products export and swap.

Cooperation with Islamic Republic of Iran's Customs Department

A number of joint meetings have been held with the chief director of export department of this organization, in order to inspect and resolve members' customs problems including problems involving grease exportation with can packaging and the national standard sign.

Cooperation with Banks

In order to provide bank facilities for members, syndicate has signed cooperation agreements with banks including Melat, Tejarat and Gardeshgari. According to these agreements members can use the services and facilities of aforementioned banks within the framework of the signed contract.

The number held meetings since last year's December up to now is as follows:

	Number of meetings in 1392	Number of meetings in 1393	Total
Managerial board	5	14	19
Oil products commission	2	7	9
Paraffin products commission	3	6	9
Tar commission	3	6	9
Petrochemicals, chemicals and gas commission	2	8	10
Petroleum, swap, transit and bunkering commission	1	4	5
Meetings outside of syndicate	28	47	85
Public relations meetings	21	33	54

C: The other works done are:

Participation in Iran's Petroleum and Gas International Exhibition

■ As a routine, the syndicate, along with some of its members, participates in Iran's Petroleum and Gas International Exhibition that is held every year in Tehran. As like before, this year, following considerable efforts and through cooperation with the syndicate and Petroleum Ministry and SabaNaft Company, salon number 6 of the 19th International Exhibition of Petroleum, Gas and Petrochemicals of Iran, in 4000 square meter, has been dedicated to the syndicate. Moreover, distribution of pavilions, registration and management of the salon has been assigned to the syndicate's public relations. Around 50 active members of syndicates are situated in this salon, and during the exhibition a great number of people, along



with the members the parliament and government officials including Petroleum Minister, have visited the salon. The salon has been elected as the best salon of the exhibition.

Participation in India's International Exhibition of Chemicals and Petrochemicals

a) Before traveling to India

1. Welcoming India's chemicals and petrochemicals minister in the syndicate and inviting member companies to participate in this exhibition, and agreement of managerial board and deputy director of the syndicate for participation in the exhibition.
 2. Initiation of public relations' operational measures for informing, holding specialized meetings and registering applicants in two parts of running a pavilion and visiting.
 3. Holding a meeting with Commerce Development Organization in order to make the final arrangements about the diplomatic aids of Iran's commerce counselor for holding meetings with India's economic practitioners.
 4. sending letters to the ministry of foreign affairs in order to make arrangements with Iran's ambassador in India in order for him to come to the exhibition and give a speech in inauguration ceremony and visit Iranian pavilions.
- b) The most important things done in the exhibition:
1. Companies that had pavilion were: Petrochemicals Commerce, Shazand Petrochemicals, Isfahan Petrochemicals, Zagros Petrochemicals, Dorself Shimi, Kish Espanta, Kermanshah Petrochemicals. And visiting companies were: Pasargad Oil, Bani Kala, Saman Faraz Qeshm; the total number of participant companies were 30.
 2. Participating in the inauguration ceremony of the exhibition in Lilat Hotel with India's minister of chemicals and petrochemicals and Iran's ambassador in India as speakers.
 3. three days of the exhibition was assessed excellent according to both participant and visiting companies, and important contracts have been signed during these days.
 4. An oral agreement has been reached with Global Inquiry Magazine on exchanging specialized articles between two publications and on cooperation in distribution of magazines in both countries, which was of great benefit for public relations.

Participation in Emirate's International petroleum and Gas Exhibition

18th Arabian international exhibition of petroleum and gas has been held in Dubai from March 17th to 19th, 2014:

1. following numerous meetings with the holder of Islamic Republic's pavilion in this exhibition, necessary agreements have been reached concerning syndicate's participation in the exhibition in a separate pavilion in a 108 square meter space (the price of one square meter space in the exhibition was 395 dollars).
2. Members have been informed with a call and five companies consisting of Naft Jei, Pars Fanavari Adib, Gohar Safa Karkas, Shimi Taqtiran, and Kish Espanta have declared their willingness to participate in the exhibition.
3. final arrangements for reserving hotel rooms (4stars), obtaining plane tickets (Mahan), and visa have been carried out for the companies representatives by public relations department.

Publishing a special calendar for members

In order to introduce members and expansion of the scope of communication with clients, every year a special calendar is being published for the syndicate. This calendar is being provided and published in managerial size and with navy leather jacket marked with a plate, and is distributed to all members of the syndicate, and all relevant governmental and non-governmental organizations and companies (10 thousand issues). This calendar contains complete information about syndicate's members.

Planning for holding the 9th annual congress of petroleum, gas and petrochemical products exporters

The congress for petroleum, gas and petrochemical products exporters and producers consists of 300 companies active in small or large scales in producing and exporting petroleum products, all members of the syndicate. According to the statistics published by Iran's customs department, from 42 billion dollars of Iran's non-petroleum export, one third is being carried out by these companies, and so regarding the 8 billion dollars of petroleum export in form of swap, transit and bunkering by the syndicate, this organization is the largest economic firm in the country having 25 billion dollars of financial flow. Thus invitees of this congress

consist of high ranked directors in the field of petroleum products production and export. The congress is an opportunity for developing cooperation between these companies and the government and helping the progress of economic goals, clearing the obstacles in the way of exportation, planning for preventing crude sale and bringing more currency into the county.

Radio and Television interviews in order to communicate the demands and needs of the syndicate and pursuing members' guild problems

Holding a news conference with media in order to communicate syndicate's current activities and also informing about future activities and syndicates efforts for clearing the obstacles in the way of exporting petroleum products.

Holding a joint meeting with the commercial committee sent from China

A specialized meeting has been held in the syndicate with the specialized department of petroleum, gas and petrochemicals of the Chinese committee, consisting of 20 high ranked specialists and managers in the field of petroleum, gas and petrochemicals, in November 26th 2014. In this meeting a series of questions and answers has been communicated between two sides concerning Chinese production units and the volume and methods of importation from Iranian companies.

Renewing complementary health insurance for the members and signing the contract for investment and life insurance

In order to help members about their health issues, the syndicate signed a contract with Alborz Insurance for health, life and accidents insurances; as a result a group of 1300 employees of member companies will be covered for insurance. Moreover, according to the agreement between the syndicate and an official agent company on providing specialized services in the field of life and investment insurances for syndicates members, and after assessing the requirements and services of member companies and numerous meetings with managers of certain insurance companies, we reached the conclusion that consulting meetings should be held for each of the member companies in their offices in order for all the members to be able to benefit from advantages of life and investment insurances. ■

Why the oil price is falling?

THE oil price has fallen by more than 40% since June, when it was \$115 a barrel. It is now below \$70. This comes after nearly five years of stability. At a meeting in Vienna on November 27th the Organisation of Petroleum Exporting Countries, which controls nearly 40% of the world market, failed to reach agreement on production curbs, sending the price tumbling. Also hard hit are oil-exporting countries such as Russia (where the rouble has hit record lows), Nigeria, Iran and Venezuela. Why is the price of oil falling? The oil price is partly determined by actual supply and demand, and partly by expectation. Demand for energy is closely related to economic activity. It also spikes in the winter in the northern hemisphere, and during summers in countries which use air conditioning. Supply can be affected by weather (which prevents tankers loading) and by geopolitical upsets. If producers think the price is staying high, they invest, which after a lag boosts supply. Similarly, low prices lead to an investment drought. OPEC's decisions shape expectations: if it curbs supply sharply, it can send prices spiking. Saudi Arabia produces nearly 10m barrels a day—a third of the OPEC total.

Four things are now affecting the picture. Demand is low because of weak economic activity, increased efficiency, and a growing switch away from oil to other fuels. Second, turmoil in Iraq and Libya—two big oil producers with nearly 4m barrels a day combined—has not affected their output. The market is more sanguine about geopolitical risk. Thirdly, America has become the world's largest oil producer. Though it does not export crude oil, it now imports much less, creating a lot of spare supply. Finally, the Saudis and their Gulf allies have decided not to sacrifice their own market share to restore the price. They could curb production sharply, but the main benefits would go to countries they detest such as Iran and Russia. Saudi Arabia can tolerate lower oil prices quite easily. It has \$900 billion in reserves. Its own oil costs very little (around \$5-6 per barrel) to get out of the ground.

The main effect of this is on the riskiest and most vulnerable bits of the oil industry. These include American frackers who have borrowed heavily on the expectation of continuing high prices. They also include Western oil companies with high-cost projects involving drilling in deep water or in the Arctic, or dealing with maturing and increasingly expensive fields such as the North Sea. But the greatest pain is in countries where the regimes are dependent on a high oil price to pay for costly foreign adventures and expensive social programmes. These include Russia (which is already hit by Western sanctions following its meddling in Ukraine) and Iran (which is paying to keep the Assad regime afloat in Syria). Optimists think economic pain may make these countries more amenable to international pressure. Pessimists fear that when cornered, they may lash out in desperation. ■



Making the best of a low price

What is the oil cartel up to?



AN EFFECTIVE cartel requires three things: discipline, a dominant market position and barriers to entry. The Organisation of the Petroleum Exporting Countries lacks all three. Its members cheat on their quotas. It supplies only 30% of the world's oil—too little to exercise control. New producers abound. That is the backdrop to OPEC's decision last month to make no attempt to bolster the oil price, sending it below \$70 a barrel—a near 40% drop since June. Saudi Arabia, its most influential member, could have sent the price up single-handedly by deciding to pump less. Unlike cash-strapped oil exporters such as Venezuela, the kingdom can afford self-denial: it has savings of \$900 billion. But Saudi Arabia can also weather a low price: its production costs are \$5-\$6 a barrel—the lowest in the world. Moreover, history suggests most of the gains from any cut in its output would go to other producers, who would sell

their oil for more while increasing their market share. Saudi Arabia did try the tactic in the early 1980s, cutting its output by three-quarters from 10m b/d in 1980 to under 2.5m in 1985-6. The result was higher prices, but also a boom in investment, and then production, in places such as Britain and Norway. Trying to save OPEC with such tactics could be even more dangerous now. Keeping the price up would be good news for frackers, speeding the spread of that technology from America to other countries. Costly oil spurs thrift too, hastening the shift away from oil in transport. Every hybrid or electric car spells lost business for oil producers. Why encourage them? Cheap oil also has its consolations. Russia and Iran, two countries with which Saudi Arabia has its differences, are suffering much more. Better still, if low prices stem investment in other sources of oil, such as Canada's tar sands or America's shale, that means more demand for low-cost Saudi oil in future. ■





Will falling oil prices curb America's shale boom?

THIS year's Christmas parade in Lindsay, in the heart of Oklahoma's oil country, featured the Stars and Stripes every ten yards, 11 horses with riders in Santa hats and a rifle salute by veterans. But the highlight was a thundering, bright red oil tanker covered in fairy lights and owned by Hamm & Phillips, an oil-services firm with local roots that has ridden the shale boom in the state and across America. That energy revolution is the envy of the business world. Abundant oil and gas have been extracted from underground rocks by blasting them with a mixture of water, chemicals and sand—"fracking", in the jargon. As well as festive spirit, the firms responsible embody an all-American formula of maverick engineers, bold entrepreneurs and risk-hungry capital markets that no country can match. Yet now that oil prices have fallen by almost 40% in six months, these firms' mettle is being tested. Across America shale-shocked executives will spend Christmas overhauling their strategies

to cope with life at \$70 per barrel, even as investors dump their firms' shares and bonds. Executives at Lukoil, a big Russian firm, now sniff that shale is like the dotcom bubble—a mania that is being cruelly exposed. Oil-price slumps usually lead to cuts in energy firms' investments. Production eventually falls, helping prices to stabilise. In 1999, after the Asian crisis, global investment in oil and gas production dropped by 20%. A decade later, after the financial crisis, investment fell by 10%, then recovered. This time some of the pain will be taken by the big integrated energy firms, such as Exxon Mobil and Shell. After a decade of throwing shareholders' cash at prospects in the Arctic and deep tropical waters to little effect, they began cutting budgets in 2013. Long-term projects equivalent to about 3% of global output have been deferred or cancelled, says Oswald Clint of Sanford C. Bernstein, a research firm. Most "majors" assume an oil price of \$80 when making plans, so deeper cuts are likely.

But much of the burden of adjustment will fall on America's shale industry. It has been a big swing factor in supply, with output rising from 0.5% of the global total in 2008 to 3.7% today. That has required hefty spending: shale accounted for at least 20% of global investment in oil production last year. Saudi Arabia, the leading member of OPEC, has made clear it will tolerate lower prices in order to do to shale firms' finances what fracking does to rocks. Even the gods of shale disagree about the industry's resilience. The boss of Continental Resources, Harold Hamm (whose fortune has dropped by \$11 billion since July), has said he can cope as long as the oil price is above \$50. Stephen Chazen, who runs Occidental Petroleum, has said the industry is "not healthy" below \$70. The uncertainty reflects the diversity of activity. Wells produce different mixes of oil and gas (which sells for less). Transport costs vary: it is cheap to pipe oil from the Eagle Ford play, in Texas, but expensive to shift it by train out of the Bakken formation,

in North Dakota. Firms use different engineering techniques to pare costs. Two generalisations can still be made. First, in the very near term, the industry's economics are good at almost any price. Wells that are producing oil or gas are extraordinarily profitable, because most of the costs are sunk. Taking a sample of eight big independent firms, average operating costs in 2013 were \$10-20 per barrel of oil (or equivalent unit of gas) produced—so no shale firm will curtail current production. But the output of shale wells declines rapidly, by 60-70% in their first year, so within a couple of years this oil will stop flowing. Second, it is far less clear if, at \$70 a barrel, the industry can profitably invest in new wells to maintain or boost production. Wood Mackenzie, a research consultancy, estimates that the "break-even price" of American projects is clustered around \$65-70, suggesting many are vulnerable (these calculations exclude some sunk costs, such as building roads). If the oil price stays at \$70, it estimates investment will be cut by 20% and production growth for America could slow to 10% a year. At \$60, investment could drop by as much as half and production

growth grind to a halt. The industry's weak balance sheet is also a vulnerability, says Michael Cohen of Barclays, a bank. Most firms invest more cash than they earn, making up the difference by issuing bonds. Total debt for listed American exploration and production firms has almost doubled since 2009 to \$260 billion (see chart), according to Bloomberg; it now makes up 17% of all America's high-yield (junk) bonds. If debt markets dry up and profits fall owing to cheaper oil, the funding gap could be up to \$70 billion a year. Were firms to plug this by cutting their investment budgets, investment would drop by 50%. In 2013 more than a quarter of all shale investment was done by firms with dodgy balance sheets (defined as debt of more than three times gross operating profits). Quite a few may go bust. Bonds in some smaller firms trade at less than 70 cents on the dollar. All this suggests looming investment cuts that within a year will slow growth in American shale production to a crawl and perhaps even lead to slight declines. A few firms have trimmed their budgets already. More are expected to announce cuts in

January. "Frontier" projects—on the fringes of existing basins or in places where little commercial production has taken place—are vulnerable, including Oklahoma. Most firms will hunker down in the Bakken, the Eagle Ford and the Permian Basin, where they have scale and infrastructure. Even in the Bakken, applications for drilling permits fell by almost 40% in November.

OPEC's wishes may seem to be coming true over the next year. But adversity will eventually make shale stronger. It will prompt a new round of innovation, from cutting drilling costs through standardisation to new fracking techniques that increase output. Dan Eberhart, the boss of Canary, a Denver-based oil-services firm, says the industry has already "pressed fast forward" on saving costs.

And if and when prices recover, new wells can be brought on stream in weeks, not years. America's capital markets will roar back into life, forgiving all previous sins. "There is always a new set of investors," says the boss of a one of the world's biggest natural-resources firms. He predicts a shale crash—and a rapid rebound. ■



Double-edged sword of the new oil shock

IT'S certainly been good news for Australian consumers. In October, a litre of petrol cost about \$1.50; with prices now down to \$1.25, the typical motorist is saving \$60 a month.

But the global ramifications of world oil prices, which have fallen 40 per cent in six months, are more ominous and uncertain. And those ramifications are merely a microcosm of a broader problem: how global commodity markets adjust to the end of a decade in which unprecedented growth in demand provoked an equally unprecedented growth in supply.

With that demand now receding, while the increased supply remains firmly in place, the risk of a hard landing looms large — as our iron ore and coal exporters are learning to their cost. Managing the implications of that risk is at the heart of the challenges facing the Abbott government.

Much as with our resource exports, the collapse in world oil markets follows an extraordinary period in which prices reached stratospheric heights. After the shocks of the 1970s and early 80s, oil prices, expressed in today's dollars, fluctuated by about \$US25 a barrel. In 1998-99, they dipped below \$US20; but that year also marked a turning point.

By 2006, prices had risen well above their oil shock level of \$US80, before peaking at a monthly average of more than \$US140 in July 2008. The global financial crisis brought a steep fall, but it proved short-lived: prices climbed back to average at about \$US100 a barrel from 2011 to the middle of this year.

That oil prices rose so sharply in the 2000s is unsurprising. Historically, adding 1 per cent to global GDP increased oil demand by about 0.5 per cent; but since energy-hungry

China emerged as the world's engine of growth, each 1 per cent rise in global output has boosted world oil demand by about 0.8 per cent.

With the world economy expanding by 50 per cent over the period from 1999 to 2013, it was therefore always going to be a challenge for supply to catch up with demand. World production rose, going from about 60 million barrels a day in 1995 to about 72 million a decade later; but much of that increase came from high-cost sources and so barely dampened the demand-induced hikes in price. Ultimately, however, supply did respond, and with a vengeance. Nowhere was the response greater than in the US, where high prices stimulated investment in the production of unconventional oil, in particular "tight" oil from oil-bearing shale formations.

The result has been a 30 per cent increase in US crude oil production since 2005. Output last week reached 9.1 million barrels a day, close to Saudi levels of 9.6 million to 9.7 million barrels a day.

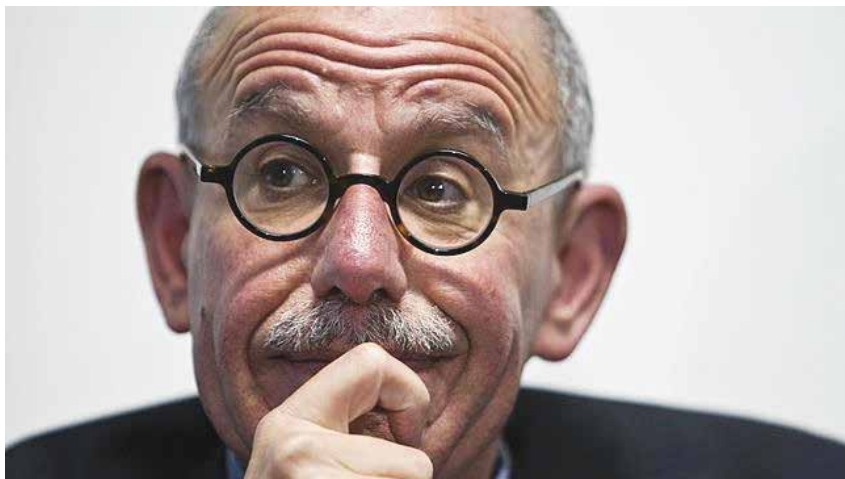
Rising American output was sure to put downward pressure on global oil markets; but so did record production in Russia and the unexpected resumption of supply

from Libya, Nigeria, South Sudan and Iraq. A surge in the availability of natural and hydrocarbon gas liquids, which reduced oil's market share as a refining fuel and as a feedstock in petrochemicals, then acted to compound the effect.

Those supply increases could have been absorbed had the world economy been growing at 4 per cent; but with Europe and Japan stagnating, and China's growth rate falling from 9.5 per cent in the first decade of this century to between 7 per cent and 7.5 per cent, world demand growth fell short of the trend rise in supply.

To make matters worse, by the end of last month, even the International Monetary Fund's most recent projections, that world GDP would increase by 3.3 per cent this year and by 3.8 per cent next year, began to look decidedly optimistic. As that happened, hedge funds, which had purchased oil in the expectation of rising prices, rushed for the exits, increasing market supply by as much as two million barrels a day.

All that, however, does not account for the extent of the price collapse. Rather, the key is Saudi Arabia's decision to maintain its production even as the supply-demand balance





deteriorated.

Traditionally, when oil markets sagged, Saudi Arabia, despite having exceptionally low costs, was willing to bear more than its fair share of output cuts in OPEC, whose 12 members account for about 60 per cent of world exports. But after a failed attempt at curbing production in August, the Saudis held out against supply reductions at OPEC's meeting late last month. Faced with that resistance, OPEC left its output targets unchanged at 30 million barrels a day, despite the near certainty that would accelerate the slump in prices.

No doubt, the Saudi decision reflects the kingdom's capacity to withstand a prolonged period of depressed oil prices. To balance its budget, Saudi Arabia needs oil prices to be about \$US80 a barrel, as compared with today's \$US60. However, with \$US734.7 billion (\$887bn) in its central bank and ample access to credit, the kingdom is willing and able to run temporary fiscal deficits, as it did from the mid-80s until the late 90s. That is especially the case because far greater pain will be visited on regimes the Saudis are happy to see suffer, notably Iran. The country's finances are already haemorrhaging, as sanctions reduce its oil and gas export revenues from \$US118bn in 2012-13 to \$US56bn in 2013-14. To make ends meet, Tehran, which is said to be spending \$US1.5bn a month on its allies in Syria and Iraq, needs prices to double: that cannot happen for so long as the Saudis retain production at current levels. Nor are the Saudis likely to be especially distressed at the damage inflicted on Russia, the staunchest ally

of Syria's Bashar al-Assad. Even were prices to rise again to \$US75, Russia's fiscal stabilisation fund would be depleted in a year; the price collapse has therefore unleashed a financial crisis, with capital flight forcing the rouble to depreciate by nearly 40 per cent in just over three months. As well as these effects, the low prices may be intended to reduce any further growth in supply. With the US accounting for 34 per cent of the increase in world oil production during the past decade, much of the attention has focused on whether its unconventional oil supplies can withstand the downturn. Unfortunately, expert assessments of US production costs differ. For example, Norwegian oil consultancy Rystad Energy estimates an average cost for the US oil of \$US62 a barrel, while Barclays Bank claims that even were prices to return to \$US85, 20 per cent of shale reserves would be

uneconomic.

In reality, costs differ greatly. Some south Texas wells are profitable at \$US30, compared with a \$US50 break-even point in the Bakken oil fields of North Dakota and Montana. That said, while many existing wells have been largely amortised by current tax policies, making them economic at today's prices, drilling new wells seems to require prices to rise by at least \$US10, unless producers succeed in substantially reducing their costs or obtaining even larger tax breaks.

With unconventional wells having short lives, a sustained period of low prices could therefore seriously dent America's move towards energy self-sufficiency, all the more so as it would undermine the viability of the myriad US wells that rely on oil revenues to subsidise low margin production of natural gas.

From a Saudi point of view, denting America's move towards self-sufficiency would not only constrain the growth of a rival supplier, it would also help lock the US into an enduring stake in the Middle East. The result would be to reinforce the kingdom's pivotal role both in the world oil market and in US foreign policy. Whether that is desirable from a global perspective is questionable, as continued reliance on Middle Eastern oil supplies involves obvious vulnerabilities. Yes, Saudi Arabia gains if it can induce a reduction in the growth of world supply, be it through the exit of capacity in the US or by deterring the development of the potentially massive shale fields that have been located in Argentina, Poland





and China; but for the West, the Saudi gain comes at a geopolitical cost. And there are other potential political and economic downsides as well. Although lower revenues will harm the Iranian regime, they may also induce it to take greater risks, seeking to gain ground while it can. Equally, precisely because a crisis increases Vladimir Putin's vulnerability, it will likely lead him to tighten his grip on power, including by heightening his rhetoric and acting even more aggressively internationally. The impact of lower oil prices on the fragile former Soviet republics of Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan only makes that threat more pressing. Moreover, the accumulating financial pressure on Russia and Venezuela could trigger wider problems in emerging markets. In 1998, Russia's default provoked a cascade of panic among investors. JP Morgan's index of emerging market bonds lost a third of its value in a month; but thanks partly to quantitative easing, the volume of assets invested in funds that depend on that index has quadrupled since then, with the result that a sell-off of those funds could seriously threaten global growth. For sure, against those risks must be set any immediate gains the world economy achieves from lower oil prices. For oil importing countries, the price fall amounts to an improvement in terms of trade, reducing the costs of energy-using industries and increasing the real income of consumers. On balance, the IMF believes those benefits outweigh the loss in world growth caused by the decline in income to oil producers. The historical

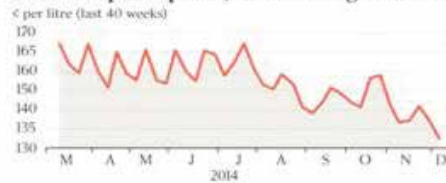
record suggests a 25 per cent price cut for oil should, if it persists, lift global GDP by around one-half of a percentage point. However, much as cheaper petrol will be a welcome Christmas present, it would be dangerous to overstate the benefits to Australia. To begin with, while lower oil prices improve our terms of trade, prices for our liquefied natural gas exports are tied to world oil prices. Since 2010, about \$250bn has been invested in Australia's LNG facilities; the revenues from those facilities, and the state and commonwealth taxes they will pay, have been viewed as an enduring dividend from the resource boom. And there is a wider point as well. The collapse of oil prices highlights the complexities of the adjustments that are now under way in global commodity markets and whose consequences weigh so heavily on our economy.

Thus, just as it did in oil, so China's explosive growth dramatically reshaped the world market for iron ore: in 2000, world exports amounted to about 500 million tonnes; last year, they reached 1.2 billion. In the process, our three major producers added nearly 350 million tonnes of capacity, confident that when a downturn in demand came, it was inefficient capacity overseas that would leave the market.

But here, too, politics has intervened, with China continuing to subsidise its very high-cost domestic suppliers. As a result, prices have collapsed, forcing the smaller Australian producers to retrench and pushing FMG towards the point where revenues no longer cover expenses. In this market as in that for coal, there is therefore a real prospect of a lengthy period of price declines.

It is true that some of the effects of those declines will be offset by falls in the Australian dollar. But devaluation is not a miracle cure; it cannot prevent real incomes shrinking as our terms of trade worsen. Nor can it overcome the effects of labour market rigidities that make it unattractive for firms to create jobs, of environmental policies that waste resources on projects that make no sense or of inefficient taxes and public spending. Least of all can it fix the budget, which risks getting to the point where we lack the fiscal wherewithal to ride out the storm. As Joe Hockey stands up next week to deliver the mid-year economic and fiscal outlook, he should therefore have the unfolding drama of world oil markets firmly in mind. It may well prefigure the rapids that lie ahead. ■

Domestic petrol prices, metro average unleaded



Rising cost of oil production per barrel



Source: Australian Institute of Petroleum, Bloomberg

The Oil Price War Era Is Here

The fact that Saudi Arabia produces nearly 10 million barrels of oil a day is not the only reason it's been called "the central bank of oil."

The desert kingdom has earned that designation by using that massive output to have a singular influence on the oil market for decades. Most recently, it has used its heavy hand to help keep the average annual price of Brent crude hugging \$110 for each of the past three years.

With oil prices plummeting of late, then, it was reasonable to assume that Saudi Arabia would respond to the rout by encouraging its fellow members of OPEC to slash production at their meeting late last month. That didn't happen. OPEC's decision to keep its production target unchanged sent oil prices even lower, and Brent hit a five-year low of \$66.84 per barrel and West Texas Intermediate (WTI) closed at \$63.05 on Monday. But the long-term implications of the decision may be far more significant than the short-term ones. It's quite possible that the cartel has decided to abandon its long-held role as a swing producer that could dictate the direction of the market, says Credit Suisse oil analyst Jan Stuart.

In doing so, it's effectively handing that responsibility to non-OPEC suppliers such as the U.S., Russia and Canada. U.S. shale producers will play a particularly important role in setting prices, Stuart says, because their output is growing fast—so much so that they helped the U.S. overtake Saudi Arabia as the world's largest oil producer this year.

It's hard to predict exactly how U.S. shale will handle this role, especially since the industry is made up of hundreds of independent oil companies rather than a small cartel of nations that is used to making collective decisions. "It's going to be a messy and uneven affair and will take

a while," Stuart says.

The U.S. shale companies will surely be reluctant to put new projects on hold or cut production right away, especially since many are used to the boom times and have promised shareholders rapid growth. But eventually they'll have to: Credit Suisse estimates that the price of WTI needs to be about \$75 per barrel for the industry to keep funding its growth shale fields. But supplies cannot fall all that fast.

Industry inertia means that all else equal, the need to build inventory in the first quarter will most likely keep WTI prices at an average of \$62 a barrel in the first quarter, according to Credit Suisse. As companies begin to curtail growth, WTI should rebound to \$70 per barrel by the second quarter. The only saving grace for U.S. producers, Stuart says, would be a major disruption in global supply or a pick-up in demand. The former is not exactly the kind of thing a serious management team would count on and the latter is doubtful given sluggish growth in China, Japan and Europe.

Nobody wants to be a swing producer in down times, either. If WTI averages

\$70 per barrel in 2015, cash flow for shale producers will fall by 20 percent next year and capital expenditures will drop 18 percent, according to Credit Suisse. The likely result, according to Stuart, is that shale production will only grow by 400,000 barrels a day next year, compared to a forecasted increase of 1.1 million barrels this year. Some companies in North Dakota's Bakken formation will be especially vulnerable because the region has been picked over to a greater degree and resource rocks in the Eagle Ford formation or Permian Basin tend to perform better.

All that said, the end of U.S. shale is not nigh. Sustained lower prices will surely force the industry onto a slower growth path. New drilling projects will be put on hold and there will be layoffs, and Stuart sees total cash flows falling from \$170 billion a year to \$140 billion. But those companies with strong balance sheets should be able to withstand the impending pressure, and some that need it may still have access to debt markets. "This is not an industry that's getting into a crisis from a position of weakness, but a position of strength," Stuart says. "You can't kill the U.S. shale industry." ■





With oil trading below US\$60, provinces brace for impact of global oil price shock

When provincial finance ministers meet Monday with their federal counterpart, routine gripes over equalization payments and pension reform will be pushed back by a much bigger concern — plunging global oil prices and the impact on Canada, particularly in the oil patch.

The Conservative government has already warned that crude prices — now trading below US\$60 a barrel, more than a five-year low — will significantly cut into growth next year and beyond.

With many oil companies putting investment plans on ice, there are worries a freeze on spending will also cut deep into the fiscal books of Alberta, the country's largest oil producer, as well as those in Saskatchewan and Newfoundland and Labrador.

"The biggest hit is actually on the income front. . . . Nominal GDP, which is the total income in the economy, is going to drop very dramatically," said Craig Alexander, chief economist at TD Economics.

"The pace of growth in Alberta is going to drop to a low single-digit . . . because there's going to be this huge swing in the terms of trade for provinces like Alberta and Newfoundland," he added.

"It can cause them to constrain their spending growth and that can have a knock-on effect in terms of job growth in the public sector. Scaling back investment intentions will naturally have an impact on sectors that were going to be involved in that investment activity."

Not surprisingly, perhaps, Alberta Finance Minister Robin Campbell is taking a pass on the one-day meeting in Ottawa — the first to be chaired by Joe Oliver, the federal minister — to focus on the province's upcoming budget, expected next spring.

"Alberta has started to undertake measures to reduce government spending and work is underway to find savings in government," said Kevin Zahara, Mr. Campbell's press secretary.

"This is not business as usual in the province and we will be very disciplined and prudent in our spending in this low-price environment."

In his Nov. 12 economic and fiscal update, Mr. Oliver projected a surplus of \$1.9 billion for next year — on top of a \$3-billion contingency fund — and that would rise to \$6.8 billion by 2018-19.

Mr. Oliver said the drop in oil prices could cut about \$3 billion off nominal growth in Canada's economy this year — and by as much as \$16-billion annually through 2019. That would shrink Ottawa's budget balance by \$500 million this year and by \$2.5 billion a year over the next four years. Those forecasts were based on oil trading around US\$70 a barrel, with the government using a blended price between what Canadian oil has been selling and that of Brent crude, the global North Sea benchmark. At that time, overall global crude prices were trading around US\$77.

Bank of Canada governor Stephen Poloz this week acknowledged he anticipates lower oil prices will knock about 0.3% off gross domestic product in 2014, but longer-range estimates were not provided.

For Alberta, the government calculates that for every dollar lopped from crude prices, revenues fall by about \$215 million. "The fall in oil prices is having a significant impact on provincial revenue for the government of Alberta," said Mr. Zahara.

"In this low-price environment," he said, "there will be a budget shortfall of \$6 billion to \$7 billion in the next fiscal year."

"Even with the fiscal challenges, our economy remains strong with investments still being made in various sectors including oil and gas," Mr. Zahara said. "Forestry, manufacturing and agriculture are all doing well. We still expect growth next year and are in a good position to deal with this situation."

So far, many economists agree the overall impact of low-for-longer crude price will be mitigated by growth in other sectors and in other regions of the country, where low oil costs will help boost output — as it will in the United States — an encourage consumer spending.

"For the global economy, it's a very positive supply shock," said Charles St-Arnaud, an economist at Nomura Securities, but "that depends are where you are and what you do."

"If you're an oil producer or you have a job in the oil industry, you're probably getting very, very worried. But if you're a manufacturer in Ontario that has nothing to do with oil, then great. Transportation costs will go down. The dollar is going down. So, if I'm exporting to the U.S., I'm happy."

At the same time, there appears to be little risk of the financial sector taking a hit, as diversified lenders will find new customers elsewhere.

"Banks are constantly assessing risks and challenges to the economy and how these may impact on their business," said Terry Campbell, president of the Canadian Bankers Association.

"A strength of our banks is their diversification of business both geographically and across different sectors of the economy."

As for interest rates, most forecasters still see the Bank of Canada holding the line until U.S. monetary policymakers make the first move — still expected to be up — in early or mid-2015.

The Bank of Canada has held its trendsetting lending level at 1% since September 2010. Some economists have suggested the drop in oil prices could convince policymakers to lower that already near-record low rate to help prime the economy.

"We have to remember that the objective of the Bank of Canada is not growth stabilization. It's inflation targeting," said Mr. St-Arnaud, who has worked at the central bank and the Finance Department.

"Core inflation is now 2.4%. It's hard to justify to cut rate when your inflation is higher than [the bank's target of] 2%." ■



Oil Woes Slam Income Investors

As if it weren't already hard enough to earn a decent yield these days, the plunging price of oil continues to undercut a vast array of income investments. The damage to asset values so far is raising hopes for a rebound. But the post-crisis faith that one can—and should—earn extra yield from risky investments without expecting problems is being severely tested.

High-yield bonds, dividend-paying stocks, and master-limited partnerships all got hammered anew last week, and falling oil prices upended everything from bond-trading revenues at big banks to the outlook for inflation and how soon the Federal Reserve will raise interest rates.

The re-emergence of volatility is forcing investors to re-evaluate how much of it they're willing to accept in exchange for yield. Even staid municipal bonds are feeling oil's effects, although at least some are benefiting. Stronger consumer spending should boost coffers in states that don't rely heavily on oil and gas revenues; bonds backed by toll roads, airports, and public utilities should also benefit, Citi's muni strategists say.

At the same time, Citi expects oil-reliant states to face "sizable budget gaps, which they will be forced to close by cutting spending, dipping into rainy day funds, and issuing debt in some cases." Oil's effects are widespread, but the energy sector "is probably more important to high yield than to any other market," says Peter Toal, head of leveraged finance syndicate at Barclays. Corporate bond risk premiums—the extra yield they pay versus comparable Treasuries—hit their highest in over a year last week. The high-yield energy sector's average yield has surged to 9.42% from a record-low 4.87% just six months ago. The average energy-sector bond now trades at 87.7 cents on the dollar.

Financial markets expect the Fed to raise its target lending rate sometime next year, and perhaps to clarify its timetable when its policy committee meets this week.

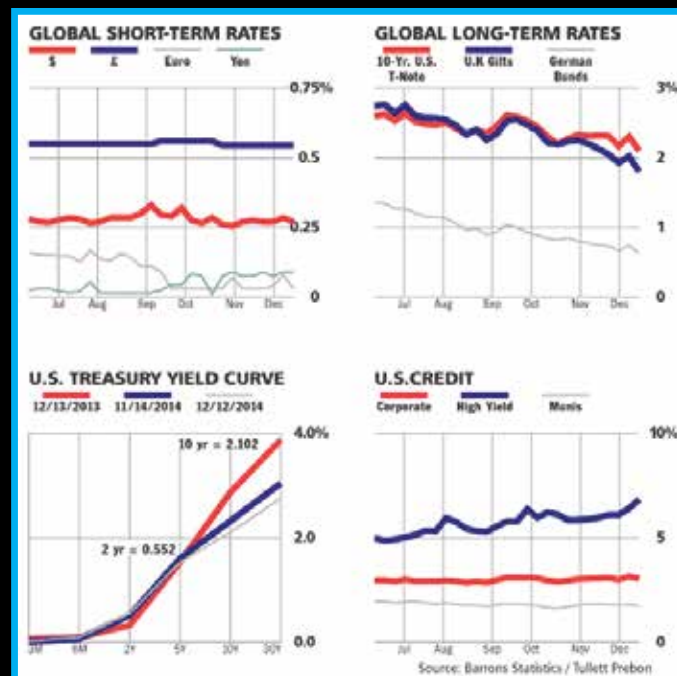
"For no asset class is that change more profound than for [corporate bonds]," says Hans Mikkelsen, credit strategist at Bank of America Merrill Lynch. "The Fed will be increasing risk-free yields and pulling investors out of credit."

INVESTORS PULLED \$1.9 BILLION from high-yield funds last week, the largest outflow in 10 weeks. Tighter post-crisis regulations had already cut corporate bond inventories by some 75% at banks and dealers that once willingly bought and held bonds when others wanted to sell, and financial institutions are even more loath to own risky assets this month as they close their books on 2014.

Is the selloff a sign of broader trouble ahead? Strategists have cautioned lately that stocks are lagging junk bonds in responding to oil's slide. Jeffrey Gundlach of DoubleLine Capital said during a Webcast last week that it's usually a bad omen for the financial system when junk-bond yields rise while Treasury yields don't, and historically junk bonds fare poorly when the Fed nears a rate hike. Still, he thinks prices look fair after their recent fall. "If you're going to own energy bonds, you should own long-term Treasuries as well as a risk offset," Gundlach says.

Mark Okada, chief investment officer at Highland Capital, says this isn't likely to be a repeat of early last decade when a single sector, telecom, sparked a prolonged market rout. But investors in junk bonds and leveraged loans need to be comfortable with the companies that back these securities, not just their attractive yields.

"I don't think interest-rate bets are why you should get into high yield or loans. You want to make sure it's a credit bet," says Okada. He expects underwhelming returns from these sectors in 2015. "It's very painful to have 20 points of downside risk when you're only trying to earn three or four percent." ■



When stocks or commodities are tumbling, traders start to prepare for "capitulation." That's typically the final phase in a sell-off, characterized by a complete absence of buyers and one last massive exit by sellers.

Investors are hoping we are nearing the capitulation phase in oil prices and related stocks. First, an increasing number of hedge funds are using options contracts to position their portfolios for an imminent rebound in crude prices. Second, oil industry insiders have tacitly declared a bottom by embarking on a large-scale wave of insider buying.

There is good reason to believe that oil prices have come close to a bottom, and it's known in economic circles as "supply destruction." More and more oil exploration projects are being cancelled as \$65 oil makes these efforts much less feasible. There's no way to precisely correlate supply cuts with price support, but the longer-term impact is undeniable: Energy producers will pump less oil out of the ground in 2015 and 2016 than they had planned to just six months ago. Assuming oil prices find a floor near current levels, a number of energy stocks are poised to stage a relief rally. The key is to identify what shares are likely worth at current oil prices, and then determine potential upside when oil prices rebound to \$75 or \$80 a barrel. That's the price that many strategists peg as a breakeven rate for most U.S. oil producers.

To be sure, almost every type of energy-related stock should bounce once oil prices stabilize and reverse course simply because of the sidelined buyers that are merely waiting for the bottom to be put in. But few offer as much upside potential as Continental Resources (NYSE: CLR). Continental has surely been impacted by the plunge in oil prices, with shares losing more than half of their value since Labor Day.

Management announced in November that the company would cut capital spending by \$600 million to \$4.6 billion in 2015 from a prior estimate of \$5.2 billion.



Insanely Undervalued Stock Could Rebound 50% When Oil Stabilizes

That new figure is flat with 2014 spending levels.

Still, flat capital spending should enable Continental to boost production by more than 20% next year. That's because the company's newest oil wells are more productive than legacy wells. Although management has been discussing cash flow scenarios at \$70 or \$80 oil in recent weeks, we don't yet know what the company's cash flow profile looks like with oil trading at \$65. But we can connect some dots.

On Nov. 7, with crude oil already below \$80 per barrel, analysts at Merrill Lynch noted: "At current levels, we view CLR as oversold, discounting long-term oil prices around \$65 per barrel in perpetuity."

At that time, CLR was trading in the low \$50s, down from an all-time high above \$80, made in late summer. Since then, shares plunged to a 52-week low of \$33 on Wednesday. In effect, we know that by this analysis, fair value should be closer to \$50.

Next, we want to figure out what fair value would be if oil rebounded to \$70 or \$80 a barrel. According to the company, at \$70 oil, Continental would generate a 30% rate of return on each of its wells in the Bakken Shale, which accounts for more than half of the company's total output. At \$80 oil, that figure rises to 40%, meaning for every \$1 in drilling expenses, the company would make \$1.40 in cash flow.

Merrill's analysts project that the company will generate \$2.75 billion in 2015 cash flow, assuming oil prices average \$72 a barrel. Yet these analysts don't expect oil

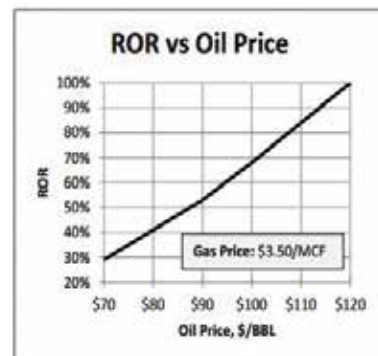
prices to stay in that range, and instead think oil will rebound to \$90 by later this decade. In that context, they peg fair value for CLR at \$74, which is more than twice the current share price.

Even if oil prices remain range bound in coming months, CLR is trading well below fair value, which appears to be north of \$50.

CEO Harold Hamm already assumed that oil prices would find a floor when they were trading at \$70 a barrel, which led him to cash in some hedges that netted the company a \$433 million profit. Continental would have earned more on those liquidated hedges had he waited a bit longer, but his instincts are likely correct that \$60 or \$70 oil sets the stage for enough supply destruction to foment an eventual rebound in oil prices.

William Berry, a company director, isn't afraid to commit to shares. On Dec. 3, he spent \$603,000 to acquire 15,000 shares at around \$40 a share. CLR has fallen more than 15% from there, but unless oil prices completely collapse from here, they are unlikely to fall much further.

In short, the potential reward in CLR clearly outweighs the risk at these levels. ■

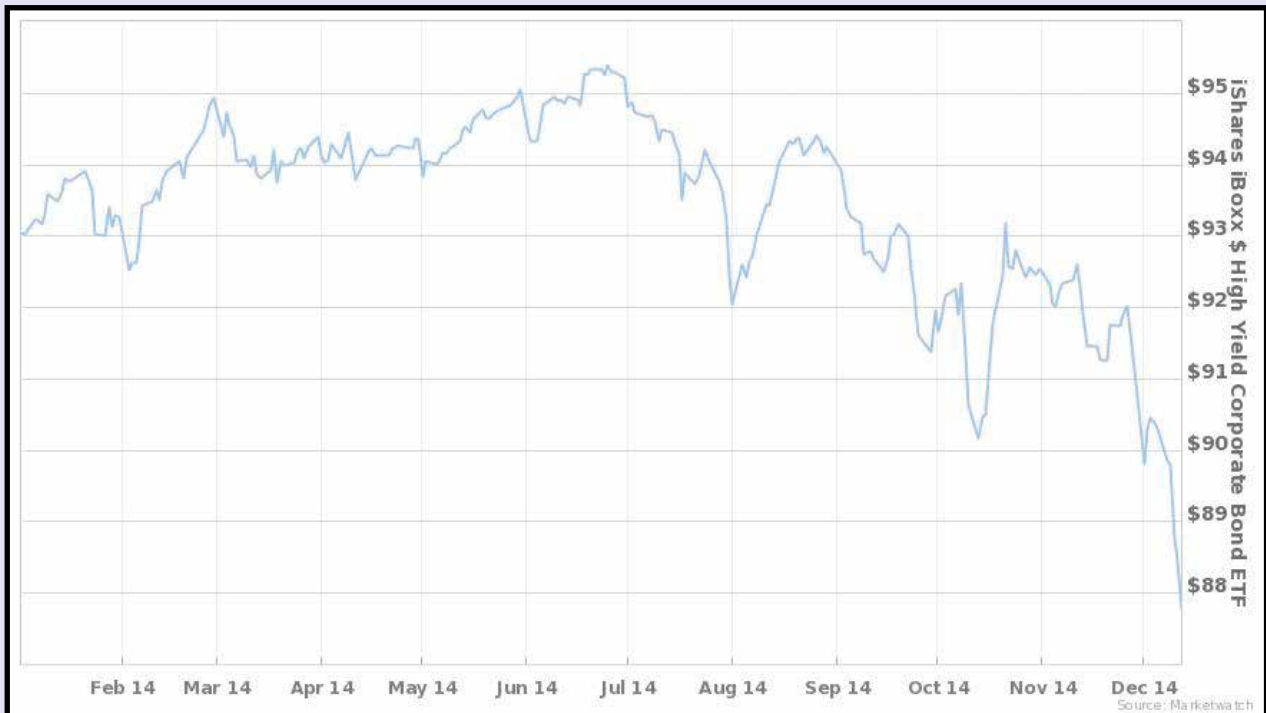




4 reasons collapsing oil prices are rattling stocks

Falling oil prices are supposed to be good news on balance for the U.S. economy. Nevertheless, crude's astonishingly rapid decline has served to rattle investors, triggering a strong pullback in stocks this week.

On the New York Mercantile exchange crude oil for January delivery settled at a remarkable \$57.81, shedding \$5.25, since Monday. Here are some of the reasons investors are unsettled by oil's drop CLF5, -1.20% to five-and -half year lows:



Global growth

The benefits of cheap oil aren't hard to pick out: Cheaper gasoline, and lower prices for other fuels, is often likened to a tax cut for consumers.

The rub, though, is that the decline in oil prices alongside other economically sensitive commodities, including copper, might signal trouble in the global economy. A sputtering recovery in Europe and concerns about Asia have undercut oil demand even as robust production adds to a global oil glut.

The oil plunge "is betraying that we potentially have something darker and more sinister on our hands than we may have thought just a few weeks ago. If things play out as I suspect, interest rates and oil prices will head meaningfully lower in the near term," wrote Scott Miner, global chief investment officer at Guggenheim Partners, this week.

Miner said he still expects a seasonal rally to carry stocks through the current oil-related turmoil, but investors should beware.

Energy loans as percentage of total loans

COMPANY	TICKER	TOTAL LOANS (MILLIONS)	ENERGY LOANS (MILLIONS)	% OF TOTAL
BOKF Financial	BOKF	\$13,684	\$2,552	19%
Cullen Frost	CFR	\$10,747	\$1,505	14%
Zions Bancorp	ZION	\$39,550	\$3,000	8%
Comerica	CMA	\$47,708	\$3,300	7%
Prosperity Bancshares	PB	\$9,369	\$644	7%
Regions Financial*	RF	\$74,609	\$2,891	4%
SunTrust**	STI	\$125,528	\$3,971	3%
BB&T Corp.***	BBT	\$117,264	\$3,100	3%
Fifth Third Bank	FITB	\$90,624	\$1,687	2%
Wells Fargo	WFC	\$838,883	\$15,423	2%
KeyCorp	KEY	\$56,155	\$600	1%
US Bancorp**	USB	\$226,773	\$2,094	1%

*As of Dec. 31, 2013; energy and utility loans reported as a group

**As of Dec. 31, 2013

***Total energy loan commitments as of June 30, 2014

Source: BMO Capital Markets

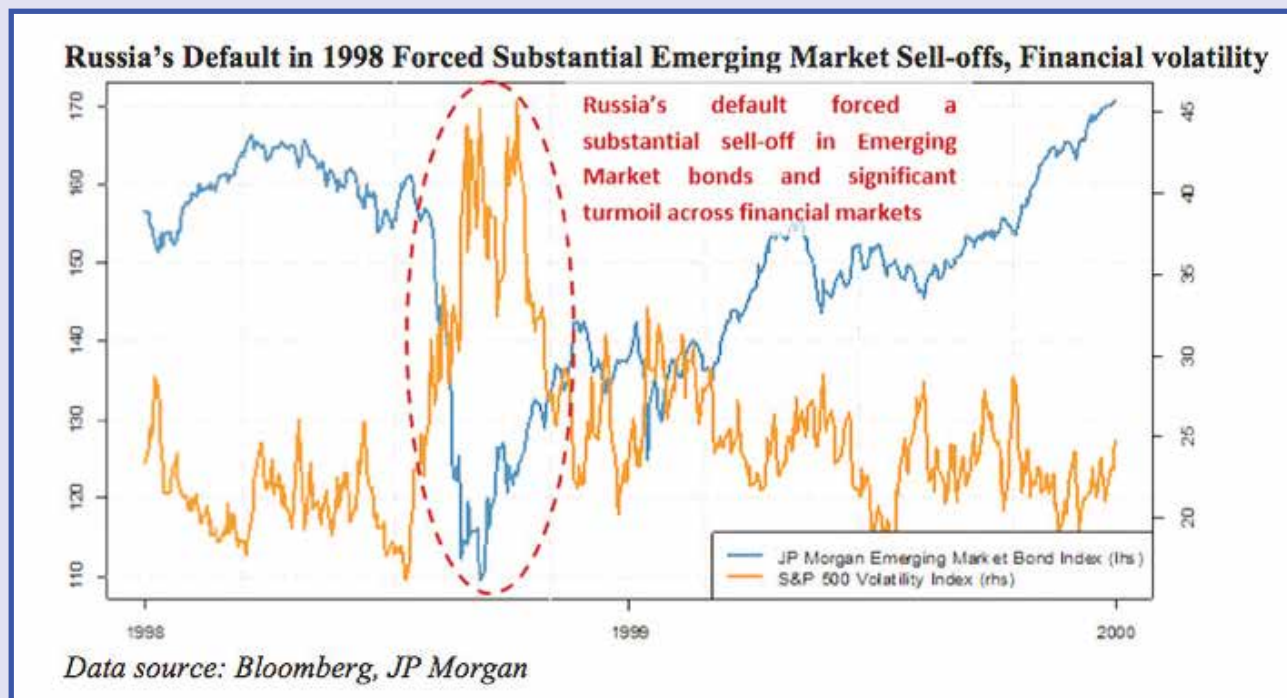
High-yield pressure

High-yield corporate bonds have come under heavy pressure as oil prices have declined, reflecting worries about highly-leveraged shale producers and other energy names.

And while stocks have stepped back this week, some strategists still see a troubling disconnect between the still-relative calm in equities overall and the carnage in high-yield and energy-sector stocks. "Either the market is too negative on energy, or it is not diligent enough in thinking about broader implications," wrote Deutsche Bank credit strategist Oleg Melentyev in a note earlier this week.

Not everyone's alarmed, however. For virtually the first time in four years, junk-bond yields are above the earnings yield on the S&P 500 SPX, -0.59% noted Thomas Lee of Fundstrat Global Advisors, in a note, but observed that high-yield yields remain low by historical standards.

That, however, is largely a reflection of the fact that high-yield was relatively expensive versus stocks and that high yield has more exposure to the energy sector than the S&P 500, Lee said, arguing that stocks are poised to decouple "somewhat" from the high-yield market over the next few months.



Russia redux

There's a lot of talk about differentiation in emerging markets with analysts urging investors to parse the differences between emerging economies that are adversely affected by falling oil prices and those that benefit.

Turmoil in Russia, which has seen the ruble USDRUB, +10.32% plunge to an all-time low versus the dollar as the nation's central bank scrambles to respond to a currency crisis, has triggered reminders of the country's 1998 default, which sent shock waves through emerging markets that eventually hit developed markets as well. The crisis was a factor in the collapse of the Long-Term Capital Management hedge fund.

While the world has changed in many ways since 1998, some analysts still see significant danger.

"We would argue that risks are magnified given the substantial growth in EM holdings in the years since 1998. Near-zero interest rates in the U.S., Japan, and other developed economies have forced many investors into more-speculative and higher-yielding investments," said David Rodriguez, senior analyst at DailyFX. "Yet fear is a much stronger emotion than greed; the first sign of danger could force a market deleveraging akin to what we saw post-Lehman in 2008 and the Russian crisis of 1998."

It's not just oil that's ailing

Economically-sensitive copper also under pressure



Bank exposure

The Russian crisis of 1998 isn't the only ghost revived by the oil turmoil. It also stirs shades of the 1980s oil bust that led to a wave of bank failures across Texas.

Analysts at Bank of Montreal recently took a look at the U.S. banks most exposed to energy .

They didn't sound the alarm in a recent note, observing that Texas and Oklahoma both have more diversified economies than was the case in the 1980s. They also noted that banks generally stress test energy loans down to the mid-\$50s per barrel. That said, "if oil prices should fall below \$65 for an extended period, it could lead to weaker energy loan demand and also have a negative impact" on economies in still "energy-dominant" states such as Texas and Oklahoma.

Banks with energy exposure may have to add to reserves, potentially creating a headwind for earnings, they wrote.

And don't forget about banks in other energy-producing countries. For example, analysts have also raised concerns about Canada's well-regarded banking sector, pointing to macro risks tied to a hit on employment as well as the impact on energy lending. ■





No hope for oil price hike in near future

Nersi Qorban, a senior international energy expert, explains the reasons behind the oil price plunge in recent times, saying there is little hope for a jump in prices next year.

Replying to a question by the paper on the reasons behind the latest developments in the oil market, Qorban said that the decline in oil prices has intensified in the past few months. We can study this issue through the supply and demand mechanism. On the one hand, we have witnessed a cut in the economic growth of European states as well as Asian states such as China and India, which reduced oil demand. There are no positive predictions for an increase in world economic growth in 2014. On the other hand, non-OPEC oil producers also have increased their output, while the level of production of OPEC members stands at over 30 million barrels per day. Saudi Arabia, Iraq, Kuwait and the UAE, which produce more than 60 percent of oil in the 12-member organization, have increased their production to a maximum level in recent months. Therefore, OPEC's overall output has not decreased despite a partial cut in

output by the other eight members. Political issues and successive discounts by certain oil exporters also intensified the plunge in oil prices. On the role of other crude resources such as shale oil in the successive decline in oil prices, he told the daily that the US has recorded the highest production level among non-OPEC countries by supplying the market with shale oil. We cannot miss the role of US oil in the decline in (global) crude production. The US is expected to become the biggest producer of oil products in the world in the near future. The US has increased shale gas production to a maximum in the past ten years and it is expected surpass that of Russia in 2014. The continuation of investment in oil production depends on high prices, therefore the current trend of oil prices is against the US interests. As to why the OPEC which was set up to safeguard the interests of its members has failed to accomplish this,

Qorban stated that OPEC was formed in 1960 when oil companies were controlling the supply and demand mechanism. But the current oil market condition is not suitable and the importance of OPEC has also declined. Regarding his Opinion as to what Iran should do regarding oil market developments, he said, after the release of the country's blocked assets, Tehran should increase investment to optimize energy consumption by using the best technologies. The country should retake its oil market share by increasing production to four million barrels per day. Oil prices have reduced to its lowest level in recent times due to an increase in production by certain states and low economic growth of developed countries. Members of the Organization of Petroleum Exporting Countries (OPEC), including Saudi Arabia, are under pressure to cut production to stem the global oil glut. ■



Lower crude prices will even affect PG Arab economies badly

A lecturer in international political economy at Regent's University London says that if oil prices fall further even the Persian Gulf Arab members of OPEC will face huge economic problems. Sara Bazoobandi made the statement in an interview with Energy World, adding: "For the OPEC economies, even the Arab Persian Gulf producers with large assets cushioned up in their sovereign wealth funds, the price at/or about \$40 pb will have long-term negative macroeconomic consequences."

Ms. Bazoobandi, whose core research interest is focused on Iran and (Persian) Gulf Cooperation Council countries, said, "The balance of power struggle in the region between the two countries (Iran and Saudi Arabia) has not helped their much-required united decisions within OPEC." Responding to a question on why OPEC couldn't reach an agreement, she said various considerations, mainly fear of losing market share to non-OPEC producers has contributed to the recent decision of OPEC. Given the current production quota system and historical backgrounds in OPEC, Saudi Arabia has been a key player in the organization and the recent decision was influenced by this role. In other words, Saudi Arabia and other the three Persian Gulf Arab producers, did not consider the short-term fiscal pressure on other OPEC members with high breakeven prices in this decision. From the latest meeting, it seems there is a cartel (formed of Arab Producers of the Persian Gulf) created within cartel (OPEC) and this will likely widen the gap within the organization and can make the future decisions harder to reach.

On her opinion whether the decision will serve the interests of OPEC in the long run by discouraging investment in shale oil, Bazoobandi stated that the prices will certainly decrease further and stabilize at some point. When speaking about oil prices, it is

important to differentiate between break-even prices, the prices that investors consider when deciding whether to invest in new producing capacities, and shut-in prices, the price that existing operators consider for covering variable costs and if those costs are not covered, they will stop production from existing wells. OPEC's current decision is based on one assumption that lower break-even prices will reduce/slow down shale production. The U.S. shale break-even prices are estimated to be somewhere between \$60 and \$80 per barrel (pb). In reality however, what matters in the next few years for shale producers is the shut-in price, which falls below \$40 pb.

Therefore, existing shale production is likely to continue for sometimes even if prices stay low. For the OPEC economies, even the Arab Persian Gulf producers with large assets cushioned up in their sovereign wealth funds, the price at/or about \$40 pb will have long-term negative macroeconomic consequences which will take them a long time to recover from. Regarding the daily's question whether the OPEC has weakened now, she said that the world is consuming roughly about 90 million barrel of oil per day. The OPEC is producing one third of this amount. Therefore, the OPEC produced oil is still quite important to the global energy markets. Moreover, the Persian Gulf oil is much cheaper to produce than most of the other regions in the world. So, the importance of OPEC for the global energy supply has not declined. However, one can argue that the political power of OPEC has decreased mainly due to the rise of non-OPEC production.

Replying to a query whether the move, that Iran is seeking a price increase outside OPEC, can really work, she expressed doubt whether there would be much scope for price increase without production cut in the short-term. 'I also doubt any non-OPEC

producer will make any significant production cut which will be sufficient to boost the prices unless it is a unified global strategy by, at least, the major producers. In the current oil market climate, production reduction of one producer means, another producer will fill the gap in the market, simply because there is surplus supply of over a million barrel per day in the market. I equally doubt Iran make any drastic decision to drop out of OPEC in the short-term, as it would not be useful for Iran in any respect.



Iran outside of the OPEC will not hold more power to boost the prices single handedly.'

On whether the conflict of interests between Iran-Saudi Arabia caused a failure by OPEC to reduce oil production, she said, oil has historically been a very politicized commodity; and Iran and Saudi Arabia have had their differences over oil policies within OPEC for the past decades. In addition, the balance of power struggle in the region between the two countries has not helped their much-required united decisions within OPEC. Saudi Arabia is the producer of one third of total OPEC productions; hence, it had traditionally held high decision-making power within the organization. The Saudi position with the GCC countries also encourages Saudi Arabia's aspiration to take a leadership role within OPEC.

As a result, Iran has often sought to lobby with non-GCC producers of OPEC to offset the Saudi influence. Having said that, it would be wrong

to assume these two countries make all the decisions of OPEC or the difficulties and internal disputes within OPEC are only as a result of the conflict of interest between Iranians and Saudis.

After all, oil is a highly political commodity and there are complex factors at the global level, which affect the markets.'

On whether the extension of nuclear talks between Iran-5+1 group have any effect on the sanctions regime on Iran, she said: 'Iran's oil production and export have significantly declined as a result of the toughened sanctions. In addition, the sanctions worsened Iran's structural economic issues.

'Therefore, any extension of the negotiations and delay in lifting the sanctions will have continued negative impact on the Iranian economy. This combined with lower oil prices would only pose a bigger impact on Iran.

The \$700 million per month payments to Iran from its frozen assets (which is almost equal to selling of 300,000

barrel of oil a day at price of \$70pb) will provide some assistance for the Iranian government's liabilities. But such measures will surely not be sustainable.'

On the issue of whether foreigners would be eager to invest in Iran's oil and gas industries during this time, she said: 'The sanctions are probably by far a bigger threat to the future of foreign investment in Iran's oil and gas sector. Lifting the sanctions will take long even if, and when, a deal is reached. From an investment perspective, given the low cost of production for Iranian oil, and increasing importance of gas as a strategic commodity both to Europe and Asia, Iran will be financially a desirable investment destination. However, there are other internal factors, which make it difficult for the foreign investors to enter Iran. The difficulty of doing business in Iran and the heavy government involvement in the economy, are amongst such factors.' ■



ENERGY
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Gas refineries closer to self-sufficiency

Shahid Hasheminejad Gas Refining Company accomplished designing, manufacturing and indigenizing electronic speed control system, ending European countries' monopoly in providing the device. Head of instrumentation division at Hasheminejad refining company Ali Bayat said the device known with Woodward PG-550 trade mark, was being exclusively manufactured by the U.S and European countries with wide use in rotating machinery, high speed and highly sensitive machines. Bayat said the company has spent just one fifth of the cost it spent already to buy the foreign-made item for manufacturing the device. The company has saved 3.88 billion rials by managing to manufacture the device domestically.

Shahid Hasheminejad Gas Refining Company is located in Khorasan Razavi province, northeast of the country.

Bayat concluded that instrumentation division of the company decided to make the device in order to reduce dependency on foreign-made devices, halting foreign exchange exodus and achieving self-sufficiency.

Gas refinery promotes domestic manufacturing

Meanwhile, Parsian gas refining company has managed to indigenize manufacturing of ball valve springs, managing director of the company Farshid Ebdali said

Ebdali noted that the company also has been able to save more than 4 billion rials through indigenizing and installing 600 valves with different

sizes from 2 to 30 inches.

According to Ebdali, Parsian gas refining company has also acquired the technical knowhow of manufacturing spacer and tilting pads and handed over the parts to South Pars gas field phases for using in gas turbines.

He pointed to Britain as the main manufacturer of the products, adding domestically manufactured items are working without any problem.

Manufacturing of these items has enabled the company to save more than 1.5 billion rials preventing foreign exchange exodus.

Domestic manufacturing is one of the most important plans on the agenda and the company will pursue it seriously with the goal of realizing Economy of Resistance targets, he concluded. ■





Iran raises gas production in shared gas fields

Deputy-oil minister has said Iran has raised gas production from joint fields with Qatar.

Mansour Moazzami said that the ministry had plans to increase gas production of current 100mn cubic meters daily. "Since the beginning of the current year (March 21 2014), Iran has increased natural gas production capacity up to 45-50 per cent; which accounts for deliveries to electricity power plants," he added.

Moazzami pointed to raises in Iran's gas production in shared gas fields with Qatar in development of 12th phase of South Pars, and predicted new gas production venues with 12th and 15th-18th phases entering operation. "The gas delivery to power

plants has also risen up to 40 per cent; this rise not only decreased the using of liquid fuels especially diesel in power plants, but also it did save \$5bn and reduced environmental pollution, with subsequent clean weather in country's megacities," Moazzami emphasized.

Hamid Reza Araqi, managing director of National Iranian Gas Company (NIGC) spoke of 'new records in gas deliveries to power plants and reduced liquid fuel burning in the power plants and subsequent economic saving; "About 25 billion liters of liquid fuel including diesel and fuel oil have been fed into power plants, which contributed significantly to pollution in megacities," he added. "In first six months of the year, more

than 7.5 billion cubic meters of natural gas have been delivered to power plants, while country's gas production has risen 60 million cubic meters daily at the same time," said the official.

In still different occasion, the director-general of Pars Special Energy Zone said that during recent seven months, country's gas condensate exports has risen 76 per cent in value compared to that last year. Khodadad Rahimi also said that the Zone had great capacities for exports and imports of goods especially of industries and oil, gas, and petrochemical sectors. "More than 147,000 tons of goods have been imported through the South Pars customs, mainly in petrochemical industries, worth of \$966mn," he added. ■

NIGC, Gazprom sign cooperation deal

National Iranian Gas Company (NIGC) and Russian Gazprom have signed cooperation agreement, an NIOC official said.

Hamid Reza Araqi, Deputy Oil Minister said that the cooperation agreement would extend Iran-Russia joint projects in gas, training and international activities to new levels.

"A joint workgroup consisting of NIGC and Gazprom members to coordinate joint ventures in Iran and Russia as well," said the official, "the workgroup also will supervise the ways to implement the agreements."

Araqi also said that the agreement however had not predicted any orchestrated attempt by Iran and Russia to 'shape the gas global market,' and that "the agreement would address and implement only training and

implementing projects."

"Iran has great technical and engineering capabilities in CNG (compressed natural gas); and would export technical services to Russia as well," said the official, claiming that Russian gas industry had undergone little progress in technical grounds compared to Iran. Araqi pointed to joint plan to restore natural gas; "we predict that many facets of Iran and Russia gas cooperation would only realize when the final draft of agreement is signed by two sides," he asserted. ■



Gov't Wasted Oil Revenues During Previous Administrations

Dropping oil prices and the ensuing challenges for our country stimulated us to conduct an interview with Mahmoud Jaamsaz, economist.

What is your proposal for setting oil price in the annual budget in a way that its fluctuations will not hurt the economy?

- Setting oil price for annual budgets has been challenging for governments and parliaments in Iran. But, the problem is not confined to our country. Those countries relying on natural resources for revenues, for instance oil, gas, gold and other commodities, and generally single-commodity-dependent economies, face the challenges of price instability and its impact on their economies.

Could we call Iran's economy a kind of single-commodity-dependent economy?

- We may argue that our economy is not a single-commodity-dependent but if we leave out oil exports from foreign trade there is no doubt that our trade balance would be completely negative and that is

What is your opinion about the place of oil in Iran's economy? Is it an advantage or disadvantage?

- It depends on how the states spend oil incomes. Spending oil revenues for well-being and economic and social welfare of the people will have different results with the situation when the states use the revenues for political wills, rent-seeking and military and political tendencies relying on the government. So it could be an advantage or disadvantage depending on how the income is spent in the country. Inappropriate use of oil revenues could lead to spread of poverty, unemployment, inequality and Dutch Disease.

Anyway, Iran's budget has been heavily dependent on oil revenues since long ago so it could be said oil income is a disadvantage for the

country because it has been misspent and the incomes have not been followed by economic welfare, social justice and sustainable development.

Could you please refer to a special period of time when rising oil prices made trouble for the economy?

- The years between 1995 and 2013 are the clear example of the period when resources did not allocate adequately. Prevalence of rent-seeking and embezzlement of billions of dollars of oil income were the features of the period.



Inflation above 40 percent, close to 6,000 trillion Rials liquidity, 13 percent unemployment, rising poverty and misery index changes were the results of close to 800 billion dollars of oil revenues the government made during the period.

All these happened in a time when all economic development programs of the country and general economic directions of the country were focused on cutting the role of oil revenue in the budget.

What should the current administration do to overcome the economic problems it has inherited from the former administration?

- The current administration has inherited many social and economic problems from the past and tries to restore economic stability by the help from economic experts and experienced academicians through diagnosis of the root

causes of problems like inflation, unemployment, recession and malfunction of other macroeconomic variables.

There is no doubt that budget is the most important document the government can arrange as a roadmap and follow it in order to bring down inflation, to boost economic growth, to reduce unemployment, to achieve sustainable development and provide social and economic welfare for the society.

What do you think about OPEC? Do you believe the organization has lost its credibility?

- OPEC once was very powerful and influential in the market through its policies pertaining on increasing or decreasing production. But these days it has lost its credibility once it enjoyed mainly because of the lack of compliance with its commitments.

With regard to dropping oil price, what solution do you think is more workable for the government in order to reduce deficit in the budget?

- At present the country faces budget deficit. Budget deficit stood at 180 billion Rials during the first six months of this year and if the government plans to end the year according to the figures in has anticipated in the budget and avoid deficit, it should be able to sell oil based on at least 125 dollars per barrel.

In your opinion what is the root cause of dropping oil prices?

- There are several economic and political reasons behind falling oil prices and big powers play a role. One reason is higher value of dollar. The value of dollar has gone up nearly 20 to 25 percent against other currencies including Euro. Strong dollar, in itself, could be the result of better employment status in the U.S, stabilizing interest rates up to the end of 2015 by Federal Reserve, economic growth and so on.

Economic slowdown in European countries, recession in Japan, falling oil demand by developed and emerging economies altogether have caused oil prices to drop by 30 percent in a short period.

Which countries stand to benefit from falling oil prices?

● It's clear that some countries will benefit from low oil prices and some others will be losers. If you assume daily oil consumption 90 million barrels and the price of each barrel 115 dollars, you will reach 3.8 trillion dollars per year, but with price at 75 dollars the annual figure stands at 2.4 trillion dollars which means energy expenses will come down by 1.4 trillion to the benefit of oil importing countries. China and India as big oil importers will benefit from falling oil prices. Even those countries whose economies revolve around producing agricultural products will benefit from lower prices because energy makes up a great part

of their expenditure.

What about Saudi Arabia? Do you think dropping oil prices will hurt its economy?

● Saudi Arabia is one of the largest oil producing countries in the world and in the ongoing economic and political play sides with U.S. Saudi Arabia with more than 700 billion dollars of foreign exchange reserves is not worried about oil price fluctuations and its impact on its annual budget.

What about the impact of dropping oil prices on Russian economy?

● Russia holds about 450 billion dollars foreign exchange reserves now but continuation of the current status will relay a massive challenge to the Russian economy.

What do think about Iran?

● Iran has not enough foreign exchange reserves to cope with the effects of low oil prices. Venezuela faces similar situation and suffers from huge foreign debts which is the result

of the performance of the government headed by late president Hugo Chavez.

Does the U.S benefit from lower prices?

● The U.S is the biggest importer and consumer of oil. The country is expected to reduce its oil demand in next years and at the same time it is a large oil producing country. Generally, in my view those countries with high level of dependence on oil revenue are the biggest losers.

What points are essential in your view in drafting budget?

● I think the budget should be drafted based on pessimism. Because I think any deal with 5+1 won't be comprehensive and it will not change the economic situation of our country. The past six months have proved my view.

In my opinion, drafting annual budget, as it has been suggested, based on 70 dollars for oil is very optimistic. I think 60 dollars will be more reasonable. ■



ENERGY
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Oil price pressure spreads into global LNG market



A setback for Canada's leading liquefied natural gas project reflects the ripples that continue to spread from OPEC's decision to maintain crude production levels in the face of a global supply glut, as the links between oil and natural gas carry new uncertainties into world methane markets. Malaysian oil and gas company Petroliaam Nasional Berhad, or Petronas, announced that it was backing off its commitment to reach a final investment decision in December on an expensive new LNG terminal to be sited along Canada's British Columbia coastline.

After more than a year of wrangling with provincial officials over the deal's tax terms, previously seen as a key sticking point, Petronas officials were careful last week to say that regulatory concerns are not driving the postponement (EnergyWire, Oct. 23).

"Petronas and its partners in the Pacific NorthWest LNG project continue to review the economic viability of the project which, in a time of declining oil prices, presents challenges," the company said in explaining the move. Petronas said it would defer the \$36 billion final investment decision "to ensure that critical project components align with economic viability of the project and competition from other LNG

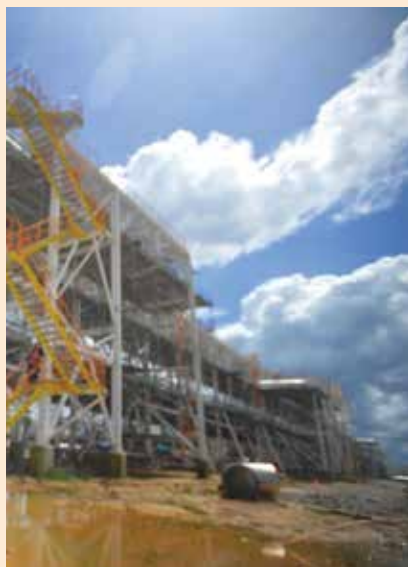
producing countries.”

British Columbia’s gas export proposition has always been shaky compared with the U.S. competition, pairing high development costs with potentially expensive natural gas contracts.

The new oil price environment only adds to that pressure, leading oil and gas companies to reassess their balance books and look critically at projects that involve massive spending to enter highly competitive markets.

LNG project developers around the world have been keeping wary eyes on proposals to ship the product from facilities offering LNG priced against U.S. Henry Hub gas. Over the past few years, that has priced out much more favorably than LNG sold at oil-linked prices from projects proposed and developed in Australia, Canada and elsewhere.

Proposals to export LNG from projects along the heavily industrialized



U.S. Gulf Coast and elsewhere also boast lower upfront costs than those available to projects like Petronas’ that envision carving out new facilities in remote areas and building lengthy pipelines from gas fields to the waterline (EnergyWire, Oct. 23). Now the oil price drop is pulling down LNG prices and bolstering the appeal of oil-linked natural gas, but the more favorable outlook for buyers competes with the tougher investment climate for developers to

prevent a shift away from the United States.

Will oil drag down natural gas?

Even as oil pulls down world LNG prices, there is risk that it will also indirectly drive up natural gas prices in the United States, some observers warn.

Kevin Book, an analyst at Washington, D.C.-based ClearView Energy Partners, points to U.S. Energy Administration Information data in an estimate that roughly half of U.S. natural gas production is from wells where oil and oil condensates play a role in economic viability.

“Roughly one-fifth of gross gas production could be sensitive to low oil prices. If the next year were to bring enduringly low crude oil prices, we wouldn’t just expect producers to cut their capital spending, but also to focus their efforts on highest-value production. In other words: producers might try to avoid ‘gassy’ oil wells ... potentially leading to lower volumes of associated gas,” he wrote in a recent update.

Such drilling decisions aren’t likely to put a serious damper on natural gas production, which the EIA reported last week reached a record high in 2013. But agency data show that among states with falling gas production, Alaska led the way due to falling crude production that knocked associated natural gas production offline (Greenwire, Dec. 4).

EIA natural gas production figures for the coming year have been bullish, with somewhat lower rig counts offset by growing productivity at well sites as industry fine-tunes its ability to wring natural gas from shale. Still, with the oil and gas investment climate for next year in flux and industry ready to hunker down for a lean spell, it remains to be seen how prices at the Henry Hub will respond.

Geographic risk reduction

The narrowing price spread between U.S. and foreign LNG supplies cuts into the advantages of domestic projects.

But Hidehiro Muramatsu, general manager of the Washington, D.C.,

office of the Japan Oil, Gas and Metals National Corp. (JOGMEC), said it will do little to curb Japanese interest in signing new deals in the Lower 48. With oil trading between \$60 and \$70 per barrel and the Henry Hub a bit above \$4 per million British thermal units, prices are roughly in parity between oil-linked and non-oil-linked suppliers, he said, though the specifics of transit distances and contract terms are crucial.

But U.S.-based contracts offer prized geographical diversity for Japan, Muramatsu said, noting that presently more than 80 percent of the island nation’s LNG must pass through the Strait of Hormuz between Iran and Oman, largely from Qatar, the world’s largest supplier.

Fuel from Australia, Canada and the United States can reduce Japanese vulnerability to Middle East tensions, Muramatsu said, noting that buyers are actively involved in negotiations with two LNG export projects under development in Oregon, as well as with numerous Canadian project backers.

More than an oil price change, Japan is looking to a domestic policy change around nuclear power to temper its interest in natural gas.

Since the Fukushima Daiichi disaster in 2011, nearly all of the country’s nuclear power base has been offline; Muramatsu said any shift away from natural gas and back toward nuclear “depends on the psychological factor of the general public.”

That appears to be gradually softening as the Japanese economy continues to struggle with recession and the foreign exchange hit of its natural gas appetite, and as the government and nuclear industry offer assurances that systems are in place to ensure safety.

That psychological shift has been happening slowly, though, and with a nuclear restart seemingly always just around the corner, locking in fossil fuel supplies remains important.

“Low oil prices really help the Japanese economy,” Muramatsu said. But even with the oil price plunge bringing bouts of LNG price parity, Muramatsu affirmed that the island nation “of course” remains keen to sign U.S. contracts. ■



Opec 'will let oil price fall below \$40'

As the price of Brent crude fell below \$60 for the first time since 2009, the most powerful nations in Opec have made clear that they are willing to push prices as low as \$40 a barrel in their bid to take on Russia and US shale, a high-profile Gulf oil minister said this week.

Suhail al-Mazrouei, energy minister of the United Arab Emirates, said that the organisation will let prices fall by more than \$20 per barrel before they consider an emergency meeting to cut production.

"We are not going to change our minds because the prices went to \$60, or to \$40," he said.

Brent crude, the global benchmark, fell by more than a dollar to \$59.75 a barrel today, the BBC reports, while the price of US crude dropped to \$54.85.

Tumbling prices have already had a profound impact around the globe,

including in Britain where three times as many UK oil and gas firms have declared insolvency this year compared with 2013.

A report published on Monday by Moore Stephens, a UK accountancy firm, said that 18 UK oil and gas businesses became insolvent this year compared with just six in 2013, The Guardian reports.

Jeremy Willmont at Moore Stephens said: "The fall in the oil price has translated into insolvencies in the oil and gas services sector remarkably quickly. The oil and gas services sector has enjoyed very strong trading conditions for the last 15 years, so perhaps they have not been quite so well prepared for a sustained deterioration in trading conditions as other sectors would have been."

According to Willmont, expectations that prices will remain low for some time are fuelling the insolvencies: "There was a sharp drop in the oil

price during the financial crisis, but the sense that oil prices could be depressed for some time is much more widespread this time around."

But George Osborne said that falling oil prices are "overall a very good thing", adding that the effect would be a "net positive" for both the US and the UK.

"We have important oil and gas industries in the US and the UK but nevertheless this is a big boost for American and British consumers and businesses," Osborne said at an address to the Economic Club of New York.

The Paris-based International Energy Agency recently slashed its forecasts for growth in demand for oil in 2015 by 230,000 barrels to 93.3m barrels per day. The estimations of the US Energy Information Administration are even more pessimistic; last week the department reduced its forecast demand growth for 2015 to 92.8m



barrels per day.

Oil price: Opec is dead and oil could hit \$50, says Bank of America
Oil prices could hit \$50 per barrel in 2015 and Opec is effectively irrelevant, the Bank of America has suggested.

Francisco Blanch, the bank's commodity chief, warned that the consequences of Opec's decision not to stabilise prices at its last meeting will be "profound and long-lasting," and said that oil cartel is now "effectively dissolved".

Oil will now enter a period of wild price swings and "disorderly trading" that will benefit cash-rich Middle East petro-states such as Saudi Arabia, but will damage some of Opec's less wealthy members such as Nigeria and Venezuela, the Daily Telegraph reports.

The Bank of America said in its end of year report that as a consequence of falling prices, 15 per cent of US shale gas producers are already losing money and up to half of all shale operations will face financial difficulties if oil prices slip below \$55

a barrel.

Years of oversupply in conjunction with developments in liquefied natural gas (LNG) have brought prices to their lowest point in five years.

If the global oil glut is not brought under control, prices will slide towards \$50, the bank said.

Citigroup disagreed with the Bank of America's assessment, suggesting that shale gas is more robust than their rival suggests, and will be able to weather prices nearer to \$40 per barrel.

According to the end-of-year report, declining oil prices may lead to large-scale shale projects in Argentina and Mexico being scrapped, and could force some exploration in the remote areas of Russia and Canadian oil sands to be scaled back. Several major oil companies are also expected to cancel projects if the price of Brent crude price remains below \$80.

In spite of the continuing freefall of oil prices in the months ahead, prices are expected to rebound in the middle of the year, said Sabine

Schels, an energy expert for the Bank of America. "We expect a pretty sharp rebound to the high \$80s or even \$90 in the second half of next year."

Oil price: Brent crude rebounds from five-year low

The price of Brent crude rebounded on Tuesday afternoon after hitting a new five-year low of \$66 per barrel, as some traders gambled that the prices had reached a floor.

After oil prices continued yesterday's downward trajectory in early trading, some buyers eventually emerged, apparently anticipating that prices are now bottoming in the wake of a 40 per cent slide since June.

The sharp drop in oil prices has been caused by rapid growth of US shale output and concerns that the global oil glut will continue well into 2015 following the decision of Opec not to cut production when the organisation met in Vienna last month. Prices tumbled by almost \$3 a barrel



on Monday following a forecast from Kuwait that the cost per barrel would hover around the \$65 mark until at least next summer. Kuwait is a key ally of Saudi Arabia and "follows the strategy set by the world's largest crude producer, which has triggered a price war with American shale oil companies", The Times says.

In spite of today's slight rally, many traders believe it is too soon to call a floor, Reuters reports.

"Although talks of oil reaching its bottom are more rampant, we fail to see a reversal coming without stronger fundamentals," said Daniel Ang of Phillip Futures.

Brent crude for January deliveries fell as low as \$65.29, its weakest since September 2009, but was up 46 cents at \$66.65 a barrel by 1.30pm GMT. US crude was up 64 cents at \$63.69 a barrel, having plummeted to \$62.25, its lowest since July 2009.

Oil price slips towards five-year low of \$68 a barrel

The oil price has fallen by more

than a dollar as it sinks towards its weakest point since October 2009 after Morgan Stanley forecast that oversupply would peak in 2015. The investment bank cut its forecasts following Opec's decision not to reduce production to address the growing oil glut.

"Without Opec intervention, markets risk becoming unbalanced, with peak oversupply likely in the second quarter of 2015," Morgan Stanley said in a report dated 5 December.

In its report, the bank slashed its average 2015 Brent base-case forecast by \$28 to \$70 per barrel and for 2016, by \$14 to \$88 from \$122 a barrel.

In its worst-case scenario, the report suggested that oil could fall to \$43 in the second quarter of next year.

Today, Brent crude for January was down 90 cents at \$68.17 a barrel, Reuters reports, having gone as low as \$67.73 in intra-day trading, just slightly above last week's bottom of \$67.53 – the lowest oil has fallen since October 2009.

Oil prices also dropped slightly

following the publication of China's monthly trade data, which came in well below expectations. In November, Chinese imports fell by 6.7 per cent and exports grew just 4.7 per cent.

"We expect China's trade data to cause falling oil prices to fall further, as exports were lower than expected," Daniel Ang of Phillip Futures told CNBC. "Although lower imports would imply less crude imports, we attribute falling crude oil prices to be the primary reason for a reduced value of China's imports."

As a consequence of falling prices, British oil company BP announced that it would cut hundreds of back-office jobs around the world in downsizing measures.

BP said that tumbling prices underlined the importance of "making the organisation more efficient".

The company has 84,000 employees worldwide, including 15,000 in the UK, the BBC reports, but has been downsizing since the catastrophic Deepwater Horizon oil spill in the Gulf of Mexico in 2010. ■



Qatar LNG sector set for less volatility in 2015



Qatar's key liquefied natural gas sector is likely to see less volatility in 2015 than the oil sector, as most of the country's LNG is sold on long-term contracts, a new report has shown. Being the world's largest LNG producer, Qatar has an output capacity of 77mn tonnes annually, said Standard Chartered bank in a report. The country accounts for almost one-third of global LNG trade, and more than 80% of its exports go to Asia. "We expect Qatar to be among the best-insulated GCC (Gulf Co-operation Council) countries from a projected drop in oil prices and potential output cuts. Qatar is less sensitive to oil price moves, as 50% of its hydrocarbon revenues come from the gas sector and LNG exports," StanChart said in its country report, which is part of its "Global Focus – 2015–the Year Ahead". According to StanChart, Qatar would take smaller cuts than some of the larger oil producers later in 2015 due to its lower oil output levels.

The bank sees a "buoyant" growth outlook for Qatar and forecasts GDP growth at 5.4% in 2015 versus 5.5% in 2014. The moderating outlook for oil markets is likely to affect the hydrocarbon sector only moderately, largely through oil. "Qatar remains well positioned to undertake long-term investment plans. The key drivers of long-term growth are National Vision 2030 (the country's long-term development plan) and the FIFA 2022 World Cup. "Infrastructure investment is taking centre stage. Qatar has awarded numerous infrastructure projects in 2014 to prepare to host FIFA 2022 and to address long-term infrastructure needs arising from rapid population growth. We expect spending to increase further in 2015. Population growth is one driver of long-term investment. The government forecasts that the population could rise to 3.8mn by 2030 from around 2mn currently. "Under Qatar's national development

strategy, an estimated \$183bn of investment is planned between 2011 and 2016. We estimate that almost \$27bn of key infrastructure projects have been awarded in 2014. We expect project spending to reach \$34bn in 2015," Standard Chartered said. StanChart said the Middle East's economies boomed in 2014 on the back of increased spending on infrastructure projects. "Although GCC economies are taking active steps to diversify, government revenues are still highly dependent on hydrocarbon proceeds. The drop in oil prices in 2014 raises the question of whether GCC governments can keep raising government spending year after year without facing fiscal pressures. "The answer is that they probably cannot, and fiscal policy will have to be reassessed. We expect oil prices to rebound in 2015. Additionally, our client surveys in the GCC suggest optimism for 2015." ■



The Saudi standoff: Oil-rich nation takes on world's high-cost producers

In the high-stakes contest between the United States, the biggest shale oil producer, and Saudi Arabia, the biggest oil exporter, America has blinked first.

The OPEC refusal to cut production at its November meeting was widely seen as the declaration of a price war against booming U.S. shale oil producers, which had sent their country's oil production soaring. Saudis had watched as their market share dropped precipitously in the world's biggest oil-consuming nation, and they wanted to send a clear message across the global energy market that they weren't about to back off. Oil prices have been in freefall ever since. Brent crude, the global oil benchmark, sank another 3 per cent Friday to \$61.85 (U.S.) a barrel, while West Texas intermediate, the U.S. benchmark, dropped 3.6 per cent to \$57.81, extending its slide from well over \$100 a barrel in the summer. If the global oil standoff pits the

industry stalwart Saudi Arabia against the surging U.S. rival, other global players are coping with the pricing fallout, including Canada. Oil companies around the world are being forced to revisit their spending and production plans for 2015, and in the offices towers of downtown Calgary, those changes are already well under way.

Cenovus Energy Inc. this week slashed its capital budget by 15 per cent and signalled more to come. Canadian Natural Resources Ltd. has said a quarter of its \$8.6-billion (Canadian) budget is "flexible" and could be deferred if prices don't recover. A growing number of smaller producers have cut budgets and dividends in a bid to conserve cash and ride out the storm.

More cutbacks are likely to follow in the weeks ahead, and expectations that Alberta could double oil sands production over the next decade are suddenly in doubt. After all, new oil sands projects on the drawing board

have costs per barrel well above current market prices.

For Canada, future projects sidelined or scaled back will act as a drag on the national economy, which has for years benefited from heavy spending in the energy sector while other sectors such as manufacturing struggled. The case for the many new pipelines currently in various stages of planning will be weakened.

Analysts warn it could take many months – even a full year – before global oil supplies fall enough and demand catches up, so that prices recover somewhat.

The oil slump is expected to affect most quickly on production levels in the United States, where the shale boom has added four million barrels a day of supply in the past few years and prompted predictions that the country would become the world's largest crude producer by 2016.

Already, the number of new shale drilling licences has dropped by 40 per cent, plans are being scaled back, and rigs are being pulled out of the field. With relatively short lead times from planning to production, analysts are cutting their expectations of supply growth for next year. As Saudi Oil Minister Ali al-Naimi predicted two weeks ago, the market is beginning to "stabilize itself."

But it will take a while for the Saudi strategy to play out. American producers are still expected to continue to boost production through the first half of next year, although at a slower rate than 2014. Meanwhile, global demand growth is slowing. That will keep pressure on prices at least through the first half of 2015, unless OPEC does cut production or there is



a sharp supply disruption caused by political upheaval.

Companies adjust

On Friday, the International Energy Agency shaved its forecast for 2015 demand by 230,000 barrels a day – the fourth time in five months that it has reduced its forecast – citing economic weakness in Russia and China. The Paris-based agency also raised its expectation for non-OPEC oil production in 2015, despite lower prices.

Oil companies are seeing their revenues nosedive, share prices sink, and capital market players grow wary about lending. State-owned companies are facing pressure to maintain the flow of revenue to government coffers even as their cash flow dries up. Capital discipline had been the mantra among major oil companies heading into 2014; retrenchment and focus on high-grade prospects will be the watch words as the year ends.

Even as U.S. producers respond, companies operating in high-cost, capital-intensive areas like Canada's oil sands or Brazil's offshore will defer and even cancel planned projects, although the impact on actual production will take longer to materialize.

It's too early to call "mission accomplished" for the Saudis. The OPEC leader is playing a long game in order to preserve its oil market share by making life difficult for the high-cost oil producers, and its strategy is showing early signs of success.

The quick reaction time by some of the high-cost producers, notably the American shale oil drillers, is why one of the world's foremost oilmen, Sadad Al-Husseini, the former executive vice-president of Saudi Aramco, the world's biggest oil and gas company, is becoming bullish on oil even as Brent prices sink to the low \$60s.

"If you go down low enough, as we are now, you'll get to the point where there is little investment, which is what we're going through," he said in an interview in Al Khobar, the Saudi city filled with Aramco employees in the country's oil-rich Eastern Province. "You will force the excess out of the market and demand will take you back up. That is

what is about to happen."

'Strength of the profit motive'

Mr. Al-Husseini, 67, worked at Aramco until his retirement in 2004 and was a member of its board and its management committee. During his Aramco career, he was instrumental in making 20 discoveries, including vast gas fields and the central Arabian and Red Sea oil fields. He is now president of Husseini Energy, an oil consultancy based in Bahrain that advises financial institutions and the oil services industry.

He admits he underestimated the "strength of the profit motive" that turned the United States into a shale oil powerhouse. Since 2010, U.S. shale oil production is up by three million barrels a day. But he feels confident that waning investment is already hitting production growth and that prices won't fall much farther as the supply-demand balance tightens up. "When prices come down 40 per cent, you're not going to keep spending like there is no change," he said. "My guess is that by the end of second quarter of 2015, there will be a returning confidence in oil. Does that mean it will go to \$115? No, that was never a sustainable number. Could it go as high as \$80, maybe \$90? Sure."

Unlike some of their more vulnerable OPEC partners like Venezuela and Nigeria, the Saudis can afford to be patient and wait for the market to recalibrate. But it too faces fiscal pressure as it spends heavily to diversify its economy and provide social benefits to a young population. The International Monetary Fund estimated early this year that Saudi Arabia needed an oil price of \$89 (U.S.) a barrel to keep its budget out of the red, up from \$80 in 2012.

U.S. shale oil is generally far more expensive to produce than Saudi oil, which has the lowest pumping costs in the world. Shale oil wells deplete rapidly, meaning a lot of them have to be drilled constantly to keep production intact.

The upshot? Shale oil output is much more sensitive to falling prices than Saudi oil, and the market is beginning to work its magic. Although the U.S.



rig count remains well above the level of a year ago, it saw its biggest drop in two years this week and has declined in six of the past nine weeks. And it's expected to drop sharply next year. Estimates of break-even costs for new production in the three key shale basins – the Bakken, Eagle Ford and Permian – range from \$60 to \$70 a barrel. But there is wide discrepancy in the actual break-even costs for each well, and companies will focus spending on their best prospects. "Balance sheets are going to force discipline," said David Pursell, an analyst at Tudor Pickering & Holt Co. in Houston. "When we look at basin economics, there's just a handful of core areas that make economic sense to continue to drill at even \$70 crude. ... Companies will drop rig count very quick to stay within cash flow so they don't see their balance sheets unravel. And they can unravel very quickly if they maintain the current activity level into 2015 at a much lower oil price." Most vulnerable are the smaller exploration and production (E&P) companies that have taken on debt as their spending outpaced their cash flow, and Mr. Pursell said the high-yield debt market on which they rely is already showing signs of nervousness. Companies like Range Resources Corp. and SandRidge Energy fall into that category.

The Tudor analyst sees the rig count dropping by nearly a third from the recent 1,600, but said it will still take several quarters before production growth slows. He predicts U.S.

production will rise by 592,000 barrels a day next year and 226,000 in 2016, after growing by nearly one million barrels a day this year.

In a release Friday, the U.S. Energy Information Administration also indicated it will take time for the impact of lower prices to be felt in the supply picture. The EIA forecast that U.S. production will average 9.3 million barrels a day in 2015 – up from 8.6 million in 2014 and closing in on Saudi's estimated 9.60 million daily output.

Mr. AL-Husseini is no fan of the theories that the decision by OPEC (read: Saudi Arabia) not to trim the cartel's 30-million-barrel-a-day production quota at its November meeting in Vienna was a political act of war aimed at punishing Russia and Iran for their support of the al-Assad regime in Syria or aimed solely at choking off U.S. shale production.

He said it was a market decision designed to trim high-cost production wherever it lies, including Brazil's offshore fields and Canada's oil sands, to end the oil glut. An OPEC production cut would have only propped up prices, he noted, "subsidizing the high-cost oil at the expense of low-cost oil," the latter being Saudi Arabia and Gulf allies such as Qatar.

Among the high-cost producers, there

is no doubt that U.S. shale oil would be quickest to trim investment and thus output. Mr. Al-Husseini said that, even if oil prices were to remain fairly strong, the shale industry's ability to deliver ever-higher production would not be assured. That's because shale wells are short-lived creatures. His research says that shale oil (and natural gas) wells decline at a rate of 50 to 70 per cent a year, "requiring intense capacity replacement drilling."

That means shale fields require more and more drilling to maintain production and that gets expensive. At the huge Eagle Ford shale field in southern Texas, some 4,500 new wells will have been drilled in 2014, of which 3,800 are required just to maintain production.

One major test for producers will be the degree to which they can squeeze costs out of the supply chain, thereby lowering their break-even price.

U.S. shale producers say they are doing just that. Houston-based EOG Resources Inc. has slashed the average well cost in North Dakota's Bakken play to \$8.7-million from \$10.5-million two years ago. In the Eagle Ford, it reduced the number of days to drill a well to 12.5 from 22.7 in 2012.

Pioneer Natural Resources Co. said last week that it was still planning to pursue production growth of between 16 and 21 per cent next year, with its key assets in the West Texas Permian basin. Pioneer chief executive officer Scott Sheffield said the Saudis had "declared war on the U.S. oil and gas industry," and the company is responding by driving down costs and re-evaluating its drilling program. He acknowledged that a sustained period of prices below \$60 a barrel could force further cuts.

The oil sands challenge

But high-cost producers across the globe are facing similar challenges. London-based oil economist Amrita Sen said Canada's oil sands remains the world's highest-cost production in terms of new projects, with the U.S. shale and the offshore in Mexico and Brazil not far behind.

Existing oil sands operations aren't likely to be cut off any time soon.

Analysts say currently producing projects have average per-barrel costs in the mid-\$50s to mid-\$60s, depending on the type of operation. "The advantage that oil sand producers have over, for example tight oil producers, is that they typically invest for the longer term as they rely on a steady stream of production over an extended period of time, making them less susceptible to temporary price fluctuations," Ms. Sen said in a report this week.

Cenovus, for example, is slowing spending on longer-term projects that are still in early development stage, including Narrows Lake, Telephone Lake and Grand Rapids, while it continues to advance its Foster Creek and Christina Lake projects that are closer to completion. Under that capital plan, its production won't be affected by today's lower price until five years from now.

The same is true for most deep-water offshore fields, where companies may defer exploration or delay sanctioning new projects, but are unlikely to reverse course on those that are under development. Still, lower revenues will force an industry-wide cutback on activity.

Ms. Sen said the seeds of another cycle are now being planted. The current drop in prices will lead to lower-than-expected production in a few years, even as consumers increase consumption. U.S. gasoline demand is climbing at a rate well above its recent five-year average. And that classic supply-demand response could trigger a snap-back in prices in two or three years.

At the moment, though, "it's hard to say anybody that relies on oil prices wins when prices are below \$60 instead of \$100 plus," said R.J. Dukes, senior analyst with the Wood Mackenzie consultancy.

The oil slump is giving Canadians a long-awaited break at the pump, but is a worry for the country's energy future. Since new oil sands projects are expected to have per-barrel costs of \$80 or higher, they may no longer make sense, and the country may need to look to other sectors for new economic drivers. ■





End of \$100-oil Era in 10 Years



The world shall see oil reserves in Asia and the Pacific completely depleted by the next ten years, as it will be the case for European, Eurasian and African producers in later decades as their 31 mb/d output is doomed to fall dramatically if the current state is to remain in place. Estimates show that the 8.3 mb/d crude oil output by Asian and Pacific suppliers will completely die out, and the 31 mb/d produced by Europe, Eurasia and Africa will diminish dramatically by the coming decades.

The developments in the Middle East, especially the recent unrests in certain oil-rich Persian Gulf states, can be viewed from the framework of oil and the future of the energy market. By 2012, the Middle East region enjoyed 48.4 percent of the world's 1,669 billion barrels of proven oil reserves, studies show.

After the Middle East were the central

and South America with 19.68%, North America with 13.2%, Europe and Eurasia with 8.44%, Africa with 7.81% and Asian and the Pacific with 2.49% of world reserves.

Adding to this the oil sands in Canada with 167.8 billion barrels of in-place petroleum reserves, North American and Canadian oil sands make up 21.13% of world reserves which is still less than that of the Middle East with 43.97% of the total reserves.

A glance at the crude oil output of various world regions shows that the Middle East's crude oil output was only 32.8% of the total production in the world with 86.152 million barrels in 2012. The region offered only 28.3 mb/d at its most to world markets.

Of the produced volume in the Middle East, more than 21.4 mb/d (almost 76%) were supplied by Iran (3.7 mb/d), Iraq (3.1 mb/d), Kuwait (3.1 mb/d) and Saudi Arabia (11.5 mb/d).

After the Middle East were Europe and Eurasia with 17.2 mb/d, North American and Canadian Sand with 15.6 mb/d, Africa with 9.4 mb/d, Asia and the Pacific with 8.3 mb/d and Central American with 7.3 mb/d.

Given the 2012 production rate, the approximate number of the remaining years for production for Saudi Arabia and Iraq will be 63 and 132, respectively, while the number of the remaining years will be 117 for Iran.

Should the world crude oil output, regardless of shale productions, remains intact and no new reserves are located in the world, the world's oil reserves including Canada oil sands will exhaust in less than 58 years.

Regarding the average production of 86.152 mb/d in the world and the overall reserves of 1,836.8 bb (including Canada's oil sands) in 2012, crude oil are expected to dry up in most world regions by the next 58 years.





As major suppliers are drifted away in domestic and international markets, the demand for crude oil naturally prompts the remaining producers to offer more oil to satisfy the market.

Assuming that the supply of crude oil will not change noticeably by major producers, and the volume of world reserves remains unchanged, and supposing that suppliers drifted away because of their dried reserves will not become buyers of petroleum products, South and Central America with the production ceiling of 7.4 mb/d, the Middle East with 28.2 mb/d, and North American with 15.5 mb/d will maintain their supplies by the next 122, 778 and 68 years, respectively.

However, such assumptions seem unreasonable because oil has to be delivered to all regions in need of the product (no matter if they were once suppliers themselves), which puts double or triple pressure on

the remaining suppliers. This can by itself tap the prices and at the same time shorten the life of oil wells in the producing regions.

The decline in crude oil supply in the future shows that in less than the next 13 years, one should expect to see the removal of 8.3 mb/d of Asian and Pacific oil from the market, while the 17.2 mb/d output of European and Eurasian suppliers will reduce to close to zero by the next 22 years. The same will be the case for Africa if the current conditions are to remain unchanged and the 9.4 mb/d production of African suppliers will reach zero within the coming few years. In simpler words, over 35 mb/d of crude oil will fade away from domestic and international markets in Europe, Eurasia, Asia, the Pacific and Africa. This is while the reduction will have to be compensated by producers in other regions which will raise the prices in an unbelievable fashion.

In the next 10 years, unconventional productions, like shale, will be much more economically justifiable due to the severe depletion of vast oil reserves and the inevitable price spikes by major conventional producers. Moreover, just like natural gas, shale production will be used as a lever to control prices and the market.

To sum, the decline rate of crude oil wells in the world, the hike of natural gas output, shales and alternative energies can reduce the demand for oil to some extent; however, the reduction falls much shorter than being able to rule out an imminent war over resources in the Middle East, and prevent military forces by world industrial and economic powers to be deployed in the region in areas mostly close to Iran, Iraq, Saudi Arabia and Kuwait. In other words, industrial countries will keep making up pretexts to stay in the region to check on the prices. ■



Dumping Trap and OPEC Responsibility

Shale oil producers have waged a war in world oil markets whose objective is to gain more share in the market. To this end,

American companies have laid a trap by resorting to dumping, a situation that OPEC members should avoid to be caught in.

While OPEC's 166th Ministerial Meeting is set to be held on November 27 in Vienna, Rich Miller from Bloomberg has said that the new era of cheap oil will be followed by supremacy of U.S in geopolitics. He portrays an outlook in which some states will be weaker and some others will become more powerful.

Ed Morris head of international research department of City Group in New York has also said that new era of low oil prices is looming in the horizon which is the result of shale revolution in the U.S. He continued there is no doubt that these changes will be followed by crucial geopolitical developments.

Claire Milhench from Reuters is of the opinion that cutting oil production by more than 500 thousand barrels per day by OPEC is the only way to be able to reverse the downward trend of prices and restore previous status. He continues otherwise oil prices will fall further hitting 60 dollars.

Eyes are now fixed on OPEC's decision and Iran's position as one of key members of the organization.

The importance of Iran's view drives from the fact that even though Iran's current production is estimated at about 3 million barrels per day, but in case of lifting sanctions, the country is able to raise its oil production to 4.2 million barrels at once.

In other words, Iran is able to flow 1.2 million barrels of oil to the market immediately after lifting sanctions.

In the meantime, falling prices to 70 dollars per barrel, which shale oil producers pursue in the market, not only will not push OPEC to a corner in the market but will remove a great part of shale oil from the market against their will.

According to executive vice president of HIS, Yergin, in 2015 production of about 80 percent of shale oil will be

economical based on considering the price of each barrel of oil 50 to 69 dollars.

Therefore, maintaining oil prices at 70 dollars will force shale oil producers to shut down equivalent of 700 thousand barrels of oil production per day and if prices stay at 60 dollars they will be forced to abandon 2.5 million barrels out of 3.5 million barrels of oil per day they are producing now. Of course this amount is apart from falling oil production from deep wells in onshore and offshore sectors.

Now the question is that despite these economic realities, why shale oil producers insist on continuing oil production far from the low level of prices and why they think OPEC should cut production!

The answer is that shale oil producers plan to persuade conventional oil producers notably OPEC and Russia to abandon part of their share in the market for the benefit of shale oil producers by pushing oil prices toward risky levels of less than 60 to 70 dollars. It is clear that cutting oil production by OPEC would then push prices upward and they will reach the level that is regarded as a red-line for shale oil producers.

The curve of movement of oil prices in recent weeks proves this argument. In fact, whenever the prices near the red-line as the starting point of crisis for shale oil producers it starts moving upward and whenever it distances from the limit we are witnessing

downward trend of prices.

While the market has hit an equilibrium, too much speculations by media about likely falling prices to below 70 and simultaneously requesting OPEC to cut production should seek an especial objective. In these circumstances, taking any step back will embolden shale oil producers to take a step forward. In this way, shale oil producers will raise their revenues from new markets they capture and will embark on new investments to assume more share in the oil market and make up for short term losses due to falling prices. In fact, shale oil producers have waged a war to capture part of the share of OPEC in oil market; a move that OPEC should avoid and try to save itself from the dumping trap set by American companies.

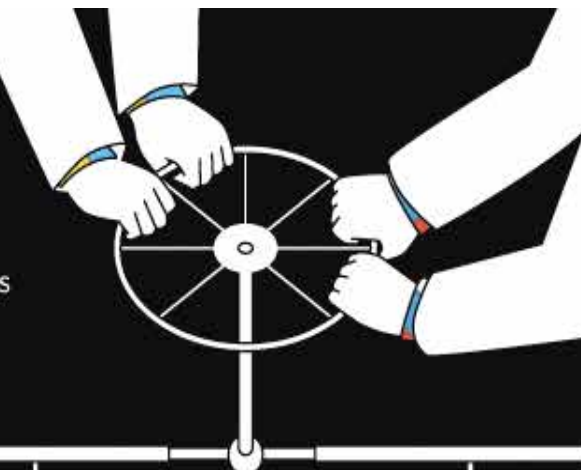
Sharp fall in oil prices not only will force shale oil producers to leave the market as soon as possible but also will help OPEC to avoid great losses in the long-term.

We should remember that Non-OPEC oil producing countries should raise their investment 300 billion dollars annually to increase their production capacity and make up for falling oil production between 2015 and 2020 while OPEC needs just 40 billion dollars in investment annually in upstream sector during the period. Thus, it could be concluded that shale oil will not be a threat for OPEC's oil production and its markets as long as OPEC acts wisely. ■



Russia's and Ukraine's stance in gas dispute

Russia and Ukraine strive to agree on gas price, but still without success



dispute



Ukraine

Insists on signing an interim agreement for the autumn-winter period at with gas price set at

\$385 per **1000** m³

Requests a review of transit agreement

Point of sale of Russian gas to EU countries should be located on the Ukrainian-Russian border



Russia

Demands debt repayment for 2012 and 2013

Over **\$5** billion

Refuses to resume supply without prepayment

The gas being supplied to EU countries belongs to Gazprom

Ready to cut down the price

to **\$385** per **1000** m³

while the current price is

\$485



European Commission

Calls for setting the price in a range of

\$350-380 per **1000** m³

Admits responsibility of Gazprom for gas transportation to Europe through Ukraine



Lawsuits are being revised



Naftogaz filed two lawsuits against Gazprom in the Arbitration Court of Stockholm in June and October

To achieve reduction of gas price

To increase transit tariff and claim compensation for insufficient handling of Russian gas through Ukraine



Gazprom filed a lawsuit against Naftogaz in the Arbitration Court of Stockholm

To demand debt repayment

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