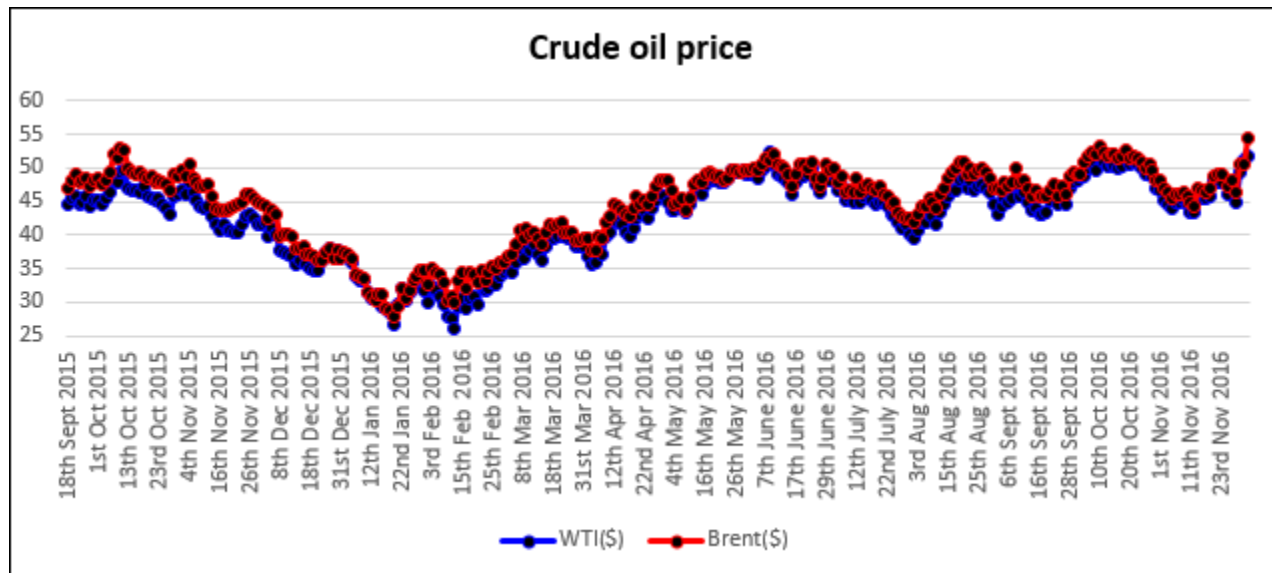


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Calgary, Canada

Some of the news items for this week are as follows:



- The much awaited OPEC meeting was held on Wednesday, November 30th, 2016 at Vienna, and resulted in a positive outcome. The 14-member organization reached a deal to curtail OPEC production from 33.8 mb/d to 32.5 mb/d, over the next six months, starting January 2017. The reduction is 4.5% of their current production. Crude oil price immediately shot up to \$49.44 on Thursday, a surge of 9.3%. It is expected that the crude oil price will eventually rise to \$60.

The deal is expected to balance the supply and demand in the first half of 2017. But OPEC has the difficult task ahead, of deciding how much reduction will be assigned to each member.

Besides this reduction, OPEC is expecting cuts of about 600,000 b/d from non-OPEC producers, out of which Russia is expected to temporarily cut its production by 300,000 b/d. A meeting between OPEC and non-OPEC producers on December 9, 2016 will discuss this. The success of the OPEC deal will depend on how the non-OPEC producers cooperate in terms of shouldering some similar responsibility for balancing demand and supply. The one important aspect to watch will be US shale drillers, who have a backlog of partially completed wells and have been waiting for the crude oil prices to recover. It will be interesting to see how Russia agrees to a reduction, as firstly, in the recent past, it has talked about freezing its production rather than reducing it; secondly, Russian government has a majority share in the country's big oil companies, and any proposal for reduction will not go down well with the minority shareholders. And finally, much of the crude oil production in Russia comes from cold areas, where the oil has to keep flowing. A statement from the Russian Energy Minister though said that the proposed cut should be spread proportionally between the Russian producers.

- The downturn in the oil industry over the last two years resulted in 350,000 job losses globally, and over 100 oil-field service companies in North America have gone abrupt. The concluded

OPEC deal is seen to have a positive impact, though as mentioned above, it will have to be seen how it all pans out. Some analysts feel the recovery could be slower, and a lot will depend on how the concerned parties stick to the agreement. Others think the price will go to above \$60 in the first half of 2017, only to come down to \$50 in the second half.

- The US crude oil inventories fell by 884,000 barrels last week according to EIA, which helped the oil prices earlier in the week.
- Though the current OPEC agreement will be in place for 6 months, its success over that term will dictate its renewal at the next scheduled OPEC meeting on May 25, 2017. It will remain to be seen how the oil companies react in terms of their budgets and cash flows for 2017.
- The US President-elect, Donald Trump had said in his election campaign that he intends to open up offshore drilling, and also use all the available fuel reserves for energy self-sufficiency. It looks like Trump will encourage aggressive drilling, onshore as well as offshore. This could be a headache for the environmentalists. We will see how this unfolds in the New Year.

So much for the industry news this week.

For the lighter side this week

The other day I was watching the TV show called 'Koffee with Karan', where Bollywood actor Akshay Kumar, and his wife Twinkle Khanna, also a former Bollywood actress, were in conversation with Karan Johar, another famous Bollywood movie director and producer. During the conversation Twinkle asks the host Karan, why Pluto has been dropped as planet, saying her daughter had asked her this question. The host didn't have a clue, but it reminded me that this was a news item I had heard about a couple of years ago.

Pluto was discovered in 1930 by US astronomer Clyde Tombaugh at the Lowell Observatory in Arizona. It takes 248 years to complete its orbit around the sun and is in the farthest orbit of all the other planets. It was added as the ninth planet in our solar system. Later, in 1978, its largest moon, Charon was also discovered, and gradually with sophisticated equipment, and thus more accurate observations, our understanding of the solar system has been changing. What has been found over the last few decades is that beyond the orbit of planet Neptune, there is a collection of over 70,000 icy leftover objects from the creation of our solar system, in a region that measures 100 km across and is referred to as the Kuiper Belt, named after the Dutch-American discoverer, Gerard Kuiper. Interestingly, some objects (Sedna, 2003) and Eris, 2005) in the Kuiper Belt have been found to be comparable to the mass of Pluto, which raised the question why Pluto is a planet whereas these other objects are not. This led the International Astronomical Union (IAU) to set up a committee charged with the task of defining what constituted a planet. The committee report was discussed at the IAU's 2006 General Assembly in Prague. After intense discussions, the members voted on the criteria for naming a planet as follows:

- It needs to be in orbit around the Sun.
- It needs to have enough gravity so that it can pull itself into a spherical shape.
- It needs to have "cleared the neighborhood" of its orbit.

The last item means that the planet which has been in existence for billions of years, has under its gravitational influence has been able to annihilate or kick off other large objects in its vicinity, and thus clear off the space around it.

Pluto happens to meet the first two of the above requirements, but the third one is questionable.

This issue is still controversial, with many astronomers disputing the criteria set up for classification of planets. We can wait for further refinements in the light of more observation in the years to come.

I hope you will find this interesting.

Did you know?

... that an octopus has three hearts?

The name octopus is derived from Greek language, where 'Octo' means 'eight' and 'pus' means 'legs'. It is an invertebrate, i.e. it does not have a backbone. It has two eyes and four pairs of arms commonly referred to as tentacles. It has a beak that is used for crushing the food that it eats. As it is mostly made up of muscle, it can wriggle in or out of small holes, limited only by the size of its beak. It is a salt-water animal that lives in coral reefs or ocean floor.

An octopus has three hearts: two are used to pump blood to its gills, while the third circulates it to the rest of its body. Its blood contains the copper-rich protein haemocyanin, which is more efficient than haemoglobin for transport of oxygen at very low temperatures and low oxygen concentrations. Due to the presence of haemocyanin, the colour of octopus blood is blue and not red.

So much for this week! Till the next post, stay safe and happy!

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