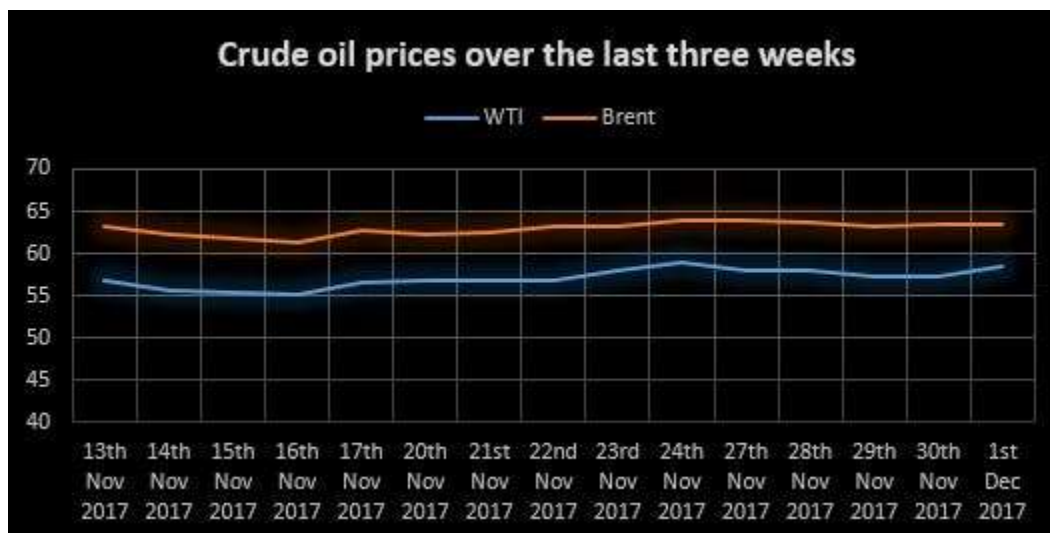
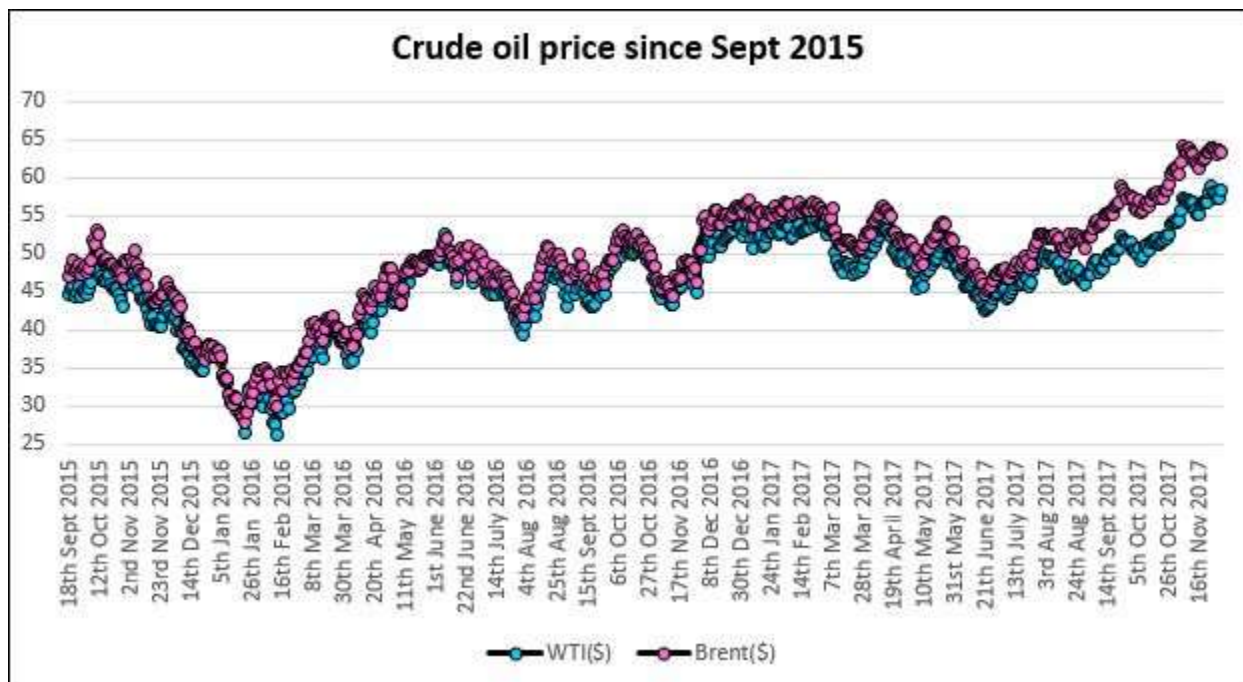


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- The long-awaited OPEC meeting was held on Nov 30, 2017, where OPEC and non-OPEC members led by Russia agreed to extend the oil production cuts till the end of 2018. The global glut is expected to be cleared by that time. Libya and Nigeria, which were exempted from any production cuts earlier, agreed to a collective cap of 2.8 mb/d. At the meeting, Russia did express concern that an extension could prompt high US oil production, with a subsequent price collapse. It also cautioned about a responsible exiting strategy at the end of 2018, or else, it could lead to a large oversupply. If the likelihood of the geopolitical tensions is included, this picture could change. Others did suggest that a discussion on exit strategy may be premature at the present

time, but the winding down will have to be done gradually. The next OPEC meeting will be held in June 2018, where these issues will be discussed.

- With the price of oil around \$57, the US shale drillers are likely to enhance production, and the oil inventories are expected to swell, in all likelihood, unless there is some supply disruption. Added to this is the seasonal sluggish demand for oil in the winter. Both these factors are expected to bring the price of the barrel down in 2018, and may continue throughout the year, unless some geopolitical developments influence it.
- There is no denying that horizontal well drilling and hydraulic fracturing are the technologies that have enabled the shale revolution and catapulted US into a leading global oil and gas player. But a recent research study done at Massachusetts Institute of Technology (MIT) has suggested that the forecasts made by the US EIA may be overstated. While it is true that the stated technologies have driven the shale resource exploitation, but the low oil price scenario has also led the drillers to focus on sweet spots or areas where oil and gas was the easiest to extract. In other words, the best acreage has been drilled. Application of these technologies in not-so-sweet spots may not pan out equally well, and thus the EIA estimates or forecasts may be off. There are already signs of slowdowns in some areas, and so the MIT findings will be an important factor that can have a bearing on the US production forecasts.

So much for the industry news this week.

For the lighter side this

We know that a radar uses electromagnetic waves for its communication in the air. But for underwater communication, a sonar is used, which uses sound waves for its communication. Why do you think electromagnetic waves are not used under water?

Radar is an acronym for Radio detection and ranging. The way it works is that radio or electromagnetic waves are emitted by a transmitter, and directed at a target. Portion of these waves that may be reflected off a target are detected by a receiver. By taking the product of one-half of the recorded time between transmission and reception of the radio waves, and the velocity of the radio waves, the distance of the target from the location of the radar is computed.

Sonar stands for sound navigation and ranging, and uses sound waves for its detection of underwater objects, such as submarines. The velocity of sound waves in water is approximately 1500 m/s, which is much less than the velocity of electromagnetic waves. Thus, the response time for sonar is longer.

The reason electromagnetic waves are not used under water is that they cannot easily penetrate large amounts of water. For example, submarine contact for detection under water is usually over several tens of kilometers, and electromagnetic waves need to be really powerful to travel such large distances. Sound waves, being mechanical waves, can easily travel through such distances.

I hope you find this information interesting. So much for this post!

Till the next post, stay safe and happy!