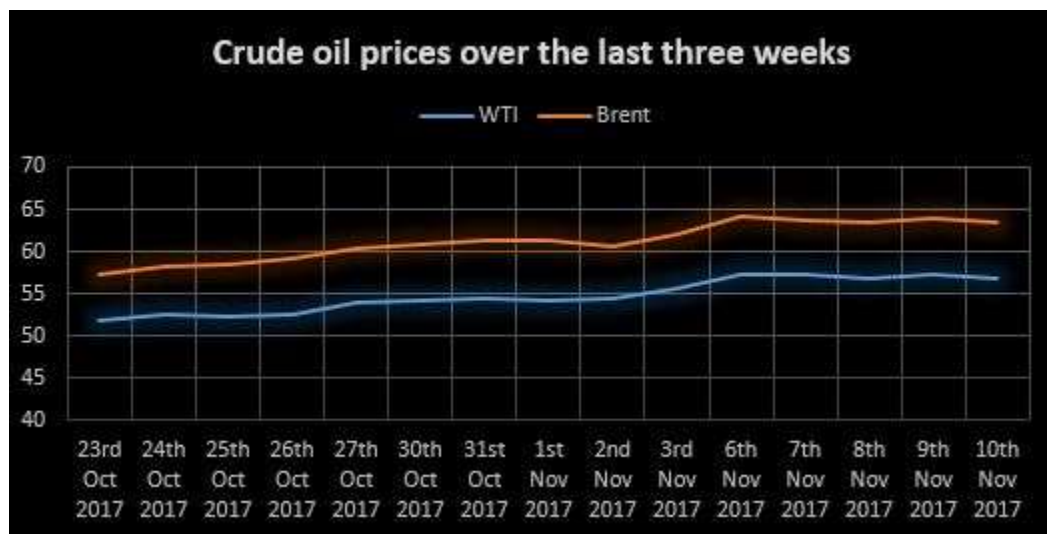
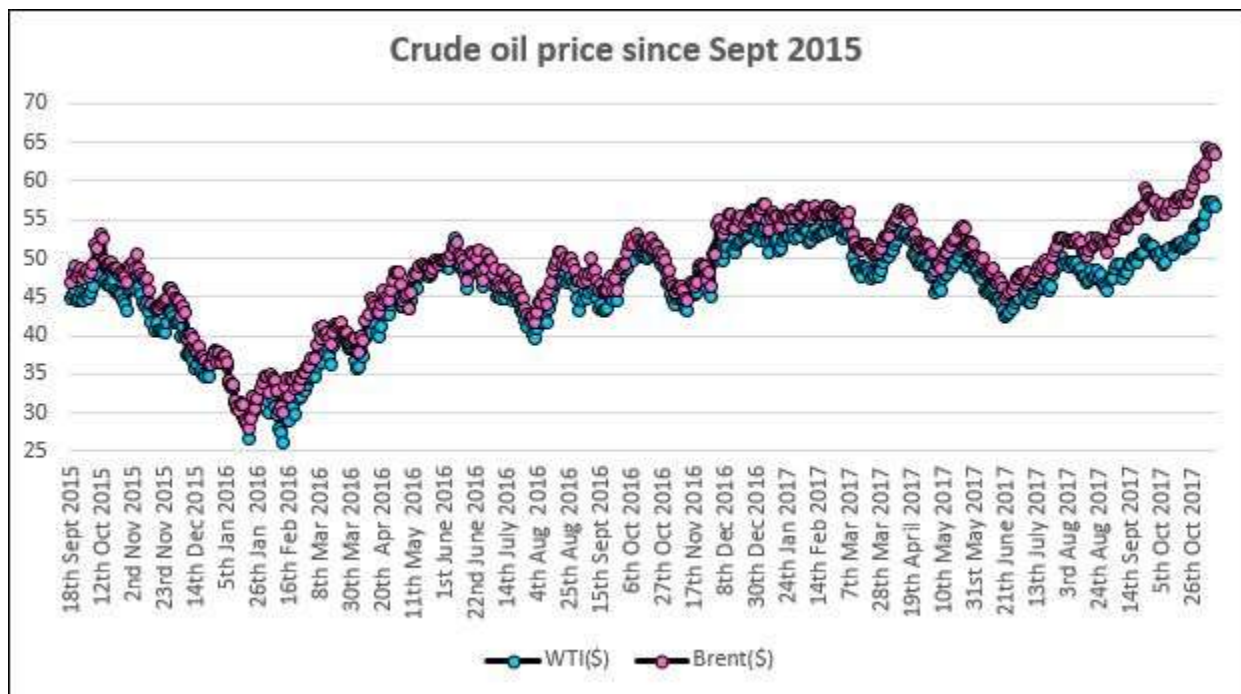


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- The price of crude oil showed slight variations, but stayed above the \$56 mark. Though speculation about OPEC's extension of output-cut past the March 2018 expiry is a driving factor, but the variation in crude price is also due to the news that the stockpiles at Cushing, Oklahoma fell by 1.1 mb for the weekend November 7. The number of drilling rigs in the US slipped by eight to 729, but the US production increased by 46,000 b/d to 9.55 m for the week ended October 27<sup>th</sup>, as per the EIA.

- According to a report by Paris-based IEA, the use of digital technologies associated with enhanced reservoir modeling, advanced seismic data processing and sensors in the oil and gas industry could lead to a 10% to 20% drop in production costs. Very fast analysis of data can lead to faster decisions and therefore enhanced operating times of drilling rigs, wells and facilities, which can lead to reduced delays. Similarly, the use of advanced and sophisticated processing algorithms could help find new oil and gas fields, to innovative development plans, and ranking of exploration portfolios in the upstream sector.
- In its world oil outlook report released this week, OPEC has said that shale oil production will grow considerably faster than expected over the next four years, and that the North American shale output will be 7.5 mb/d in 2021. This number is 56% higher than its forecast last year. As per the report, the shale production growth will originate mostly from the US, with contributions from Canada, Argentina and Russia till 2022. The North American shale production for 2017 is at 5.1 mb/d. OPEC also expects shale oil production to peak after 2025 and decline from 2030. Thereafter, OPEC will increase its output from 33 mb/d in 2025 to 41.4 mb/d in 2040. The world oil demand in 2040 will be about 111 mb/d, largely driven by the demand growth from China and India.

So much for the industry news this week.

### *For the lighter side this week*

It is usually said that some animals do not sleep much and can remain awake for days together. This sounds strange, as all living things need time for taking rest and recharging. Even though research on these aspects is limited, but what has been found is that there are some animals who can get by, by practically sleeping for very short time. Some of these animals are giraffes, dolphins, elephants, bullfrogs, walruses and orca whale calves. For their survival, all these animals always remain guarded against predators (survival of the fittest doctrine). Consequently, these animals have evolved to be alert all the time.

If giraffes lie down they could take a few seconds to get on their feet, and this could make them vulnerable to lions and crocodiles. So, giraffes tend to take very short naps (~ 5minutes) during the day and that too while standing.

Similarly, dolphins shut down one hemisphere of their brains, and so one eye is closed. The other eye and the brain hemisphere remain active. This way they put up a sub-active guard against predators.

Elephants spend three-fourth of their day eating, and if they lie down (which they do for less than 30 minutes at a stretch to avoid keeping their organs from getting crushed under their body weight), would take a few seconds to get up. So elephants take short naps during the day, mostly standing, and these are for 3 hours or so in all.

Bull frogs are known to be very alert during their sleep. They may go to sleep for a very short time, and can get away in that routine for days.

Walruses can sleep in any position, floating, leaning, or lying at the bottom of the water. They have the ability to fill up part of their body with air and stay afloat and sleep, but can swim for days without sleep.

Orca whale calves are almost awake the whole time for the first several months, with no sleep. One of the reasons is that to keep themselves warm, they remain active, and are almost constantly swimming. With time, they grow older and also grow some blubber, that keeps them warm.

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

Till the next post, stay safe and happy!