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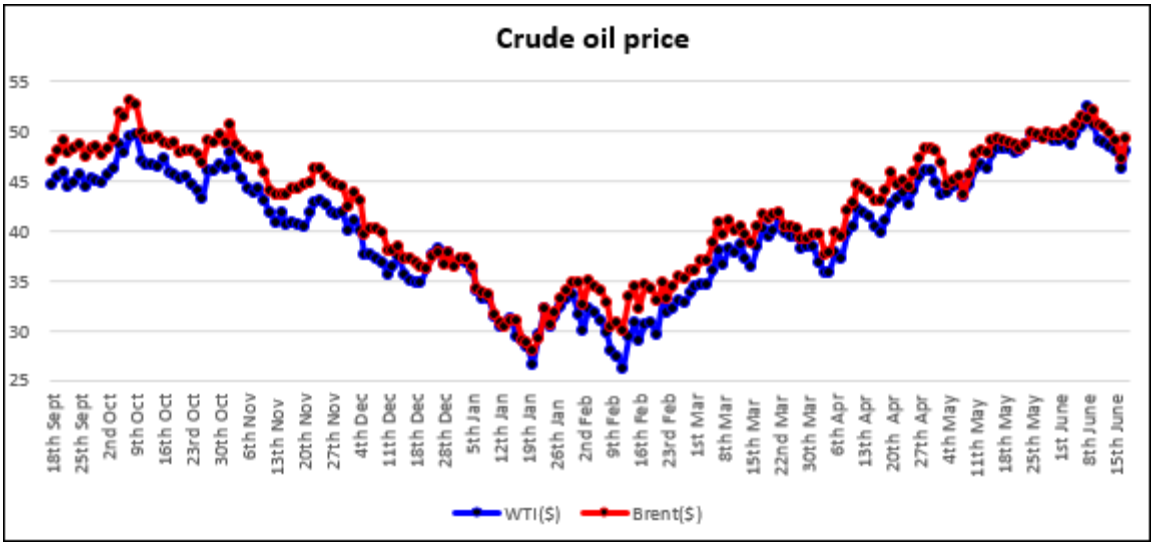
As you are probably aware, the variation in crude oil prices is dependent on the changes that take place in the following factors:

a) Overall production
b) Overall demand
c) Trading currencies
d) Outages affecting the production
e) Growth in demand
f) Unforeseen geopolitical developments

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




1. This week the crude oil price came down from $49 at the beginning of the week to a little over $46 on Thursday and then reversed climbing close to $47. The drop in oil price has been due to various reasons.
2. The IEA monthly report released on Tuesday, June 14, showed a growth in the world oil demand in the first quarter as a result of demand from India and China. There has been less oil stockpiled by different countries and there have been disruptions in the OPEC and non-OPEC countries, but Iran has added 700,000 b/d this year, lifting its crude oil production to a 4-year high of 3.8 mb/d.
3. OPEC production in May was 32.36 mb/d, which is below the 32.6 mb/d average that would satisfy the estimated demand in the second half of 2016.
4. Speculation of UK exiting from the European Union (EU) also has had an impact on crude oil pricing. If indeed UK takes exit from EU, the US dollar is expected to gain strength and oil price would drop. It has happened this week based on early indications. Britain suspended campaigning over its EU membership status after a deadly attack on a Member of Parliament and the US dollar strengthened.

5. Last week, US crude supplies rose by 1.16 mb/d, though according to EIA, though the overall oil stockpile in the 1st half of 2016 is smaller.
6. As per the IEA, the consumption has proved stronger than expected in the 1st half of 2016, but the high 'inventory overhang' accumulated over the years of oversupply is limiting the crude oil prices.
7. For 2017, the IEA expects the global oil demand to increase at the same rate as 2016, i.e. 1.3 mb/d and reach 97.4 mb/d.
8. According to a recent CNBC news report, China has been importing 787,000 b/d in the first quarter for storage and has stockpiled about 135 mb of oil. Considering the most optimistic estimates, China's has a storage capacity of 155 mb, and thus the country's demand will drop off soon.
9. If the OPEC production remains steady, many US drillers will go back to production, and oil prices could fall further.
10. Gabon, which produces 20,000 b/d, will be re-admitted to OPEC in July, becoming its 14th member.

So much for the industry news this week.

*For the lighter side this week*

Have you heard of the quote, '*Extraordinary claims require extraordinary evidence*'?

This interesting quote is often used by proponents in reference to paranormal activity, existence of god(s), ghosts, or such claims that may seem miraculous. Skeptics often ask or look for compelling evidence, in the absence of which they are not ready to accept or believe in the claims made. This quote was popularized by Carl Sagan (1934 – 1996), who was professor of astronomy at Cornell University in New York, and was well known for a TV series called *Cosmos* that he hosted, and published hundreds of scientific articles.

The quote seems quite logical in that if someone makes a claim that is 'extraordinary', then that someone must provide 'extraordinary' evidence to support or back it up. In the absence of such convincing evidence, the claim made may be left unbelievable. However, what is termed as extraordinary may be subjective.

For example, if a claim is made about the existence of an alien race, as some fictional movies seem to suggest, then sufficient evidence needs to be provided, which may be in the form of any authentic photographs, if and how any contact was made, or some such proof of their existence.

Similarly, if anyone has seen a ghost, then skeptics demand a photo of the ghost. The claimers can then go on to say that in such cases, their existence can only be felt and not seen. If that is so, then any repetitive behavior of the assertion would also need to be furnished.

Another common instance is when atheists question the existence of god(s).

There are many inconsistencies that are noticed in the evidence that is provided for the extraordinary claims made. An example at hand would be some historical figures; specifically in the narration of the stories about Alexander the Great (356-323 BC) and king Porus, there were no cameras at the time to click their photos or the wars that Alexander fought and conquered the world that 'existed' at age 33. We have seen busts of Alexander in our history books and the articles that have been written about him.

But then a lot has been written about god(s) as well, and many devotees are engaged in idol worship, but atheists tend to term all that as insufficient evidence.

I like the explanation that some statisticians provide for understanding such cases in terms of probability theory. They use Bayes' theorem to calculate probability of occurrence of an event based on the prior information. Let me have a stab at explaining it below.

Bayes' theorem incorporates prior information in probability estimates. It assumes that the probability of a hypothesis or a claim is a function of the likelihood based on new evidence, and the previously held information about it. According to the theorem

$$P(B|A) = \frac{P(A|B).P(A)}{P(B)},$$

where P (A|B) and P(B|A) are conditional probabilities. They are conditional in the sense that P (A|B) is the probability of occurrence of A, given that B has already happened.

Let us discuss a specific case. Suppose there is doctor who claims that through touchless healing, he/she is able to cure patients of their physical or mental ailments. Based on the available data,

1. 10% cases have been found to be positive.
2. Based on the attributes of the techniques that the doctor employs, there is a chance that 90% of the time the method works.
3. There is a possibility that 15% of the time the patients may not benefit from the treatment carried out on the patients.

What is the probability that the doctor's treatment works?

$$P(success\ of\ treatment|ailment) = \frac{P(ailment|success\ of\ treatment).P(success\ of\ treatment)}{P(ailment)}$$

$$P(success\ of\ treatment|ailment) = \frac{0.1\ .0.9}{[0.1\ x\ 0.9 + 0.9\ x\ 0.15]}$$

$$= 0.4$$

i.e. there is a 40% chance that the doctor's treatment works.

Some of us may find all this quite confusing, but if understood logically, it is not difficult to grasp.

I do not suggest that the above calculation provides 'extraordinary' evidence, but it definitely allows a logical way of presenting facts in support of 'extraordinary' claims.

*Did you know?*

The longest time interval between two twins being born is 87 days. The earlier record was 84 days.

You might want to check it out at http://www.mirror.co.uk/news/real-life-stories/miracle-twins-born-record-87-1857782

I hope you find these interesting.

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