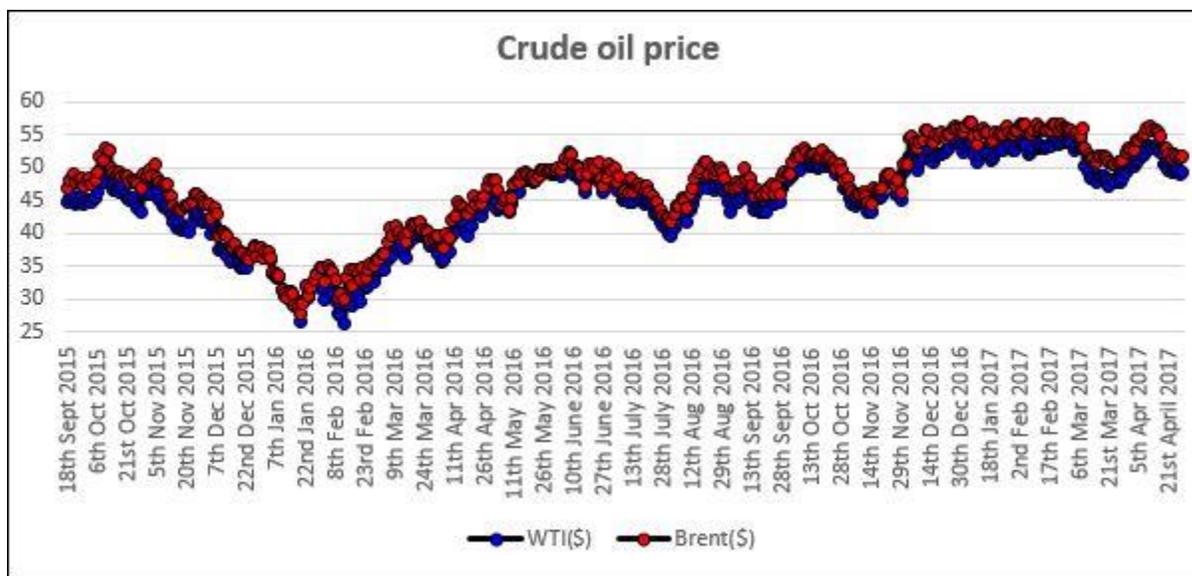


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Calgary, Canada

The price of oil has shown the following variation over the last week:



- The oil prices remained below \$50 for a few reasons. Libya reopened its biggest field Sharara. The pipeline carrying Sharara crude to Zawiya refinery had been blocked at the beginning of April. Last week the US crude production rose and it continued to raise concerns about undermining the OPEC efforts to cut production, and the hope that these cuts will be extended beyond June 2017.
- According to the IEA, the global oil discoveries fell to a record low in 2016 and the conventional oil projects that were sanctioned were the lowest in over 70 years, and both trends are expected to continue this year. Oil discoveries fell to 2.4 billion barrels in 2016, compared with 9 billion barrels over the last 15 years. The volume of conventional resource projects sanctioned last year fell by 30% from the previous year. This stands in contrast to the resilience of the US shale industry. The global oil production for 2016 was 85 mb/d, of which 69 mb/d is the conventional oil production, 6.5 mb/d from the liquids production from US shale plays, and the rest comprised the natural gas liquids, oil from oil sands and heavy oil. As the global oil demand rises by 1.2 mb/d per year over the next 5 years, the IEA has warned many times before that lower oil investment will lead to lesser supplies. The US shale production is expected to increase by 2.3 mb/d by 2022 at the current prices, and more if crude prices increase.

Similar concerns were raised by the CEO of Schlumberger Ltd., Paal Kibsgaard recently, who said that the rate of depletion of proved and developed reserves are rapidly accelerating in several key non-OPEC countries, and the current levels of underinvestment are more visible in exploration, including both seismic and drilling.

- China's three big oil companies have reported profits even though their outputs are somewhat down. These include PetroChina, Sinopec and CNOOC. All these companies have raised their

spending for the first time in four years, which is expected to help output by 2018 and 2019. China is also shifting to natural gas usage to cut pollutions from coal.

- The US crude oil imports from Mexico have been sinking over the last several years, as the latter's production has declined for 12 years in a row, and will be the lowest this year at 2 mb/d. This is the lowest since 1980. US imports total 290,000 b/d, which is a 43% weekly drop and this could also be due to weather-related shutting down at key Mexican export ports this month. Besides, Mexican crude imports could pick up during the summer months, when the refinery maintenance season is over and the gasoline demand is higher. The yearly average for 2014 was 561,000 b/d, which was down from 630,000 b/d from 2013. Even otherwise, Mexico has also turned to Europe and Asia to make up for the US shortfall. Since February this year, Mexico now exports to Spain, India, South Korea, Japan and China.
- Saudi Arabian oil minister, Khalid Al-Falih acknowledged last week that OPEC and its partners, after 3 months of restricting their production, have failed to hit their target of balancing oil inventories. Some industry veterans are also opining that the reductions would need to be extended. As per the IEA data, these efforts have been influenced by the rising inventories in the first quarter in some developed nations.
- Over the past three years, Exxon Mobil Corp., Royal Dutch Shell, Chevron Corp., Total and BP have cancelled projects worth billions of dollars, laid off employees and accrued large debts, so as to weather low crude oil prices. Even though the prices are at the half-way mark of what they were in 2014, these companies are expected to double their net income in the first quarter.
- The energy ministers of Saudi Arabia and Venezuela are expected to meet their Russian counterpart within the next two weeks, for discussing the extension of the oil production cuts beyond June 2017.
- As per the EIA data, for the week ended April 22nd, the US commercial crude oil inventories standing at 528.7 mb, excluding the Strategic Petroleum Reserves decreased 3.6 mb from the previous week. The data also projects that the US shale oil in May will post the biggest monthly increase in over 2 years.

So much for the industry news this week.

For the lighter side this week

On last Thursday, as I was going up to my office in the elevator, the news monitor there was flashing a headline that, *hunger hormones can lead to more healthy brains*. I have heard of hormones in our body, but had never come across the term 'hunger hormones'. So decided to look it up and hereunder is what I learned.

We all need food to survive, and our body signals to us when we need food, or when we are hungry. Our body has a complex system that functions with hormones. There is a small area in the center of brain (behind the eyes) called *hypothalamus*, which keeps our body in a balanced state, and coordinates our nervous system, and other functions such as body temperature, thirst, appetite, emotions, blood pressure and heart rate and others. Within the hypothalamus there are nerve cells (neurons), which when activated, makes us feel hungry. This it does by producing proteins, again controlled by hormones circulating in our blood.

The news is that a stomach hormone that stimulates appetite seems to promote growth of new brain cells and protect them from ageing. Dr. Jeffrey Davies at Swansea University, UK and his team have found that ghrelin (also called hunger hormone released by the endocrine cells present in the stomach's lining) can 'stimulate brain cells to divide and multiply, a process called neurogenesis. Ghrelin is produced by the stomach when it is empty, and so when we go without food for a few hours its levels rise in our body. When ghrelin was added to mouse brain cells grown in a dish, it switched on a gene known to trigger neurogenesis.' Young brain cells enhance the ability to form new memories and so could fire up neurons more easily than the old ones.

There are anecdotes floating around that some people on fasting feel mentally sharper. Similarly, our forefathers have preached us that fasting cleanses our body. So, now we are hearing about the confirmation of those facts.

Did you know?

Remember, in our childhood we have seen snake charmers blowing their pungi (wind instruments) in front of a snake, and that begs the question, *where are the ears of a snake located?*

Snakes have no visible external ears, but it does not mean that snakes are deaf. Sound waves travel in the form of vibrations, and when they fall on the human ear drum, it transmits them to a set of tiny bones, which translate them in to nerve impulses travelling to the brain. Snakes have a fully formed inner ear structure, which is connected to their jaw bone. As they slither on the ground, the footstep vibrations of predators are picked up by them through the ground. Besides this, their skin is also sensitive to vibrations and so can detect some frequencies that way.

I hope you find this interesting.