**Towards a new oil shock ?**

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**Overview**

The paper reviews the situation of energy demand and the role of oil. Limited investments in the oil and gas industry could jeopardize the replacement of production facilities in face of the natural depletion of existing fields while the demand will continue to increase.

**Methodology**

Analysis of articles, review of media, direct contacts with executives and managers of the industry

**Results**

The lack of investment in the oil industry will translate into a sizeable increase in the price of oil in the coming years

**Conclusions**

The price of oil could significantly increase by 2020. However the development of Light Tight Oil production will be enhanced by an increase in the price and this should “cap” the price below 100 dollars per barrel

**Towards a New Oil Shock**

1. **The collapse of oil prices– 2014/2016**

The collapse of oil prices from $115 per barrel in June 2014 to less than 30 at the beginning of 2016 before a recovery at the end of 2016 has been largely discussed and the reasons are clear. Oil production increased in the US, each year, by one million barrels per day because of the development of shale oil (Light tight oil). The production of LTO was – about – 1 Mb/d in 2010, 2 in 2011, in 2012, 4 in 2014 and 5 in 2015. The total increase of oil production in the US was a bit more important because of the development of the oil production in other regions (Gulf of Mexico for instance).

In addition, the production in Saudi Arabia and Russia, the two largest oil producers with the US, remained healthy and was on the rise. At the same time, the production of most countries in the Gulf, starting with Iran (after the lifting of sanctions), Iraq and even the United Arab Emirates and Kuwait were able to increase. Prospects were also very positive for the production in Kazakhstan (Kashagan field), in Brazil and in a few African countries. The only big producing countries with a relatively poor outlook were Nigeria and Libya.

1. **The recovery of oil prices – 2017-2018**

Usually in such a situation and in order to firm prices, OPEC would be expected to reduce production quotas – the traditional strategy of OPEC (for instance in September 2008, when oil price was falling sharply, OPEC announced a 4 Mbd production reduction). But Saudi Arabia, by far the most powerful country within OPEC, took an opposite direction at the November 2014 meeting and declared its intention to protect its market share, and non-willingness to reduce extraction, since its production costs are only a few dollars per barrel while production costs of LTO (shale oil in the US) are in the range of 40, 50 $/bl or more.

As a consequence, the price of oil continued to fall and the US production was reduced but only by a small amount thanks to improvements in the technology of shale oil extraction. However the price was as low as 30 dollars per barrel at the beginning of 2016 and the Saudi budget, mainly fed by its oil revenues, underwent a huge deficit, close to $ 100 billion. After long discussions, OPEC countries agreed on a reduction of their maximum production from 33.5 to 32 Mbd by the end of November 2016 and a few days later the non OPEC countries (including Russia) reached a similar agreement. Progressively the price increased and reached $70 in April 2018, slightly reinforced by geopolitical tensions.

1. **The lack of investments**

Because of the decrease in the oil price, investments in the oil and gas industry were largely reduced and fell from more than $700 billion in 2014 to less than $400 billion in 2017. While at a $100 /bbl money was abundant, in the new price environment, companies decided to reduce their expenses and aim for a $50 or $60 breakeven price for oil (the price which is necessary to make most projects profitable).

1. **Limited investments : which consequences**

Because of the lower price, demand for oil is still increasing (by 1,5 or 2 Mbd each year) and could reach a new threshold : 100 Mbd globally in one or two years. But limited investments mean that production will not increasing sufficiently to match demand. The natural depletion (reduction in production) of a field is about 5% per year so that if there is no investment, the world oil production could decrease significantly.

More demand, less production, this is a good recipe for a price increase. Up to which price? $80 can be attained. The limitation will come from both a reduction of the rate of increase of demand when the oil price gets higher and from a more abundant production of LTO with better returns.