Crude Oil Prices in Movement

By Christian Growitsch and Leon Leschus*

Between last June and January this year crude oil prices slumped by around 60 percent. This downturn has essentially two explanations. First, global oil supply increased strongly in the last year. Second, oil demand developed below market expectations. Global oil production increased by nearly 4 mb/d in 2014: the United States produced oil in such quantity not seen in decades. The use of new technologies, namely fracking, made it possible to get access to unconventional oil in shale-formations, which had not been economical before. But also Russia increased its oil production strongly up to levels last seen during times of the Soviet Union. The Russian government tried to counteract falling revenues due to lower oil prices by increasing its quantities sold. Both developments drove production. The corresponding global excess supply put global oil prices under downward pressure. In addition, the Organization of Oil Exporting Countries (OPEC) contributed to this well supplied oil market. At their meeting on November 27, 2014 OPEC-members decided not to reduce their production quotas. In the run-up of the meeting it was speculated that Saudi Arabia, the biggest oil producer in the OPEC, would cut production to stabilize global crude prices. However, Riyadh's Minister of Petroleum Ali al-Naimi opted against production cuts. From an economic perspective, this decision can be interpreted as Saudi Arabia's decision to resign from the position of the world's crude oil swing supplier. In fact, on November 27 last year OPEC gave up its idea of controlling global oil prices.

The economic consequences of this decision are ambivalent. While the oil importing countries benefit, the oil price decline puts the business case of U.S. fracking industry in question. This industry has significantly higher production costs for crude oil than producers in Middle East; the price levels of the beginning of 2015 can be considered predatory for them. Also, some OPEC-members as Venezuela and Iran opposed the decision to keep the oil-production quotas unchanged. These countries need a relative high oil price to finance their national budget. Above that they suffer from enormous redistribution effects. The ECB calculated that due to the lower oil prices not much less than two trillion U.S. dollars went from the oil exporting to the oil importing countries.

The world economy overall benefits from lower oil prices, however. Oil intensive industries face less energy costs in their production process. Also, transport costs decrease. Especially the chemical industry, the transport sector and airlines benefit from lower crude oil prices. Furthermore, households spend less money for gasoline and heating oil. The global economic effect of a larger oil price decrease is, therefore, significant. According to the International Monetary Fund a longterm decrease of 10 U.S. dollars per barrel in oil prices leads to an additional growth of 0.2 percent of the global economy. Allthough oil prices started to recover in the last weeks the oil price is still 45 U.S. dollars under the level of last summer. Hence, the global economy benefited from a growth impulse of 0.9 percent.

How long the world economy will benefit from the low oil prices is, however, questionable. The current oil price downturn could cause higher oil prices in the future: oil producers could limit or stop their investments in oil exploration and future production projects. This would have a reducing effect on the future global oil supply. The consequences of omitted investments will, to a large extent, be noticed in the long run rather than in a short time perspective. It takes approximately five years from the decision to invest to see real oil production. Hence, for a transition time, new oil sites will go online although they might not be profitable today. This time delayed reaction of the oil supply to price developments is the reason for cyclical price fluctuations. Nevertheless, the strong price decreases in the second half of 2014 pushed U.S. unconventional oil producers to reduce their oil output in the short run. In contrast to conventional oil fields, unconventional wells need to be replaced every year to keep the oil flow stable. According to oil-service-company Baker Hughes the numbers of oil rigs in the United States decreased from over 1600 in October to 679 in late April. That is the lowest number in four and a half years. The number of U.S. rigs fell twenty-one weeks in a row. As a result, oil production decreased, which pushed prices up to about 60 U.S. dollars per barrel (WTI).

It is likely that during the year 2015, market exits from U.S. oil producers will continue. Therefore, the U.S. Energy Information Administration reduced its forecast for the oil supply in the U.S. for the second quarter 2015. A lower growth in oil supply would underpin increasing oil prices especially as the global oil demand seems to strengthen again. In the last week of April crude oil inventories in the U.S. decreased and Saudi Arabia decided to increase export oil prices for the U.S. and European market, which was interpreted by market participants as a sign that in these markets oil demand is growing. Furthermore,

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production losses in important oil producing countries continue to be a risk in the following months. The closure of Libya's most important oil export port, Es Sider, triggered price increases during April. There are still pronounced upward price risks mostly related to the worsening of the political environment in Northern Africa and the Middle East.

With increasing oil prices the growth impulse for the international economy is turning down. For the U.S. the situation is two sided: on the one hand the U.S. economy is still a large importer of oil, facing higher prices again. On the other hand the U.S. oil industry will benefit from a relatively high oil price and become profitable again. Technological progress might become a game changer, again. The productivity of working rigs might continuously increase due to realized efficiencies in the oil production process and cost cuts. As a result, U.S. oil-companies might be able to cope with lower oil prices. This, will incentivize investing again. In the medium term the U.S. could, therefore, become a swing-producer on the international oil market. Hence, the U.S. shale oil industry could help to abolish long lasting oil price shocks and strong cyclic price fluctuations in future. That will especially be the case when U.S. oil companies become able to reactivate stopped drilling facilities in a short time horizon. As a consequence, the international oil price would stabilize at a comparably low level. Extreme global oil price risks could be a thing of the past.