

Thinking about Turbulent International Energy Situation in April

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April 2020 is ending after seeing unprecedented turbulence in international politics, the global economy and the international energy situation as the world is plagued with the devastating COVID-19 pandemic. While the pandemic is still spreading even after infecting 3 million people and killing 0.2 million people around the globe, once unimaginable impacts are hitting the world, with unprecedentedly powerful measures taken against the pandemic and economic contraction. The international energy situation for its part has seen a series of inconceivable developments rattling the international community. Focusing on the international oil situation and oil prices on which the pandemic has exerted particularly dramatic impacts, I would like to review turbulent developments in April and summarize two key points for considering the future in the following.

As crude oil prices were accelerating their crash, with the pandemic going on a rampage, April began with U.S. President Donald Trump's mediation between the Organization of the Petroleum Exporting Countries and non-OPEC oil-producing countries in their reconstruction of the OPEC-plus joint production cut initiative. The OPEC-plus group eventually agreed to cut oil production by a record 9.7 million barrels per day from May, allowing oil prices to rally temporarily. In the market, however, even the production cut was dominantly expected to fail to offset an oil demand plunge estimated to exceed 20 million bpd, allowing a substantial oversupply to remain. So, crude oil prices continued sinking. On April 15, the front-month West Texas Intermediate crude futures contract fell below \$20 per barrel at last. In a shocking event during the downtrend, the key WTI futures price plunged into negative territory, closing at negative \$37.63/bbl on April 20.

What are negative prices? Normally, a seller of a good receives a certain amount of money as the price of the good from its buyer. If the price is negative, however, the seller would fail to find any buyer or would have to pay some money to someone to sell or dispose of the good. The negative WTI price resulted from a combination of special factors. Substantial oversupply in the international oil market and subsequent downward pressure on oil prices as strong background factors were combined with two special factors: (1) the expiration of the front-month WTI futures contract and relevant terms and conditions, and (2) a key storage hub for WTI nearing capacity in Cushing, Oklahoma.

The day when the price became negative was the one day before the final trading day for the May WTI futures contract. Market participants with long positions were then required to find buyers to liquidate long positions and avoid taking physical delivery of oil upon the expiration of the May contract. As the WTI storage hub in Cushing was nearing capacity due to a substantial inventory increase, however, there were few buyers who could take physical delivery of oil. Market participants required to sell oil to avoid taking delivery of oil had no choice but to pay substantial money or dump oil to find those who would take delivery of oil.

Negative prices have been seen sporadically in European wholesale electricity markets. As electricity supply was required to constantly match demand, an oversupply caused by a factor like a rapid rise in renewable energy power generation forced suppliers to pay money to sell electricity due to supply bottlenecks in a case. In this sense, I had theoretically understood that negative prices would be realized in the international oil market if such conditions were met. However, It had been very difficult for me to imagine that the WTI futures price would actually turn negative.

The negative WTI futures price was attributable to the abovementioned special factors. From the next day, the price of the front-month WTI contract turned positive, though remaining as low as below \$20/bbl. One of the implications from the special development is that if oversupply remains substantial, onshore tanks, tankers and pipelines in the world could reach their storage capacity in May or June, leading to a serious development close to the front-month WTI futures contract's plunge into negative territory, as feared by oil stakeholders in the world. If the market is flooded with oil, it would be difficult for sellers to find buyers. Then, oil could become valueless, with prices crashing to extremely low levels or negative territory.

To avoid such unusually extreme development, oil-producing countries' strategic enhancement of joint production cuts would have to be combined with oil-consuming countries' expansion of strategic oil reserves based on their physical and economic limits. Oil-producing and consuming countries would have to cooperate with each other. Such cooperation has already been discussed at the Group of 20 and other forums. If such a development becomes likelier, it would be more important for oil-producing and consuming countries to consider and enhance cooperation. If oil prices fall to extremely low levels with their measures failing, market forces would lead high-cost oil producers to exit from the market. Given that some time is required for market forces to complete adjustments, complex and serious problems accompanying extremely low oil prices could weigh on the international oil market over a long time.

As the second key point, I would like to cite lockdowns that would dramatically affect the oil market. In its latest analysis, the Institute of Energy Economics, Japan, projects that global oil demand in the second quarter of this year would plunge by about 16 million bpd year on year to 83.3 million bpd. The International Energy Agency has forecast an even greater decline to 76.1 million bpd. The biggest factor behind the dramatic oil demand plunge is human and goods traffic restrictions and powerful lockdowns, which have been implemented in many major oil-consuming countries to prevent the pandemic from expanding. As a matter of course, macroeconomic contraction is also contributing to lowering oil demand. A decline in international air and maritime transportation demand also exerts great downward pressure on oil demand. However, lockdowns have devastating effects. The IEEJ's analysis of traffic restrictions and lockdowns under various assumptions indicates that global oil demand would decline by 18 million bpd or 20%. The huge impact is behind the current substantial oil oversupply, price plunges and downward pressure on prices.

The problem is that the future of traffic restrictions and lockdowns is very uncertain. There are three important factors for assessing the impacts of traffic restrictions and lockdowns: (1) how many people and regions would be covered, (2) how powerful such restrictions would be, and (3) how long such restrictions would be in place. Each point is difficult to ascertain at present or forecast for the future. The downward pressure of traffic restrictions and lockdowns on oil demand may differ depending on changes in the three factors. Whether such restrictions would be enhanced further or eased and whether they would be enhanced again due to a second wave of the pandemic would exert great influence on global oil demand, the oil supply-demand balance and oil prices. We should pay

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fine-tuned attention to relevant future developments.

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