Special Bulletin

A Japanese Perspective on the International Energy Landscape (332) July 12, 2017

WTI Futures Average below $50/bbl in 1st Half of 2017

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Daily closing prices of front-month crude oil futures contracts averaged $52.68 per barrel for Brent and $49.95/bbl for West Texas Intermediate in the January-June period of 2017. If rounded, the averages come to $53/bbl and $50/bbl, indicating that average crude oil prices in the first half of 2017 were roughly in a $50-55/bbl range. Precisely, however, the average WTI price remarkably slipped below $50/bbl.

The average WTI price came to $51.78/bbl in the first quarter of 2017 and $48.15/bbl in the second quarter, showing that the WTI price declined in the second half of the six-month period after remaining above $50/bbl in the first half. The monthly average stood at $52.61/bbl in January, $53.46/bbl in February, $49.67/bbl in March, $51.11/bbl in April, $48.54/bbl in May and $45.20/bbl in June. Thus, the WTI futures remained roughly above $50/bbl between January and April, began to drop in May and fell to around $45/bbl in June. In the six-month period, the WTI price ranged from the bottom of $42.53/bbl on June 21 to the ceiling of $54.45/bbl on February 23.

Factors behind the price trend include a coordinated oil production cut by the Organization of the Petroleum Exporting Countries and non-OPEC oil producing countries. OPEC agreed to cut oil production by 1.2 million barrels per day at its general meeting last November before striking an agreement with Russia and other non-OPEC oil producing countries on the coordinated production cut. OPEC and non-OPEC oil producing countries began to reduce their oil production by a total of about 1.8 million bpd at the opening of 2017 and have maintained the coordinated production cut. Particularly, the OPEC members' rate of compliance with the production cut came to almost 100%, indicating that they steadfastly achieved their commitment. After the agreement on the coordinated oil production cut, crude oil futures prices rebounded above $50/bbl and remained above the level until around April. Then, they stayed in a boxed range between $50/bbl and $55/bbl, with the bottom supported by the coordinated production cut and the ceiling capped by high oil inventory levels and a shale oil production increase.

However, the abovementioned market sentiment began to change in the second half of April. Oil inventories remained high despite the longer-than-expected continuation of the compliance of the coordinated production cut, indicating that the elimination of oversupply was

failing to make progress as expected by oil producing countries. While an upward trend in oil inventories seen in the summer of 2016 came to a pause, high-level oil inventories failed to be reduced substantially. OPEC failed to achieve its official target of lowering oil inventories to appropriate levels.

The OPEC failure resulted from an increase in U.S. oil production in particular in shale oil production. In response to oil price plunges from the second half of 2014, shale oil producers concentrated production on profitable wells, streamlined operations and reduced costs, resulting in a remarkable improvement in productivity per well and a drop in production costs. Recently, the average shale oil production cost has reportedly declined to around $40/bbl. As a result, oil production including shale oil in the United States has steadily expanded. By the end of May this year, U.S. oil production increased by about 900,000 bpd from October 2016. In response, the International Energy Agency has predicted that U.S. oil output would increase by 600,000 bpd from the previous year in 2017 and by 1 million bpd in 2018.

In a sense, the $50-55/bbl boxed range from the beginning of this year supported the U.S. oil production expansion, which then exerted downward pressure on the oil market. This trend is structurally similar to the past development in which crude oil prices remained above $100/bbl between 2011 and the first half of 2014, bringing about a substantial increase in shale oil output that led to a substantial decline in oil prices. The current downward pressure, though smaller in scale and maginitude than the past one, has resulted from the decline in shale oil production costs. Shale oil production's quick response to crude oil price trends (or a short investment-production cycle) has exerted influences on the current price trend.

As crude oil prices recently slipped below $50/bbl to a $40-45/bbl range, interestingly, U.S. oil production growth indicated a sign of deceleration. A gradual acceleration in U.S. oil production growth continued until late May before the growth remarkably slowed down in June. As crude oil prices fell below $43/bbl, U.S. oil output tended to hit the ceiling. Such U.S. oil production trend encouraged crude oil prices to slightly rebound. In this sense, U.S. oil production, including shale oil, can be viewed as having supported oil prices recently instead of OPEC. Under this view, U.S. shale oil production may be interpreted as a key factor influencing both the ceiling and bottom of an oil price fluctuation range at present. The fluctuation range is from $40/bbl to $55/bbl, indicating a wider boxed range than the $50-55/bbl range seen until around April. Crude oil prices may fluctuate within the wider range, depending on occasional supply and demand changes.

At the same time, however, dynamic supply and demand changes may continue to take place. While oil demand is expected to steadily increase by around 1.3 million bpd, non-OPEC oil production other than U.S. output is expected to remain stagnant or fall. OPEC has decided to extend the production cut for nine months, expecting that this trend would lead to an equilibrium in supply-demand. OPEC may intend to maintain the current production cut until time is on its side. If

the market gradually goes in the direction of supply-demand equilibrium or rebalancing as expected by OPEC, the oil supply-demand balance will slowly tighten with crude oil prices turning upward. We must pay attention to whether rebalancing is realized and how U.S. shale oil will move in response to the realization. We must also keep close watch on various upside and downside risk factors involving crude oil prices in the international oil market.

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