

A Thought on Crude Oil Pricing in Asia

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As an important topic related to crude oil pricing in the international oil markets, the widening gap between West Texas Intermediate and North Sea Brent crude oil futures prices, the background thereto, and the suitability of WTI futures price as the benchmark have become matters of great concern to the world, as noted in my previous special bulletin (A Japanese Perspective on International Energy Landscape (30)). As the next topic linked to the matter, I would like to take up crude oil pricing issues in the Asian market.

Asia is one of the world's three major oil markets, rivaling North America and Europe. According to International Energy Agency data, oil demand in the Asian (Asia-Pacific) market in 2010 reached 27.47 million barrels per day, far exceeding the 23.92 million bpd in North America and the 14.43 million bpd in Europe. Asia was thus the largest oil market in the world. The Asian market in 2010 also saw a demand increase of 1.43 million bpd from the previous year. Asia is now a growing oil market and is expected to remain so over the medium to long term. In contrast, the North American and European markets are well expected to shrink over the medium to long term. Therefore, the appropriateness and reasonableness of crude oil pricing in Asia as the world's largest and growing market are very important for sound oil market development.

It is well known that the Asian market uses the similar crude-oil-pricing formula to those used in Europe and North America, which is a formula pricing with benchmark crude oil prices. The benchmark for the Asian market is Dubai (and Oman) crude oil. Once the benchmark price is determined in the respective market, the prefixed adjustment factor (a constant factor reflecting crude oil quality and supply-demand situation, etc.) is added to calculate actual selling price of each crude oil for sale. Therefore, the benchmark crude oil price and the adjustment factor are of key importance for the pricing of crude oil.

The Asian crude oil-pricing formula (as well as those used in Europe and North America) was adopted more than 20 years ago, and has been accepted by both oil producing and consuming countries. In this sense, this is well established oil-pricing formula. But some new developments, or challenges have emerged in regard to this established formula. In respect to the widening gap between WTI and Brent prices, the characteristics and suitability of benchmarks have become a matter of concern. The three major benchmark crude oil (WTI, Brent and Dubai) prices have correlations. The price of Dubai crude oil is closely linked to Brent price. As it is thought that Dubai

price is affected by market perceptions or assessment about a price gap between Brent and Dubai prices, Dubai price often follows or have close correlations with the Brent price. Off course Dubai price itself has undoubtedly played an important role as a benchmark. Furthermore, market participants have made various efforts to maintain and enhance the role of Dubai crude oil as the benchmark. The efforts include: utilization of Upper Zakum crude oil as an alternative to Dubai crude in order to maintain and enhance physical trading liquidity of the benchmark crude in the face of declining Dubai crude oil production; listing of Oman crude on the Dubai Mercantile Exchange, etc. Recognizing that the price of Dubai is closely linked to that of Brent (in other words, Dubai price is affected by Brent) as mentioned earlier, however, it can be argued that price signals that reflect the reality of supply and demand conditions in Asian market specifically are more desirable. This is because WTI and Brent are interpreted as sending price signals reflecting global supply and demand while being based on their respective local conditions.

In considering the Asian crude oil-pricing problems, we must pay attention to the fact that Asia is far more dependent on Middle East oil than Europe and North America. According to BP statistics, the Asian (Asia-Pacific) market depended on the Middle East for about 60% of oil imports in 2009, against around 15% for Europe and North America. For Asia, therefore, how the Middle East crude oils that account for a dominant share of oil supply in Asia should be priced is very important. In considering this problem, many experts have pointed out that Asia's heavy dependence on the Middle East is the largest constraint on efforts to devise a solution to the problem. This means that a pricing competition would be limited in the absence of crude oils that can meaningfully compete with Middle East crude oils. In this respect, however, an attention-attracting development has emerged recently. The development is a substantial growth in crude oil production in Russia's Sakhalin-Eastern Siberia region. This includes an increase in oil supply through the East Siberia-Pacific Ocean (ESPO) pipeline that has started oil transportation including exports to the Asia-Pacific market.

ESPO crude oil exports from Kozmino, on the Pacific coast, began in December 2009 under the ESPO project's first phase (oil-transportation pipeline capacity of 600,000 bpd). In addition, an ESPO branch line was completed in January 2011 for China-bound exports totaling 300,000 bpd. ESPO crude exports from Kozmino also total 300,000 bpd. In 2010, 30% of ESPO crude exports from Kozmino went to Japan, 29% to South Korea, 16% to the United States and 11% to Thailand. There are a wide range of ESPO crude buyers in the Asia-Pacific region. The ESPO crude oil is free from the "destination clause", which is a condition attached to the sales of Saudi Arabian and other representative Middle East crude oil, and thus ESPO crude can be traded more flexibly. The ESPO crude, whose shipment port is closer to the Northeast Asian market (which includes Japan, South Korea and China) can reach the market more quickly and at a lower transportation related costs than Middle East crude oils. ESPO crude oil is thus more flexible for Northeast Asia. At present, ESPO crude price is linked to the Dubai crude oil price, just as the case of Middle East crude oil. But ESPO crude oil has taken advantage of its meaningful trade volume, flexible trade conditions and its proximity to the Northeast Asian market to expand its sales channels in Asia. This means that ESPO crude has emerged as a key competitor to Middle Eastern crude oil. This development might have led major crude oil suppliers including those in the Middle East to give more prudent considerations

to the adjustment factor in marketing and pricing their crude oils, which can be seen as a new movement with regard to crude oil pricing system in Asia.

Given that Russia is likely to expand crude oil production and exports in regions close to Asia, we may have to keep close watch on how the Russian actions from now on would influence Asia's crude oil pricing. So far, their impacts seemed to emerge only on consideration for the adjustment factor for pricing Middle Eastern crude oil. Depending on future developments, however, the Russian actions may have wide-ranging impacts on marketing strategies of Middle East oil producing countries. It may be also useful for market participants in Asia to consider adopting ESPO crude oil as a candidate of the Asian benchmark. However, it is important to note that proactive, creative and strong decisions by both sellers and buyers may be required for realizing adoption of a new benchmark, along with necessity of physical and financial infrastructure development for the new benchmark. As the Asian crude oil-pricing formula plays a key role in pricing Asian liquefied natural gas, which is mainly linked to the "Japanese crude cocktail" (JCC, an average import CIF price of crude oil in Japan), we may have to analyze and consider crude oil pricing from a broader range of viewpoints covering not only oil market but also overall energy market.

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