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Report Summary

Recent International Oil Situation and Prospects for Crude Oil Prices

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<Research Objectives>

In the first half of 2010, the West Texas Intermediate (WTI) crude oil futures price (the daily closing price of the front-month contract), a benchmark international market price for crude oil, averaged $78.5/barrel. Its peak during that period stood at $86.8/barrel and its bottom at $68.0/barrel. The price range represented a middle range between 2008 average and 2009 average. The fluctuation range (the gap between the peak and bottom) was relatively smaller. The WTI price remained range-bound in the first half of 2010, approximately $68-87/barrel range.

Behind the crude oil price trend were effects imposed by the world economic and financial situations, by oil supply/demand fundamentals, by money inflow into and outflow from crude oil futures markets, and by various risk factors. These effects were intricately intertwined to lead to the crude oil price trend.

The future international oil situation and crude oil prices may change dramatically depending on developments regarding the factors cited above. Since the international oil situation and crude oil prices have a significant impact on future global developments to include the Japanese economy and the international energy market, it is vital to grasp their trends regularly and analyze their future outlook based on the latest situation. Under the above recognition, the report explores the prospects for the future international oil situation and crude oil prices by examining the trends of the world economic and financial situation, money inflow into and outflow from crude oil futures markets, and other financial factors such as oil supply/demand factors and the like.

<Key Conclusion>

◆ **Future Crude Oil Price Outlook**

1. Unless there are major changes in market perceptions and expectations that have led to the present range-bound trend, the trend may continue in the second half of 2010. In such case, crude oil prices will be influenced most by the world economic and financial situation and move in line with stock prices that mirror the situation. Our “reference case” given in December 2009 for crude oil prices (the average WTI price for 2010 is estimated at around $70/barrel plus or minus up to $10/barrel) is likely to stand. But the benchmark price may move around $75/barrel in the second half of this year.
2. However, we see various uncertainty factors emerging in the international oil market. The most important are uncertainty factors regarding the world economic and financial situation. Depending on future developments regarding European economic turmoil and sovereign risks triggered by the Greek budget crisis, the world economy may be greatly affected. Attracting attention will be the trend of the Chinese economy that has increased its presence as the world’s growth center. The macroeconomic and financial situation may also change dramatically depending on developments regarding these factors. Crude oil prices could move in line with changes in the world macroeconomic and financial situation. On the supply side, both OPEC and non-OPEC oil producing countries are expected to continue a moderate growth in their production. Meanwhile, the recent oil leak problem in the Gulf of Mexico may adversely affect deepwater oil drilling not only in the gulf but also in other regions. Depending on the world oil demand trend, the possibility

could affect the international oil market. If a future expansion in world oil supply is dependent on deepwater oil development, we may have to pay attention to relevant future developments including the effects on market psychology anticipating an oil supply expansion.

3. Under such conditions, if downside risks emerge in a manner to cause global economic turbulences, downward pressures may work on crude oil prices. The benchmark WTI price may then decrease to around $60/barrel. If the effects of the Gulf oil leak problem and other factors are feared to affect an oil supply growth in the absence of major global economic turbulences, the WTI price may range from $80/barrel to $100/barrel.

◆ **Major Factors Attracting Attention (supplemental comments)**

4. **Importance of expectations in price formation and range-bound prices**: Futures markets play a leading role in pricing crude oil. Trading factors in the market include oil supply/demand fundamentals, financial factors, and risk factors. They influence each other mutually and closely. A recent important feature is that the world economic and financial situation has become a common driver of these factors. Another feature is that expectations or forecasts regarding these factors, as well as their present conditions, exert great influences on price formation in futures markets. In this sense, we may be able to interpret the recent range-bound crude oil prices as an indication that market participants have built on their experiences in 2008 and 2009 to commonly perceive that excessively high or low prices are not sustainable.
5. **World economy:** The world economy has recovered faster than expected since 2009. The IMF World Economic Outlook forecasts the world economy to score a fairly firm growth rate of 4.6% in 2010. Under the economic recovery, global stock prices followed an upward trend until mid-April. Since the Greek budget crisis grew in the second half of April, however, fears over future economic conditions have emerged. As credit fears emerged on Greek default fears and spread throughout Europe, the euro and stock prices declined altogether. A fundamental factor behind such situation is that major countries have seen a substantial increase in their fiscal burdens through their large-scale economy-boosting measures (including fiscal expansion and monetary easing) since the 2008 Lehman shock. The slump in the European economy that occupies a key position in the world economy is now feared to affect the entire world, including the United States and Asia, through a decline in the export market for these regions and other adverse effects on their real economies, as well as adverse financial effects such as increasing nonperforming assets, credit fears, falling risk tolerance and deterioration of fund-raising environments. Furthermore, the Chinese economy, which has driven the world economy, now has seen the emergence of uncertainty factors including adverse effects of the European economic problem, asset bubble fears, and upward pressures on the Chinese currency of renminbi known as RMB. While steady world economic growth is forecast as noted above, market participants have grown conscious of downside risks.
6. **Financial factors (including money inflow into and outflow from futures markets)**: Money inflow into crude oil futures markets has expanded amid the world economy's recovery and market participants' increasing risk tolerance. Open interest on the NYMEX crude oil futures market increased from about 1.16 million contracts at the end of 2009 to about 1.4 million contracts at the beginning of May 2010 (and declined to about 1.26 million contacts at the end of June). In futures markets at present, various financial players have actively participated with their unique investment strategies and approaches. Key points include how pension funds known for large-scale investment would be involved in trading in crude oil and other commodity futures from now on, what measures would be taken in response to the so-called contango of futures prices amid financial players' growing participation in futures markets, and how market participants would balance portfolios in markets where risk tolerance is falling again. As crude oil futures markets are expected to structurally remain smaller than markets for traditional assets class

(including stocks, bonds and currencies), money inflow or outflow based on financial factors may remain as an important factor to accelerate crude oil price fluctuations.

7. **Oil supply/demand factors**: The faster-than-expected economic recovery has led world oil demand in 2010 to increase by 1.68 million barrels per day from the previous year (according to IEA statistics). The demand increase centered on China, other Asian developing countries and Middle Eastern oil-producing nations. A steady expansion has been seen in oil supply in 2010. Non-OPEC and OPEC NGL (natural gas liquid) production has increased by about 0.8 million bpd respectively. As a result, Call on CPEC crude oil (demand for OPEC crude) has almost leveled off. OPEC actual output has increased slightly since the first half of 2009. The supply/demand balance in the international oil market has seen no major change. OPEC spare production capacity and OECD inventory levels indicate a sufficient supply surplus in the market. Therefore, judging from the "fundamental side," crude oil prices are likely to remain weak in the second half of this year unless turbulence factors emerge and expand their influences.
8. **Effects of Gulf of Mexico crude oil leak**: On April 20th, a crude oil leak started on an accident at the Deepwater Horizon drilling rig in the Gulf of Mexico. The leak formed from a ruptured pipe 1,500 meters below sea level and had been extremely difficult to stop or accurately measure. After several unsuccessful attempts to stop the leak, the Lower Marine Riser Package method has been adopted to place a containment cap on the pipe while leading an oil-drilling ship to pump up leaking crude oil. Efforts are also underway to collect leaked crude oil. Work has begun to drill a relief well to intercept and seal the existing well that is leaking crude. While going ahead with investigations into causes of the accident in the face of possible heavy damage on the environment, tourism and fishing, the U.S. government has considered and introduced new offshore oil development safety standards and regulations, suspended oil acreage auctions, declared an oil drilling moratorium, and led Congress to consider relevant bills (including a measure to raise maximum oil spill liability). It has also asked BP, the operator of the oilfield involved in the accident, to create special fund of $20 billion for oil spill compensation. The government and BP agreed through their negotiations to create a special fund administered by a third party to pay damage claims. One major concern is the accident's possible impact on offshore oil development (particularly, deepwater oil development). The Gulf of Mexico has been the center of the U.S. oil output growth. Particularly, a deepwater oil output growth there has played a major role. Even on a worldwide basis, deepwater oil development is expected to play a central role in expanding oil production in the future. The accident is expected to bring about deepwater oil development delays and production drops due to higher costs under tougher safety standards, greater operation risks and less access to deepwater oilfields under the drilling moratorium. At present, any impact is still left uncertain due to lack of data for judgment or analysis. But the IEA has estimated oil production in the world could decline by 0.9 million bpd by 2015. If spillover effects of the accident lead to an oil output decline, it may work to tighten the oil supply/demand relationship depending on demand trends. In this sense, we will have to closely watch future developments including the accident's effects on market psychology. The accident is also expected to become a trigger to discourage oil demand (by triggering the enhancement of alternative energy development promotion) and hurt the financial health of BP due to heavy accident-related costs, affecting the entire oil industry. Due to such a wide range of possible effects, future developments are attracting much attention.
9. **China's economy and oil demand trend:** The Chinese economy achieved a V-shaped recovery from the bottom in the first quarter of 2009 mainly due to a 4 trillion RMB stimulus package including investment in public infrastructure. In 2009, the Chinese economy grew 9.1%. Growth accelerated to 11.9% in the first quarter of 2010. China's oil demand includes diesel oil (about 40% of total demand) and gasoline (slightly less than 20%) and has close relations with economic growth, industrial activities, and income levels. According to monthly APEC statistics, apparent consumption of petroleum products (oil refinery output plus imports minus exports) in China

indicates that oil demand centering on diesel fuel has been increasing from a year earlier substantially since the autumn of 2009. The oil demand growth may be attributable to heavy public investment and infrastructure development as the economic growth driver in 2009, a relevant expansion of transportation demand and a vehicle ownership expansion under a domestic demand expansion initiative. In addition, the promotion of infrastructure investment has worked to expand oil refining capacity, oil pipelines and oil stockpiling, creating demand for oil for "infilling" into the above mentioned infrastructure. Since the oil demand trend is closely linked to the macroeconomic trend in China, the future Chinese economic situation is also attracting attention. Despite the recent double-digit economic growth, we see various macroeconomic management problems and uncertainty factors, including effects of the economic crisis in Europe as a major export destination, responses to and results of asset bubbles emerging as a "side effect" of economic stimulus measures, responses to growing pressures on the RMB to be revalued amid increasing trade imbalances, and effects of recent manufacturing industry strikes and emerging wage-increasing pressures on industry competitiveness. In addition, if China can attain an energy conservation target (of improving energy-GDP intensity by 20% by 2010 as compared to 2006) under the 11th five-year development program, (in other words, China's actual energy-conservation efforts and performance), it may also affect China's energy demand including oil as the Chinese government has given top priority to the energy conservation target. Without any major turbulence in the above factors, the Chinese economy may score a high growth rate of around 10% in 2010, with oil demand increasing by 6-8% (0.5-07 million bpd). If downside risks emerge, however, the economic growth rate may be one percentage point lower in 2010 (and fall further later) with an oil demand increase slowing. We must take note of the possibility that a slowdown in China's oil demand growth could exert a stronger psychological impact on the market than any actual demand decline.

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