Oil Market Review in Japan No. 48/2022

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Overview

The key WTI (West Texas Intermediate) crude oil futures contract on NYMEX (New York Mercantile Exchange) in the March 2 - March 8 week moved within a range of \$76.66 per barrel and \$80.46/bbl.

On March 9, the key contract turned down for the third straight trading day due to strengthened concerns about recession caused by the expectations for a continuation of interest rate rise by the U.S. FRB (Federal Reserve Board). The bear trend in the U.S. stock market was also one of the factors for oil price decline. A strike against pension reform in France had an influence on the oil industry, which brought about concerns about oil supply. The April contract closed at \$75.72/bbl down \$0.94/bbl from the previous trading day.

On March 10, the key contract rebounded for the first time in four trading days due to receding concerns about a continuation of interest rate rise by the U.S. FRB. The U.S. Employment Statistics was less than the market expectation. Furthermore, it was announced that Saudi Arabia and Iran had agreed to normalization of diplomatic relations between the two countries through China's mediation on this day. This was one of the factors for détente in the Gulf region. However, it didn't affect the market so much. The April contract closed at \$76.68/bbl up \$0.96/bbl from the previous trading day.

On March 13, the key contract turned down due to a investors' risk-aversion attitude caused by the bankruptcy of the U.S. Silicon Valley Bank. However, some of the market players bought crude oil futures actively due to a sense of undervalued crude oil futures price caused by the depreciation of the U.S. dollar in the foreign exchange market and by the expectations for revision of interest rate rise by the U.S. FRB. The April contract closed at \$74.80/bbl down \$1.88/bbl from the previous trading day.

On March 14, the key contract turned down further due to investors' strengthened risk-aversion attitude caused by the chain reaction bankruptcy of the U.S. banks. The OPEC (Organization of the Petroleum Exporting Countries) Monthly Report announced on this day for the first time since December 9 of last year, made an upward revision on the projection of China's oil demand for 2023, made a downward revision on the projection of the U.S. and Europe's oil demand for 2023, and maintained the previous projection on the world total oil demand for 2023. The April contract closed at \$71.33/bbl down \$3.47/bbl from the previous trading day.

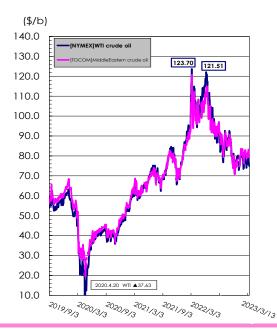
On March 15, the key contract turned down further due to strengthened concerns about the U.S. financial system caused by anxiety over the management of Credit Suisse after bankruptcy of the two U.S. Bank, falling below the milestone of \$70/bbl, hitting a record low for the first time in one year and three months since December 2021. Moreover, the U.S. EIA (Energy Information Administration) announced that the U.S. domestic inventory for crude oil the last weekend increased from the previous week more than the market expectation. In addition, the IEA (International Energy Agency) Monthly Report announced on this day made an upward revision of the projection on the world oil demand for 2023, which had only a limited impact on the market. The April contract closed at \$67.61/bbl down \$3.72/bbl from the previous trading day.

The Asian benchmark crude oil of Dubai for May delivery on the Tokyo market ranged from \$81.80/bbl to \$84.80/bbl on March 2 – March 8 week. It closed at \$81.60/bbl on March 9, at \$80.10/bbl on March 10, at \$82.10/bbl on March 13, at \$79.00/bbl on March 14, at \$77.50/bbl on March 15.

On the foreign exchange market in the March 2 - March 8 week, the dollar moved within a range of 135.92 yen and 137.35 yen. It changed hands at 137.10 yen in late trading on March 9, at 136.01 yen on March 10, at 134.34 yen on March 13, at 133.21 yen on March 14, at 134.62 yen on March 15.

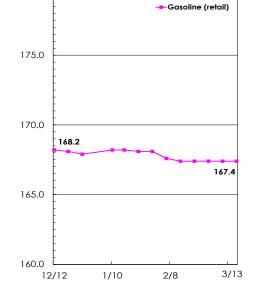
Japan's average retail price on March 13 leveled off from a week earlier for gasoline and diesel oil and decreased by 2 yen/l for kerosene on an 18-liter tank basis. The gasoline price leveled off for the fourth straight week. Diesel oil price stopped increasing for the first time in two weeks. Kerosene price decreased for the first time in two weeks. The national average gasoline price was 167.4 yen/l and mitigation measures against the extreme change in fuel oil were invoked again. The subsidy for the next week was 17.1 yen/l.

| Crude oil | | This week | | From a week earlier | From a year earlier | |
|-------------------|-------------------------------------|--------------|------------|---------------------------|------------------------|----------------|
| | Crude oil runs | (1,000 kl) | 3/5 ~ 3/11 | 2,846 | -81 | ▼ - |
| Supply/ Demand | Topper capacity utilization rate | (%) | " | 76.8 | ▼ -2.2 | ▼ - |
| | Crude oil inventories | (1,000 kl) | 3/11 | 11,122 | △ 591 | |
| | Middle Eastern crude oil (TOCOM) | (\$/bbl) | 3/13 | 80.60 | -1.59 | -22.0 |
| | WTI crude oil (NYMEX) | (\$/bbl) | 3/13 | 74.80 | -5.66 | -28.2 |
| Prices | Crude oil import CIF price | (\$/bbl) | Mid Feb | 87.80 | △ 0.84 | 1.05 |
| Prices | ①Crude oil import CIF price | (yen/kl) | " | 71,789 | 1 ,077 | A 9,129 |
| | ②Yen-dollar exchange rate | (yen/dollar) | " | 129.98 | -0.70 | -15.15 |
| | TTS exchange rate | (yen/dollar) | 3/13 | 135.34 | 1.58 | -16.73 |



(¥/L) 180.0

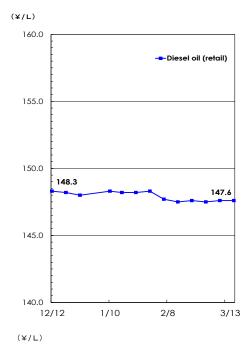
| (Unit: 1,000 kl, yen/l) | | | | | | |
|-------------------------|--|------------------------|------------|---------------------------|------------------------|---------------|
| Gasoline | | This week | | From a week earlier | From a year earlier | |
| | Production | | 3/5 ~ 3/11 | 889 | -23 | ▼ - |
| | Imports | | 11 | n.a. | n.a. | n.a. |
| Supply/ Demand | Shipments | | 11 | 783 | -53 | |
| | Exports | | 11 | 82 | -38 | ▼ - |
| | Inventories | | 3/11 | 1,671 | △ 24 | |
| | Gyoten (spot) [4-district average lorry rack price] | (RIM) | 3/7 ~ 3/13 | 73.4 | 0.8 | -8.6 |
| Prices | Futures [front-month contract/closing price] (TOCOM/ Tokyo Bay) (TOCOM/ Chubu) | • | 3/7 ~ 3/13 | 73.0 | 0.0 | -14.2 |
| | | 3/13 | 73.6 | 0.0 | ▼ -11.4 | |
| | Retail prices [weekly trend] | (published by ANRE) | 3/13 | 167.4 | • 0.0 | ▼ -7.8 |



Retail prices [weekly

trend]

| (Unit: 1,000 kl, yen/l) | | | | | | | |
|-------------------------|---|------------------------|------------|---------------------------|------------------------|---------------|--|
| Diesel oil | | This week | | From a week earlier | From a year earlier | | |
| | Production | | 3/5 ~ 3/11 | 722 | -48 | ▼ - | |
| | Imports | | " | n.a. | n.a. | n.a. | |
| Supply/ Demand | Shipments | | " | 655 | <u></u> 4 | ▼ - | |
| | Exports | | 11 | 45 | -127 | ▼ - | |
| | Inventories | | 3/11 | 1,206 | <u>^</u> 21 | ▼ - | |
| | Gyoten (spot) [4-district average lorry rack price] | (RIM) | 3/7 ~ 3/13 | 75.0 | △ 0.4 | ▼ -8.1 | |
| Prices | Futures [front-month | (TOCOM/ Tokyo Bay) | 3/7 ~ 3/13 | 77.1 | △ 0.7 | -14.7 | |
| Filces | contract/closing price] | (TOCOM/ Chubu) | 3/13 | - | _ | _ | |
| | Retail prices [weekly trend] | (published by ANRE) | 3/13 | 147.6 | → 0.0 | ▼ -7.3 | |



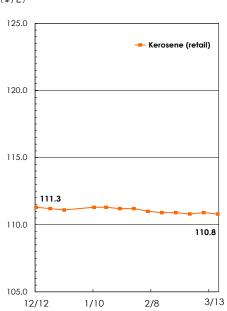
| Kerosene | | This week | | a week earlier | a year earlier | |
|-------------------|---|-----------------------|------------|-------------------|----------------|----------------|
| | Production | | 3/5 ~ 3/11 | 231 | ▼ -60 | |
| | Imports | | 11 | n.a. | n.a. | n.a. |
| Supply/ Demand | Shipments | | 11 | 286 | ▼ -116 | ▼ - |
| | Exports | | 11 | 0 | → 0 | - |
| | Inventories | | 3/11 | 1,173 | -54 | |
| | Gyoten (spot) [4-district average lorry rack price] | (RIM) | 3/7 ~ 3/13 | 75.5 | ▲ 0.2 | ▼ -7.1 |
| Prices | Futures [front-month | (TOCOM/ Tokyo Bay) | 3/7 ~ 3/13 | 75.0 | → 0.0 | ▼ -11.2 |
| | contract/closing price] | (TOCOM/ | 3/13 | 763 | • 00 | 7 -5 7 |

3/13

by ANRE)

110.8

(Unit: 1,000 kl, yen/l)



Relevant Information

1 Overseas crude oil prices

On the crude oil futures market for this week (from March 9 to March 15), WTI end price logged \$75.72/bbl on March 9 and rose further to \$76.68/bbl on March 10 the last weekend mainly by the expectations for China's economic recovery. However, WTI end price turned down for the third straight trading day from March 13 due to concerns about the U.S. financial system, falling below the milestone of \$70/bbl, and logged \$67.61/bbl on March 15.

According to the U.S. EIA Weekly Report announced on March 15, the U.S. domestic inventory as of March 10 increased by 1.6 million bbl for crude oil from the previous week, which was more than the market expectations of an increase by 1.2 million bbl.

According to the EIA, the average U.S. retail price of gasoline as of March 13 increased by 6.7 cents per gallon from a week earlier to \$3.456/gal (123.4 yen/l), increasing for the second straight week. The average U.S. retail price of diesel oil decreased by 3.5 cents per gallon from a week earlier to \$4.247/gal (151.7 yen/l), decreasing for the sixth straight week.

Baker Hughes reported on March 10 that the number of operating U.S. oil-drilling rigs decreased by two units from a week earlier to 590 units, decreasing for the fourth straight week.

2 Petroleum products supply and demand in Japan (1) Shipments

According to a weekly report by the PAJ (Petroleum Association of Japan), inactive topper capacity in the March 5 - March 11 week in 2023 stood at 227,000 barrels per day, increasing by 122,000 bpd from the previous week (total capacity remained at 3,331,000 bpd).

Crude oil throughput in the week decreased by 81,000 kl from the previous week to 2,846,000 kl. From a year earlier, it decreased by 237,000 kl. The topper capacity utilization rate stood at 76.8%, down 2.2 points from the previous week and down 3.3 points from a year earlier.

Production increased from the previous week for jet fuel, Fuel Oil A, and Fuel Oil C and decreased for other petroleum products. Output was down 2.5% for gasoline, up 48.9% for jet fuel, down 20.6% for kerosene, down 6.2% for diesel oil, up 10.11% for Fuel Oil A, and up 10.6% for Fuel Oil C. Fuel Oil C imports in the week totaled 48,000 kl, down 41,000 kl from the previous week. Diesel oil exports aggregated 45,000 kl, down 127,000 kl from the previous week.

Shipments (excluding imports) in the week increased from the previous week for jet fuel, diesel oil, and Fuel Oil C and decreased for other oil products. From a year earlier, shipments expanded for gasoline, jet fuel and Fuel Oil C and declined for other oil products. Gasoline shipments decreased by 6.3% from the previous week to 783,000 kl, decreasing for the second straight week. Shipments totaled 139,000 kl for jet fuel (up

213.6% from the previous week), 286,000 kl for kerosene (down 29.0% from the previous week), 655,000 kl for diesel oil (up 0.6% from the previous week), 201,000 kl for Fuel Oil A (down 22.7% from the previous week), and 318,000 kl for Fuel Oil C (up 72.3% from the previous week).

(Unit: 1,000 kl)

| | This week | Previous week | From a week earlier |
|---------------------------|--------------|---------------|------------------------|
| | (3/5 ~ 3/11) | (2/26 ~ 3/4) | |
| Gasoline | 783 | 836 | -53 (-6%) |
| Jet fuel | 139 | 44 | 95 (216%) |
| Kerosene (heating Oil) | 286 | 402 | -116 (-29%) |
| Diesel oil | 655 | 651 | 4 (1%) |
| Fuel oil A | 201 | 260 | -59 (-23%) |
| Fuel Oil C | 318 | 185 | 133 (72%) |
| Total | 2,382 | 2,378 | 4 (0%) |

This week's shipments = (Previous weekend inventories + This week's production + This week's imports) - (This week's exports + This weekend inventories)

2 Petroleum products supply and demand in Japan (2) Inventories

Inventories as of March 11 increased for gasoline, diesel oil, and Fuel Oil A and decreased for other petroleum products. From a year earlier, inventories decreased for jet fuel and diesel oil and increased for other petroleum products.

Gasoline inventories totaled 1,671,000 kl, up 24,000 kl from a week earlier and up 25,000 kl from a year earlier.

Kerosene inventories totaled 1,173,000 kl, down 54,000 kl from a week earlier and up 57,000 kl from a year earlier.

Diesel oil inventories totaled 1,206,000 kl, up 21,000 kl from a week earlier and down 39,000 kl from a year earlier.

Fuel Oil A inventories totaled 682,000 kl, up 23,000 kl from a week earlier and up 13,000 kl from a year earlier.

Fuel Oil C inventories totaled 1,747,000 kl, down 40,000 kl from a week earlier and up 196,000 kl from a year earlier.

(Unit: 1,000 kl)

| | | (Unit: 1,000 kl) | | | | |
|---------------------------|-----------|------------------|------------------------|--|--|--|
| | This week | Previous week | From a week earlier | | | |
| | (3/11) | (3/4) | | | | |
| Gasoline | 1,671 | 1,647 | 2 4 (1%) | | | |
| Jet fuel | 688 | 745 | -57 (-8%) | | | |
| Kerosene (heating Oil) | 1,173 | 1,227 | -54 (-4%) | | | |
| Diesel oil | 1,206 | 1,185 | 2 1 (2%) | | | |
| Fuel oil A | 682 | 659 | 23 (3%) | | | |
| Fuel Oil C | 1,747 | 1,787 | -40 (-2%) | | | |
| Total | 7,167 | 7,250 | -83 (-1.1%) | | | |

3 Petroleum products wholesale prices in Japan (1) Wholesale price revision trend

During March 7 – March 13, crude oil cost in yen decreased by 0.5 yen/l from a week earlier with a decrease in crude oil price and the appreciation of the yen to the U.S. dollar.

For the next week of March 16– March 22, Motouri companies increased their real wholesale prices for gasoline, kerosene, and diesel oil by 0.5 yen/l from a week earlier, because a subsidy of 17.1yen/l from this week was added to an increase in the cost of 17.6 yen/l including the previous week's subsidy of 18.1 yen/l.

3 Petroleum products wholesale prices in Japan (2) Spot (Gyoten) and futures price trend

Futu Pric

Spot petroleum products prices in the March 7 – March 13 week increased for all oil products in all trading except for the leveled off gasoline and kerosene futures prices compared to the period of February 28– March 6.

The latest onshore cargo spot price (the average onshore rack price for four districts -- Chiba, Kawasaki, Chukyo, and Hanshin -- for March 7 – March 13) increased by 0.8 yen/l from the previous week for gasoline and increased by 0.2 yen/l for kerosene and increased by 0.4 yen/l for diesel oil.

The average offshore barge spot price in Tokyo Bay increased by 0.9 yen/l for gasoline, increased by 0.1 yen/l for kerosene and increased by 1.1 yen/l for diesel oil on March 7 – March 13 week from the previous week.

The key average futures price leveled off for gasoline and for kerosene and increased by 0.7 yen/l for diesel oil from a week earlier

| | (RIM) [4-district | | | (Unit: yen/l) | |
|---|------------------------------|------------------------|----------------------------|---------------------|--|
| | average lorry rack price] | This week (3/7 ~ 3/13) | Previous week (2/28 ~ 3/6) | From a week earlier | |
| | Regular | 73.4 | 72.6 | △ 0.8 | |
| s | Kerosene | 75.5 | 75.3 | △ 0.2 | |
| | Diesel oil | 75.0 | 74.6 | △ 0.4 | |

| | (TOCOM) [Front-month | | | (Unit: yen/l) |
|-----------|---|------------------------|----------------------------|---------------------|
| | contract/closing price] [Average] | This week (3/7 ~ 3/13) | Previous week (2/28 ~ 3/6) | From a week earlier |
| ires e | Regular | 73.0 | 73.0 | → 0.0 |
| | Kerosene | 75.0 | 75.0 | → 0.0 |
| | Diesel oil | 77.1 | 76.4 | △ 0.7 |

Above prices are before tax.

Reference (March 7 - March 13 actual data)

| | | | (Unit: yen/i) |
|------------|-------|---------|---------------|
| Products | Spot | Futures | Average |
| Gasoline | ▲ 0.8 | → 0.0 | ▲ 0.4 |
| Kerosene | ▲ 0.2 | → 0.0 | ▲ 0.1 |
| Diesel oil | ▲ 0.4 | ▲ 0.7 | △ 0.6 |
| Fuel Oil A | ▲ 0.6 | | |

(Source) Spot: RIM 4-district average lorry rack price (Chiba, Kawasaki, Chukyo, Hanshin) Futures: TOCOM average offshore barge spot price for Keihin District

4 Retail prices of petroleum products in Japan

The average retail service station price as of March 13 leveled off from a week earlier at 167.4 yen/l for gasoline, leveled off at 147.6 yen/l for diesel oil and decreased by 2 yen to 1,995 yen for kerosene on an 18-liter tank basis (decreased by 0.1 yen/l to 110.8 yen/l) from a week earlier. The gasoline price leveled off for the fourth straight week. Diesel oil price stopped increasing for the first time in two weeks. Kerosene price decreased for the first time in two weeks.

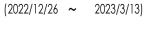
Gasoline prices increased in 18 prefectures, leveled off in five prefectures, and decreased in 24 prefectures. The lowest gasoline price among the prefectures was 159.8 yen/l in Tokushima. The second lowest was 160.2 yen/l in Miyagi. The highest price was 180.3 yen/l in Nagasaki. Aichi logged the largest price hike of 2.0 yen/l from the previous week. The price leveled off in Kouchi and four other prefectures. Wakayama logged the largest price fall of 1.2 yen/l.

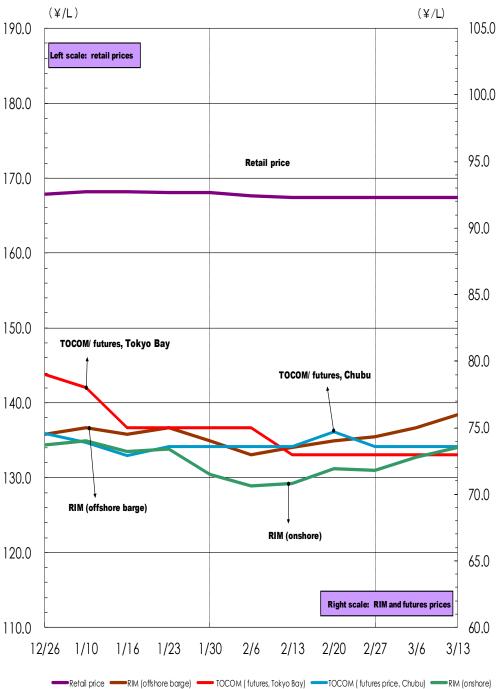
Retail gasoline price on the next price survey day March 20 is expected to level off or fluctuate slightly from a week earlier.

| | (Published by | | | | (Ui | nit: yen/l) |
|-----------------|------------------------|---------------------|------------------------|---------------------|---------|-------------|
| | ANRE)[Weekly trend] | This week (3/13) | Previous week (3/6) | From a week earlier | Latest | high |
| | Regular | 167.4 | 167.4 | → 0.0 | 08/8/4 | 185.1 |
| Retail Price | Kerosene | 110.8 | 110.9 | - 0.1 | 08/8/11 | 132.1 |
| | Diesel oil | 147.6 | 147.6 | → 0.0 | 08/8/4 | 167.4 |

Nationwide average cash retail price (including consumption tax) Since April 2007, 2,000 service stations have been covered. Latest highs are highest levels since October 2003.

Gasoline price trend





(Note) ① Retail price includes consumption Tax, RIM, TOCOM prices are before tax. ② RIM (onshore) is the aberage of four district .

Announcement

This report is available at the center's website (https://eneken.ieej.or.jp/en/). The next issue (No. 49 for 2022) will be announced on March 31.

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Weekly Oil Market Review

In an interim report compiled in May 2004 by a petroleum products market trend study panel sponsored by the Petroleum Distribution and Retail Division of the Natural Resources and Fuel Department at the Agency for Natural Resources and Energy, the panel stated, "We hope that the Japanese oil industry will solidify its market and price-finding functions and that the oil industry as a mainstay industry in Japan will further enhance its rationality and vitality over a medium term as industry people deepen their understanding of the need for rational price recognition based on market and price-finding functions to be established in the oil industry and for business decisions based on recognition under the principle of self-responsibility."

In response to the report, this Center has published the Weekly Oil Market Review as a tool for oil-related people, business administrators (particularly service station managers) and ordinary consumers to accurately understand crude oil and petroleum products supply and demand and price trends, in cooperation with relevant organizations such as the Petroleum Association of Japan and the Zensekiren (Japan's Dealers Association) since May 2005.

Sources of data provided in this report

① [Crude oil and petroleum products supply and demand] (weekly PAJ report)

Data in weekly statistics on crude oil and petroleum product supply by the Petroleum Association of Japan are calculated in terms of 1,000 kiloliters. Shipments are estimated by this Center.

② [Crude oil and futures prices] (WTI crude and Middle Eastern crude)

For the WTI crude, the front-month WTI crude futures contract's daily closing price on the New York Mercantile Exchange (NYMEX) is adopted.

For the Middle Eastern crude, the front-month Middle Eastern crude futures contract's closing price on the Tokyo Commodity Exchange (TOCOM) is adopted. * "Second-month (next-month) contract"

Underlying the Middle Eastern crude price is the average price for the Dubai and Oman crude oil. The telegraphic transfer middle rate (TTM) released by the MUFG Bank is adopted as the foreign exchange rate.

The crude oil import CIF price is a dollar-denominated reference price estimated by the PAJ based on the average crude oil price (on a 10-day basis) in the Ministry of Finance trade statistics.

③[Motouri wholesale prices of petroleum products in Japan]

Motouri wholesale prices are prices for transactions between Motouri petroleum products wholesalers (primary wholesalers) and their affiliates (secondary wholesalers).

Motouri companies modified their new pricing system in April 2010 to decide specific policies in comprehensive consideration of crude oil and petroleum products market prices, each other's prices and other data. In June 2014, they modified the system further to give greater priority to crude oil cost.

(A) [Gyoten spot prices of petroleum products in Japan](RIM gyoten)

Onshore cargo spot prices are the average onshore lorry rack prices for the four districts of Tokyo, Kawasaki, Chukyo and Hanshin in the Lorry Rack Report of RIM Intelligence Co.

⑤ [Futures prices of petroleum products in Japan] (TOCOM)

Front-month petroleum products futures contracts' daily closing prices for TOCOM Tokyo Bay and Chubu are adopted.

TOCOM Tokyo Bay prices are the average offshore barge prices for the Keihin district. TOCOM Chubu prices are the average lorry rack prices in the Chubu district.

(6) [Retail prices of petroleum products in Japan] (Weekly trend survey)

Average cash retail prices at some 2,000 service stations subject to a weekly nationwide survey are adopted (as released by the Agency for Natural Resources and Energy). The survey covers prices on Monday and is released at 14:00 on Wednesday (available on the website of the Agency for Natural Resources and Energy).