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432nd Forum on Research Works

Outlook of the International Oil Situation

July 23, 2019

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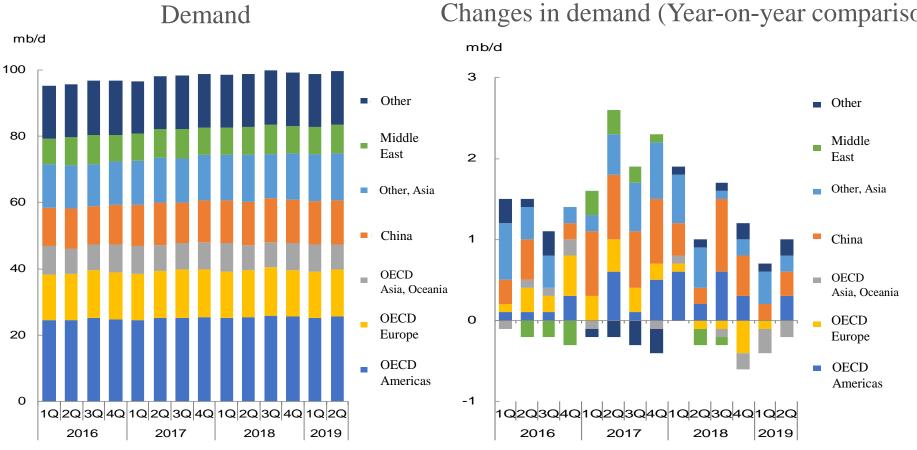
Key points of this report

- IAPAM
- ✓ While global oil demand in 2019 was 100.3 million b/d, total supply was 100.2 million b/d, comprising non-OPEC production of 64.4 million b/d and OPEC production of 35.8 million b/d, partly due to a decline in production in Iran, Venezuela, and other countries. On the other hand, although supply pressure is expected to increase by 2020 due to an increase in non-OPEC production particularly in the United States, demand and supply will be balanced at a level of about 101 million b/d to 102 million b/d through OPEC-plus adjustments.
- Based on the abovementioned premise of demand and supply balance, and if the impact of geopolitical risks and other factors are not taken into consideration, Brent prices are expected to move in the range of \$60 70/bbl on the average for the second half of 2019. The price level will remain generally the same in 2020, and prices will remain low within a range of fluctuation. The main factors that can cause significant changes to this price outlook include supply disruptions and geopolitical risks such as tensions surrounding the Iran situation, which could lead to an increase in prices, and macroeconomic risks such as intensification of the U.S.-China trade war, which could cause prices to drop. In the high-price scenario with emerging geopolitical risks, prices are expected to reach the high level of \$15/bbl from the standard level; in the low-price scenario with growing macroeconomic risks, prices are expected to reach a low of \$10/bbl from the standard level.

Oil demand: Sluggish growth

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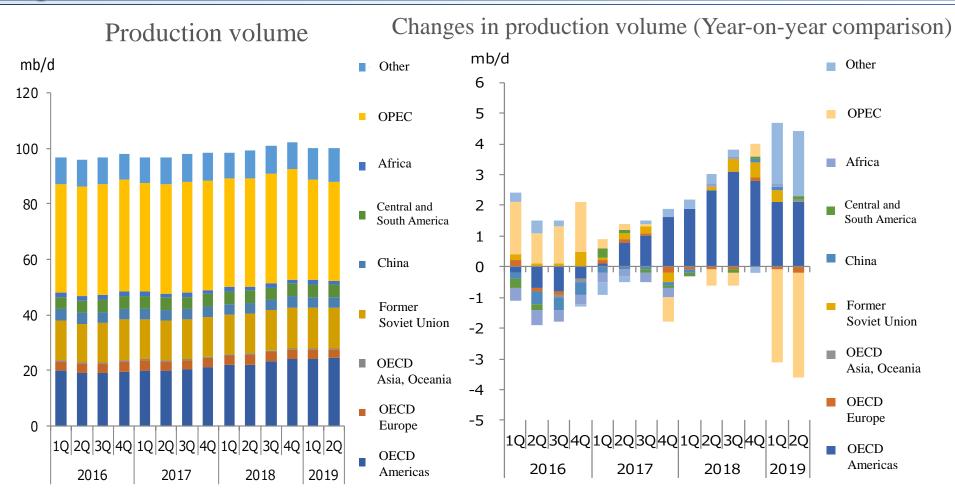


Changes in demand (Year-on-year comparison)

Source: IEA "Oil Market Report"

- Demand for the second quarter of 2019 increased by 0.8 million b/d (0.8%) year-on-year to 99.6 million b/d.
- Growth in demand has slowed down due to the sluggish growth of the global economy, but is expected to increase from the second half of 2019.

Oil supply: Fall in OPEC production despite increase in production in North America



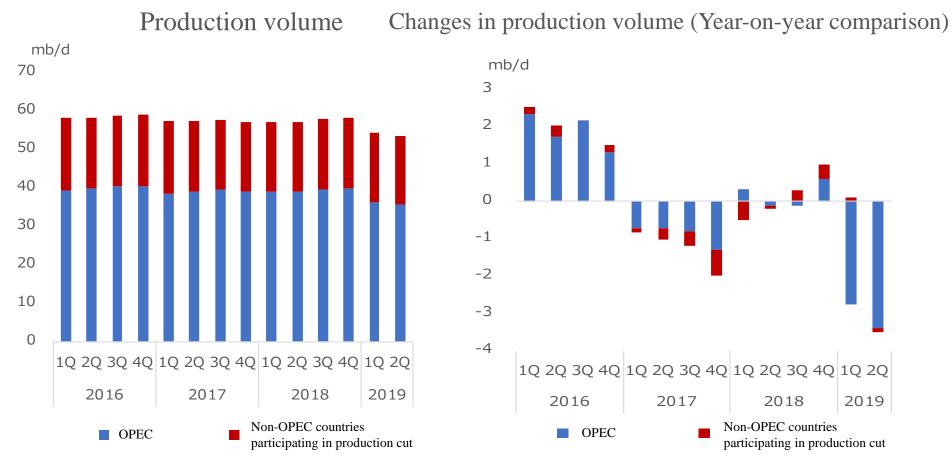
Source: IEA "Oil Market Report"

Production volume for the second quarter of 2019 increased by 0.8 million b/d (0.8%) year-on-year to 100.1 million b/d.

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• Despite the increase in production in North America, average production for 2019 remained at the level of 100.2 million b/d due to coordinated production cuts since January and other factors.

Coordinated production cuts by OPEC-plus: Stronger efforts to cut production since January



Source: IEA "Oil Market Report", OPEC "Monthly Oil Market Report"

- Due to stronger efforts to cut production, the production volume of OPEC-plus countries in the first quarter of 2019 fell significantly by 2.3 million b/d (4.2%) year-on year to 54.5 million b/d.
- Qatar's withdrawal from OPEC and fall in production accompanying economic sanctions on Iran and Venezuela are also reasons for the fall in production.

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OPEC and non-OPEC Ministerial Meeting : Coordinated production cuts to be extended by 9 months



		Developments surrounding coordinated production cuts
Joint Press Conference C* OPEC and ease OPEC Ministerial Meeting	Sep 2016	Extraordinary Meeting of the OPEC Conference, agreement on production cut policy
	Dec 2016	Agreement on coordinated production cuts of 1.8 million b/d, based on "Declaration of Cooperation."
	Jun 2017	6 countries including Saudi Arabia cut diplomatic ties with Qatar
	Nov 2017	Extension of coordinated production cuts till end of 2018
	Spring 2018	Realization of demand-supply rebalance (average level for past 5 years)
	Jun 2018	Agreement to ease production cuts (response to sanctions on Iran, etc.)
	Nov 2018	Embargo on import of oil produced in Iran (8 countries excluded)
	Dec 2018	Agreement to cut production by 1.2 million b/d (from actual production in October)
	Jan 2019	Qatar withdraws from OPEC/Conflict in Venezuela
	May 2019	Intensification of U-SIran confrontation, suspension of exclusion from
		import embargo

Press conference after the meeting Source: OPEC HP

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[Main agreements reached at OPEC and non-OPEC Ministerial Meeting (July 2)]

1. Extension of agreement on production cut (Dec 2018) for nine months till end of March 2020

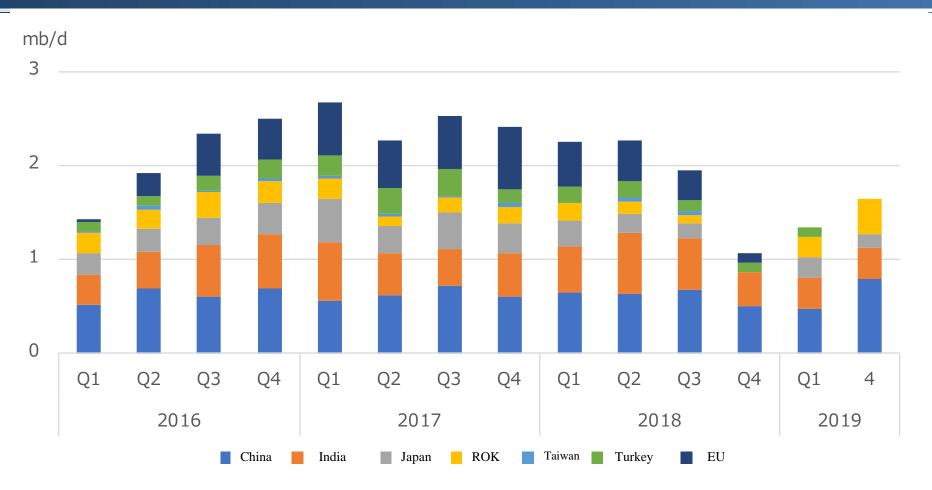
2. Adoption of Cooperation Charter on the framework of OPEC-plus

3. Next meeting to be held on December 6, 2019 (OPEC General Meeting on December 5)

With the renewal of the production cut agreement, it is expected that full compliance will continue to be attained.

This agreement was decided on substantively in a meeting between President Putin and Crown Prince Mohammad at the G20 Summit despite opposition from Iran, and with the adoption of the Cooperation Charter as well, drew attention to the deepening relationship between Russia and OPEC.

Iran's oil exports: Possibility of further reduction



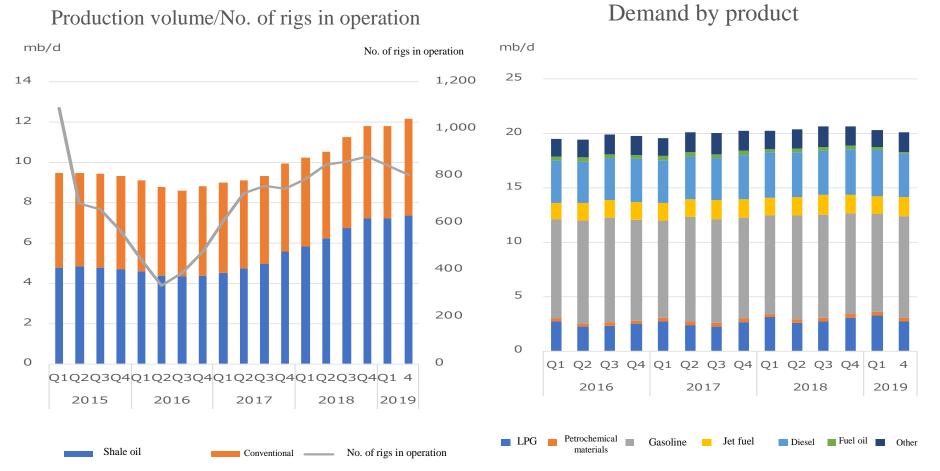
Source: Prepared based on Trade Statistics and MEES

- Exports increased temporarily in the first quarter of 2019, mainly to Japan and ROK, due to the temporary stay on the embargo on oil imports from Iran.
- Production volume of 2.4 million b/d and exports falling to 0.8 million b/d in May 2019? Possibility of further reduction.

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Oil demand and supply in the U.S.: Trend of continued increase in production



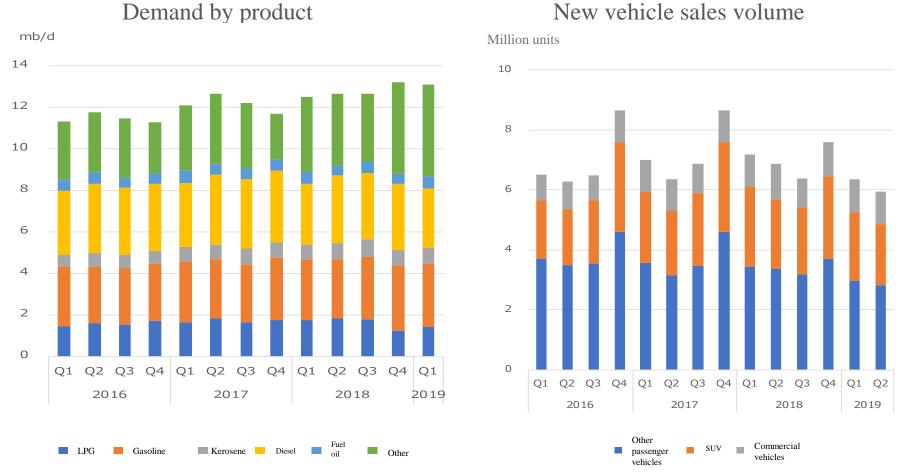


Source: EIA statistics, Baker Hughes "North America Rig Count"

- Production volume for the first quarter of 2019 increased by 1.6 million b/d (15.7%) year-on-year to 11.8 million b/d, while demand increased by 0.1 million b/d (0.5%) year-on-year to 20.3 million b/d.
 - EIA predicts an increase in production of 1.4 million b/d from 2018 to 2019.

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China's oil demand: Signs of a slowdown



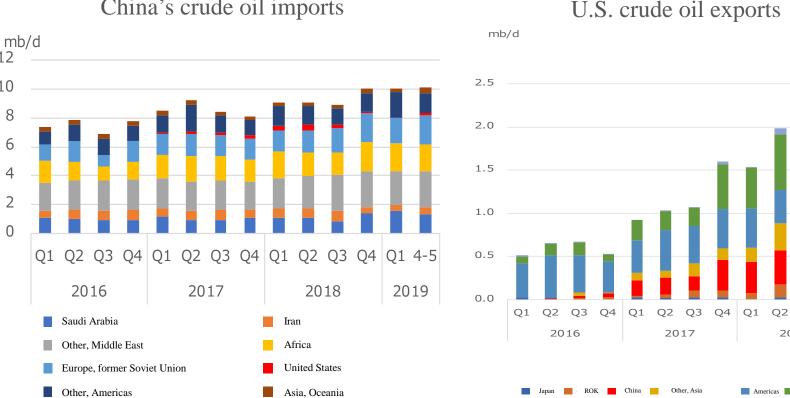
Source: APEC "EGEDA Database", China Association of Automobile Manufacturers statistics

- Demand for the first quarter of 2019 increased by 0.6 million b/d (5.0%) year-on-year to 13.1 million b/d. New vehicle sales volume slowed down, falling by 0.9 million units (13.0%) year-on-year in the second quarter of 2019 to 6 million units.
- The pace of demand growth is expected to fall as a result of a slowdown in economic growth.

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U.S.-China trade war and oil trade between the two countries



China's crude oil imports

12

10

8

6

4

2

0

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Source: EIA statistics, China OGP, OPEC statistics

In the first quarter of 2019, among China's crude oil imports, the volume of crude oil imported from the U.S. fell significantly from 4% in the previous year to 0.1%. Among U.S. crude oil exports, the volume exported to China fell dramatically from 23.4% in the previous year to 2.9%. China is moving forward on switching mainly to Saudi Arabia as its alternative supplier, while the U.S. is moving forward on switching to ROK and other countries as its alternative supply destination.

If the trade friction between the U.S. and China intensifies or becomes prolonged, it could also have an impact on other economies, and possibly bring about a decline in demand and give rise to the risk of pushing down prices.



Q3

2018

Q4

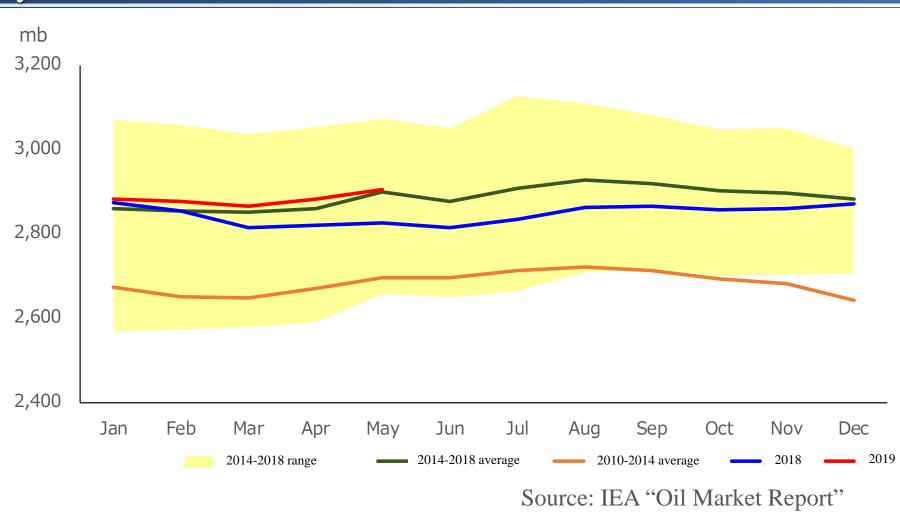
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Inventory: Marginally above the average for the past five

years

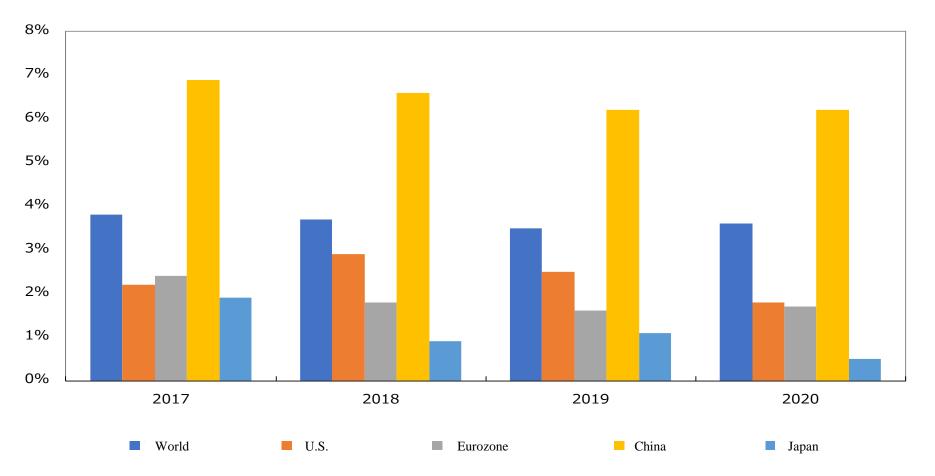
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- OECD commercial inventory level in May 2018 increased to a level marginally above that of the average of the past five year.
- Despite increase in production by the United States, production cuts by OECD-plus and other factors may contribute to a fall in inventory level in the second half of 2019.

Forecast of GDP growth rate: Slowdown in 2019, slight recovery in 2020

Growth rate

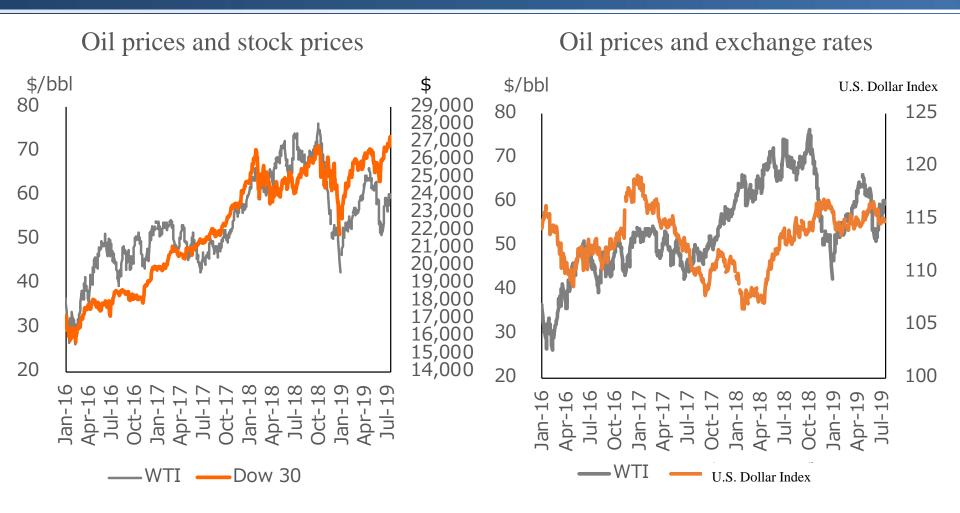


- According to IMF's forecast for GDP growth, a slowdown is predicted across the board for 2019, with global growth rate at 3.3% (against 3.6% in the previous year). This is expected to recover slightly in 2020 at 3.5%.
- IMF's forecast for global growth in 2019 was revised downward from the October 2018 forecast of 3.7%.

Financial markets

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Source: FRB statistics

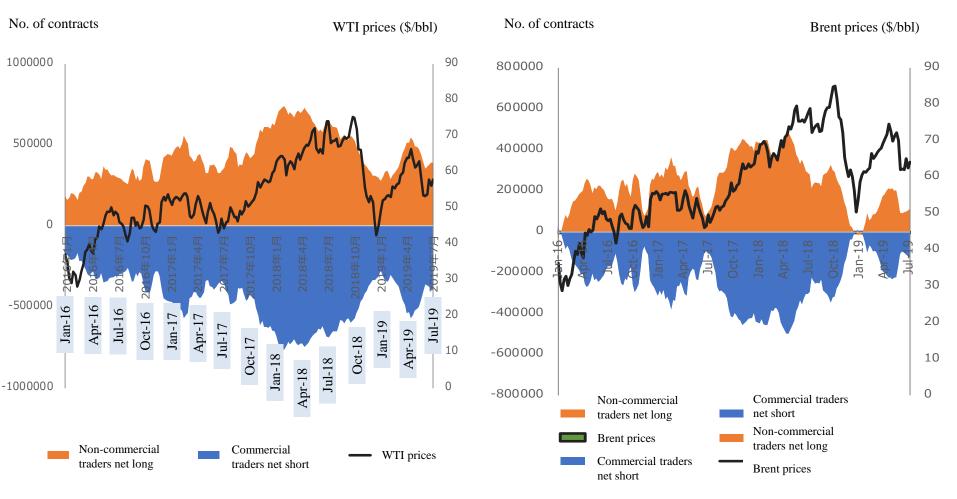
- Both oil prices and stock prices recovered with the decrease in risk aversion, and U.S. stock prices hit a record high on July 15.
- U.S. dollar is moving within a relatively low range due to expectations of a cut in U.S. interest rates.

Futures position

WTI



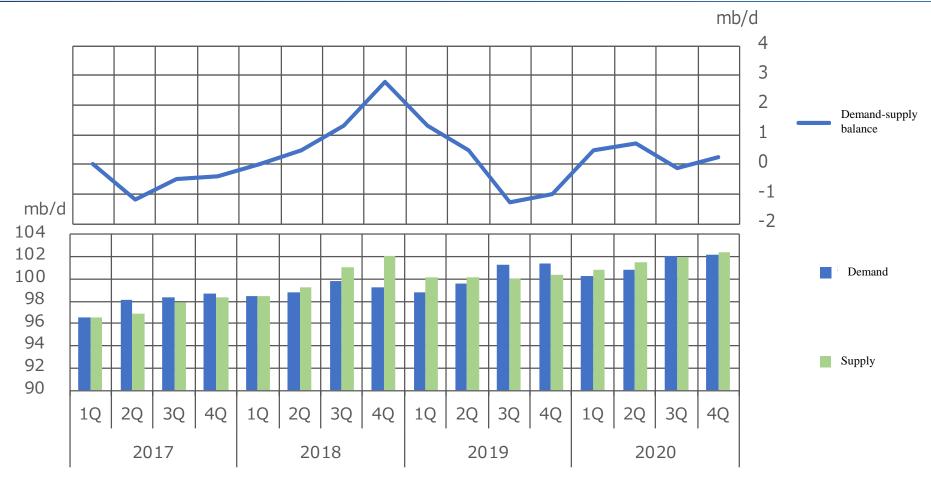
Brent



Source: CFTC, ICE

The net long range for non-commercial traders recovered slightly after the start of the year, but resumed the downward trend once again.

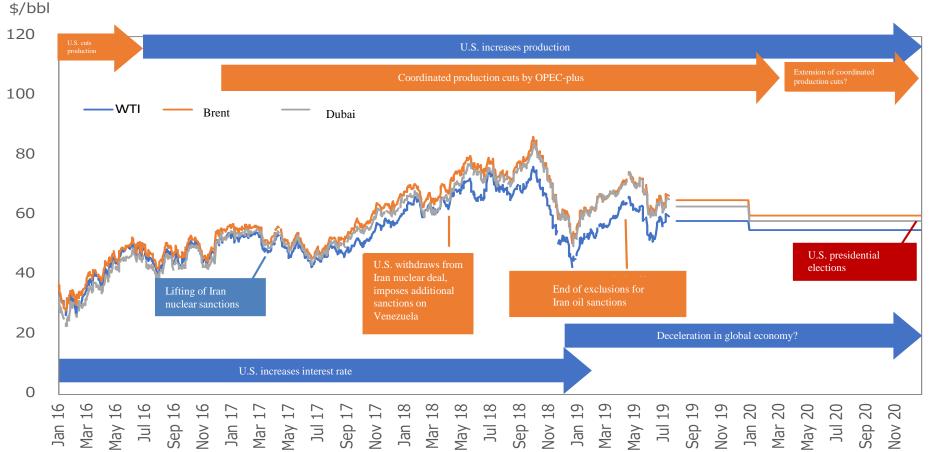
Forecast of demand-supply balance: Slight tightening in the second half of 2019



• For 2019, average demand was 100.3 million b/d and average supply was 100.2 million b/d. For 2020, demand and supply are expected to reach a balance at an average level of 101 million b/d to 102 million b/d.

• Although there was a slight tightening in the second half of 2019 due to factors such as the coordinated production cuts, there is a possibility of a balance in the first half of 2020 due to increased production by the U.S. and other factors.

Forecast of crude oil prices: \$60 – 70 for the second half of 2019



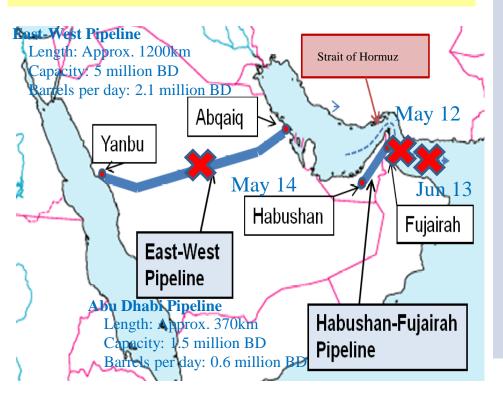
- International crude oil prices (Brent) are expected to be at the level of 60 70 in the second half of 2019. The price level is expected to remain generally the same in 2020, with prices staying at a low level within a range of fluctuation.
- The main elements of uncertainty include geopolitical risks such as the heightening of tensions surrounding the Iran situation, disruptions to supply, and macroeconomic risks such as the intensification of the U.S.-China trade war. 15

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High-price scenario: Heightened geopolitical risks

Strait of Hormuz : World's largest strategic point for oil transportation

21 million barrels/day of oil being transported (2018) Approx. 80% of Japan's oil imports pass through



Recent confrontation between U.S. and Iran

Jul 2015	Iran nuclear deal enacted
May 2018	U.S. announces withdrawal from nuclear deal
Aug 2018	Resumption of economic sanctions on Iran
Nov 2018	Enforcement of oil import embargo postponed
	for 180 days
Apr 2019	Islamic Revolutionary Guard Corps recognized
	as terrorist organization
May 2, 2019	Postponement of oil import embargo
	enforcement cancelled
May 5, 2019	U.S. military dispatches aircraft carriers and
	bombers
May 8, 2019	Iran partially suspends fulfilment of nuclear
	deal
/lay 12, 2019	Four tankers explode off the coast of Fujairah
1ay 14, 2019	Attacks on Saudi pipeline
1ay 24, 2019	Increased dispatch of 1,500 personnel from U.S,
	military
Jun 13, 2019	Two tankers explode on the Gulf of Oman
Jun 20, 2019	Iran shoots down U.S. drone
Jun 24, 2019	U.S. strengthens sanctions on Iran

Attention drawn to explosions not at the Strait of Hormuz, but near the exit and the bypass pipeline. Although it is difficult to imagine that the Iranian government would block the strait, **in the high-price scenario** in which geopolitical risks emerge, such as concerns of a military clash caused by incidental events, prices are expected to reach the **high level of \$15/B**.

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Low-price scenario: Heightened macroeconomic risks

【Downward revision of global oil demand】 EIA short-term forecast (June): Growth for 2019 at 1.4 million BD year-on-year⇒1.2 million BD IEA Oil Market Report (June) : Growth for 2019 at 1.3 million BD year-on-year⇒1.1 million BD Downward revision for two consecutive months, 1.4 million BD until the April report [Downward revision of forecast of crude oil prices] EIA short-term forecast (June): Brent 3rd quarter $73/B \Rightarrow 67/B$ 4th quarter $70/B \Rightarrow 68/B$ Bank of America Merrill Lynch (Jun 14) : Brent Second half of 2019 \$68/B \Rightarrow \$63/B

[Main macroeconomic risks]

1 U.S-China trade war

Concerns of intensification and prolonging of the situation; resolution is expected to take time.

The Chinese economy is already showing signs of a slowdown, with sluggish growth in oil demand.

Going forward, there are concerns of significant impact on the economies of related countries such as Japan, ROK, and EU.

1 Brexit

Brexit will have an impact not only on the British economy, but on the overall economy of Europe.

In particular, Europe's economy will be thrown into a state of confusion in the event of a "no-deal Brexit."

In the **low-price scenario** with heightened macroeconomic risks, prices are expected to reach the **low level of \$10/B**.