

The 437th Forum on Research Work (December 24, 2020)

Outlook and Challenges for Oil Market

Institute of Energy Economics, Japan

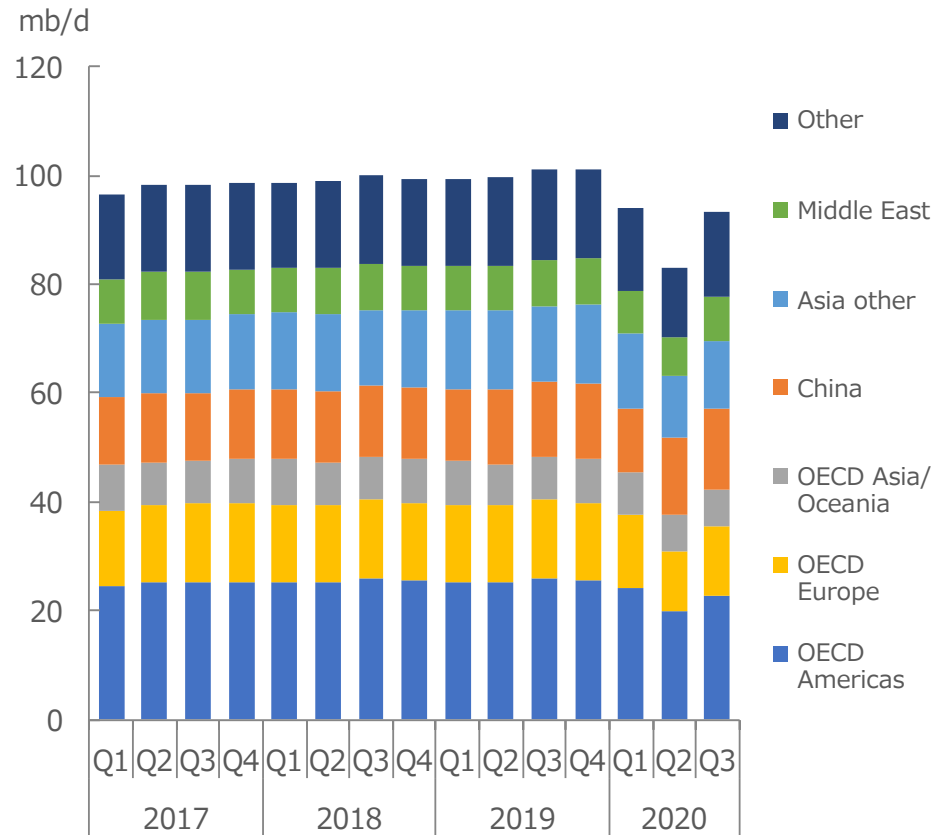
Yoshihiro Hashizume, Secretary General
Oil Information Center

Key Points of the Report

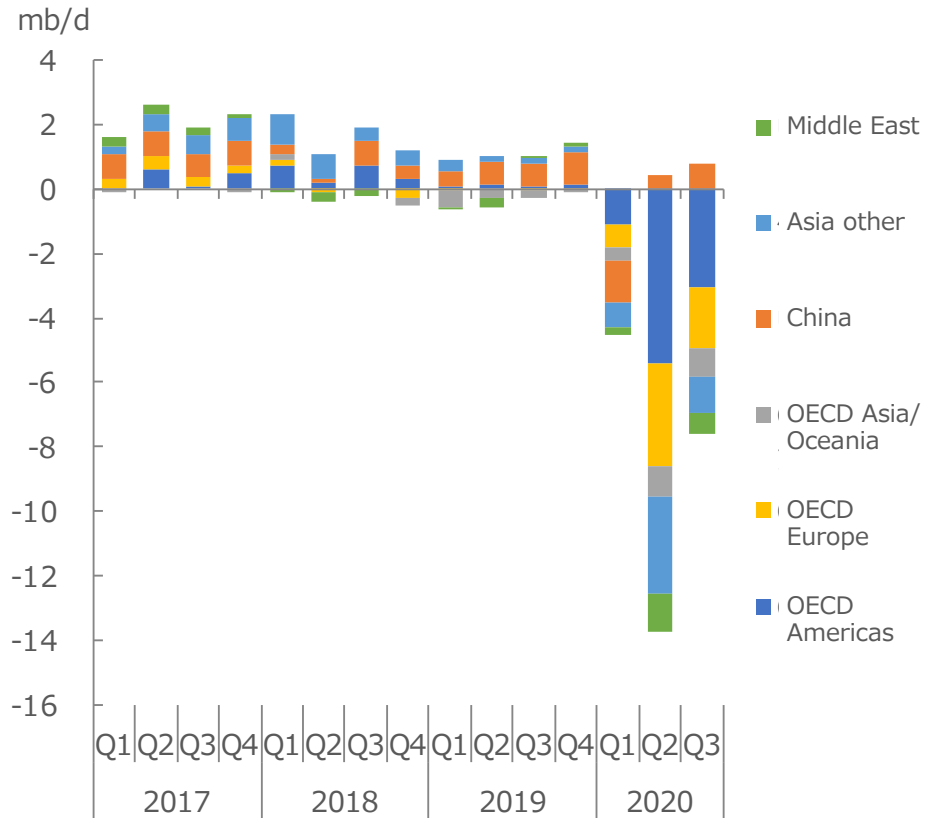
- ✓ Although global oil demand in 2021 will grow to 97.9 million b/d, a 6.6 million b/d increase over 2020, owing to a slowdown in COVID-19 cases and to the growing economic recovery, it will not surpass the level in 2019 (which was 1.9 million b/d higher). Supply will also increase by 4.3 million b/d over 2020 to 99.5 million b/d. While 2021 should see a slight oversupply, continued demand growth should find the market gradually reach a supply-demand equilibrium.
- ✓ International oil prices (Brent Crude) will average \$50/bbl, fluctuating in a \$5 range. Uncertainties that could lead to lower prices include the lingering COVID-19 pandemic, global economic stagnation, a quick recovery of production in Iran (due to loosening of economic sanctions), loosening production decreases by OPEC Plus, and increased U.S. oil production (-5 USD compared to the base scenario). Conversely, factors that could boost prices include ending the pandemic quickly, an upturn in the global economy, demand led by China, and increased tensions in the Middle East (+5 USD compared to the base scenario).
- ✓ Further decarbonization is expected in Japan. This will require oil industry players to make parallel efforts to reinvent business models while maintaining a stable oil supply, including for depopulated areas, even during times of emergency, SS measures for depopulated areas and maintaining a stable oil supply, including during times of emergency.

Oil Demand

Demand



Demand change

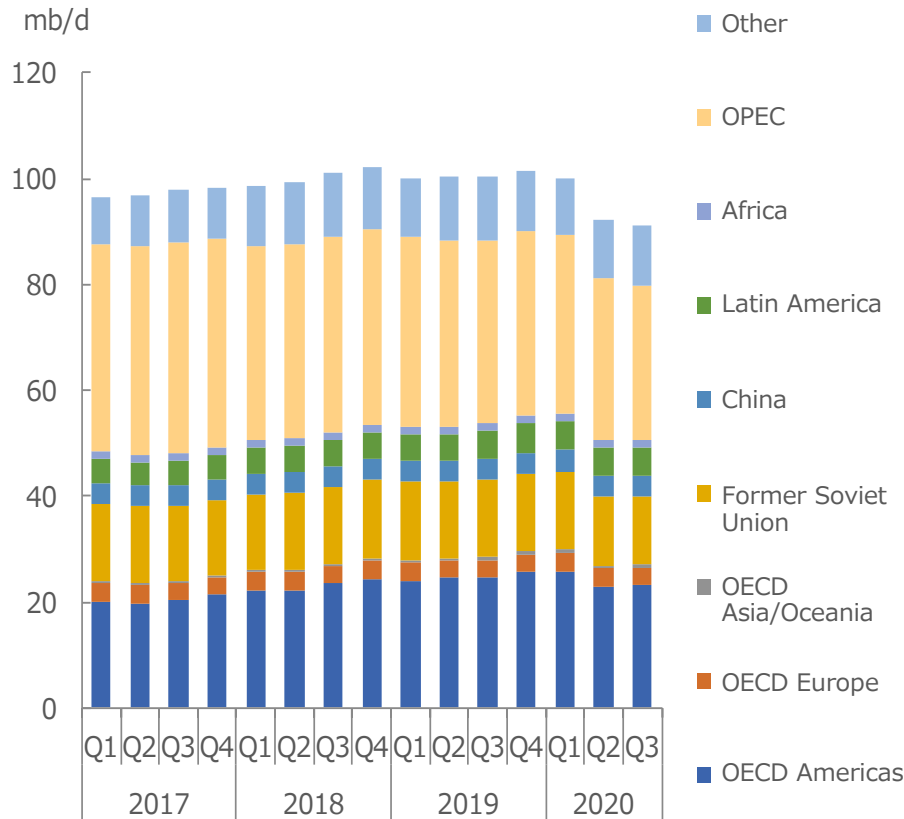


Source: IEA, *Oil Market Report*

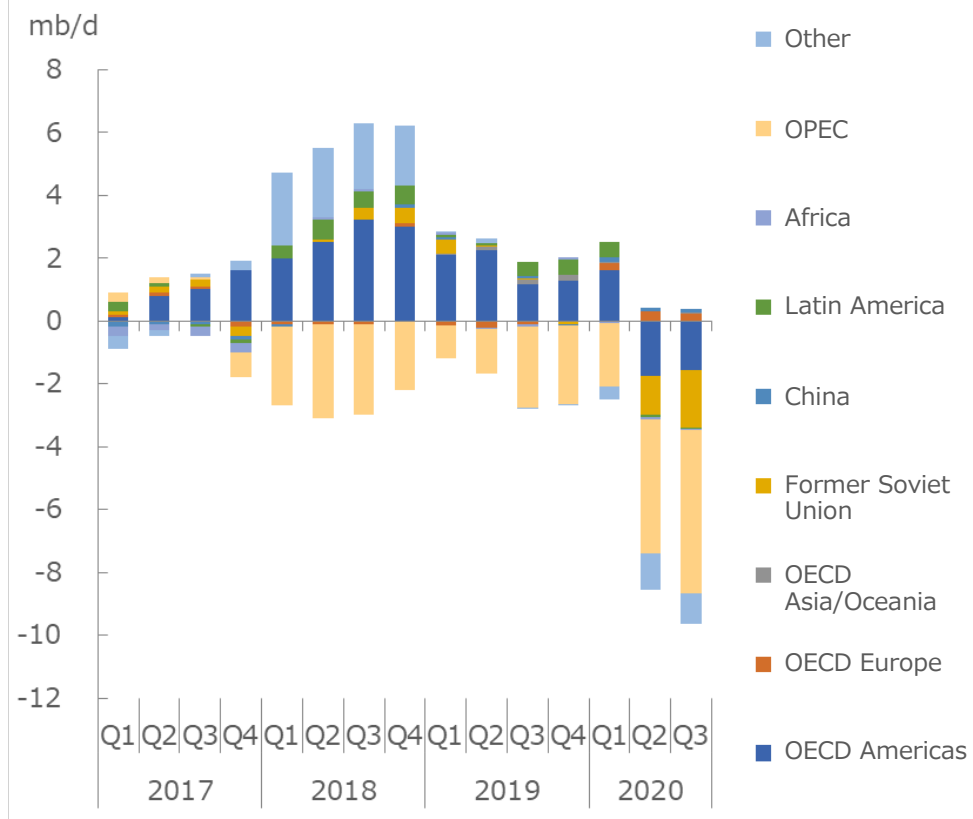
- 3Q 2020 demand decreased 7.8 million b/d year-over-year (7.8%) to 93 million b/d. While this is a significant rise up from the 83.1 million b/d (down 16.2 million b/d year-over-year) of 2Q, when COVID-19 broke out, a second wave of COVID-19 cases is seeing this recovery falter, especially for jet fuel.

Oil Supply

Production



Production change (year-over-year)

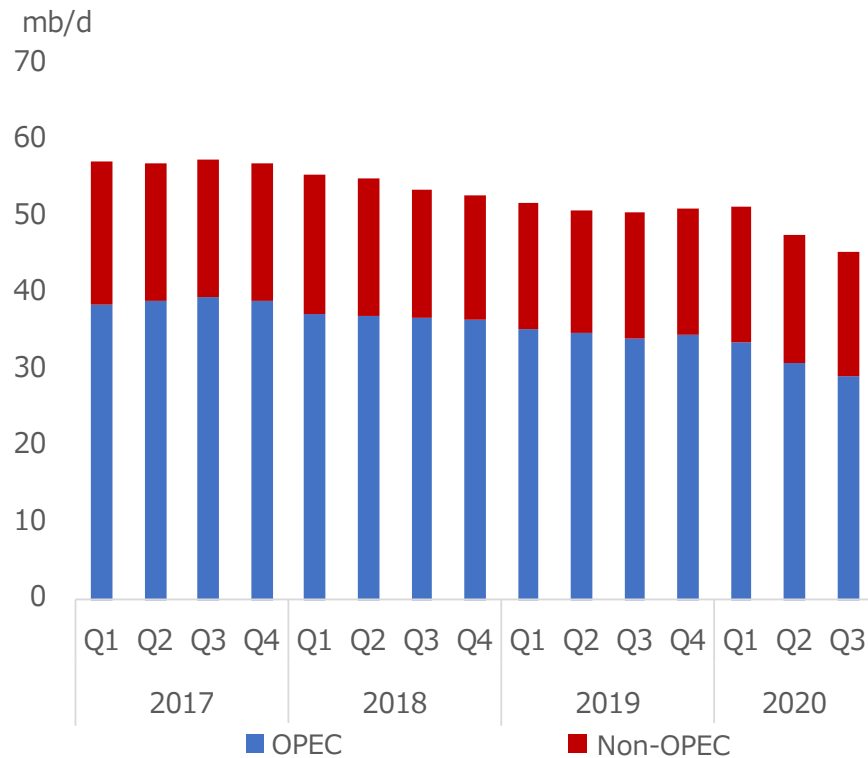


Source: IEA, *Oil Market Report*

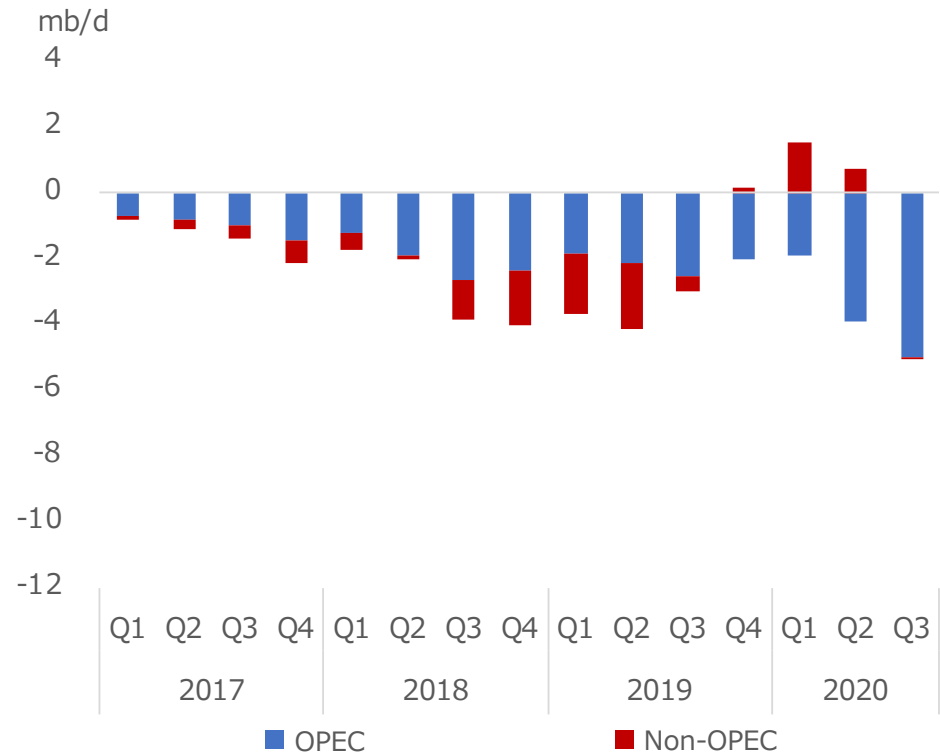
- 3Q 2020 production decreased 9.2 million b/d year-over-year (9.2%) to 91.1 million b/d.
- Production dropped to 92.1 b/d of 2Q 2020 due to decreased production by OPEC Plus and slow recoveries in production in the U.S., Canada, and elsewhere.

OPEC Plus coordinated production cut

Production



Production change (year-over-year)

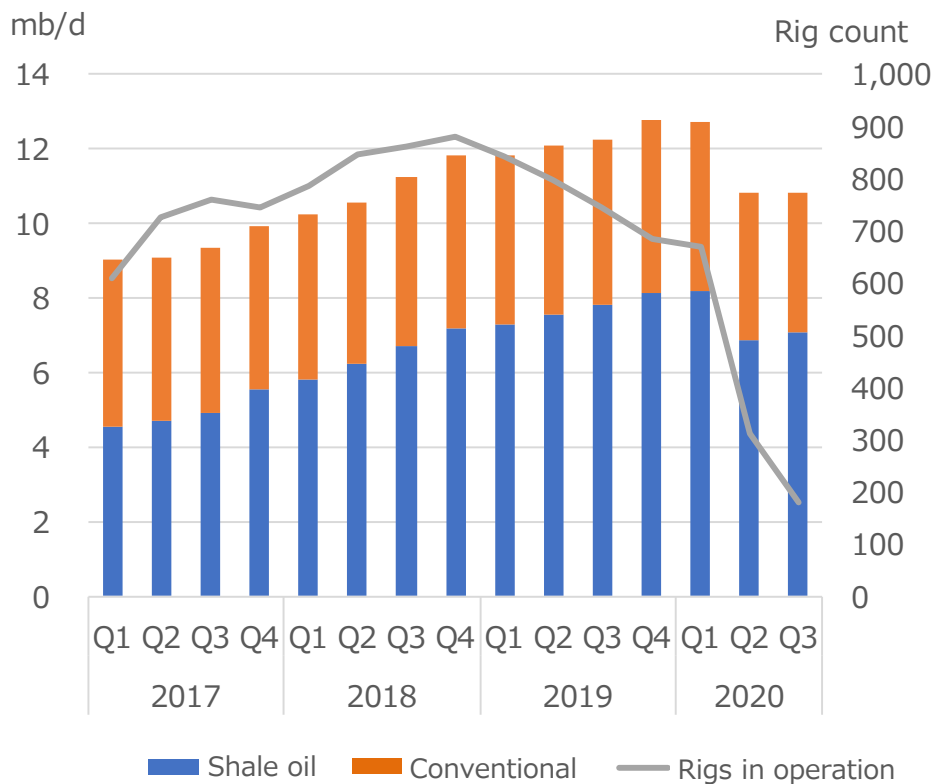


Source: IEA, *Oil Market Report*; OPEC, *Monthly Oil Market Report*

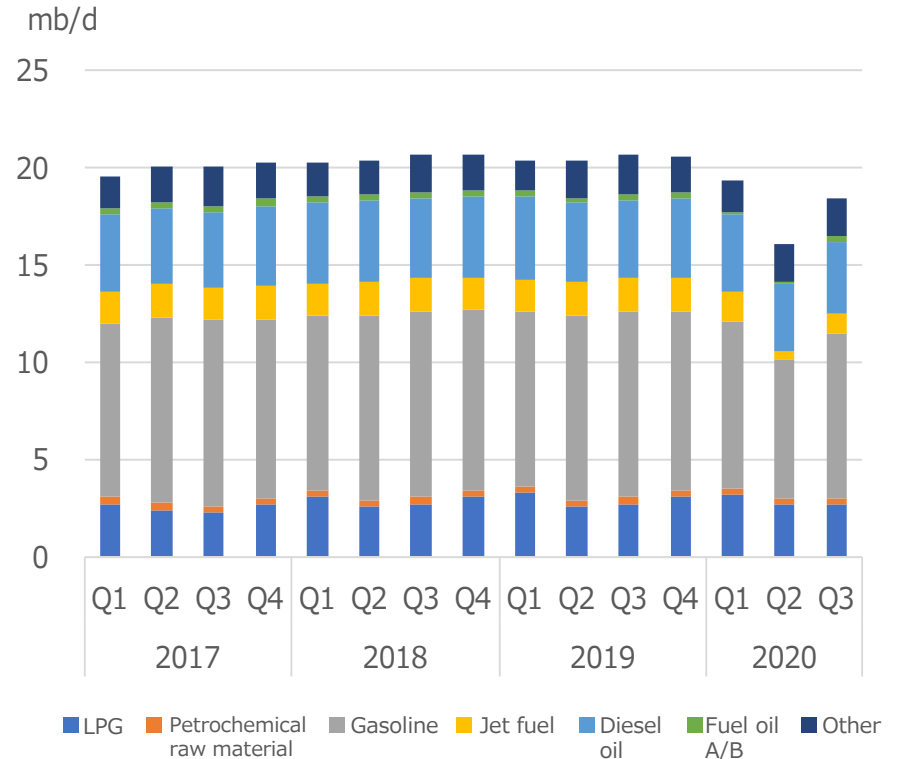
- OPEC Plus's November 2020 production volume was 34.3 million b/d, with a production cut compliance rate of 101%. OPEC Plus agreed to increase production by 0.5 million b/d (7.2 million b/d) on December 1.
- It is expected to decide on the extent of the decrease based on the supply and demand situation.

U.S. supply and demand

Production and rigs in operation



Demand by product

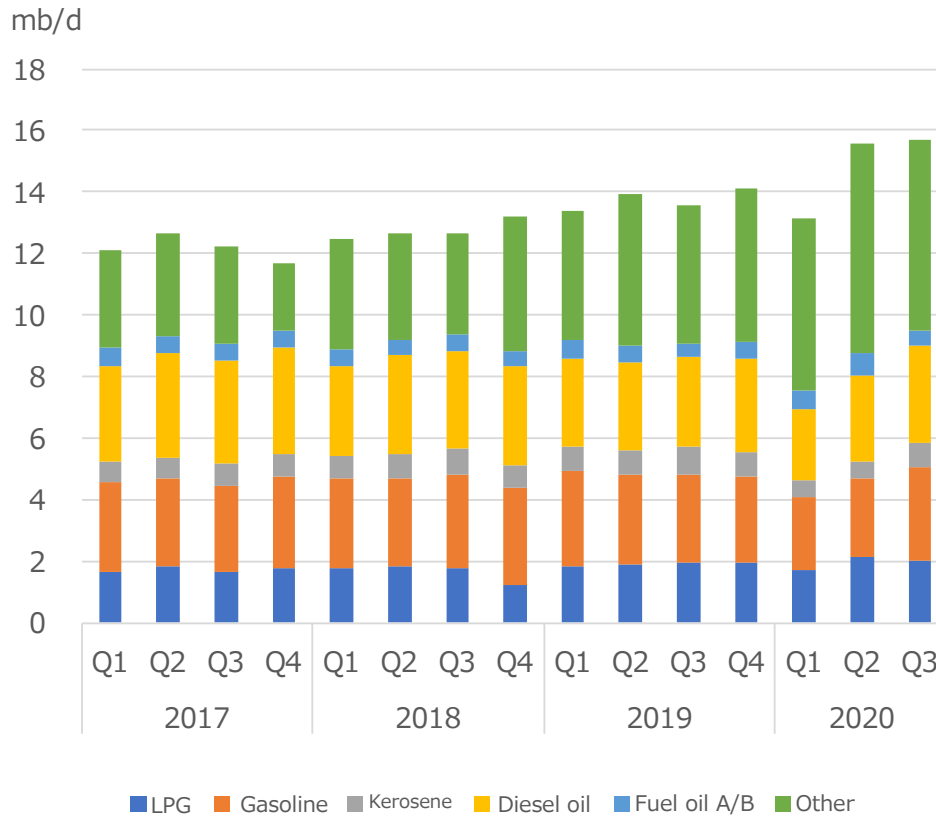


Source: EIA statistics, Baker Hughes

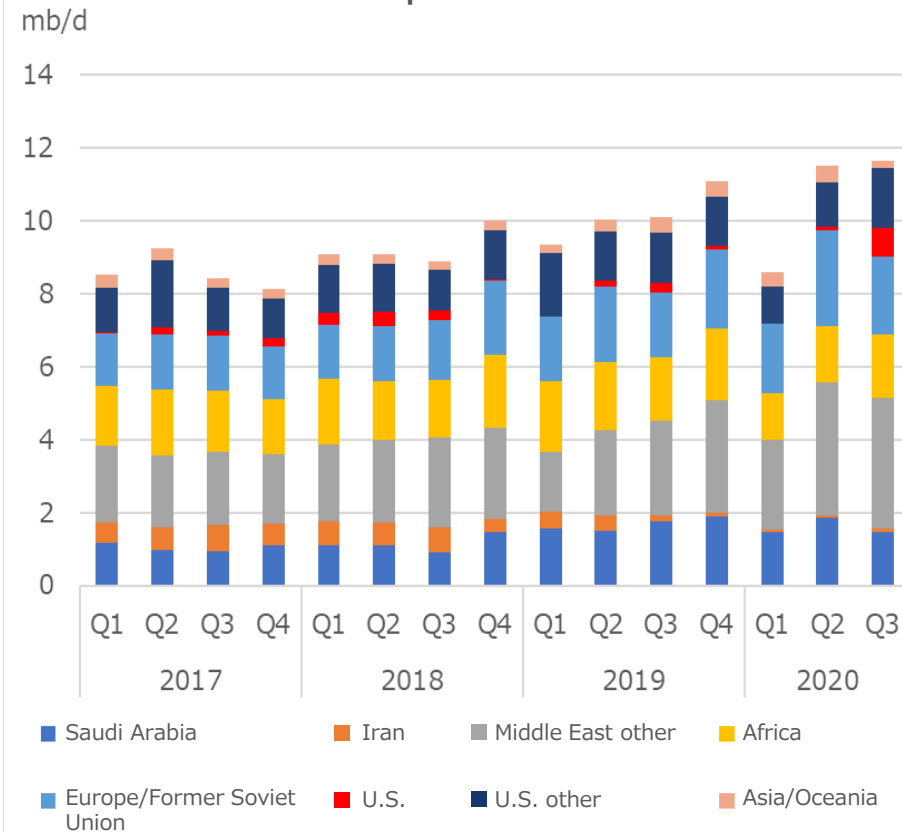
- 2Q 2020 demand decreased 4.2 million b/d year-over-year (20.8%) to 16.1 million b/d. The rate of decrease by oil type for the period was 75.9% for jet fuel and 25.0% for gasoline. By month, production hit bottom at 14.7 million b/d in April and recovered to 18.4 million b/d by August.
- 2Q 2020 production decreased 1.3 million b/d year-over-year (10.7%) to 10.8 million b/d. By month, production hit bottom at 10.02 million b/d in May and recovered to 10.58 million b/d by August.

China supply and demand

Demand by product



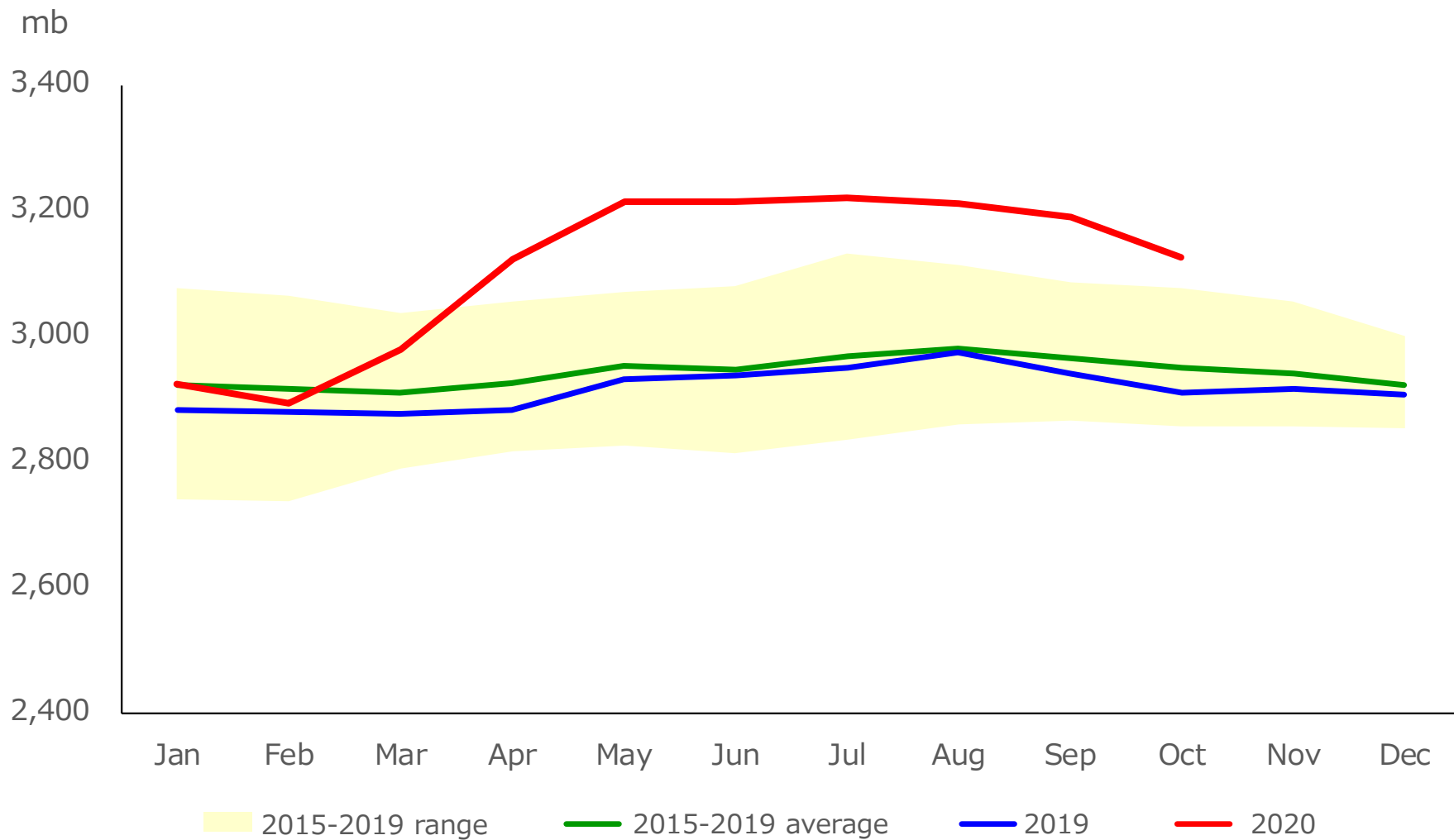
Oil import volume



Source: APEC, EGEDA Database; China OGP

- 2Q 2020 demand decreased 1.07 million b/d year-over-year (12.0%) to 15.6 million b/d, a quick turnaround from the 13.1 million b/d of 1Q.
- Due to trade friction between the U.S. and China, there is no import record from the U.S. for December 2019 through May 2020.

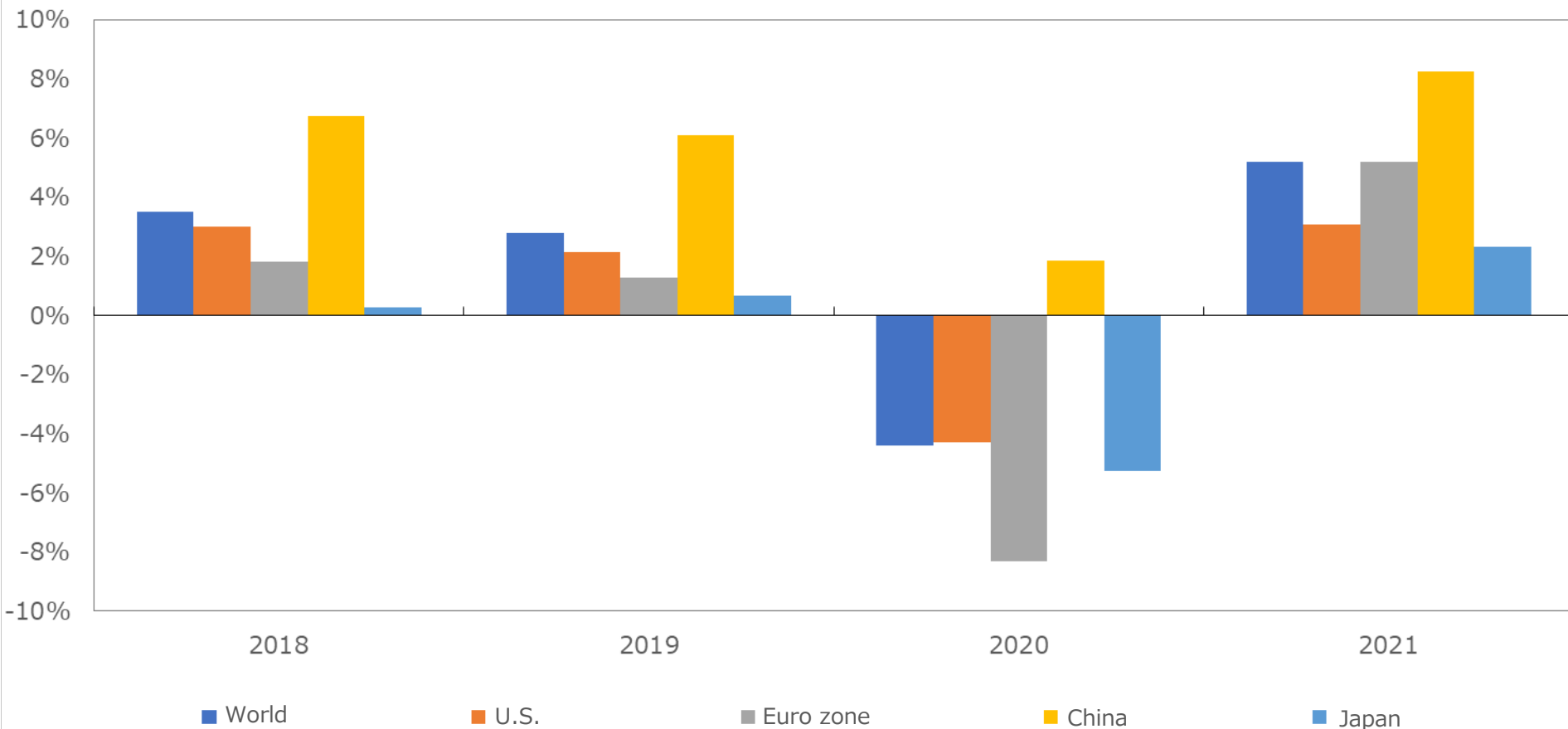
Inventories



Source: IEA, *Oil Market Report*

- OECD commercial oil inventories continue to rise, currently at a high 3.129 billion barrels as of October.

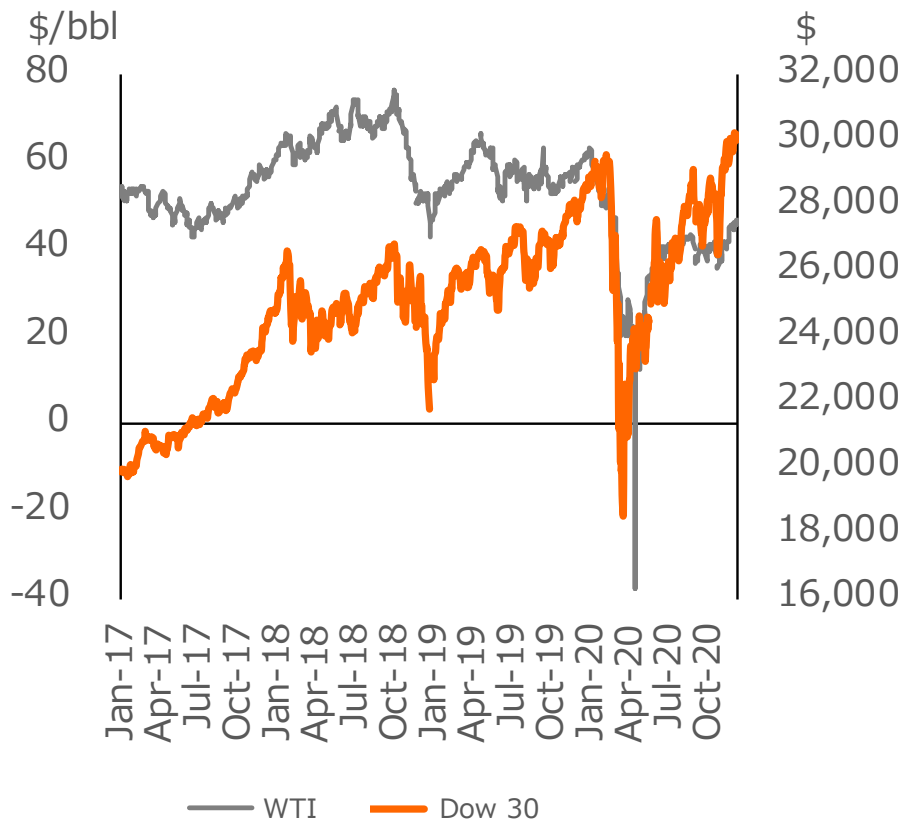
Economic growth rate



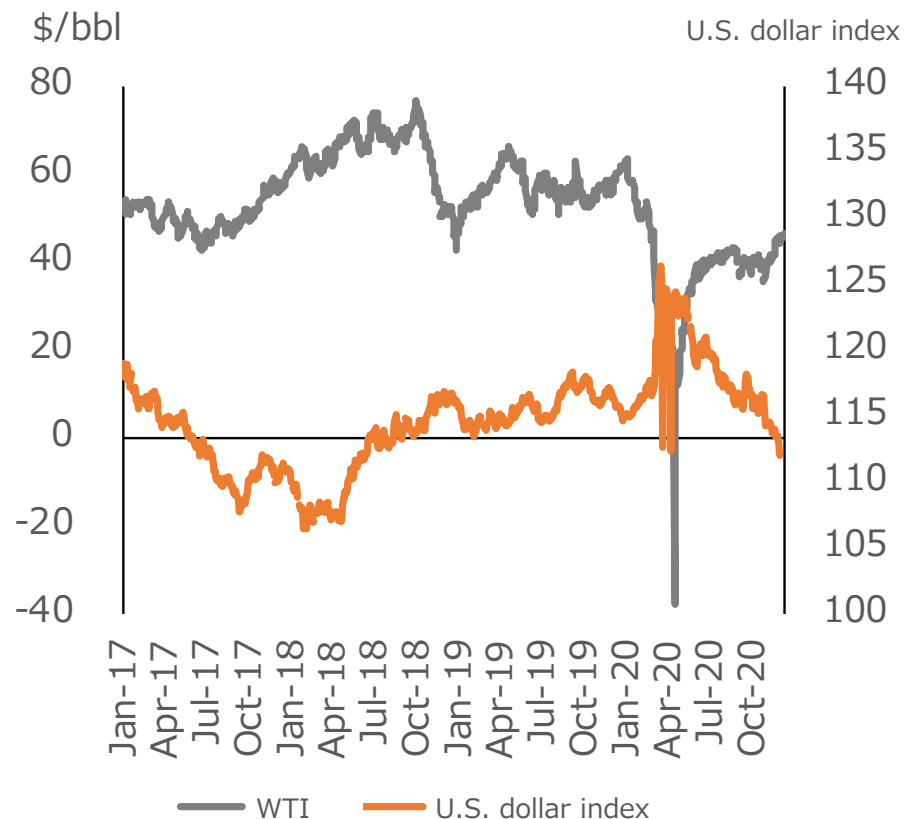
Source: IMF, *World Economic Outlook*

- The IMF forecasts a global economic growth rate of -4.4% for 2020 and 5.2% for 2021. The forecast released in June revised 2020 upward and 2021 downward.

Oil prices and stock prices



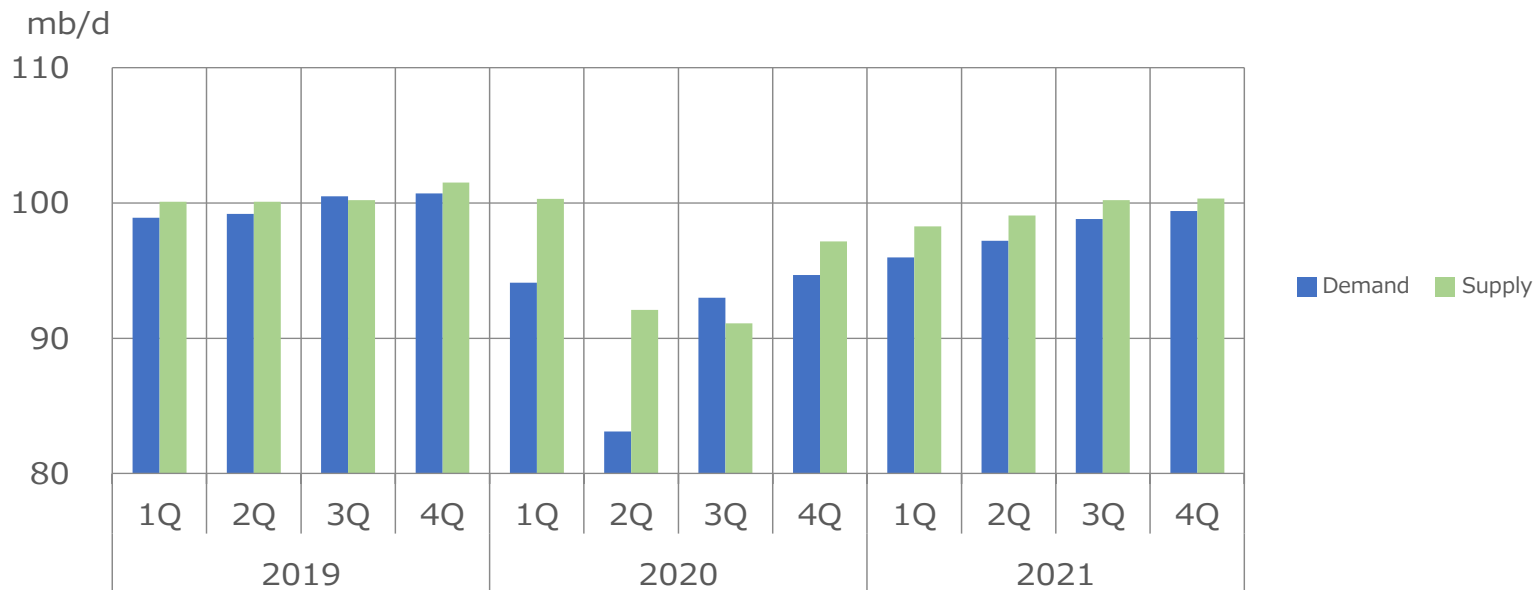
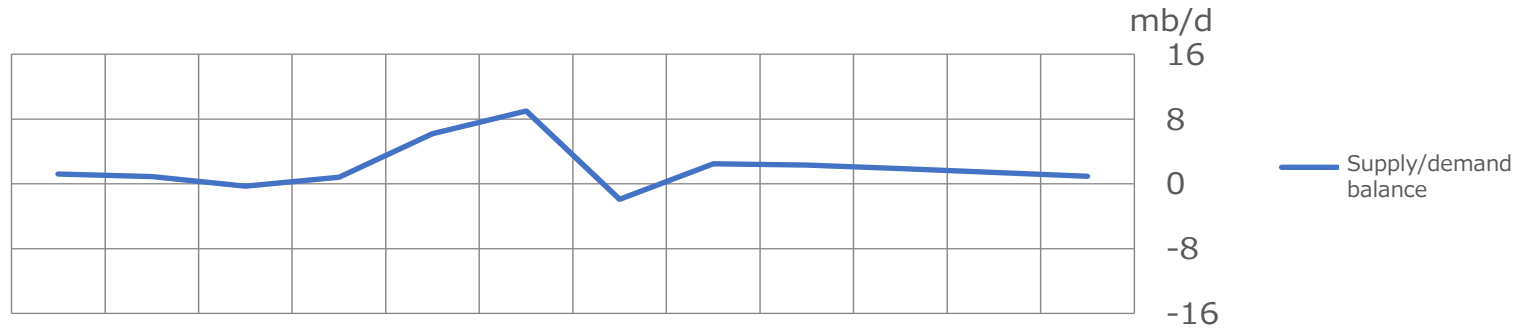
Oil prices and exchange rates



Source: FRB statistics

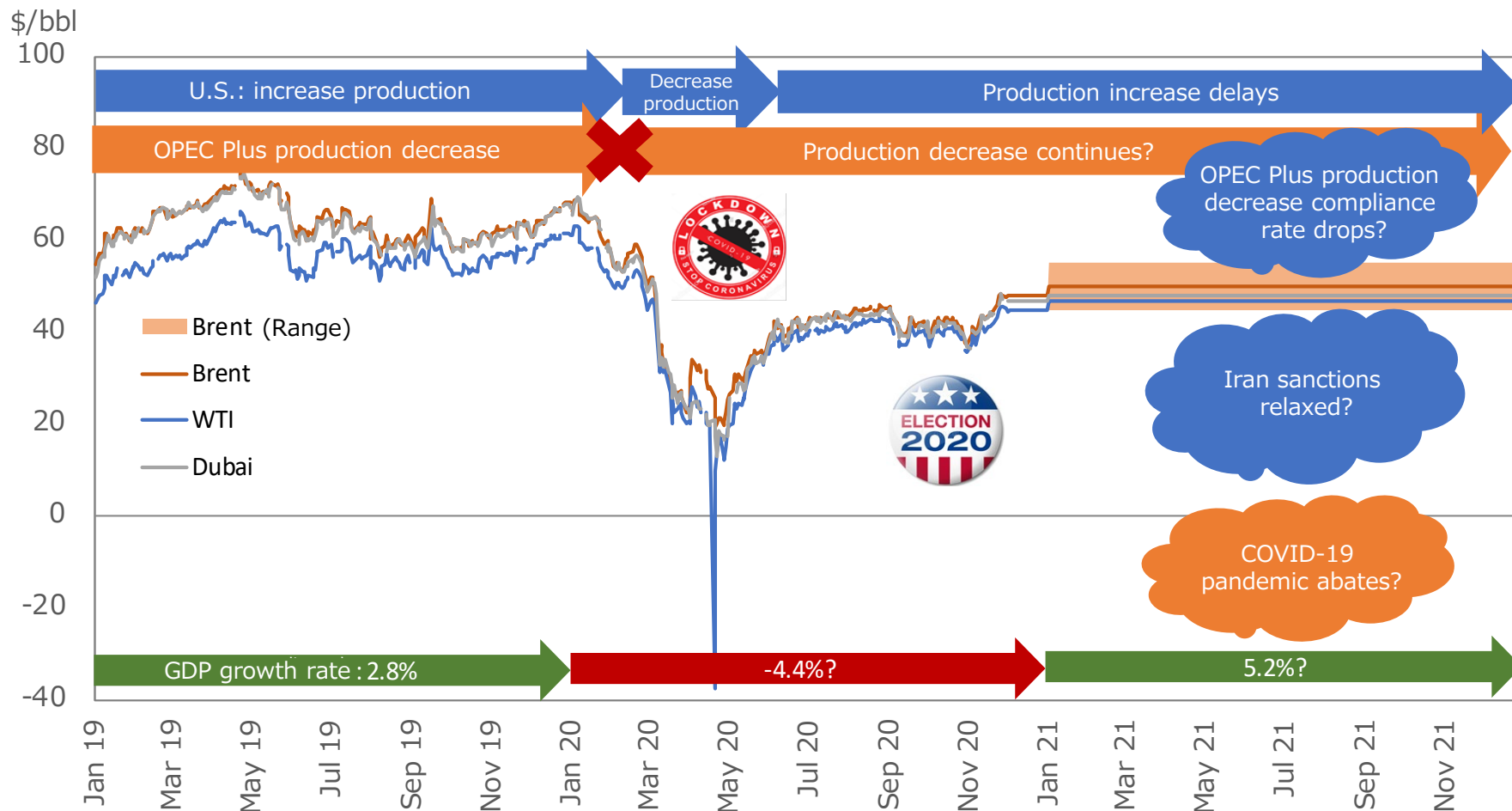
- Although there was some degree of correlation between U.S. stock prices and oil prices when oil prices dropped due to COVID-19 and when they rose afterwards, a divergence was seen when oil prices stagnated amid the second wave of infections that began in August 2020. However, stock prices once again synchronized with oil prices starting in November, when expectations towards a vaccine began driving stock prices up.

Supply-demand balance forecast



- Although oil demand in 2021 will grow to 97.9 million b/d, a 6.6 million b/d increase over 2020, it will not surpass the level in 2019 (which was 1.9 million b/d higher).
- Supply will also increase by 4.3 million b/d over 2020 to 99.5 million b/d. While 2021 will see a slight oversupply, continued demand growth will find the market gradually reach a supply-demand equilibrium.

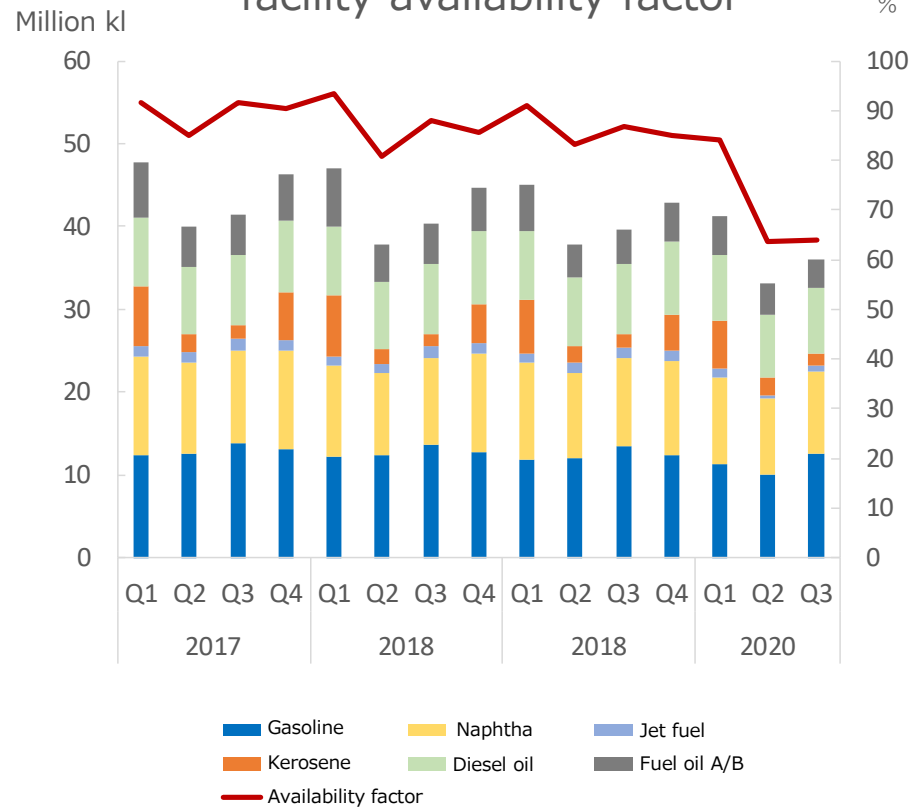
Oil price forecast



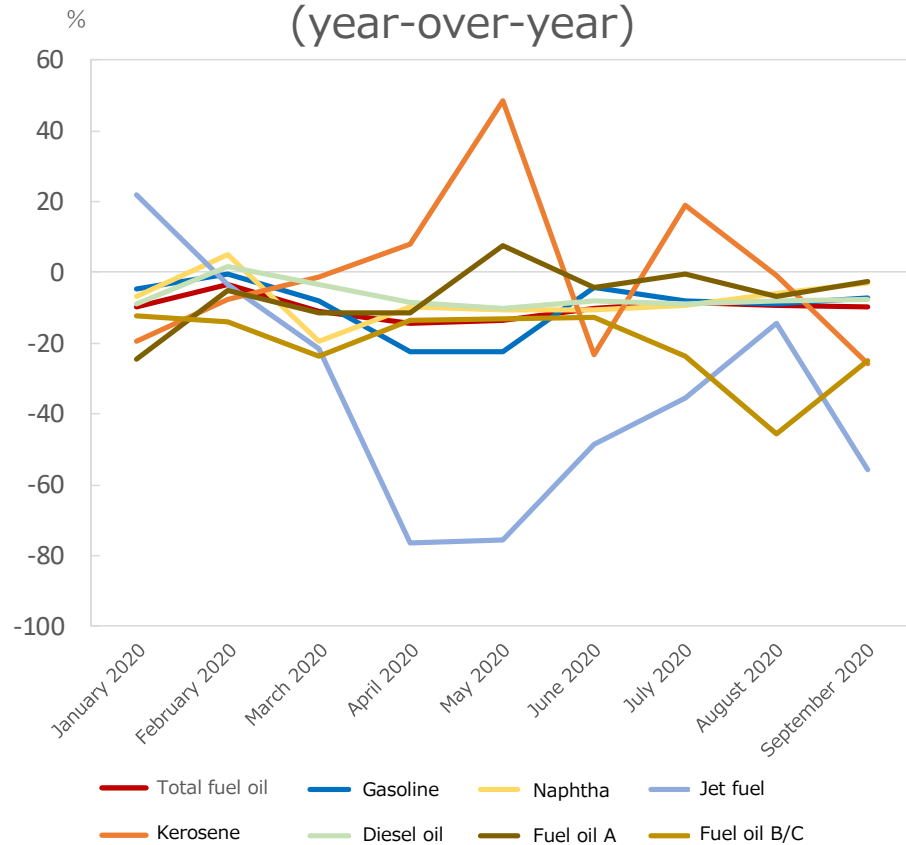
- International oil prices (Brent Crude) will average \$50/bbl in 2021, fluctuating in a \$5 range.
- Downward price pressure could come from a prolonged pandemic, global economic stagnation, loosening OPEC Plus production decreases, expeditious Iran production increases, and U.S. production increases (-5 USD compared to the base scenario). Upward price pressure could come from a quick end to the pandemic, global economic strength, demand led by China, and tensions in the Middle East (+5 USD compared to the base scenario).

Japanese market

Fuel oil sales volume and refining facility availability factor



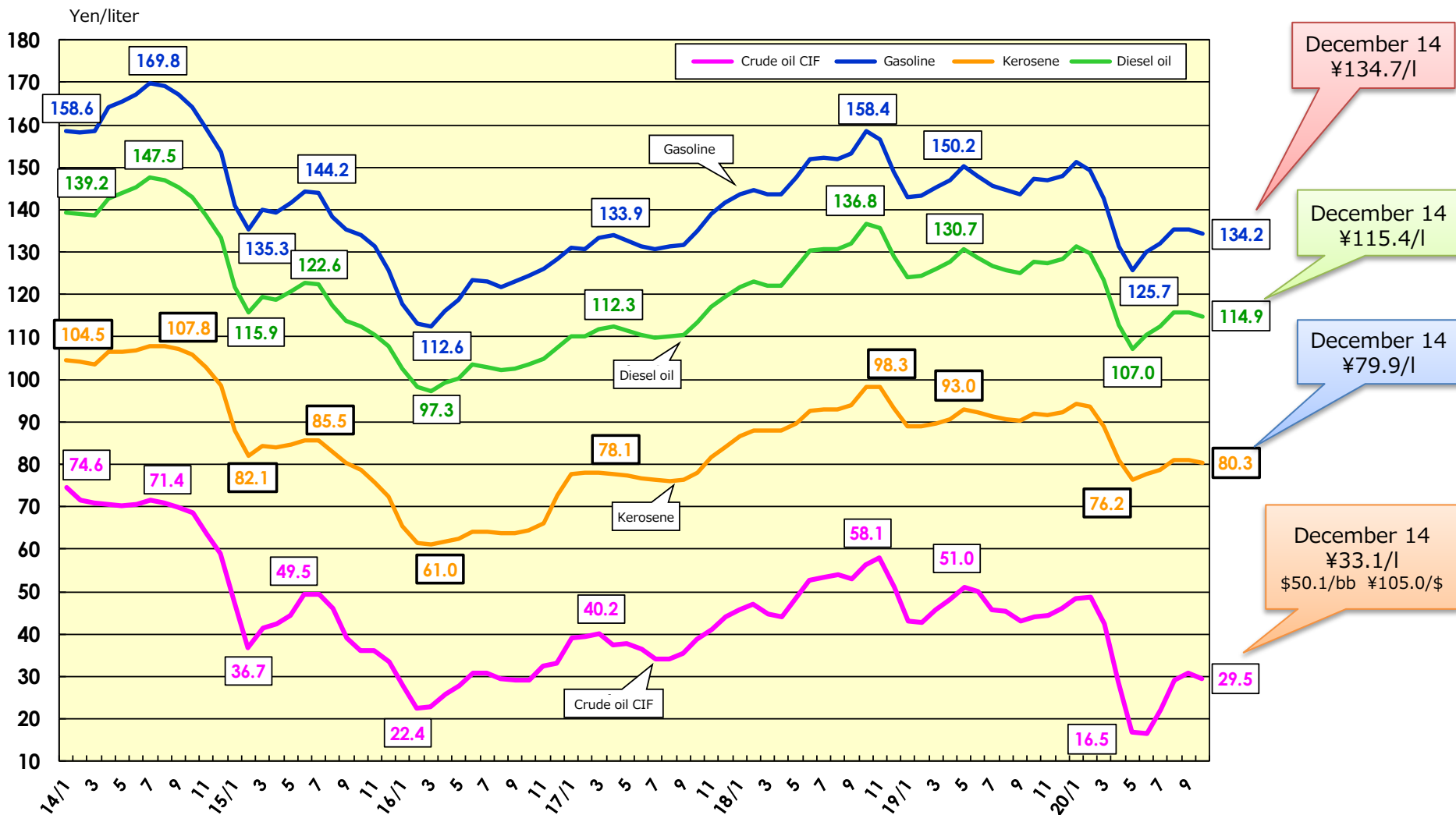
2020 product sales volume (year-over-year)



Source: Ministry of Economy, Trade and Industry

- Domestic oil (fuel oil) demand for 3Q 2020 was 11.98 million kl (2.46 million b/d) per month on average, a 9.1% (1.2 million kl) year-over-year decrease and 9.2% increase over 2Q's 11.02 million kl (2.26 million b/d).
- Topper utilization rate in refinery was 64% in 2Q 2018, and 59% in May alone, which are both low levels.

Domestic impact (3) Securing margin, with domestic market conditions tracking oil prices



- To date, the domestic petroleum products market has been tracking the procurement cost of crude oil, with a two-to-three-week lag
- Further decarbonization is expected in Japan. This will require oil industry players to invent business models while maintaining a stable oil supply, including for depopulated areas, even during times of emergency, SS measures for depopulated areas and maintaining a stable oil supply, including during times of emergency.