

KAPSARC Oil Market Outlook - Update

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Instant Insight

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China reported an outbreak of a SARS-like viral infection on December 31, 2019. The disease, officially named COVID-19, was first detected in Wuhan City, Hubei Province, China and continues to spread globally. Initial symptoms are similar to the common cold, but in severe cases it can cause pneumonia and even organ failure. The Chinese government has taken a number of steps to try to contain the virus, including extending the annual Lunar New Year holiday, restricting travel, and suspending some business activities. All of these measures will have some effect on the country's energy consumption. Given the growing concerns over COVID-19 and its impact on oil demand, KOMO has been updated and KAPSARC is examining a range of possible outcomes¹.

On February 3, Bloomberg reported that, over the course of a week, "Chinese oil demand has dropped by about 3 million barrels a day, or 20% of total consumption" (Cang, Blas and Cho 2020). This news caused concerns globally, both in relation to the oil market and the global economy, forcing gross domestic product (GDP) growth and oil demand forecasts to be revised down.

Some believe that the virus infection rate will be mitigated by warmer weather from April, four months after the outbreak began. The previous SARS and avian flu outbreaks in China also started to dissipate after fourth months. However, the Centers for Disease Control and Prevention in the United States noted that "the [corona] virus is probably with us beyond this season, beyond this year" (Howard 2020). Hence, there is considerable uncertainty regarding how long the decline in Chinese oil consumption could last.

Transportation fuels are likely to face the largest declines in consumption during the coming two quarters, while we expect fuels such as liquefied petroleum gas (LPG) for cooking, heating and fuel oil, and diesel for electricity generation to rise in the first quarter. If infection rates subside in April, we would expect a stronger rebound in demand for transportation fuels sometime in Q2 2020, especially in the aviation sector.

Given the wide range of uncertainties surrounding the persistence of the coronavirus, the KOMO team developed two scenarios to assess the impact of this outbreak:

1. **New baseline:** This scenario assumes GDP growth is downgraded by 0.3% to 3.1% (2.7%, 2.9%, 3.1%, and 3.4% for the respective quarters of 2020), against an earlier expectation of 3.4% in mid-January 2020². This scenario predicts a gradual recovery in GDP over time.
2. **Slow recovery:** This scenario estimates GDP growth of 2.8% in 2020 (2.6%, 2.6%, 2.8%, and 3.1% for the respective quarters of 2020). It considers an extended period of the virus-related effects, resulting in a more severe slowdown in global economic activity due to spillover effects.

This update keeps the forecast supply levels from the January KOMO release. However, supply is expected to change as the price reacts to the changes in demand. The scenarios assume OPEC maintains its cuts, including additional cuts of 500,000 barrels per day from March onward as a result of price changes. KOMO also expects natural production declines from some OPEC countries and partners, as well as from North American shale. In addition, any expected decline in demand growth for 2020 is assumed to bounce back in 2021, as the effects of the coronavirus taper off.

Table 1. KOMO results: January 30, 2020 (GDP growth for 2020 of 3.4%).

MMb/d	2019	Q1	Q2	Q3	Q4	2020	Q1	Q2	Q3	Q4	2021
China	13.3	13.5	13.7	13.6	13.8	13.65	13.8	14.1	13.8	14.1	13.95

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Demand	100.5	100.6	101.8	101.8	101.6	101.7	103.0	103.1
Supply	100.8	101.2	101.5	101.7	102.3	102.7	102.9	103.2
Δ	0.3	0.6	-0.3	-0.1	0.7	1.0	-0.1	0.1

	2019	2020	Growth	2021	Growth
Demand	99.94	101.18	1.24	102.35	1.18
Supply	100.85	101.30	0.45	102.78	1.47
Δ	0.91	0.12		0.43	

Table 2. KOMO results: New baseline (GDP growth for 2020 of 3.1%).

MMb/d	2019	Q1	Q2	Q3	Q4	2020	Q1	Q2	Q3	Q4	2021
China	13.3	12.7	13.6	13.3	13.6	13.30	13.6	13.8	13.6	13.9	13.73

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Demand	100.0	100.3	101.5	101.5	101.4	101.6	102.8	102.9
Supply	100.8	101.1	101.4	101.5	101.9	102.4	102.5	102.8
Δ	0.8	0.8	-0.1	0	0.5	0.8	-0.3	-0.1

	2019	2020	Growth	2021	Growth
Demand	99.94	100.83	0.89	102.18	1.35
Supply	100.85	101.20	0.35	102.40	1.20
Δ	0.91	0.37		0.22	

Table 3. KOMO results: Slow recovery (GDP growth for 2020 of 2.8%).

MMb/d	2019	Q1	Q2	Q3	Q4	2020	Q1	Q2	Q3	Q4	2021
China	13.3	11.8	12.8	13.3	13.6	12.88	13.4	13.5	13.2	13.3	13.35

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Demand	98.8	99.6	101.6	101.6	101.3	101.3	102.5	102.4
Supply	100.8	101.0	101.1	101.0	101.4	101.8	102.0	102.3
Δ	2.0	1.4	-0.5	-0.6	0.1	0.5	-0.5	-0.1

	2019	2020	Growth	2021	Growth
Demand	99.94	100.40	0.46	101.88	1.48
Supply	100.85	100.98	0.13	101.88	0.90
Δ	0.91	0.58		0.00	

References

Cang, Alfred, Javier Blas and Sharon Cho. 2020. "China Oil Demand Has Plunged 20% Because of the Virus Lockdown." Bloomberg. February 3. Accessed February 14. <https://www.bloomberg.com/news/articles/2020-02-02/china-oil-demand-is-said-to-have-plunged-20-on-virus-lockdown>

Howard, Jacqueline. 2020. "CDC director: Novel coronavirus 'is probably with us beyond this season, beyond this year.'" CNN. February 14. <https://edition.cnn.com/2020/02/13/health/coronavirus-cdc-robert-redfield-gupta-intv/index.html>

Endnotes

¹ KAPSARC is also looking at the effects of COVID-19 on oil demand using demand elasticity with respect to price, detailed in a forthcoming Instant Insight. The elasticity methodology produces estimates of demand lower than those forecast in the KOMO model, which is due to a significant amount of uncertainty in the market.

² KOMO's Q4 2019 publication estimated growth of 3.2% for 2019. The latest OPEC Monthly Oil Market Report stated that current GDP growth is 0.1% lower than in 2019.



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