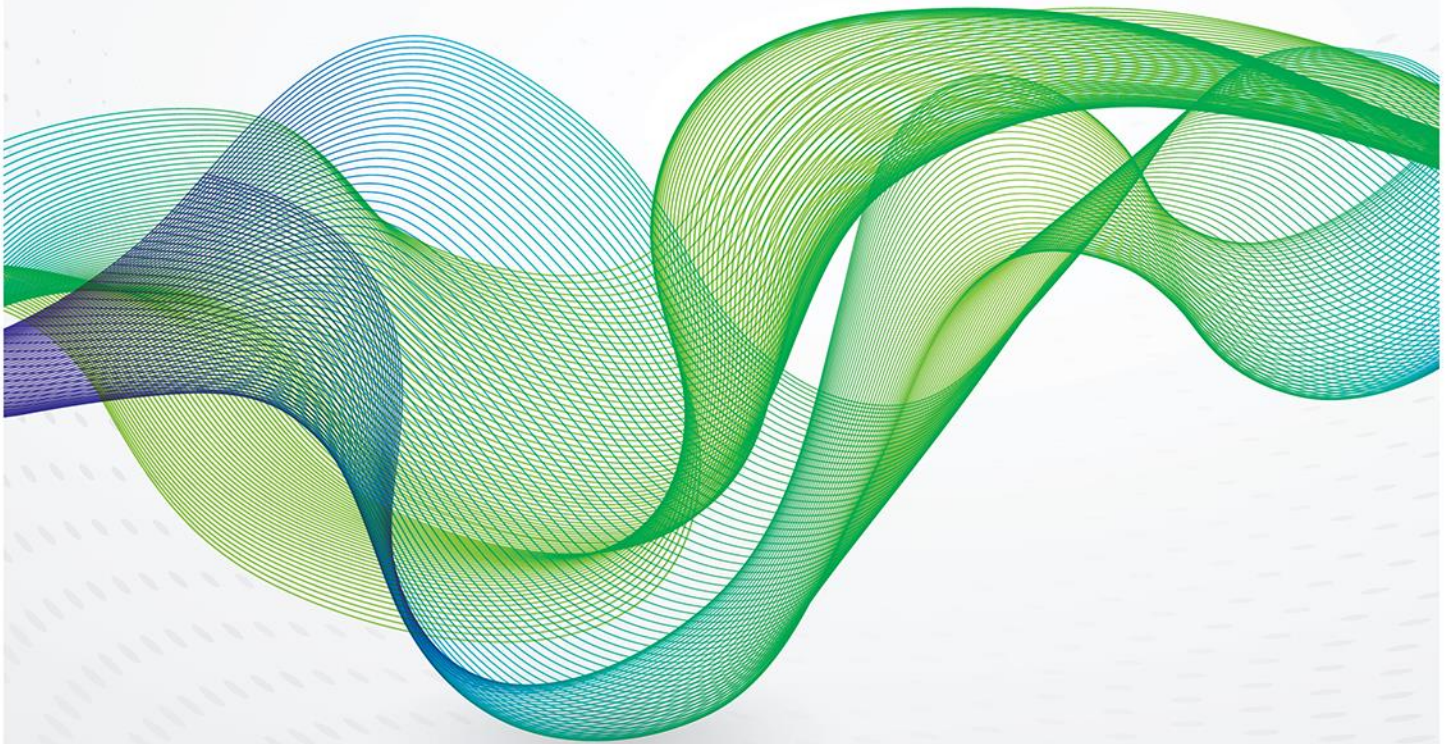


May 2022

China's diminished appetite for imported oil and gas: is the price not right?



Following the Russian invasion of Ukraine, global energy markets have tightened with prices of oil and gas surging. At the same time, Chinese oil and gas demand has been relatively weak, raising questions about the impact of high prices on China's appetite for imported oil and gas. But the high costs of imports are likely playing a small part in the country's reduced appetite for imports compared to the subdued macroeconomic context, due to Beijing's dynamic zero-COVID policy, which is arguably playing a greater role. This matters because if prices are the main culprit, China's oil and gas imports may well remain muted through year-end, as markets seem set to remain tight¹. But if the macroeconomic outlook is main driver for oil and gas buying, government-led support measures, in a bid to reach its stated 5.5 per cent GDP growth target for 2022, will prompt buyers to return to the market as economic activity recovers, even if prices remain high. That said, it is by no means a foregone conclusion that the 5.5 per cent GDP growth target will be met. Despite the need for stability in this year of political transition, limiting the spread of the pandemic will remain the top priority. The government will seek to reinvigorate growth to the extent possible, but the focus will be on employment and if logistics allow, on infrastructure development. Still, the 5.5 per cent growth target will be hugely challenging and the anticipated economic rebound may fail to materialise this year.

It's the economy, stupid!

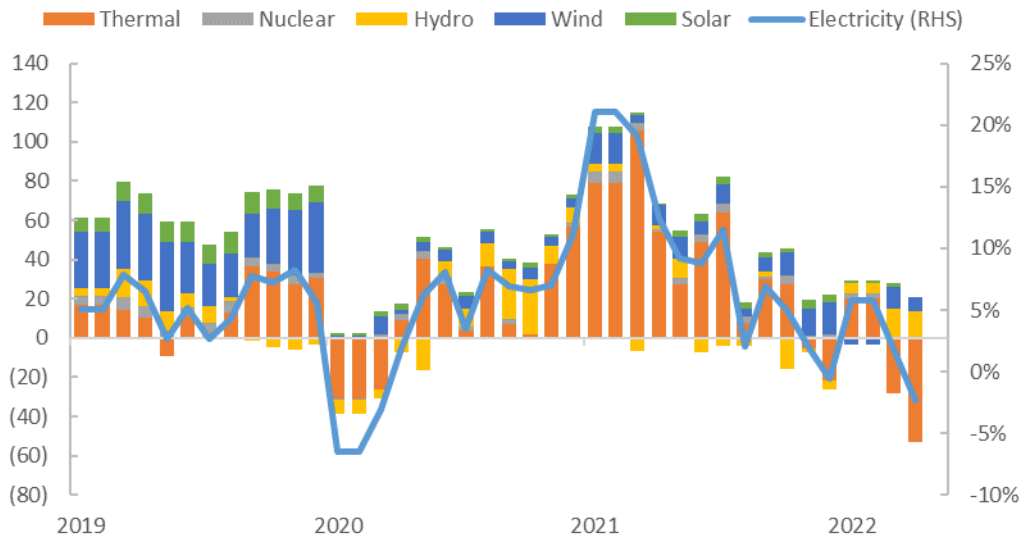
From a macroeconomic perspective, 2022 was set to see a weak start due to a combination of factors: First, the overhang of the Q4 2021 power outages and high global prices weighed on economic activity; Second, the Lunar New Year takes place in the first quarter and typically sees industrial activity slow even as transport demand increases; Third, the winter air pollution reduction plans combined with industrial curbs ahead of the Winter Olympics all suggested that Q1 2022 would see weak economic activity and weak energy demand, especially given the high base in 2021. But as the Omicron variant of COVID-19 began spreading in Chinese cities, the government introduced stringent lockdowns, with the most severe in Shanghai, weighing heavily on economic activity. The Russian invasion of Ukraine further complicated matters as energy and commodity prices have risen across the board, with prices also exhibiting huge volatility. And while some buyers have now started importing discounted Russian commodities, on the whole, the weak macroeconomic environment has muted appetite for additional imports.

While Q1 22 was set to be weak, macroeconomic data was not overly grim: the economy expanded by 4.8 per cent y/y in real terms, compared to 4 per cent growth in Q4 21, and higher than the consensus forecast of 4.3 per cent. Industrial value-add output increased by 6.5 per cent y/y but power consumption in industry rose by a more modest 3.1 per cent y/y while steel and cement production fell precipitously. It was the April data, however, that captured the impact of the lockdowns with a steep drop in both retail and factory activity, the worst since the initial COVID lockdowns in 2020. Power generation declined by 4 per cent y/y,² although thermal power bore the brunt of the fall, even as wind, solar and hydropower use rose (see Figure 1). Steel output continued to fall (-5 per cent y/y) and cement output plummeted by 19 per cent y/y.

¹ For the OIES scenarios and reference case for oil prices, see Bassam Fattouh, Andreas Economou, Implications of the proposed EU ban of Russian oil for global oil markets, 5 May 2022, <https://a9w7k6q9.stackpathcdn.com/wp-content/uploads/2022/05/Implications-of-the-proposed-EU-ban-of-Russian-oil-for-global-oil-markets.pdf>

² "Electricity consumption increased by 3.4 per cent y/y in January-April 2022" (Chinese), National Energy Administration, 16 May 2022, http://www.nea.gov.cn/2022-05/16/c_1310594831.htm

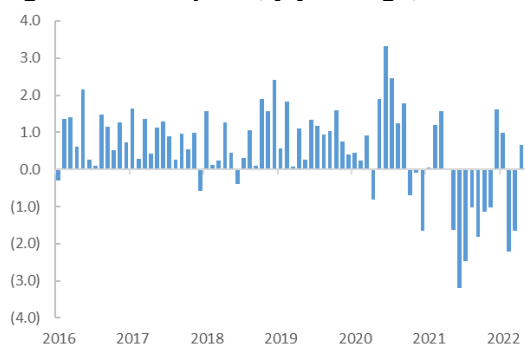
Figure 1: Power generation, TWh, %



Source: Argus, OIES

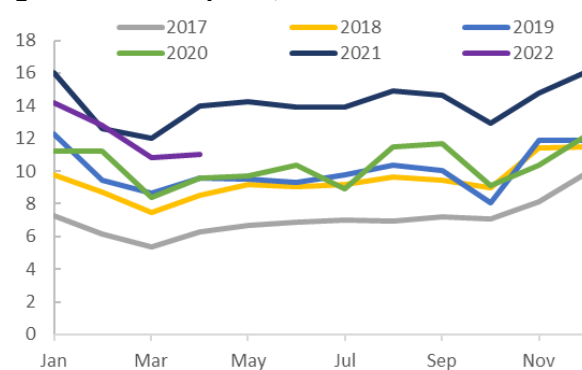
While the lockdowns in Shanghai have captured all the headlines, and at the time of writing, tentative restrictions in Beijing are emerging, the impact of selective lockdowns across the country run deep. According to Nomura, in early May, over 300 million inhabitants were impacted by restrictions, accounting for roughly a third of China's GDP³. Indeed, Shanghai accounts for under 4 per cent of China's refining capacity, as well as 3 per cent of total gasoline consumption, 3 per cent of diesel use and 3.5 per cent of China's natural gas demand. Beijing, for its part, accounts for 1 per cent of diesel consumption, close to 4 per cent of gasoline use and a larger 6.5 per cent of total natural gas demand. But it is the combined lockdowns on numerous cities and provinces, alongside travel restrictions among locations that have heavily weighed on both oil and gas imports (see Figure 2,3) as well as demand in China. Refining throughput fell in April (Figure 4) by close to 11 per cent y/y, the sharpest contraction in the year to date.

Figure 2: Oil imports, y/y change, mb/d



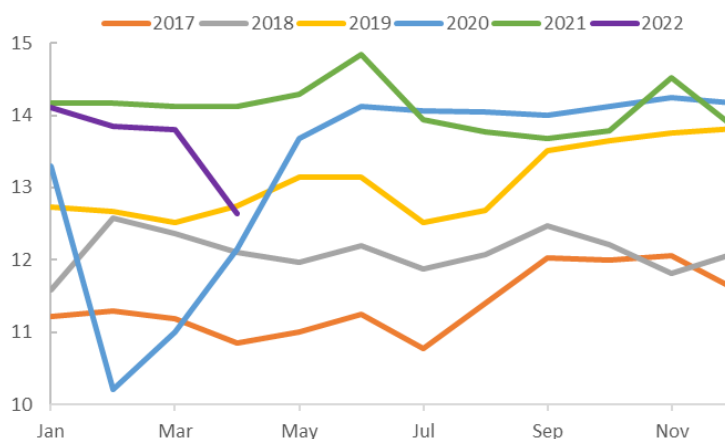
Source: Customs, OIES

Figure 3 : Gas imports, bcm



³ Evelyn Cheng, "China's Covid lockdowns are hitting more than just Shanghai and Beijing", 5 May 2022, CNBC, <https://www.cnbc.com/2022/05/06/chinas-covid-lockdowns-hit-more-of-the-country-beyond-shanghai-beijing.html>

Figure 4: Refinery runs, mb/d

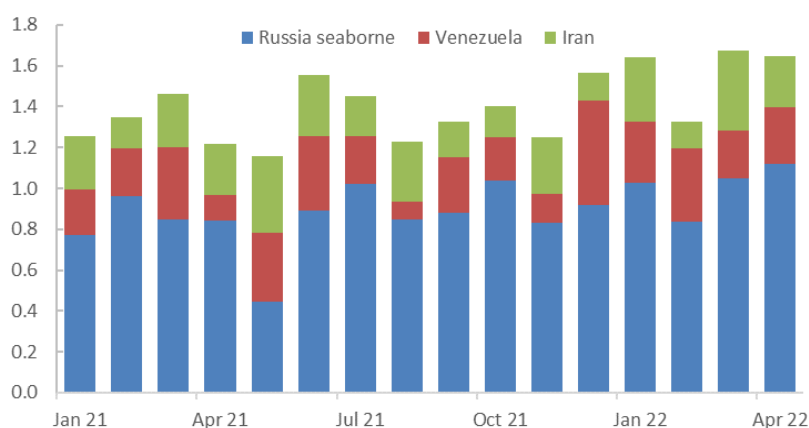


Source: NBS, OIES

Overindulging on sanctioned crude

The lacklustre economic activity has weighed on oil product demand in China, just as high import costs have squeezed margins. And given the tight controls over product exports, in light of the government's concerns about energy security and pollution control, refiners have had few incentives to raise runs. The picture is further complicated by the fact that buyers were stocking up on sanctioned (and discounted) crude in Q1 22, so crude inventories built in January (and then again in April, see Figure 6). Indeed, in Q1 22, customs reported 61 thousand b/d of Iranian crude in January and no flows from Venezuela, while ship tracking data from Kpler points to 0.5-0.6 mb/d of flows from Iran and Venezuela combined in each of the first three months of the year (Figure 5). This means that in February, as Gulf producers raised formula prices for April arrivals, Chinese buyers, mainly independent refiners, held off buying. Spot buying also tapered off dramatically, as Russia's invasion of Ukraine caused prices to spike, but discounted sanctioned barrels were still flowing.

Figure 5: imports of seaborne Russian, Venezuelan and Iranian crude, mb/d



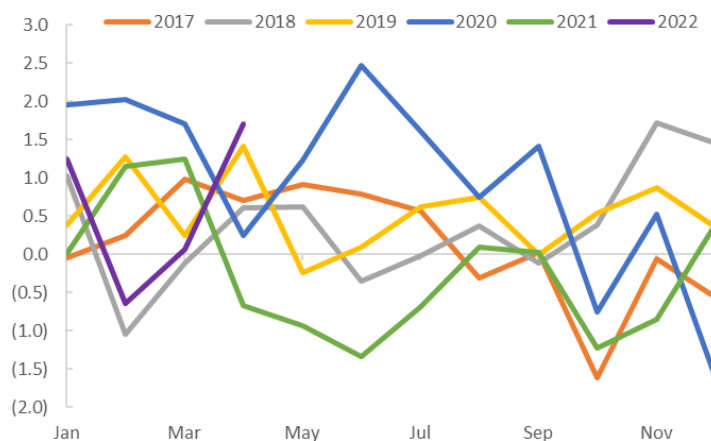
Note: Russian volumes exclude pipeline flows through the ESPO pipeline

Source: Kpler, OIES

The availability of discounted crude helped margins in Q1 22 but the weakness in end user demand has led refiners to store products. With no outlets for products and limited demand for crude, refiners cut runs, and will likely continue to temper throughputs until demand recovers. Their return to the market

will be determined by refinery runs and to a lesser extent a restocking bid. Crude stocks are still below their peak in mid-2020, when Chinese buyers were binging on low-cost crude, but the recent builds suggest they are well above early 2020 levels and, according to our estimates still account for close to 90 days of forward cover (all stocks combined) when taking into account that crude imports average 10.4 mb/d in the first four months of the year.

Figure 6: Implied stocks, mb/d



Source: China Customs, NBS, OIES

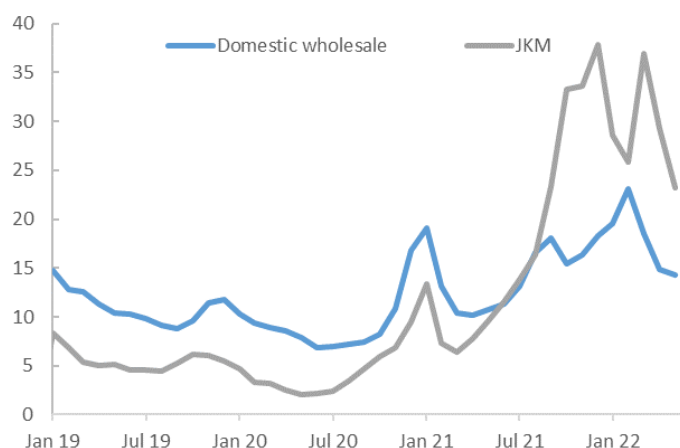
A similar situation is unfolding in gas demand: Chinese buyers stocked up on gas ahead of the winter, but mild weather combined with weak economic activity have dampened demand. And since industry is the largest user of gas in China, a weak industrial profile inevitably weighs on gas demand growth. Soaring international gas prices and the availability of domestic coal (as well as renewables) have limited appetite for imported LNG, prompting some cargo re-exports instead.

A question of priorities

This raises the question of the Chinese buyers' price sensitivity. With LNG and oil markets expected to remain tight at least through year-end, both spot LNG and oil-indexed contracts will remain expensive, although oil-indexed contracts have not seen sharp price increases akin to spot LNG levels. Already, Chinese buyers have pared back spot LNG purchases. Moreover, some of the new contracts with US sellers are Henry-Hub indexed, making them more competitive than spot cargoes, despite the recent increases in Henry Hub. Flows from the US have, however, fallen in the first few months of the year, as Europe is pricing out other buyers.

So are low LNG purchases related to high prices or lacklustre demand? For gas, the answer is probably a combination of both. Spot purchases account for roughly one third of China's total LNG imports so when global prices surge, these volumes do get curtailed as some industrial users reduce consumption. Even though the pass-through of costs remains limited due to state-controlled end-user prices, in early March, CNPC increased its sales prices to industrial users by as much as a third having introduced more spot-pricing based sales ahead of the winter. Domestic assessed prices (as reported by NBS, Figure 7) are now at record highs. Industrial users are therefore shunning gas to the extent possible, but this is also facilitated by weak demand. Similarly, in the power sector, in light of the price reforms in late 2021, energy-intensive industries will need to pay more for gas in power, curbing generation or leading them to prefer coal.

Figure 7: Domestic gas prices, JKM, \$ per mmbtu



Source: NBS, Platts, OIES

Appetite for more expensive LNG imports will be put to the test when economic activity recovers. This leads to a related question: how likely is Beijing to abandon its dynamic zero-COVID policy in favour of growth support? At the time of writing, there are no signs of let-up from the dynamic zero-COVID policy. The government has few viable alternatives given the share of unvaccinated elderly in the population. In early March, just under 20 per cent of people aged over 80 in China had received a COVID-19 vaccine booster, and just 50.7 per cent of that age group have completed their primary vaccinations⁴. The mortality rates in Hong Kong were a stark warning for Beijing, and going into a leadership transition in November, the government is keen to avoid a similar outbreak with the current assessment that a relaxation of controls would lead to 1.5 million deaths in China⁵. What is more, the Chinese government's success in dealing with the COVID outbreak in 2020 and its ability to provide a swift return to normality was presented as a triumph of Chinese planning and therefore the Chinese governance model. In early May, Xi Jinping reiterated that relaxing the COVID strategy would be devastating, inevitably leading to large-scale infections, a large number of serious illnesses and deaths as well as "serious impact on economic and social development"⁶.

To be sure, the government can tweak the rhetoric slightly to fit realities should it need to change course—especially in light of rising unemployment and emerging student protests at universities—but a major U-turn remains unlikely until infection rates are curbed dramatically. Even the easing of restrictions in Shanghai, that are currently being introduced, will depend on infection levels continuing to fall.

The dynamic zero-COVID policy will weigh on economic activity. Yet in March, at the Two Sessions, the Chinese leadership issued a target of 5.5 per cent GDP growth this year. At the time it already seemed ambitious, but as lockdowns continue and the dynamic zero-COVID policy remains in place, it becomes even harder to see how these growth rates will be achieved. Goldman Sachs has recently revised down its GDP growth forecast to 4 per cent from 4.5 per cent for the year⁷, although interlocutors in the energy industry in China forecast even slower growth rates. As things stand currently, in the

⁴ "Chinese officials urge elderly to get COVID vaccine, cite lesson of Hong Kong", Reuters, 18 March 2022, <https://www.reuters.com/business/healthcare-pharmaceuticals/covid-vaccination-rate-people-aged-over-80-china-relatively-low-official-2022-03-18/>

⁵ "Foreign Ministry Spokesperson Zhao Lijian's Regular Press Conference on May 11, 2022", https://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/202205/t20220511_10684604.html

⁶ "Meeting of the Politburo Standing Committee of the Chinese Communist Party to analyse the current situation of coronavirus prevention and control (Chinese)", 5 May 2022, http://www.news.cn/politics/leaders/2022-05/05/c_1128623588.htm?mc_cid=d24293a258&mc_eid=4912bc2dc4

⁷ Evelyn Cheng, "Goldman Sachs cuts its China GDP forecast to 4% on Covid controls", 18 May 2022, <https://www.cnbc.com/2022/05/18/goldman-sachs-cuts-its-china-gdp-forecast-on-covid-controls.html>

choice between dynamic zero-COVID and economic growth, dynamic zero-COVID still trumps, with economic recovery a strong second. Environmental sustainability and the 30-60 targets are now falling in the list of priorities.

Not a binary choice

Yet government officials have already started highlighting the need to support the real economy. The high unemployment numbers, more than a fixation with the GDP target, are cause for concern and are prompting the government to accelerate the economic recovery. Premier Li has instructed all government departments and regions to help businesses retain jobs, urging businesses to resume production with COVID-fighting measures in place, while also reiterating efforts to promote internet platform companies to support employment⁸. The People's Bank of China is looking to help smaller banks increase lending while infrastructure projects are high on both central and local government's to-do lists. Priorities include regional airports, urban rail systems, port and waterway networks, energy and water conservation projects as well as oil and gas pipelines⁹. Yet if local government must devote resources to testing, vaccinations and general COVID control, they may be constrained in the funding available for infrastructure spend.

Ongoing COVID curbs will complicate logistics, and in light of Xi's emphasis on dynamic zero-COVID, local officials will likely err on the side of caution (i.e. partial lockdowns). The macroeconomic risks are therefore weighted to the downside. Assuming a modest recovery in Q3 22 and a stronger rebound in Q4 22, we estimate oil demand growth will reach around 0.2 mb/d y/y, and gas imports are only likely to recover toward year-end, when the economy picks up slightly and as buyers look to replenish stocks ahead of the winter. Their first choice will be pipeline gas and oil-indexed LNG contracts, but depending on weather patterns and the need for stocks, we expect an incremental need for around 4 bcm this year, out of a gas demand increase of 20-25 bcm y/y in 2022.

Figure 8: China gas balance, bcm

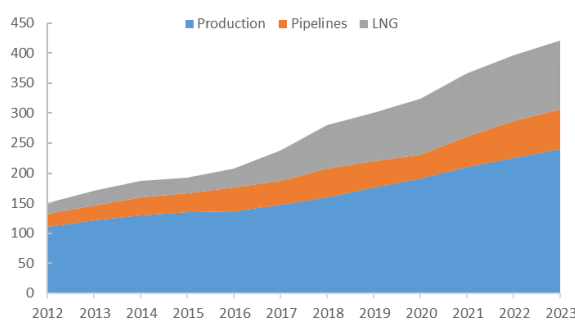
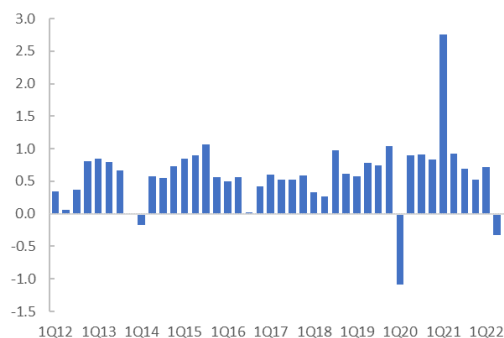


Figure 9: Oil demand growth, y/y, mb/d

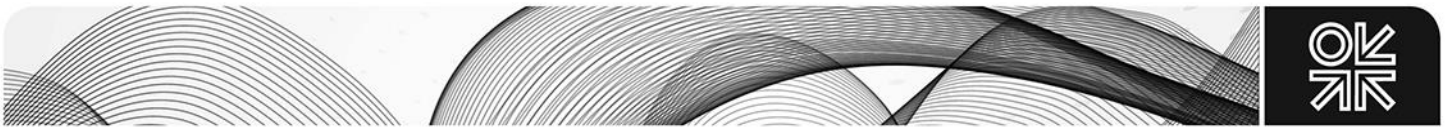


Source: China Customs, NBS, Nexant WGM, OIES

Similarly, oil imports will only recover later in the year. Refiners will likely limit runs with the state-owned majors accounting for most of the cuts, especially if the independent buyers continue picking up sanctioned barrels at a discount. The independent refiners will then produce oil products and sell them at a discount to the majors as well as to off-road users, since the recovery is set to be rather diesel heavy. While the majors may lobby for additional product export quotas, concerns about energy security and efforts to control emissions suggest these calls will fall on deaf ears. Another round of tax and environmental inspections on the independent sector, however, would be the majors' way to regain

⁸ "China Premier Warns of 'Grave' Jobs Situation Amid Lockdowns", Bloomberg, 8 May 2022, https://www.bloomberg.com/news/articles/2022-05-08/china-premier-warns-of-grave-jobs-situation-as-lockdowns-bite?mc_cid=d3329d9e71&mc_eid=1f5ebaac4b

⁹ Xi Jinping presides over the 11th meeting of the Central Financial and Economic Commission" (Chinese), Xinhua, 26 April 2022, http://www.gov.cn/xinwen/2022-04/26/content_5687372.htm?mc_cid=a7b33680b9&mc_eid=1f5ebaac4b



market share later in the year, but with 30-60 targets lower on the political agenda than stability and economic recovery, 2022 is looking like another good year for the independents.

Conclusion

In the first half of 2022, China's oil and gas demand is hit by both soaring international costs and weak demand, due to the dynamic zero-COVID policy. Unpacking the price impact is therefore challenging. For oil importers, there is a two-tier market emerging, of sanctioned (and therefore discounted) crudes vs other non-sanctioned crude. While sanctioned volumes cannot meet all refiners' needs, in light of the weakness in demand, and expectations that any near term recovery will be distillate-heavy, sanctioned crudes can pick up some of the slack. But as the economy recovers—which now seems possible in Q3 22 but more likely only toward Q4 22—pent-up demand will help lift demand for transport fuels and chemicals for consumer goods. But restocking requirements can wait for lower prices.

Domestic gas users are also somewhat sheltered from global price increases given domestic price controls, but industrial demand is suffering from both high costs and weak demand, so the real test here too will be when demand recovers. The extent to which industrial users can switch back to coal is limited and ahead of the winter, if buyers need to restock and economic momentum increases, LNG buying could recover, suggesting a greater pull on global markets in 2023.