

SUPPLY CHAIN SURGES & SHORTAGES

Exiger Trends Report

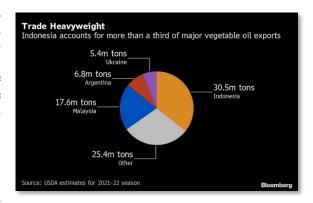
April 2022

Climate, Disasters, & Disruption

Citing failure to pay in rubles, Russia halts gas supplies to NATO members Poland and Bulgaria. European gas prices rose roughly 20 percent after state-owned Gazprom announced it would stop supplying gas to Poland and Bulgaria—a move the European Commission President called "another attempt by Russia to use gas as an instrument of blackmail." Poland's largest gas company bought 53 percent of its gas from Gazprom in Q1 2022, while Bulgaria sources 90 percent of its supply from Gazprom (BBC; Reuters; Exiger Russia-Ukraine Knowledge Hub).



- Supply chain disruptions worsen as Shanghai lockdown enters fourth week and other cities fear lockdowns under China's "Zero COVID" strategy. Shanghai's port is the largest in the world and, as the city remains under lockdown, delays in shipping and production could severely impact global supply chains across multiple industries. Other major Chinese economic hubs, such as Beijing and Kunshan, face looming shutdowns and other restrictions (TIME; CNBC; ABC News).
- Peru declares a national emergency to restart operations at a copper mine halted by protests since February. The world's second largest copper producer, protests in Peru have impacted 20 percent of production (S&P Global; Reuters).
- EU agrees to ban Russian coal in response to the war in Ukraine. The ban will cost Russia an estimated \$4.4 billion a year and could stoke EU inflation. The EU is reportedly preparing "smart sanctions" against Russian oil imports (AP; Reuters).
- Indonesia bans palm oil exports, including crude palm oil. The move comes as the price of crude palm oil rose sharply and after the country scrapped previous restrictions imposed in January. In 2020, Indonesia accounted for 46.8 percent of global crude palm oil exports and 52.4 percent of refined exports. Palm oil is the most widely consumed vegetable oil and has applications in other consumer products and biofuels. The ban marks another disruption to the vegetable oil market already heavily impacted by supply chain issues: Ukraine, for example, accounts for more than 75 percent of global sunflower oil exports, with production slashed because of the Russian invasion (Reuters; Quartz).



• Supply chain disruptions will outlast the pandemic according to this year's Economic Report of the President. Pandemic-exposed vulnerabilities in global supply chains will continue, especially with climate change-driven disruptions from stronger storm patterns and other weather events. The White House economists' report emphasized the public sector's role in bolstering supply chain resilience, including to highlight weaknesses in critical products (semiconductors, EV battery materials, etc.) and to incentivize greater domestic manufacturing (NYT).

Labor & Industry

- U.S. supply chains struggle to cut ties with Russian uranium. Since the Ukraine invasion, the U.S. has banned Russian energy imports but left the door open for uranium; Russia accounts for nearly 20 percent of U.S. uranium imports. In March, the White House considered sanctioning state-owned Rosatom, Russia's largest nuclear firm (Ukrainian officials claimed Rosatom had sent engineers to Ukrainian nuclear sites claimed by Russian forces). A secure uranium supply is indispensable to the nuclear power industry (The Verge).
- The Biden administration announces requirements that steel and iron used in projects funded by its \$1 trillion infrastructure package be made in the U.S. The requirements can be waived if there is insufficient domestic production or materials are too costly, with the goal of issuing fewer waivers as U.S. manufacturing capacity increases (ABC News).
- China's DJI exits Russia and Ukraine in "light of current hostilities." The world's largest drone maker, DJI—which has faced scrutiny for its ties to Chinese government surveillance in Xinjiang—is the largest Chinese company to halt operations in Russia and Ukraine. In March, a Ukrainian official claimed the Russian military was using DJI products in its hostility against Ukraine (CNN; Bloomberg).
- Suppliers to BMW, GM, and other major global automakers linked to forced labor in China's Xinjiang region, according to report by U.S.-based consultancy. The report identifies connections between Chinese state-linked organizations sanctioned by the U.S. over alleged human rights abuses, and entities that supply aluminum to automakers. Xinjiang produces nine percent of the world's aluminum (Bloomberg).
- CEO of EV automaker Rivian warns the shortage of materials to manufacture high-capacity batteries could soon be a bigger supply chain issue than the semiconductor crunch. According to the Rivian CEO, current global production of lithium-ion batteries is less than 10 percent of what's needed a decade from now, which means "90% to 95% of the [EV battery] supply chain does not exist" (Business Insider; WSJ).

Risk & Innovative Mitigation

Apple lessens reliance on Chinese factories. The tech giant announced it began making the iPhone 13 in India, with plans to assemble iPad tablets in India as well. The iPhone is being manufactured at an Indian Foxconn plant, the world's largest electronics contracts manufacturer. As of April, approximately half of Apple's top 200 suppliers operated in Chinese provinces heavily impacted by COVID-19 lockdowns (Reuters; Nikkei Asia).



- Wind energy becomes new target for cyberattacks as Europe seeks to ease Russian energy reliance. Since Russia invaded Ukraine, suspected Russian cyberattacks have targeted three German wind energy companies. Over the same period, Germany had shrunk its dependence on Russian gas by ~15 percent (WSJ).
- DHS announces foiling a cyberattack against an unnamed telecom company; attackers had targeted servers associated with an undersea internet cable in Hawaii. The Department of Homeland Security and international law enforcement partners, which reportedly made arrests in connection with the operation, attributed the planned attack to an "international hacking group." No damage or disruption occurred (Cyberscoop).
- Fiber Optic Cables in France are found severed in apparent large-scale coordinated attack. This led to extensive interrupted internet service in the country and shockwaves amongst global intelligence communities. (Cyberscoop; Exiger)
- DOE Loan Programs Office reups lending to EV supply chain. Through its Advanced Technology Vehicles Manufacturing Program, the U.S. Dept. of Energy committed over \$100 million to Australia-based Syrah Technologies to expand production capacity for battery-grade graphite. The loan is the first to an EV supply chain company since 2011 and represents a commitment to diversify sources of key battery materials. China is currently the source of nearly all battery-grade graphite, used for anodes in EV batteries (Electrek).
- NIST is working to protect traditionally encrypted data from the decoding abilities of quantum computers. According to a researcher from the Commerce Department's National Institute of Standards and Technology (NIST), methods must be developed to protect prequantum data vulnerable to post-quantum capabilities. In doing so, cryptographers will seek to encode data with such complexity that decryption is impossible even with quantum computers. The story came days after the House of Representatives introduced the Quantum Computing Cybersecurity Preparedness Act, which will develop updated security standards for the quantum age (Washington Post; Nextgov).

Threats & Regulatory Compliance

- Taiwan launched probes into ~100 Chinese companies suspected of design theft and illegally poaching semiconductor engineers. Taiwanese law prohibits Chinese investment in some portions of the semiconductor supply chain, and the Taiwanese government is working to increase penalties for poaching. Taiwan's semiconductor industry is strategically important to U.S. national security, with Taiwan facing the mounting prospect of a Chinese invasion (Taipei Times).
- Major U.S. semiconductor firm investigated for providing chip designs to blacklisted Chinese companies. The U.S. Commerce Dept. is investigating American electronic design automation firm Synopsys for suspicion of transferring chip designs and U.S.-developed software to Huawei and SMIC, each on the Commerce Dept.'s so-called export control "Entity List" (Bloomberg).

Highway Traffic Safety Administration's probe is focused on South Korea's LG Energy Solution, one of the world's largest high-capacity battery manufacturers whose batteries were used in over 140,000 recalled Chevy Bolt EVs. LG reimbursed GM \$2 billion for the recalls and cemented its joint venture with GM to supply batteries for the auto giant's next generation of EVs. Other cars made by GM, Mercedes, Stellantis, Hyundai, and Volkswagen have also



been recalled in the past few years, citing similar problems with LG batteries (ABC News).

- Multiple U.S. agencies warn that advanced persistent threat (APT) actors have developed malware to target industrial control systems (ICS) and supervisory control and data acquisition (SCADA) devices. Once APT hackers have established initial access in a network, the malware enables them to scan for, compromise, and control certain ICS/SCADA devices. The malware is designed to target specific devices, including Schneider Electric programmable logic controllers (The Hacker News; CISA).
- FBI warns agricultural industry of increased ransomware attacks. Similar to its advisory last month on U.S. energy infrastructure, the FBI issued another notice to agricultural stakeholders citing a spike in ransomware attacks. According to the FBI, the average ransom demand doubled from 2019 to 2020 and insurance payouts rose by 65 percent (FBI; Exiger Trends Report, March 2022).

ABOUT EXIGER

Exiger is revolutionizing the way corporations, government agencies and banks manage risk & compliance through its combination of technology-enabled and SaaS solutions. In recognition of the growing volume and complexity of data and regulation, Exiger is committed to creating a more sustainable risk & compliance environment through its holistic and innovative approach to problem solving. Exiger's mission to make the world a safer place to do business drives its award-winning Al technology platform, DDIQ, built to anticipate the market's most pressing needs related to evolving ESG, cyber, financial crime, third-party and supply chain risk. Exiger has won 30+ Al, RegTech and Supply Chain partner awards. Learn more at Exiger.com and follow Exiger on LinkedIn.

For more information contact:

Tim Stone

Senior Director, SCRM, Government Solutions

Carrie Wibben

President, Government Solutions cwibben@exiger.com