

 BRIEF

Russia-Ukraine Conflict: Supply Chain Updates

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Scope Note

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Russia-Ukraine Conflict: Supply Chain Updates

Executive Summary

Nearly two weeks since Russia's military escalation, impacts on the global economy are becoming clearer. While the economic impact on Russia and Ukraine has been staggering, they do not have enormous economies and account for less than two percent GDP worldwide; the countries with the two largest economies—the United States and China—have limited trade exposure to the region. Outside of Russia's major trading partners in Europe, the economic effects have been limited to rising commodity prices' impact on inflation and supply chains. However, the longer-term economic impacts from higher energy prices could shift from lowering Western growth to causing a global recession. Therefore, expect Western nations to push for alternative energy sources that reduce energy income for the Russian state while sourcing energy production elsewhere.

Details

For now, damage to the global economy is less than anticipated because of Russia and Ukraine's limited economic power. The consequences for the global economy are mainly rising commodity prices and the worsening of backed up supply chains and inflation, which were pre-existing conditions to this conflict. The economic consequences for Russia and Ukraine are dire; economic sanctions on Russia have been powerful, and companies are increasingly refusing to do business with Russia. Companies leaving Russia will find it much more difficult to re-enter the Russian market if sanctions are lifted. The United States is leading diplomatic efforts with Venezuela, Iran, and Saudi Arabia to secure more oil supply, while Europe will need to rapidly accelerate its energy transition.

Analyst Commentary

Global Economic Vulnerabilities to Russia-Ukraine Crisis

The primary economic vulnerability resulting from Russia's military escalation in Ukraine remains energy prices; however, unified Western sanctions present other



vulnerabilities that were not immediately apparent at the onset of the conflict. The collapse of both Russia and Ukraine's economies now needs to be considered, as do direct trade relationships with both nations.

Media coverage is focused on the economic impacts for the West, which was already facing supply chain constraints, high energy prices, and inflation. The economic impact for the West has been limited so far; however, initial projections are that economic growth will shrink in response to the crisis, as prices are expected to remain high long-term. For example, projections for the European Union's 2022 economy have shrunk from 4.3 percent to 3.7 percent. While this is significant, these countries have tools to alleviate economic collapse; the biggest vulnerabilities are for countries with close geographic proximity to Russia and countries where Russia's economy dwarfs their own.¹

Russia is responsible for almost 50 percent of exports and imports with Belarus. Kyrgyzstan is next with less than 22 percent followed by Armenia with less than 20 percent. The loss of the entire Russian market for those countries is miniscule compared to the more consequential economic impacts from COVID-19.

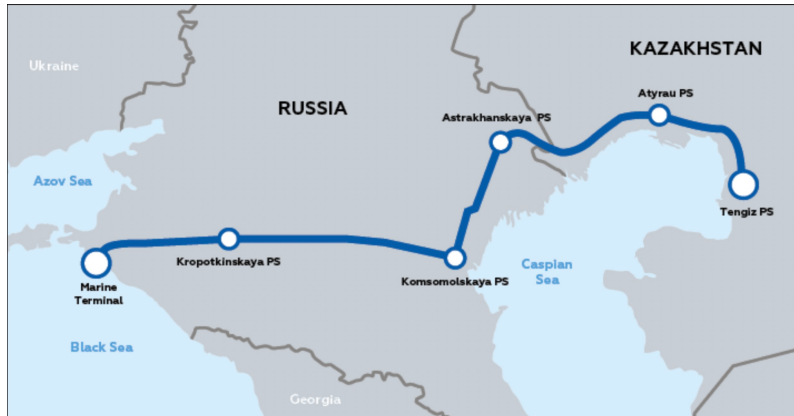
Russia is also responsible for investment in many countries, and those countries will suffer without Russian Foreign Direct Investment (FDI). Again, these are not major economies; they are small dependent nations like Montenegro and Belarus. Austria is the most economically advanced economy with significant Russian investment interests, and it is less than 0.5 percent of GDP.

A destabilized Russia will also impact Russia's smaller neighbors reliant on remittances and tourism from Russia. These are almost entirely made up of ex-Soviet bloc countries. The currencies of Russia's neighbors are also hurting. Poland's zloty and Hungary's forint dropped to record lows against the euro since the invasion, and every eastern European currency has dropped compared to the dollar in the past week—led by losses in the ruble.² Perhaps the worst hit and most vulnerable economy, outside of Russia and Ukraine, is Kazakhstan. Oil exports account for almost 60 percent of all its exports and 15 percent of GDP. This oil passes through a Russian pipeline into the Black Sea, near fighting in southern Ukraine. Even if flows remain uninterrupted, there is a "War Premium" to ship in the Black Sea that has resulted in Kazakh oil actually seeing its value fall, despite oil prices being high worldwide.

¹ <https://tellimer.com/article/the-countries-exposed-to-russias-economic-crisis>

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<https://www.reuters.com/markets/europe/war-ukraine-puts-pressure-east-european-banks-prop-up-sinking-currencies-2022-03-04/>



Source: <https://eurasianet.org/ukraine-war-threatens-kazakh-oil-exports>

This is not to say there will not be global economic harm. Most stock markets are performing poorly, gas prices are at a 10-year high, and inflation will worsen the world over. Food price inflation is of particular concern. February 2022 data before the military escalation showed that food prices jumped four percent in one month, which bucks the recent trend of prices only increasing about one percent. Compared to February 2021, food prices are nearly 25 percent higher.³ The military escalation will cause prices to increase. However, since reopening following the COVID-19 pandemic, most Western economies are relatively stable with low unemployment. They also have the ability to offset price increases, as European countries have done with energy price subsidies for the poorest or the stimulus measures offered during the height of COVID-19. This is not the case for Russia or economies dependent on Russia, which have few resources to counter major economic downturns.

Economic Impacts for Russia

Russia is economically isolated. Its currency, the ruble, is down roughly 50 percent⁴ against the U.S. dollar since the invasion, its stock market remains shuttered, and the foreign currency reserves it built up in anticipation of Western sanctions have been largely cut off. Russia will burn through what reserves it can gain access to quickly. None of this is likely to improve unless Russia de-escalates in Ukraine, which appears unlikely. Russia made moves to limit the economic pain by raising interest rates, but inflation will soon far outpace any impact its central bank can make. The only economic avenue remaining for Russia is energy sales, which means threats to cut off energy access as leverage are unlikely.

In fact, Western nations absorbing the economic pain from voluntary energy cutoffs is becoming more likely. On March 8, 2022, the United States decided to cut off Russian

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<https://en.mercopress.com/2022/03/08/fao-food-price-soars-in-february-but-profit-margins-are-squeezed-by-energy-fertilizer-and-feed-costs>

⁴ <https://tradingeconomics.com/russia/currency>



oil purchases, and many traders are self-sanctioning and not making Russian energy purchases; Russia is reportedly unable to sell two-thirds of its oil, even at a discount. A Russian default is now almost certain, barring a complete and rapid military de-escalation; not even increased sales to China can avert this. Russia was already running out of ways to fund this war and will likely have fewer avenues in the coming days. On March 8, 2022, Fitch credit ratings cut Russia's rating to C, stating it reflects their view that a “sovereign default is imminent..⁵

The prospects for a Russian economic recovery remain dim even under de-escalation. Companies that have pulled out of Russia are unlikely to return in time to help the economy, and its primary energy adversaries will escalate their push to renewables and look for alternative suppliers. This means Russia or any allied country, like Belarus, is likely to default.

International Companies with Russian Operations

In response to Russian media restrictions limiting what can be reported, many outlets have removed themselves from Russia. The BBC said it would temporarily suspend its work in Russia, as did CNN. Russia's second-biggest internet provider, Cogent, plans to cut service—partly to avoid being used for cyberattacks.

Countless brands have closed their official stores in Russia, including at least 200 well-known Western brands.⁶ Helly Hansen said it would close all 41 Russian stores. Louis Vuitton said it would close 124 stores. The world's largest chemicals group, BASF, said it was halting new business in Russia and Belarus.⁷ Companies that have not shut down operations in Russia are facing calls for bans or boycotts. McDonald's announced it is temporarily closing all of its 850 restaurants in Russia after being subject to boycott calls.⁸ Coca-Cola, which earlier closed manufacturing, also announced the company would no longer service the Russian market after boycott calls. Unilever said it would suspend imports into Russia. Shell was forced to apologize for buying Russian crude oil last week—which it did at a steep discount as Russia was having difficulty offloading the product—and said it would withdraw completely from any involvement in Russia.⁹

On March 4, 2022, Russian First Deputy Prime Minister Andrei Belousov stated that foreign companies can stay in the country, exit entirely, or hand over their holdings to local managers until they return. Those staying could face a backlash, those

⁵ <https://www.fitchratings.com/research/sovereigns/fitch-downgrades-russia-to-c-08-03-2022>

⁶ <https://som.yale.edu/story/2022/over-300-companies-have-withdrawn-russia-some-remain>

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<https://www.reuters.com/business/russias-offer-foreign-firms-stay-leave-or-hand-over-keys-2022-03-04/>

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<https://www.channelnewsasia.com/business/starbucks-says-it-will-suspend-operations-russia-2549921>

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<https://www.shell.com/media/news-and-media-releases/2022/shell-announces-intent-to-withdraw-from-russian-oil-and-gas.html>



transferring shares could be leaving their brands at the mercy of local authorities, and those leaving face the possibility of steep losses they will never recoup. Those exiting the country will also have a much more difficult time returning to Russia, as opposed to a sector limited by sanctions that, if lifted, could have an easier time resuming operations in the country.

Oil Prices

On March 8, 2022, the United States announced it would no longer purchase Russian energy. This came a day after the U.S. House of Representatives presented a bill on halting Russian energy imports.¹⁰ The bill, the Banning Russian Energy Imports Act, ends the purchase of more than 20.4 million barrels of crude and refined products a month from Russia, which is about eight percent of U.S. imports. The United States government argues it can replace the imports by sourcing what it needs from the United States and Canada without boosting prices. While this is unlikely, the U.S. ban of Russian oil imports will worsen energy prices and overall inflation. The impacts from this will be marginal with the U.S., as there are alternative supplies to replace the relatively modest amount of Russian imports into the United States. It would also not greatly impact the Russian economy, as allied states could make up the difference. The real economic consequence of the U.S. position is that it heaps pressure on allied nations to do the same—including the EU, which imports a more impactful amount of oil and Liquid Natural Gas (LNG) from Russia. The United Kingdom also joined the United States in restricting its purchase of Russian oil—but not LNG or coal. A global oil ban alone deprives Russia of much-needed war funds— about USD 16 billion a month at 2021 oil prices. An even larger energy ban could shorten the time that Russia can fund this war. Under that scenario, Russia would likely escalate initially with the time it has, rather than cut its losses.

West Texas Intermediate (WTI), which is the market for U.S. oil, was USD 130 a barrel at the time of the announcement. Brent, the market for the rest of the world's oil, was almost USD 140 a barrel. Worst-case projections could see oil at USD 200 a barrel by the busy summer travel season. At that price point, demand and consumer spending is damaged to the degree that recessions are triggered, and some of the economic consequences suffered by the world's poorest countries are seen more globally. However, this price point accounts for no additional supply coming online and Russia's expulsion from the entire Western market. There remain several avenues for additional oil supply to come online, which will create a price ceiling if realized—although a high one that will eat into profits and likely cause political and social unrest.

A conservative estimate regarding oil prices is around USD 160 a barrel by May 2022 if little additional supply comes online and the conflict continues. This will worsen global inflation, as energy is a key input in almost every sector. For example, European

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<https://www.reuters.com/world/us/pressure-grows-biden-ban-us-imports-russian-oil-2022-03-03/>



inflation for February 2022 was 5.8 percent, year over year—up from 5.1 percent a month. Energy prices are the largest contributor to inflation, which is expected to jump even higher for March.

OPEC+ Not Increasing Supply

On March 2, 2022, the Organisation of Petroleum Exporting Countries (OPEC+) held its monthly meeting but decided against increasing oil output beyond 400,000 additional barrels per day (BPD). OPEC+ has been announcing a monthly increase of 400,000 BPD since May 2021 despite demand rising and prices increasing. Most oil-producing nations were forced to reduce supply during the peak of COVID-19 and have been increasing supply slowly in response to the global economic reopening.

Despite promising to increase output by 400,000 BPD, that number is rarely actualized. Only Russia, Saudi Arabia, and perhaps UAE have the capacity to increase production, so actual increases in production are often hundreds of thousands of barrels less. In the event Russia is cut off entirely, no country has the capacity to make up the shortfall. However, OPEC+'s unused capacity is estimated at about 2.5 million BPD; it is about the same for non-OPEC members like the United States and Canada. Together, those reserves could account for the reduction of Russia's 4-5 million BPD, especially if China does not join the boycott—which could mean only about 3.2 million barrels need to be replaced.

Avenues to Replace Russian Production

OPEC+ has been under heavy pressure from the United States to increase output in order to lower prices. This includes increased diplomatic efforts with traditional adversarial countries. For example, there is a renewed U.S. effort to conclude the Iran nuclear talks so that Iranian oil can get back to market as quickly as possible. Iran is one of the few countries that can and wants to increase production after years of economically damaging sanctions. The prospect of as much as 1.75 million additional BPD looks possible before the end of 2022.¹¹ An agreement this week could result in sanctions on Iran's energy sector lifted by May 2022, which could realistically see Iran adding over 1.25 million BPD to the international market at that time. Russia produces about 4-5 million BPD; coupled with increased production elsewhere, a high oil price ceiling is attainable if this deal comes to fruition.

The United States has also restarted talks with Venezuela—another country that wants to increase production. Lastly, the United States is planning to renew talks aimed at improving ties with Saudi Arabia. Saudi Arabia is reportedly angry with the current U.S. government for criticism aimed at its war in Yemen. As a result, Saudi Arabia is reportedly using high oil prices to damage President Biden politically. The Biden Administration hopes a high-level U.S. delegation to Saudi Arabia could see an

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[https://www\[.\]hellenicshippingnews\[.\]com/iran-offering-fewer-crude-cargoes-to-chinese-traders-as-it-prepares-for-lifting-of-sanctions-sources/](https://www[.]hellenicshippingnews[.]com/iran-offering-fewer-crude-cargoes-to-chinese-traders-as-it-prepares-for-lifting-of-sanctions-sources/)



agreement to increase oil production.¹² Taken together, these actions could create an oil price point similar to the current pricing. This would continue to hurt financial markets and reduce consumer spending power, but it would aid in avoiding a global recession and would likely maintain the positive economic measurements elsewhere—like low unemployment, increased wages, and high consumer purchases.

Self-Sanctioning

Part of the reason for the latest price increase, despite Western sanctions largely avoiding the industry, has been self-sanctioning from energy traders that are refusing to deal with Russian producers. For example, LNG prices have surged despite Russian energy largely flowing uninterrupted into Europe. This is because private traders and shippers are avoiding Russian supplies.

West Breaches Last Remaining Sanction – Russian LNG

Europe claims to be prepared for the possibility that either Russia cuts off its energy supply as punishment or that the conflict escalates to a point where Europe decides to voluntarily refuse Russian energy (the more likely scenario). However, banning imported oil sales is different and easier to replace than LNG. Most developed economies are electrifying as a way to reduce emissions; however, electricity—especially in Europe—is dependent on natural gas, and it will take years for Europe to remove its electrical system's reliance on natural gas. It would also require heavy infrastructure spending on renewable energy.

The real economic impact of the U.S. announcement banning Russian energy imports will be if it spurs the EU to do the same. After President Biden announced the United States would be halting imports, most of the EU said they would reduce their dependence before the end of 2022 but not immediately. The EU plan will reportedly see EU dependence on Russian energy shrink by 80 percent before 2023. More specifics on how it will get new or alternative supplies are pending, but it will likely be costly as it will require increased funding to improve energy efficiency and alternative energy sources. These require massive amounts of infrastructure spending at a time when infrastructure spending is as expensive and inefficient as possible due to high prices and the supply chain crisis, which delays the delivery of building materials. Part of the plan will likely see the EU issue bonds on a large scale to finance energy spending and take on new debt specifically for “energy independence.” An important EU summit is planned for March 10-11, 2022, at which more details are expected. However, the amount of spending needed to quickly end reliance on Russian energy would dwarf the EU’s COVID-19 stimulus package, which were the largest-ever rescue measures approved by the EU. It would also likely rely on a mild 2023 winter and the increased use of other fossil fuels like coal and nuclear energy, which Europe is reluctant, but capable of, producing. It may also require energy rationing.

¹² <https://www.axios.com/biden-saudi-trip-oil-b7a91070-8045-4155-9120-a35d59fd7603.html>



Other items under discussion include sourcing more coal from Australia and LNG from the United States and the Middle East. Poland asked Australia if it could supply coal that could displace Russian imports. Italy is considering reopening coal-fired power plants shuttered as part of its transition away from fossil fuels. Germany said it might extend the lifespan of coal plants that were due to close by 2030 for the same reasons. Coal's advantage is that power plants can switch from natural gas to coal at short notice. This would avoid costly infrastructure spending but would be insufficient at controlling price increases, as these alternative suppliers cannot make up for the Russian market. Another difficulty is that Russia is also a major supplier of thermal coal to Europe.¹³

On March 2, 2022, Denmark authorized the construction of a new pipeline between Norway and Poland to reduce their dependence on Russian gas. The Baltic Pipe project aims to ensure that Poland receives supplies of Norwegian gas through the Baltic Sea. The pipeline is expected to have an annual transport capacity of 10 billion cubic meters of natural gas. The permit had been stalled over a lack of environmental approval but has been approved since Russia's military escalation in Ukraine. The pipeline is expected to be partially commissioned in October 2022 and fully operational by January 1, 2023. The timing is important because Poland has stated it will no longer accept Russian gas after 2022, which amounts to two thirds of its gas supply. Germany also recently suspended the Nord Stream 2 pipeline, which connects Germany to Russia via the Baltic Sea.¹⁴

Europe Avoids Targeting Russian Banks Involved in Oil and Gas Payments

The EU banned seven Russian banks from the Society for Worldwide Interbank Financial Telecommunication (SWIFT). The expelled institutions are VTB Bank, Bank Otkritie, Novikombank, Promsvyazbank, Rossiya Bank, and Sovcombank, as well as VEB, Russia's development bank. The measure will enter into force on March 12, 2022, to allow both SWIFT and EU business to adapt.¹⁵

About 50 percent of Russia's banks are connected and use SWIFT. Others rely on alternatives to SWIFT that include China's CIPS, India's SFMS, and Russia's SPFS, as well as fax and phone messages, which are time-consuming, pose security risks, and are generally reserved for the most severe outages.

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<https://www.wsj.com/articles/coal-runs-hot-as-russia-ukraine-war-risks-europes-climate-agenda-11646402902>

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<https://www.euronews.com/2022/03/01/denmark-authorises-construction-of-gas-pipeline-from-norway-to-poland>

¹⁵

<https://www.euronews.com/my-europe/2022/03/02/these-are-the-7-russian-banks-banned-from-swift-and-the-two-exempted>



The ban excludes Russia's first and third-largest banks, Sberbank and Gazprombank. The two were exempted because they handle most of the payments related to gas and oil exports on which the EU heavily depends to produce energy. As a result, EU member states will be able to continue buying Russian gas without major disruption for the time being. Russia could still decide to cut off supplies; however, energy accounts for 60 percent of its exports, of which half goes to the EU, so this is unlikely. One third of Russia's budget comes from energy sales. The two banks had assets worth 37.5 trillion and 7.53 trillion in rubles, respectively. In comparison, the penalized banks own much less—except for VTB, which is the second largest bank in the country with 18.59 trillion in rubles.

In practice, the sanctions could prove easy to circumvent because operators can change their accounts to a bank that has not been sanctioned. While these sanctions have been criticized as half-hearted, they will impact the Russian economy as they come alongside other financial sanctions such as freezing foreign reserves owned by the Russian Central Bank, cutting Russian access to the EU's capital markets, and prohibiting the provision of euro banknotes. They also coincide with tougher U.S. sanctions that do target Sberbank in particular.

Non-Energy Commodity Prices

On March 8, 2022, Russian President Vladimir Putin ordered the banning of exports of certain commodities and raw materials.¹⁶ Putin did not name the commodities, instead telling his cabinet to come up with a list by March 10. This list could include oil and gas to places that have already banned Russian energy, like the United States and the UK, but it will likely spare the EU until they move first. The outcome will worsen price pressures for commodities like nickel and palladium of which Russia is also a major producer.

On March 3, 2022, the price for aluminum and palm oil all hit new records.¹⁷ The jump in aluminum prices is directly attributed to the crisis as Maersk, which is the world's second-largest shipping company and handles shipments for Russian aluminum company United Co Rusal, suspended operations in Russia.¹⁸ Most of the global shipping capacity has decided to suspend shipping to Russia. Palm oil, produced in Indonesia and Malaysia, is also an alternative to sunflower oil—the majority of which comes from Russia and Ukraine.

Russia and Ukraine together produce 70 percent of the world's neon, used in the making of semiconductors. That is especially worrisome because COVID-19

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<https://www.wsj.com/articles/russia-set-to-ban-commodity-exports-following-western-sanctions-11646768260>

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<https://www.hellenicshippingnews.com/aluminium-at-record-high-nickel-scales-11-year-peak-on-russian-supply-woes/>

¹⁸ <https://www.yahoo.com/now/aluminum-trades-near-record-high-074451106.html>



exacerbated a global shortage of computer chips that has still not been resolved. During Russia's initial military escalation in Ukraine in 2014, neon prices jumped 600 percent.

Russia and Ukraine supply 13 percent of the world's titanium, which is used to make airplanes, and 30 percent of the palladium, which is used to make cars and cellphones. Russia also is a major producer of nickel, which used to produce electric car batteries and steel; its price has jumped 31 percent since the invasion.¹⁹ The London Metal Exchange suspended the trading of nickel on March 8, 2022, after prices passed USD 100,000 per metric ton. Russia is the third-largest nickel producer. Nickel is used in stainless steel and lithium batteries, making it even more expensive to fund infrastructure spending and technological or automotive production. Copper is also at a new high, while aluminum is over USD 4,000 a ton. All of these commodities were already expensive due to COVID-19 and the energy transition, and the Ukraine-Russia crisis is exacerbating the price problem.

Wheat Prices

Ukraine is a world-leading wheat producer. Since the conflict began, not a single container ship—the method of trade for wheat and the global economy in general—has arrived or departed Ukraine. The conflict has completely frozen all non-emergency or humanitarian trade with Ukraine.

With Russia and Ukraine accounting for almost 30 percent of wheat supplies, buyers are looking for alternatives. However, all the major producers—including the wider EU, Russia, the United States, Canada, Ukraine, Argentina, Australia, and Kazakhstan—are struggling, and wheat reserves are set to fall to a nine-year low of 57 million tons by the end of the 2021/22 season. Global consumption of wheat is 781 million tons annually, so those reserves would only last 27 days—and only 20 days if Russia and Ukraine are excluded. There are also concerns the crisis may prevent farmers in Russia and Ukraine from planting grain crops this spring. Many of the world's top importers are in the Middle East and North Africa, where bread is an important staple but weather makes it difficult to grow wheat. Top wheat buyer Egypt is considering an overhaul of its decades-old food subsidy program, which provides cheap bread to nearly two-thirds of its population. The removal of this subsidy could lead to social unrest.²⁰ The price of wheat in particular was a major instigator to the Arab Spring protests of 2011, and companies operating in emerging markets should be aware of the social unrest and disruptions to business operations caused by rising food and energy prices.

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<https://www.naharnet.com/stories/en/288237-economic-dangers-from-russia-s-invasion-ripple-across-globe>

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<https://www.reuters.com/business/russia-ukraine-conflict-highlights-wheat-supply-vulnerability-2022-03-03/>



Complicating matters, China has almost 50 percent, or 131 million tons, of global inventories. The reality is that replacing 30 percent of the world's wheat supply is impossible. Food price inflation alone before the conflict was about eight percent, year over year, and this will likely worsen that.²¹

New Trade Obstacles from Russia-Ukraine Conflict

All traders will experience higher shipping costs, longer delays, and unfamiliar sanctions to navigate, but European traders will likely suffer the most—led by Europe's biggest port in Rotterdam, Netherlands. Many of Europe's biggest logistics firms, including DHL and Kuehne + Nagel, halted shipments to Russia. The EU is looking at ways to limit access to its ports and waters for Russian vessels, expanding on an earlier ban of Russian flights into its airspace. Western allies are also considering the possibility of sanctioning Russian maritime ports, and the EU is looking at ways to target yachts owned by Russian oligarchs.

Impacts on Russian Aviation Sector

On March 3, 2022, Sabre, the company that runs the reservation system used by most airlines worldwide terminated its agreement with Russia's government-owned carrier Aeroflot, which handles the majority of Russia's domestic air travel. As a result, Aeroflot will not be shown in the marketplace used by travel agencies, travel websites, and corporations around the world to shop, book, and service flight reservations.²²

The move is the latest measure against the Russian aviation industry after the Western world closed airspace to Russian aircraft. Boeing and Airbus said they would no longer do business with Russian customers. Last week, Delta Air Lines ended its codeshare booking agreement with Aeroflot.

Russia's aviation sector for travel could be reduced to nothing within a month as Aeroflot was the only Russian company that owned airplanes; the others were owned by foreign-owned lessor companies and are increasingly choosing to terminate leases ahead of sanctions that could leave them criminally liable. The bulk of aircraft operated in Russia are still Boeing and Airbus. Those use CFM, GE, and Rolls Royce engines, all of which have cut off access to repair manuals—without which the aircraft and engines cannot be serviced. Those companies have also issued a global ban on servicing in other countries, so Russian aircraft cannot be flown abroad for maintenance. These companies have also stopped the supply of spare parts. Most airlines keep about two or three weeks' worth of spares supplies.

The outcome could see Russia effectively cut off from international travel—with the notable exception of allied states like China—but continued flights to places like UAE and Beijing would only account for roughly a dozen flights a week.

²¹ <https://www.ft.com/content/e6a28dd9-ecea-4d67-b6b5-a50301b731b2>

²²

https://www.cnn.com/europe/live-news/ukraine-russia-putin-news-03-03-22/h_3dfca976b44c492b7f4eefcb7a6dc37e



Finally, there is the added problem of how Russia would make payments for refueling or airport charges. Even China would have to accept either a cash payment in yuan held by the Russian Central Bank or some form of extended credit, both of which are problematic.

Appendix: Traffic-Light Protocol for Information Dissemination

Color	When Should It Be Used?	How May It Be Shared?
RED	Sources may use TLP: RED when information cannot be effectively acted upon by additional parties and could lead to impacts on a party's privacy, reputation, or operations if misused.	Recipients may not share TLP: RED with any parties outside of the specific exchange, meeting, or conversation in which it is originally disclosed.
AMBER	Sources may use the TLP: AMBER when information requires support to be effectively acted upon but carries risks to privacy, reputation, or operations if shared outside of the organizations involved.	Recipients may only share TLP: AMBER information with members of their own organization and only as widely as necessary to act on that information.
GREEN	Sources may use TLP: GREEN when information is useful for the awareness of all participating organizations, as well as with peers within the broader community or sector.	Recipients may share TLP: GREEN information with peers and partner organizations within their sector or community but not via publicly accessible channels.
WHITE	Sources may use TLP: WHITE when information carries minimal or no risk of misuse in accordance with applicable rules and procedures for public release.	TLP: WHITE information may be distributed without restriction, subject to copyright controls.