

OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE

Assessment of the Effects of Sanctions in Response to the Russian Federation's Invasion of Ukraine

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EXECUTIVE SUMMARY

This report responds to Section 6807(b) of the Intelligence Authorization Act for Fiscal Year 2023.

In accordance with the referenced statute, this report is provided by the Director of National Intelligence in coordination with the Secretary of State and Secretary of the Treasury, and other government agencies deemed appropriate. It examines the effects of sanctions imposed in response to the Russian Federation's invasion of Ukraine in February 2022. The report also discusses country efforts to evade sanctions on Russia, sanctions evasion tactics used by Russia, country efforts to develop alternative payment systems, countries' perceived risk of holding U.S. dollar reserves, and impacts of general licenses related to sanctions. The report is unclassified and includes a classified annex.

The report finds that sanctions and other Western punitive actions have adversely affected a broad range of Russian economic interests including industries dependent on Western technologies, and the energy, defense, and financial sectors. In response, Russia has provided state support to import-dependent industries, increased domestic manufacturing and import substitution efforts, turned to foreign partners including the People's Republic of China (PRC) for critical components, reoriented energy exports to customers in Asia, and increased its use of non-Western shipping and insurance options, all of which has provided some measure of protection against the adverse effects of sanctions and other Western punitive actions. Russia has established new access to the global financial system through non-or less-restricted financial institutions, the use of third-party intermediaries, alternative payment systems, diversification of its currency mix for trade settlement, and expansion of its illicit finance networks.

COUNTRY EFFORTS TO SUPPORT RUSSIA SANCTIONS EVASION^a

Russia has sought assistance from many countries, such as the PRC and Iran, to offset the economic impact of Western sanctions, diversify its energy exports, and procure military materiel from countries not part of the Western sanctions coalition. The extent of circumvention of Western sanctions is hard to document, but Russia faces limitations in the amount of support it gets from its outreach. The more sanctions interrupt established patterns of trade and investment, the more efforts are made by the target regime and its collaborators to misrepresent documentation on sanctioned transactions, imposing additional costs on sanctions targets, according to an open-source report.

- There is a wide spectrum of countries and actors that have directly or indirectly supported Russian sanctions workarounds. Several governments, including Iran and Venezuela, have not enforced sanctions on Russian entities in their jurisdictions. Many countries probably seek to avoid overt sanctions violations but may nevertheless facilitate some circumvention or evasion of sanctions because of a lax regulatory environment, limited law enforcement capacity, and weak enforcement efforts. Some countries, such as those in Central Asia, have historical and significant economic dependencies on Moscow, which could affect their willingness to enforce sanctions.
- Despite some bilateral cooperation with Russia on military procurement, energy exports, and financial transactions, many of Russia's foreign relationships are unequal and unlikely to lead to long-term, full-fledged strategic cooperation or military alliances between countries because of sustained mutual distrust and differing strategic priorities. Governments neighboring Russia were concerned with Moscow's war against Ukraine and sought to work against Moscow, sometimes in small ways.

The People's Republic of China

Russia's large-scale invasion of Ukraine in 2022 has solidified the PRC's role as Russia's most important economic partner. Beijing is pursuing a range of economic support mechanisms for Russia that help mitigate the impacts of Western sanctions and export controls on the Russian economy. The PRC has increased imports of Russian energy, particularly oil supplies rerouted from Europe. Beijing has significantly increased the use of its currency, the renminbi (RMB), and its financial infrastructure in commercial interactions with Russia, allowing Russian entities to conduct financial transactions. The PRC also has become an increasingly important supplier for Russia in its war effort, probably supplying Moscow with key technology and dual-use equipment used in Ukraine.^b

• Russian imports from China increased 13 percent to \$76 billion in 2022, and its exports to China increased by 43 percent to \$114 billion. Total bilateral trade

^a For the purposes of this assessment, we discuss various country sanctions and export control workarounds and economic diversification efforts, not just legal cases of sanctions evasion.

^b For more information about the China-Russia relationship, see the Office of the Director of National Intelligence authored, *Report on Support Provided by China to Russia*, May 2023.

between China and Russia hit a record high of \$190 billion in 2022, which is a 30 percent increase from 2021.

- Russia has turned to the PRC for critical components, and increased its use of non-Western shipping and insurance options, all of which has provided some measure of protection against the adverse effects of sanctions and export controls, according to an executive with a Chinese firm involved in the shipments.
- Many shell companies and small trading companies in Hong Kong serve as receptacles for secondary sales of chips to Russia from China, according to an industry source.

The Islamic Republic of Iran

Since early 2022, Tehran and Moscow have significantly expanded security and economic cooperation. Russian companies' newfound willingness to work with Iranian counterparts and Iran's decision to sell armed Unmanned Aerial Vehicles to Russia for use in Ukraine have put Tehran and Moscow on a trajectory to further expand bilateral cooperation. Both states are likely to increase economic cooperation as they contend with extensive sanctions and the need for alternative economic partners.

- Since late 2022, Iranian and Russian officials have increased the pace of high-level bilateral engagement, seeking to finalize a long-term strategic cooperation agreement, advance transportation and infrastructure projects, and ensure more Iranian involvement in discussions on Syria. Shared international condemnation and isolation in international fora probably has boosted collaboration between Tehran and Moscow.
- Bilateral trade grew about 40 percent in 2022 year-on-year; although, Iran still accounts for less than 1 percent of Russia's total trade. Since Russia's 2022 invasion of Ukraine, Iran and Russia have accelerated their efforts to conclude a free trade agreement, and improve rail and port infrastructure. However, Tehran and Moscow share similarities as exporters of petroleum and importers of high technology that probably will limit bilateral trade growth.
- Sanctions on Russia have prompted both countries to begin linking their financial infrastructure to facilitate transactions outside the Western system. Iran and Russia probably will be able to overcome at least some structural hurdles to expand their financial cooperation. Iran and Russia also have been discussing ways to drop the U.S. dollar from their transactions to bypass sanctions and have made some progress with settling bilateral payments in their national currencies. As of January, both countries also have signed deals to link their financial infrastructures.

North Korea

Since last year, Russia's shortage of munitions in Ukraine and North Korea's public support for Moscow probably drove Russia's interest in expanding economic, political, and military collaboration with North Korea to coax the munitions supplies it needs to sustain battlefield operations. Mutual distrust and differing strategic priorities probably will limit the relationship to transactional and ad hoc collaboration on sanctions evasion.

- Shortly after the outbreak of war in February 2022, North Korea defended Russia's invasion of Ukraine and voted against a United Nations (UN) resolution demanding that Russia end the invasion, according to press reporting. In July 2022, Pyongyang recognized the independence of two Russian-backed breakaway regions. The Russian Ambassador to North Korea subsequently stated in an interview that Moscow could hire North Korean workers to rebuild Ukraine's war-ruined Donbas region, now largely under Russian control, which would be in contravention of a 2017 UN resolution banning member states from hiring North Korean workers. Later the same month, North Korea's Foreign Ministry issued a statement saying its relations with Moscow "are reaching a new strategic height," according to the same source.
- In November 2022, the United States publicly condemned North Korea for transferring arms to Russia. According to the White House, the United States had intelligence indicating that North Korea was covertly supplying Russia with a significant number of artillery shells but obfuscated the real destination of the arms shipments by trying to make it appear as though they were being sent to countries in the Middle East or North Africa.
- In March, the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) sanctioned an intermediary for attempting to facilitate arms deals between Russia and North Korea. According to OFAC, between the end of 2022 and early this year, Ashot Mkrtychev worked with North Korean officials to purchase more than two dozen kinds of weapons and munitions for Russia in exchange for materials ranging from commercial aircraft, raw materials, and commodities.

Cuba, Nicaragua, Venezuela

Russia has longstanding political relationships with the authoritarian regimes of Cuba, Nicaragua, and Venezuela; and these countries continue to support Moscow. Cuba, Nicaragua, and Venezuela have publicly issued declarations of support for Russia and possess minimal abilities to help Russia evade or circumvent U.S., European, and international community sanctions because of their own economic and political challenges. As of May, Cuba and Venezuela still are receiving substantial economic assistance from Russia.

- Cuba: Cuba is increasingly turning to Russia to ease its oil and wheat shortages, according to press reports from this year. Historically, Cuba and Russia have been close economic partners, but their relationship has suffered during the past few years in part because Havana has been delinquent on its debt repayments to Russia.
- **Nicaragua:** The value of bilateral trade and financing between Russia and Nicaragua, which is in the single digit millions per year, have not changed significantly since

- 2022, according to press reporting. Concerns remain that the Nicaraguan Government may seek to assist Russia on sanctions evasion, according to press reporting and a U.S. Government (USG) report, although we lack reporting to indicate whether Nicaragua has successfully aided Russia in evading sanctions.
- Venezuela: Russian companies and banks have continued to support Venezuelan state-owned oil firm PDVSA with sanctions workarounds, although additional sanctions on Russian entities since 2022 have forced Venezuela to seek new banking channels and deprived Russian companies operating in Venezuela of hard currency, forcing them to further move their assets, according to press reporting. In February, Russia and Venezuela stated that they were working on an alternative to the Society for Worldwide Interbank Financial Telecommunication (SWIFT). Separately, Russia and Venezuela signed bilateral agreements on oil and mining in April.

CUMULATIVE EFFECTS OF SANCTIONS ON RUSSIA

Impact of Sanctions on Russia's Macroeconomy

The Russian economy contracted by 2.1 percent in 2022, compared with projections of 3 percent growth at the beginning of 2022, according to official Russian data. This year's outlook for Russia's economy is subject to a high degree of uncertainty. As of April, industry and Russian Government forecasts range from contraction of 3.4 percent at the low end to small growth of 1.2 percent on the high end, with a median forecast of 0.9 percent contraction.

- As of February 2022, the Central Bank of Russia no longer publishes some key economic or financial data in an attempt to reduce insights into the effectiveness of sanctions, which consequently reduces the quality of data on which non-Russian forecasts are based.
- In mid-January, the Russian State Duma approved a law to further restrict access to Russia's economic data—despite a push by the chair of the Central Bank of Russia to declassify most of Moscow's macro and financial data who stated that disclosure and transparency was needed for Russian firms to make good decisions.

Since October 2022, the performance of major macroeconomic indicators have been mixed. Imports, for example, rebounded from lows last year because Russia reoriented some exports toward new partners, particularly in Asia, and expanded imports. Some of Russia's financial health indicators—such as the budget deficit—have deteriorated, reflecting the combined effect of higher war expenditure, government support to Russian businesses, increased social transfers, declining energy revenues, and sanctions.

Impact of Sanctions on Russia's Sectoral Markets

We assess that sanctions, export controls, and other economic statecraft measures have adversely affected a broad range of Russian economic interests, including industries dependent on Western technologies, and the energy, defense, and financial sectors. Russia, in response, has provided state support to import-dependent industries, increased domestic manufacturing and import substitution efforts, turned to foreign partners such as the PRC for critical components, reoriented energy exports to customers in Asia, and increased its use of non-Western shipping

and insurance options, all of which has provided some measure of protection against the adverse effects of sanctions and other Western punitive actions.

Methodology

Our assessment of the economic impact of sanctions, export controls, and other Western punitive actions relies on a wide body of quantitative and qualitative data. We explicitly consider the specific actions levied on Russia, the relative importance of the targeted sector or company to Russia's economy, the counter actions of Moscow, Russian firms and individuals, and the effectiveness of steps taken by various actors that blunt the impact of Western actions. Our analysis does not incorporate potential longer-term impacts beyond what we have observed to date and does not assess political or other non-economic ramifications. Our assessment of impact is necessarily imprecise because of the overlapping nature of some policy actions, our inability to reliably disaggregate effects of specific sanctions from contemporaneous factors and other actions, and limited data availability. The sectors and entities in the tables below represent the cumulative breadth of the sanctions and punitive actions implemented against Russia, and the list is not exhaustive.

Export Controls

Sanctions and Western Punitive Actions: Export controls on selected equipment and components outside the defense, energy, and metals sectors

Impact Ratings (Significant, Moderate, Low, No Effect): Moderate

Observed Impact on Russia's Economic Interests: As of May, decreased technology imports had disrupted production across Russia's transportation industry because of its heavy reliance on foreign inputs to maintain and produce aircraft, automobiles, and trains. Sales of passenger vehicles in Russia fell by 60 percent in 2022, compared with 2021.

Russia's Response: As of May, Russia was continuing to encounter challenges mitigating the effects of sanctions and export controls on its automotive and aviation industries. China has emerged as a key supplier for some products, and other countries, such as Turkey, are helping Moscow to mitigate some damage. In recent months, China has sent auto spare parts, and IT and communications equipment to Russia—helping sustain Russia's access to foreign-made home appliances, smartphones, and passenger vehicles.

Russia has achieved some success in negating the effects of export controls by indirectly importing critical products from third countries including Turkey, the United Arab Emirates (UAE), and post-Soviet states, such as Armenia, Georgia, Kazakhstan, and Kyrgyzstan, according to press reporting.

Between September 2022 and December 2022, Russia announced financial assistance to agriculture, aviation, microelectronics, and railway firms, including cheap credit, reduced administrative barriers, and tax breaks.

Energy Sector Measures

Sanctions and Western Punitive Actions: Energy sector measures, including the European Union's (EU) ban and G-7 led price cap on petroleum products in February 2023, the EU's seaborne crude oil ban and G-7 led price cap on crude oil in December 2022, and the EU's import ban of coal in August 2022

Impact Ratings (Significant, Moderate, Low, No Effect): Moderate

Observed Impact on Russia's Economic Interests:

Crude:

- As of May, Russian oil export volumes had rebounded to pre-invasion levels. According to the International Energy Agency, Russia exported 8.1 million barrels per day (b/d) of crude and refined oil products in April and 7.8 million b/d in May. By comparison, Russia exported an average of 7.5 million b/d in crude and refined oil products in 2021. Oil and gas revenues, however, were down 45 percent for January through March 2023 compared with the same period in 2022, according to the Russian Ministry of Finance.
- Energy experts caution that Urals prices reported in the open market have become unreliable because many market participants have stopped sharing their data and the industry price assessment of Urals cargoes to Europe has become increasingly obsolete as Russian crude oil has shifted onto Asian markets. In late April, Russian Urals crude oil traded around \$63 per barrel, above the price cap of \$60 a barrel, compared with late January, when Russian Urals crude oil approached \$60 a barrel after touching the lowest level in nearly two years of \$50 earlier in the month, according to industry reports.
- In early February, at least some of Russia's other crude oil blends sold abroad, Sokol and ESPO, were potentially trading above the price cap, with Sokol trading at \$77 per barrel, and ESPO trading at more than \$72 per barrel. However, these figures may factor in transportation costs.
- Urals oil cargoes, loaded in the first half of April, are moving to India and China. Purchases by the PRC are expected to hit a record this year, and consumption from number three importer India is set to remain robust.
- In 2022, Russia's budget revenues from the oil and gas industry totaled \$172 billion—an increase of 28 percent from 2021, according to industry reporting. Record discounts for Russian benchmark Urals grade saw Russian export revenues slip by \$3 billion month-over-month to \$12.6 billion in December, the lowest since February 2021, according to the International Energy Agency.

Refined Oil Products:

• In 2022, the EU accounted for about 550,000 b/d or 69 percent of Russia's diesel and gasoil exports, according to industry data. An industry consultancy estimated in mid-December 2022, that the EU ban probably would reduce Russia's total exports of diesel and gasoil by between 200,000 to 420,000 b/d in 2023—a one-

quarter to one-half drop in Russia's exports of these products, compared with 2022 volumes.

• From January to mid-March, Russian export volumes of diesel fell by 3 percent year-on-year, which was offset by an increase in deliveries to the domestic market, with a 7.5 percent increase of diesel production volumes during the same timeframe, according to Russian open-source reporting.

Coal:

- Russian coal export volumes decreased approximately 8 percent in 2022, and production remained relatively unchanged, leading to a buildup of inventories last year, according to open-source reporting.
- Russian coal firms continue to navigate rising transportation and logistics costs and constraints because of Russia's currently overwhelmed eastbound rail capacity, according to press reporting.

Russia's Response

Crude:

- Through May, Russia continued to divert its crude exports from Europe to other
 markets, most notably China and India. India accounted for about 70 percent of the
 seaborne Urals oil cargoes as of mid-April, according to industry reporting. As of
 March, discounted Russian oil purchases made up 35 percent of India's total crude
 imports by volume, an increase of just 1 percent before Russia invaded Ukraine.
- In April, the Russian Duma passed a law that established new oil price rules for calculating oil-related taxes. Traditionally, taxes were determined by Urals crude oil price, but the new rules calculate taxes relative to a fixed discount to Brent. Moscow also probably switched its pricing calculation to Brent in part because the industry price assessment of Urals cargos to Northwestern Europe had become increasingly obsolete as Russian crude oil shifted away from Europe and onto Asian markets.
- In March, Russia stated that it would voluntarily reduce its oil production by 500,000 b/d, probably to put upward pressure on global oil prices. Despite the announcement of cuts, oil export volumes in March and April increased relative to February.

Refined Oil Products:

• As of May, Russia had increased diesel exports to Latin America, Africa, and the Middle East. China and India are unlikely to demand significant new quantities because they are net exporters of diesel.

Coal:

• Russian coal companies have attempted to find new markets in Asia, with some success locating buyers in China; Russia increased its coal export volumes to China in 2022 by 11 percent compared with the previous year. Press reporting indicates

that Russian coal exports are being offered at a discount between 50 percent and 60 percent to secure buyers.

Defense-Related Sanctions and Export Controls

Sanctions and Western Punitive Actions: Sanctions and enhanced export controls on defenserelated entities

Impact Ratings (Significant, Moderate, Low, No Effect): Moderate

Observed Impact on Russia's Economic Interests: International restrictions limiting Moscow's access to critical inputs have reduced and delayed weapons production, and led to potential quality issues.

Russia's Response: Moscow has alleviated some equipment shortages caused by export controls and sanctions by importing items that are not subject to international restrictions, purchasing goods that are transshipped through third countries, buying military equipment from sanctions-indifferent countries, and increasing reliance on illicit procurement networks.

According to a Western report that analyzed Russian customs data, China has sent tens of thousands of shipments of goods—some of which are classified as dual-use—to Russia, with some received by Russian state-owned defense companies. As of April, Kyiv stated that its forces were increasingly finding Chinese commercial components in weapons used by Russia.

Financial Sector Measures

Sanctions and Western Punitive Actions: Financial sector measures, including access of major Russian banks to the Western financial system for most commercial payments

Impact Ratings (Significant, Moderate, Low, No Effect): Moderate

Observed Impact on Russia's Economic Interests: Sanctions are leading to foreign banks curbing ties with even non-sanctioned banks, constraining Russia's ability to make dollar- and euro-denominated payments, and forcing reliance on subsidiaries of foreign banks.

Although Russia's banking sector remains stable, in February, Russia's VTB Bank announced that customers had withdrawn \$26 billion of deposits after sanctions were imposed.

Russia's biggest companies—including unsanctioned ones—face difficulties servicing their outstanding dollar denominated debt, and many have refinanced in RMB.

Russia's Response: Russia has used less-restricted financial institutions to continue to make cross-border payments, with Raiffeisen Bank International's Russia subsidiary involved in 40-50 percent of such payments.

Russia has increasingly turned to currencies outside the dollar and euro to pay for its cross-border transactions. As of April, there have been an increase in multi-currency trade settlement agreements between Russia and some of its trade partners—including India, Iran, and Turkey. In December, the Central Bank of Russia (CBR) reported that around half of Russian cross-border payments were now being made in currencies other than the dollar and euro, up from 21 percent at the start of 2022.

Russia has increasingly looked to use the RMB. As of March, the share of the RMB on the Moscow Exchange hit an all-time high, according to the CBR. By the end of February, the volume of trading in the ruble-RMB pair amounted to \$24.3 billion against \$20.7 billion in the dollar-ruble pair, according to the CBR.

Russia is seeking to expand its use of alternative financial infrastructure, including China's Cross-Border Interbank Payment System (CIPS). In April, Bangladesh and Russia agreed to use the Chinese RMB to settle a \$12 billion payment for the construction of a nuclear power plant, which will be conducted through CIPS, according to media reports.

As of March, major Russian corporate giants, including Rusal and Rosneft, had raised more than \$7 billion in RMB-denominated bonds on the Russian market since starting to issue them in August, partially to recapitalize U.S. dollar or other Western currency debt.

Russia also has explored the use of digital currencies, although at a small scale. As of January, Russia was testing the use of cryptocurrencies as a method of payment for foreign trade transactions.

Russian Affiliated Actors

Sanctions and Western Punitive Actions: Sanctions on Russian affiliated actors (including oligarchs) and seizures of their assets

Impact Ratings (Significant, Moderate, Low, No Effect): Moderate

Observed Impact on Russia's Economic Interests: Twenty-three of the richest Russian oligarchs have lost \$67 billion, or 20 percent of their fortunes since February 2022, according to press reporting and the Bloomberg billionaires index. According to the multilateral Russian Elites, Proxies, and Oligarchs (REPO) Task Force, as of February, REPO members had collectively blocked or frozen tens of billions of dollars' worth of sanctioned Russians' assets in financial accounts and economic resources.

However, a few mostly unsanctioned Russian billionaires also increased their fortunes during the same period; much of this wealth probably is derived from high commodity prices, which probably helped minimize some losses from sanctions and asset seizures. Many billionaires also maintain opaque offshore networks that protect their wealth from detection and disruption.

Most oligarchs who were individually sanctioned and had assets seized by Western authorities experienced partial degradation of their financial and social networks and a reduction of travel and holdings abroad, and subsequently reoriented their holdings toward Russia. These had previously been key assets in supporting the Kremlin's malign influence and election interference efforts.

Russia's Response: In February, the Russian Foreign Ministry decried the asset seizures of at least one Russian oligarch as "undisguised politically motivated robbery."

Russian Steel/Iron and Gold

Sanctions and Western Punitive Actions: Russian steel/iron (EU, UK) and gold (EU, UK, U.S.) import bans.

Impact Ratings (Significant, Moderate, Low, No Effect): Low

Observed Impact on Russia's Economic Interests: Sanctions contributed to a 7 percent contraction of finished steel output and a 6 percent reduction in domestic steel demand in 2022. Steel demand in Russia is forecasted to decline an additional 10 percent this year because of the direct and indirect effects of sanctions, according to an industry report.

Sanctions caused Russian gold sales to external markets to fall, but overall sales remained stable in 2022 because of a surge in domestic demand.

Russia's Response: One of Russia's biggest steelmakers is investing in domestically produced information technology for the metals industry to replace currently unavailable foreign equipment and software, and prevent project disruptions.

Russia has continued to divert steel volumes to alternative markets such as China and India, providing large discounts to India, but its efforts have been constrained by limited global demand for steel and challenges associated with payment settlement and insurance procurement.

Russian Officials

Sanctions and Western Punitive Actions: Sanctions on Russian officials (senior leadership and senior military officers) and seizures of their assets

Impact Ratings (Significant, Moderate, Low, No Effect): Low

Observed Impact on Russia's Economic Interests: The economic impact of sanctions on Russian officials most likely will remain limited because historically, they have held most of their wealth in Russia.

Russia's Response: Moscow has established tax havens in Russia to encourage sanctioned Russian firms, including those owned by Russian officials and oligarchs, to register at home and conceal information from the West about their banking, borrowing, insurance, and licensing.

Russian State-Sponsored Actors

Sanctions and Western Punitive Actions: Sanctions on Russian state-sponsored actors (Vagner, Russian propaganda, and cultural organizations) and seizures of their assets

Impact Ratings (Significant, Moderate, Low, No Effect): Low

Observed Impact on Russia's Economic Interests: State-sponsored actors such as Vagner probably generate a substantial share of their revenue from domestic Russian Government contracts, which insulates them from the effects of most U.S. and EU sanctions.

Russia's Response: Vagner has established extensive networks of front companies and front persons, and uses diverse financial tactics for its international operations, much of which were established before 2022, which helps it to avoid U.S. and EU financial systems and protect its revenues.

RUSSIA SANCTIONS AND EXPORT CONTROL EVASION TACTICS

Sanctions on Russia have disrupted most of its traditional financial channels, forcing a wide spectrum of Russian entities to use diverse tactics to maintain access to the global financial system. Russian entities have extensively used varied networks of third-party intermediaries, both licit and illicit, to conduct financial transactions and trade, including in energy, and military and technology related items.

Use of Third-Party Intermediaries

Russia frequently uses third-party intermediaries to conduct trade in sanctioned and non-sanctioned goods. Some of these intermediaries are countries or independent facilitators that may not recognize that the money transacted or goods being shipped are destined for, or supporting, Russia. Other times, these third-party intermediaries are governments with longstanding ties to Russian Government entities or private actors operating illicit procurement networks and are actively complicit in supporting Russia's sanction evasion efforts. In March, the U.S. Departments of Commerce, Justice, and Treasury released a "compliance note" stating that Russia might be circumventing sanctions and export controls through the use of third-party intermediaries and transshipment points. These intermediaries and transshipment points could allow Russia to indirectly send significant exports to European markets.

- Russia has continued its "parallel imports" program, through which Russian companies acquire goods purchased through a third country but not licensed for sale in Russia. Between May 2022 and mid-December 2022, Russia obtained more than \$20 billion worth of "critical products," probably including electronics, via parallel imports, according to Russian's Federal Customs Service. Some of these goods were channeled through Turkey, the UAE, and post-Soviet states, such as Armenia, Georgia, Kazakhstan, and Kyrgyzstan, according to press reporting.
- Sometimes, Chinese companies supplying Russia use chains of intermediary companies that can include more than a dozen firms, which could enable these firms to hide their intent. In other cases, descriptions of items in shipments are intentionally vague and the volume of goods exported are unreported.
- Since October 2022, the U.S. Department of Commerce's Bureau of Industry and Security (BIS) has added 31 entities in China to its Unverified List^c for supporting Russia's military or defense-industrial base. During the same period, BIS added two Chinese state-owned enterprises to the Entity List, designating them as having provided exports to Russian military end users.

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^c BIS announced a policy in October 2022 indicating that if BIS was unable to complete an end-use check within 60 days for certain reasons, including a lack of host government cooperation, the entity subject to the check may be added to the Unverified List, which imposes restrictions on future exports. The party subject to the check may be added to the Entity List, which generally restricts all exports, reexports, and transfers (in-country) of items if the check could not be completed within 60 days of a party being added to the Unverified List or if the check identified that the party has violated export controls.

Shipping Tactics

Moscow has been relying more heavily on third party tanker owners and operators—including those that previously facilitated Iranian oil shipments—to provide supertankers and insurance coverage to transport its oil following actions that restricted the use of Western oil cargo and insurance services.

- Unlike Western insurance providers, which have a coverage and reinsurance chest valued in the billions of dollars, the alternative insurance being taken by many of the ships carrying Russian commodities probably is much smaller, according to a Singapore-based maritime insurance executive.
- According to financial press reporting in February, many of the "shadow fleet"—vessels with opaque ownerships—also used by Iran, have begun to ship Russian crude oil. Russia has attracted these vessels by enticing tanker owners and operators with premium freight rates, sometimes 50 or 100 percent above market rates.

Technology Replacements

Beijing is providing some technology that Moscow's military has been using to continue the war in Ukraine, judging from Western press reporting and trade data. Western press analysis of customs records revealed that PRC state-owned defense companies have been shipping navigation equipment, jamming technology, and fighter-jet parts to sanctioned Russian Government-owned defense companies. Russia has continued to acquire electronic chips through circuitous routes, with a large portion flowing through small traders in Hong Kong and mainland China. Between January and September 2022, PRC semiconductor exports to Russia rose by 19 percent from the same period in 2021, according to a third-party examination of trade data from the UN Comtrade database.

- Global exports of electronic chips and associated components to Russia were cut in more than half after the United States and its allies first imposed strict export restrictions and financial sanctions on Russia, according to customs records. However, by October 2022, Russia's total imports of these items hit nearly \$33 million per month, just below the \$35 million monthly level Russia has averaged since the United States began tightening high technology exports to Russia following its invasion of Crimea in 2014, according to a third-party analysis of the Russian custom records and the UN Comtrade database.
- The PRC's state-owned defense companies have shipped navigation equipment, parts for fighter jets, and other military technology equipment to Russian defense companies, according to Western analysis of customs data. According to that analysis, the PRC has sent tens of thousands of shipments of goods—some of which are classified as dual-use—to service Russia's military. The PRC's top firms develop technologies with civil and military applications, creating obstacles to stemming the flow of military technology to Russia.
- The PRC has made progress in its ability to develop and manufacture chips for military use, according to a research article in the Journal of Strategic Studies. However, according to the same article, Beijing still is unable to make advanced

chips that are competitive with U.S. and Western options, and continues to rely on foreign technology and fabrication facilities in Taiwan for production. As of early 2022, Chinese market share for the most advanced processor categories was less than 1 percent. Chinese-made chips also are lower quality, and the failure rate for Chinese chips purchased by Russia is as high as 40 percent, according to Russian news source Kommersant.

Increased Use of Chinese RMB and Exploration of Digital Currencies

Since the start of Russia's war on Ukraine, banking ties between the PRC and Russia have increased as has the amount of trade denominated in RMB and rubles. In 2022, the share of Russia's imports settled in RMB jumped to 23 percent, up from 4 percent in 2021, according to the Central Bank of Russia, and in February, the RMB surpassed the dollar in monthly trading volume on the Moscow Exchange for the first time. As of January, many large Chinese banks still were blocking at least some transactions with designated Russian banks because they feared exposing themselves to sanctions.

- Last year, Russian companies turned to the RMB and issued bonds in the Chinese currency worth the equivalent of more than \$7 billion, according to Refinitiv data. As of May, the RMB-ruble was the most traded currency pair on the Moscow Exchange (MOEX). In October 2022, total transactions in the RMB-ruble pair on the MOEX ballooned to an average of almost \$1.25 billion a day—previously, they rarely exceeded \$150 million in an entire week.
- In April, Russia accounted for 2.7 percent of offshore RMB payments—a more than 10-fold increase in its share since February 2022, according to SWIFT statistics and Russian press reports. In April, Russia was the fourth largest user of RMB; before March 2022, Russia was not even among the top 15 RMB users.
- In September 2022, the CEO of Russia's second largest bank, VTB bank, boasted that it was the first Russian bank to establish a cross-border bank transfer service with China. VTB plans to boost the volume of RMB transactions fivefold by this year. As of March, China had provided a sufficient number of payment routes within mainland China for Russian banks, according to a Russian bank chairperson.

Russia is exploring an expanded use of cryptocurrencies to facilitate cross-border transactions and Russian cryptocurrency exchanges probably are being used by individual actors to launder money, according to press reporting. In May, Russia's Finance Ministry indicated that digital currencies could help fill the gap resulting from the lack of correspondent bank accounts, although the Russian official indicated that cryptocurrencies are ill-suited for sanctions circumvention since the most popular cryptocurrencies are monitored by financial intelligence in all countries. Russia is concurrently exploring cryptocurrency agreements with other sanctioned economies, which could facilitate some trade between parties to the agreement.

• As of January, Russia and Iran were cooperating to create a gold-backed stable coin that would enable cross-border transactions without using fiat currencies such as dollars, rubles, or Iranian rials. Separately, in November 2022, Russia and Cuba were

- considering how to generate a bilateral agreement for the use of cryptocurrencies between the two countries, according to press reporting.
- As of January, Russia had taken steps to allow the use of digital currencies for commercial transactions to ease restrictions caused by sanctions, although it still maintains some restrictions on digital currency transactions. As of April, Russian officials are working on experimental legislation that would allow cryptocurrencies to be mined for use in export-import deals, according to press reporting.

COUNTRY DEVELOPMENTS IN ALTERNATIVE PAYMENT SYSTEMS

As of June 2023, the PRC, Iran, and Russia have the most developed alternative messaging and payment systems. These systems have not been widely adopted, but the linkages between the Iranian and Russian alternatives have increased during the past 16 months.

• Iran and Russia are working jointly to overcome restrictions on cross-border financial flows resulting from sanctions and in January, Central Bank of Iran (CBI) officials confirmed that Iran and Russia have interlinked and integrated their interbank communication and payment systems. The CBI stated that Iranian banks are able to communicate through Iran's SEPAM system with Russia's Financial Message Transfer System (SPFS). The latter is used by all Russian banks and many banks in Commonwealth of Independent States countries.

Russia also is working to expand international usage of its Mir payment system, SPFS, and China's CIPS. To date, its goal of expanding the international use of its Mir card has been stymied by countries' concern of potential sanctions exposure. Russia has been more successful, however, in expanding its use of CIPS. Since the invasion of Ukraine, CIPS has continued to expand, and as of early April, has a network of more than 1,400 participant banks, including 23 Russian banks. As of October 2022, Moscow and Beijing have increasingly used CIPS and SPFS, and accelerated cooperation between their respective payment systems, according to Russian press reporting.

- As of September 2022, the Central Bank of Russia sought to increase the number of countries participating in Russia's Mir card payment system from 11 to 25 by 2025, and several countries including the PRC, Egypt, India, Indonesia, and Thailand were in negotiations to implement the system, according to a Russian press report. However, U.S. warnings and sanctions on Mir executives later that month prompted many banks in the 11 countries where Mir already was used to sever relations with Mir, according to press reports.
- As of July 2022, at least 23 Russian banks had joined CIPS as indirect participants, allowing for clearing and settlement of RMB payments, although most probably continue to rely on SWIFT to transmit bank messages. As of January 2023, the average daily Russian transaction volume through CIPS had increased by nearly 50 percent since Russia's invasion, to 21,000 transactions per day. Total settlements on CIPS came to RMB97 trillion (\$14 trillion) in 2022, a year-on-year increase of 21 percent, according to a financial press review of central bank data.

 As of March 2022, the Central Bank of Russia and the People's Bank of China were working to integrate SPFS and CIPS, according to the Chairman of the State Duma's Financial Markets Committee Anatoly Aksakov.

COUNTRY RISK ASSESSMENTS OF HOLDING U.S. DOLLAR RESERVES

Most countries probably do not perceive that holding dollars has become riskier since the onset of Russia's war on Ukraine, judging from the stability in the share of global reserves held in U.S. dollars since January 2022. According to the latest available International Monetary Fund data, the dollar accounted for approximately 59 percent of the world's foreign currency reserves holdings in both 2021 and 2022. In contrast, the share of global reserves held in RMB increased only fractionally from 2.66 percent in 2021 to 2.79 percent in 2022.

• Press reporting indicated that Beijing's holdings of USG bonds—a key component of China's foreign reserves holding—hit a 13-year low at the beginning of this year. This was driven largely by falling bond prices but is popularly attributed to Beijing's efforts to diversify its portfolio and lower dependence on the dollar while promoting broader use of the Chinese RMB, and as a guard against the risk of sanctions, such as those imposed on Russia for its invasion of Ukraine, according to open sources.

IMPACT OF GENERAL LICENSES RELATED TO SANCTIONS

As of May, Russia has been complaining that General Licenses (GLs), which describe allowable transactions with Russia, have been ineffective in unlocking unsanctioned and allowable trade. It has been joined by other countries, including food importers and others reliant on imported fertilizer, that have expressed concerns that sanctions are limiting Russia's ability to export these products.

- In February, Russian officials declared that "GLs and pseudo-exemptions are a sham that do not guarantee freedom of action in the business environment," reflecting Russian messaging that Western general licenses are insufficient and have failed to ensure that Russia is able to export grain and fertilizer at scale. As of December 2022, Russian companies continued to face prohibitively high insurance costs, obstacles in the implementation of financial transactions, and difficulties arranging logistics for sanctions-exempt trade, according to Russian officials.
- Several African and Middle East countries remain concerned that sanctions continue to impact humanitarian assistance and commerce, according to a USG report, and industry analysts have speculated that sanctions-related challenges are limiting Russia's exports of humanitarian goods.

GLs and exemptions in relation to Western sanctions directed against Russia have lessened but not eliminated Western financial institutions and firms' predispositions to overcomply with sanctions. Many global companies involved in supply chains for essential commodities—such as wheat, fertilizer, fuel, and medicine—continue to assess their exposure to Russia-related sanctions and export controls even if their business does not overlap sanctioned entities and sectors, and some have chosen to de-risk and avoid all Russia-related transactions,

even when their transactions would be covered under a GL. Other firms have been more receptive to government outreach and assurances, and have chosen to engage in transactions covered by GLs. As of May, many multinationals and U.S. banks remained cautious in their dealings with Russia, which continued to experience friction in completing allowable transactions under the various GLs.

- U.S., UK, and EU GLs and policy clarifications on finance and trade in food and fertilizer are helping to underscore that Russia's food production and agricultural trade are not sanctioned. Increased Russian grain export volumes in the first two months of this year probably indicate that the degree of overcompliance on trade in Russian agricultural exports may have fallen.
- In November 2022, the United States issued GL 53 which authorizes U.S. persons to engage in all transactions ordinarily incident and necessary to the official business of diplomatic or consular missions of the Government of the Russian Federation. Further guidance indicates that the United States does not seek to pursue sanctions against non-U.S. persons for transactions related to Russian missions located outside the United States, and the United States has provided the Russian Federation with options for how to secure access to the U.S. banking system to pay its UN dues. However, Russia's overseas mission has encountered some difficulty in paying salaries and expenses associated with the provision of consular services.
- In May 2022, the United States issued GL 31, which specifically authorizes U.S. entities to continue seeking, obtaining, maintaining, prosecuting, and defending Russian patents, among other forms of Russian intellectual property. Despite the issuance of GL 31, some U.S. banks are refusing to make payments to Russian entities altogether because they do not want to inadvertently run afoul of sanctions, according to legal analysis.
- In April 2022, the United States issued GL 25 authorizing non-government transactions related to Russian telecommunications services. However, several international media companies have frozen the assets of Russian influence actors, including Russian state affiliated media outlets RT and Sputnik, as well as Russian opposition leader content, despite the GL. GL 25 has not encouraged most telecommunications companies that had voluntarily pulled out of Russia and suspended Russian user accounts in the immediate aftermath of the war to reconsider their position, although one company reportedly is exploring reengaging with its Russian customers in a limited manner, possibly as a result of the GL.

GLs that exempt some energy-related bank transactions with Russia may have increased energy revenue flowing into Russia and decreased potential disruptions to energy trade that could have negative spillover effects onto the global oil market, particularly through higher prices. These include U.S. GL 8, 55, and 56 which authorize energy-related transactions conducted by select sanctioned Russian banks, as well as certain transactions related to the importation of Russian oil or petroleum products into Bulgaria, Croatia, and landlocked EU member states, as well as the maritime transport of crude oil from the Sakhalin II project intended for import to Japan.