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RUSSIA SANCTIONS:

ADAPTING TO A MOVING TARGET



Russia Sanctions: Adapting to a Moving Target

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INTRODUCTION

On Feb. 28, shortly after Russia's invasion of Ukraine, the Institute of International Finance (IIF) published a report called [*Russia Sanctions: Climbing the Escalation Ladder*](#), which looked at measures imposed in the early days of the conflict—as well as potential future measures—in several key areas: global payments systems, access to the U.S. dollar, sovereign debt, hydrocarbon exports, and technology export controls. This publication, which assessed the sanctions' implications for the Russian economy and international financial markets, followed the IIF's first paper on the topic, [*Market Interventions: U.S. Sanctions on Russia*](#).

While the war continues to rage on in its fourth month, friends and allies of Ukraine—the United States, European Union, United Kingdom, Japan, and others—have continued to levy swift and far-reaching sanctions against Russia. This paper picks up where the earlier one left off, looking in detail at the impact of international financial-sector sanctions and restrictions on energy exports. It will also examine something we believe is an underestimated factor: multinational companies' exiting of the Russian market, whether partially or fully, temporarily or permanently. In some cases, sanctions on certain business activities play an important role. In other cases, the pullout is a result of the public opinion response to the invasion of Ukraine.

And while there is certainly widespread global support for continuing to exert pressure on Russia, it is also important to remember that Russia is not the only country feeling the sting of these sanctions. When we look at energy exports, for example, there is an unevenness in how embargos on separate energy imports will be felt across the European Union. The IIF's earlier paper argued that the U.S., EU, and their allies were “climbing the escalation ladder” of sanctions; this paper highlights why sanctions should not be considered static. Rather, they are a “moving target” requiring regular adjustments as their consequences play out and countermeasures are taken. Importantly, we have also yet to reach the top rung of the ladder. Western allies could take additional steps in the coming weeks and months to keep up pressure on the Russian government.

There are some who question the efficacy of sanctions, citing the fact that they have not brought about an end to Russia's aggression yet. However, we believe that these sanctions, which are a form of economic warfare designed to both weaken Russia's ability and resolve to continue its war operations, have had a serious impact on the Russian economy. In fact, they are unraveling its economy, wiping out more than a decade of economic growth—and some of the most meaningful consequences have yet to be felt. Economic sanctions were never going to stop Russia's actions overnight, but are intended to raise the price of their continuation. Eventually, the price may reach a level where Russia's war on Ukraine becomes prohibitively expensive.¹

¹ This paper's discussion of sanctions on Russia includes measures taken up to and until June 8, 2022.

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1. CLIMBING THE ESCALATION LADDER

Sanctions on Russia can be categorized into three phases. The first phase followed Russia's annexation of Crimea and the beginning of the military conflict in Eastern Ukraine in 2014. Largely unilateral actions by the United States in the following years constitute the second phase.

The third phase began with Russia's invasion of Ukraine in February 2022 and includes several unprecedented measures. In our paper, [Russia Sanctions: Climbing the Escalation Ladder](#), published on Feb. 28 of this year, we took stock of the initial round of actions announced by the United States, the European Union, and their allies. These include sanctions on Russian financial institutions' access to the U.S. and European financial systems, cutting off of a number of banks from the SWIFT financial messaging system, sanctions on the Bank of Russia (CBR), additional restrictions on Russian sovereign debt, and technology-related export controls. We concluded that, while these were meaningful steps, they left the door open for additional sanctions, especially related to Russia's financial industry as well as the country's oil and natural gas exports.

With the war now in its fourth month and no end in sight, Ukraine's friends and allies have indeed "climbed the escalation ladder" and taken additional steps to impose economic costs on Russia, including new restrictions on the country's financial system and, importantly, sanctions on exports of coal, crude oil, and petroleum products. The latter essentially reflect the fact that sanctions are a "moving target" that require regular adjustments. Specifically, while the initial round of measures had a marked impact on Russia's macroeconomic buffers—especially freezing a significant share of the Central Bank of Russia's (CBR's) foreign currency reserves—it did not change the fundamental dynamic of large foreign exchange (FX) inflows due to the country's substantial commodity exports. Left unaddressed, and coupled with soaring energy prices, Russia would be able to rebuild its buffers in a relatively short period of time, rendering some of the existing sanctions obsolete.

In this paper, we update our analysis of the various impacts of sanctions on the Russian economy and look at additional steps that Western allies may take in the coming weeks and months.

2. FINANCIAL SYSTEM UNDER STRAIN

a. International Financial Sector Sanctions

To begin the third phase of sanctions, the United States first imposed sanctions on Russia's financial system on Feb. 22, 2022, following President Putin's recognition of two separatist states in Eastern Ukraine, by adding state-owned development corporation Vnesheconombank (VEB) as well as the defense sector-connected Promsvyazbank to [U.S. Treasury's](#) Specially Designated Nationals and Blocked Persons (SDN) List. This froze the two banks' (and their subsidiaries') assets within U.S. jurisdiction and prohibited U.S. persons from conducting transactions with them.

Following Russia's invasion of Ukraine, the U.S. extended these sanctions to three more institutions on February 24—Bank Otkritie, Sovcombank, and VTB Bank—while adding Russia's largest bank, Sberbank, to its CAPTA List, which prohibits the opening of corresponding or payable-through accounts (and/or mandates their winding-down). Since then, further banks have been added to the SDN list, including Sberbank, and Alfa Bank on April 6. The United States had, in previous years, sanctioned additional financial institutions in Russia, including Bank Rossiya in 2014. As a result, an estimated 65% of the banking system—in asset terms as of February 2022—are currently under "full blocking sanctions", i.e., included on U.S. Treasury's SDN List (Exhibit 1). In effect, these institutions have lost access to the U.S. financial system and to the U.S. Dollar.

The European Union has introduced [financial sector sanctions](#) as well, including asset freezes and the prohibition of transactions with ten Russian banks, by adding them to *Annex I of Council Regulation (EU) No 269/2014*, which had been instituted following Russia's annexation of Crimea in March of 2014. These banks are Bank Rossiya, Promsvyazbank, and Vnesheconombank (VEB), sanctioned on February 23 (first package), Bank Otkritie, Novicombank, Sovcombank, and VTB Bank, sanctioned on April 8 (fifth package), and Credit Bank of Moscow, Rosselkhozbank, and Sberbank, sanctioned on June 2 (sixth package). The institutions represent around 65% of banking system assets. As EU measures partially overlap with steps taken by the U.S., seven banks representing 58% of assets have lost access to the world's two most important international financial markets and reserve currencies.

Another important development took place on Feb. 26 when the U.S., EU, Canada, and the United Kingdom announced that seven Russian banks—Bank Otkritie, Bank Rossiya, Novikombank, Promsvyazbank, Sovcombank, VEB, and VTB Bank—would be disconnected from the global financial messaging system SWIFT. Credit Bank of Moscow, Rosselkhozbank, and Sberbank were added on June 2.

Russia had undertaken [efforts](#) in recent years to address its financial system’s exposure to this risk through the development of a domestic payments system—the CBR’s Financial Communications System (SPFS). However, its international connectivity is insufficient for the system to represent a true alternative to SWIFT, and it will impact the disconnected institutions in a meaningful way.

Although close to two-thirds of Russia’s financial system are now disconnected, international transactions remain possible. In particular, Gazprombank, which plays a critical role for energy trade, has been excluded from sanctions so far. Nonetheless, it should be emphasized that SWIFT-related restrictions represent a step long considered a “nuclear option” and, thus, a significant development.

On Feb. 28, in an unprecedented step, both the U.S. and EU also prohibited transactions with the Bank of Russia and froze CBR assets under their jurisdictions. As a result, Russia’s central bank lost access to roughly \$300 billion (or 40%) of its FX reserves—despite concerted previous [actions](#) to restructure their currency composition (Exhibit 2) as well as geographical distribution (Exhibit 3). Transactions with Russia’s Ministry of Finance as well as country’s National Welfare Fund (NWF) were also forbidden.

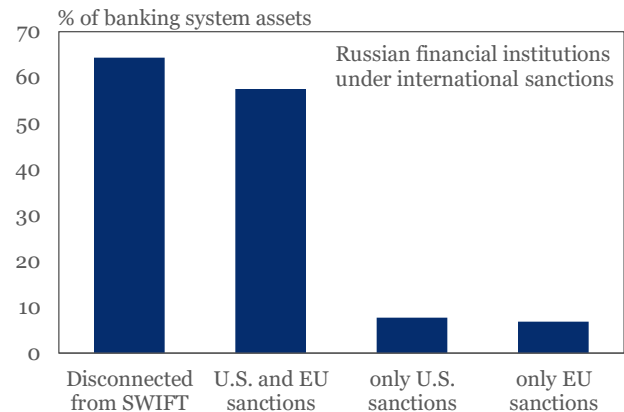
b. Initial Impact and CBR Response

Many Russian financial institutions experienced bank runs in the days following the introduction of sanctions, and the ruble fell against the U.S. dollar from around 75RUB/\$ to above \$120/\$ in mid-March. The CBR responded by hiking its key policy interest rates by 1,050bps—from 9.5% to 20%—on Feb. 28. A stabilization and recovery of the ruble has since allowed the central bank to cut by a cumulative 900bps—300bps each on April 8, April 29, and May 26.

The CBR provided liquidity to the banking system in an unprecedented fashion, with the structural liquidity deficit reaching a record-high RUB5.4 trillion on March 9 through standing facilities as well as auction-based operations (Exhibits 4 & 5). That deposits at the CBR rose while liabilities increased sharply points to disruptions in the interbank market, i.e., banks—potentially foreign ones—were hesitant to lend to other institutions. The central bank’s measures were successful insofar as the Russian banking system [stabilized](#) relatively quickly, given the magnitude of the shock. The system’s structural liquidity has returned to a surplus similar in size to the post-sanctions level.

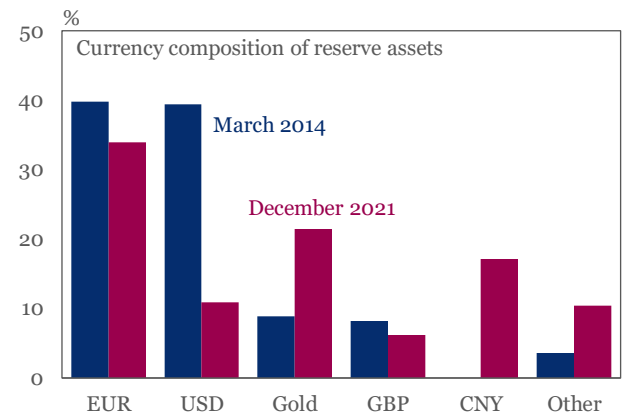
In addition to the interest rate hike, several factors contributed to the quick recovery of the ruble (Exhibit 6): (1) The CBR introduced strict capital controls, ordering banks not to sell foreign currency to retail clients until September and introducing a \$10,000 cap on cash withdrawals from FX-denominated retail accounts. However, supplies of foreign

Exhibit 1. Banking sector sanctions are significant.



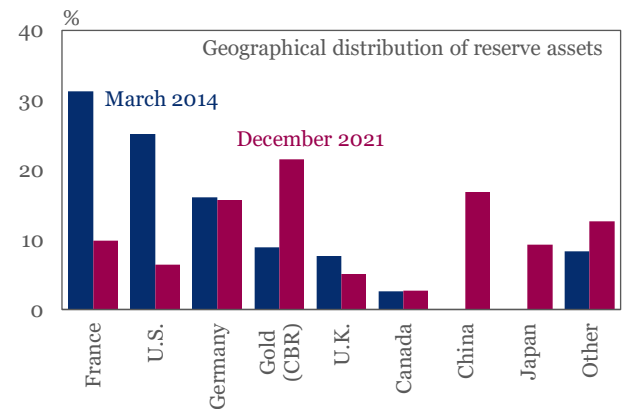
Source: European Commission, U.S. Treasury Department, IIF

Exhibit 2. CBR had shifted the composition of reserves.



Source: Bank of Russia, IIF

Exhibit 3. Gold and CNY gained importance; the USD lost.



Source: Bank of Russia, IIF

currency are extremely limited, making withdrawals, even under the cap, sometimes impossible. Essentially, only swap transactions with residents remained before the provision of these data were discontinued (Exhibit 7). (2) The central bank now requires exporters to convert 50% of their revenue into rubles (in the immediate aftermath of the imposition of sanctions, the mandated share had been 80%). To the extent that foreign importers of Russian natural gas adhere to the demand to pay for deliveries in rubles, this will increase the share of converted revenues to 100%. (3) High commodity prices have had a positive effect on FX inflows for goods exports, in particular, energy exports. Russia's current account surplus reached \$58.2 billion in the first quarter of 2022, the highest on record and almost 50% of the full-year 2021 number. April set another record at \$37.6 billion.

c. Implications for Economic Growth

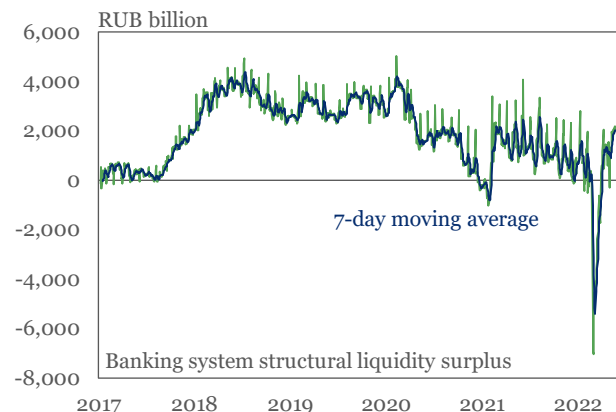
Despite the CBR's forceful reaction, the Russian economy is facing an extremely difficult situation in the coming months and years. While current developments are fluid, fast-paced, and unprecedented, meaning any forecast will inevitably be surrounded by an unusual level of uncertainty, it is our initial assessment that the Russian economy will contract by 15% in 2022, followed by a further 3% decline in 2023 due to a large negative statistical carryover (-8pp). Altogether, our projections mean that current developments are set to wipe out the economic gains of roughly fifteen years.

Domestic demand is set to drop substantially: Dimming economic prospects in the short as well as medium and long term, together with the exit of foreign companies, will likely trigger a dramatic and sustained decline in gross fixed capital formation (-25%). Private consumption will also fall but should stay somewhat more robust in our opinion (-18%) since households retain access to ruble liquidity and, thus, purchasing power. However, higher inflation is inevitably going to weigh on real incomes and consumption.

We believe that the impact on imports will be most severe (-28%) and outweigh a sharp decline of exports (-25%), thereby keeping the contribution from net foreign demand in marginally-positive territory. An important factor is that households and corporations are struggling to acquire sufficient foreign exchange for purchases from abroad. On the exports side, foreign companies have already begun to reduce their acquisition of Russian goods and services considerably—a dynamic that is unlikely to reverse anytime soon. From the production side, the unavailability of critical imported components is having a dramatic impact on manufacturing, with activity in many factories having come to a standstill, e.g., the auto industry.

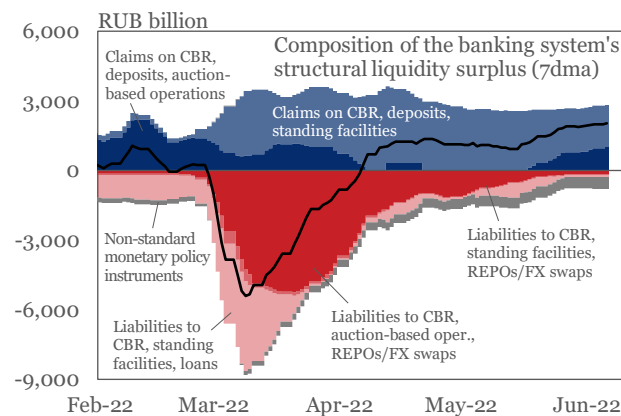
The most important downside risk is the EU's oil embargo, which could lead to an even more pronounced decline in

Exhibit 4. Banking system's structural liquidity recovered.



Source: Bank of Russia, IIF

Exhibit 5. CBR's emergency measures are now withdrawn.



Source: Bank of Russia, IIF

Exhibit 6. Capital controls helped strengthen the Ruble.



Source: Bank of Russia, IIF

export volumes (see Section 3). However, in this scenario, further import compression would soften the impact on overall economic activity. Stronger domestic demand as a result of the financial system’s stabilization could, on the other hand, also lead to a smaller output contraction.

d. Effect on Fiscal Financing

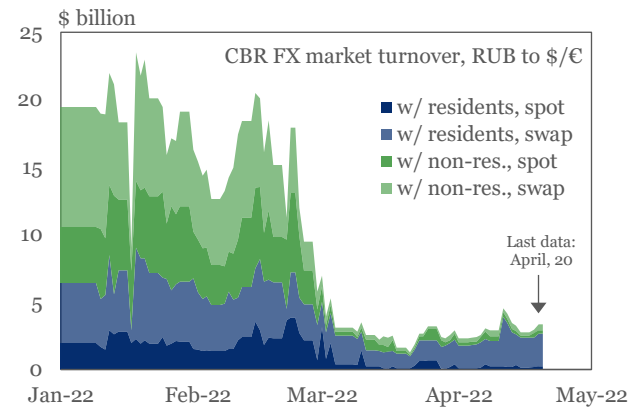
As part of international sanctions imposed in 2022, the U.S. and EU also tightened restrictions on foreign transactions in ruble-denominated sovereign debt, so-called OFZ. While sanctions and capital controls mean that non-residents will not be able to unload their positions or take repayments out of the country (foreign holdings remained broadly stable in March and April per Exhibit 8), new investments will not occur for the foreseeable future. Thus, the Russian government will have to rely on domestic financial institutions to finance budget deficits, which are likely to grow both due to an expected collapse in revenues as well as war-related expenditure increases. For the time being, credit institutions’ holdings of government debt securities as a share of total banking system assets remain relatively low in historical comparison, and should allow for further domestic absorption of OFZ issuance (Exhibit 9).

e. Medium- and Long-term Impact

Beyond the aforementioned immediate implications for economic activity, the voluntary pullout of foreign companies, a dynamic that can be described as “self-sanctioning”, will have a meaningful impact on [medium- and long-term prospects](#), especially in light of already-weak productivity growth in recent years. The strong shift in global public opinion has prompted a significant number of corporations to withdraw—partially or fully, temporarily or permanently—from the Russian market even in cases where they were not required to do so legally (see Section 4).

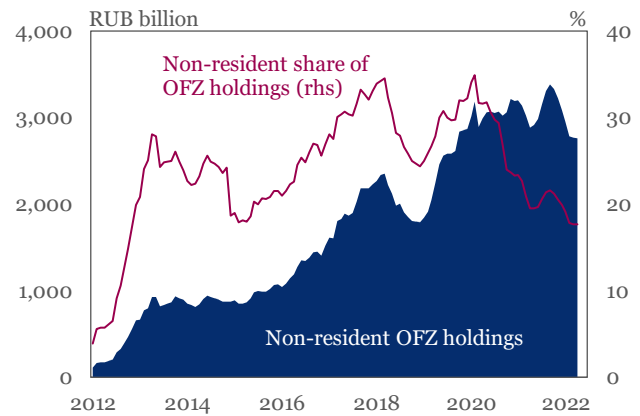
Furthermore, so-called “brain drain” will have an impact on the economy in the medium and long term. Observers estimate that hundreds of thousands of Russians have left the country since late February. This is not a completely new phenomenon, however. Following the “golden period” of economic expansion and double-digit real income growth in the 2000s, emigration accelerated again following Vladimir Putin’s return to the presidency in 2012. It continued in the aftermath of Russian military action in Ukraine in 2014 and the imposition of international sanctions (Exhibit 10). According to official statistics, almost half a million people left Russia in 2020, close to double the numbers during the economically challenging 1990s. We believe that productivity and potential output growth will decrease further as a result.

Exhibit 7. Supply of foreign currency collapsed in March.



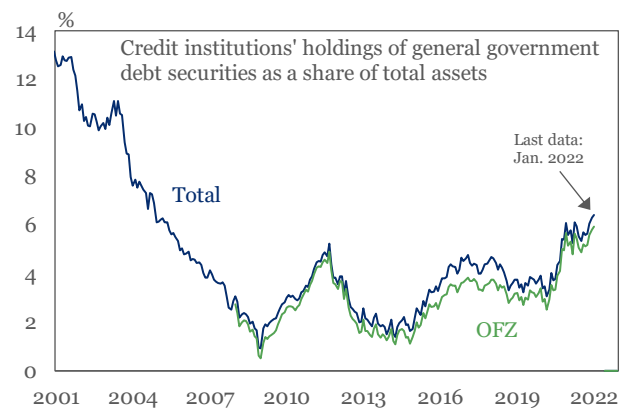
Source: Bank of Russia, IIF

Exhibit 8. Non-resident have not been able to exit.



Source: Bank of Russia, IIF

Exhibit 9. Domestic banks have room to finance deficits.



Source: Bank of Russia, IIF

3. ELEPHANT IN THE ROOM: ENERGY EXPORTS

a. Macroeconomic Buffers: Stocks vs. Flows

International sanctions on Russia’s central bank have had a meaningful impact on the CBR’s ability to access its reserve assets. However, the country’s structural current account surplus inevitably reduces sanctions’ effectiveness over time since it leads to a quick rebuilding of buffers (Exhibit 11). In fact, the two “post-sanctions” months—March and April—registered the highest ever surplus over a two-month period. Such dynamics lead us to conclude that sanctions are a moving target and require regular adjustments.

According to the most-recent data, CBR foreign reserves declined by \$53.6 billion since mid-February (Exhibit 12). Furthermore, due to asset freezes, approximately \$300 billion are not available to the central bank. However, should commodity prices remain high for the remainder of the year, and under the assumption of constant volumes, Russia could receive over \$300 billion in payments for energy exports over 2022 and relatively quickly rebuild accessible reserves. Thus, the question of imports of Russian energy is a critical one, especially for Europe, and additional steps have been taken to reduce foreign currency inflows.

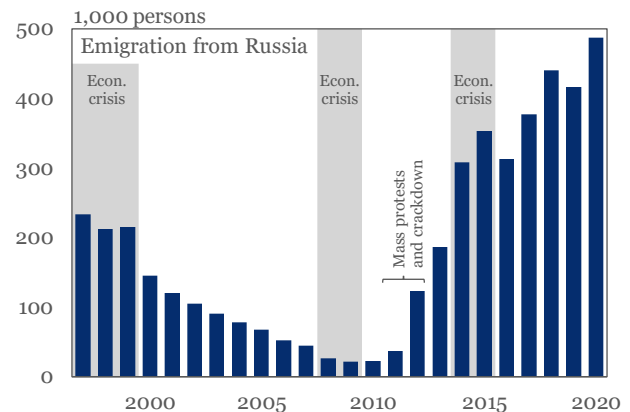
b. Existing Embargos on Russian Energy Exports

For the European Union, embargos on different energy imports from Russia present vastly different challenges depending on the degree of supply diversification, as well as the different commodities’ respective role in the overall energy mix. Russia’s share of total imports is highest for solid fossil fuels (e.g., coal) at 45.6% in 2020, followed by natural gas (35.1%), crude oil (25.7%), and petroleum products (18.8%) (Exhibit 13). However, these numbers can be somewhat misleading, as crude oil and natural gas overall play a substantially larger role compared to solid fossil fuels.

Looking at the share of Russian imports of different commodities within total available energy (which includes domestically-available energy as well as exports), it is evident that reliance on Russia is highest for crude oil and natural gas, while solid fossil fuels play a very minor role (Exhibit 14). As a result, the ban on coal imports—part of the EU’s fifth package of restrictive measures against Russia (announced on April 8)—did not represent a significant hardship for Europe. This also meant that the impact on Russia’s exports, estimated at around \$8 billion, is minor. Also worth noting, differences across countries are relatively small, with Poland and the Slovak Republic most reliant on Russian coal at 4.6% and 3.7%, respectively, of total available energy (Exhibit 15).

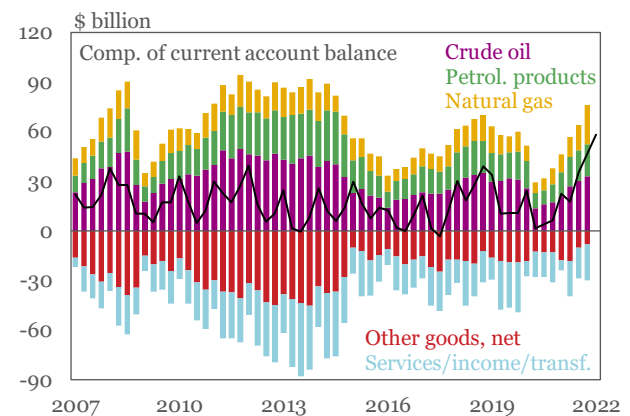
Restrictions on crude oil and petroleum product imports will be significantly more difficult to absorb for European countries, which rely on Russian exports to varying degrees.

Exhibit 10. Emigration has risen over the last decade.



Source: Rosstat, IIF

Exhibit 11. Russia’s current account surplus record high.



Source: Bank of Russia, IIF

Exhibit 12. Reserves fell by \$53.6 billion in recent weeks.



Source: Bank of Russia, IIF

The U.S., which has only imported a small amount of crude oil from Russia in recent years, announced on March 8 that it would ban imports, and the U.K. is planning to phase them out by the end of the year. EU countries were much more hesitant at first, but most have taken steps in recent weeks to reduce their reliance. Germany, for example, stated that it had [reduced](#) the share of Russian crude oil from 35% to 12% since the beginning of the war in Ukraine, leaving only one refinery potentially exposed to a cut-off.

Following difficult negotiations, the European Union imposed an embargo on Russian crude oil and petroleum products with its sixth sanctions package (on June 2): countries have a period of six months to wind down crude oil imports and of eight months to do the same for petroleum product imports. Due to concerns raised by the Czech Republic, Hungary, and the Slovak Republic, crude oil deliveries via pipeline are excluded from the embargo. The three countries receive Russian oil via the Southern branch of the Druzhba pipeline network and may have struggled to replace supplies quickly as they are landlocked.

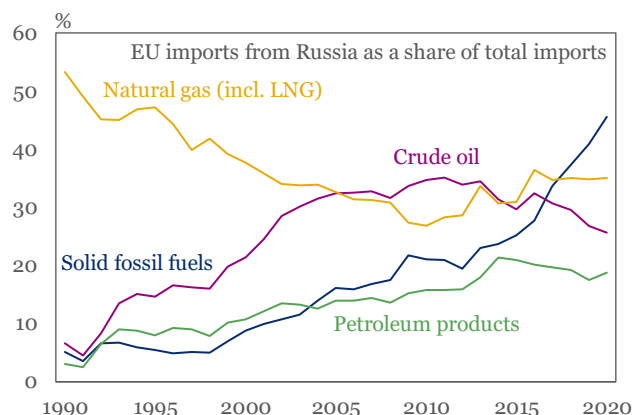
Originally, this issue was to be addressed by allowing for a longer transition period but due to strong resistance, in particular from Hungary, and to secure the needed votes for a unanimous Council decision a broader exception was adopted. While this would also allow Germany and Poland to continue importing Russian crude oil via the Northern branch of the Druzhba network, both countries have stated that they will wind down such imports voluntarily. Both are among the countries most reliant on Russian crude oil and petroleum products in absolute terms (Exhibit 16).

The embargo has the potential to dramatically reduce Russian exports as crude oil and petroleum alone accounted for \$111 billion and \$70 billion, respectively, in 2021 (Exhibit 17). Of critical importance in this context is Russia's ability—or lack thereof—to redirect its exports to other potential buyers, e.g., China and India. The EU's sixth sanctions package addresses this to some extent by imposing restrictions on insurance for oil shipments by Russian companies. The limited nature of the provision is a result of concerns by Cyprus, Greece, and Malta over their shipping industries, and has prompted heavy criticism, as it could significantly weaken the embargo's overall effect.

Impact on Russia's External Balance

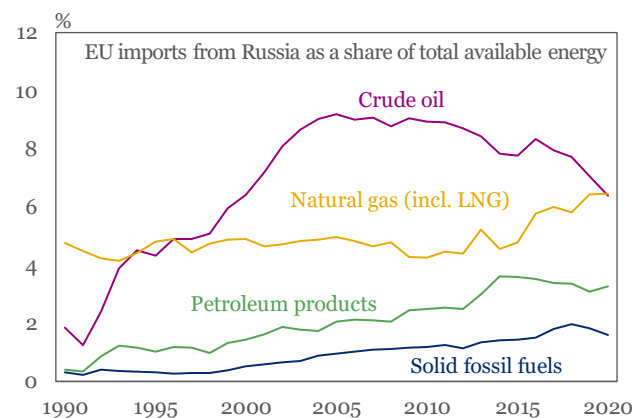
To achieve a reduction of foreign currency inflows, there are three critical factors in an embargo: (1) the pace with which European countries are able and willing to find alternative crude oil supplies, (2) Russia's ability to redirect exports to other destinations, and (3) the restrictions' effect on prices, both the global oil price as well as the discount on Urals.

Exhibit 13. EU countries rely heavily on Russian energy.



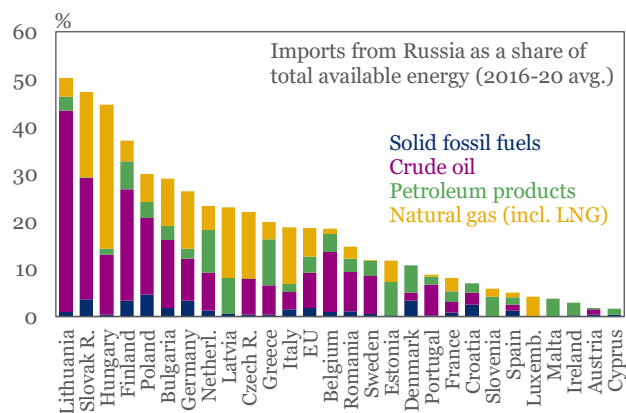
Source: Eurostat, IIF

Exhibit 14. Natural gas' importance has been rising.



Source: Eurostat, IIF

Exhibit 15. Exposure to Russian energy imports differs.



Source: Eurostat, IIF

To estimate the effect of the embargo, we assume linear reductions of crude oil and petroleum product volumes—from a country’s respective 2021 monthly averages to zero—starting in April, while taking into account realized imports over January-March to the extent that data are available. We are aware that countries’ progress in reducing Russian supplies has been uneven in recent months, but believe this simplification still allows for a reasonable approximation. Due to the aforementioned exception for pipeline oil, we hold volumes constant for the Czech Republic, Hungary, and the Slovak Republic (Exhibit 18). The countries may choose to voluntarily reduce imports from Russia, but levels are too small for this to have a major impact on the overall results.

This scenario results in a decline of crude imports of 38 million tons and 100 million tons in 2022-23, respectively, with the corresponding numbers for petroleum products being 20 and 58 million tons (Exhibit 19). By the end of the year, we estimate crude oil imports to be 85% lower compared to their 2021 monthly average of 9.4 million tons.

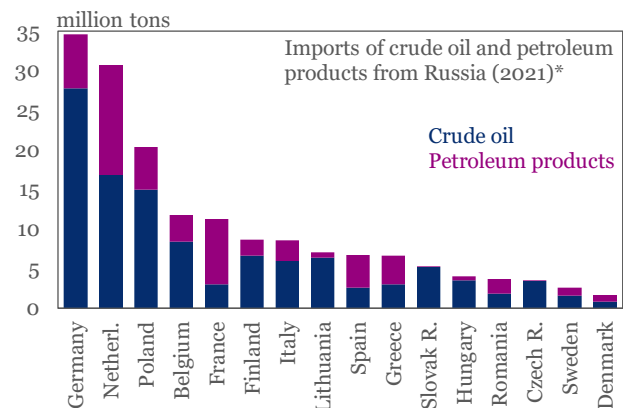
Compared to natural gas, crude oil exports are somewhat easier to redirect geographically as the share of pipeline flows is significantly lower. Only 30% of Russian crude oil is exported to the EU via pipeline while the corresponding share for natural gas lies above 90%. The Druzhba pipeline network transported 720 thousand bbl/day from oil fields in Western Siberia to refineries in the Czech Republic, Germany, Hungary, Poland, and the Slovak Republic last year. The remaining 70% are so-called “seaborne” oil, exported overwhelmingly from Baltic Sea ports (Exhibit 20).

The key question is to what extent Russia will be able to [redirect crude oil](#) to other potential buyers, including China and India. The country is already an important energy partner for China as the second-largest supplier of crude oil and coal and the third-largest supplier of natural gas. A look at the composition of Russian oil exports is instructive. Over the last twelve months, pipeline crude oil deliveries to Europe and China accounted for 16.9% and 18.4% of the total, respectively. The other key export modes were Baltic Sea (26.0%) and Pacific Ocean ports (23.3%).

While oil tankers can theoretically be rerouted anywhere, Baltic Sea ports would be fairly unsuitable for exports to Asia due to the long and expensive journey. This means that crude oil would have to be redistributed within Russia via pipelines, either to China or to ports allowing for reasonably quick shipments. Exports via pipeline have risen considerably in recent years (Exhibit 21); however, the capacities of the Atasu-Alashankou pipeline through Kazakhstan and the Eastern Siberia-Pacific Ocean (ESPO) pipeline are limited.

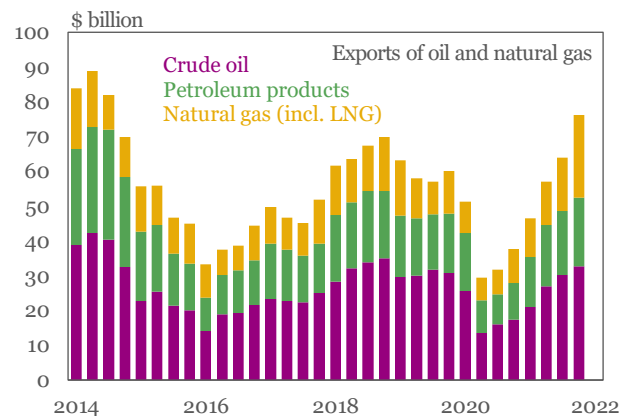
As far as the ESPO pipeline is concerned, recent data indicates that 30% of its 100 million-ton capacity is used for

Exhibit 16. Germany, Netherlands & Poland most exposed.



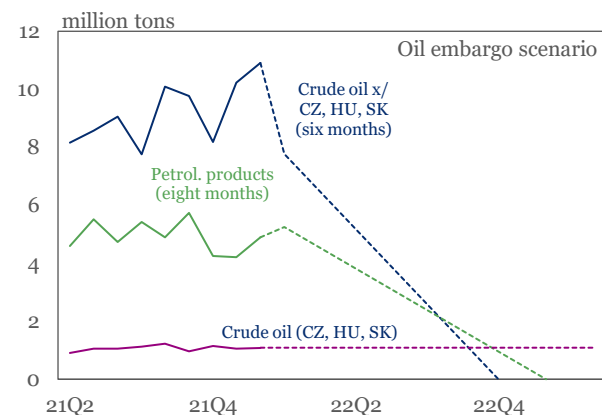
Source: Eurostat, IIF *countries below 1 million tons excluded

Exhibit 17. Soaring energy prices drive up FX inflows.



Source: Bank of Russia, IIF

Exhibit 18. Embargo will lead to sharp reduction in imports.



Source: IIF

crude oil deliveries to China and an additional 35% for flows to Russia’s most important Pacific Ocean terminal for “seaborne” oil in Kuzmino. The Atasu-Alashankou pipeline provides a capacity of 20 million tons per year, of which roughly 50% are used for shipments to China. This means that a little less than half of all Russian crude oil exports to China are conducted through pipelines and that the existing infrastructure would allow for an additional 45 million tons per year—roughly one-third of Russia’s exports to the EU (Exhibit 22). It is important to highlight that the remaining capacities outlined here are estimates and may understate current pipeline usage. For example, they do not take into account possible flows of Kazakh oil to China.

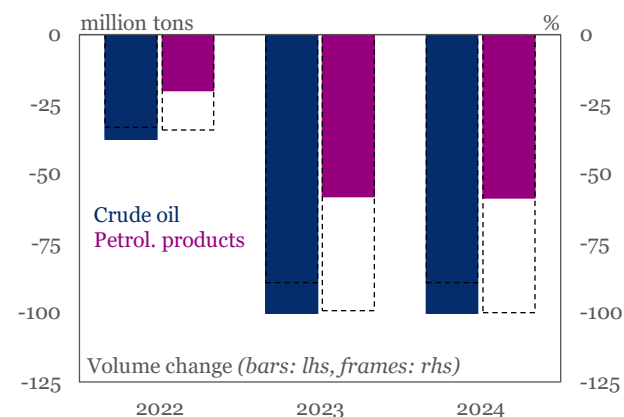
Another point deserves consideration: China’s stated objective is to limit the reliance on individual crude oil suppliers to around 15% of total imports. In 2020, Saudi Arabia and Russia reached this threshold. India, which relied on Russia for only 1.3% of its oil imports in the same year, may represent an even more promising option for Russia. Still, a rapid increase in oil imports from Russia could be technically challenging. Exports would have to be conducted exclusively via ships and create infrastructure-related challenges similar to those mentioned above.

Sanctions on maritime insurance on oil shipments by Russian companies are expected to only have a limited effect on Russia’s ability to redirect exports. Undoubtedly, the EU could step up measures significantly in the coming months if the need arose, and it generally stands a better chance of preventing the redirection of “seaborne” vs. pipeline exports due to the involvement of third parties. The U.S. could also impose (secondary) sanctions on companies involved in the shipment of Russian oil. However, we believe it is unlikely the Biden administration will do so as long as the U.S.’s European partners are not ready to move forward with more restrictions.

For the purpose of estimating the embargo’s overall impact, we assume that reductions in crude oil exports to the EU will be compensated 100% until the remaining pipeline capacity of 45 million tons per year is reached (or 3.75 million per month). For losses beyond this threshold—and for all losses of petroleum product exports—we model that Russia will be able to increase its current replacement rate of 25% to 40% by the end of this year, and 50% by mid-2023. As a result, a cumulative 265 million tons—210 in crude oil and 55 in petroleum products—could be offset over 2022-24 (Exhibit 23). Should additional sanctions be implemented on oil shipments, offsetting flows would likely be limited to crude oil exports via pipeline and turn out substantially smaller at around 125 million tons.

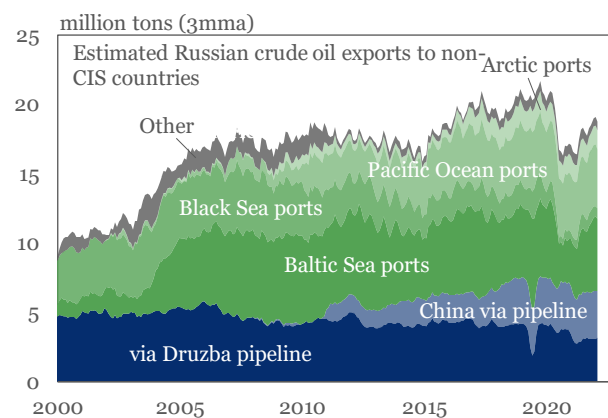
The final key component is the price. The embargo has not led to a meaningful increase in global oil prices so far; Brent

Exhibit 19. Full embargo impact set to unfold in 2023-24.



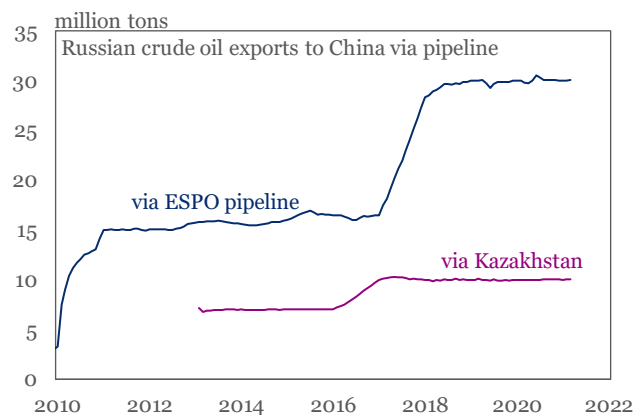
Source: IIF

Exhibit 20. “Seaborne” oil makes up large share of exports.



Source: Transneft, IIF

Exhibit 21. Oil exports to China have risen since 2018.



Source: Transneft, IIF

crude remains at around \$110-115/bbl. For this note, we assume the average annual price to come in at \$120/bbl in 2022, \$110/bbl in 2023, and \$100/bbl in 2024. The discount of Urals crude, which had been small in recent years but has risen sharply since the beginning of Russia's invasion of Ukraine, is set at \$30/bbl (Exhibit 24).

Historical data from the CBR shows that price differences between crude oil and petroleum products have been minimal in the recent past. Therefore, we use the same price for both goods in our calculation of the value effect. Depending on the aforementioned imposition of sanctions, we find that Russian exports of crude oil and petroleum products would be \$90 billion or \$165 billion lower over 2022-24, respectively (Exhibit 25). It is important to acknowledge that oil prices are endogenous and would be impacted by Russia's ability to redirect exports as the total supply on the global market would differ. A similar logic applies to the discount on Russian oil: should U.S. and EU sanctions lead to higher risks for buyers of crude oil as well as third parties involved in its transport, Urals prices would fall further relative to the global oil price.

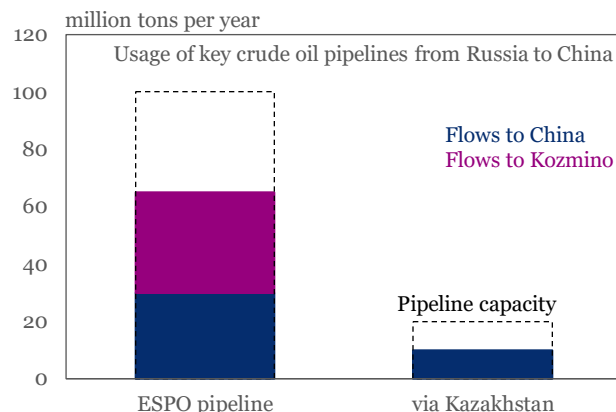
Impact on Russia's Fiscal Accounts

For Russia's fiscal accounts, the future path of the ruble exchange rate is also of major importance as a weaker currency increases revenues in local currency terms. Because the ruble has largely returned to pre-sanctions levels, we assume an exchange rate of RUB75/\$ here.

Revenue from the extraction and/or export of crude oil, petroleum products, and natural gas represent a large share of the Russian federal government's total revenue—around 30% in recent months. Receipts reached an all-time high in April at over RUB1,600 billion due to soaring global energy prices (Exhibit 26). Year-to-date, revenues are up by more than 100% compared to 2021. Their composition has changed in recent years as Russia moved from relying on export duties to raising revenues through mining and quarrying taxes (Exhibit 27). While this may somewhat insulate the country's fiscal accounts from an EU embargo, production will eventually decline due to limited storage capacity and, with it, revenues from mining taxes.

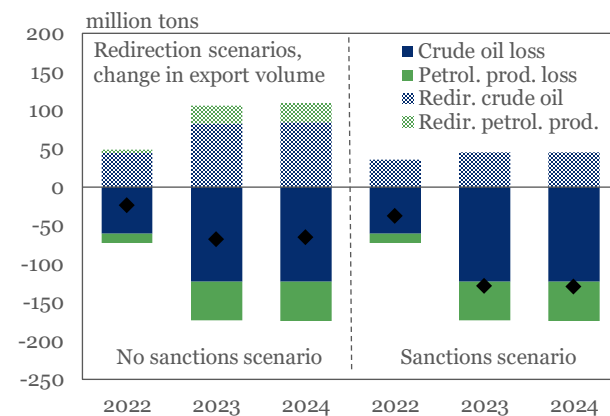
To estimate the fiscal effects of an embargo on crude oil and petroleum products, we calculate the ruble value of the changes shown in Exhibit 23 and then proportionally adjust revenues (Exhibit 28). In a scenario without major additional sanctions on Russian shipments, revenues would decline by around RUB1,700 billion, cumulatively, over 2022-24—or roughly the current monthly total. Should sanctions hinder the reorientation of exports, the impact would be closer to RUB3,200 billion over the three years. It is evident that an embargo's impact on Russia's external balance would be dramatically bigger than on the country's fiscal accounts.

Exhibit 22. Some pipeline capacity to China remains.



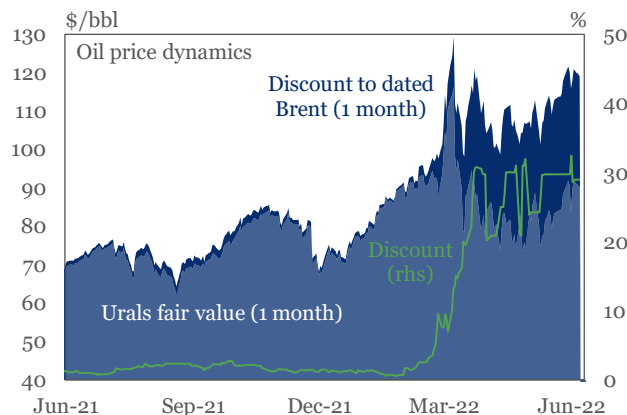
Source: Transneft, IIF

Exhibit 23. Ability to redirect oil exports is critical.



Source: IIF

Exhibit 24. Discount on Urals crude has grown markedly.



Source: Bloomberg, IIF

c. The Question of European Natural Gas Imports

Europe's heavy reliance on Russian natural gas has been an important topic of discussion—even before Russia's invasion of Ukraine on Feb. 24. Many countries, especially those in Eastern Europe, had been extremely critical of the Nord Stream 2 pipeline, since it would have allowed Gazprom to circumvent existing infrastructure in Poland and Ukraine. But Germany had resisted efforts to stop the pipeline. Previous sanctions by the U.S. had only delayed, but not stopped, the project's completion. However, right after the start of the war, the German government put the pipeline on hold—a measure that will likely turn out to be permanent.

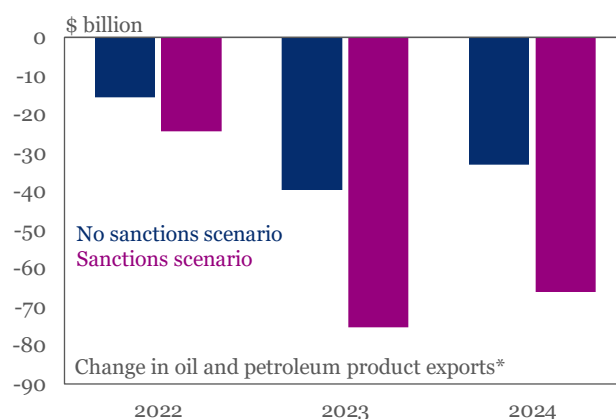
For most European countries, reliance on Russian imports is higher in the case of natural gas than for crude oil and petroleum products (Exhibit 29). We believe that an EU embargo on Russian natural gas is unlikely to be imposed in the foreseeable future for this reason. As we outlined in a [previous publication](#), finding alternative sources for natural gas would present a serious challenge. And the economic impact of a natural gas shortage would be dramatic.

Nonetheless, countries have begun to explore alternative supply options, and some have already reduced their reliance on imports from Russia. The pace with which many European governments decided to completely overhaul existing energy policies is extraordinary. For example, Germany is planning to rapidly build at least four LNG import terminals, and construction started on the first one just two-and-a-half months after the start of the war. At the same time, Russia's invasion of Ukraine is likely going to significantly accelerate Europe's transition to renewable energy sources. Thus, a formal embargo on natural gas will, in the end, not be necessary to reduce imports; however, the process will take longer than in the case of oil.

An additional issue that is now emerging is the disruption of natural gas flows through Ukraine due to the war. With the discontinuation of deliveries through the Yamal pipeline, alternatives are limited, and Europe may find itself in a challenging spot without itself imposing an embargo—or without Russia retaliating against other actions by cutting off countries from its exports. As a result of the Russian offensive in the Donbass, Ukraine's pipeline operator Ukrtransgas has stopped transit through parts of its network, specifically in the Luhansk region. This could reduce natural gas deliveries via Ukraine by roughly one-third (Exhibits 30 & 31).

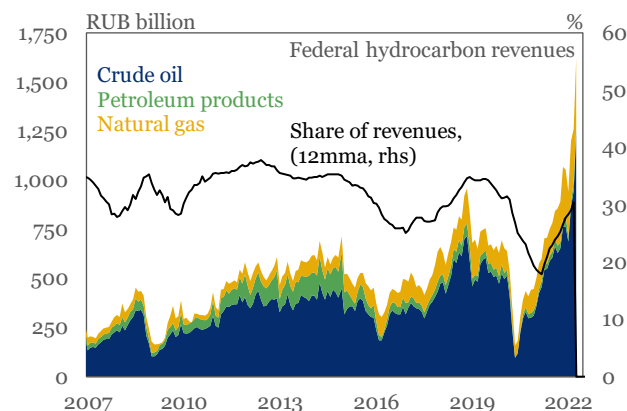
While EU-wide storage levels are recovering from their record lows in recent months, differences between countries are considerable (Exhibits 32 & 33). For the EU as a whole, current storage would cover close to three months. This is, however, an extreme scenario as it assumes a stoppage of all new inflows, not just those from Russia.

Exhibit 25. Shipping sanctions would hit Russia hard.



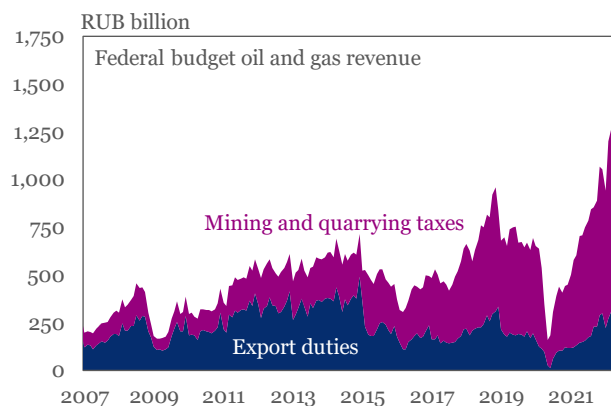
Source: IIF *Urals at \$90, \$80, and \$70 per barrel and year

Exhibit 26. High energy prices have driven up revenues.



Source: Federal Treasury, Ministry of Finance, IIF

Exhibit 27. Revenue composition shifted toward extraction.



Source: Federal Treasury, Ministry of Finance, IIF

d. The Risk of Counter-sanctions

Russia has already used its leverage as a critical provider of energy to pressure and/or punish individual countries. The decline of deliveries in the fall of 2021, for example, has been interpreted by many observers as a response to delays in the commissioning of the Nord Stream 2 pipeline.

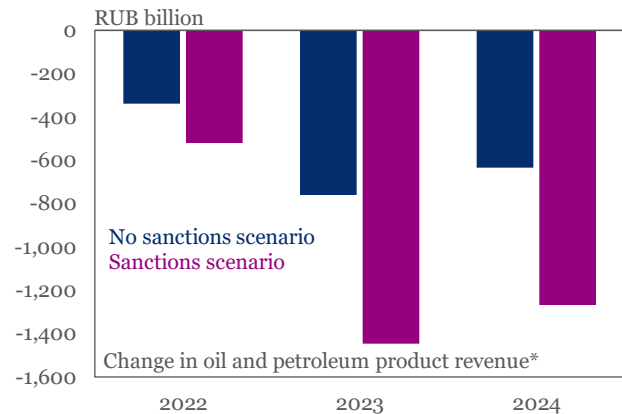
Following the decision by companies in Bulgaria, Denmark, Finland, the Netherlands, and Poland to not pay for natural gas in Rubles as demanded by the Russian government, Russia has cut off all five countries from its exports. The impact will likely be manageable, as overall volumes are relatively small and alternative supply channels exist. It should be acknowledged that not all European importers have taken a unified position on the question of ruble-denominated payments. Namely Italy's ENI has officially accepted the Russian government's demand and will conduct the necessary transactions via Gazprombank.

For those countries more exposed to additional cutoffs, socializing this risk within the EU and guaranteeing targeted countries' supply through other channels should be an effective remedy and protect individual member states, especially smaller ones. From the Russian perspective, while the near-term impact of these developments is small, the unilateral decision to stop deliveries to certain countries is effectively eliminating export markets, which are extremely unlikely to return unless and until a fundamental geopolitical change occurs. Given that Europe's transition to renewables will likely accelerate due to current tensions, the loss of potential buyers of Russian natural gas may even be permanent.

Russia also represents a substantial share of total world imports of a number of key commodities (Exhibits 34). In response to attempts by the United States, the European Union, and their allies to significantly reduce FX inflows into Russia, the country could impose counter-sanctions, such as export controls, for some of these goods. This could meaningfully impact manufacturing supply chains around the world and would also further increase the risk of food shortages in the developing world. The war in Ukraine has already led to serious challenges as food exports collapsed due to the Russian blockade of Ukrainian Black Sea ports. But observers also fear an effect on the ongoing sowing season, which would impact the 2022 harvest.

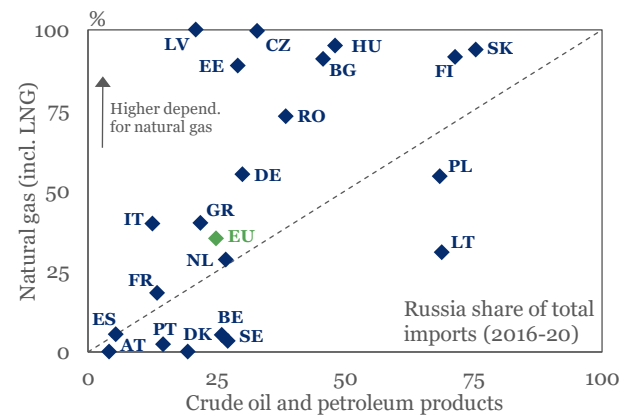
While counter-sanctions would also further hurt Russia's external balance, the willingness of the Russian government to drive up the economic cost of sanctions for the countries imposing these measures should not be underestimated. And in the end, any impact on the U.S.'s and EU's foreign policy would be a political rather than economic question.

Exhibit 28. Embargo could weigh on the budget as well.



Source: IIF *Urals at \$90, \$80, and \$70 per barrel and year

Exhibit 29. Natural gas dependency differs across EU.



Source: Eurostat, IIF

Exhibit 30. Gas flows via Ukraine declined since 2020.



Source: Uktranszgas, IIF

4. AN UNDERESTIMATED FACTOR: MULTINATIONALS’ “SELF-SANCTIONING”

As mentioned above when discussing the medium- and long-term impact of international sanctions on the Russian economy, a significant number of multinational companies have partially or fully, temporarily or permanently exited the Russian market. While, in some cases, restrictions imposed by the U.S., EU, and others on certain business activities play an important role, in many, the pullout is due to the public opinion response to the invasion of Ukraine.

We describe this as an underestimated factor as it did not feature prominently in the pre-war discussion of sanctions but may be among the most consequential. While the immediate impact on economic activity will undoubtedly be considerable, we expect it to be even more meaningful in the medium and long term and lead to a permanent weakening of key sectors of the Russian economy. At the same time, the retreat of foreign competitors will provide opportunities for domestic companies to fill the gap, resulting in an increasing decoupling of Russia from the global economy—“Fortress Russia” pushed to the extreme.

Yale University’s School of Management maintains a [comprehensive database](#) of companies that have left Russia, limited operations, or continue to operate in the country. At this time, almost 1,000 have publicly announced that they are voluntarily curtailing operations beyond what is legally required by the respective jurisdiction’s sanctions regime—often at significant cost. According to the tracking of announcements from over 1,350 companies, 24% are withdrawing completely, 34% suspending operations, 12% scaling back activities, 12% postponing investments while continuing existing business, and 18% continuing activities without major changes (Exhibit 35). Regional differences do exist, with European companies somewhat more hesitant to stop activities compared to those from North America, but more than those from other regions (Exhibit 36).

A look at the sectoral composition of the 800 companies that are not continuing operations at this time is instructive as well (Exhibit 37). Industrials lead the way (25%), followed by producers of discretionary consumption goods (21%), and information technology companies (17%). The number of energy companies involved—seven are suspending and twelve ending operations—means the impact on Russia’s hydrocarbon sector should not be underestimated.

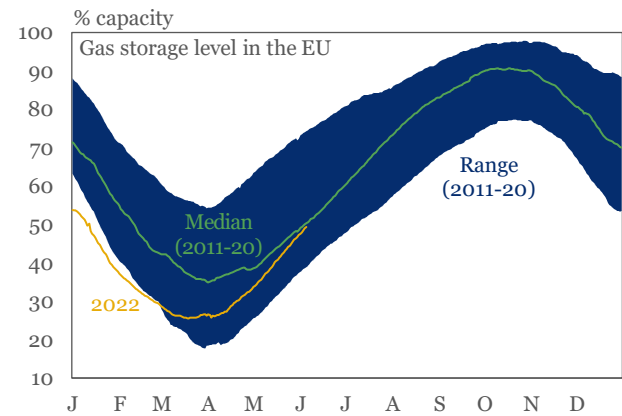
Since 2014, foreign companies had already been banned from investing in new oil and natural gas projects. But multinationals have also pulled out of existing joint ventures with Russian companies and/or ended operations in the country since the start of the war in Ukraine: BP is divesting from its 20% stake in Rosneft, ExxonMobil is

Exhibit 31. Military conflict also affects transit capacity.



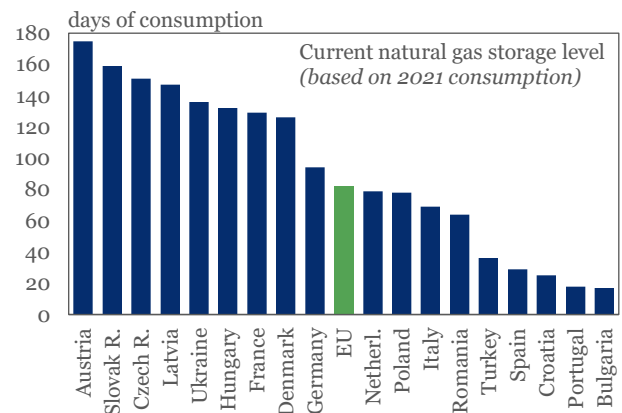
Source: Uktranszgas, IIF

Exhibit 32. EU gas storage is slowly recovering.



Source: Eurostat, Gas Infrastructure Europe, IIF

Exhibit 33. Cut off could be serious challenge for some.



Source: Eurostat, Gas Infrastructure Europe, IIF

exiting its partnership with Rosneft, ENI is pulling out of a pipeline project, Total Energies will not provide capital for any new ventures, and Chevron as well as Shell are suspending all transactions in Russia. While this may not have an immediate impact on production and export capacities, the sector will eventually lack the necessary investment to maintain infrastructure and continue with the exploration of so-far untapped resources.

Consequential for Russia's economy is also the exit of several car manufacturers, which are either ending joint ventures or stopping production at their own plants. Among them are Audi, BMW, Ford, Hyundai, Mitsubishi Motors, Renault, and Skoda. In addition, many producers of car parts have ended exports to Russia which is affecting local companies that rely on foreign inputs. Missing components—as well as the cancelation of maintenance contracts—are also a major issue for Russia's aviation sector as we discussed in a recent [note](#). Foreign-manufactured aircraft, including those from *Airbus*, *Boeing*, and *Bombardier*, make up more than 80% of the entire fleet of Russian airlines and the exit of these companies will increasingly lead to the grounding of planes. In addition, essentially all Russian-built planes contain critical components that are produced by foreign companies.

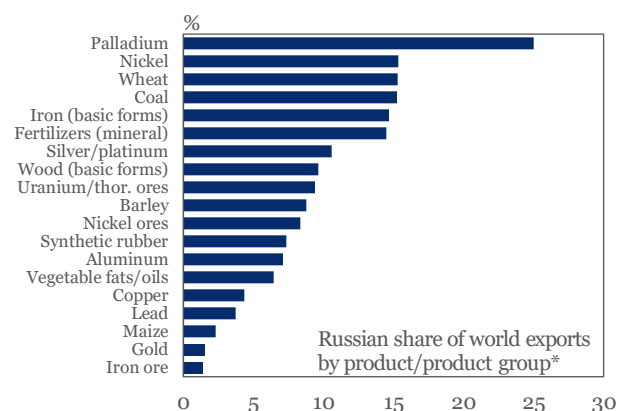
However, the departure of foreign companies could benefit domestic competitors in some cases. For example, Russian banks, which already dominate the financial sector, will benefit from the withdrawal of many international financial institutions. In most sectors, however, short-term advantages for Russian companies will be more than outweighed by a dramatic decline in foreign investment. Already-weak productivity growth, and, thus, medium- to long-term potential growth, will be negatively affected.

5. RUSSIA SANCTIONS: WHAT NEXT?

The situation surrounding the war in Ukraine, and the associated economic sanctions, is extremely fluid at this moment in time. However, we believe that a ceasefire or peace agreement will not be achieved in the near term. Thus, it is more likely than not that sanctions will be expanded and tightened in the coming months.

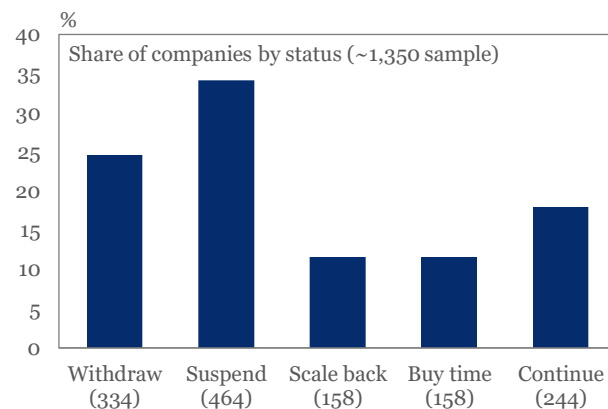
Despite the meaningful steps taken since late February, we are far from the top of the escalation ladder. Additional measures, such as those related to the financial system and/or key Russian exports (and imports), would be possible and could lead to dramatic consequences for the Russian economy, as well as the government's ability to continue its war effort in Ukraine. However, the costs of such actions could be significant for the sanctions-imposing countries as well. Thus, the careful economic analysis of different options should always be a part of the decision-making process.

Exhibit 34. Russia plays critical role for other commodities.



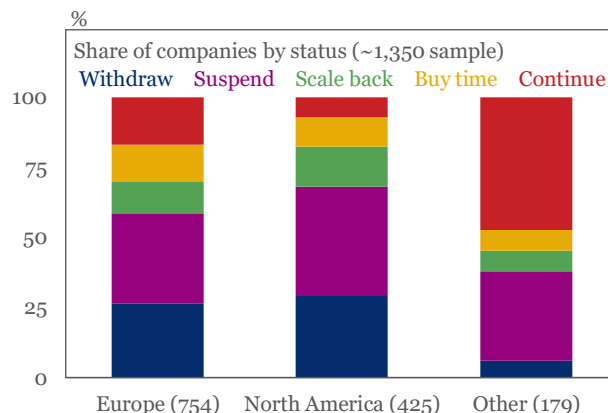
Source: Unctad, IIF *products with share below 1% not shown

Exhibit 35. Multinationals have withdrawn from Russia.



Source: Yale University, IIF

Exhibit 36. Exit is more challenging for European firms.



Source: Yale University, IIF

We believe that [crypto-related issues](#) may gain in importance as financial sector sanctions weigh on Russia’s ability to conduct cross-border transactions. Russians have been among the quickest to embrace cryptocurrencies. Close to 12% of the Russian population (or 17 million individuals) possess crypto wallets, the second-highest share globally (Exhibit 38), and the total amount held in them is estimated at around RUB2 trillion (or ~\$32 billion). Furthermore, Russia’s virtual asset market has grown rapidly. Access to skilled labor and cheap energy, together with relatively low temperatures, have allowed crypto mining to flourish and Russia to become the fifth-largest Bitcoin mining location (Exhibit 39).

Before the imposition of financial sanctions on Russia, the Bank of Russia had advocated to ban crypto assets aside of its own [digital ruble](#), for which a pilot started earlier this year. Now, however, its position seems to have changed and the government has decided to prepare [legislation](#) for the legalization and regulation of cryptocurrencies, including allowing investments in crypto assets through licensed entities. At the same time, the digital ruble is still expected to be [rolled out](#) by the end of 2022.

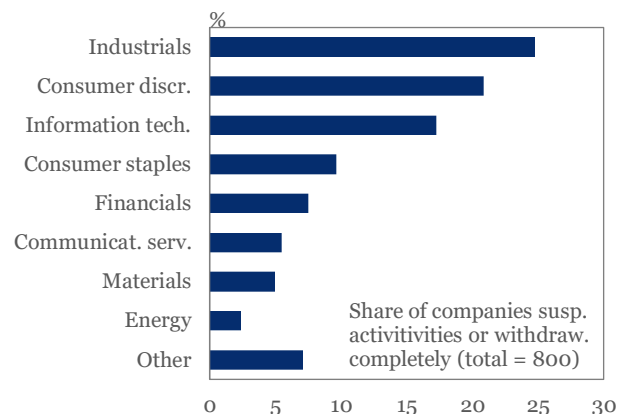
With the high degree of digitalization and progress on a ruble central bank digital currency, the U.S. and EU became concerned that Russia might use crypto assets to avoid sanctions. As a result, the Biden administration, in March, [authorized](#) “sanctions against persons determined to be responsible for or complicit in (...) transactions or dealings to circumvent U.S. sanctions through the use of digital currencies or assets (...)”. Furthermore, the U.S. [added](#) Switzerland-based holding company Bitriver AG, as well as ten of its Russia-based subsidiaries, to the Treasury Department’s SDN list in April.

With its fifth sanctions package, the European Union [prohibited](#) the provision of “high-value crypto-asset services” to close potential sanctions loopholes. Despite these measures, the decentralized nature of Blockchain technology and crypto currencies may enable Russia to avoid sanctions; the challenge lies elsewhere.

We believe that the current size of the global crypto market is insufficient to provide a channel for broad sanctions circumvention. The total market capitalization of cryptocurrencies is estimated at around \$1.3 trillion, of which close to two-thirds are accounted for by Bitcoin and Ethereum (Exhibit 40). The volatility of these two currencies renders them inadequate for the kind of transactions that Russian individuals and entities may want to conduct.

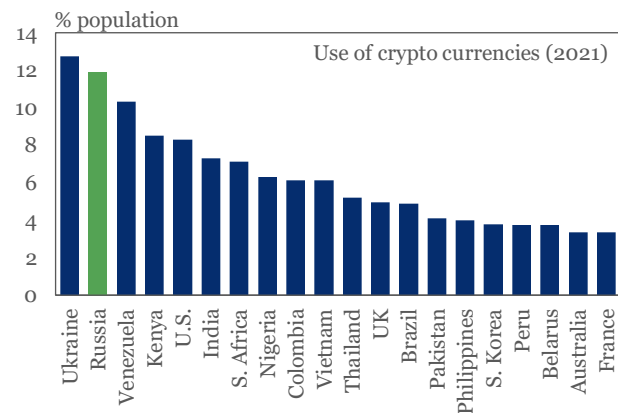
As far as so-called “stablecoins” such as Tether, USD Coin and Binance USD are concerned, markets do not provide the level of liquidity needed. Ultimately, Russia’s gross

Exhibit 37. Long-term effects on economy will be dramatic.



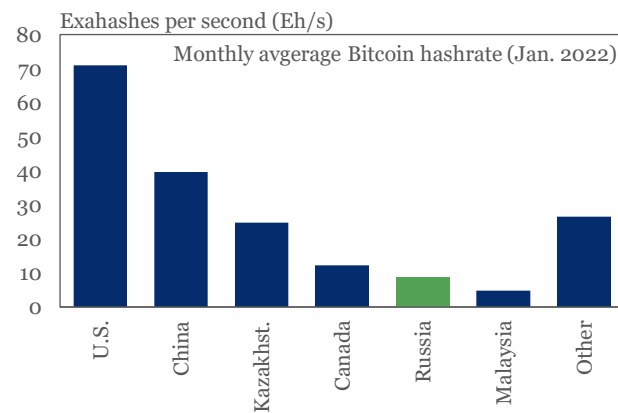
Source: Yale University, IIF

Exhibit 38. Crypto currency use in Russia is high.



Source: TripleA, IIF

Exhibit 39. Russia is the fifth-largest Bitcoin mining place.

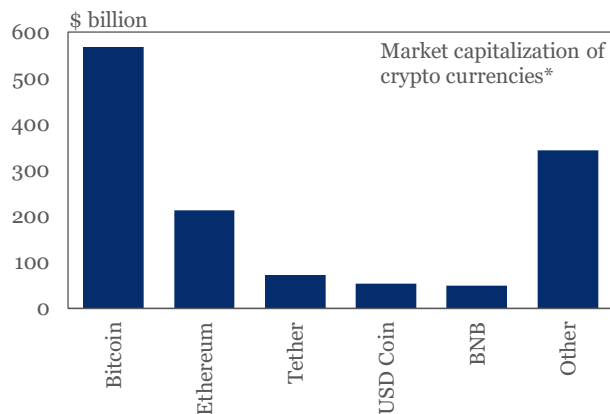


Source: Cambridge University, IIF

trade in goods and services reached close to \$1 trillion in 2021, while resident capital outflows exceeded \$200 billion in previous crises. While there is anecdotal evidence for individuals moving money out of Russia by converting it into cryptocurrencies, it does not yet appear that this instrument is used to facilitate wholesale capital flight or circumvention of international financial sanctions.

We will continue to monitor developments in the sanctions field carefully and hope to provide an important contribution to the discussion. Sanctions will remain a moving target for the foreseeable future and should be viewed as such.

Exhibit 40. Bitcoin and Ethereum dominate crypto market.



Source: CoinMarketCap, IIF *as of June 3, 2022