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# THE DUST HAS SETTLED. THE RUSSIAN ECONOMY AND SANCTIONS: WHO'S WHO?

FREE RUSSIA FOUNDATION
2022

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Russian aggression against Ukraine has led to the imposition of massive economic sanctions by the United States, the European Union, Britain, Canada, and other Western countries, intended to make the Kremlin feel the actual cost of war.

Russia's preparations for war had been going on for months, which was no secret to Western intelligence. The US and the EU initially decided they would not become parties to a military conflict; still, they openly declared that Russia would face severe sanctions pressure in the case of aggression. Thus, unlike in 2014, when decision-making on sanctions was chaotic, in 2022 Western politicians had enough time to discuss and agree on solutions. In this regard, at least the decisions of the first month can be seen as prearranged.

The sanctions policy is based on three principles. First, sanctions measures should be taken synchronously, demonstrating the unity of Western countries. Second, the sanctions policy should have the ability to ratchet up the pressure, i.e., sanctions should be adopted in several iterations. Third, any sanctions affect the economy of the country which imposes them, so their effect on the economy of Russia should be significantly greater than on that of Western countries.

The initial expectations of Western politicians and most experts were that the sanctions would deal a serious blow to the Russian economy. Express estimates of the Russian authorities and Western experts suggested that Russia's GDP would fall by 8-12% in 2022. For example, the Bank of Russia predicted an 8%-10% decline in GDP in 2022.[1] The Ministry of Economy and the Ministry of Finance predicted a 10% decline.[2] The same estimate was given by World Bank experts.[3] EBRD experts were even more pessimistic, foreseeing a drop of 11.7%.[4] If these forecasts had come true, the goal of the Western countries—to significantly limit the Kremlin's financial capacity to continue its aggressive policy—would have been achieved. However, these forecasts were based on few realistic hypotheses and assumed a collapse of the Russian economy: for the fall in GDP in 2022 to be 10%, the Q4 2022 drop will have to be 15–20% against the same quarter of 2021. Three months after sanctions were introduced, it became apparent that the Russian economy, although damaged—the drop in GDP in the second quarter of 2022 was 1.95% compared to the first quarter (minus 7.5% annualized), had not collapsed. Russia's economy has shown stability, and experts' assessments have begun to reverse: the sanctions are not having a serious effect and do not influence decision-making in the Kremlin. As is often the case, the truth lies between the two extremes, and today the task is to give the most objective assessment of what is happening.

The general conclusion consists of three points: 1) the sanctions imposed on Russia are much more aimed at undermining the long-term potential of the economy than at limiting its current capabilities; 2) financial sanctions for several reasons (favorable external conditions, incomplete decisions taken, structural features of the Russian economy, the reaction of the Russian authorities) had a much less significant impact than in 2014/15; 3) the most significant impact on the dynamics of the Russian economy in the first months after the introduction of sanctions came from "moral sanctions" in the form of Western companies leaving Russia and/or refraining from doing business there.

1 https://www.cbr.ru/Collection/Collection/File/40972/2022_02_ddcp.pdf
2 https://ria.ru/20220412/vvp-1783035116.html
3 https://www.worldbank.org/en/news/press-release/2022/04/10/Russian-invasion-to-shrink-Ukraine-economy-by-45-percent-this-year
4 https://www.ebrd.com/news/2022/ebrd-sees-war-on-ukraine-causing-major-growth-slowdown.html

# Introduction

Russia has become the world leader in the number of sanctions imposed on it, including against banks, companies, and individuals. The total number of sanctions is estimated at 11,000. They can be divided into four large blocks: 1) financial, imposing restrictions on the activities of Russian financial institutions, 2) restrictions on the export of Russian goods, 3) restrictions on the import of goods and technology to Russia, 4) individual sanctions.

I will consider the first four blocks of restrictions, because individual sanctions, with sporadic exceptions, have no impact on economic activity in Russia. In contrast to the practice of 2014/15, when the imposition of sanctions on individuals automatically led to their imposition on companies controlled by them, in 2022 the position of Western countries has changed. Only the sanctions against Alexei Mordashov affected the activities of the companies he owns (Severstal and Power Machines), which were subject to sanctions restrictions. Other Russian businessmen who controlled significant assets saved them from the sanctions through a simple procedure: once sanctioned, they soon announced that they had transferred/sold their assets to other persons and left the management bodies of the companies/banks.

Different sanctions affect economies at different rates: financial sanctions can take effect within days or even hours; restrictions on the export of goods from a sanctioned country can take several weeks after they begin; restrictions on the export of goods and technology to a sanctioned country can take months or years to become visible, because often such rules concern investment projects, the freezing of which does not have a statistical impact on the economy. This is the order in which I will look at the sanctions imposed on Russia and analyze their effect.

The analysis will focus on decisions made by the United States and the European Union; if decisions made by other countries have played a significant role, such choices will also be considered.

Moral sanctions will be analyzed in a single block in a separate section.

# Part 1. Financial sanctions

The authors of the sanctions package relied on the experience of the 2014 sanctions imposed after the shooting down of Malaysian Airlines flight MH17. They expected that the first blow of the financial sanctions would have the same dire consequences for the Russian financial system as in late 2014. As I recall, in December of that year, the Russian ruble halved in value in a matter of weeks, even though the Bank of Russia spent a third of its foreign exchange reserves to support it, and the Russian financial market plunged into a groggy state. All of this resulted from a total ban on new borrowing on the Western market for Russian banks and companies.

The 2022 set of financial sanctions was outwardly much more substantial.

The United States and the European Union used the "nuclear option" and froze the accounts and assets of the Bank of Russia; several major Russian banks, including the country's first and second largest banks, Sberbank and VTB, came under full-scale sanctions, lost the ability to make payments in dollars and euros, and were cut off from the international financial messaging system SWIFT; financial markets in the United States and Europe were closed to Russian borrowers.

The powerful sanctions had an immediate effect. If in 2014 the lag between the imposition of sanctions and the maximum point of the financial crisis was 4-5 months,[5] in 2022 it happened in two weeks: the dollar exchange rate in the Russian interbank market rose by more than

5 In 2014, Western financial sanctions were imposed in late July and early August; the ruble's maximum drop occurred in December, and inflation peaked in January 2015.

70% (from 75 to 130 rubles), and consumer inflation accelerated to a rate of 10% per month. However, this effect appeared to be short-lived: price growth in Russia stopped as early as mid-April,[6] and the ruble exchange rate returned to its pre-war level and continued strengthening for the next six weeks. Why did this happen? I see four explanations: favorable external conditions, an incomplete and inconsistent sanctions policy, structural features of the Russian economy, and the actions of the Russian authorities.

## Favorable external conditions

The external conditions in the autumn of 2014 were much more unfavorable for the Russian economy. Late 2014 and early 2015 saw a peak in payments on the external debt of Russian banks and companies (repayment volume of 5% of GDP for two quarters). In addition, the sanctions pressure on the Russian financial system was accompanied by a rapid decline in global oil prices, which by the end of 2014 had fallen by more than half compared to the beginning of August. In 2015, the fall in oil prices repeated. I estimate that falling oil prices at that time was much stronger than the effect of the sanctions.[7] In 2022, oil prices provided noticeable support to the Russian economy. After the global economic downturn associated with the coronavirus pandemic, oil prices fluctuated in a narrow $40-$45/bbl range for 14 months (September 2020-November 2021) before beginning to rise steadily. By mid-February 2022, the price of oil had surpassed $90/bbl. The Russian invasion of Ukraine and talk of an embargo on Russian oil imports led to a decline in Russian exports and an increase in oil prices above $120/bbl by the end of March. After the European Commission softened its stance on Russian oil imports (the sixth package of sanctions), the oil price dropped to its pre-war level of $90/bbl. Although Russian oil in April-August was sold at a substantial discount, the average export oil price was $79/bbl, 16% above the same period in 2021. Beginning in August 2021, Russia began to consistently reduce the volume of gas exports to Europe, which led to a rapid market price increase. Although Russian pipeline gas sales to Europe fell by 35% in the first half of 2022, these losses were more than offset by higher prices.

The foreign debt burden on the Russian economy in 2022 was less severe than at the end of 2014. According to the Bank of Russia's estimate[8] , as of early 2022, the total short-term debt (with payments within 12 months) of the Russian economy amounted to $165.4 billion or 7.5% of GDP[9] (12% of GDP as of July 1, 2014[10]).

| | State | Banks | Corporations | TOTAL |
|---|---|---|---|---|
| **Short-term debt** | 0.0% | 2.6% | 1.7% | 4.3% |
| **Long-term debt with repayment within 12 months** | 0.2% | 0.8% | 2.2% | 3.2% |
| **TOTAL** | 0.2% | 3.4% | 3.9% | 7.5% |

The concentration of external debt payments in late 2014-early 2015 was accompanied by a rapid contraction of the current account balance, which almost halved in the second half of 2014 compared with the first. In 2022 the situation was the opposite: there were no peaks in the schedule of payments on foreign debt, and the current account balance in the first half of 2022 was almost 70% higher than in the second half of 2021.

In addition, in the autumn of 2014, the situation in the Russian currency market was destabilized to a certain extent by the inarticulate policy of the Bank of Russia, which, on the one hand, for several weeks restrained the ruble exchange rate from falling by conducting currency

6 This is largely due to a sharp drop in real incomes of the population and a contraction of consumer demand. According to Rosstat, in April-June, sales of food products in Russia fell by 2%, and non-food products by 17% compared to last year.

7 https://www.atlanticcouncil.org/in-depth-research-reports/report/evaluating-western-sanctions-on-russia/

8 http://www.cbr.ru/vfs/statistics/credit_statistics/debt/ed_short-term_maturity.xlsx (August 12, 2022).

9 Estimated with Russia's GDP for 2021 (130.8 trillion rubles) and the average dollar exchange rate for 2021 (73.6824 rubles/$).

10 Estimated in relation to Russia's GDP for 2014 (71.4 trillion rubles) and the average dollar exchange rate for 2014 (73.6824 rubles/$).

interventions, and, on the other, increased the volume of ruble loans extended to banks at a low-interest rate. In 2022, the Bank of Russia, faced with panic in the financial market immediately after the invasion of Ukraine by the Russian army, stopped trading in all sections of the Moscow Exchange, after which it imposed numerous bans and restrictions, which made the ruble inconvertible, but avoided a catastrophic devaluation of the national currency. The strengthening of the ruble exchange rate, which soon began, made it easier for many banks and companies to service their foreign debts.

## Inaudible policy

The sanctions against the Russian financial sector adopted by the United States and the European Union, on the one hand, were not coordinated in everything and, on the other hand, left a lot of room for the Russian financial sector to minimize their impact.

The White House's official announcement of sanctions against Russia on February 24, 2022, stated: "The sanctions impose severe costs on Russia's largest financial institutions and will further isolate Russia from the global financial system. With today's financial sanctions, we have targeted all ten of Russia's largest financial institutions, including the imposition of full blocking, correspondent and payable-through account sanctions, and debt and equity restrictions on institutions holding nearly 80% of Russian banking sector assets.[11]" This statement was highly vague: were the sanctions to lead to "further isolation of Russia from the global financial system"? As of February 23, Russia was fully integrated into the global financial system, so the goal of "further isolation" was inadequate.

The sanctions imposed on Russian banks can be divided into three components: suspension of payments, restriction of access to capital markets, and freezing of assets. As seen from the table, concerning the "top ten Russian banks" mentioned by the White House, these decisions were taken step by step over four months, while only five banks were subjected to comprehensive sanctions. As a consequence, the only result achieved was the restriction of access of Russian banks and companies to Western capital markets. To a certain extent, the sanctions disrupted the flow of payments made by Russian banks and companies that had not been sanctioned;[12] however, there is no reason to speak of any isolation of the Russian banking system. The West failed to impose full-scale sanctions on Gazprombank and Credit Bank of Moscow, the settlement banks of the two largest state-controlled hydrocarbon exporters, Gazprom and Rosneft. As a result, their role in the Russian banking system has increased. Following the Kremlin's ultimatum to convert payments for gas purchases into rubles through accounts opened at Gazprombank, this bank has effectively become untouchable.

Of course, the West could not completely freeze payments for exports of Russian hydrocarbons and other raw materials—Russia is too important internationally, and such a move could lead to a halt in Russian exports and a rapid rise in commodity prices in world markets—but the obvious alternative was to create a "single window" system whereby all payments to and from Russia in Western currencies would go through correspondent accounts opened at Russian banks and controlled by Western ones.

11 https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/24/fact-sheet-joined-by-allies-and-partners-the-united-states-imposes-devastating-costs-on-russia/

12 To some extent, this is because the ban on payments by Sberbank was introduced only a month after the announcement, which gave time to redirect payment orders through banks that were not under sanctions.

| | Stopping of payments | | Access to capital markets | | Asset freeze | |
|---|---|---|---|---|---|---|
| | USA | EU | USA | EU | USA | EU |
| **Sberbank** | 02.24 | 06.14 | 02.24 | | 06.04 | 07.21 |
| **VTB** | 02.24 | 12.03 | 02.24 | 04.08 | 02.24 | 04.08 |
| **Gazprombank** | | | 02.24 | | | |
| **Alfa Bank** | 06.04 | | 02.24 | 02.25 | 06.04 | |
| **Rosselkhozbank** | | 06.14 | 02.24 | | | |
| **Otkrytiye** | 02.24 | 03.12 | 02.24 | 02.25 | 02.24 | 04.08 |
| **Promsvyazbank** | 02.24 | 03.12 | 02.24 | 02.25 | 02.24 | |
| **IBC** | | 06.14 | 02.24 | | | |
| **Sovcombank** | 02.24 | 04.08 | 02.24 | 04.08 | 02.24 | 04.08 |

## Why didn't the "nuclear button" work?

For a long time after the annexation of Crimea, experts discussed the possibility and practicality of blocking the assets and accounts of the Bank of Russia. Almost unanimously, this measure was dubbed the "nuclear button": experts believed that the Russian financial market was highly dependent on the Bank of Russia and that such a move would destroy the stability, first and foremost, of the domestic foreign exchange market and devalue the Russian ruble. However, freezing the central bank's foreign exchange reserves substantially impacts an economy with a precarious balance of payments heavily dependent on foreign exchange inflows on the capital account, and foreign exchange reserves are used to maintain the national currency exchange rate. Russia had none of the above.

First, starting in May 2015, the Bank of Russia abandoned the practice of currency interventions and switched to a floating ruble exchange rate. Over the following seven years, the Russian currency market weaned itself off currency interventions by the Bank of Russia, and the excess supply of currency in the market caused by rising global hydrocarbon prices was absorbed by the Ministry of Finance, which announced the volume of its purchases in advance.

Second, the balance of payments in Russia is characterized by a near-constant current account surplus, i.e. the supply of currency in the domestic foreign exchange market exceeds the demand. This situation is broken during periods of sharp changes in external factors, as happened in March-April 2020 after the beginning of the global economic recession caused by the coronavirus pandemic. At other times, the Bank of Russia did not participate in currency trading.

The Ministry of Finance stopped buying currency in the market on the first day after the Russian invasion of Ukraine, which led to an increase in the supply of foreign currency in the market, and the subsequent introduction of restrictions on the purchase of foreign currency by the Bank of Russia created a situation where supply exceeds demand. In such a situation, blocking Bank of Russia accounts made it impossible to conduct direct currency interventions.[13] This did not affect the currency market: currency sales by the Bank of Russia make sense only in periods when the demand for currency exceeds supply. Third, the Bank of Russia first stopped currency trading on the Moscow Exchange, which made information about the current ruble exchange rate inaccessible for most Russians, and then introduced numerous restrictions on the purchase of currency, which radically reduced the demand for it.

13 Theoretically, the Bank of Russia can still indirectly participate in the foreign exchange market by using correspondent accounts opened at Russian banks that the full-scale sanctions have not hit. I have no evidence that the Bank of Russia used this opportunity.

## Let's give credit where credit is due

Indeed, we must acknowledge that the Russian authorities quickly found an "antidote" that eliminated the impact of financial sanctions and limited the possibility of their strengthening in the future. Many of these solutions and their effects have already been discussed above, so I will restrict myself to enumerating them.

1. The main threat to the Kremlin was a sharp devaluation of the ruble, which was averted by freezing the organized foreign exchange market for two weeks and imposing numerous restrictions on purchasing foreign currency[14], turning the ruble into a non-convertible currency. These decisions sharply reduced the demand for foreign currency, removed pressure on the ruble exchange rate, and led to its strengthening in April-June. Of course, this created severe imbalances in the long term: a multiplicity of ruble exchange rates emerged in the economy, and equal access to foreign currency for all participants in the country's economic life disappeared. But in the short term, these negative aspects do not affect the economic dynamics. Scarlet O'Hara said: "I will think about it tomorrow," especially since there is no telling when tomorrow will come and who will have to think about how to return the ruble to the status of a convertible currency. The Russian authorities banned the sale of financial assets in the market by non-residents, which allowed them to avoid a panic flight of foreign investors, the collapse of market quotations of securities, and the devaluation of the ruble.
2. The Russian authorities introduced a requirement for foreign companies to agree with the government on the sale of direct investments and the need to obtain permission to convert rubles received in this way.
3. The Russian authorities introduced a requirement to pay for gas imports by European consumers in rubles using accounts opened at Gazprombank, which has put that bank in danger of being hit by sanctions. Given that Western countries did not impose payment restrictions on the state-controlled Rosselkhozbank and the Rosneft-controlled Credit Bank of Moscow, the ability of Russian companies to interact with the global economy was shaken for a time but quickly recovered in full.

In the medium term, I see three problems in the financial system that may worry the Kremlin:

1. Preservation of a robust ruble exchange rate undermines the effectiveness of some Russian exports. The weakening of the ruble may result from the compression of the trade balance as a result of lower oil export prices or an increase in imports as a result of economic recovery, or the removal of restrictions on financial transactions by non-residents, which seems unlikely, since those restrictions are of a political rather than an economic nature.
2. Pressure on companies and banks controlled by the state in favor of abandoning the use of dollars and euros will lead to increased risks for them by switching to less stable currencies with limited financial markets. Due to restrictions on the export of dollar and euro banknotes to Russia, the gap between the rates of cash and non-cash currencies will remain in the Russian market, and the Bank of Russia will have to limit the access of individuals to foreign currency deposits.
3. The Bank of Russia introduced numerous prudential loosenings for banks, which led to their reporting not reflecting the real risks. The Bank of Russia estimates that the banking system incurred losses of 1.9 trillion in the first half of 2022, and we can expect that a large number of banks will face the need to obtain new capital after the loosenings are lifted.

* * *

To summarize, we can say that the attempt by Western countries to conduct a financial "blitzkrieg" initially destabilized the Russian financial system, but the incompleteness and inconsistency of the decisions made allowed the Russian monetary authorities to "seize the initiative" and, by introducing numerous prohibitions both for non-residents and residents, to stabilize the situation.

14 In Russia, restrictions were imposed on capital and some current operations.

# Part 2. Hitting the real sector

No matter how challenging the financial sanctions may be, it is probably impossible in today's world to imagine a country being completely cut off from international payments and settlements. Even in the case of North Korea and Iran, which have been subjected to the most severe sanctions by the international community, there have always been banks and companies willing to help companies from these countries. This means that it is possible to adapt to financial sanctions, to create more expensive and less fast payment chains, to avoid SWIFT and use other ways to transfer information. It is also possible to make settlements not in the world's major currencies but in currencies of countries that have not joined the sanctions, or (today) in cryptocurrencies.

In short, the effect of financial sanctions can be powerful, but it inevitably loses energy over time; the economy of the country hit by sanctions adapts to them and, after a while, practically ceases to notice their effect. Of course, restrictions on access to capital markets remain in place, but, living under sanctions, the economy finds a new state of equilibrium in which it can continue to function without external financing.

Therefore, the inevitable next stage of sanctions pressure is to impose restrictions on the access of goods from the country hit by sanctions to foreign markets, primarily countries. The focus of sanctions restricting exports should consider the economy's structure and be aimed at key export goods.

## Structure of the Russian Economy

Although Russia's exports and imports of goods and services to GDP were very high (about 50% from 2010–2021, higher than that of China), this is not an indicator of a high degree of global integration of the Russian economy. Russia supplies raw materials and products of primary processing to the worldwide market, importing mainly goods for final consumption and investment. Five commodity groups (mineral products, metals, chemical products, timber and wood products, agricultural products) accounted for at least 85% of Russia's exports from 2010–2021, while the share of machinery, equipment, and transport vehicles did not exceed 6.5% (except for 2020, when commodity prices plummeted). It turns out that the role and place of the Russian economy in the world have not changed in the 20 years of Vladimir Putin's rule: it has failed to become competitive and integrate into global value chains.

This conclusion should come as no surprise, since the policy pursued by the Russian authorities was focused on attracting investors to the country who would create final products for domestic consumption, rather than producing products for export. Power Machines, Perm Motors, and the automotive industry are vivid examples of this policy.

Power Machines, the largest producer of power equipment in Russia, consolidated its enterprises located in St. Petersburg in the early 2000s, which attracted the attention of global actors General Electric and Siemens. These companies wanted access to the Russian market, which was in a phase of rapid growth and needed to create new generating capacity. On the other hand, the global players were attracted by the low labor costs in Russia, which incentivized the transfer of some production to Russia. The competition was won by Siemens, who decided to buy a significant stake in Power Machines and share some of its technology with the Russian company. When the relevant proposal landed on President Putin's desk, he firmly rejected it.[15] At the same time, Perm Motors, one of the largest manufacturers of aircraft engines in Russia, began building an alliance with Pratt & Whitney, which was interested in refining the Russian PS-90A engine and bringing it to the global market under its own brand. The following offer was laid on the main table at the Kremlin: to buy a block of shares in Perm Motors with the obligation to invest in the company and engine development. The Kremlin's response was less harsh than in the case of Power Machines but no more attractive. Instead of an agreement on the paid use of the Russian government's intellectual property related to the engine, the potential foreign investor was offered to buy it for a price several times higher than the planned investment, making the deal pointless for the investor. As a result, Pratt

15 Siemens came to Russia after all, creating a separate company to produce gas turbines with Power Machines; however, all critical technologies remained unavailable to Power Machines.

& Whitney created its own engine of similar capacity, while Perm Motors failed to refine the PS-90A engine to make it aircraft-worthy.

In the mid-2000s, the demand for passenger cars increased as the Russian economy boomed in terms of personal income. The Russian government decided to use this to lure the leading car producers into the country. The high import duties and tax preferences for production led to the desired result: 19 automobile factories owned by global players emerged in the country. At the next stage, the Russian authorities increased the requirements for investors and invited them to increase the level of localization of production to maintain the attractive tax conditions. To do this, the global players needed to attract to Russia component suppliers for their cars. However, the Russian market was not large enough for this: it was not economically attractive to establish production facilities that focused only on the domestic market. Global companies offered the Russian government a different path: to set up companies in Russia to produce individual components that would meet the needs of the whole European market. But to do this, the Russian authorities had to agree to a proposal to include exported products in calculating localization indicators. This proposal was rejected, and the Russian automobile industry did not become integral to the global market.[16]

## Commodities' export

Production and export of commodities in Russia, factoring in related industries (services, transport, etc.) and net taxes on products, provide more than 35% of the country's GDP. The share of the manufacturing industry, minus the initial processing of raw materials,[17] does not exceed 4.5% of GDP; the share of telecommunications and the IT industry amounts to 2.5% of GDP. The Kremlin's overtly backward and outdated economic structure creates a reliable defense against sanctions pressure. The Russian economy is the most important supplier of many commodities to the world market, occupying key positions. Today's global economy cannot dramatically abandon the consumption of Russian products without the risk of skyrocketing prices and years of recession. And without a significant reduction in revenues from exports, primarily hydrocarbons, the decline of the Russian economy cannot be sharp and deep.

### Russia's share in global production and global trade of certain commodities (2020–2021)

| | **Share in global production (%)** | **Share in international trade (%)** |
|---|---|---|
| **Oil** [18] | 11% | 17.5%[19] |
| **Nickel**[20] | 11.3% | 16.7%[21] |
| **Palladium**[22] | 40% | 47%[23] |
| **Aluminum**[24] | 5.5% | 12.9%[9] |
| **Potash fertilizers (2019)** [25] | 19% | 23.7%[26] |
| **Copper** [27] | 4% | 4.7%[28] |

In such a situation, it should not have come as a surprise that restrictions on Russian raw materials' exports were minimal. Moreover, after the invasion of Ukraine, Western countries increased their imports of raw materials from Russia. For example, between March and June 2022, US companies' purchases of aluminum and nickel

16 In 2022, this decision by the Russian authorities led to the fact that, after the Russian invasion of Ukraine, almost all manufacturers of automotive components instantly left Russia without any damage to their business outside of it.
17 Oil refining, metallurgy, coke and fertilizer production, half of the chemical industry.
18 https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2022-full-report.pdf
19 Ex-domestic consumption by oil-producing countries.
20 https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-nickel.pdf
21 Ex-China & Indonesia
22 https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-platinum.pdf
23 Ex-USA & Canada
24 https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-aluminum.pdf
25 https://www.nationmaster.com/nmx/ranking/potash-fertilizer-production
26 Ex-domestic consumption by potash-producing countries ex-50% of Canada's exports with the US as a destination.
27 https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-copper.pdf
28 Ex-USA & Canada & China

from Russia increased by 21% and 70%, respectively, compared with the same period in 2021. European companies' purchases of the same metals increased by 13% and 22%, respectively.[29]

## Energy Export

All previous economic recessions in Russia after the post-Soviet structural adjustment of the economy (1998, 2008, 2014/15, 2020) coincided with a fall in oil prices, while their recovery always triggered economic growth. The economic recovery speed depended on the pace of recovery of oil prices.


*Source: EIA (oil price)[30]; Rosstat (GDP dynamics).[31]*

Energy exports are the backbone of the Russian economy. Oil, petroleum products, gas, and coal account for about 60% of Russian exports and more than 25% of GDP (including transportation, sales, and services). Taxes received by the federal budget from the production and export of hydrocarbons invariably exceed 35% of total revenues. This means that if sanctions do not put pressure on this sector, the Russian economy will be in a stable state, and its decline (reduction of growth rates) will be minimal.

29 https://www.currenttime.tv/a/reuters-es-i-ssha-uvelichili-zakupki-nikelya-i-alyuminiya-u-rossii/32022181.html; https://www.reuters.com/markets/Europe/exclusive-EU-us-step-up-Russian-aluminium-nickel-imports-since-Ukraine-war-2022-09-06/

30 https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm

31 https://rosstat.gov.ru/storage/mediabank/VVP_kvartal_s%201995.xls

The authors of the sanctions policy in the United States and the European Union were aware of this, and announcements of impending sanctions on Russian energy imports began to appear in the first days after Russia's aggression. At the beginning of March, the US and Canada imposed a ban on imports of oil and oil products from Russia, and it seemed to many that a similar decision from the European Union would follow. The information pressure resulted from increased caution on the part of trading companies working in Europe, which reduced the volume of purchases of Russian oil and oil products. This led to pressure on Russian business: average daily oil production in April fell by 8.5% compared with March, and weekly oil refining in the second half of April fell by 9% compared with December-February levels.

However, political decisions to impose sanctions on Russian oil imports were delayed, and the imposition of the embargo was postponed until the end of the year.[32] In addition, it turned out that Western countries could not get support from India and China, which were happy to buy Russian energy resources at 25%-30% discounts. As a result, Russian oil production in May recovered to the pre-war level, and the volume of oil refining even exceeded it.

Russia supplies the world market with about 7.5 million barrels of oil per day (including oil products), which is more than 17.5% of the total international oil trade. If half of Russia's oil exports leave the world market, it could lead to an abrupt surge in world oil prices and the beginning of a global recession. In this regard, I predict that Western sanctions will not be able to create a workable constraint on Russian oil exports; hence, we should not expect a severe downturn in the Russian oil industry this year. Perhaps we will see the impact on oil production caused by the departure of Western service companies from Russia later. Still, no one can conclusively estimate this effect today.

Although the EU sanctions on Russian oil have not yet begun to work, they have nevertheless constrained the Kremlin's financial resources. Preparations to impose sanctions motivated major European consumers to stop purchasing Russian oil, and Russian companies were forced to look for new consumers. As a rule, it was Indian and Chinese entities that agreed to buy Russian oil at a substantial discount, sometimes reaching 40% of the Brent price. As a result, though the export of Russian crude oil and petroleum products slightly increased on the previous year, in March-August Russian companies lost about $70 billion. About half of this money was intended for the federal budget.

32 EU countries are set to stop buying Russian oil (excluding pipeline oil) at the beginning of December and petroleum products at the beginning of February 2023; in the UK, the embargo will take effect at the beginning of 2023.


*Source: EIA (Brent price)33; Russia's Ministry of Finance (Russia's export price).*

The situation with Russian gas exports looks more confident. The Kremlin is intensively using gas as a weapon in its hybrid warfare with Western countries to destabilize European economies and political systems and split Western unity. Since August 2021, Gazprom has gradually decreased its gas exports to the European market. This has led, on the one hand, to a rapid increase in gas prices in Europe, and, on the other, to a sharp decrease in gas production in Russia.[34] In July 2022, its production dropped by 25% compared to July 2021. So far, the financial arithmetic plays into Gazprom's hands: higher prices more than compensate for the drop in sales. But it seems that this tactical victory will turn into a strategic defeat for Gazprom: the EU countries have realized the risks associated with dependence on Russian gas; and they are ready to sharply reduce its share of the European market in the coming years. From 2016–2021, Gazprom exported gas to Europe. Gazprom exported one-third of its gas production to Europe, providing it with 75% of its revenues. The loss of this market would not only call into question the company's financial stability and the stability of its production process.

On August 10, an EU embargo on Russian coal imports came into effect, which will be a severe test for the coal industry. In 2020–2021, Russian companies sold 21–22% of their total exports to Europe. Over the past ten years, Russian coal production has increased by a quarter due to growth in export shipments, which

33 https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm

34 Gazprom exports gas to Europe through pipelines and has no way to redirect it to other markets. Therefore, reduced sales in Europe automatically lead to the need to reduce production.

accounted for half of the total output. Coal shipments are carried out by Russian Railways: they account for more than 20% of all cargo turnover and more than 40% of export shipments. Russian coal production stopped growing in the first half of 2022, but I am not convinced that this resulted from a decline in demand from European consumers. On the contrary, Russian coal exports to some European countries grew in the second quarter as Russian companies were willing to give 30%-40% discounts on world market prices to sell their products.

So far, Russia claims that coal production and exports will not decline this year as Russian companies manage to find new consumers. Still, judging by the newsfeed, such forecasts are overly optimistic: Russian coal miners face rising logistics costs and shipping insurance, while Chinese consumers are willing to buy Russian coal only at a 30% discount. As a result, in September, the profitability of coal exports from Russia to China through the Black Sea ports fell to zero. The decline in coal production is gradually increasing, and the Russian government expects it to reach 7% by the end of the year, but given that the share of the coal industry in Russia's GDP does not exceed 1%,[35] it will not seriously affect the macroeconomic indicators.

## Non-energy exports

EU sanctions[36] on Russian non-energy exports were not very extensive. Although they began in late June-early July 2022, the drop in production of sanctions-hit products became noticeable as early as May. Although the decline was very significant at the level of individual products, the overall level of the economy and industrial production were not significantly affected by the imposed restrictions. If all the limitations imposed by the European Union take full force, the Russian economy may lose $31 billion (6.3% of commodity exports). However, since most of the Russian goods subject to sanctions can be sold on other markets, the actual effect will be much smaller. The reorientation of exports, primarily to Asian markets, will require time to rearrange the logistics and conclude new contracts, but it is unlikely to be an insurmountable task. Therefore, it can be assumed that the central effect of such sanctions will become evident in the second half of 2022.

| **Products** | **Start date EU sanctions[37]** | **Export volume 2021 (total/in the EU)** | **Change in Production (January to August 2022-January to August 2021)** |
|---|---|---|---|
| Iron and steel products[38] | 06.17.22 | $28.9 bn/$6.2 bn | -9% |
| Coal | 08.10.22 | $17.6 bn /$4 bn | -5% |
| Fertilizer (quotas for one year) | 07.10.22 | | -9,4% |
| Wood and lumber | 07.10.22 | $17.5 bn /$6.1 bn | -8,2% |
| Cement | 07.10.22 | $55 bn /$2 bn | +6,5% |
| Seafood | 07.10.22 | $6.7 bn/$2 bn | -7,7% |
| Alcoholic Beverages | 07.10.22 | $200 mn/$100 mn | ... |
| Aluminum sheet | 07.10.22 | $850 mn | +14% |
| Gold and jewelry | 07.22.22 | $13 bn (UK) | -1.9% |

35 Considering some of the activities of the railroads, which have coal accounting for about 30% of the transportation volume and consolidation of profits in trading and holding companies. The direct contribution of the auspicious industry to the country's GDP was 0.5% in 2016, with no more recent data published by Rosstat

36 Exports of Russian raw materials to other countries that limited Russian exports were generally insignificant in volume. The exception was steel and steel product exports to the United States, which totaled nearly $6.7 billion in 2021. Since the second half of the year, after the introduction by the US of a 35% duty on imports of Russian steel, export volumes have fallen to almost zero.

37 https://russland.ahk.de/ru/obzor/obzor-sankcii

38 On February 28, 2022, the European Union imposed personal sanctions on Alexei Mordashov, the main shareholder of Severstal, one of Russia's largest steel companies. On June 2, the US imposed similar sanctions, and on June 3, Mordashov's wife was included in the EU sanctions lists. As a result, Severstal could no longer export its products to European countries as early as March. This is the reason why the decline of steel production in Russia began before the EU sanctions were introduced.

## Sectoral sanctions

An essential element of Western countries' sanctions policy against Russia is sectoral sanctions and restrictions on exporting various goods and technologies to Russia. Russia has traditionally been an importer of modern technology for many sectors of the economy, and the actual degree of dependence is complicated to assess—in value terms, imports may constitute a few percent of the cost of the final goods, but without imported components, the final products cannot appear.

For example, Russia is deprived of access to 5G mobile communications technology and equipment; the consequences will be manifested over the next few years as Russia will be limited in its use of the Internet to develop economic potential, constraining economic growth rates compared to other countries. Moreover, mobile operators say that companies most likely will not be able to develop existing 4G networks[39], because European manufacturers of telecommunications equipment (Nokia and Ericsson) have stopped supplying equipment to Russia due to EU sanctions, and China's Huawei is afraid to do so because of the threat of secondary sanctions.

Or another example. The most advanced technology company in Russia, Yandex, is on the verge of splitting into two companies with different shareholder structures: one of them will stay in Russia and serve the needs of the economy, while the other, whose activities are related to advanced technology, may move to one of the Western countries, retaining opportunities for cooperation with the rest of the world, but losing income from doing business in Russia.

We can predict growing technological backwardness in the Russian economy and confidently say that in 10-15 years this will be evident to everyone. But it is impossible to estimate which sectors of the economy or companies will lose the most and which will be able to find ways to remain competitive. We recall the experience of the Soviet Union, whose economic growth rate for a long time outstripped that of Western countries, but the level of technological lag was growing yearly.

## Civil aviation

This sector of the Russian economy has been hit twice: on the one hand, the US, the EU, and the UK have banned Russian airlines from flying in their airspace; on the other hand, the US and the EU have banned the export to Russia of civil aircraft and their spare parts and repair services.

The ban on flights in the airspace of key countries for Russian airlines has dealt a severe blow to the industry's economic situation. For example, in 2019 (before the pandemic), the share of passengers on international flights at Russia's largest airline, Aeroflot, was 45%, and its aggregate ticket fares were $5 billion (58% of the company's total revenue).[40] In 2021, Covid restrictions reduced Aeroflot's share of international traffic to 36.5% and its share of revenue to 45% ($2 billion).[41] In the second quarter of 2022, Aeroflot's international passenger numbers dropped 58%, and its revenue dropped 63%.[42] While this is a severe blow for the company, in terms of absolute numbers, the loss to the Russian economy, given that Aeroflot's share in air traffic exceeds 40%, was insignificant.[43] The ban on new aircraft and spare parts, as well as on aircraft repairs, has posed a significant challenge to Russian authorities: Most of the medium- and long-haul aircraft held by Russian companies are various modifications of Airbus and Boeing, and they carry 95% of Russian passengers.[44] According to the Russian Ministry of Transport, the total number of such aircraft was 801, of which more than 520 were leased from foreign companies.[45] Since no companies in Russia are authorized to do medium and heavy aircraft inspections, and repairs and servicing by certified companies are an obligation for airlines when entering into leasing contracts, Russian

39 https://www.bloomberg.com/news/articles/2022-08-08/sanctions-may-freeze-veon-s-network-rollout-in-russia-ceo-says
40 https://ir.aeroflot.ru/fileadmin/user_upload/files/rus/reports/msfo/fy_2019_rus_.pdf
41 https://ir.aeroflot.ru/fileadmin/user_upload/files/rus/reports/msfo/fy_2021_rus.pdf
42 https://ir.aeroflot.com/fileadmin/user_upload/files/eng/companys_reporting/Operating_highlights/2022/2022_07_26_AFLT_Operating_results_2Q_ENG.pdf
43 Other effects of this ban—limitation of opportunities or a sharp increase in the cost of flights abroad for Russian citizens—remain outside the scope of this analysis.
44 https://www.atorus.ru/news/press-centre/new/59791.html
45 https://www.dw.com/ru/lizingovaja-kompanija-zajavila-o-milliardnom-ushherbe-iz-za-nacionalizacii-samoletov-v-rf/a-61310357

airlines were required to return all aircraft to lessors within a short period of time. Fulfilling this requirement would have led to a disaster in the air transport market, and the Russian authorities decided to order the airlines to "steal" the planes. On March 14, President Putin signed a decree forbidding Russian companies to return leased planes to their owners without the government's permission. In turn, the government said that no such permits would be issued and recommended that companies stop operating some of the planes to dismantle them for spare parts gradually.

Formally, Russian companies continue to pay lease payments, but they make them in rubles to special accounts that leasing companies were forced to open in Russian banks. At the same time, they are not allowed to convert the funds received into foreign currencies and repatriate their income.

After the invasion of Ukraine, some 80 aircraft, which Russian companies had leased, were seized at foreign airports. About 440 remain in Russia; their combined value is estimated at $20 billion.

# Part 3. "Moral" sanctions

A fundamentally new development in relations between Russia and the Western world has been the "moral" sanctions imposed by international business. After the Russian invasion of Ukraine, hundreds of Western companies announced that they would stop or suspend their activities in Russia. The consequences of some of these decisions can be seen at the level of macro statistics: in the second quarter, production of cars dropped tenfold, and production of railway freight cars and excavators more than halved. The share of McDonald's alone exceeded 5% of total sales in Russian cafes and restaurants; IKEA's annual sales exceeded 30% of the country's furniture production.[46] The decision by global shipping companies to stop shipping containerized cargo into and out of Russia led to a 35% drop in container shipments through Russian ports in March-August.

In the second quarter of 2022, "moral" sanctions were the main factor in the decline of the Russian economy; often, such decisions were implemented within days of the announcement, leading to the destruction of established economic chains. However, each company chose its way of implementing "moral" sanctions, so we cannot say that the departure of each of them will lead to long-term consequences.

The most frequent exit scenario for Western companies from Russia was the sale of the business, often to a management team. Global consulting and auditing companies followed this path, McDonald's, Starbucks, Tetra Pack, and many others. In such cases, after a renaming, the companies' activities continued as before, although sometimes (e.g., McDonald's and Starbucks) with some interruption.

Most of the global automobile companies that had built plants in Russia stopped production and supplying car kits almost immediately. But the French company Renault, managing Russia's largest car plant, AvtoVAZ, for ten years, has done things differently. During its management of the Russian plant, Renault gave the plant access to its suppliers and technology, effectively integrating it into its production structure. A complete break with Renault at AvtoVAZ would have prevented the Russian company from being able to produce any vehicles for a long time, due to the need to find new suppliers of components. On the other hand, having decided to leave Russia, Renault wanted to keep the option to come back. To that end, the French company sold its shares in AvtoVAZ to the Russian government for 1 ruble, with an option to repurchase them within six years. In addition, Renault pledged that the Russian company would retain the right to use the base platform and promised to supply a specific set of components to produce the cars. It took AvtoVAZ three months to establish an import company and build bank relationships to reach production levels in January 2022.

The British BP announced its withdrawal from Russia and intention to sell its stake in Rosneft; however, no buyer could be found in seven months. Following the ban imposed by the Russian authorities, BP does not receive dividends from Rosneft, and its representatives left the

46 Of course, these figures are not comparable since a significant portion of sales in IKEA stores cannot be classified as furniture.

company's Board of Directors. However, the British company's decision has had no effect on Rosneft's current operations and is not reflected in Russian statistics.

Similarly, Shell, a shareholder in Sakhalin Energy, was developing oil fields as part of a production sharing agreement. But unlike BP, which legally owns Rosneft shares, the Russian government seized Shell's stake in Sakhalin Energy. This became possible after President Putin signed a decree on nationalizing Sakhalin Energy assets.

Meanwhile, ExxonMobil, being the operator of another production sharing agreement company, Sakhalin-1, halted its activities in Russia and recalled its staff from the project. This has led the production to shrink from 272,000 to 10,000 barrels of oil per day. ExxonMobil is currently negotiating the transfer of its stake and operator's license, while the project is suspended.

Three international beer market giants with solid positions in the Russian market (just under 70% in total)—Carlsberg, Heineken, and AB InBev—decided in March to leave Russia, but, most likely, these steps will not be reflected in Russian statistics either. AB InBev was part of a joint venture with Turkey's Anadolu Efes and has agreed to sell its stake. Carlsberg and Heineken have stated that their exit from Russia will be gradual, and they intend to sell their businesses from 2022–2023. In the first half of 2022, Heineken sales in Russia grew by 7.6% in volume terms,[47] Carlsberg and a joint venture with AB InBev reduced their sales by 2%[48] and 1.4%,[49] respectively.

Coca-Cola and Pepsi Cola accounted for 11.5% of the soft drink market in Russia. Both companies said they would stop producing and selling their flagship beverages in Russia, but would retain production of the Russian brands they bought, as well as juices and milk.

Swedish IKEA closed the company's Russian stores and sold the furniture factories it had built, but remained the owner of the shopping malls.

The most damaging consequences for the Russian economy may come in 2023 after the withdrawal of global oilfield service companies, which, almost on the same day in mid-March, announced their departure from Russia. Halliburton made the harshest announcement, declaring the immediate termination of its activities. Schlumberger, Baker Hughes, and Weatherford made less unambiguous statements, which said that the companies had "decided to immediately suspend the introduction of new investments and technologies for operations in Russia." Still, the companies intend, until the end of 2022, "to continue to meet existing contractual obligations under applicable international laws and sanctions."

The departure of foreign oilfield service companies will not stop the Russian oil industry, but will severely slow its development. Foreign companies account for about 20% of total operations, but they are the suppliers of the most high-tech solutions. For example, they account for more than 60% of software deliveries and more than 50% of oil-production intensification. If the announced boycott of Russia continues for 4-5 years, it may result in a 15%– 20% decrease in oil production, which would lead to, it may result in a 15%–20% decrease in oil production, which will result in a 20–25% decrease in oil and oil products export, while the volume of domestic oil consumption in Russia will remain the same.

## Energy Hostages

In early September, President Putin signed a decree limiting the property rights of foreign companies that had invested in the Russian energy sector: they now cannot sell their assets without government permission. This decision creates enormous problems for two major European energy companies: Italy's Enel and Finland's Fortum.

Both companies became significant players in the Russian energy sector after acquiring controlling stakes in generation companies during the restructuring of the state monopoly RAO UES in 2006–2008. For 15 years, both companies actively modernized the power plants, making them the most efficient in the industry. After the invasion of Ukraine, both companies announced their intention to end investments in Russia and sell their existing assets.

By September, Enel had managed to negotiate and announced a deal: LUKOIL and the private fund Gazprombank-Frezia were to become the new owners of the company's Russian assets. The deal was expected to close in the third quarter after the government's Foreign

47 https://www.heinekenrussia.ru/press-center/news/rezultaty-deyatelnosti-heineken-n-v-za-pervoe-polugodie-2022-g/
48 https://www.interfax.ru/business/857017
49 https://profibeer.ru/beer/prodazhi-ab-inbev-efes-v-pervom-polugodii-2022-goda-byli-na-urovne-rynka-v-czelom/

Investment Commission and the Antimonopoly Service had approved.

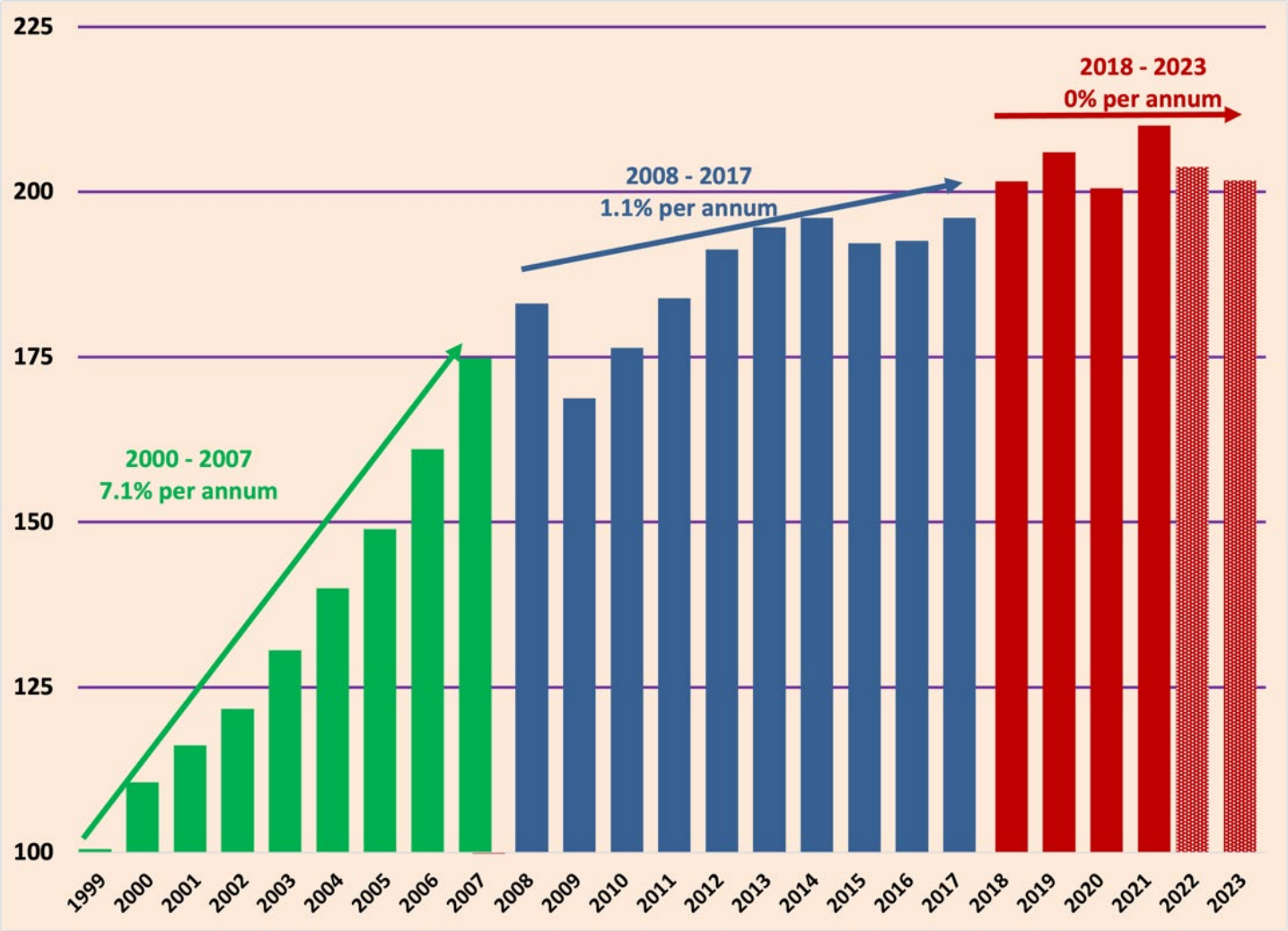
Fortum was at an advanced stage of looking for buyers: bidding closed at the end of July; among those willing to buy the company's assets were Gazprombank, AFK Sistema, and Invest AG of EVRAZ shareholders Alexander Abramov and Alexander Frolov.[50]

After President Putin's decree, European companies became hostages of the Kremlin, and they will have to face the difficult task of continuing to fulfill their obligations to build generating facilities and maintain Western equipment installed at power plants amid sanctions restrictions. Failure by the companies to meet their commitments will threaten European companies with substantial fines and may result in a complete loss of Russian assets in involuntary bankruptcy (as happened with the oil company Yukos in 2004–2006).

50 Fortum owns a 73.4% stake in Germany's Uniper (set to drop to 56% after the German government buys back shares), which owns almost 84% of another Russian generating company, Unipro. Uniper has also announced its intention to leave Russia, but this statement has not yet been transformed into an organized asset sale process.

# Conclusions

## Russia's GDP dynamics, 1999–2023 (1999 = 100, 2022–2023 based on Russian government forecast)



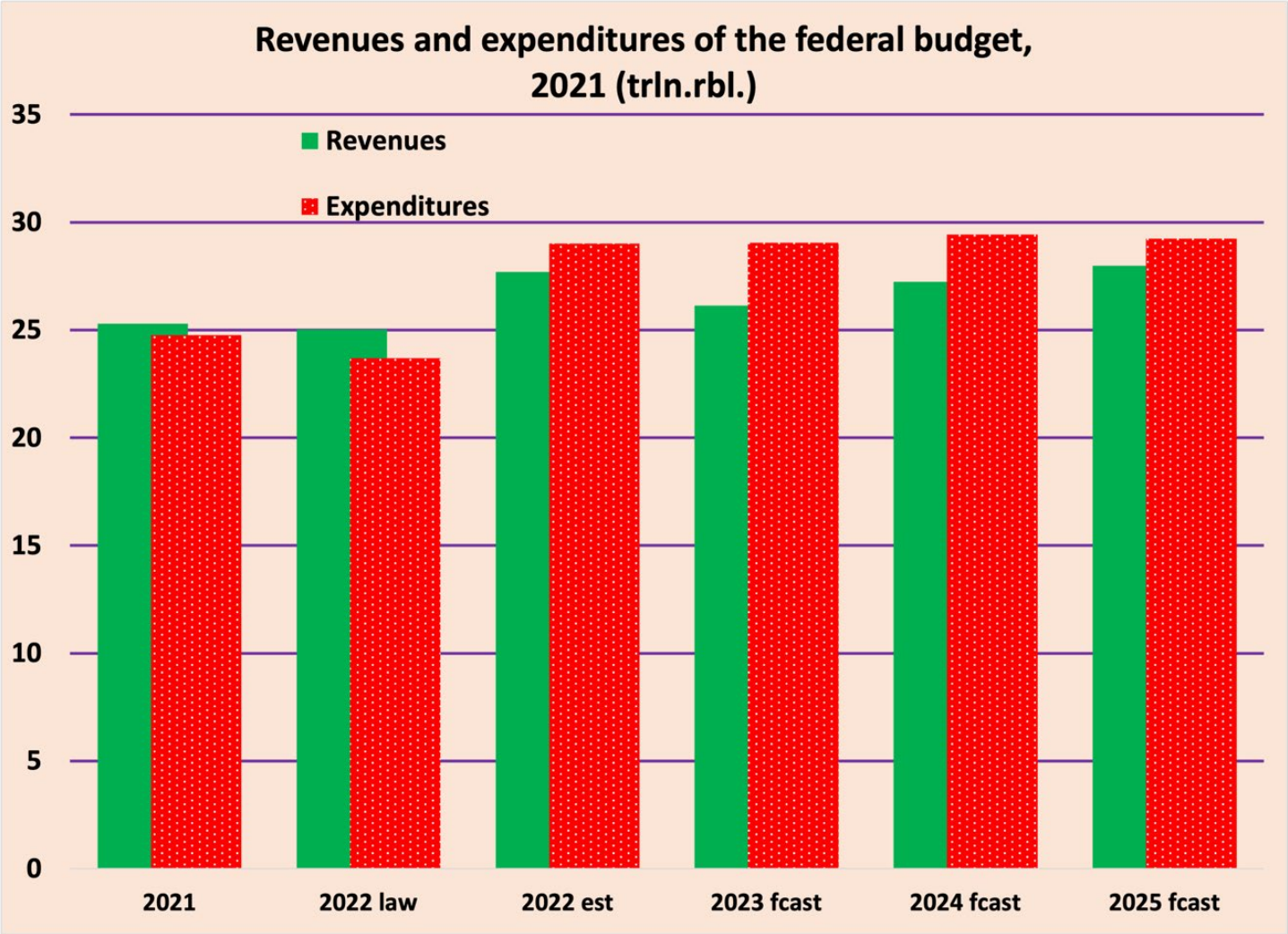

*Source: Rosstat.*[51]

Let's analyze the Vladimir Putin era in terms of the growth rate of the Russian economy. We can clearly distinguish two stages: a period of rapid growth, which lasted until mid-2008, when the economy grew at an average rate of 7% per year, and the following 14 years, during which the Russian economy in total increased by 11%, i.e., grew at an average rate of 0.8% per annum. Of course, the actual event separating one period from the other is the global financial crisis of 2008–2009. Still, symbolically the "growth period" coincides with Vladimir Putin's first two presidential terms, while the "stagnation period" continues as he frantically tries to hold on to power.

The Russian economy's return to growth after the recession, triggered by the annexation of Crimea and the ensuing Western sanctions, has been slow and uncertain. The average growth rate for 2018–2021 was only 1.7%, twice as slow as global economic growth. According to government forecasts (without discussing their reliability), the economy will decline by 2.9% in 2022, pushing

51 https://rosstat.gov.ru/storage/mediabank/VVP_god_s_1995.xls

the economy back five years to 2018 levels (symbolism again—the beginning of Vladimir Putin's current presidential term).




*Source: Consultant.ru.*[52]

Previously, the federal budget's revenue shortfall from the discounted oil price was estimated at $35 billion. But losses are not limited to that: according to the Ministry of Finance, the federal budget revenues not related to hydrocarbon production and exports in the first eight months of 2022 were 12% lower than the previous year in nominal terms, not counting inflation, which was 13% for the budget sector.

Such is the price of war for Russia, and such is the effect of sanctions, which are likely to work against the Russian economy while the current president remains in power.

* * *

During the 23 years of Vladimir Putin's rule, the Russian economy has experienced three crises: the global economic crisis of 2008–2009; the crisis of 2014–2015 related to falling oil prices, and the imposition of sanctions against Russia related to the war in Ukraine; and the crisis of 2020–2021 coupled to the coronavirus pandemic. The current crisis, on the one hand, is different: it is not related to the fall in world prices and the decline in demand for oil, which is the most critical factor determining the state of the Russian economy. On the other hand, just as in times

52 http://www.consultant.ru/document/cons_doc_LAW_396691/

of previous crises, the dynamics of the Russian economy are determined not by endogenous trends, which took shape on the eve of the crisis, but under the influence of exogenous factors, which are beyond the control of the Russian economic authorities.

The current crisis is in its initial phase: the imposed sanctions have caused the economy to slow down and slide into recession; the decline of the Russian economy is not likely to be profound, but it could last for several more quarters, followed by stagnation. The main challenge for the Russian authorities will be the technological isolation of Russia, in which context maintaining the current level of technological development would count as a major success.

# About the Author

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