

Russia's Economy on the Eve of the Second Anniversary of the War

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Abstract

Nearly two years after the start of the war in Ukraine, the report gives an overview of the current state of the Russian economy, with a focus on the fiscal situation, external balances, and the effects of Western sanctions on Russia's trade with the EU and selected third countries. Increased scrutiny of companies from third countries violating the energy sanctions led to a renewed widening of the price discount on Russian oil during the last few months of 2023. However, despite this and heavy military spending, last year's fiscal deficit was kept under control and primarily covered from the sovereign National Welfare Fund. EU exports to Russia of sanctioned economically critical (EC) goods and common high-priority (CHP) items have virtually stalled, indicating that the sanctions are effectively preventing direct exports. However, third countries, notably China, Hong Kong, Türkiye and the CIS countries, have increased their market shares and become Russia's most important suppliers of missing EC goods and CHP items. Our findings suggest a particularly high likelihood of sanctions evasion via such CIS countries as Armenia, Kazakhstan, Uzbekistan and Kyrgyzstan, and to a lesser extent via Türkiye and China.

Keywords: sovereign fund, energy sanctions, economically critically goods, common high priority items, trade sanctions, sanctions evasion

JEL classification: F14, F51, H6

SUMMARY

- › *Last year, the Russian economy grew by an estimated 3.5%, but in 2024 growth is projected to slow to around 1.5% on the back of recent monetary policy tightening.*
- › *Despite heavy military spending and budget revenue being eroded by Western energy sanctions, fiscal deficits have generally been kept under control; last year, the federal government deficit was primarily covered from the National Welfare Fund.*
- › *Increased scrutiny of companies from third countries violating the energy sanctions led to a renewed widening of the price discount on Russian oil during the last few months of 2023.*
- › *There has been little change in aggregate Russian import patterns over the past three months.*
- › *In November 2023, EU exports to Russia of economically critical (EC) goods and common high-priority (CHP) items stood at a mere 2% of pre-war values, indicating that the sanctions are effectively preventing direct exports.*
- › *Besides China and Hong Kong, Türkiye and the CIS countries are Russia's most important suppliers of missing EC goods and CHP items.*
- › *Our findings suggest a particularly high likelihood of sanctions evasion via such CIS countries as Armenia, Kazakhstan, Uzbekistan and Kyrgyzstan, and to a lesser extent via Türkiye and China.*

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GENERAL ECONOMIC SITUATION

The Russian economy grew by 3.5% last year, according to the latest wiiw estimates.¹ This is more than most analysts had been predicting. The main reason for the growth being higher than expected was the remarkable short-term resilience to drastic monetary tightening, with the policy interest rate hiked by a combined 8.5 percentage points during the second half of 2023. In Q4 2023, economic growth barely subsided, with most high-frequency indicators showing solid rates of expansion and with consumer and business confidence hovering at elevated levels. The substantial growth in domestic demand last year is demonstrated by the following figures: gross fixed capital investment picked up by 10% (in January-September, year on year); retail trade turnover increased by 5.9% (in January-November); average real wages climbed by 7.7% (in January-October); and real disposable income rose by 4.8% (in January-September).

Manufacturing grew by 7.5% in the first 11 months of 2023 (year on year), and industries with a large share of military output recorded above-average growth rates. For instance, the production of computers, electronic and optical products soared by 34.7%, other transport vehicles and equipment by 29.5%, finished metal products except machinery and equipment by 27.4%, and electric equipment by 22.6%. However, mining output declined by 1.1%, mostly on account of the falling natural gas production (-5.5% for 2023 as a whole);² meanwhile, oil production withstood the shock of sanctions quite well, as most shipments to Europe were reoriented toward Asia, particularly China and India. Oil production fell by only 1.2% last year, to 10.96 million barrels per day (bpd); an average of 7.5 million bpd was exported.³ Given the relative preponderance of mining in Russia's industrial structure, the growth in overall industrial production was confined to a relatively modest 3.6% in the first 11 months (year on year).

The rapid growth of nominal and real wages has been facilitated by the very tight labour market. In November 2023, the number of unemployed was 19% lower than the year before, and the unemployment rate had plunged to an all-time low of 2.9%. Labour shortages are particularly acute in industry: in January 2024, 47% of industrial companies reported shortages of skilled labour (up from the last peak of 45% in July 2023), which marks the highest level recorded since 1996.⁴ On top of the overall decline in the labour force on account of long-term demographic trends, the recent partial military mobilisation and emigration, the labour shortages in industry have been aggravated by the abrupt structural production shift towards manufacturing, driven by (i) sharply increased military procurements

¹ wiiw (2024).

² In particular, natural gas production by state-owned Gazprom declined by around 9%, and pipeline gas exports by around a quarter last year. This is a direct consequence of sharply curtailed exports to the EU, <https://www.kommersant.ru/doc/6467610?from=main>

³ <https://www.kommersant.ru/doc/6456100>

⁴ According to a survey by the Gaidar Institute for Economic Policy, https://www.rbc.ru/economics/25/01/2024/65b122ac9a79473a6cc106e0?utm_source=yxnews&utm_medium=desktop

and (ii) the withdrawal of some Western companies – a development which has opened up new niches for domestic producers. This has been accompanied by a flow of workers from small and medium-sized businesses in the services sector (e.g. in trade, hospitality and catering) to large manufacturing enterprises, which generally offer higher wages.⁵

After a very solid performance last year, economic recovery is expected to run out of steam in 2024 and beyond. In 2024, GDP growth is projected to decelerate sharply to a mere 1.4%, according to the latest consensus forecast of Focus Economics, released in January;⁶ the current wiiw forecast is 1.5%. The main reasons for the expected slowdown are the effects of last year's monetary policy tightening on private consumption and investment, labour shortages and the projected slowdown in the global economy. In 2025-2026, growth is likely to stay at below 2%, reflecting the capacity constraints faced by the economy.⁷

FISCAL DEFICIT: NATIONAL WELFARE FUND TO THE RESCUE

After 2.1% of GDP in 2022, last year the deficit of the federal government reportedly reached 1.9%, which was well in line with the 2% target.⁸ The deficit turned out to be smaller than predicted by many at the beginning of the year, thanks to the overperformance of non-energy revenues of the budget: these soared by 25% year on year (in nominal terms), on account of the rapid economic recovery. By contrast, energy revenues of the budget predictably plunged by 23.9%, due to much lower oil prices than in 2022 (partly because of Western energy sanctions – for more on that, see below) and reduced exports of natural gas. Still, total budget revenue picked up by 4.7%, matching the 4% rise in expenditure.⁹ Overall, these trends suggest a high degree of fiscal resilience: despite much higher military spending and the erosion of government revenue by Western energy sanctions, the budget deficit has generally been kept under control – even if its very existence is a novelty for Russia, which used to have a general track record of budget surpluses prior to the war.

Deficit financing is hardly a problem either, at least for the time being: 90% of the federal budget deficit last year was covered from the sovereign National Wealth Fund (NWF). Specifically, in December, EUR 537 million, CNY 115 billion and 233 tonnes of gold were sold from the NWF for this purpose.¹⁰ Because of this, and despite the fact that the NWF recorded a net inflow of funds in line with the 'budget rule' (for more details on this, see Box 1), in the course of 2023 it declined by 10% in USD terms (Figure 1); its liquid part, which consists of foreign exchange and gold, plunged by 36%.

⁵ Institute for Economic Forecasting (2023).

⁶ Focus Economics (2024).

⁷ wiiw (2024).

⁸ https://minfin.gov.ru/ru/press-center/?id_4=38819-predvaritelnaya_otsenka_ispolneniya_federalnogo_byudzheta_za_2023_god

⁹ Given the 5.9% inflation last year, this means that in *real* terms federal budget expenditure declined by nearly 2%.

¹⁰ https://minfin.gov.ru/ru/document?id_4=305805-informatsionnoe_sobshchenie_o_rezultatakh_razmeshcheniya_sredstv_fonda_natsionalnogo_blagosostoyaniya

BOX 1 / 'BUDGET RULE' AS A TOOL OF MACROECONOMIC STABILISATION

The 'budget rule' and the sovereign fund(s) have been in place in Russia for nearly two decades now and broadly replicate the institutional design in many other commodity-exporting economies, including e.g. Saudi Arabia, Norway and Kazakhstan, which are highly dependent on volatile oil prices. The basic idea is to save extra budget revenue to the sovereign fund in times of high oil prices; this resource can then be drawn upon in times of low oil prices and low budget revenue.¹¹

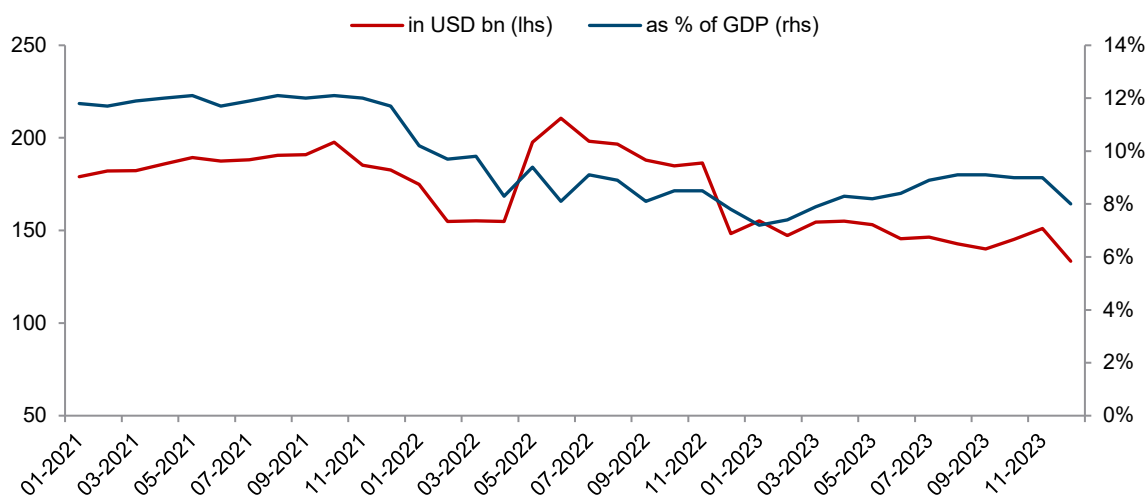
Before the war, the budget rule in Russia envisaged an oil price of USD 45 per barrel as a cut-off threshold: any extra government revenue derived from when the oil price exceeded this figure was accumulated in the NWF, which was tapped when the oil price fell below the threshold. However, because of the Western sanctions and the resulting unpredictability of energy export volumes, the budget rule has been changed and adapted to the new conditions. The version that was in place in 2023 envisaged, rather than an oil price, a certain amount of government energy revenue (RUB 8 trillion per year, or some EUR 80 billion at the current exchange rate) as the cut-off threshold. So long as the government's energy revenue stayed below the threshold (as was the case between January and August 2023), the missing volumes were taken from the NWF. Higher oil prices in the remainder of the year and the corresponding improvement in energy revenue for the government allowed the NWF to be replenished in December; the net inflow of funds to the NWF for 2023 as a whole was positive.

Starting from 2024, the budget rule has been modified once again, and oil price has been reinstated as the cut-off benchmark – albeit at a higher level (USD 60 per barrel) than before the war – reflecting sharply increased military spending and the overall deterioration in Russia's fiscal situation. Theoretically, with the current price of Russian oil comfortably above USD 60 per barrel, the budget rule should force the central bank to purchase foreign currency for the purposes of NWF replenishment. However, this is not happening, as the authorities are once again concerned about exchange rate stability – as in August-November of last year (when the budget rule was temporarily suspended in the face of strong depreciation pressure on the rouble). The central bank's president, Elvira Nabiullina, said in a recent interview that the NWF would only be replenished once the Brent oil price exceeds the level of USD 88-90 per barrel (which is in clear violation of the current budget rule);¹² at the time of writing, the Brent price was lower than that.¹³

¹¹ For more on that, see e.g. Astrov (2007) and Kochnev (2019).

¹² <https://www.rbc.ru/finances/25/12/2023/6586b40d9a79470829d2ff9b>

¹³ On 26 January, Brent oil cost USD 80.7 per barrel.

Figure 1 / National Welfare Fund in 2021-2023, end of the month

Source: Ministry of Finance.

As of 1 January 2024, the NWF stood at USD 133.4 billion (8% of estimated 2023 GDP), of which the liquid part was USD 55.9 billion (3.3% of GDP).¹⁴ The liquid part is currently held entirely in Chinese renminbi and gold; the last USD dollar assets were sold back in July 2021, assets in British pounds and Japanese yen in December 2022, and euro assets in December 2023. Thus, the current composition of the NWF is much less diversified than before the war. This reduces the vulnerability of the Russian government to Western financial pressure, but it also carries risks of its own, making the fund's assets heavily dependent on the renminbi exchange rate. The remaining (non-liquid) assets of the NWF are held in equity and bonds of Russian companies, notably Sberbank. Since the beginning of the war, the NWF has also been used on several occasions to finance various infrastructure projects (e.g. the construction of highways), the purchase of foreign-owned aircraft by Russian airlines (following the termination of lease contracts by foreign providers immediately after the start of the war),¹⁵ and the recapitalisation of large state-owned banks and corporations, such as Aeroflot, Russian Railways and VTB bank.¹⁶

On the twin assumptions that (i) the federal budget deficit in 2024-2025 will be of a similar magnitude as in the past two years, and (ii) the NWF will not be replenished under the budget rule, even if the oil price level allows it (see Box 1), the liquid part of the NWF may be fully depleted as early as the end of next year. This does not mean, however, that the government will run out of funds and will no longer be able to prosecute the war in Ukraine (assuming it drags on beyond 2025). It will still have the option of borrowing domestically – as it has already been doing to refinance the public debt stock. In 2023, a total of RUB 2.5 trillion was placed in government bonds for this purpose. For 2024, the current government plan is to borrow a total of RUB 4.1 trillion, of which RUB 1.5 trillion is to be used for debt repayment.¹⁷

¹⁴ https://minfin.gov.ru/ru/document?id_4=305805-informatsionnoe_soobshchenie_o_rezultatakh_razmeshcheniya_sredstv_fonda_natsionalnogo_blagosostoyaniya

¹⁵ https://www.kommersant.ru/doc/6425766?from=glavnoe_4

¹⁶ <https://meduza.io/feature/2024/01/23/za-dva-goda-voyny-rossiya-potratila-polovinu-deneg-iz-glavnoy-kubysyki-fonda-natsionalnogo-blagosostoyaniya-u-strany-chto-skoro-zakonchatsya-resursy-na-chemny-den>

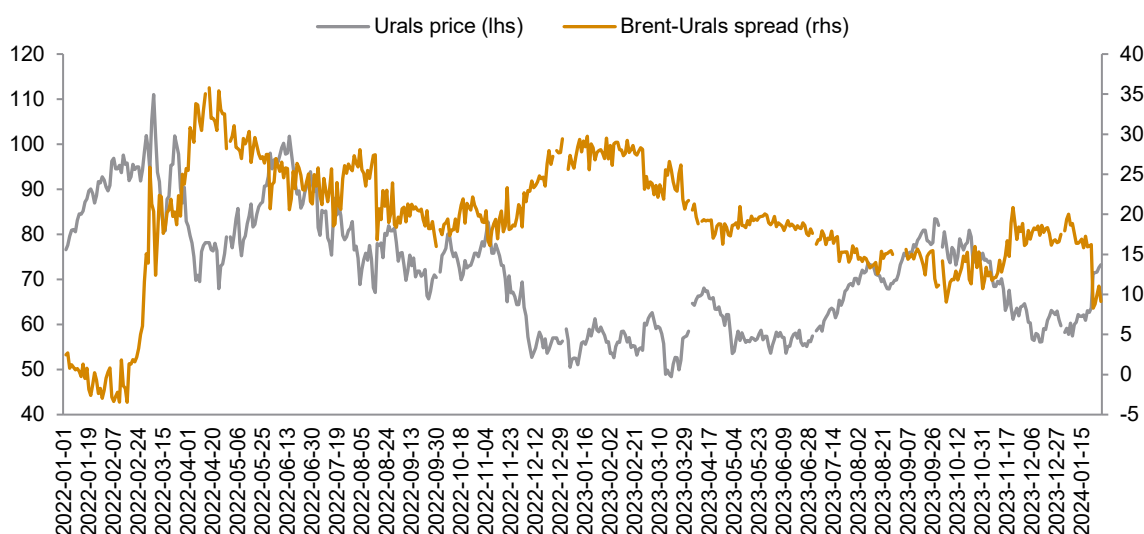
¹⁷ <https://frankmedia.ru/150407>

WESTERN ENERGY SANCTIONS START BITING AGAIN

According to preliminary estimates by the central bank, last year closed with a current account surplus of a mere USD 50.2 billion – less than a quarter of the 2022 value (USD 238 billion). Relative to GDP, this corresponds to a decline from 10.5% to an estimated 2.8%. The main reason for the shrinking external surplus has been unfavourable trends in foreign trade: falling exports and rising imports. In USD terms, goods exports fell by 28.6% year on year, while goods imports, by contrast, picked up by 10.1% year on year, resulting in the trade surplus in goods falling by 62%. In services trade, the trends were similar, with exports down by 16.7% and imports up by 4.5%, the latter partly on account of a modest recovery in the number of Russians travelling abroad. As a result, the trade deficit in services jumped markedly, although the improved income balance more than made up for this, with foreign income from Russia declining much more sharply (-26.5%, mostly on account of lower dividends) than Russian income from abroad (-14.4%).

The recent trade data also shed light on Russia's revenue from energy exports and the effectiveness of Western energy sanctions. The latter had a major impact on the price of Russian oil during the first few months following their imposition – an impact which gradually diminished over time. However, the most recent developments suggest a reversal of this trend: after hitting a low of just USD 9 per barrel in early October, the price spread between Russia's Urals and the benchmark Brent started to increase again, reaching USD 20 per barrel by early January (although it has since been declining again, Figure 2). This can partly be attributed to increased scrutiny by the US Treasury in enforcing secondary sanctions on companies from third countries that violate the USD 60 per barrel price cap set in December 2022 on Russian oil shipments to third countries.¹⁸

Figure 2 / Urals oil price and the spread to Brent, in USD per barrel, 2022-2024



Source: Investing.com.

¹⁸ See e.g., <https://www.wsj.com/articles/u-s-sanctions-shipping-companies-for-allegedly-evading-russia-oil-price-cap-20c32434>. The most recent example of this has been the sanctions imposed on 17 January on UAE-based Hennessea Holdings, which owns a fleet of 18 vessels transporting Russian oil, <https://www.kommersant.ru/doc/6456100>

As a result of the increased discount (on top of the decline in global oil prices), the average price of Russian oil plunged sharply in the last few months of 2023: from USD 80.2 per barrel in October to USD 71.4 in November and USD 64.1 in December.¹⁹ In December, Russian oil export revenue dropped to a mere USD 14.4 billion, the lowest value for six months – despite a marked increase in the volume shipped. These developments confirm that energy sanctions, when they are supported by effective enforcement of secondary sanctions on third countries helping Russia circumvent Western sanctions, have the potential to seriously undermine Russia's energy revenue and the fiscal situation in general.

LITTLE CHANGE IN RUSSIAN IMPORT PATTERNS RECENTLY

In this section, we cover the development of Russia's monthly imports (in real USD terms) across origin countries, starting from January 2021.²⁰ We combine data from various sources: aggregated import flows are from the Russian National Bank; disaggregated trade statistics come from national sources (mirror statistics) and UN Comtrade data, which provide information on 67 countries (EU27 plus 40 other countries)²¹ at the HS6 product level; these countries accounted for 83% of all Russian imports in 2019.²² To determine the sanction status of all products, we leverage the ifo sanctions database.²³

In general, the recent trends in Russian import patterns exhibit few novel developments. Total imports have rebounded to align closely with pre-war figures. While sanctioned products are hardly exported at all, the export volumes of the EU27 are far from zero for unsanctioned goods: in November 2023, EU sales to Russia were equivalent to USD 2.7 billion. Notably, China has consolidated its position as Russia's foremost supplier of goods, particularly those subject to sanctions by the West. The CIS countries and Türkiye have experienced a relative uptick in importance. However, for Armenia, Kyrgyzstan, Georgia and Uzbekistan, we see interesting developments for sanctioned goods between July and September 2023 that we describe in detail in the following.

The surge in Russia's imports from **Armenia** in August 2023 can be attributed entirely to an increase in the import of large aeroplanes (HS6 product: 880240), amounting to USD 12 million. Before the war, the EU27 and other sanctioning countries exclusively supplied this product to Russia. Since the start of the war, reports have repeatedly highlighted the challenges facing Russia's aerospace industry, especially concerning the replacement of aging aeroplanes.²⁴ Interestingly, the sudden increase in Armenian exports in August 2023 marked the first significant import of this product by Russia observed in our database. Previously, we had only observed negligible import volumes from China (2022m8 and

¹⁹ These figures correspond to the *average* price of Russian oil, which, apart from Urals, also includes other blends, notably ESPO. Therefore, they deviate from the Urals price presented in Figure 2.

²⁰ Russian imports were converted to USD and are adjusted for inflation (in constant 2018 US prices).

²¹ National statistics: EU27, Kazakhstan, China (Jan.-Nov. 2023); UN Comtrade: Armenia, Australia, Azerbaijan, Barbados, Bosnia and Herzegovina, Brazil, Belize, Canada, China (Jan. 2021-Dec. 2022), Chile, Fiji, United Kingdom, Georgia, Guatemala, Guyana, Hong Kong, Iceland, India, Japan, Kyrgyzstan (no data for July 2023), Macao, Mauritius, Moldova, Mexico, North Macedonia, Mauritius, Malaysia, Norway, New Zealand, Panama, Philippines, Paraguay, El Salvador, Serbia, Switzerland, Togo, Türkiye, United States, Uzbekistan and South Africa.

²² To calculate the share, we used trade data prepared by CEPII, which are available here: http://www.cepii.fr/CEPII/en/bdd_modele/bdd_modele_item.asp?id=37

²³ For the analysis of aggregated country groups, the sanction status is defined by September 2023. For the analysis of individual countries, it is defined by the last period available.

²⁴ <https://www.reuters.com/business/aerospace-defense/exclusive-russia-starts-stripping-jetliners-parts-sanctions-bite-2022-08-08/>

2022m10: USD 7,800) and India (2022m11: USD 83,000) for this specific product. Although notable, in absolute terms the import of aeroplanes from Armenia in August 2023 represents only 5% of pre-war average monthly import volumes from the EU27, indicating potential difficulties in supply.

The sudden increase in import volumes from **Kyrgyzstan** in June 2023 is solely attributable to a specific type of boring-milling machine (HS6 product: 845941). Interestingly, apart from in June 2023, demand for this product has been low: over all other months in our sample, including the pre-war period, average monthly Russian imports of this product amounted to USD 0.4 million; by contrast, the sales in June 2023 from Kyrgyzstan were 77 times greater (USD 29 million). This could be indicative of a profound shift in preferences due to the war; or alternatively, it may have been caused by misclassification, which would hint at illegal activities. The spike in the time series for **Georgia** in July 2023 is due to a sudden increase in the import of yachts (HS6 product: 890399); for **Uzbekistan** it is caused by higher imports of chlorates and electrical lighting in July 2023 (HS6 products: 550320 and 381512), and in September 2023, polyester staple fibres and supported catalysts (HS6 products: 282911 and 851220).

DIRECT EU EXPORTS OF SANCTIONED GOODS TO RUSSIA VIRTUALLY STALLED...

In this part of the report, we focus on the development since January 2021 of Russia's imports of two types of goods, both sanctioned by the EU in response to the Russian invasion of Ukraine:

- › (i) **economically critical goods** (EC goods), which consist of 72 HS6 products for which the EU and its allies suspect potential sanctions evasion through third countries,²⁵ and
- › (ii) **common high-priority items** (CHP items), which include 41 items critical to Russia's weapons systems and its military development.²⁶

The two lists do not overlap and they contain products from four sections: machinery and electric equipment (section 16); vehicles, aircraft, and vessels (section 17); precision instruments (section 18); and chemical products (section 6). To allow comparison over time, we convert the product codes into the HS2017 nomenclature.²⁷

²⁵ The list includes all products for which third countries suddenly start exporting at unprecedented rates. A trade flow is defined as anomalous if (i) in 2022 the exports of third countries to Russia exceeded EUR 1 million over a 12-month period and (ii) if those third countries increased their exports to Russia by at least 100%, compared to the average of the three years preceding the Russian invasion. The list of products that have been classified as economically critical goods (as of October 2023) is available here https://finance.ec.europa.eu/system/files/2023-10/list-economically-critical-goods_en.pdf. We convert the HS2022 product codes to HS2017 to make comparisons over time possible, leaving us with 72 HS6-products.

²⁶ The list of common high-priority items (as of October 2023) is available here https://finance.ec.europa.eu/document/download/5a2494db-d874-4e2b-bf2a-ec5a191d2dc0_en?filename=list-common-high-priority-items_en.pdf. We convert the HS2022 product codes to HS2017 to make comparisons over time possible, leaving us with 41 HS6 products.

²⁷ Unfortunately, five HS6 products cannot be traced back to 2021, due to changes in the nomenclature. As no clean comparison is possible, we drop them from the analysis. The product codes (in HS2022) of the CHP items for which analysis is not possible are 854151, 854159, 854149 and 852589; 870121 is the only HS6 product that we have to drop from the list of EC goods.

The EC goods comprise a relatively broad set of HS6 products. Parts of motor vehicles, laptops, trucks, shovel loaders, and filtering and purifying machinery account for roughly two thirds of total Russian imports of EC goods (both before and after the outbreak of war). The CHP items can be divided into four tiers, ranked according to their relative degree of criticality. Tier 1 (integrated circuits, i.e. semiconductors and chips) and Tier 2 (electronic components) contain particularly sensitive items of the greatest importance for Russian weapons systems. Tier 3 is divided between electrical (Tier 3a) and mechanical (Tier 3b) components; and Tier 4 pertains to manufacturing, production and quality-testing equipment. Total imports of CHP items are skewed towards a few products: the top three products – HS6 products 851762 (wireless transmission apparatus, e.g. radios, transceivers), 847150 (processing units, input or output units for automatic data processing machines) and 850440 (static converters, e.g. rectifiers) – account for almost half of all Russian imports of CHP items.²⁸

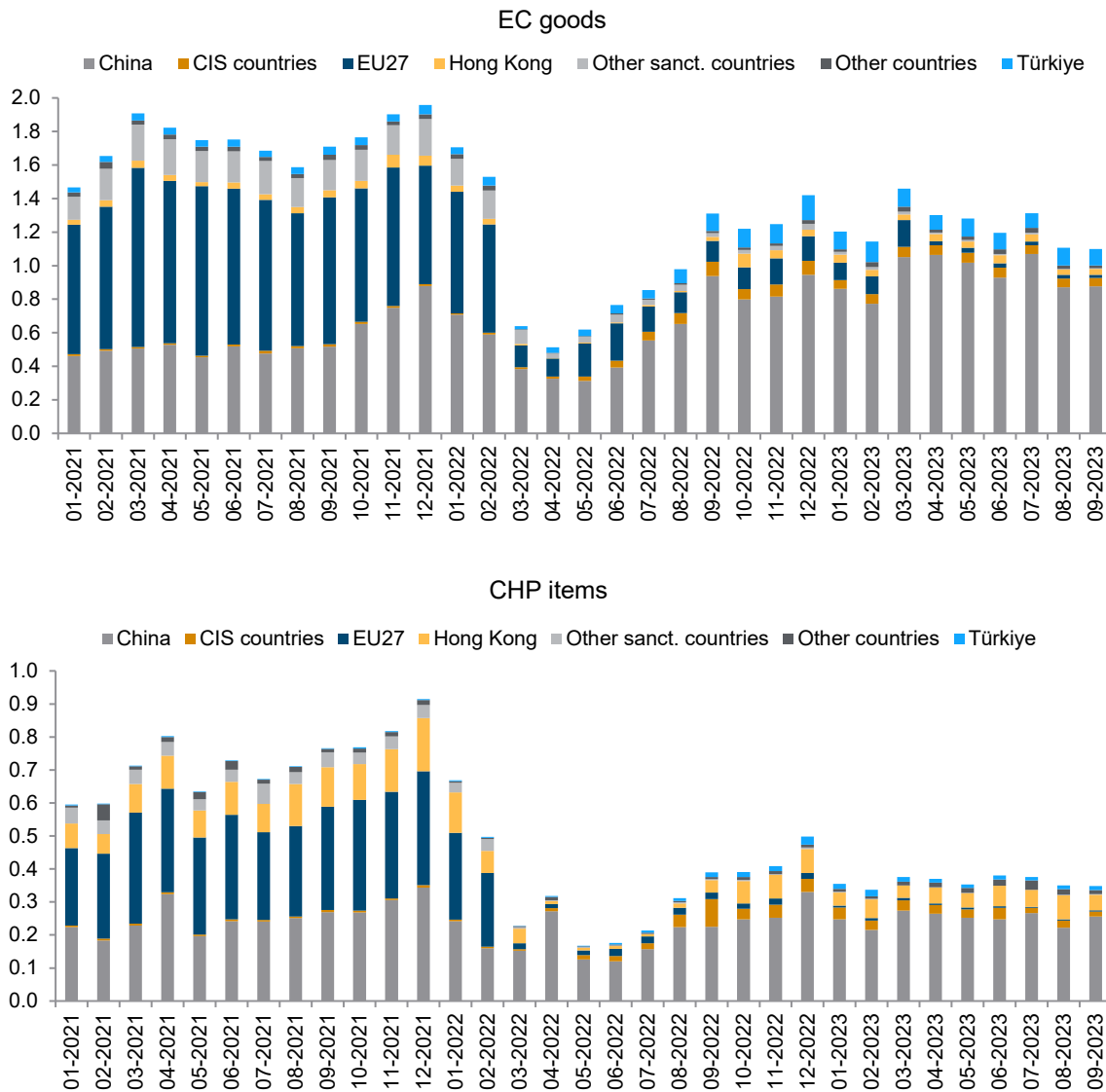
In 2021, Russia sourced 47% of its total imports of CHP items from the EU27 and other G7 countries; 35% came from China and 14% from Hong Kong. For economically critical goods, the EU and other sanctioning countries played an even more important role, as they accounted for 61% of Russia's total imports of EC goods, while 32% were provided by China. Interestingly, Germany used to be a very important source country for both types of products. For 44 of the 113 HS6 products on the two lists combined, Germany was Russia's top supplier in 2021. However, some of these products are only exported at relatively low values, which explains why the German share of pre-war imports was a mere 14%, placing Germany second, after China.

By September 2023, all the EC goods and CHP items were sanctioned, at least partially. For some HS6 products we cannot unambiguously determine the sanction status, since the trade restrictions are in force on only a subsample of items, rather than on all items that belong to the same HS6 product group. For the CHP items, by March 2022 only 2% were fully sanctioned and 19% were partially sanctioned. In subsequent rounds of sanctions, policy makers widened their scope, and consequently, by September 2023, 98% of the 41 CHP items were fully sanctioned and one HS6 product was partly sanctioned. By March 2022, only partial sanctions had been imposed on all the EC goods. This has changed drastically over time, with the share of fully sanctioned EC products increasing to 82% by September 2023; the remaining 14 HS6 products were partially sanctioned.

Our data confirm that the sanctions effectively prevent direct exports: for both EC goods and CHP items, Russian imports from the EU27 became negligible once an HS6 product had been completely sanctioned. The sizeable positive direct export flows from EU27 member states after March 2022 (Figure 3) are attributable to HS6 products that were not fully sanctioned at the time; the repeated drop in export volumes over time corresponds to the more restrictive stages of the EU's sanctions regime that followed the initial round, straight after the Russian invasion of Ukraine in February 2022.

²⁸ These patterns also hold when looking at quantities, rather than values.

Figure 3 / Russia's imports by country group, in USD billion (real, 2018)



Notes: We use the definition provided by the EU Commission for economically critical (EC) goods as of 18 October 2023 and for common high-priority (CHP) items as of 24 October 2023. Trade data presented in the figure cover a large share of total Russian imports. CIS countries include Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Moldova and Uzbekistan.

Source: UN Comtrade, national sources.

... BUT THIRD COUNTRIES INCREASED THEIR MARKET SHARES

Next, we look at the trade developments for all products for which Russia was **particularly dependent on the EU27** in 2021 (meaning that the EU share of Russian imports exceeded 75%). In total, we identify 11 products for which Russian dependency was high: three CHP items and eight EC goods. First of all, other countries have not been able to fully compensate for the lack of imports of these products from the EU27, and total imports of these goods have more than halved since the beginning of the war. Second, since March 2022 we have seen a substantial uptick in the share of those goods imported from China (51%), Türkiye (25%) and Kazakhstan (8%).

For the Tier 1 and 2 products, we see a steep decline in Russian imports from the EU27 following the onset of the war: while average monthly export volumes in 2021 were USD 117 million, this figure fell to USD 3.7 million in March 2022, and from November 2022 onwards absolute values have ranged from USD 245,000 to USD 877,000. Overall, our data suggest that missing Tier 1 and 2 products from the West are not being fully substituted by other trade partners. For Tier 1, Hong Kong is the most important supplier, and for Tier 2 – China. For both types of products, the CIS countries and Türkiye have increased their exports substantially, compared to pre-war levels; but in absolute terms, they play a less important role. Imports from other countries are negligible. However, it is not possible to fully rule out complete substitution. As the sample does not include the universe of all Russian trade partners, it is possible that other countries (on which we do not have data) now serve as suppliers. For example, Saudi Arabia has repeatedly been mentioned as an important hub for sanctions evasion, but unfortunately it is not included in our data.²⁹

China deepened its already strong trade relations with Russia to become the main source for the substitution of missing imports from the EU27 and other sanctioning countries for CHP items and EC goods alike. Chinese exports of EC goods to Russia in 2021 were fairly concentrated: laptops alone accounted for almost a third of total imports from China of EC goods. The product scope has changed over time, and imports of vehicles (in particular various types of truck) and parts for vehicles have gained in importance. In September 2023, Russia imported 1.6 times more EC goods from China than the average monthly figure for 2021. Overall, imports of CHP items from China barely changed compared to 2021, masking important heterogeneity across the tiers: while imports of Tier 1 and Tier 4 increased over time, with maximum levels (six times greater than the 2021 levels) recorded in December 2022, Tier 3b offset this development.

For the supply of high-tech products to Russia – such as semiconductors (Tier 1) – it is **Hong Kong** that matters particularly. Exports of Tier 1 products from Hong Kong have increased by 14% on average, compared to the pre-war level. However, this increase has been driven solely by the export of electronic integrated circuits: that increased by 48%, whereas the other Tier 1 products decreased (-3%).

Türkiye provides mostly EC goods to Russia. Since January 2023, Turkish exports of EC goods to Russia have been more than double the average for 2021. During the months following the Russian invasion, the share of imports from Türkiye was 8% for EC goods and 3% for CHP items. Türkiye matters particularly for the supply to Russia of hydrogen, mechanical and electrical machinery, and electrical and mechanical components.

²⁹ <https://www.zeit.de/politik/ausland/2023-12/wladimir-putin-vae-saudi-arabien-nahost-5vor8> or <https://www.ft.com/content/1cef6628-32eb-49c9-a7f1-2aef9bce4239>

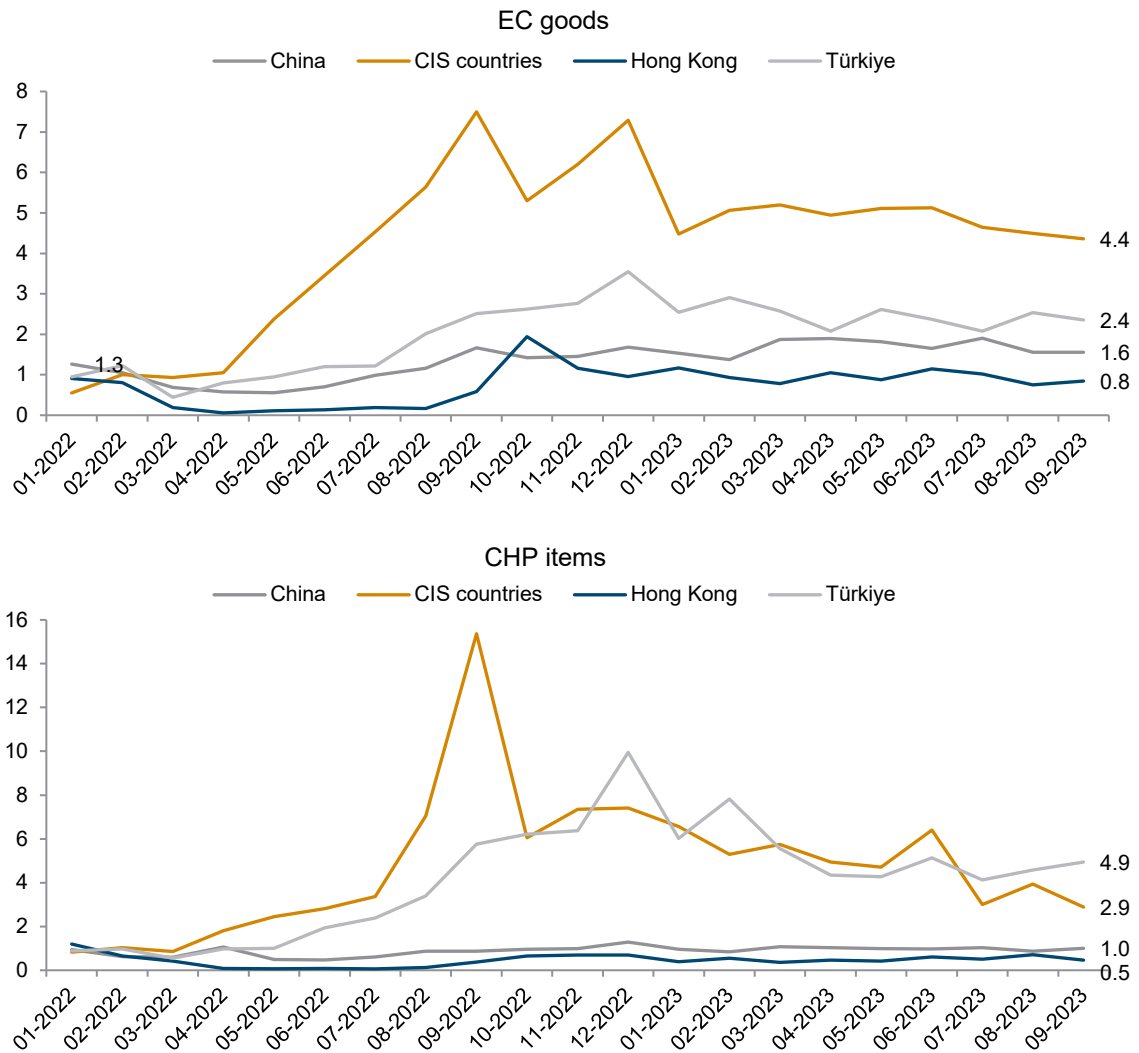
The **CIS countries** have increased their exports to Russia of both CHP items and EC goods. Since March 2022, they have exported to Russia all but one of the 113 HS6 products on which we focus. They are particularly important in terms of CHP items, for which they have supplied 8% of all Russian imports since March 2022, putting them right behind China and Hong Kong as important partners. By contrast, in terms of EC goods, their share amounts to only 3%.

Within the CIS countries, **Kazakhstan** stands out as the leading exporter to Russia of both types of products: over time, it consistently accounts for around 70% on average of total exports of EC goods from the CIS countries to Russia; for CHP items, this share amounts to 79%. Prior to March 2022, of the EC goods, 44 products had never been exported to Russia by Kazakhstan (or exported at only very low levels – less than USD 100,000); and in the case of CHP items, the same was true of 19 products. Examples of products with spectacular and unprecedented export growth are automatic data processing machines (HS6 product 847130) and automatic data processing machines and units (HS6 product 847150), although Russia imports a broad range of products from Kazakhstan.

However, over the first six months following the outbreak of the war, Kazakhstan's dominance as a hub for the re-export of EC goods and CHP items to Russia decreased somewhat, while other CIS countries also became important trade partners for Russia. This was most noticeable in the case of **Armenia**, which considerably boosted its exports to Russia, both in absolute terms and relative to other CIS countries. Armenia started to export to Russia 23 products from the list of CHP items, of which the steepest export growth was seen in communication apparatus (HS6 product 851762), which by August 2023 had reached 96% of total Armenian exports of CHP items to Russia. Armenia also features in the export of EC goods, for which prior to March 2022 39 products had never been exported to Russia (or only at very low levels of less than USD 100,000).

While other third countries generally do not feature prominently as suppliers to Russia of EC goods or CHP items, interesting patterns do still emerge for specific products. We highlight one example of this: namely, the development of ball and roller bearings, which used to be provided by the EU27 and the US and are crucial parts and components of tanks and other military vehicles. Within Tier 3b of the CHP items (mechanical components), ball and roller bearings account for 80% of total imports.³⁰ Even without supplies from the West, Russian imports of ball and roller bearings are at a level similar to that seen before the war. Besides China, the CIS countries (mostly Kazakhstan) are important suppliers; but India, Malaysia and Serbia have also emerged as reliable partners. For **Serbia**, ball and roller bearings make up approximately 50% of all its exports of CHP products to Russia. Additionally, since the beginning of the war Serbia has started to export to Russia 18 new EC goods and five new products from the CHP list. **India** is another third country that pops up as an important source country for specific products (e.g. hydrogen, parts for airplanes and helicopters) – though often only in certain months. Though the absolute numbers are currently modest, this trend warrants close attention in the coming months.

³⁰ News article reported the central role of ball-bearings for Russia, <https://maintenanceworld.com/2023/05/10/russian-ball-bearing-shortage/#:~:text=The%20shortage%20has%20been%20attributed,Western%20manufacturers%20to%20supply%20bearings.>

Figure 4 / Russia's imports from most important third countries (average 2021 level = 1)

Notes: We use the definition provided by the EU Commission for economically critical (EC) goods as of 18 October 2023 and for common high-priority (CHP) items as of 24 October 2023. CIS countries include Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Moldova and Uzbekistan.

Source: UN Comtrade, national sources.

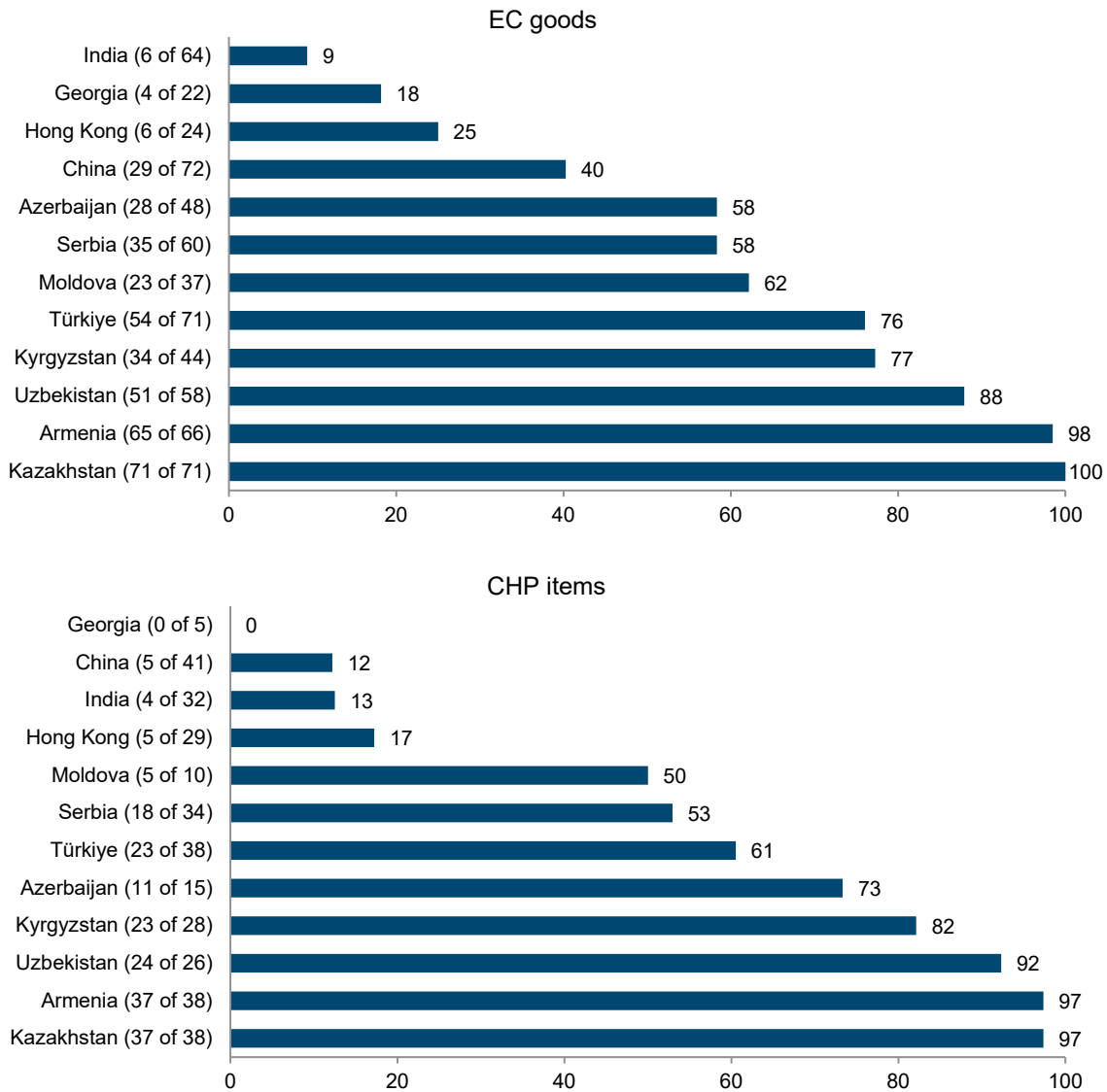
INDICATIONS OF SANCTIONS EVASION

Lastly, we want to focus on sanctions evasion, for which there is ample anecdotal evidence. To understand better how much of the surge in exports from third countries to Russia is likely due to the circumvention of sanctions, for all CHP items and EC goods we normalise the total value of the exports to Russia of each country in 2022 by considering that country's worldwide exports in 2019.³¹ If a country accounts for a large share of the worldwide production of a particular HS6 product, it would seem likely that the increase in exports to Russia is attributable to higher domestic production and this normalised share should be lower than one. To determine in how many cases and for which countries this measure could indicate sanctions evasion in 2022, we count the number of products for which exports to Russia

³¹ Changes in 2023 are not reflected.

in 2022 were more than 50 times greater than the exports of the same product to all destinations in 2019 (i.e. our approach to detecting sanctions evasion is very conservative).

Figure 5 / Share of HS6 products exported to Russia in 2022 with high likelihood of sanctions evasion, in %



Note: The chart shows the share of products (in %) across origin countries in 2022, for which the respective country's yearly exports to Russia exceeded its exports to all destinations in 2019 by at least 50 times. The normalisation measures the likelihood of sanctions evasion. We use the definition provided by the EU Commission for economically critical (EC) goods as of 18 October 2023 and for common high-priority (CHP) items as of 24 October 2023.

Source: own calculations.

Figure 5 summarises the findings and shows that, especially for the CIS countries, the data indicate a particularly high likelihood of sanctions evasion: for Armenia, Kazakhstan, Uzbekistan and Kyrgyzstan, exports to Russia were at least 50 times greater than their exports to all destinations in 2021 in the case of almost all exported goods – both EC goods and CHP items. Our method also hints at sanctions evasion by Türkiye and China, although it is less extreme than for the CIS countries. For India, sanctions

evasion seems less prevalent: for EC goods, only six out of 64 products show anomalously high exports to Russia, and for CHP items the figure is four out of 32. Of course, this finding could simply mean that India is, in fact, redirecting existing exports to other destinations to service the greater demand from Russia. Alternatively, it might be possible that the transport routes for possible evasion are, as yet, not fully developed, making it unprofitable to circumvent sanctions through India.

LITERATURE

Astrov, V. (2007), 'The Russian oil fund as a tool of stabilization and sterilization', *Focus on European Economic Integration*, No. 1, pp. 167-176, https://www.oenb.at/dam/jcr:c620146e-c948-4120-892...trov_tcm16-58446.pdf

Focus Economics (2024), 'Consensus forecast: CIS plus countries', January.

Institute for Economic Forecasting (2023), 'Quarterly GDP forecast', Russian Academy of Sciences, Issue No. 60, 18 December (in Russian), <https://ecfor.ru/publication/kvartalnyj-prognoz-vvp-vypusk-60/>

Kochnev, A. (2019), 'The fiscal rule and the foreign exchange market in Russia: Stepping in the same river twice?', wiiw Monthly Report No. 2/2019, Vienna, February, pp. 5-12, <https://wiiw.ac.at/monthly-report-no-2-2019-p-4813.html>

wiiw (2024), 'Recovering amid major risks: Economic forecasts for Eastern Europe for 2024-26', Winter Forecast Update, wiiw Monthly Report No. 1, January.

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