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HOW RESILIENT IS RUSSIA'S ECONOMY AFTER FOUR YEARS OF WAR?

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In 2022-2025 the Russian economy demonstrated resilience despite the increasing costs of the war in Ukraine and the extensive economic and financial sanctions imposed on Russia by the coalition of Western countries. Fiscal accounts, though under strain, have remained under control. However, after nearly four years of war, the associated fiscal and quasi-fiscal costs have grown significantly and started to challenge macroeconomic and financial stability. Inflation has been well above the Bank of Russia's target. The high growth rates in 2023-2024, fuelled by war-related public spending and a corporate credit boom, have decelerated in 2025 due to capacity constraints. Nevertheless, the Russian government still has the fiscal capacity to continue the war in the short term. It has some fiscal reserves, can increase domestic borrowing and may seek to raise further non-hydrocarbon taxation.

The long-term perspectives look much worse. Structural and institutional weaknesses, such as the adverse demographic trends, the continuous dependence on hydrocarbon production and exports and the poor business and investment climate will be magnified by the costs of the war and sanctions, increasing isolation from the West and entrenching an inward-oriented development strategy.

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1 Introduction

When, in response to the Russian aggression against Ukraine in February 2022, the European Union, the United States, several other G7 economies and their allies launched an unprecedented package of economic sanctions, the expectation was that it would paralyse the Russian economy immediately, limiting its capacity to conduct the war[1]. However, this has not happened. After a recession in the first half of 2022, Russia's economy returned to growth (Dabrowski, 2023), which has continued up to autumn 2025. The fiscal situation, although gradually deteriorating, allows the continuation of Russia's war in the short term.

The purpose of this Working Paper is to discuss Russia's macroeconomic and fiscal situation during the war, its short-and long-term prospects and sources of its relative resilience. The subsequent sections contain an overview of its macroeconomic performance (section 2), fiscal situation (section 3) and deficit and public debt financing (section 4). Section 5 discusses the practice of quasi-fiscal financing of war-related expenditure by commercial banks, the National Wealth Fund (NWF) and state-controlled corporations. Section 6 tries to answer the question of why the Russian economy has been resilient against far-reaching international sanctions and the increasing costs of the war. Section 7 analyses the short- and long-term prospects for the Russian war economy. Section 8 offers a summary and conclusions.

The analysis is based on data from the International Monetary Fund (IMF), Trading Economics, Bank of Russia (BoR) and the Ministry of Finance of the Russian Federation (MoF). When the Russian data sources are incomplete or problematic (for example, in the case of economic and functional disaggregation of government expenditure), we use expert estimations.

2 Macroeconomic performance

In 2022 Russia suffered from a GDP decline of 1.4 percent – much smaller than the 7.8 percent decline in 2009 during the global financial crisis, the two percent decline from the global oil price collapse and Western sanctions after the illegal annexation of Crimea in 2015, or the 2.7 percent decline in 2020 following the COVID-19 pandemic. It was followed by two years of solid growth – 4.1 percent in 2023 and 4.3 percent in 2024 – fuelled by war-related expenditures. In 2025, however, this growth decelerated (Table 1) due to lower oil prices, capacity constraints and macroeconomic overheating.

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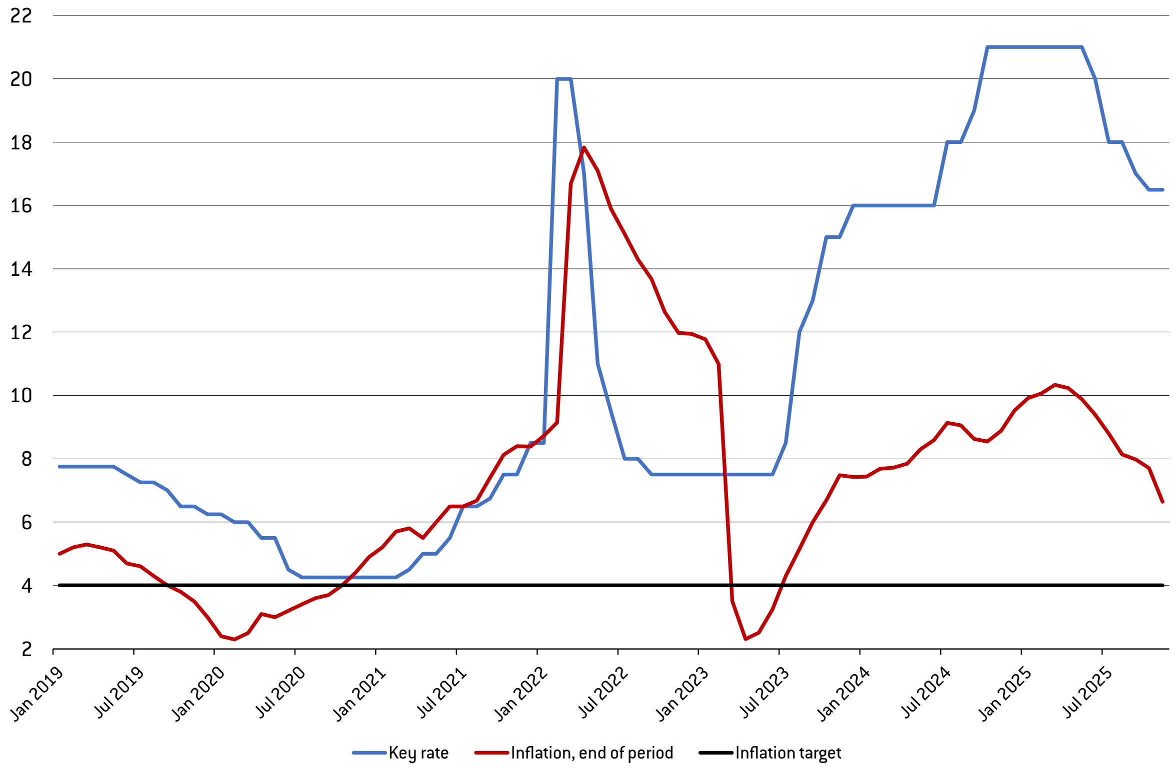
[1] Brian O'Toole, Daniel Fried and Edward Fishman 'For Biden, wreaking havoc on Russia's economy is the least bad option', *New Atlanticist*, 8 February 2022, https://www.atlanticcouncil.org/blogs/new-atlanticist/for-biden-wreaking-havoc-on-russias-economy-is-the-least-bad-option/.

Table 1: Russia: selected macroeconomic indicators, 2019-2025

Indicator	2019	2020	2021	2022	2023	2024	2025
GDP, constant prices, percent change	2.2	-2.7	5.9	-1.4	4.1	4.3	0.6
Gross national savings, percent of GDP	26.5	25.8	29.8	33.6	29.4	29.2	28.5
Gross capital formation, percent of GDP	22.7	23.5	23.0	23.2	27.0	26.3	26.7
Population, millions	147.9	147.7	147.2	146.7	146.3	146.1	145.6
Unemployment rate, percent of labour force	4.6	5.8	4.8	4.0	3.2	2.5	2.4
CPI inflation, end of period, percent change	3.0	4.9	8.4	11.9	7.4	9.5	7.6
Current account balance, percent of GDP	3.9	2.4	6.8	10.4	2.4	2.9	1.7

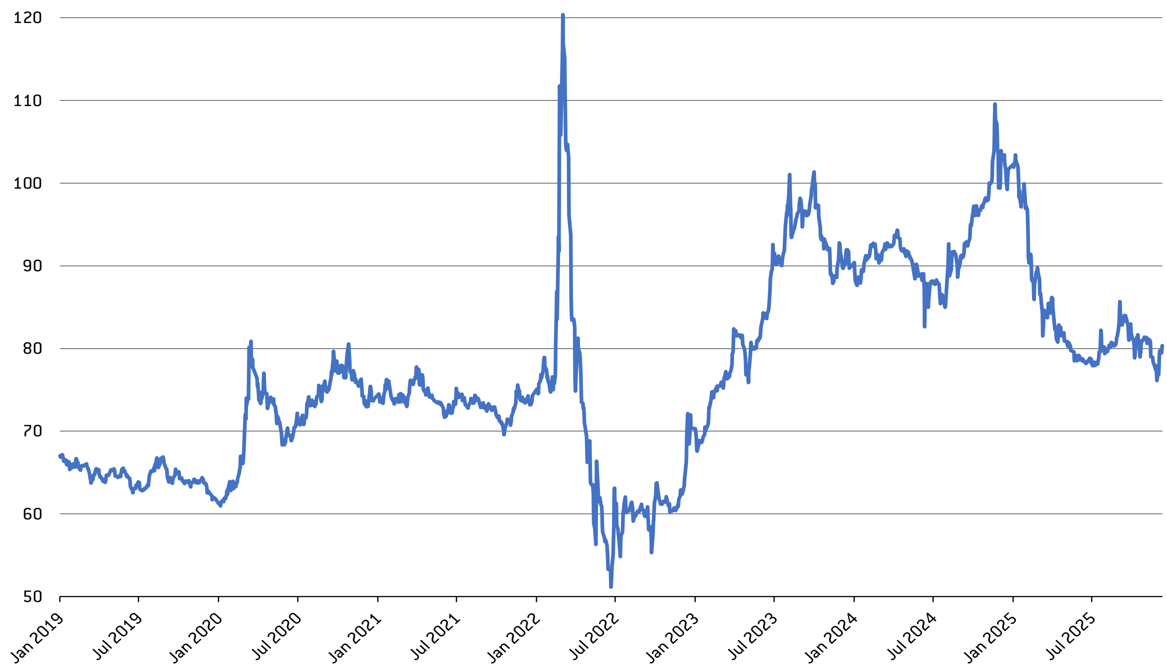
Source: Bruegel based on IMF World Economic Outlook database, October 2025. Note: data for 2025 represents the IMF staff forecast.

Figure 1: Russia: 12-month inflation, Bank of Russia key interest rate and Bank of Russia inflation target, in percent, 2019-2025



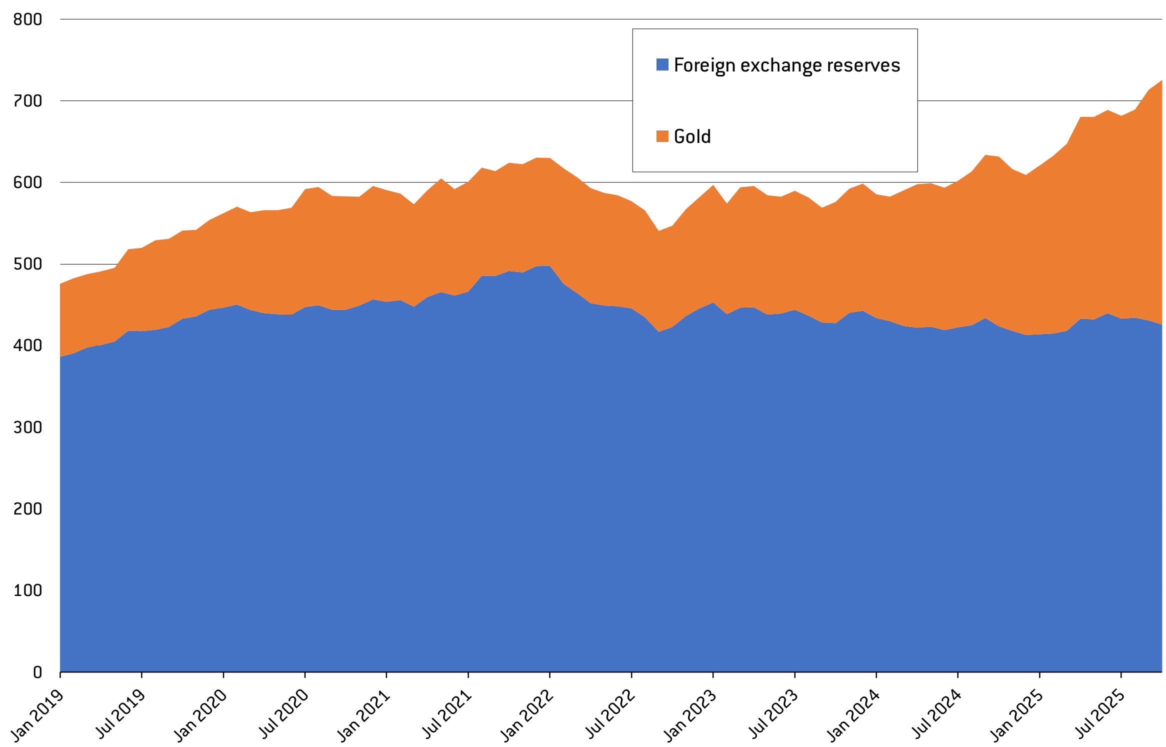
Source: Bank of Russia.

Figure 2: Bank of Russia official exchange rate, rubles for $1, 2019-2025



Source: Bank of Russia.

Figure 3: Bank of Russia international reserves, $ billions, 2019-2025



Source: Bank of Russia. Note: this also includes the Bank of Russia's international reserves frozen by Western sanctions since March 2022.

Capacity constraints are observed first in the labour market. The population of Russia has been decreasing since 2019. The decline in the working-age population (age 15-64) started earlier in 2011 and is faster, due to population ageing. It continues at the pace of about 600,000 people per year (Dabrowski, 2019). The war added to the labour market strains because of military recruitment, outmigration in 2022-2023 and reduced labour immigration from neighbouring countries. The low unemployment rate of 2.4 percent in 2025 can be interpreted as evidence of labour shortages.

Overheating can be seen in the inflation statistics (Table 1 and Figure 1). The BoR has rarely managed to meet its inflation target of four percent, higher than in most other economies. Since 2022, Russia has experienced two inflation surges: 17.8 percent in April 2022, immediately after the beginning of the war and sanctions; and 10.3 percent in March 2025. In both cases, higher inflation was associated with the depreciation of the ruble (Figure 2). However, in the second case, this was also the effect of the corporate credit expansion, which had partly a quasi-fiscal character (see section 5).

Russia has also continued its traditional current account surplus (Table 1). It reached a record-high level of 10.4 percent of GDP in 2022, due to high oil prices and a sharp reduction in imports. This surplus helped to neutralise the immediate effect of sanctions immobilising half of the BoR's international reserves, and then to rebuild them (Figure 3). However, the West's sanctions forced the BoR to change the composition of those reserves which remained under its control, in favour of gold and Chinese yuan. Both are less liquid than the US dollar and the euro, which dominated the BoR's international reserves before 2014.

3 Fiscal situation

Table 2 presents basic fiscal indicators: general government (GG) revenue, expenditure, net lending/borrowing (ie fiscal balance), primary net lending/borrowing (ie primary fiscal balance) and gross debt.

Table 2: Russian fiscal indicators (GG), percent of GDP, 2019-2025

Indictor	2019	2020	2021	2022	2023	2024	2025
Revenue	35.7	35.2	35.7	33.8	33.5	35.3	35.1
Expenditure	33.8	39.2	34.9	35.2	35.7	36.9	37.8
Net lending/ borrowing	1.9	-4.0	0.8	-1.3	-2.2	-1.6	-2.7
Primary net lending/net borrowing	2.2	-3.7	1.1	-1.1	-2.2	-1.5	-1.7
Gross debt	13.7	19.2	16.5	18.5	19.5	20.3	23.1

Source: Bruegel based on IMF World Economic Outlook database, October 2025. Note: data for 2025 represents the IMF staff forecast.

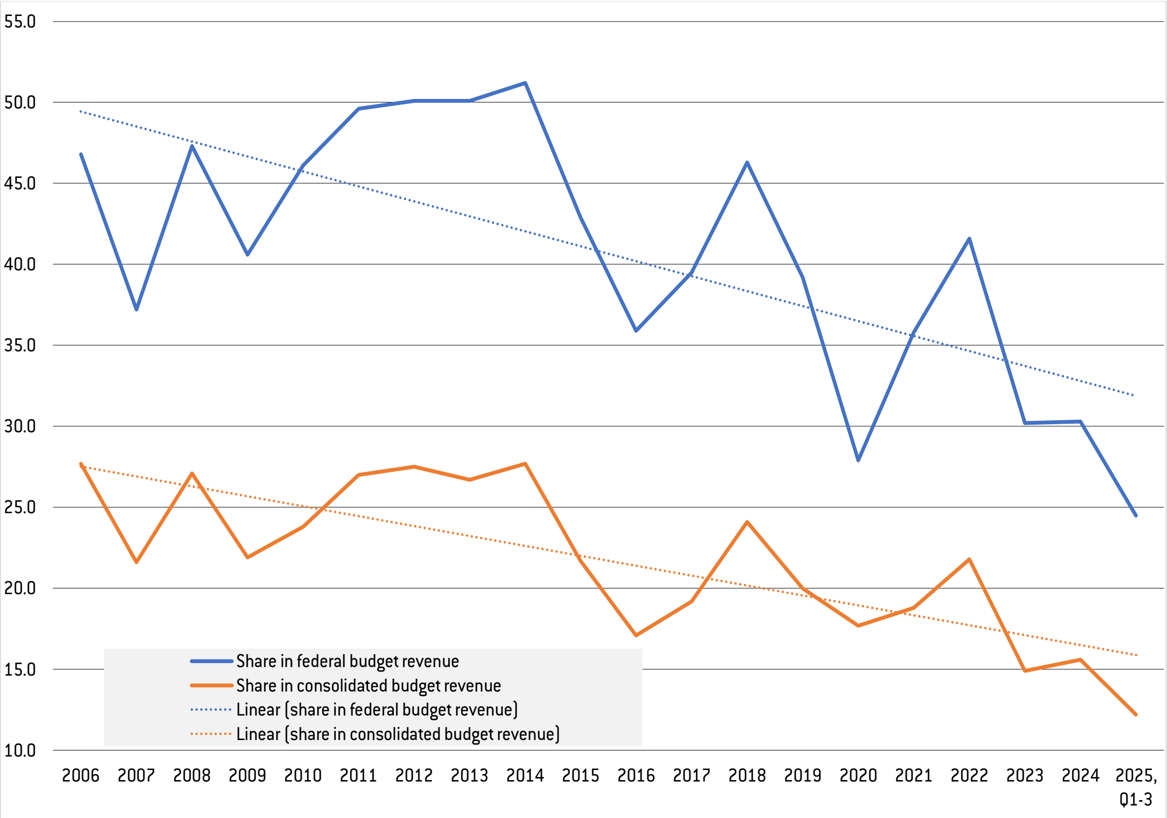
Even if it has deteriorated since 2022, Russia's fiscal situation does not look bad by international standards. However, a comparison with other countries would be misleading because Russia has restricted access to international financial markets (due to sanctions) and must rely on domestic financing of its debt.

In 2024-2025, the GG revenue-to-GDP ratio returned to the pre-war level of about 35 percent, after declining to below 34 percent in 2022-2023. However, its composition has changed. While taxes on hydrocarbon (oil and natural gas) rent remain the most important source of federal revenue, their share has diminished over time (Figure 4). In 2024, they amounted to 30.3 percent of the federal budget revenue and 15.6 percent of the consolidated budget revenue[2]. According to preliminary data for the first three quarters of 2025, these shares declined to 24.5 percent and 12.2 percent, respectively. Such a decline can be explained by lower export prices of oil (taxation of natural gas production and exports contributes to some 10 percent of hydrocarbon revenue), increasing costs of hydrocarbon production and the development of non-hydrocarbon revenue sources. The latter includes: an increase in the corporate income tax rate from 20 percent to 25 percent, steeper progression of the personal income tax rate away from the previous single flat rate of 13 percent, higher land and real estate taxes, higher excises and higher tax rates for small businesses. In 2026, the VAT rate will increase from 20 to 22 percent[3].

[2] The definition of the consolidated budget in Russia is close (but not the same) to general government in the IMF Government Finance Statistics Manual 2014.

[3] See Federal Tax Service of Russia news article of 4 December 2025, 'From January 1, 2026, the conditions for applying special regimes will change' (translated), https://www.nalog.gov.ru/rn92/news/activities_fts/16586778/.

Figure 4: Oil and natural gas revenue, percent of total revenue in the Russian federal and consolidated budget, 2006-2025

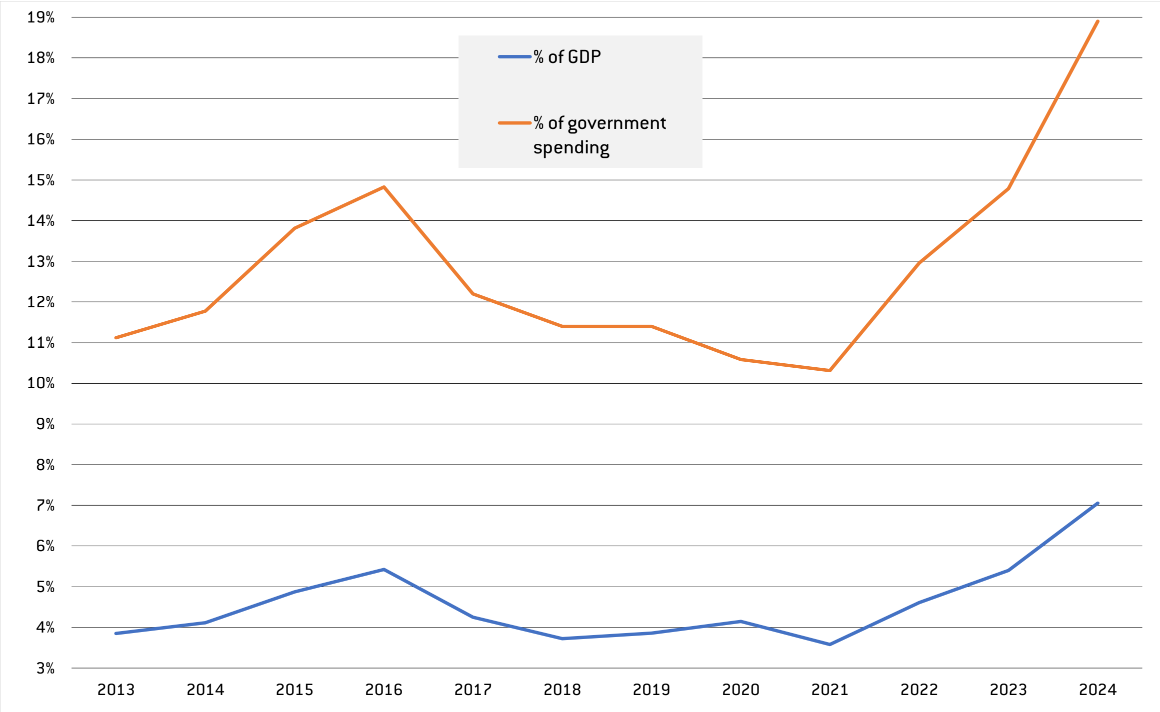


Source: Russian Ministry of Finance. Note: for 2025, preliminary data is for the first three quarters.

GG expenditure increased by about three percentage points of GDP between 2021 and 2025. Since 2022, the Russian Ministry of Finance has stopped publishing data on the economic and functional structure of government expenditure. Therefore, to assess the total war-related fiscal burden, one must rely on external expert assessment and some incomplete proxy indicators. Additional difficulty comes from war-related expenditures being spread between various lines of the federal and regional budgets.

According to estimates from the Stockholm International Peace Research Institute (SIPRI), Russia's military expenditure increased from 3.6 percent of GDP in 2021 to 4.6 percent in 2022, 5.4 percent in 2023 and 7.1 percent in 2024 (Figure 5). They are expected to reach the level of 7.2 percent of GDP in 2025 (Cooper, 2025). They do not include all war-related expenditures; for example, the costs of administering occupied Ukrainian territory and the costs of rebuilding border areas such as Kursk are not included (Cooper, 2025).

Figure 5: Russian military expenditure, 2013-2023, as a percent of GDP and government spending



Source: Bruegel based on SIPRI Military Expenditure Database, https://www.sipri.org/databases/milex.

Table 3: Comparison of allocations in Russia's federal budget acts for 2024 and 2025, selected functional expenditure items, in billion rubles, and percent of total expenditure

Expenditure item	Budget for 2024, after corrections		Budget for 2025, original version	
	in billion rubles	in percent of total	in billion rubles	in percent of total
Total	37,182.6		41,469.5	
Social policy	7,896.0	21.2	6,881.5	16.5
National defence	10,374.7	27.9	13,087.4	31.5
National security and law enforcement	3,301.6	8.8	3,438.4	8.2
National economy	4,295.3	11.5	4,377.4	10.5
General transfers to regions	1,371.7	3.6	1,403.1	3.3
General public services	2,409.6	6.4	2,464.7	5.9
Servicing public debt	2,293.9	6.1	3,181.7	7.6
Healthcare	1,650.1	4.4	1,884.2	4.5
Education	1,608.9	4.3	1,597.0	3.8
Housing and communal services	1,073.1	2.8	1,815.5	4.3
Environment	492.6	1.3	891.1	2.1

Source: Bruegel based on Russian Ministry of Finance.

The comparison of the shares of selected functional expenditure items in the federal budget acts for 2024 and 2025 (Table 3) confirms that defence expenditure crowded out 'civilian' spending, such as social policy, education and general transfers to regions. They also led to stagnation in other areas such as healthcare.

4 Deficit and public debt financing

GG deficit is financed from two sources: the National Welfare Fund (NWF), which accumulates part of hydrocarbon rent in years of high oil and natural gas prices, and the issuance of government bonds (OFZ).

The liquid NWF assets (Figure 6) were largely spent on financing fiscal deficits in 2022-2024. At the end of September 2025, they amounted to 4.17 trillion rubles – 1.9 percent of GDP or $50.3 billion. Total NWF assets were higher: they amounted to 13.2 trillion rubles – six percent of GDP or $159.3 billion. The difference has been engaged in various investment projects (see section 5) or immobilised by Western sanctions in 2022.

Figure 6: NWF liquid assets, billion rubles, January 2019 to October 2025

Source: Russian Ministry of Finance.

OFZ have become the main source of deficit financing in 2025. On 1 November 2025, Russian commercial banks held 62.2 percent of the domestic public debt stock. However, OFZ accounted for only 8.4 percent of total banking assets[4]. The share of non-residents in the OFZ market has continuously declined – from over 30 percent in 2017-2018 to 3.9 percent at the end of October 2025.

OFZ yields have been well above the inflation rate (Figures 1 and 7). Yields on 10-year bonds reached their highest level of 16.8 percent on 28 October 2024, then declined somewhat to 14.4 percent by 24 November 2025. Yields on the 52-week bonds exceeded the former between August 2023 and July 2025, reaching their peak of 23 percent on 2 December 2024.

To broaden borrowing sources, on 3 December 2025, the Russian Ministry of Finance issued two tranches of OFZ denominated in Chinese yuan (CNY). It placed CNY 12 billion of four-year bonds at a yield of six percent and CNY eight billion of eight-year bonds at a yield of seven percent[5].

Figure 7: Yields on one-year and ten-year federal government bonds, in percent, January 2019 to December 2025

Source: Bank of Russia.

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[4] Bruegel based on Bank of Russia, https://cbr.ru/collection/collection/file/59437/razv_bs_25_10.xlsx and https://minfin.gov.ru/common/upload/library/2025/11/main/debtDynamics_ru_01.11.2025.xlsx.

[5] Joseph Cotterill, 'Russia strengthens financial ties to China with first renminbi bond', *Financial Times*, 3 December 2025, https://www.ft.com/content/92b1b3f2-055c-42fb-b2da-ee774873ae7b.

5 Quasi-fiscal operations

Apart from the explicit budget expenditure, there are large-scale 'quasi-fiscal operations' to finance the war, conducted by state-controlled commercial banks, non-financial corporations and the NWF, and not recorded in official fiscal statistics.

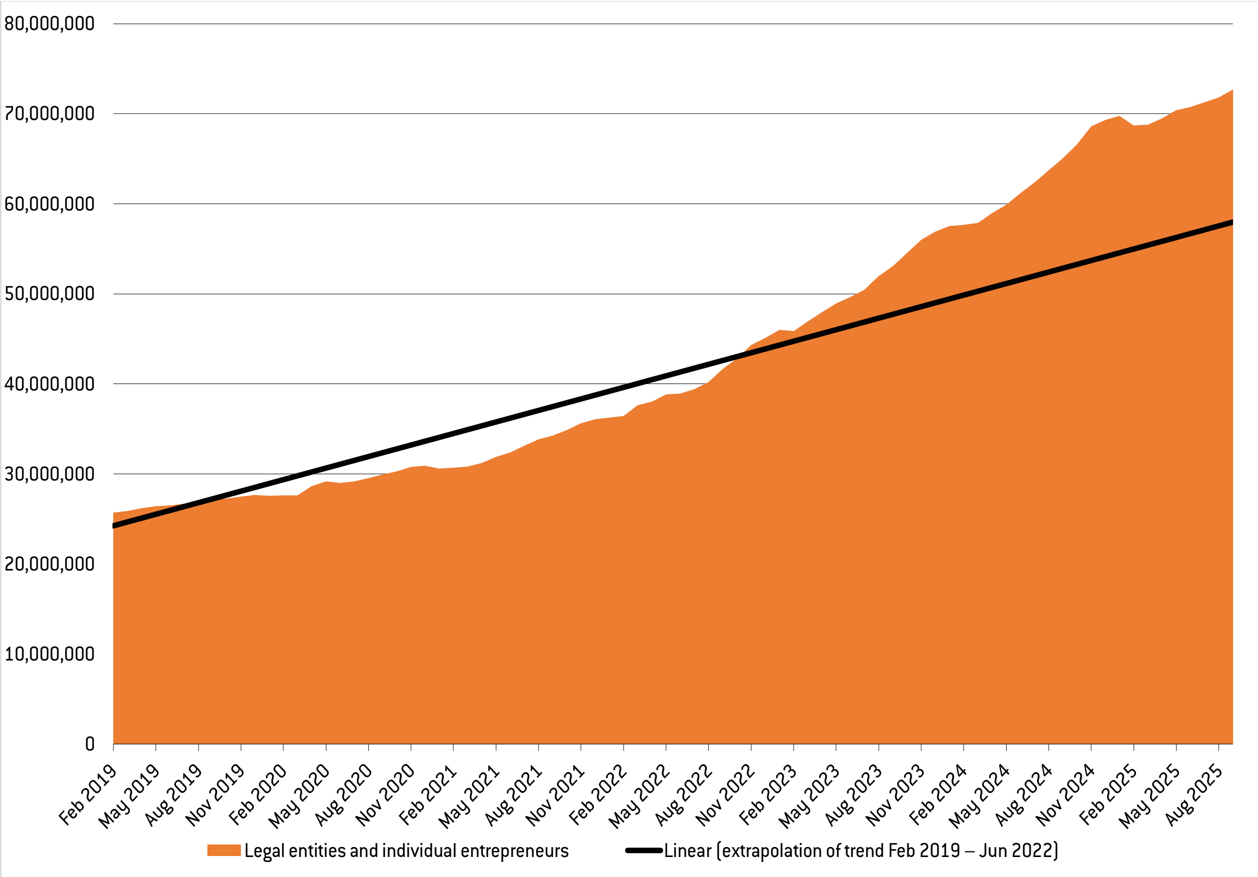
Since mid-2022, the rapidly expanding volume of corporate credit (Figure 8), partly directed and subsidised by the federal government, has supported sectors which could produce goods and services helpful for war needs (Figure 9). Comparing the actual volume of outstanding credit at the end of August 2025 with the extrapolation of the credit growth trend between February 2019 and June 2022 (ie before the war), shows the additional stock of corporate indebtedness of 13.6 trillion rubles, or 6.2 percent of GDP forecasted for 2025[6].

In fact, more credit resources were directed towards wartime purposes because privileged lending to the military and related needs crowded out non-privileged borrowers. The latter had to pay high market interest rates while the former enjoyed lower rates subsidised by the federal and regional budgets, various extra-budgetary funds and the so-called authorised banks which finance defence contracts.

The expansion of war-dependent corporate credit can help explain the phenomenon of the continuous inflationary pressure despite the high BoR key interest rates (see section 2). The latter affects only a part of the economy. It also brings the risk of deterioration of commercial bank portfolios and contingent fiscal liabilities in the future.

[6] See also Figure 15 in Craig Kennedy, 'Russia's Hidden War Debt (full report)', *Navigating Russia*, 14 February 2025, https://navigatingrussia.substack.com/p/russias-hidden-war-debt-full-report, which analyses the period between August and October 2024 when the BoR increased its key policy rate from 16 to 21 percent.

Figure 8: Outstanding total amount of loans granted to resident legal entities and individual entrepreneurs, million rubles, February 2019 to August 2025



Source: Bruegel, based on Bank of Russia, https://www.cbr.ru/vfs/eng/statistics/BankSector/Loans_to_corporations/01_02_A_Debt_corp_by_activity_e.xlsx.

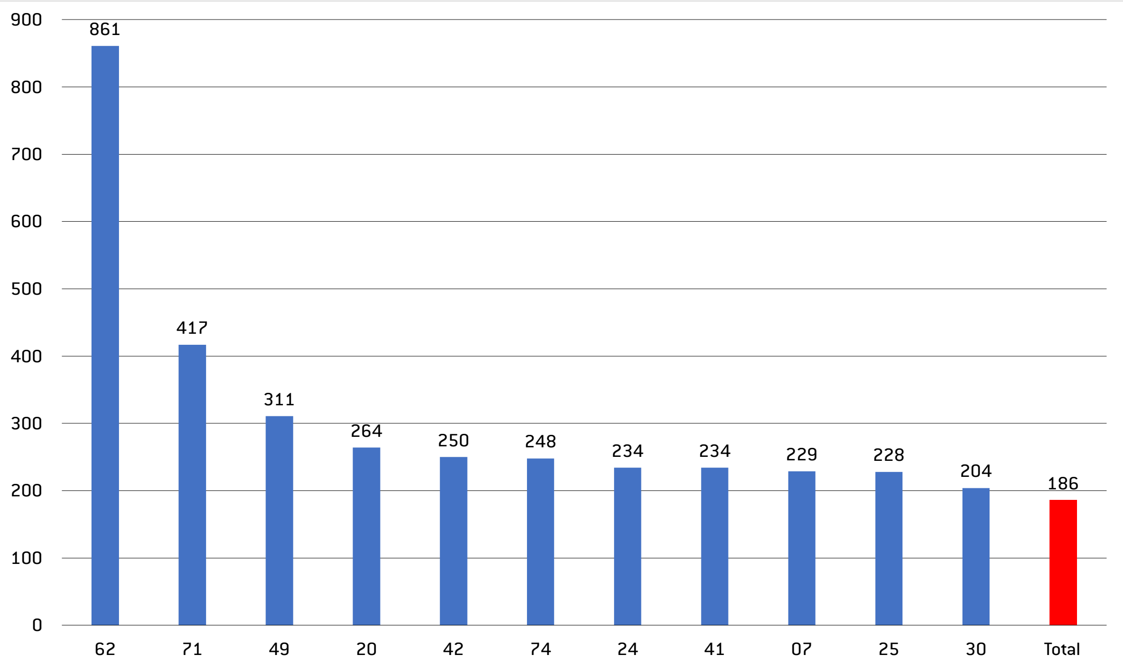
Quasi-fiscal operations conducted by non-financial corporations play a smaller role in comparison with the banking sector. The financing and organisation of two battalions that fought in Ukraine by Gazprom in 2022–2023[7] is the best-known case.

The NWF has engaged about two-thirds of its total assets (about four percent of GDP) in the equity and debt financing of such key state-owned banks as the Sberbank, VTB and Gazprombank, State Development Corporation VEB.ru, and non-bank corporations such as Aeroflot, Russian Highways (Rosavtodor) and defence conglomerate Rostec[8].

[7] Polina Ivanova, Christopher Miller and Max Seddon, '"Stream" and "Torch": the Gazprom-backed militias fighting in Ukraine', *Financial Times*, 2 June 2023, https://www.ft.com/content/4dd0aa0a-4b37-4082-8db0-0b969c539677.
[8] Ekaterina Vinogradova, Anna Galcheva, Elena Rozhkova and Ivan Tkachev, 'Svobodnye den'gi v FNB sokratilis' do minimuma s 2019 goda: Est' li risk izcherpaniya likvidnoi chasti? (Free money in the National Wealth Fund has fallen to its lowest since 2019. Is there a risk of the liquid part being exhausted?)', *RBK*, 10 March 2025, https://www.rbc.ru/economics/10/03/2025/67cad1529a7947699 2df8d15.

Examples of investment projects financed by the NWF include: leasing of planes, ships, and land transport vehicles, construction of new aircraft, construction and modernisation of highways and railways, processing of liquefied natural gas, and development of oil-processing production[9].

Figure 9: Dynamics of corporate indebtedness (resident legal entities and individual entrepreneurs) on 1 October 2025, in selected sectors; 1 Feb 2022 = 100



Source: Bruegel, based on Bank of Russia, https://www.cbr.ru/vfs/eng/statistics/BankSector/Loans_to_corporations/01_02_C_Debt_corp_by_activity_e.xlsx. Note: the x-axis presents numbers of sectors, according to the Russian Classification of Economic Activities (OKVED2): 62-Computer programming, consultancy and related activities; 71-Architectural and engineering activities; technical testing and analysis; 49-Land transport and transport via pipelines; 20-Manufacture of chemicals and chemical products; 42-Civil engineering; 74-Other professional, scientific and technical activities; 24-Manufacture of basic metals; 41-Construction of buildings; 07-Mining of metal ores; 25-Manufacture of fabricated metal products, except machinery and equipment; 30-Manufacture of other transport equipment.

[9] Vadim Belkin, 'Podushka bez bezopasnosti. Likvidnykh aktivov FNB v sluchaye padeniya tsen na neft' khvatit na neskol'ko mesyatsev (A cushion without safety. The NWF's liquid assets will be enough for a few months if the oil prices fall)', *The Insider*, 30 October 2024, https://theins.ru/ekonomika/275491.

6 Sources of relative resilience

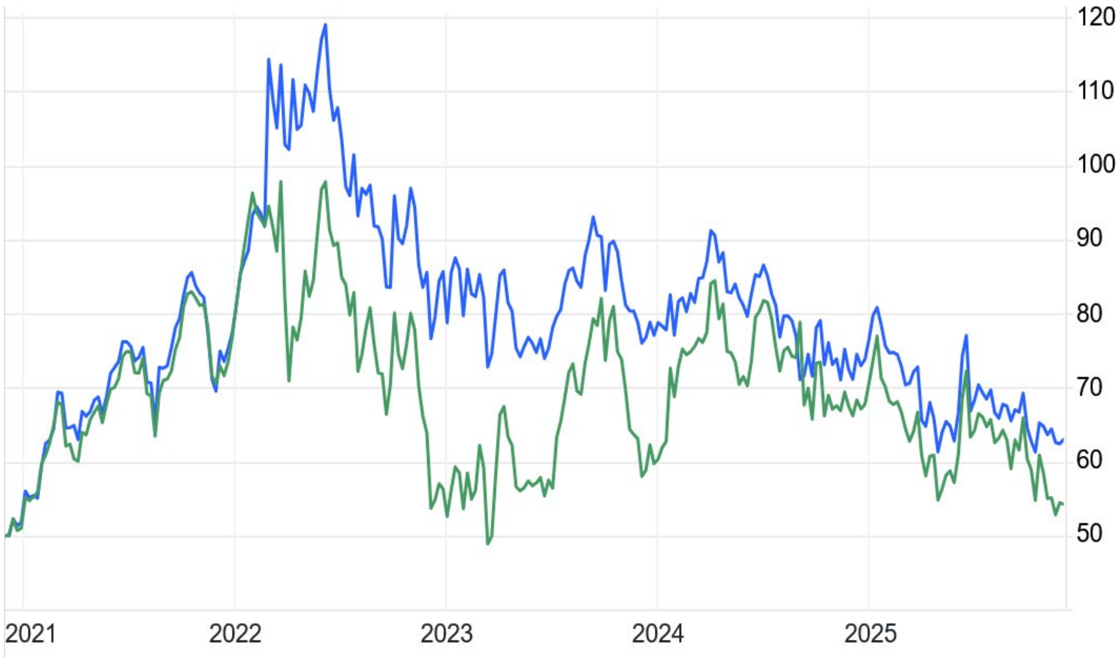
This analysis suggests that the Russian economy and public finances have demonstrated relative resilience despite the war's increasing costs and the extensive economic and financial sanctions imposed on Russia.

Five factors explain this resilience.

First, despite the increased share of state ownership and government intervention in business activity since 2005, the Russian economy has retained sufficient microeconomic flexibility, which has helped in its fast adaptation to the new conditions by, among other things, rerouting Russian trade and financial flows.

Second, in retrospect, the Russian authorities had already begun preparing the economy and the country for a geopolitical confrontation with the United States, European Union and their allies, at least since the annexation of Crimea in 2014. These preparations included the development of an independent payment system, the technical and administrative infrastructure to control the internet, import-substitution programmes and many others (Dabrowski and Avdasheva, 2023). Russia's conservative fiscal policies can also be interpreted as an effort to strengthen the country's macroeconomic resilience in the event of a potential confrontation with the West.

Figure 10: Brent Crude Oil (blue line) vs Urals Crude Oil (green line) prices, $ per barrel, November 2020 to November 2025



Source: Trading Economics.

Third, the international sanctions coalition has been geographically incomplete, consisting of countries that only represent approximately half of the world's GDP. This left ample opportunity for the circumvention of sanctions, reducing their effectiveness. This is seen in the case of the price cap imposed on Russia's oil exports by G7 countries in January 2023 and the EU's oil import embargo, fiscally the most important sanctions. The increased difference between Brent and Urals oil prices (see Kilian *et al*, 2025; Babina *et al*, 2026) was only temporary until sanction circumvention became more widespread (Figure 10).

Fourth, both the federal government and the BoR have demonstrated strong crisis management capabilities economically and financially, especially in the critical period immediately following the beginning of the war and the first imposition of sanctions.

Finally, the increasing degree of political repression and the regime's information monopoly help the authorities neutralise, at least temporarily, potential opposition against the war and associated austerity measures.

7 Prospects for the Russian war economy

Given the macroeconomic and fiscal performance analysed in sections 2 and 3, it seems likely that the Russian authorities will be able to continue the war in Ukraine and its financing in the short term, at least through 2026. The government can further increase non-hydrocarbon revenue by increasing rates of direct and indirect taxes and eliminating numerous tax exemptions. Non-war expenditure can be further limited. The deficit can be financed by more domestic borrowing (perhaps also by borrowing in China) and spending the remaining NWF liquid assets. However, all these fiscal adjustment measures have their obvious limits. Even in the highly repressive domestic political environment, the social tolerance of higher taxes and spending cuts, especially in the sphere of social policy and social services, may not be unlimited.

Despite decreasing reliance on hydrocarbon revenue (see section 3 and Figure 4), its share in total revenue remains significant enough to make revenue vulnerable to changes in export oil prices. The analysis for the period of 2019-2024 suggests that a change in the Urals price by $10 per barrel would result in a change in federal revenue of around 1-1.5 percent of GDP. As forecasting future movements in international oil prices is almost impossible, this is the biggest unknown in any *ex-ante* projections of Russia's budget.

In the long term, the prospects for the Russian economy look rather gloomy. Apart from the negative impact of demographic trends and the expected decrease in global demand for hydrocarbon resources, the war in Ukraine, associated international sanctions and Russian countersanctions and a broadly anti-Western choice in a foreign policy will limit Russia's growth potential. The deteriorating business and investment climate, a side-effect of the war economy logic and increasing political authoritarianism, will have a further negative impact. However, Russian President Vladimir Putin and his entourage seem to disregard these long-term development concerns, prioritising resource mobilisation to continue their war.

8 Summary and conclusions

The immediate economic and financial shocks that followed the outbreak of war and the introduction of sanctions against Russia were short-lived and more limited than anticipated by many Russian and non-Russian experts. A shallow recession of 1.4 percent in 2022 was followed by solid growth in 2023-2024, partly facilitated by high oil prices and partly fuelled by the rise in war-related spending and corporate credit growth. Although fiscal accounts deteriorated, they remained under control and in relatively safe territory. A consistent current account surplus has helped soften the impact of approximately half of Russia's international reserves being immobilised. Consequently, one can see the continued resilience of the Russian economy, despite the increasing costs of the war and sanctions.

Nevertheless, this resilience is not unlimited. The growth slowdown and increasing macroeconomic and fiscal tensions in 2025 signal more trouble in the future. Russia seems to have sufficient macroeconomic and fiscal space to continue its aggressive war in the short term. However, this space will gradually disappear. How quickly depends on the level of future export oil prices, which are hardly predictable.

The assessment presented in this paper differs from many opinions (see eg Milov, 2025), which see the Russian economy and budget as already facing a serious crisis. On the other hand, it differs from an optimistic view that Russia has sufficient resources to afford long-term war and geopolitical confrontation with the West (Aleksashenko *et al*, 2025). It does not.

The medium- to long-term perspectives of the Russian economy look unfavourable. Even if the war stops soon, war-related expenditures will not disappear immediately. War-related costs in, for example, the social policy sphere will burden the Russian budget for many years to come. Demilitarisation and demobilisation are always lengthy and costly processes, as the post-Soviet experience clearly demonstrated. Demilitarisation nevertheless seems unlikely if the current orientation of Russian foreign and security policy continues.

The international sanctions, even if ineffective in stopping the war and its financing, have already done a great deal of harm to Russia's long-term growth potential. Russia's reciprocity measures (countersanctions) made the situation even worse. Trade and investment cooperation with China and some other emerging-market economies can help cushion the impact of sanctions in the short term (see Ribakova, 2025), but they will not replace access to Western innovations, technologies, know-how, financial systems and markets. The European market for Russian natural gas, for example, would seem to be closed for the foreseeable future. Similarly, import substitution is not a solution to increase productivity.

If one adds the adverse demographic trends, continued dependence on hydrocarbon exports and poor business and investment climate mentioned in section 7, stagnation may be the least pessimistic scenario.

References

Aleksashenko, S., V. Inozemtsev and D. Nekrasov (2025) *The Dictator's Legacy: A New Zastoy*, Centre for Analysis and Strategies in Europe (CASE), available at https://case-center.org/wp-content/uploads/2025/10/the-dictators-legacy-a-new-zastoy-en.pdf

Babina, T., B. Hilgenstock, O. Itskhoki, M. Mironov, E. Ribakova and N. Shapoval (2026) 'Russian oil exports under international sanctions', *Energy Economics* 156: 109006, available at https://www.sciencedirect.com/science/article/abs/pii/S0140988325008369

Cooper, J. (2025) 'Preparing for a Fourth Year of War: Military Spending in Russia's Budget for 2025', *SIPRI Insights on Peace and Security* 2025/04, available at https://www.sipri.org/sites/default/files/2025-04/preparing_for_a_fourth_year_of_war-military_spending_in_russias_budget_for_2025_1.pdf

Dabrowski, M. (2019) 'Factors determining Russia's long-term growth rate', *Russian Journal of Economics* 5(4): 328-353, available at https://rujec.org/article/49417/download/pdf/366392

Dabrowski, M. (2023) 'The Russian war economy: macroeconomic performance', *Analysis*, 20 July, Bruegel, available at https://www.bruegel.org/analysis/russian-war-economy-macroeconomic-performance

Dabrowski, M. and S. Avdasheva (2023) 'Sanctions and Forces Driving to Autarky', in M. Dabrowski (ed) *The Contemporary Russian Economy: A Comprehensive Analysis,* London: Palgrave Macmillan

Kilian, L., D. Rapson and B. Schipper (2025) 'The Impact of the 2022 Oil Embargo and Price Cap on Russian Oil Prices', *Research Department Working Papers* 2401, Federal Reserve Bank of Dallas, available at https://www.dallasfed.org/research/papers/2024/wp2401

Milov, V. (2025) *What's happening to the Russian economy?* Free Russia Foundation Think Tank, available at https://thinktank.4freerussia.org/wp-content/uploads/2025/11/Digital-November-Russias-Budget-Crisis-Explained-.pdf

Ribakova, E. (2025) 'Export Controls and Technology Transfer: Lessons from Russia', Testimony to the US-China Economic and Security Review Commission, 20 February, available at https://www.uscc.gov/sites/default/files/2025-02/Elina_Ribakova_Testimony.pdf

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