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KSE Institute Russia Chartbook

BoP and Budget Under Pressure

April 2023

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Executive Summary

1. **Important measures targeting Russian energy exports are beginning to bite.** With the EU's embargo on crude oil in place since December 5, 2022, and on oil products since February 5, 2023, Russian exports are coming under increasing pressure. In addition, prices have moderated—supported by the G7 price cap—and Europe has moved away from Russian gas. READ MORE
2. **Expanded sanctions could exacerbate these pressure significantly.** We estimate that new restrictions—including lower price caps on crude oil ($50/barrel) and oil products (in line with the crude cap) as well as bans on Russian LNG and pipeline gas not sent via Ukraine—would reduce oil and gas export earnings by additional $49 billion in 2023 and $69 billion in 2024. READ MORE
3. **The impact from a less supportive external environment on government finance deepens.** Russia's fiscal deficit reached 2.4 trillion rubles in 2023Q1 alone—or 82% of the full-year deficit planned in the budget. Revenues are under pressure, in particular oil and gas receipts, while the war drives up expenditures. A supplementary budget is inevitable. READ MORE
4. **Higher deficits will put significant additional pressure on financing.** At the pace of 2022Q4, Russia will use up the NWF's liquid assets by the end of this year. With room for fiscal adjustment severely limited as war expenditures and social spending are unlikely to be touched, MinFin will need to heavily rely on domestic borrowing—the same way it did in late 2022. READ MORE
5. **Domestic borrowing to pick up sharply in coming weeks.** New OFZ issuance has fallen from the record level of 2.8 trillion rubles in 2022Q4, but we expect numbers to increase again as persistently high deficits require fresh funding. Importantly, and despite smaller issuance, auctions already show some stress—with bids unsatisfactory at times and yields creeping up. READ MORE
6. **Russia's banking system will have to bear most of the government funding burden.** Foreign investors, which used to play a big role in the OFZ market, have essentially disappeared. Thus, domestic banks will need to buy up new OFZ issuance. This is an area where stricter sanctions could exacerbate already emerging challenges and put pressure on the Russian state. READ MORE
7. **Sanctions on Russia's central bank have severely limited access to reserves.** As a less supportive weighs on the ruble—Russia's currency has depreciated by one-third since the fall—and inflationary pressure rise again, limited resources will create a dilemma and force painful decisions, including a robust monetary policy response by the CBR. READ MORE

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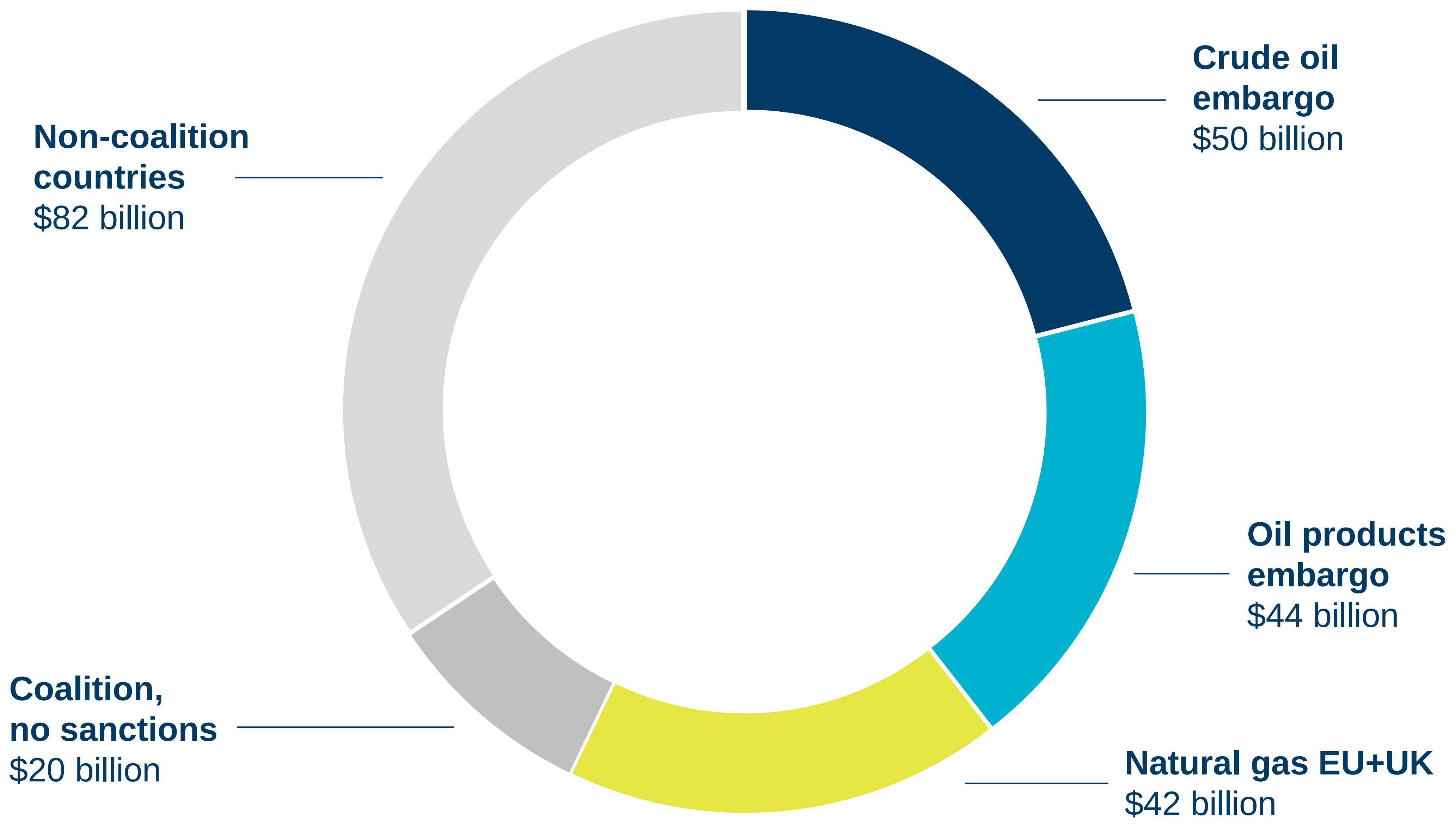
The external environment has worsened considerably.

Measures targeting Russian oil and gas exports are biting.

- Sanctions on energy began in earnest with the EU embargoes on crude oil (Dec. 5, 2022) and oil products (Feb. 5, 2023).
- Together with Europe’s exit from Russian gas, a significant share of pre-invasion exports are now impacted.
- The biggest gaps in the energy sanctions regime are East Asian democracies as well as China, India, and Turkey.

Composition of 2021 oil and gas exports



Source: Federal Customs Service, UN Comtrade, KSE Institute

Oil and gas sanctions coverage

	Seaborne crude oil	Pipeline crude oil	Petroleum products	Pipeline nat. gas	Liquified nat. gas
Europe					
European Union	🟡	🟡	🟡	🔴	🔴
Norway	🟢	🔴	🟢	N/A	N/A
Switzerland	🟢	🟢	🟢	🔴	N/A
United Kingdom	🟢	N/A	🟢	🟢	🟢
Other coalition					
Australia	🟢	N/A	🟢	N/A	🟢
Canada	🟢	N/A	🟢	N/A	🟢
New Zealand	🟢	N/A	🟢	N/A	🟢
United States	🟢	N/A	🟢	N/A	🟢
Japan	🔴	N/A	🔴	N/A	🔴
South Korea	🔴	N/A	🔴	N/A	🔴
Taiwan	🔴	N/A	🔴	N/A	🔴

🟢 – sanctions imposed; 🟡 – sanctions imposed with exemptions (temporary derogations for seaborne crude oil imports into Bulgaria as well as seaborne vacuum gas oil imports into Croatia, and temporary exception for pipeline crude imports into the Czech Republic, Hungary, and the Slovak Republic; 🔴 – sanctions not imposed, N/A – not applicable

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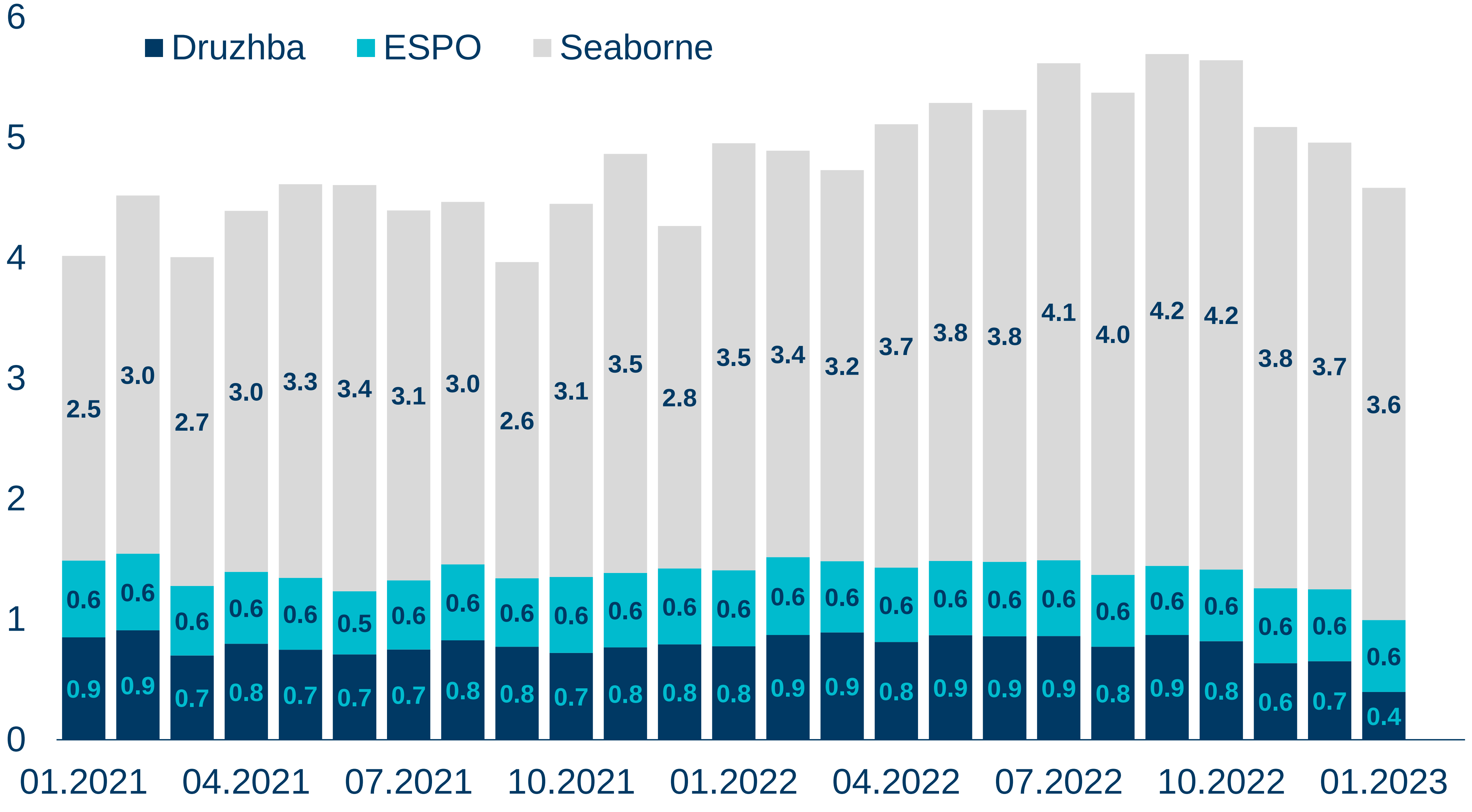
Russian crude remained on the market while discounts widened.

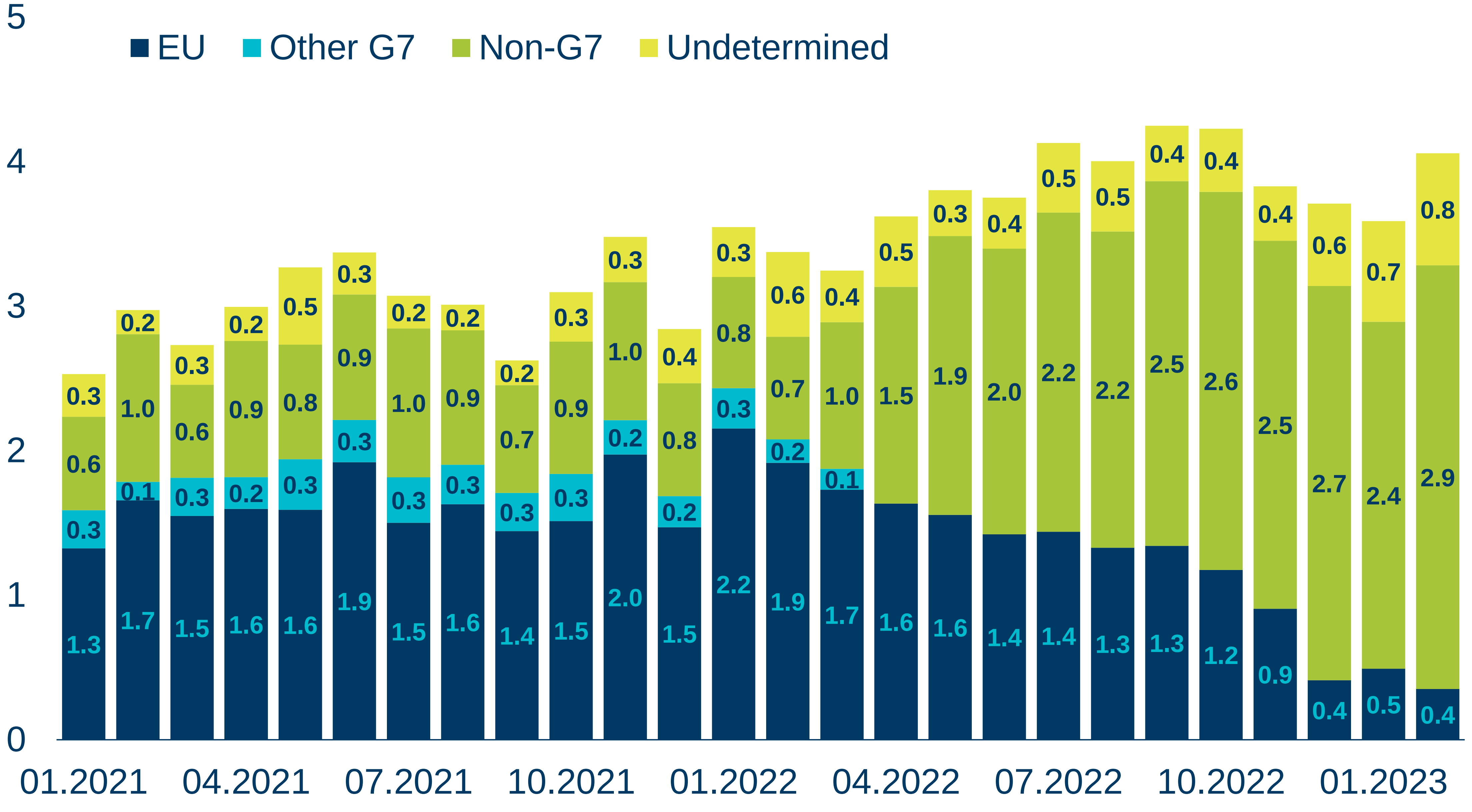
- Russia was able to redirect crude oil to alternative destinations such as China, India, and Turkey for most of 2022.
- The exclusion of shipping services from the EU embargo has reached its objective to keep Russian oil on the market.
- In order to keep up export volumes, Russia has had to accept heavy discounts in certain segments of the market.

Imports of Russian crude oil, in million barrels/day



Source: Bruegel, KSE Institute

Imports of Russian seaborne crude oil, in million barrels/day



Source: Bruegel, KSE Institute

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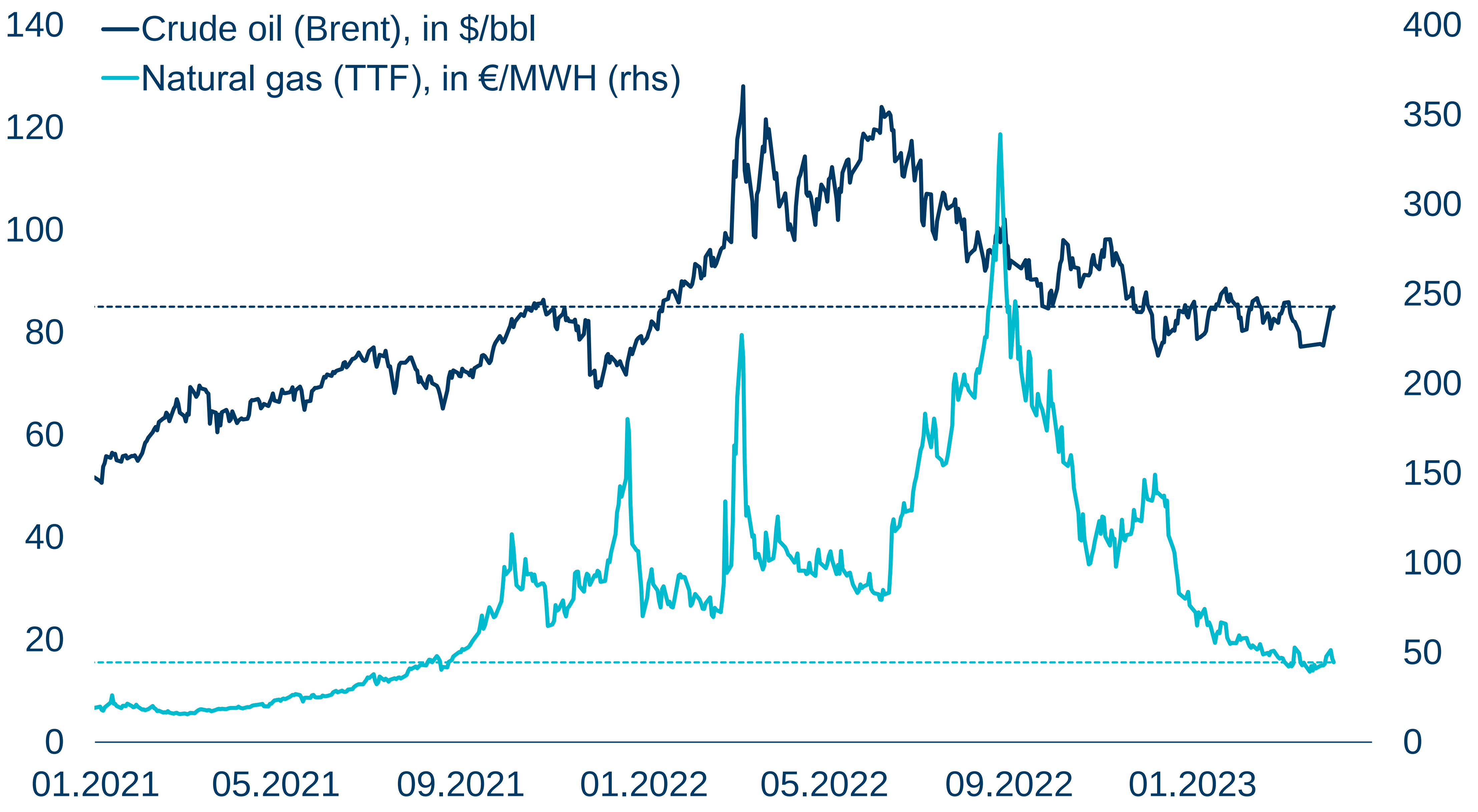
Perfect storm of sharply lower energy prices and production under pressure.

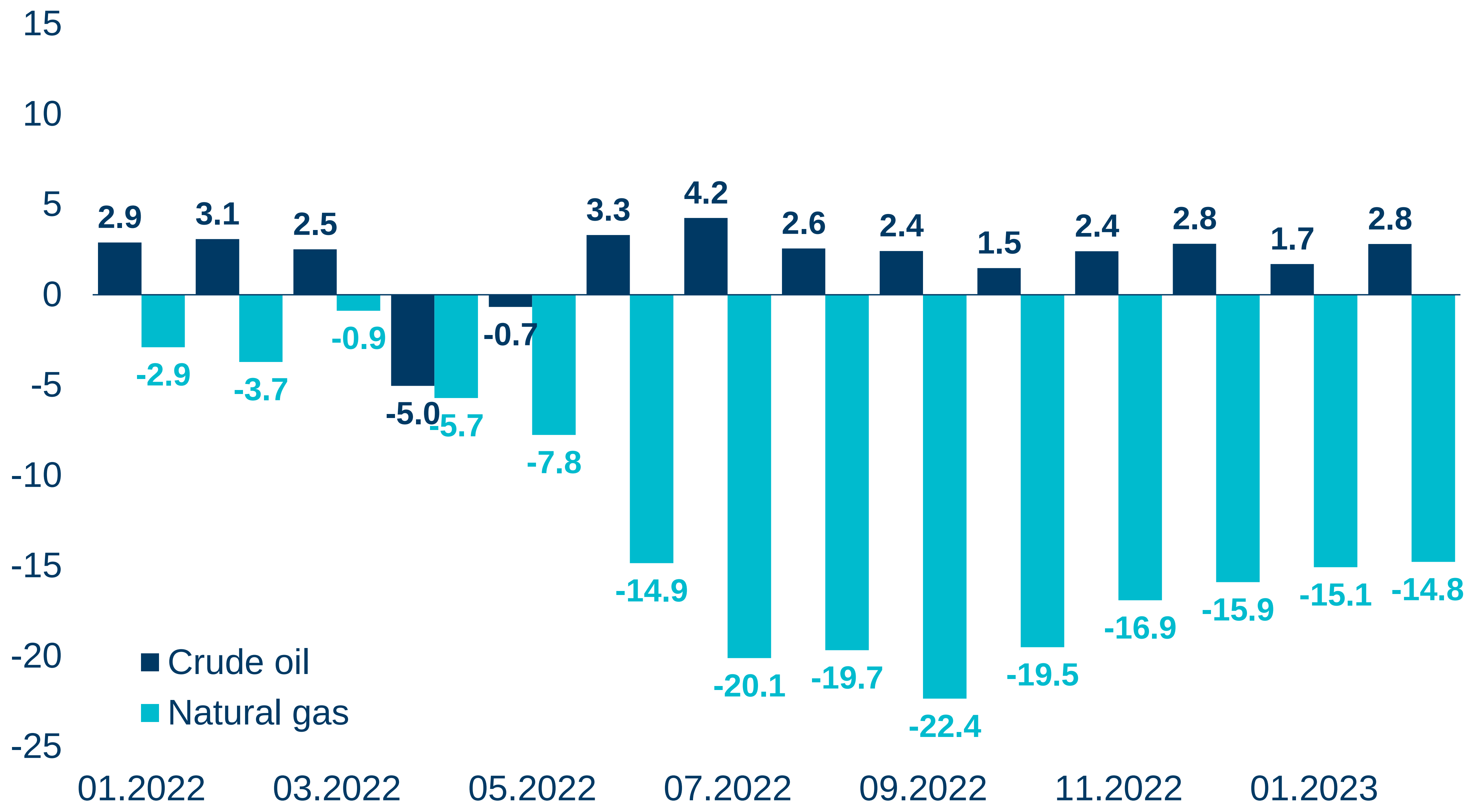
- Sanctions coalition countries succeeded in maintaining oil market stability while reducing Russian export earnings.
- Global oil prices have returned to pre-full-scale invasion levels – and European prices are the lowest since fall 2021.
- Russia’s inability to find alternative buyers for its gas following the loss of the European market weighs on production.

Prices for crude oil and natural gas



Source: Financial Times, Intercontinental Exchange, KSE Institute

Russian production volumes, % change vs. 2021 average volumes



Source: Rosstat, KSE Institute

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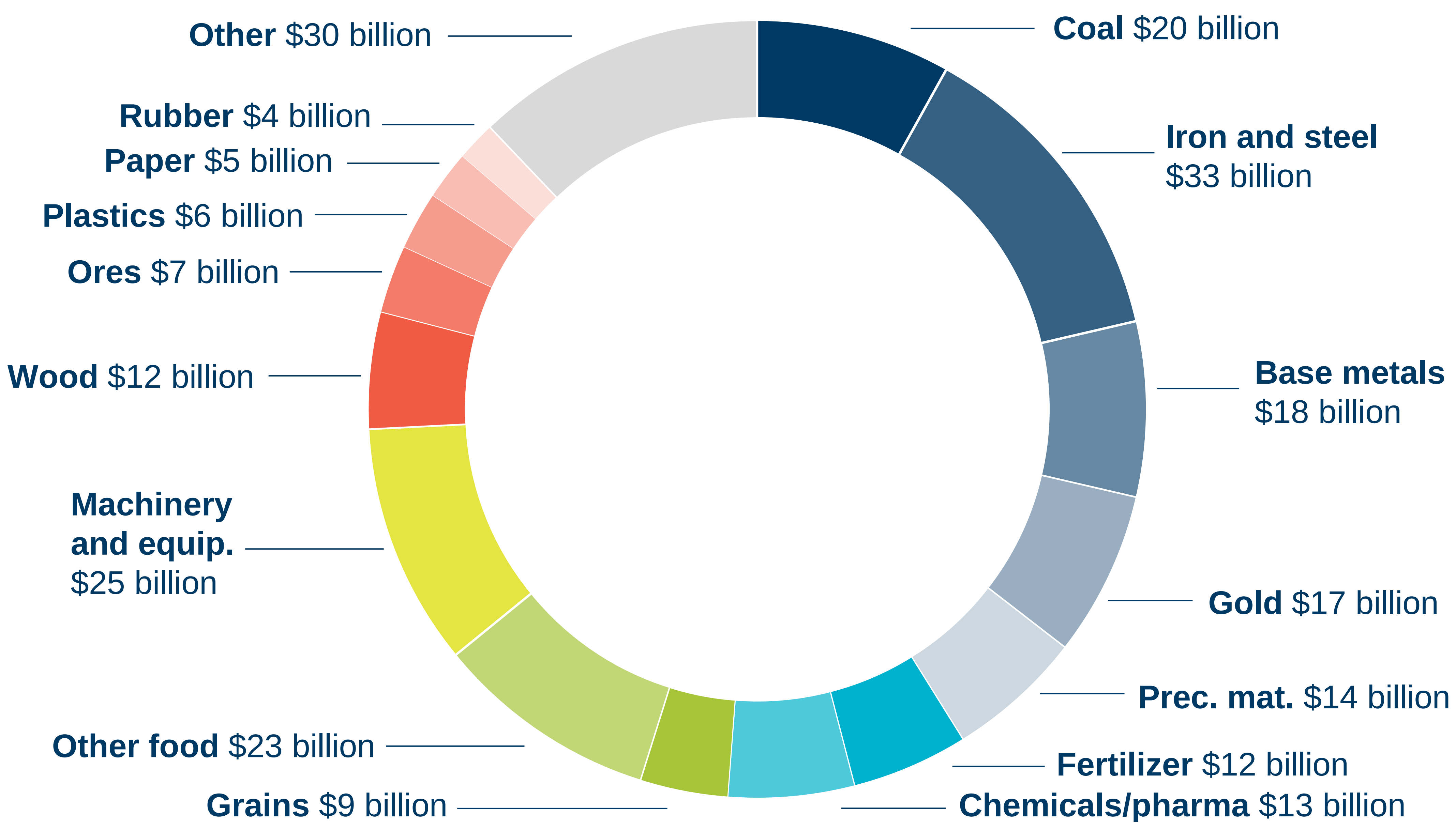
Significant room remains for additional trade sanctions outside of energy.

- While measures targeting Russian energy are having a major impact by now, other trade sanctions have major gaps.
- In our view, it would be critical to extend restrictions that exist in some countries to the entirety of the sanction coalition.
- Possible targets are diamonds, iron ore, mined uranium, timber, and steel products—together with a fertilizer price cap.

Composition of 2021 non-oil and gas exports



Source: UN Comtrade, KSE Institute

Non-oil and gas exports sanctions coverage

	EU	UK	CH	NO	US	CA	JP	AU	NZ
Iron and steel	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned
Machinery and equip.	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	not sanctioned	not sanctioned	partially sanctioned	not sanctioned	not sanctioned
Coal	sanctioned	sanctioned	sanctioned	sanctioned	sanctioned	not sanctioned	not sanctioned	sanctioned	sanctioned
Gold	sanctioned	sanctioned	sanctioned	sanctioned	sanctioned	sanctioned	sanctioned	sanctioned	sanctioned
Fertilizer	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned
Timber	sanctioned	sanctioned	sanctioned	sanctioned	not sanctioned	not sanctioned	partially sanctioned	not sanctioned	not sanctioned
Various chemicals	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned
Wheat	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned
Fish and seafood	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	not sanctioned	not sanctioned	not sanctioned
Wood pulp and paper	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned
Non-industrial diamonds	not sanctioned	not sanctioned	not sanctioned	not sanctioned	sanctioned	sanctioned	not sanctioned	not sanctioned	not sanctioned
Iron ore	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned
Rubber and products	partially sanctioned	partially sanctioned	partially sanctioned	partially sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned
Bituminous substances	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	not sanctioned	sanctioned	sanctioned

● – sanctioned, ● – partially sanctioned, ● – not sanctioned
Source: UN Comtrade, KSE Institute

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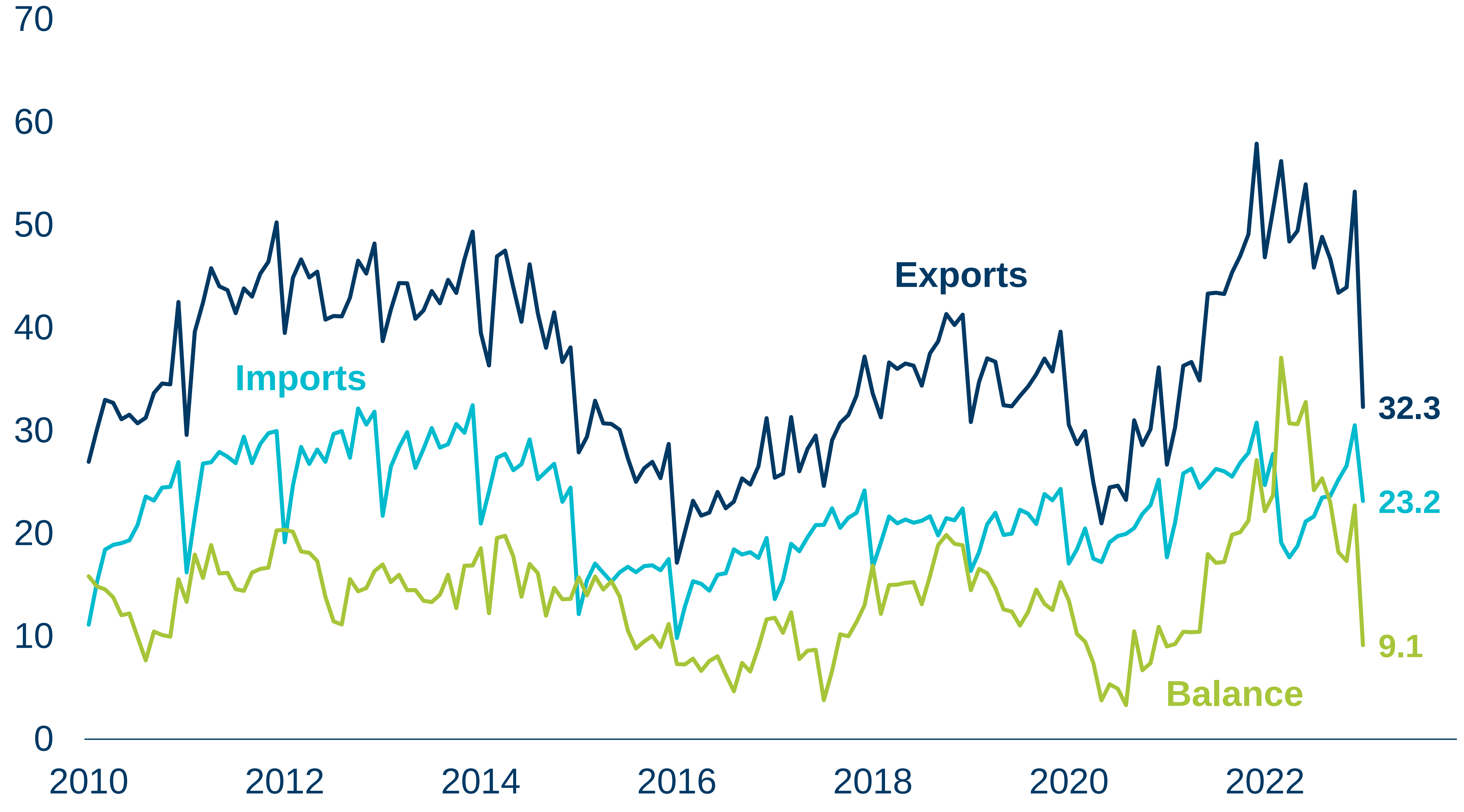
Trade balance continued to drop sharply in 2023Q1.

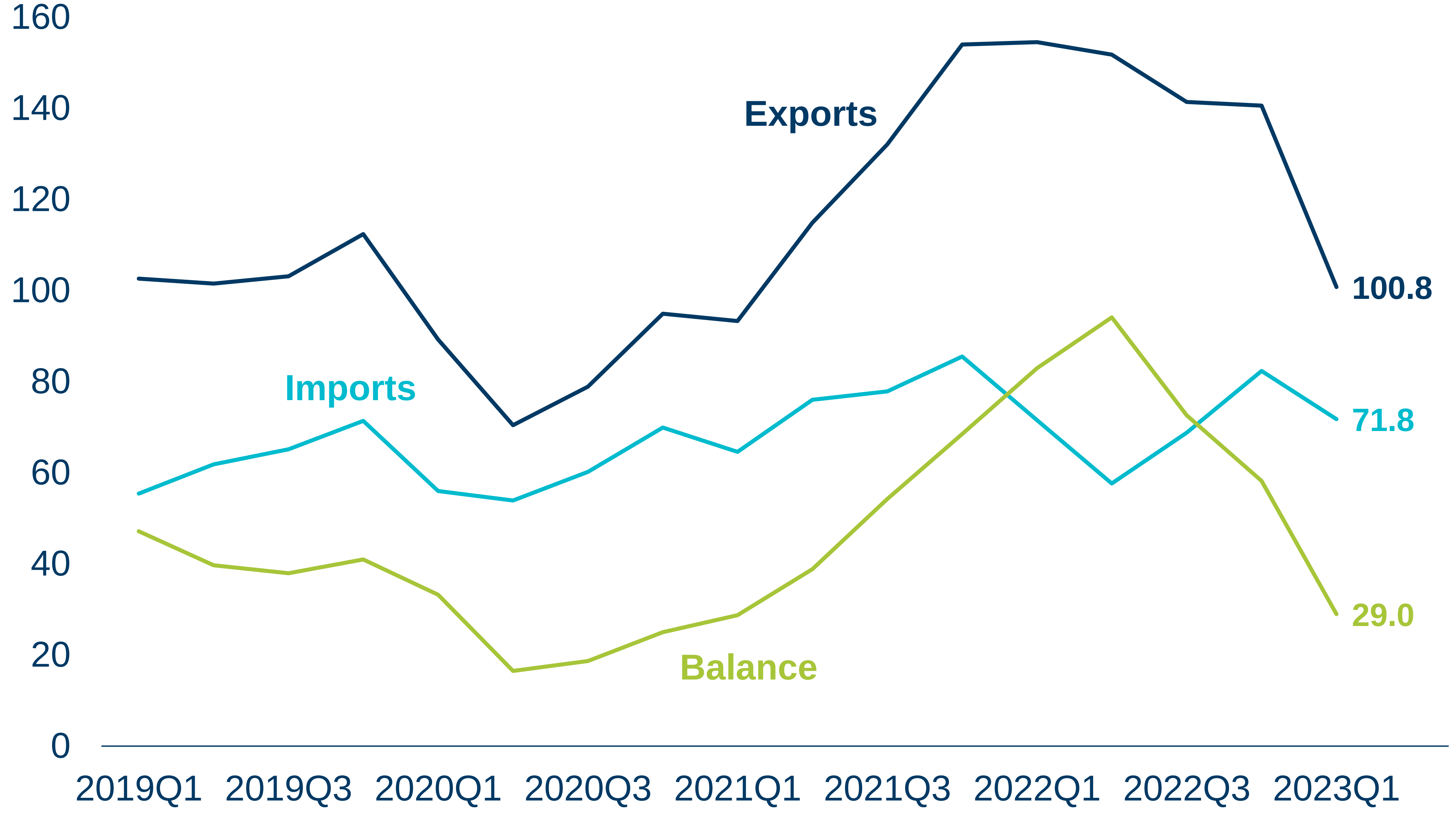
- Total goods exports reached $588 billion in 2022 according to balance of payments data – a 19% increase vs. 2021.
- At the same time, goods imports weakened to $280 billion in 2022, down 8% vs. 2021, despite a recovery in 2022H2.
- Since a record-high $83 billion in 2022Q2, the trade balance has narrowed considerably – to $29 billion in 2023Q1.

Monthly trade statistics, in U.S. dollar billion



Source: Bank of Russia, KSE Institute

Quarterly balance of payments statistics, in U.S. dollar billion

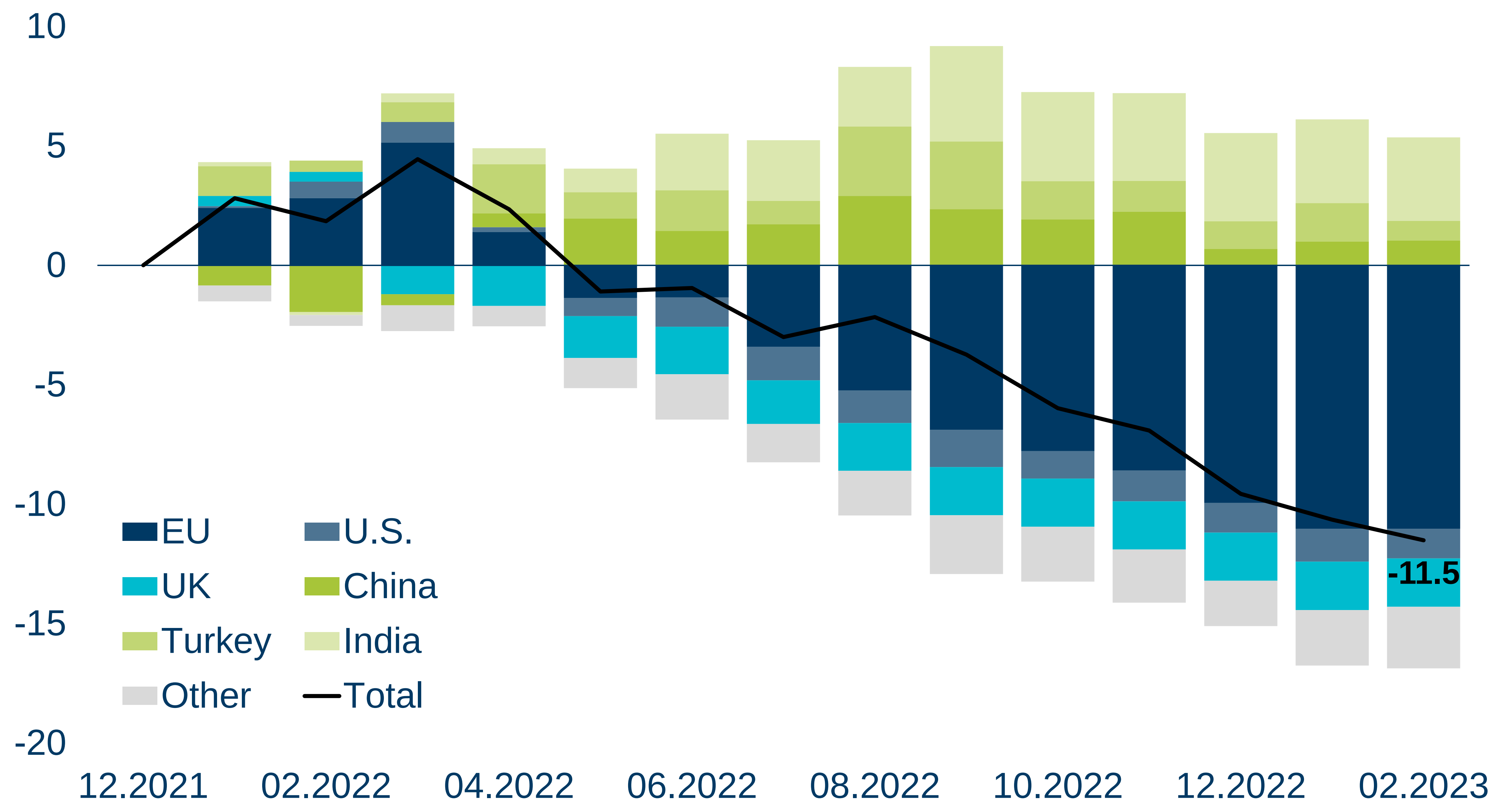


Source: Bank of Russia, KSE Institute

Key drivers are declining exports and a partial recovery in imports.

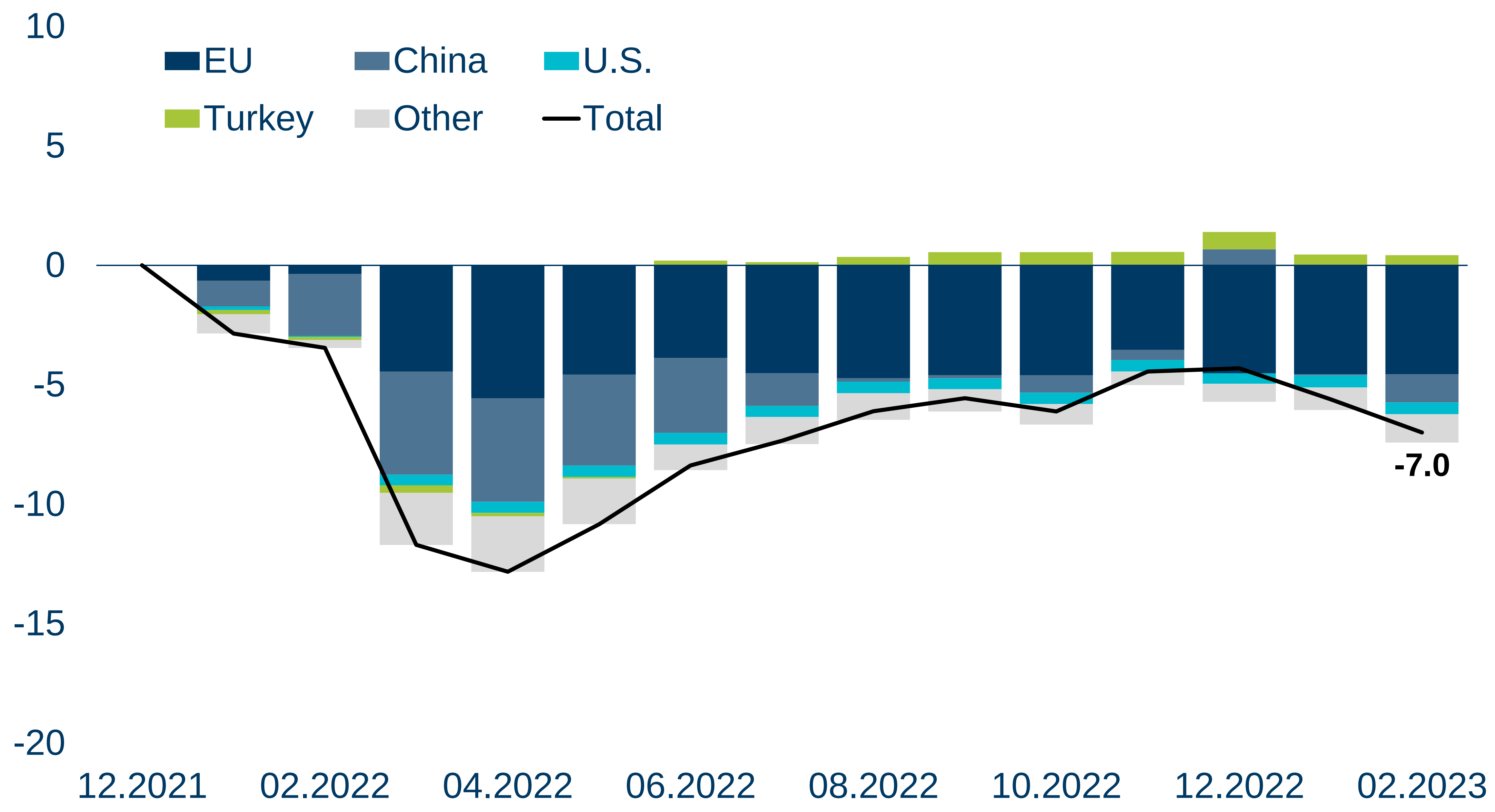
- Higher prices for key goods—and redirection to alternative buyers—supported Russian exports for parts of 2022.
- But total exports have weakened since 2022Q4 as energy prices moderated and additional sanctions took effect.
- On the imports side, Russia has not been able to replace EU and US trade – and imports from China are falling again.

Change in goods exports vs. December 2021, in U.S. dollar billion



Source: national authorities, KSE Institute

Change in goods imports vs. December 2021, in U.S. dollar billion



Source: national authorities, KSE Institute

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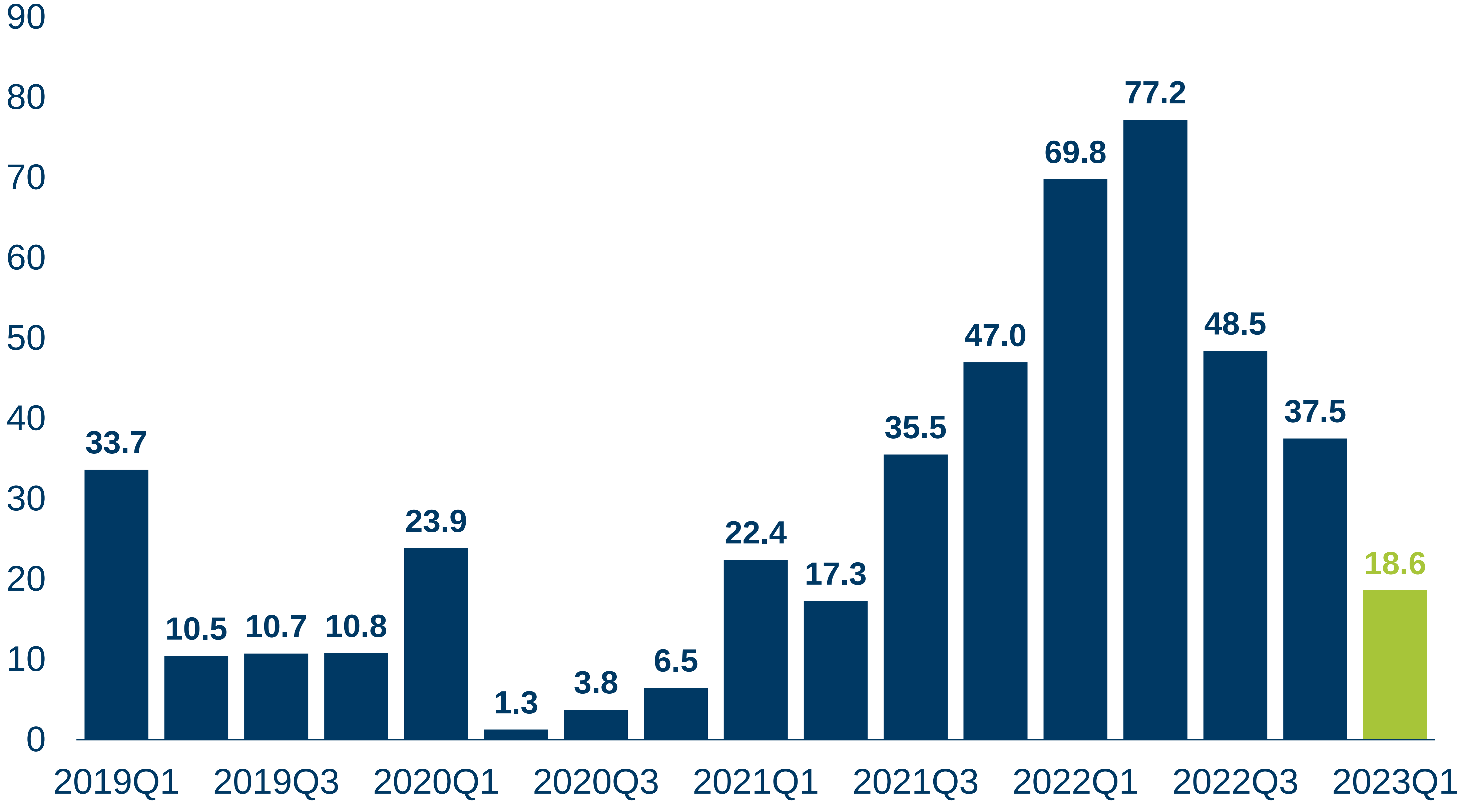
The external environment continues to worsen.

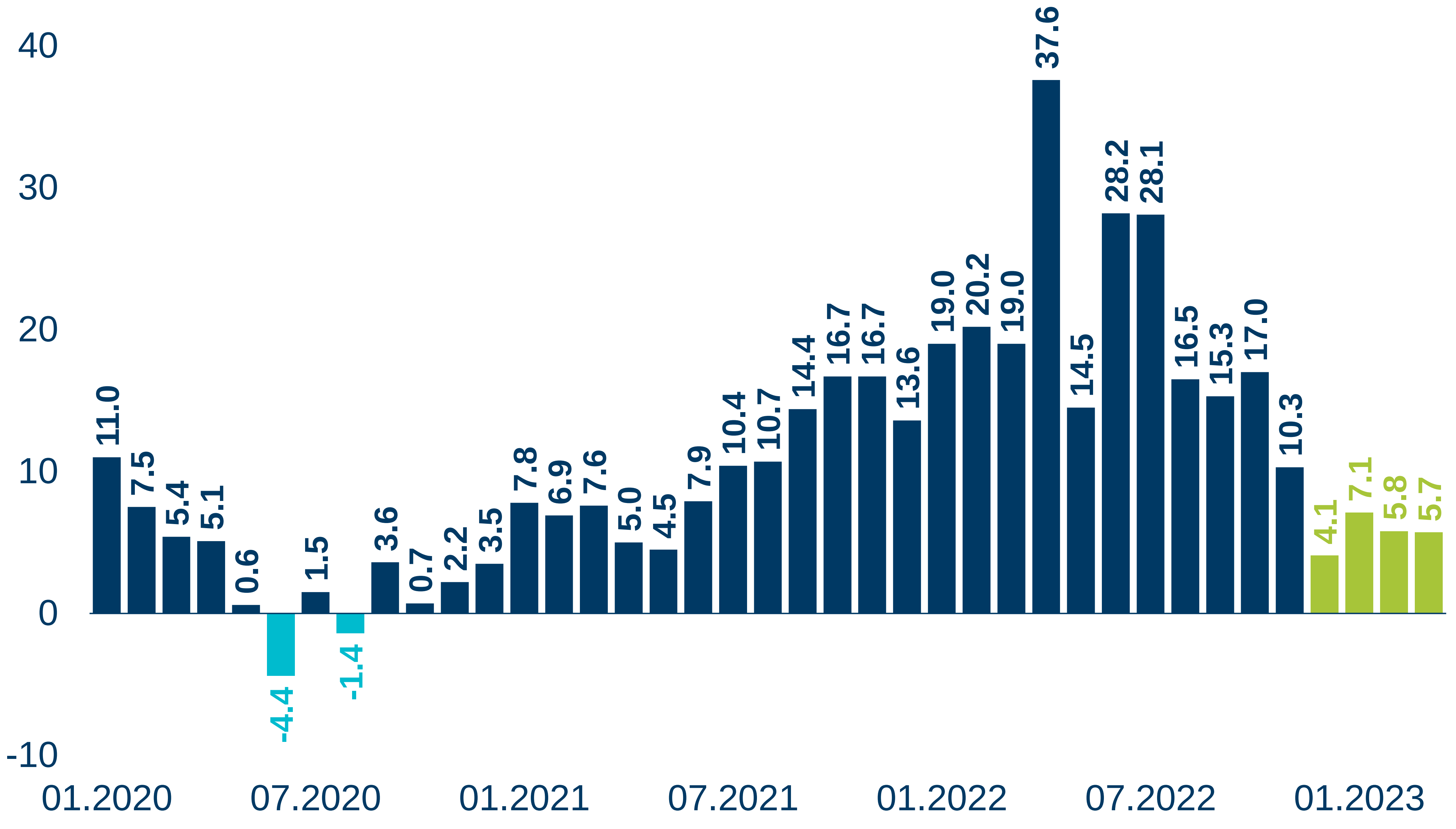
- The 2023Q1 current account surplus came in at $18.6 billion – a 50% decline vs. 2022Q4 and ~75% less than a year ago.
- December-March show persistent weakness at $4.1 billion, $7.1 billion, $5.8 billion, and $5.7 billion, respectively.
- The EU embargo on crude oil and products, Europe’s moving away from Russian gas, and lower prices clearly take a toll.

Quarterly current account balance, in U.S. dollar billion



Source: Bank of Russia, KSE Institute

Monthly current account balance, in U.S. dollar billion*

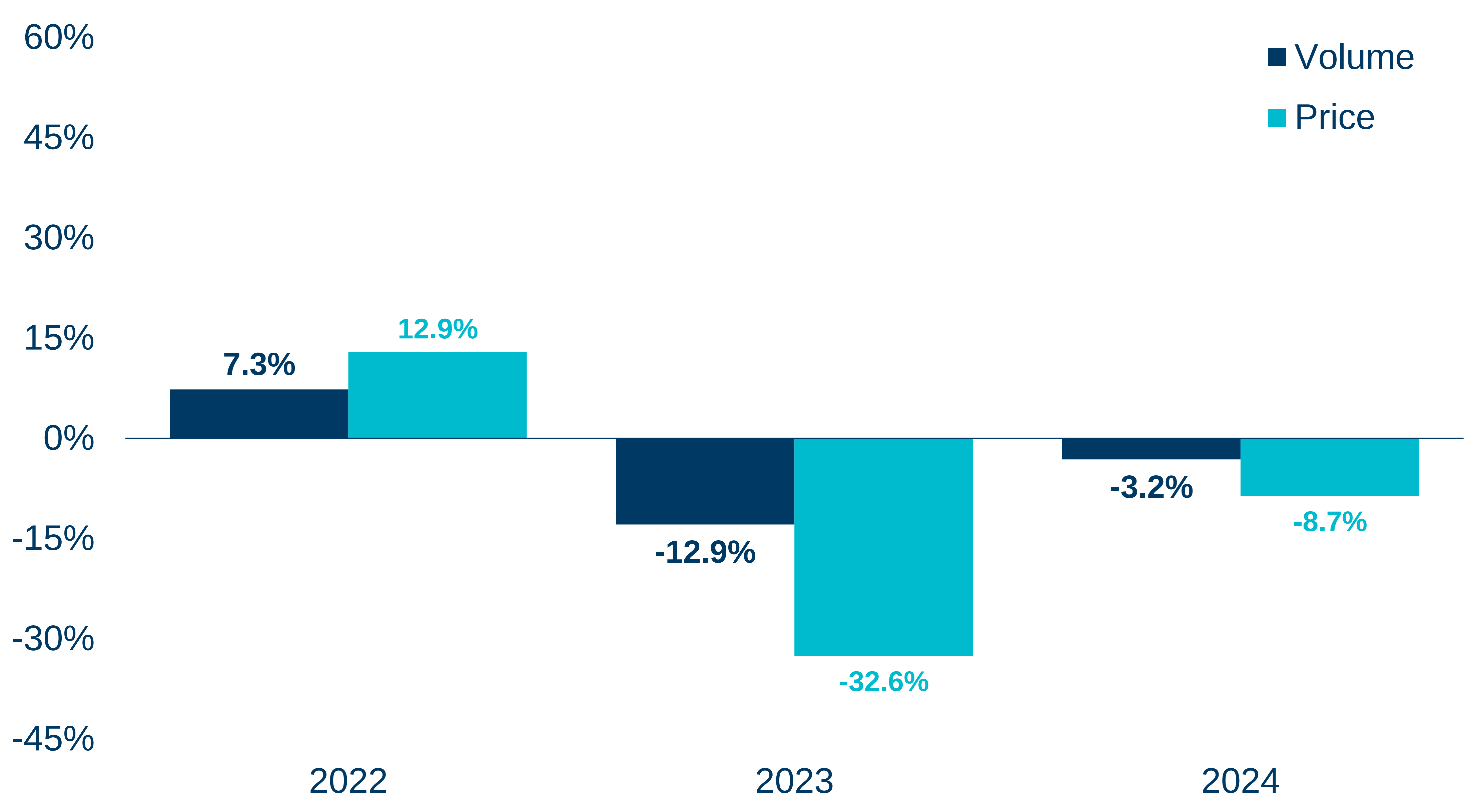


Source: Bank of Russia, KSE Institute *monthly and quarterly data do not fully align

We project a significant decline in oil and gas exports this year.

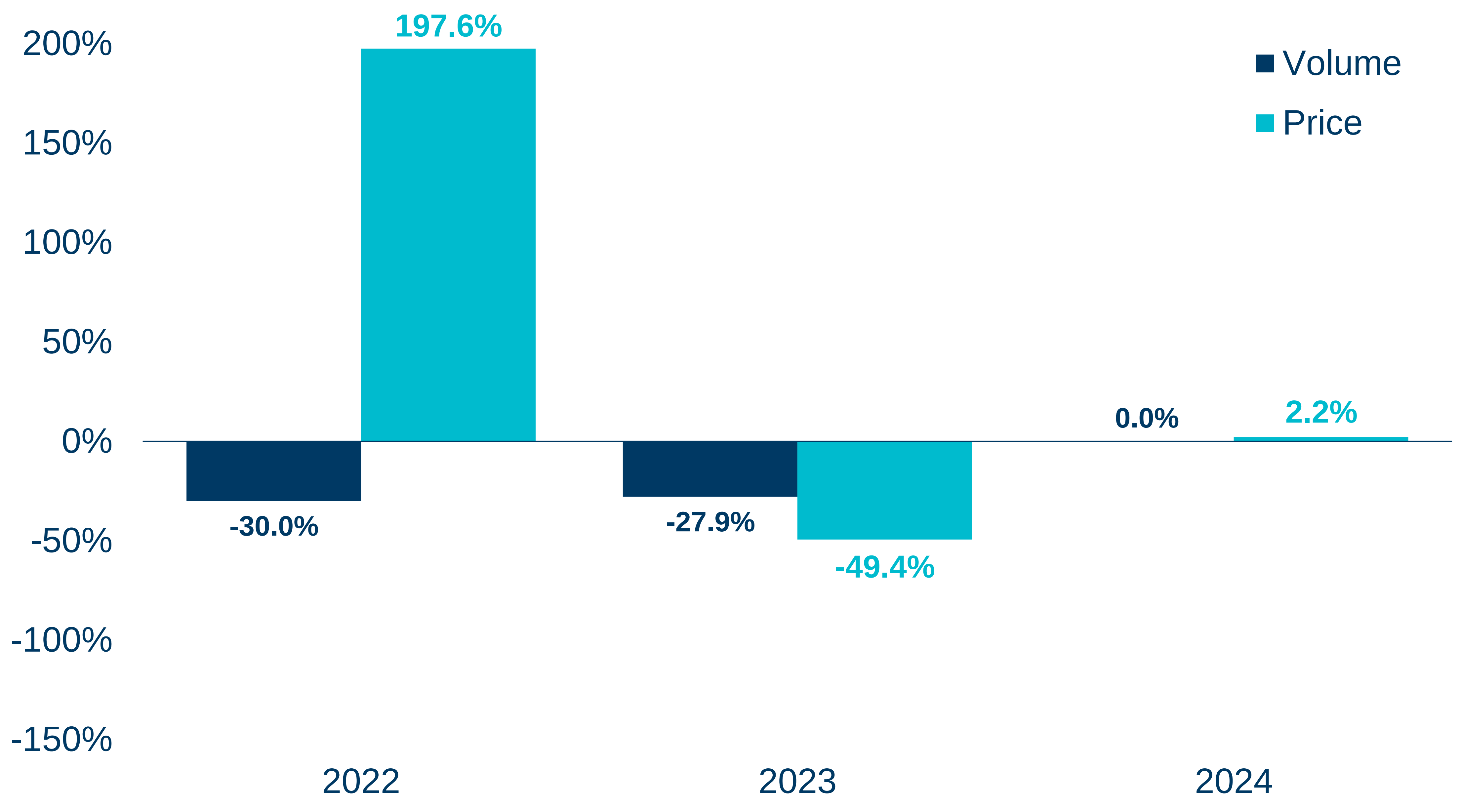
- We expect significant declines in oil and gas export volumes (-12.9%, -27.9%) as well as prices (-32.6%, -49.4%) in 2023.
- Due to the OPEC's decision to cut production, we project somewhat higher crude oil prices (for Brent, Urals, and ESPO)
- At the same time, forward gas prices have declined further as Europe exits the winter with record-high storage.

Oil volume and price forecast, in % year-over-year



Source: KSE Institute

Natural gas volume and price forecast, in % year-over-year



Source: KSE Institute

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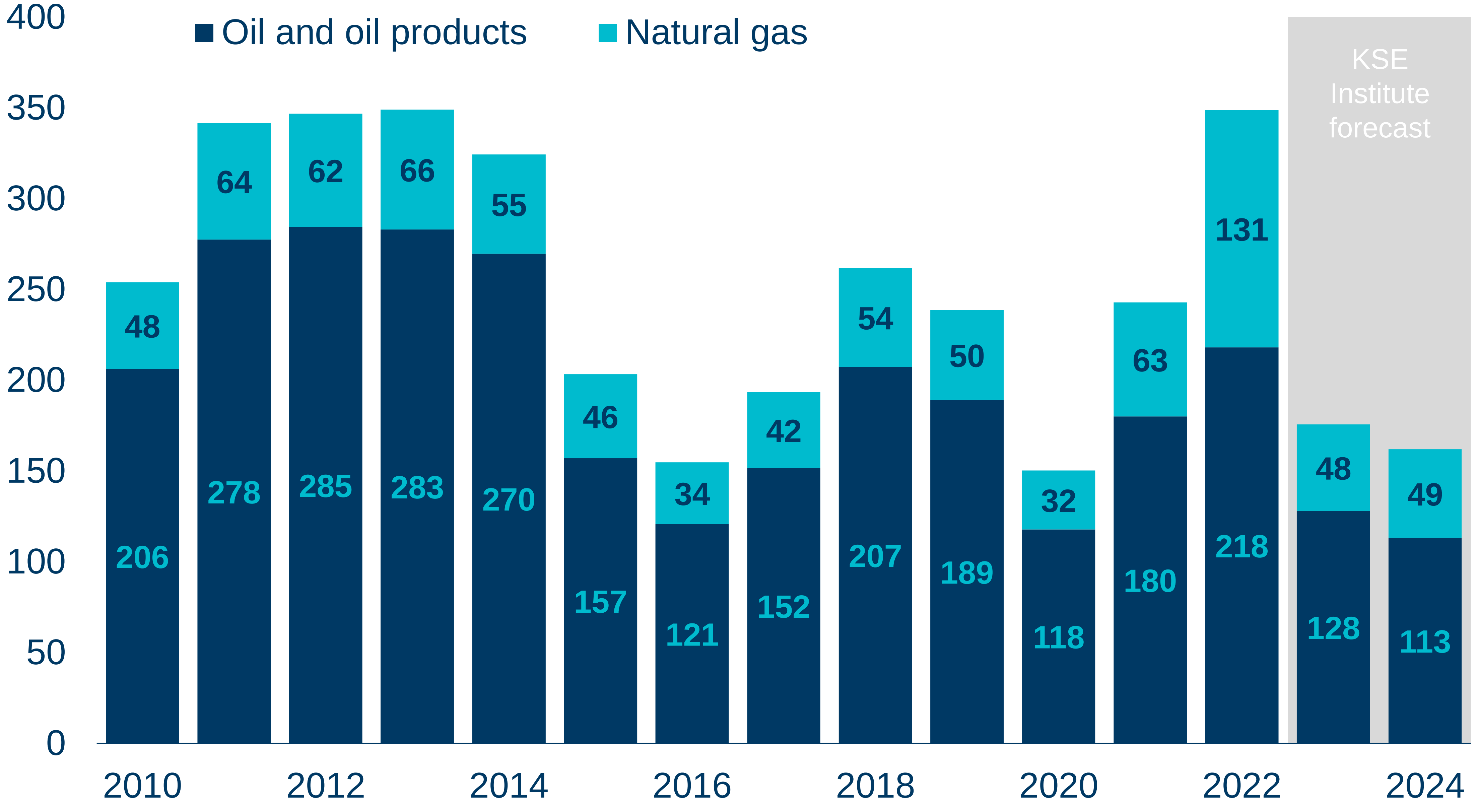
As a result, lower hydrocarbon earnings will weigh on the current account.

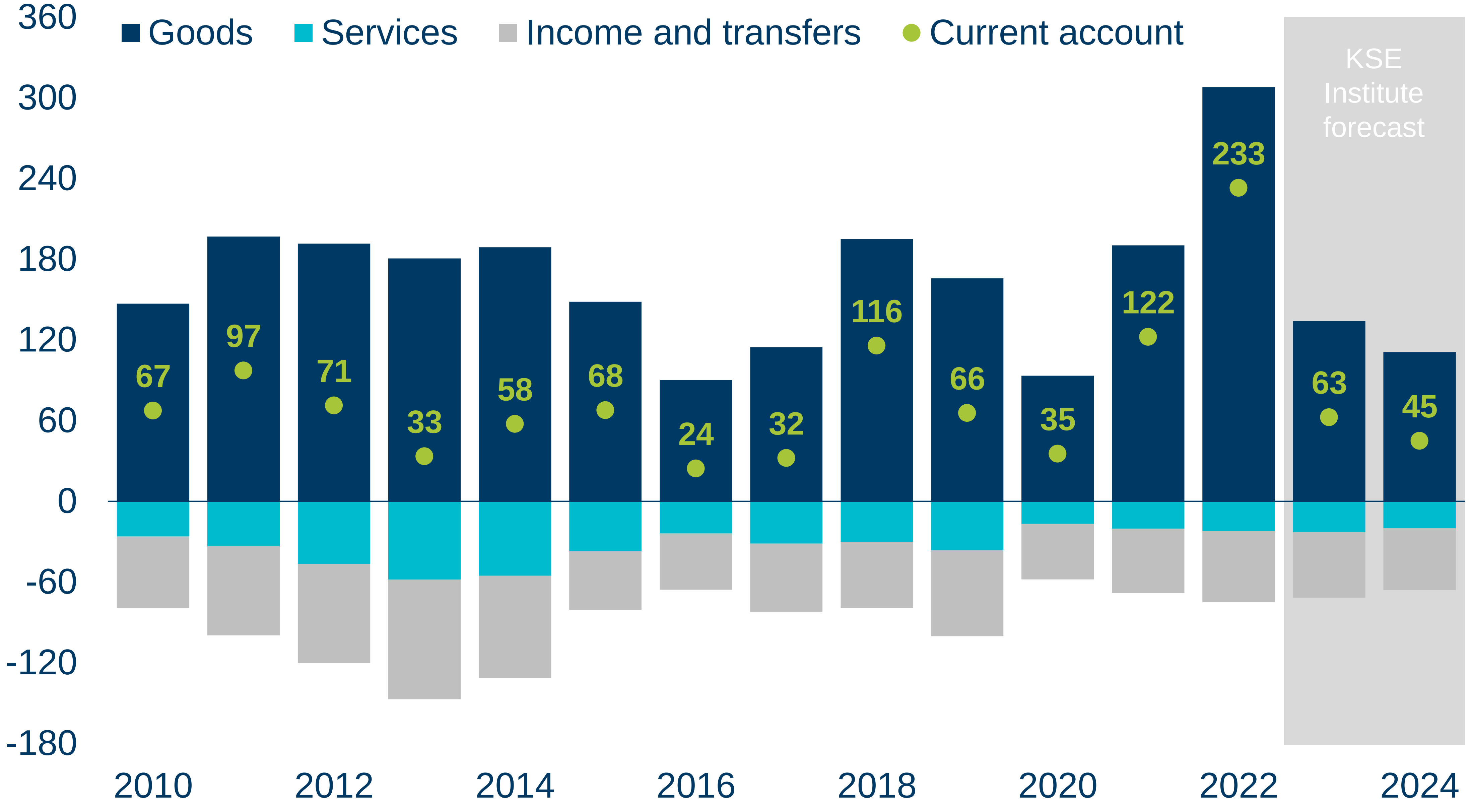
- We project that lower export volumes and prices will cut oil and gas earnings in half this year (41% for oil, 64% for gas).
- In turn, the current account surplus will narrow sharply—to $63 billion—with our forecast broadly unchanged from March.
- The 2023 budget is based on very different assumptions, however (in line with a $123 billion surplus).

Oil and gas earnings, in U.S. dollar billion



Source: Bank of Russia, KSE Institute

Current account and components, in U.S. dollar billion



Source: Bank of Russia, KSE Institute

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At this critical junction, additional sanctions could exacerbate the pressure.

- To exacerbate challenges emanating from a less supportive external environment, we propose new oil and gas sanctions.
- We estimate that these measures would reduce oil and gas earnings by $49 billion and $69 billion in 2023-24, respectively.
- This would deprive Russia of financing for imports, wear down buffers, and expose economic and financial vulnerabilities.

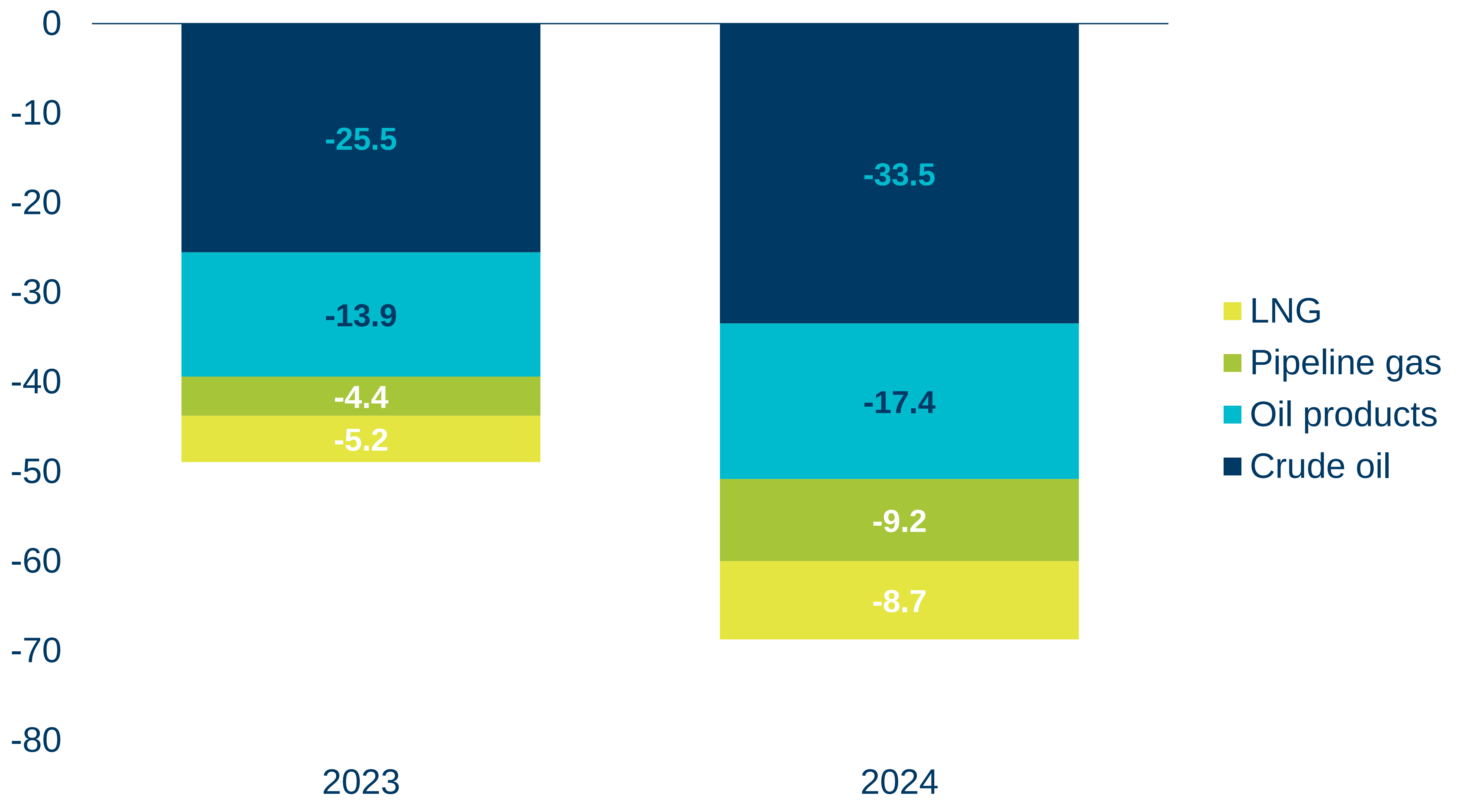
KSE proposal for further sanctions on Russian oil and gas

Russia's position has weakened considerably in recent months as Europe adjusted to the loss of Russian gas supply, and energy prices fell back to pre-invasion levels. We propose to exacerbate challenges created by a less supportive external environment by imposing the following measures:

1. Cutting the crude oil price cap to $50/barrel at the next review and, ultimately, to $30/bbl
2. Setting the oil products price caps at levels consistent with the crude price cap and respective pre-invasion price spreads to crude
3. Banning imports of Russian gas into the EU via pipelines controlled by Russia, thereby closing Turkstream and sending gas via Ukraine
4. Banning imports of Russian LNG into the EU
5. Imposing comprehensive sanctions on Gazprom, Russian oil companies, and Gazprombank

Source: KSE Proposal for a Further Package of Oil and Gas Sanctions, 13.01.2023

Oil and gas earnings vs. baseline scenario, in U.S. dollar billion



Source: KSE Institute

Russia's economic crisis is set to deepen in 2023.

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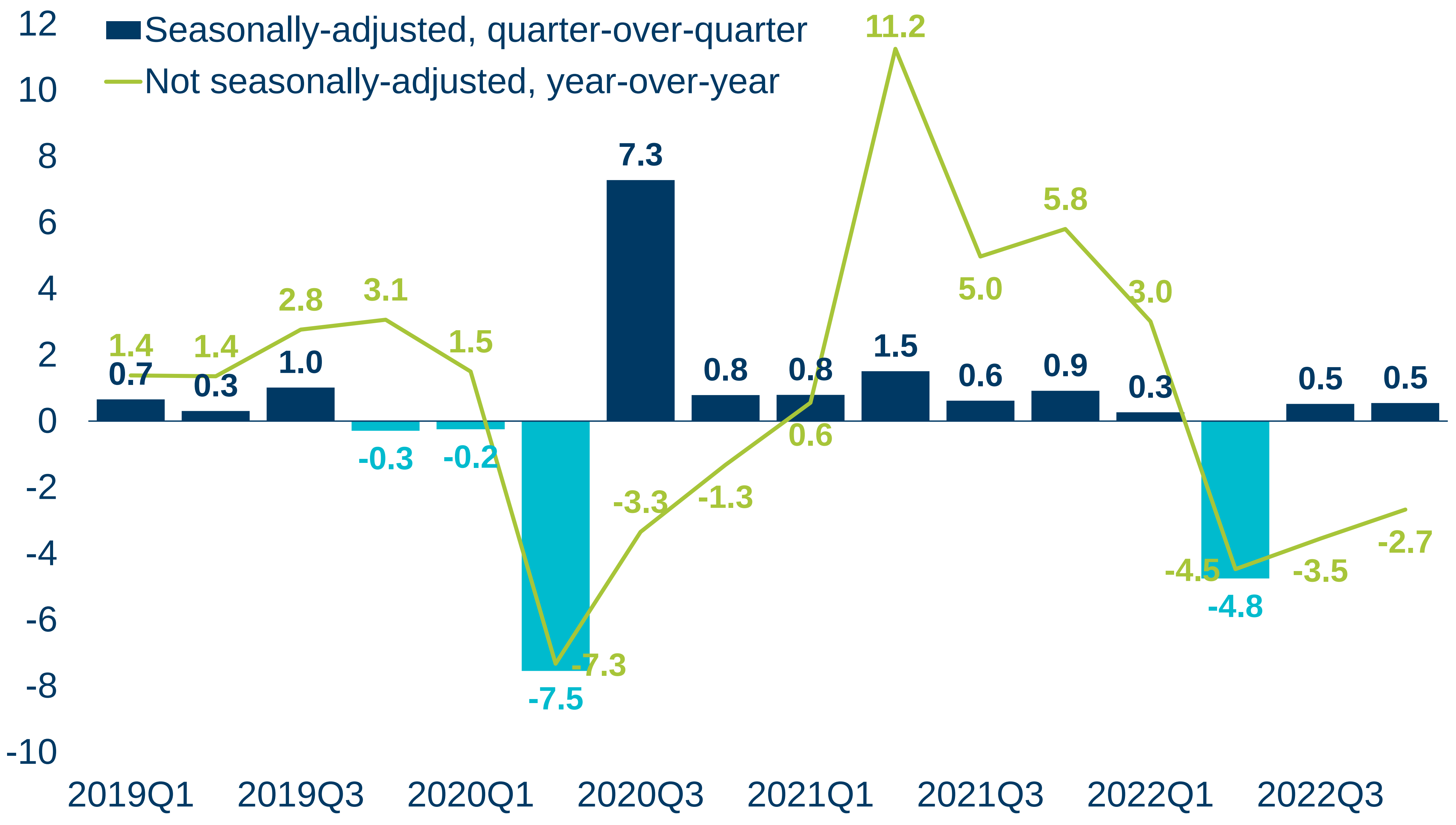
GDP contraction limited to 2.1% in 2022 according to Rosstat.

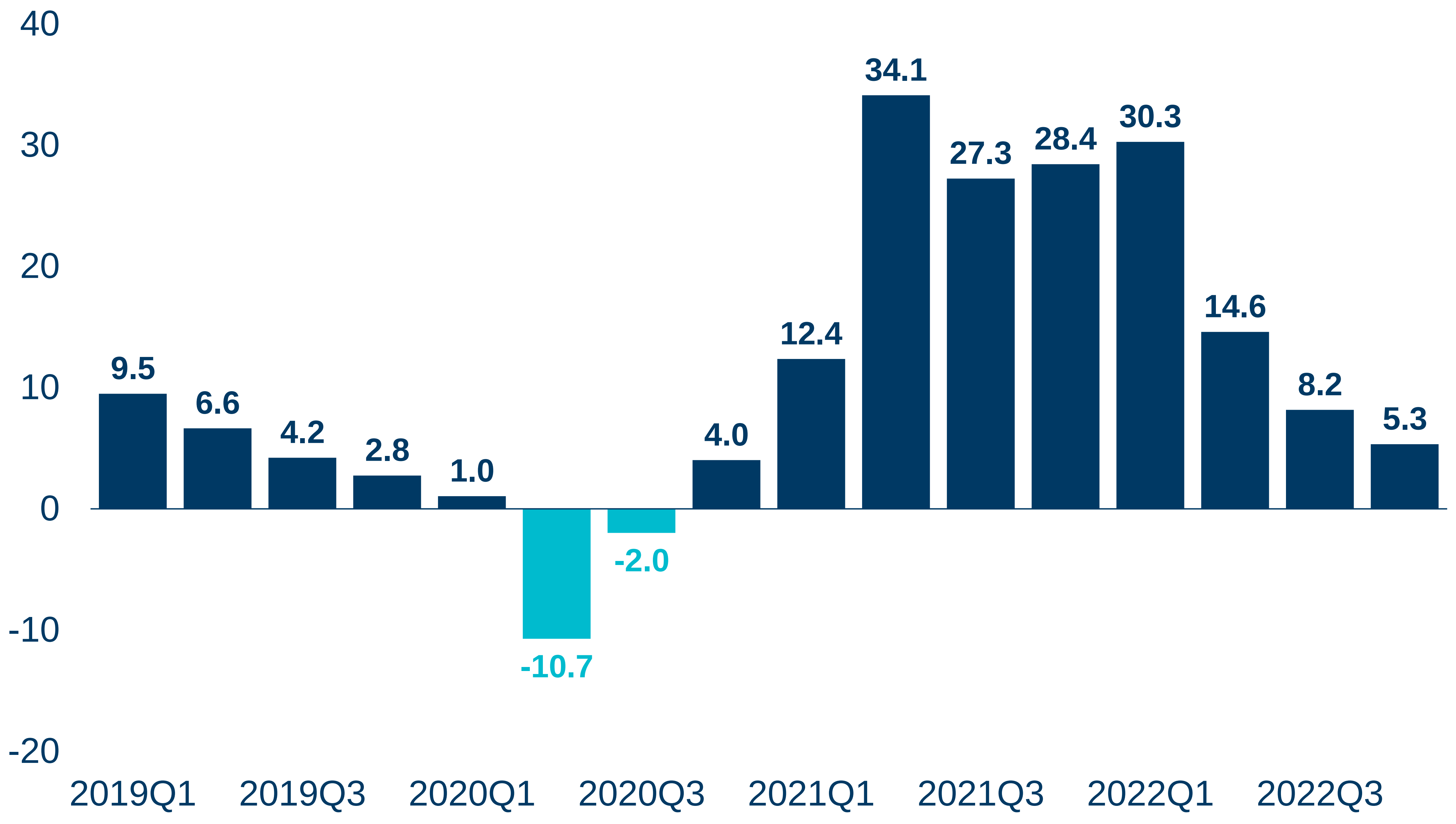
- Russia's economy outperformed expectations in 2022, with GDP only falling by 2.1% according to Rosstat.
- Recently released quarterly numbers show a small sequential recovery in Q3 and Q4 following a sharp drop in Q2.
- Nominal GDP grew by 12% last year despite the contraction in real terms – but deflator growth is coming down.

Quarterly real GDP dynamics, in %



Source: Rosstat, KSE Institute

Quarterly nominal GDP dynamics, in % year-over-year



Source: Rosstat, KSE Institute

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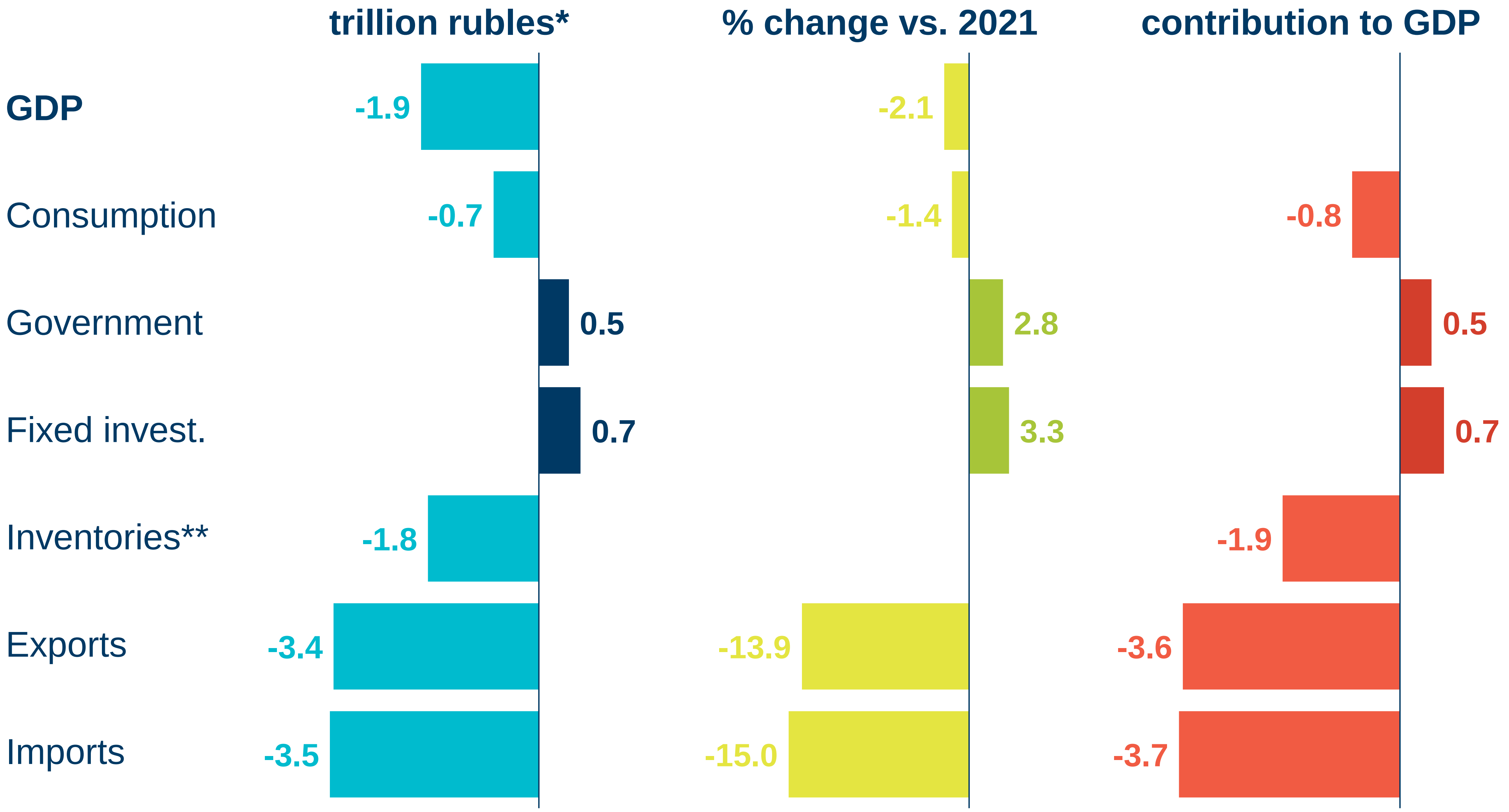
Net exports did not support overall economic activity in 2022.

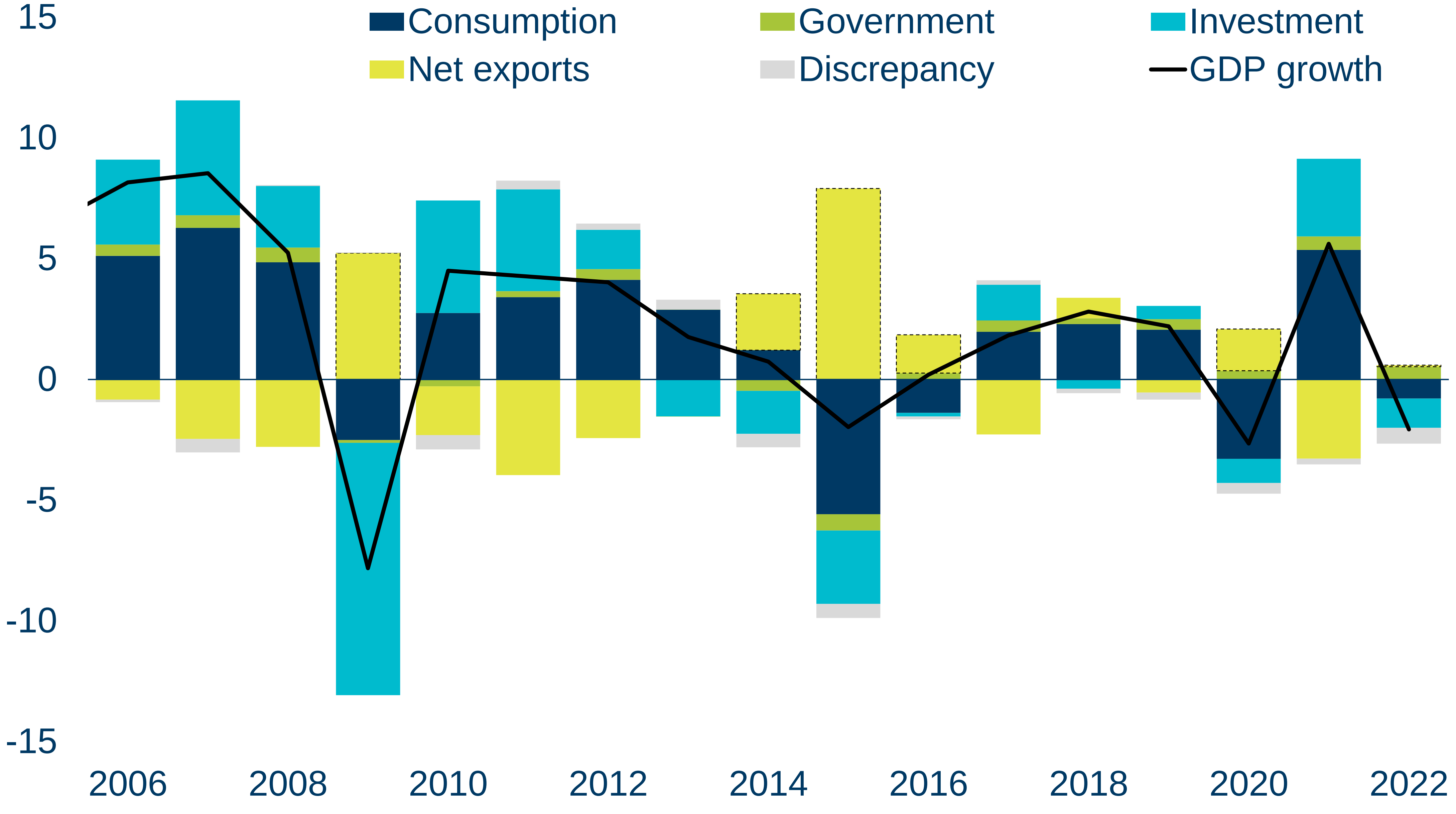
- Private consumption and capital formation (fixed invest. + inventories) had the largest negative effects on GDP.
- Comparing national accounts and BoP numbers shows what large role prices played for Russian trade in 2022.
- The missing positive contribution from net exports is unusual during a GDP contraction (e.g., 2009, 2015, 2020).

Performance of GDP and components in 2022



Source: Rosstat, KSE Institute *constant 2016 rubles **percent change not shown for net items

Contributions to GDP growth, in percentage points

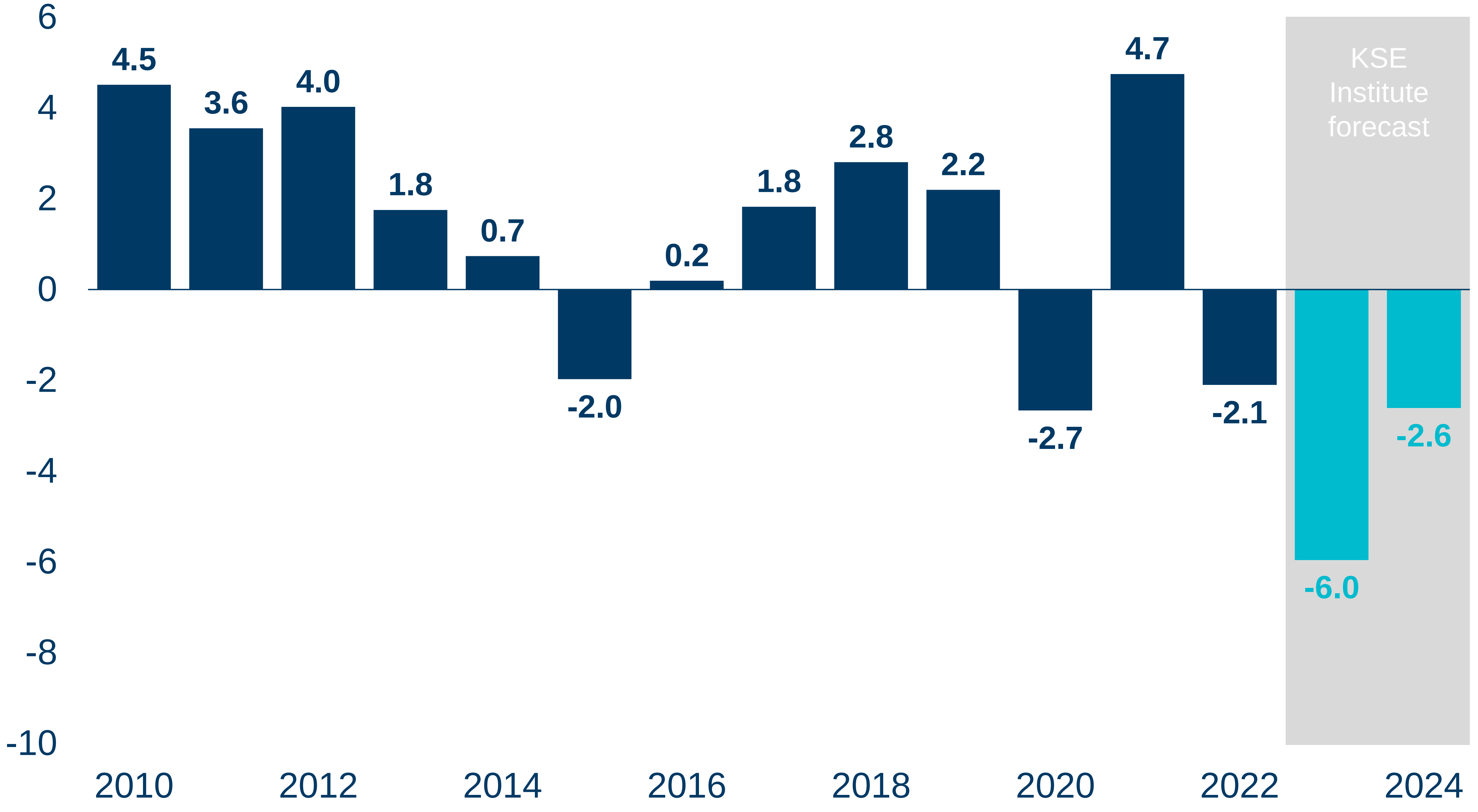


Source: Rosstat, KSE Institute

We forecast a sharp contraction of Russia's economy this year.

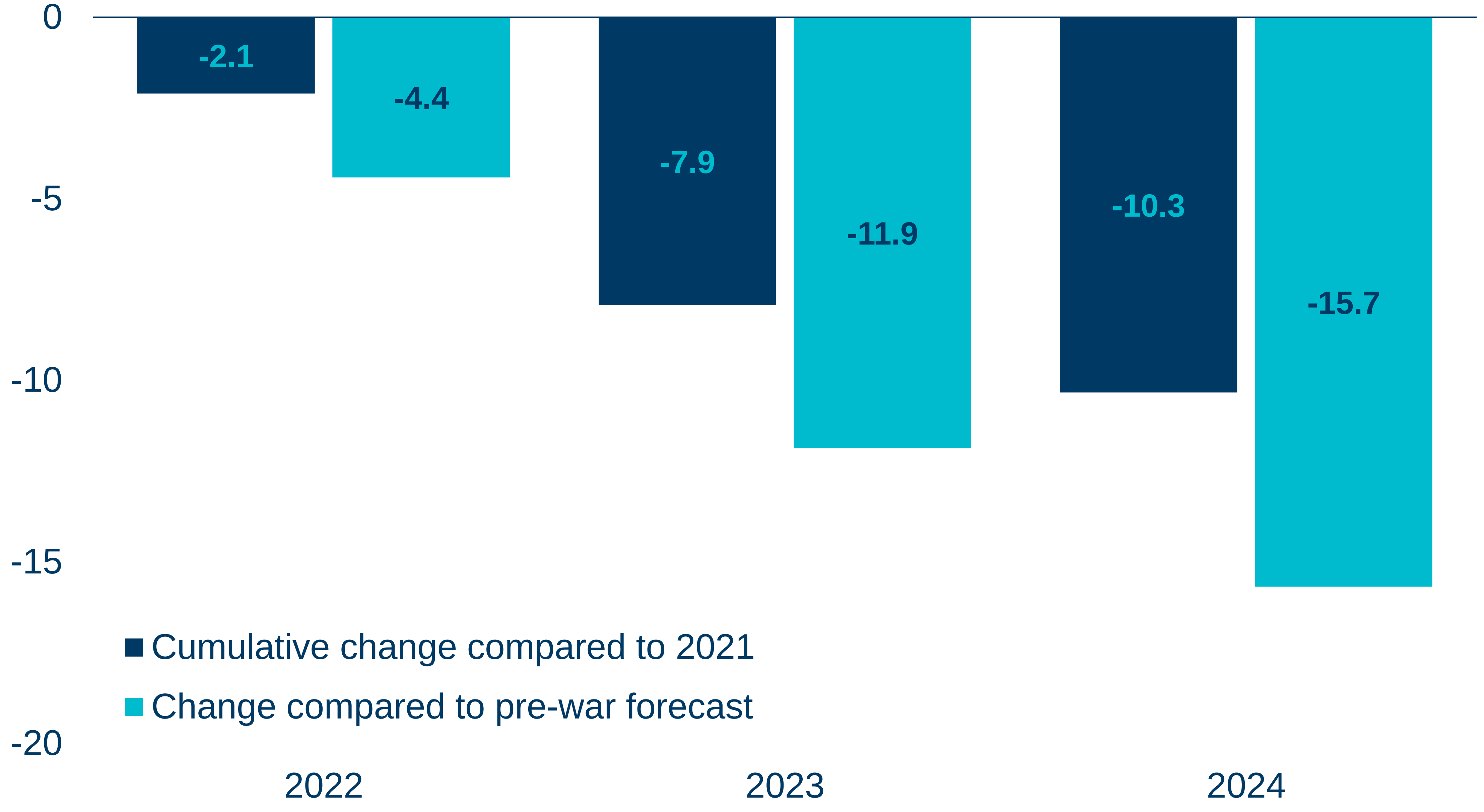
- We project that the economic crisis will deepen this year (-6%) and next (-2.6%) as net exports weigh on activity.
- Importantly, the war/sanctions-driven crisis will not be followed by a rebound but, rather, an extended period of stagnation.
- By 2024, the Russian economy will be roughly 10% smaller than in 2021 and 16% smaller than in a no-war scenario.

Real GDP growth, in % year-over-year



Source: Rosstat, KSE Institute

Loss in real gross domestic product, in %



Source: International Monetary Fund, KSE Institute

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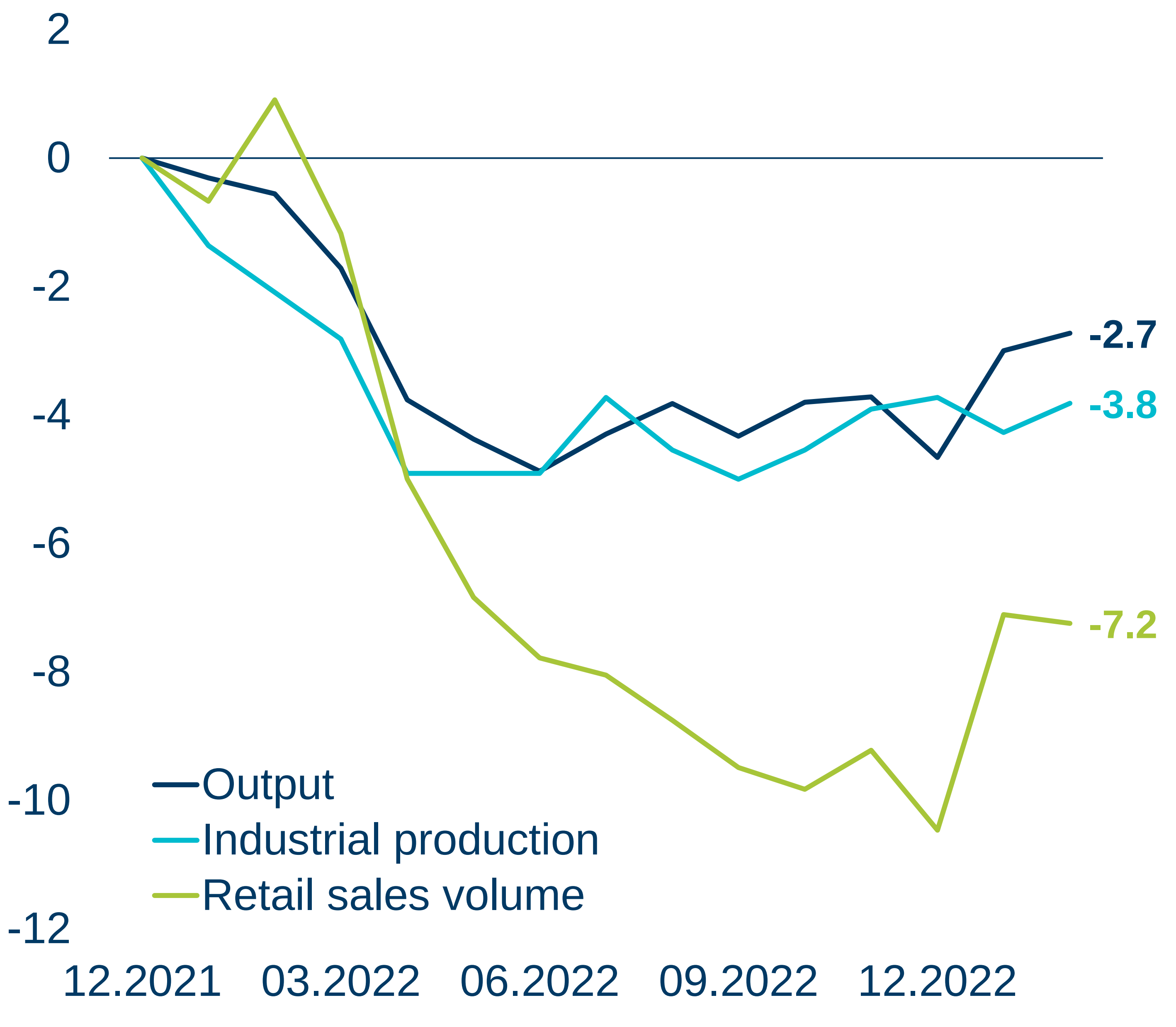
In some sectors, the effect of sanctions is clearly visible.

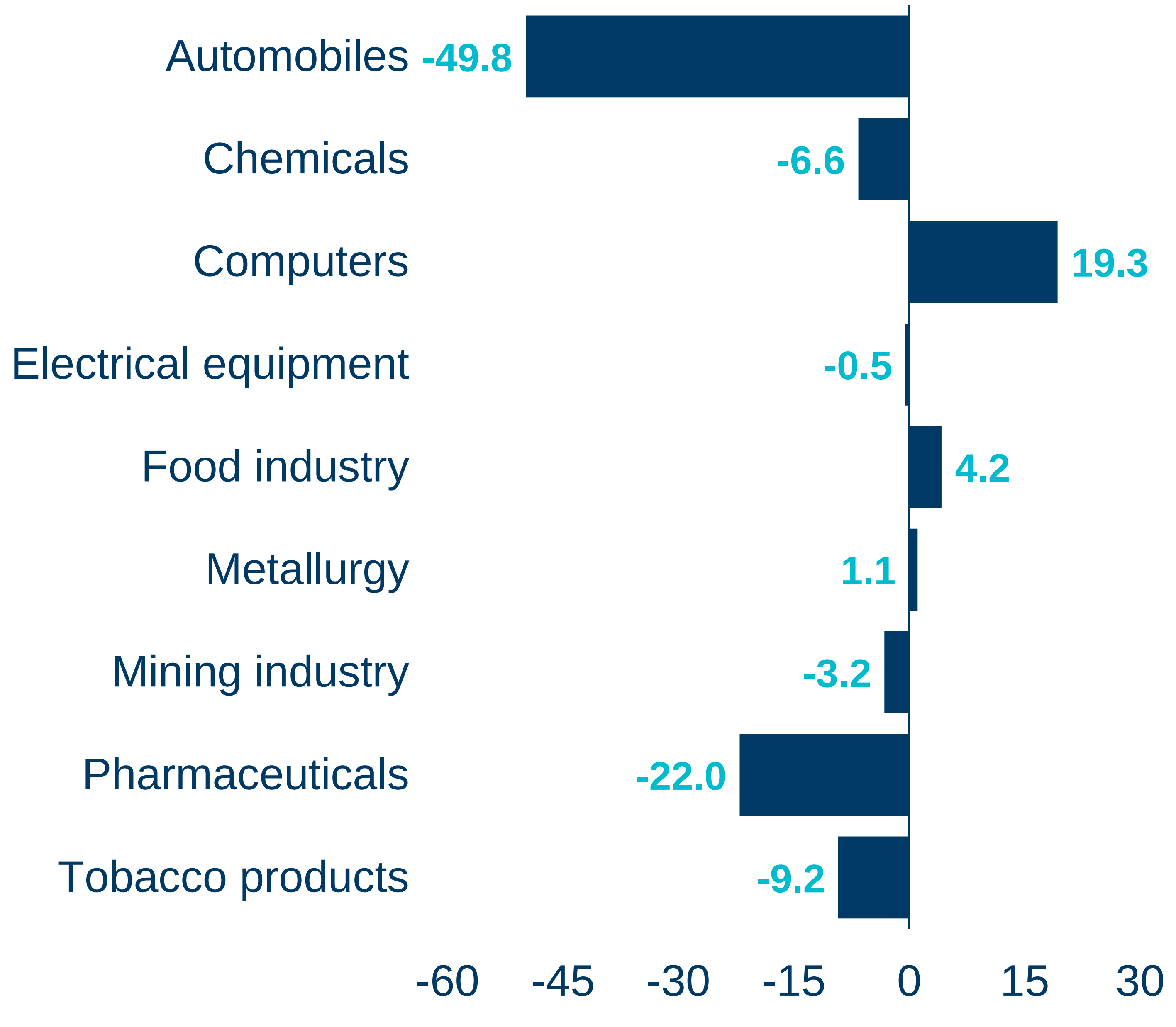
- High-frequency activity indicators point to noticeable and continued weaknesses in the Russian economy.
- Retail sales show a recovery in recent months, which is consistent with the bounce back in the services PMI.
- Sectoral performance differs considerably with car production and pharmaceuticals under the most pressure.

Activity indicators vs. December 2021, in %



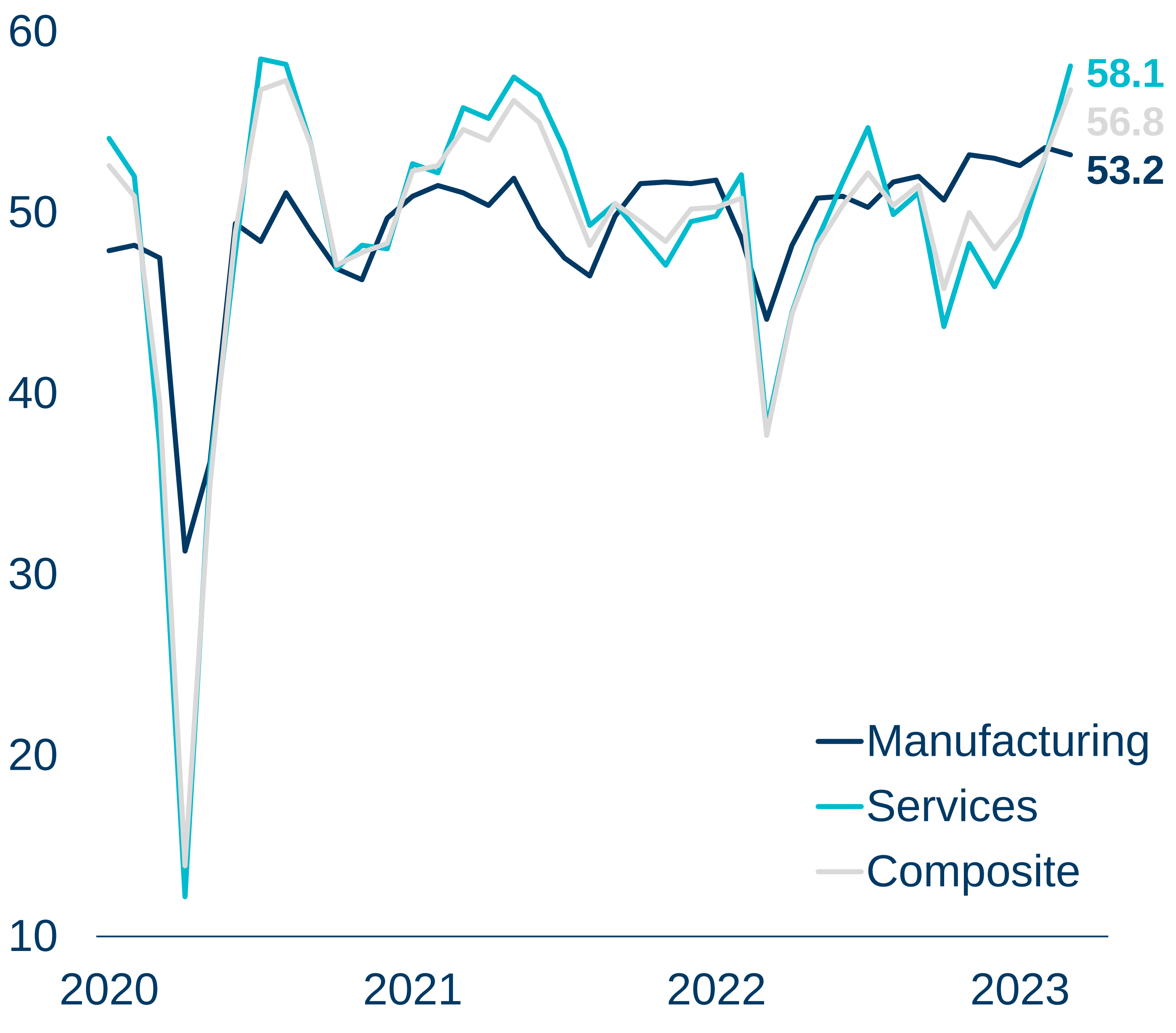
Source: Rosstat, KSE Institute

Sectoral production, in % year-over-year*



Source: Rosstat, KSE Institute *as of November 2022

PMIs, index (50+ = expansion)



Source: S&P Global, KSE Institute

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Government finances remain the primary area of macro concern.

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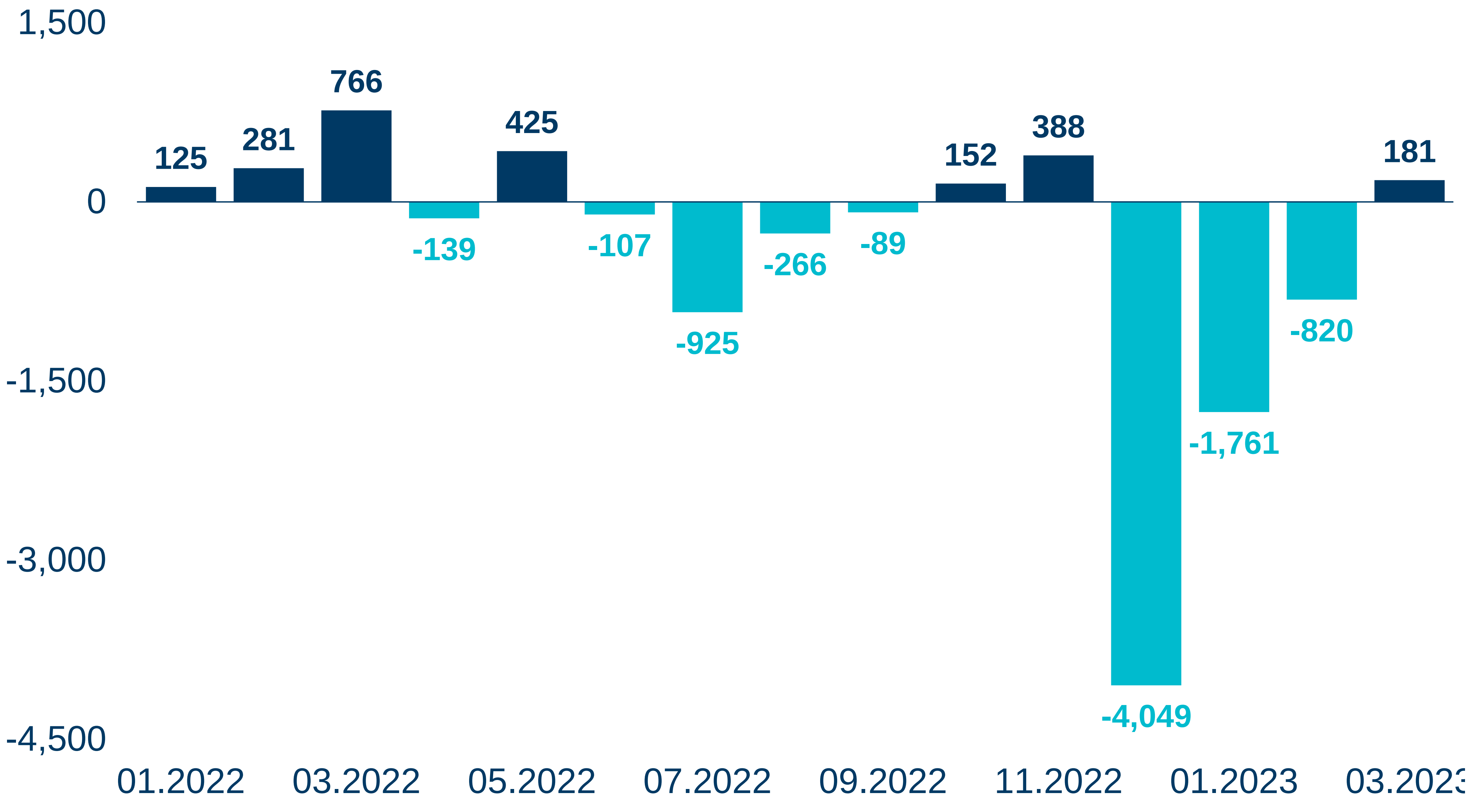
Fiscal picture continues to deteriorate in the first quarter of 2023.

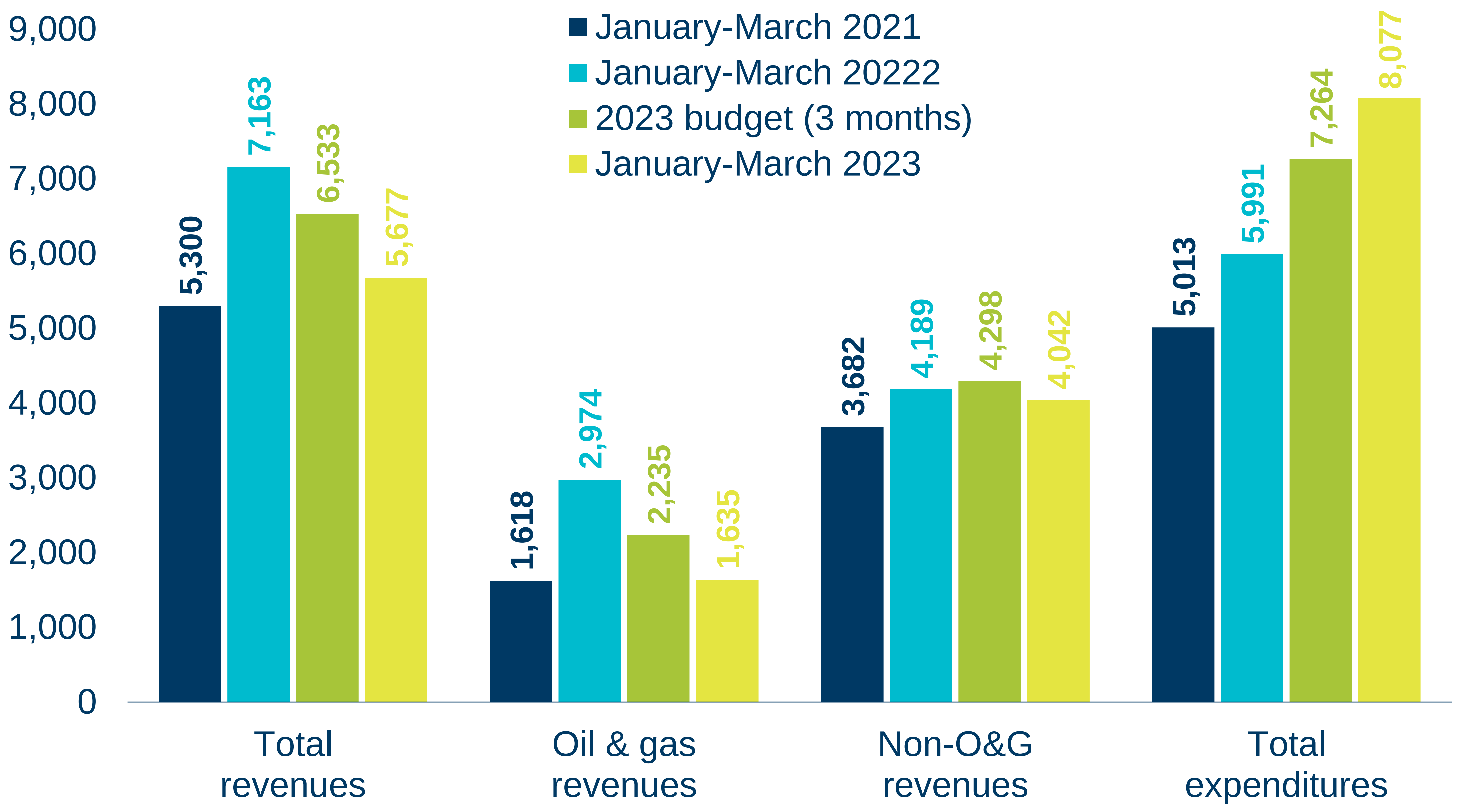
- Russia's Ministry of Finance reported a deficit of 2.4 trillion rubles in 2023Q1—or 82% of the full-year budget target.
- This comes on the heels of the largest single-month deficit on record in December of more than 4 trillion rubles.
- Key drivers are revenue underperformance—most notably oil and gas receipts—and elevated expenditures due to the war.

Federal government balance, in ruble billion



Source: Ministry of Finance, KSE Institute

Revenues and expenditures, in ruble billion

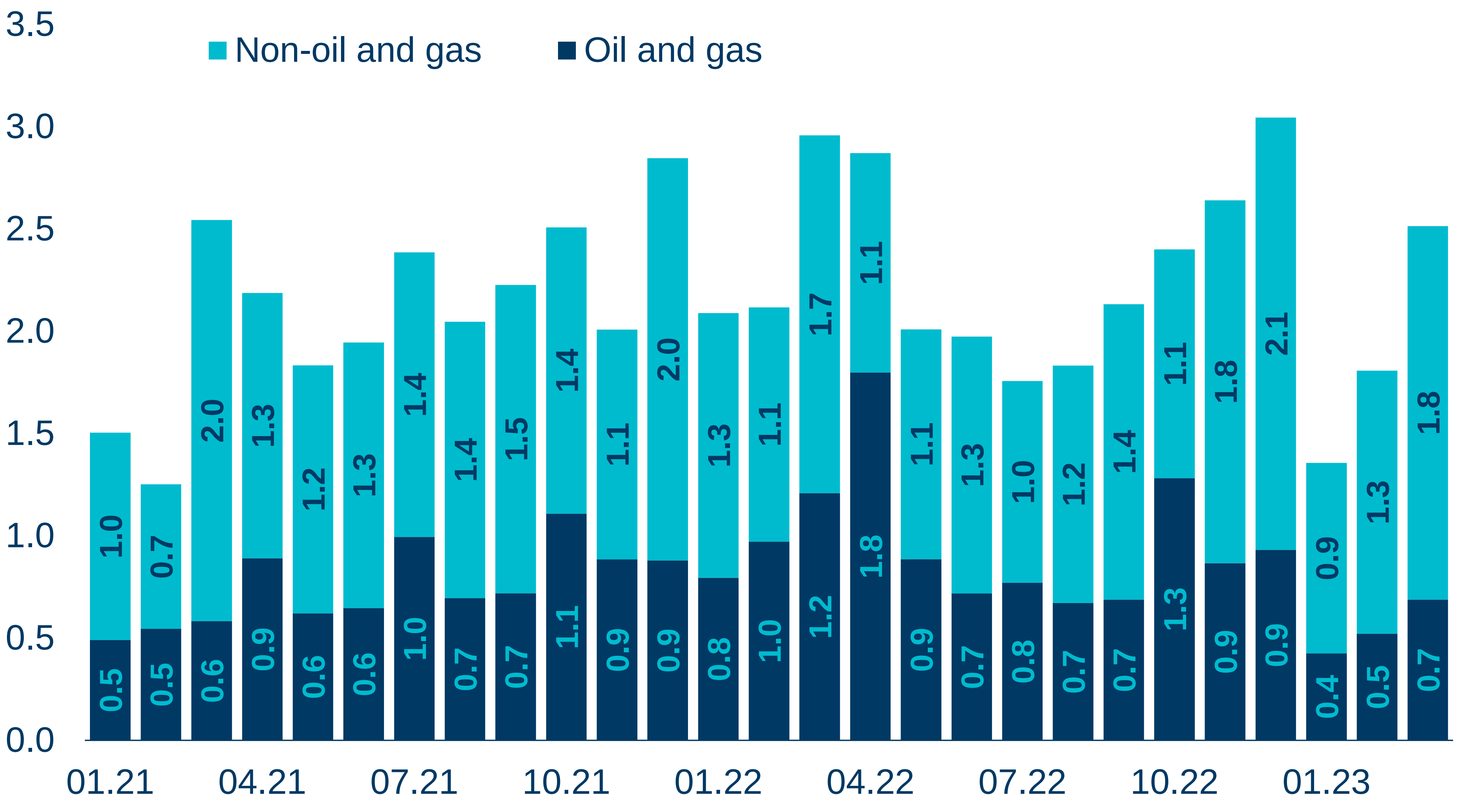


Source: Ministry of Finance, KSE Institute

The drop in oil and gas revenues is prompting changes to the tax code.

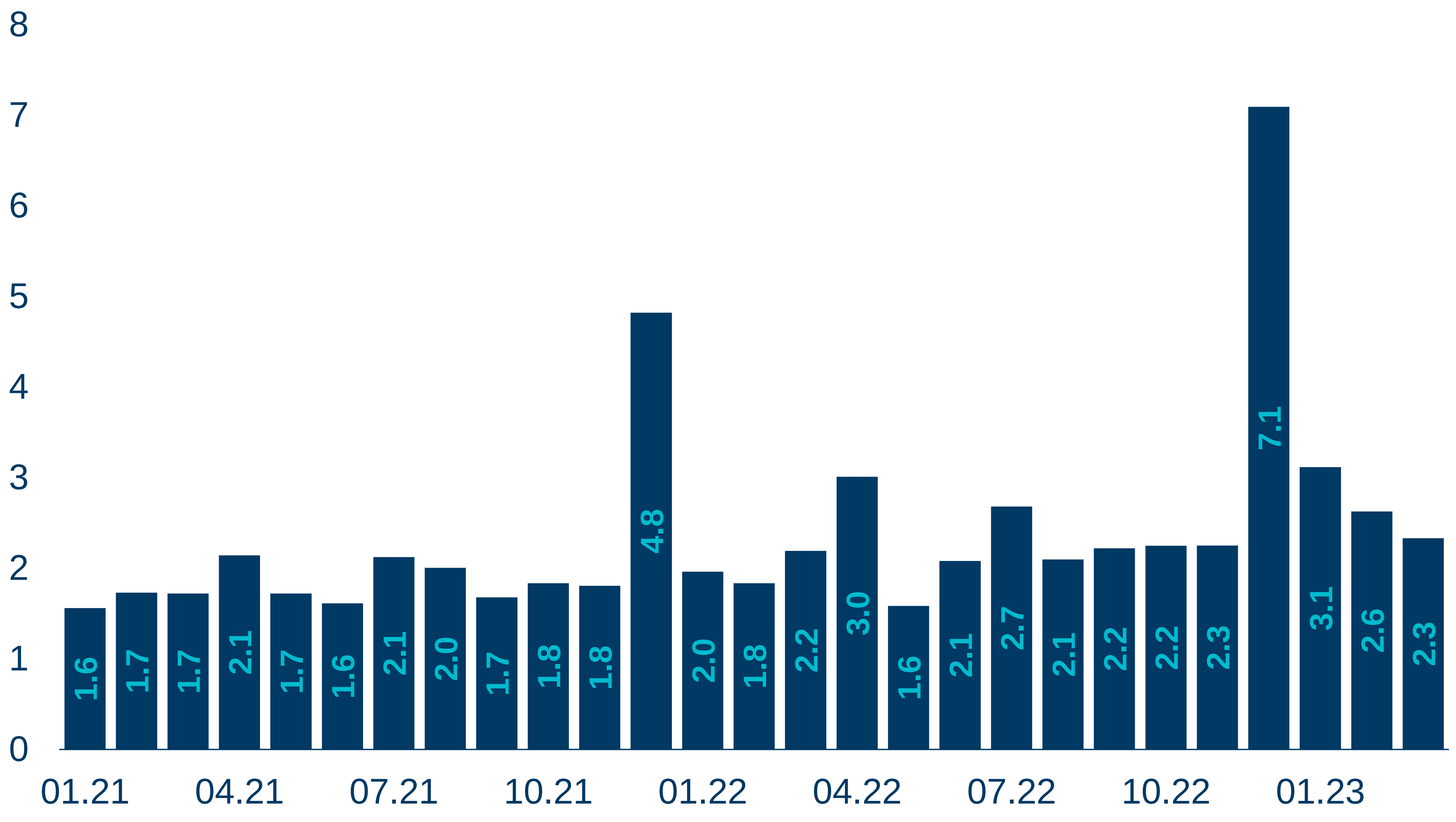
- Oil and gas revenues over January-March came in 45% below their level in the corresponding months of 2022.
- Russian authorities are changing the benchmark tax oil as large discounts for Urals heavily weighed on tax receipts.
- However, we believe that this will only result in 600 billion rubles in additional revenues—not enough by a long shot.

Federal budget revenues, in ruble trillion



Source: Ministry of Finance, KSE Institute

Federal budget expenditures, in ruble billion

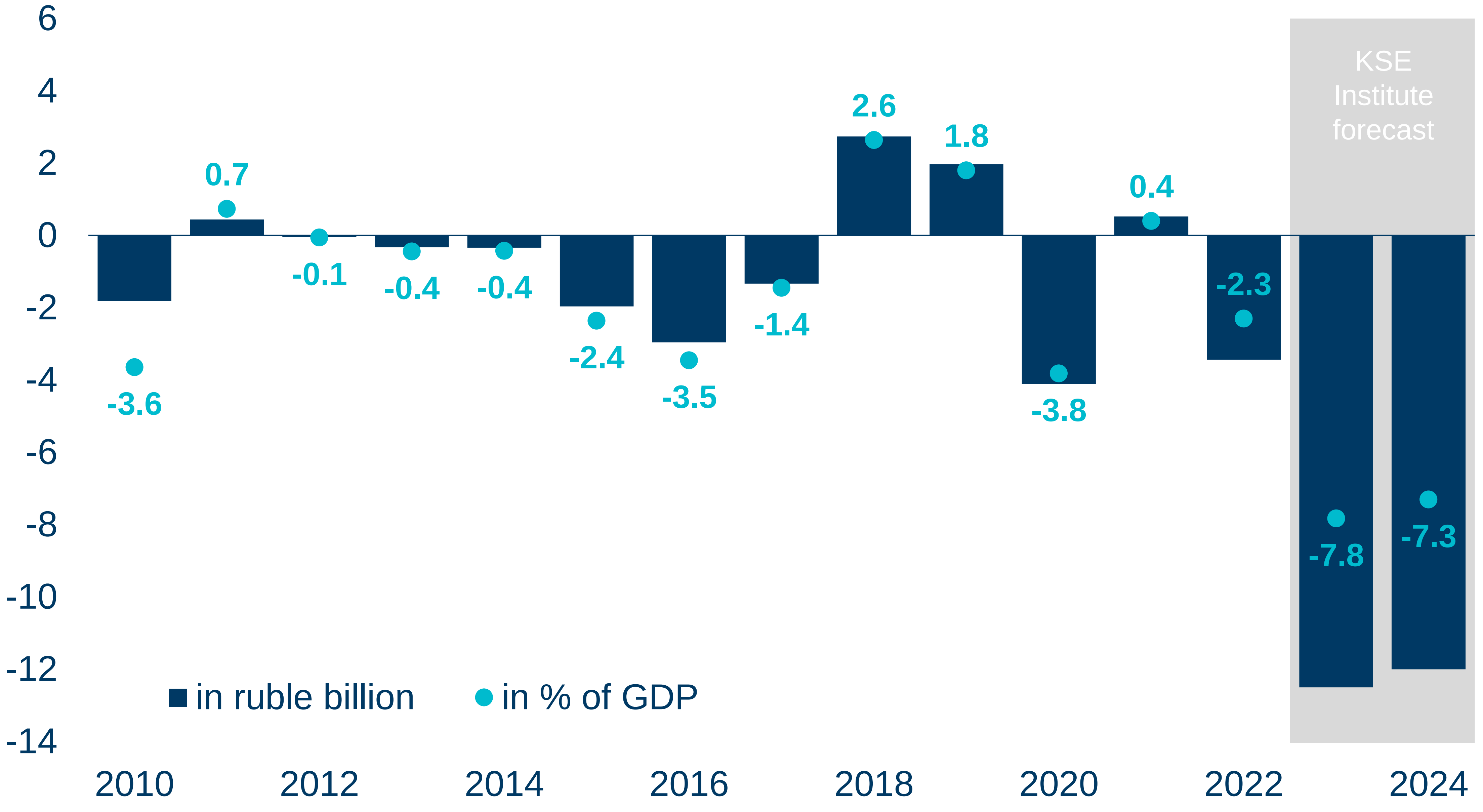


Source: Ministry of Finance, KSE Institute

Russia is facing a deficit 3-4 times as large as last year.

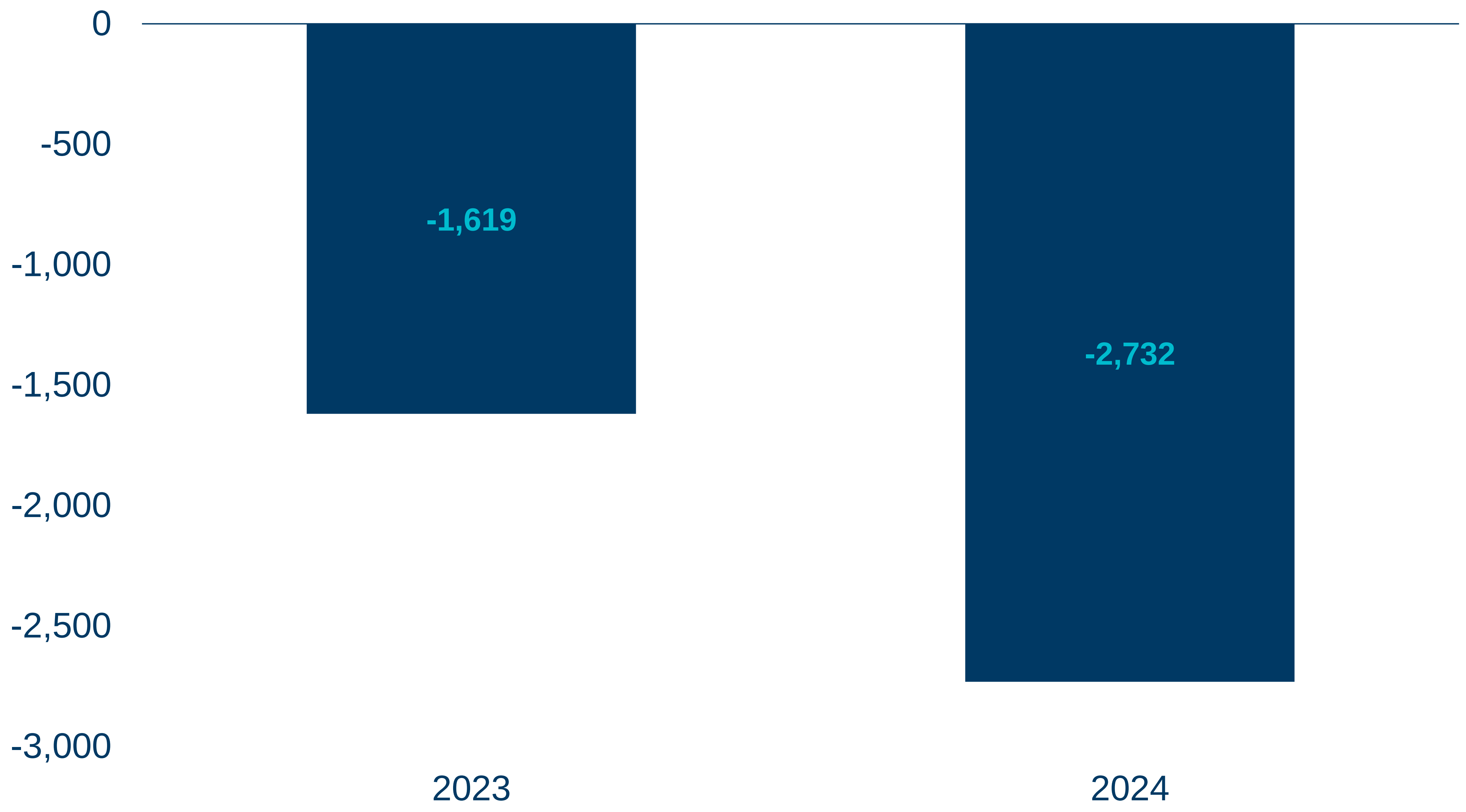
- Despite an improvement in March, we maintain our deficit forecast for 2023 at ~12.5 trillion rubles (or 7-8% of GDP).
- This assumes revenues 20% below and expenditures 15% above what was planned in the original 2023 budget.
- We believe that higher revenues (2 trillion rubles in the final days of March) cannot be maintained in the coming months.

Federal budget balance, in ruble trillion and % GDP



Source: Ministry of Finance, KSE Institute

Oil and gas revenues vs. baseline scenario, in ruble billion*



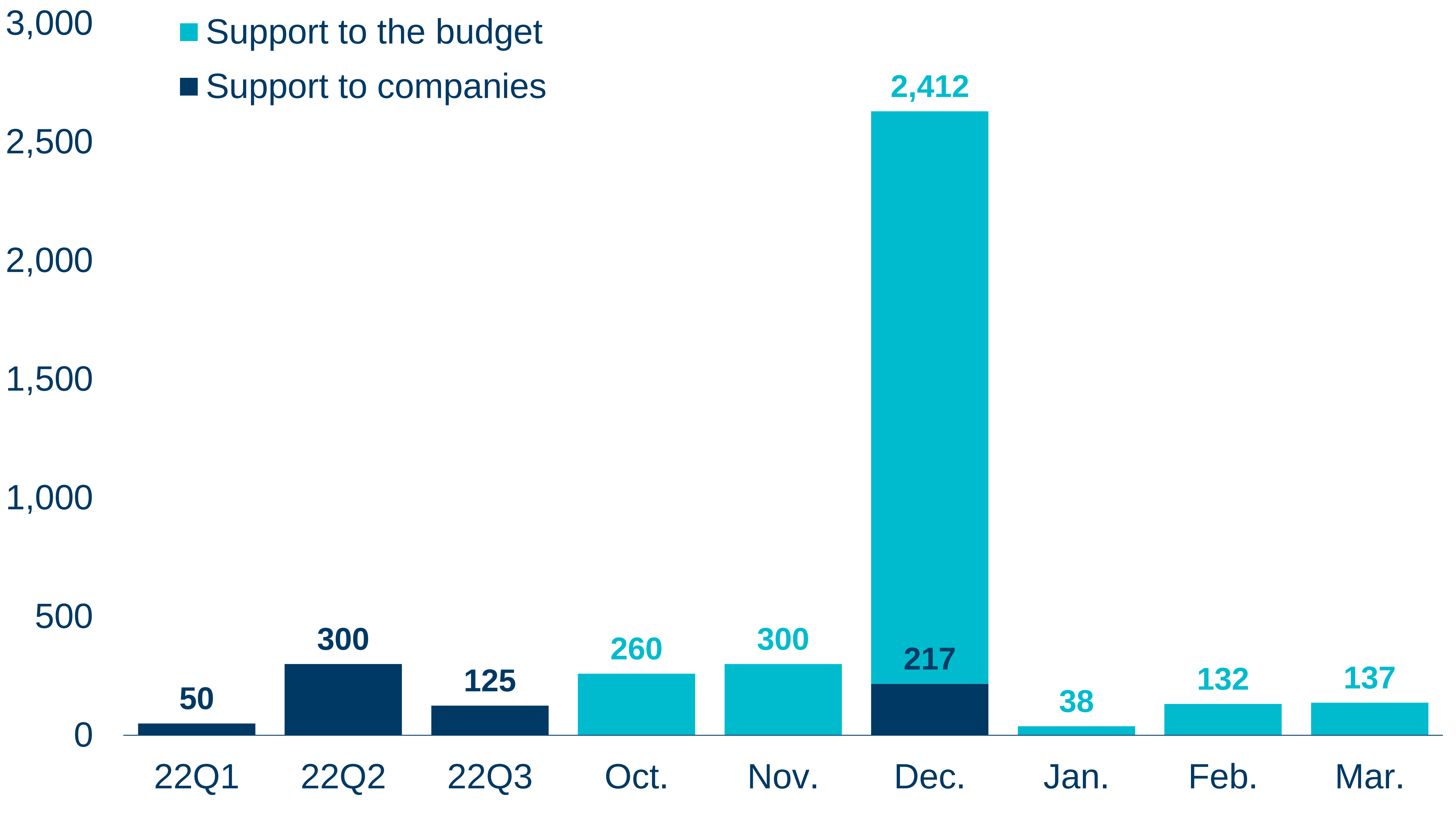
Source: KSE Institute *see scenario outlined here

Rising financing needs eat up important buffers and drive-up debt service costs.

Russia relied extensively on the NWF for budgetary support in 2022.

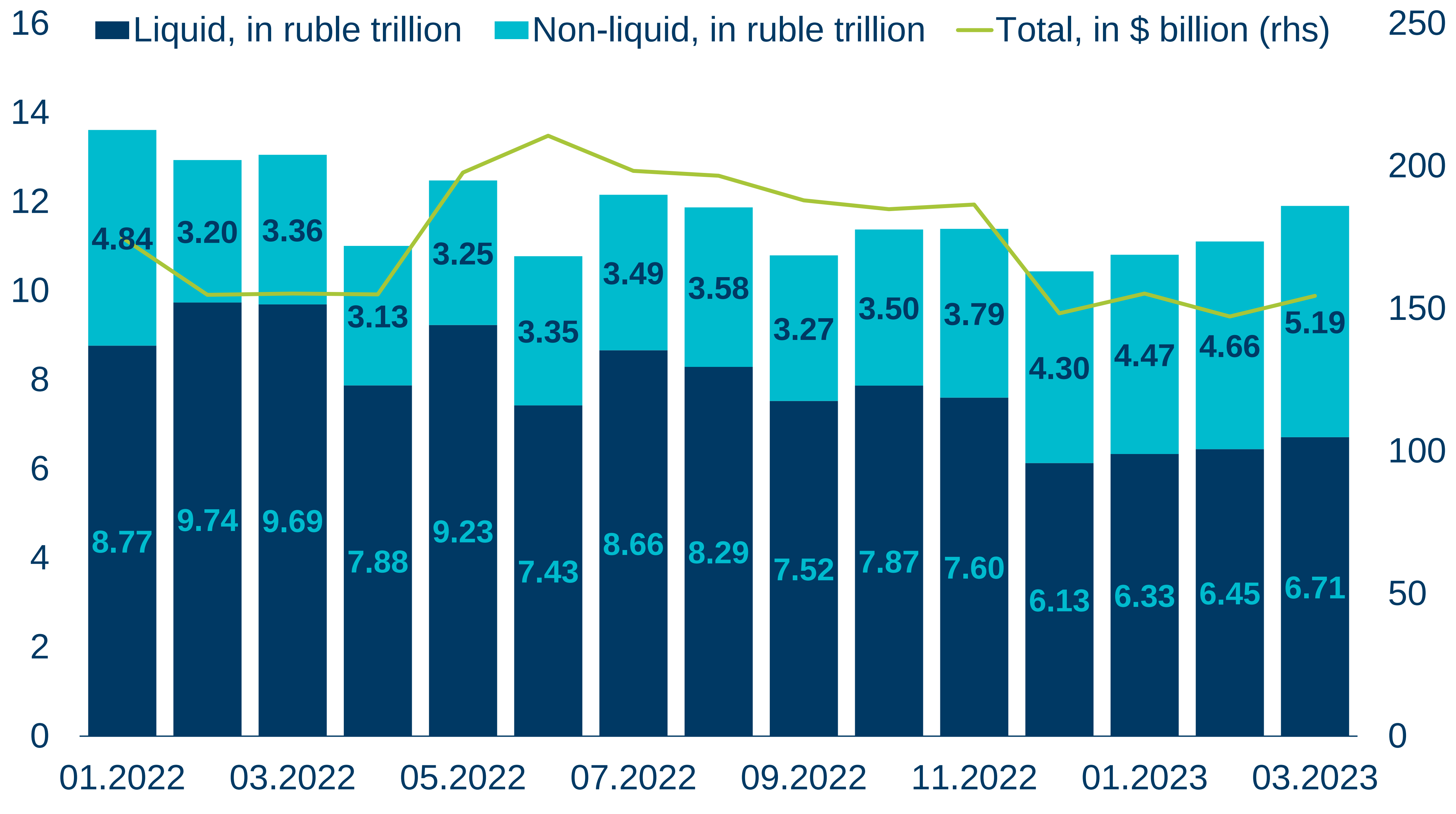
- Russia has spent 4.0 trillion rubles (~$55 billion) to support the budget and struggling companies since the start of the war.
- As a result, NWF assets dropped by 1.7 trillion rubles to 11.9 trillion rubles ($154.5 billion or 7.9% of GDP).
- Importantly, roughly 43% of the remaining holdings are not liquid and cannot easily be repurposed for the budget.

Utilization of the NWF, in ruble billion



Source: Ministry of Finance, KSE Institute

Assets of the NWF, in ruble billion and U.S. dollar billion



Source: Ministry of Finance, KSE Institute

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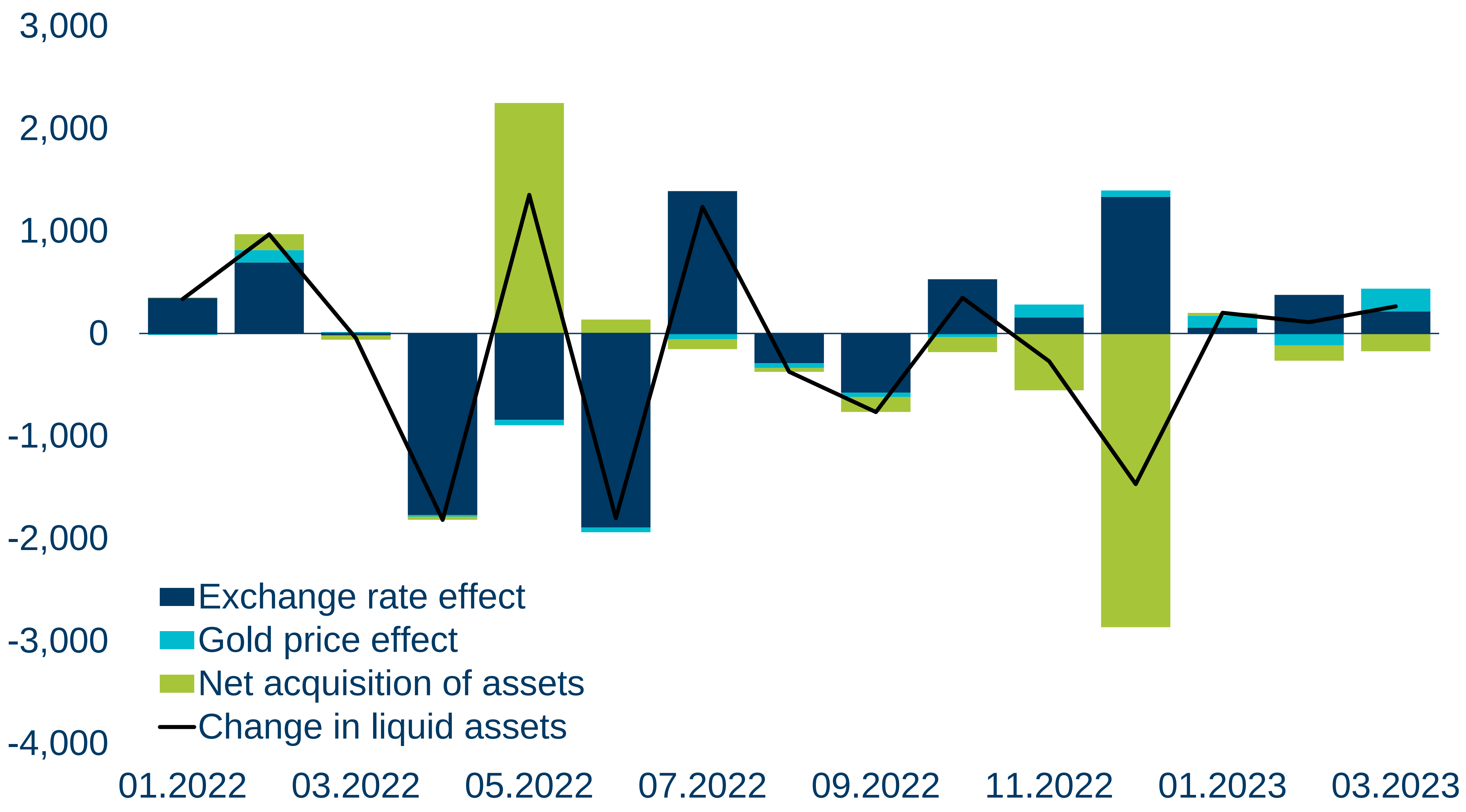
NWF is currently benefitting from valuation effects.

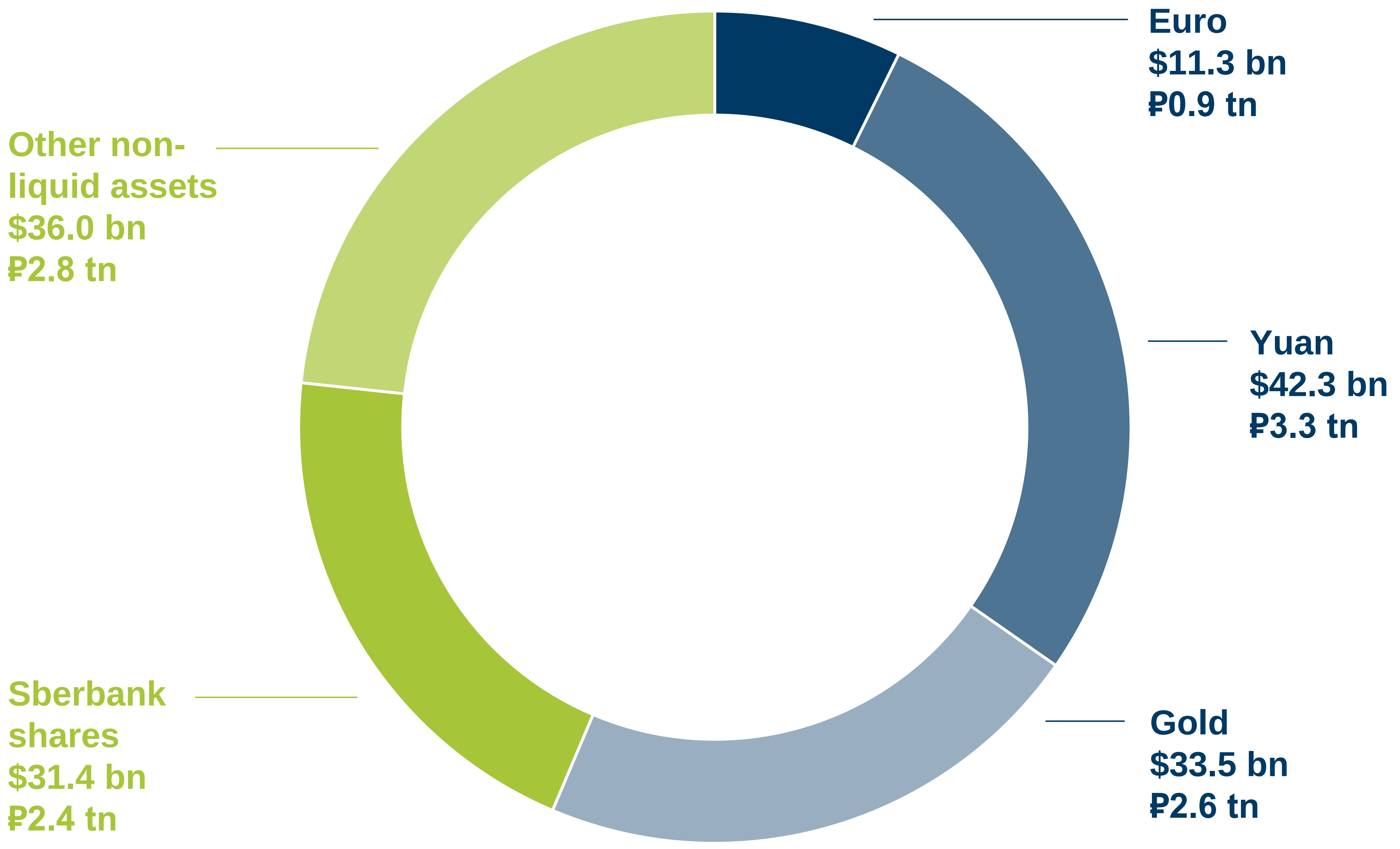
- The increase in total funds in Q1 is a result of higher gold prices, a weaker U.S. dollar, and Sberbank share gains.
- Authorities sold some additional gold and yuan in 2023Q1 and widening budget deficits will require more of the same.
- We maintain our view that the National Welfare Fund's liquid portion will be largely used up by the end of this year.

Change in liquid NWF assets, in U.S. dollar billion*



Source: Ministry of Finance, KSE Institute *based on market exchange rates/prices

Composition of NWF assets as of April 1, 2023*



Source: Ministry of Finance, KSE Institute *based on market exchange rates/prices

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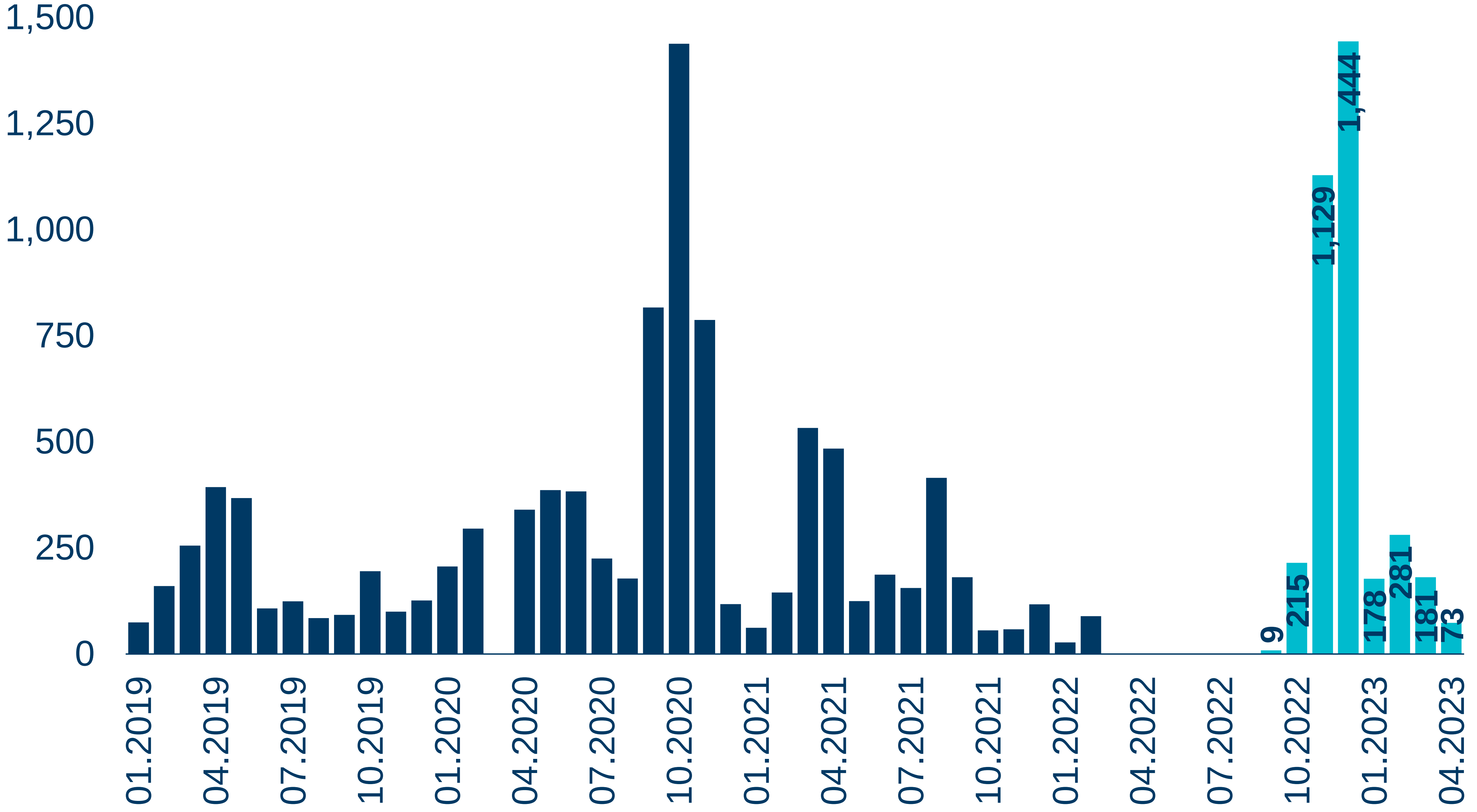
Russia will have to rely heavily on borrowing in the domestic market.

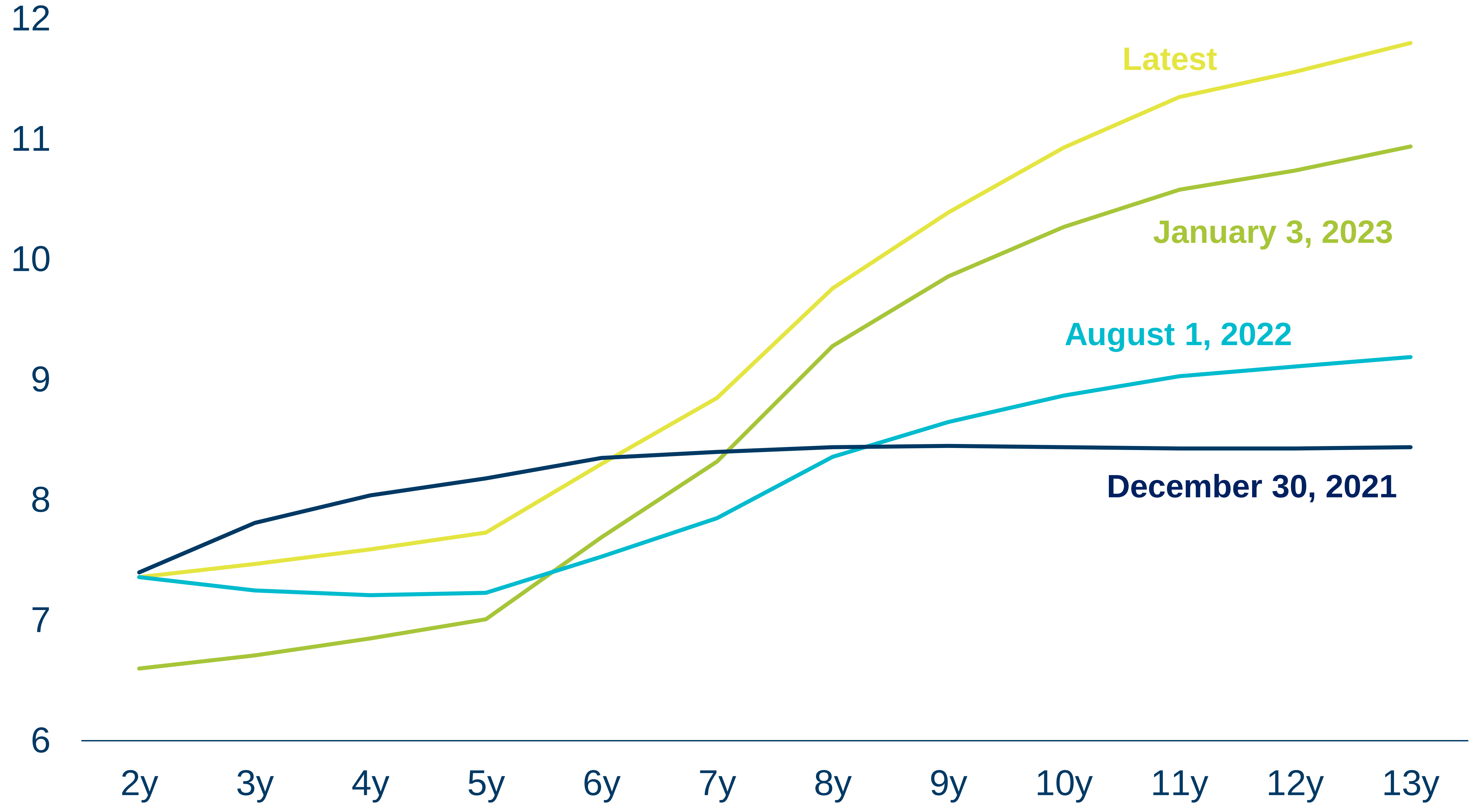
- In addition to NWF use, the Ministry of Finance issued a record 2.8 trillion rubles (~$47 billion) in OFZ in 2022Q4 alone.
- Issuance in Q1 was lower, but wider deficits will leave no other option but to rely on domestic borrowing in coming months.
- Rising OFZ yields show that this will not be an easy undertaking—in fact, recent auctions displayed signs of trouble.

New domestic debt (OFZ) issuance, in ruble billion



Source: Ministry of Finance, KSE Institute

OFZ yield curves, in %

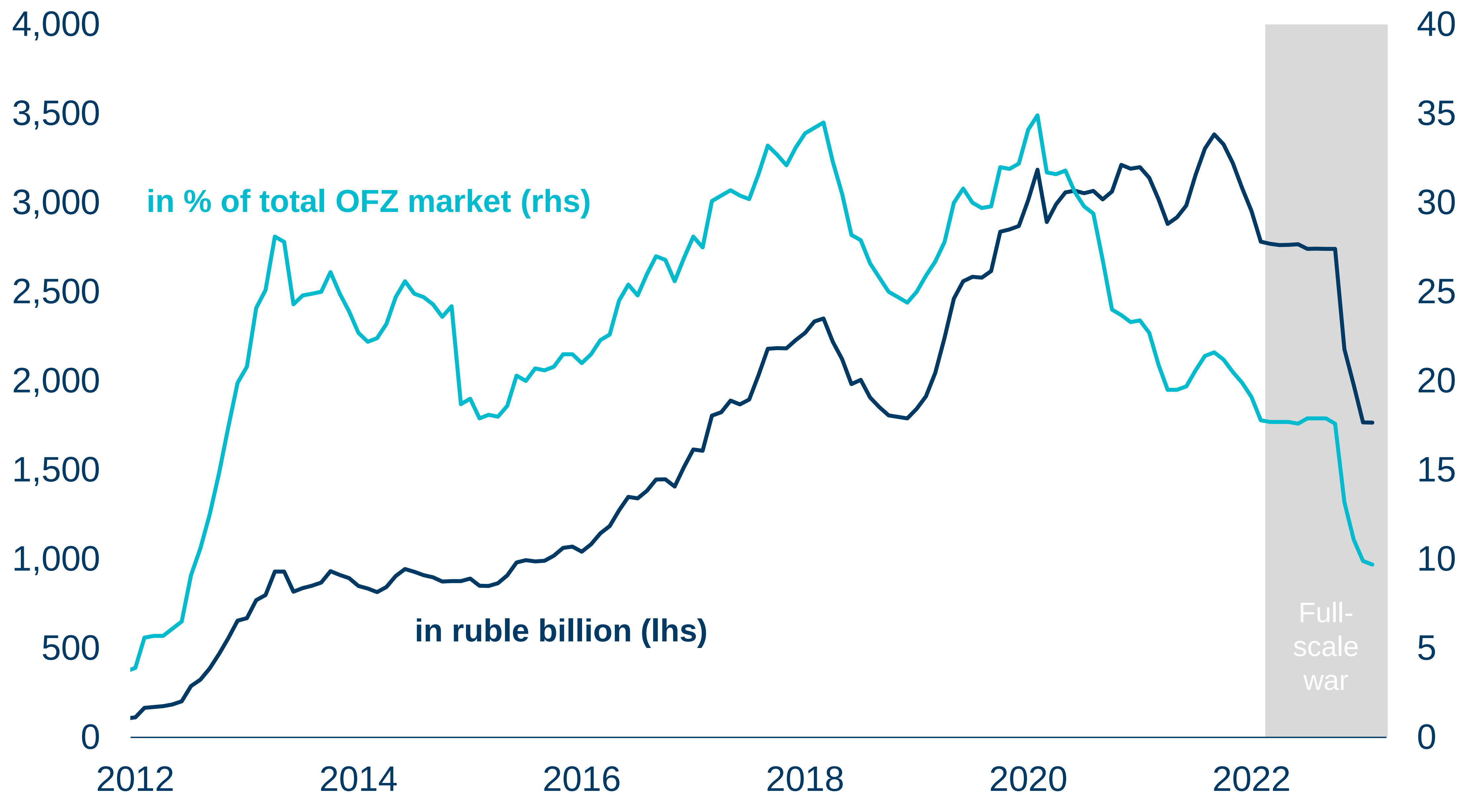


Source: Bank of Russia, KSE Institute

The banking system will have to bear most of the burden.

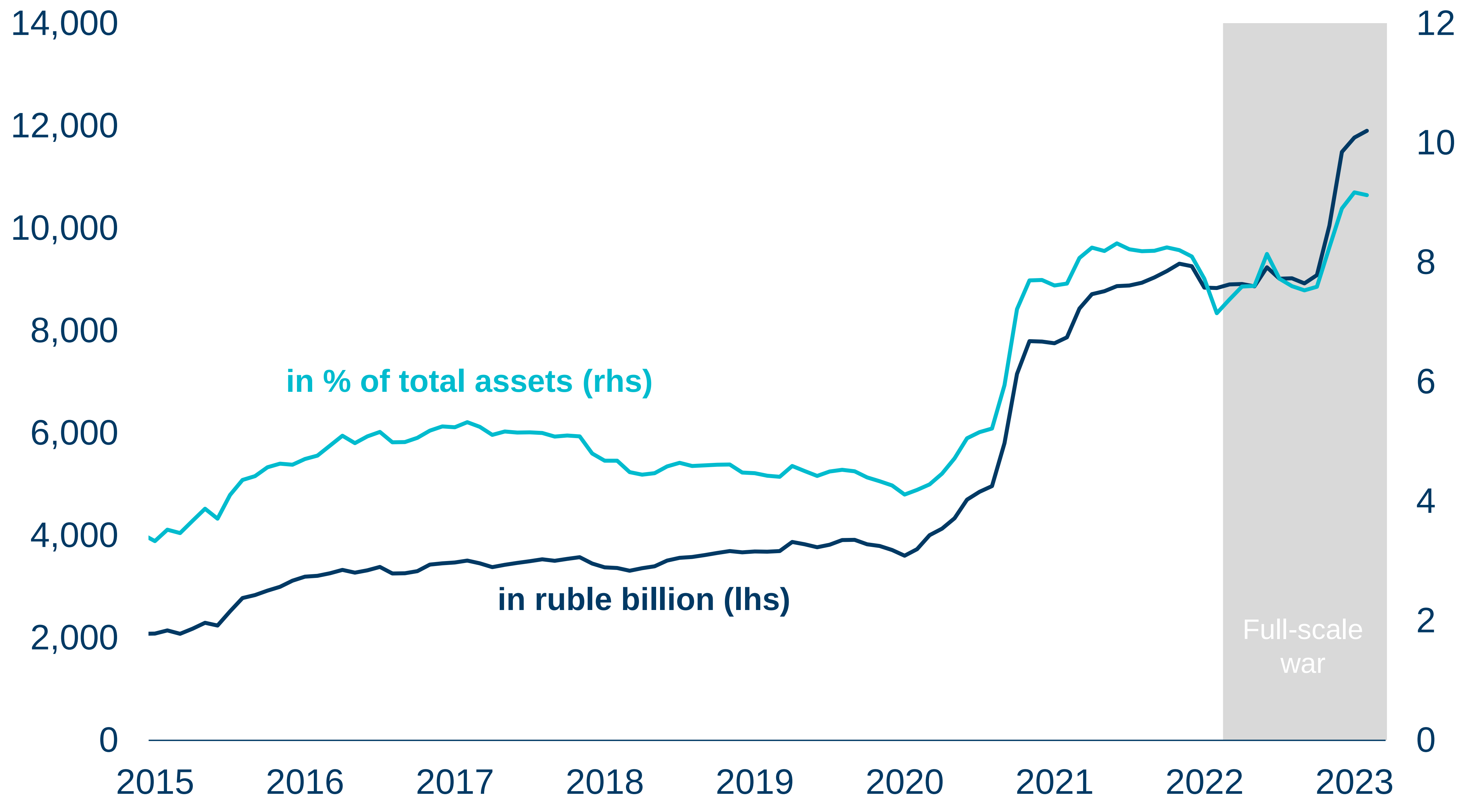
- Foreigners have largely disengaged from the Russian sovereign debt market since the start of the war.
- Following a period with little movement, remaining holdings dropped sharply in November-January (by ~35%).
- With foreigners no longer participating, domestic banks will need to bear even more of the financing burden.

Non-resident OFZ holdings



Source: Bank of Russia, KSE Institute

Credit institutions OFZ holdings

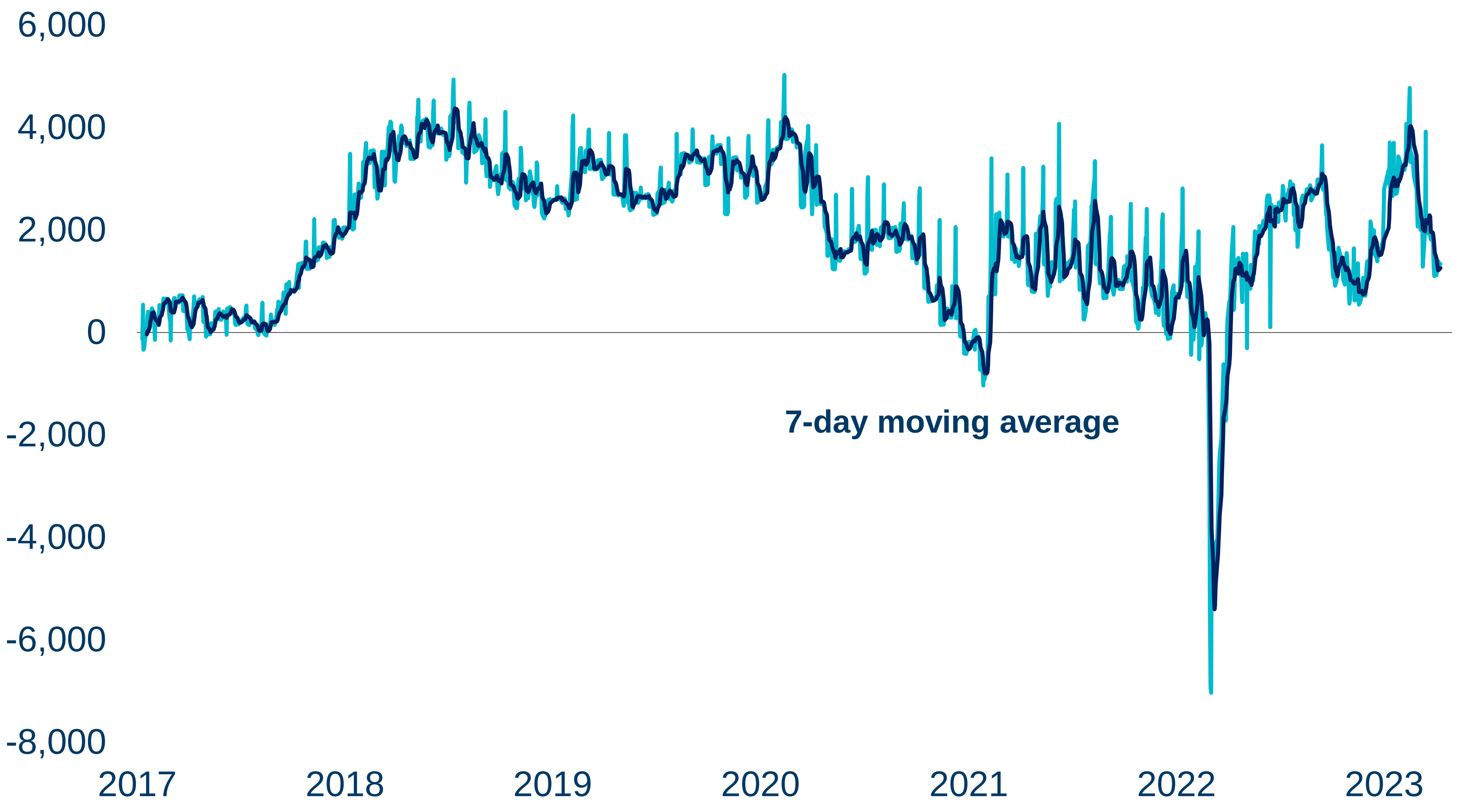


Source: Bank of Russia, KSE Institute

Financial sector sanctions did not trigger a systemic crisis.

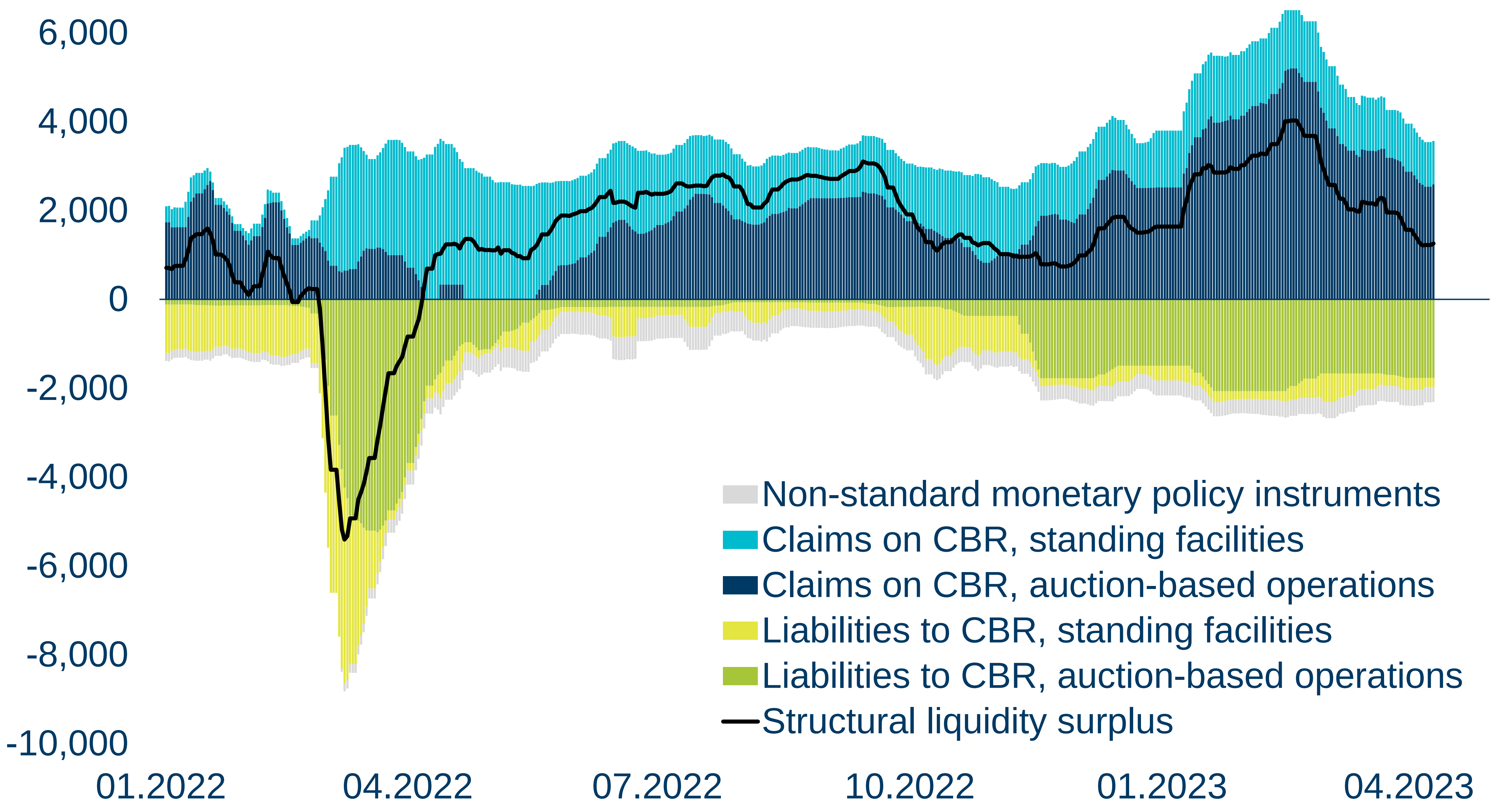
- Liquidity conditions recovered quickly after the initial shock from the war and the imposition of sanctions.
- However, a closer look at the composition of the structural surplus points to stress in the interbank market.
- Additional financial sanctions could trigger another stress episode – at a time of reduce policy space for the CBR.

Banking system structural liquidity surplus, in ruble billion



Source: Bank of Russia, KSE Institute

Composition of structural liquidity surplus, in ruble billion

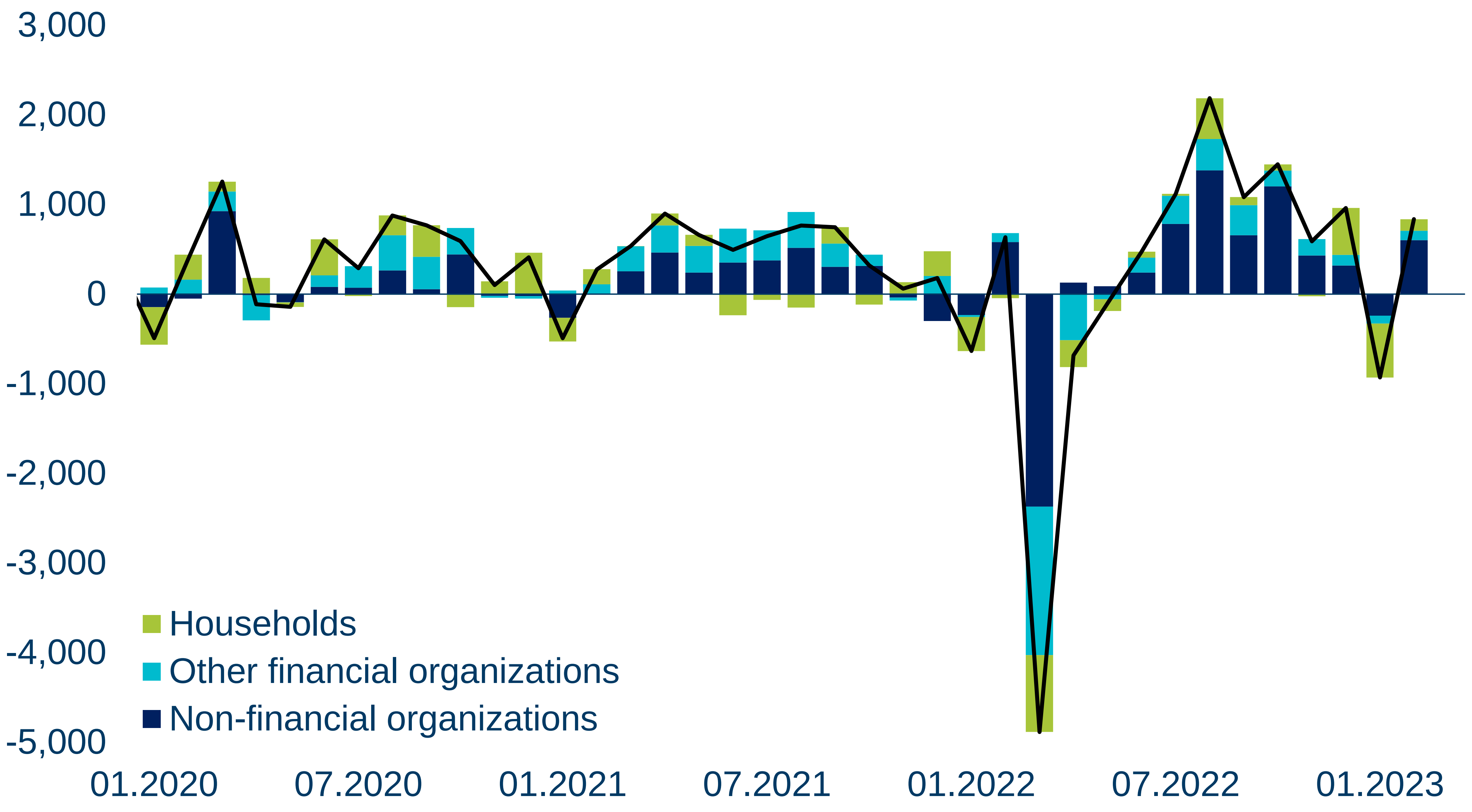


Source: Bank of Russia, KSE Institute

Robust private sector credit and no spill-overs into the real economy.

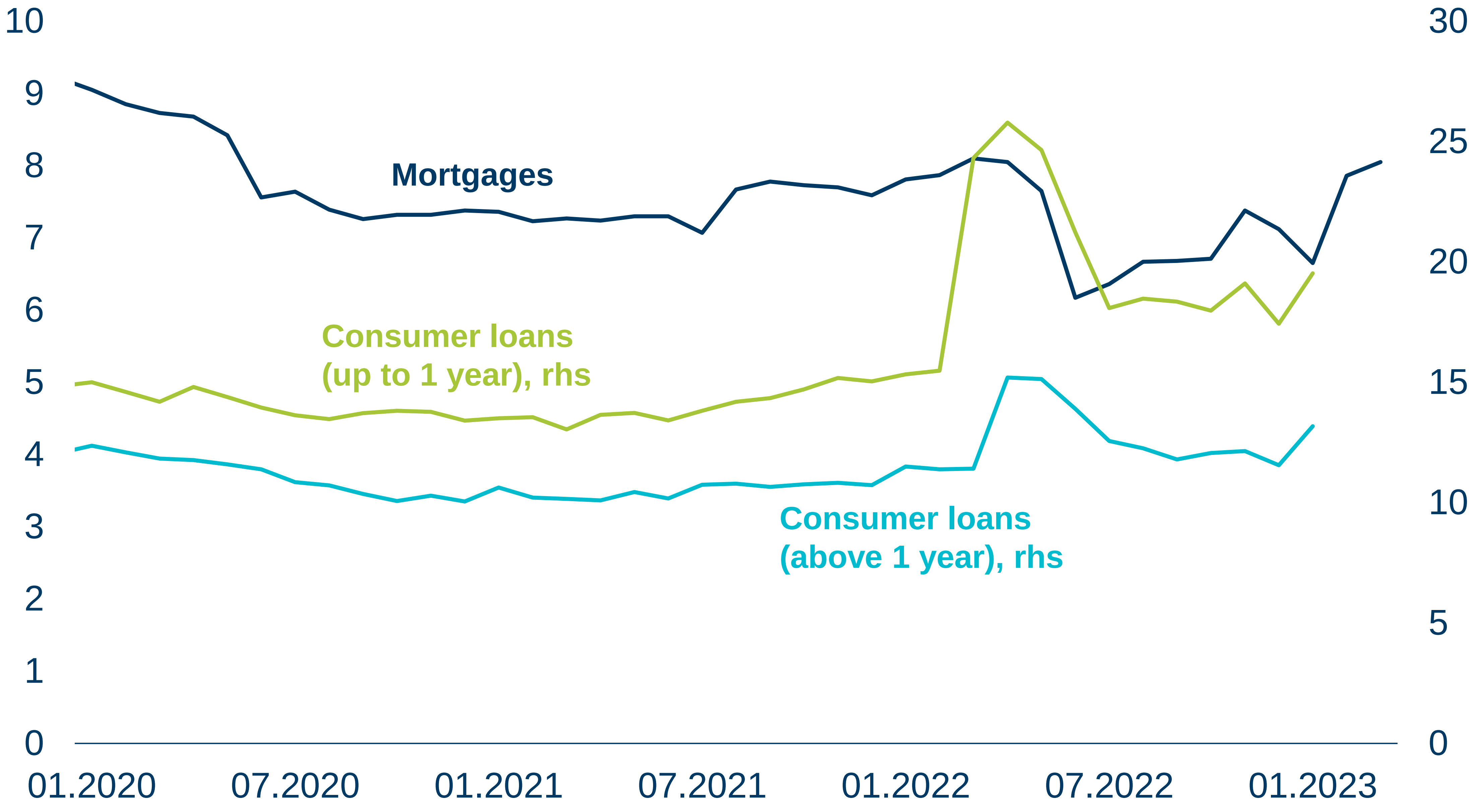
- Due to the provision of sufficient liquidity by the CBR, banks continue to be able to provide the private sector with credit.
- This is the main reasons for the Russian economy's outperformance of initial expectations in 2022.
- Rising interest rates on rate-sensitive credit types such as mortgages and consumer loans show underlying vulnerabilities.

New ruble-denominated credit, in 2020 ruble billion*



Source: Bank of Russia, KSE Institute *deflated using CPI

Average weighted interest rates, in %

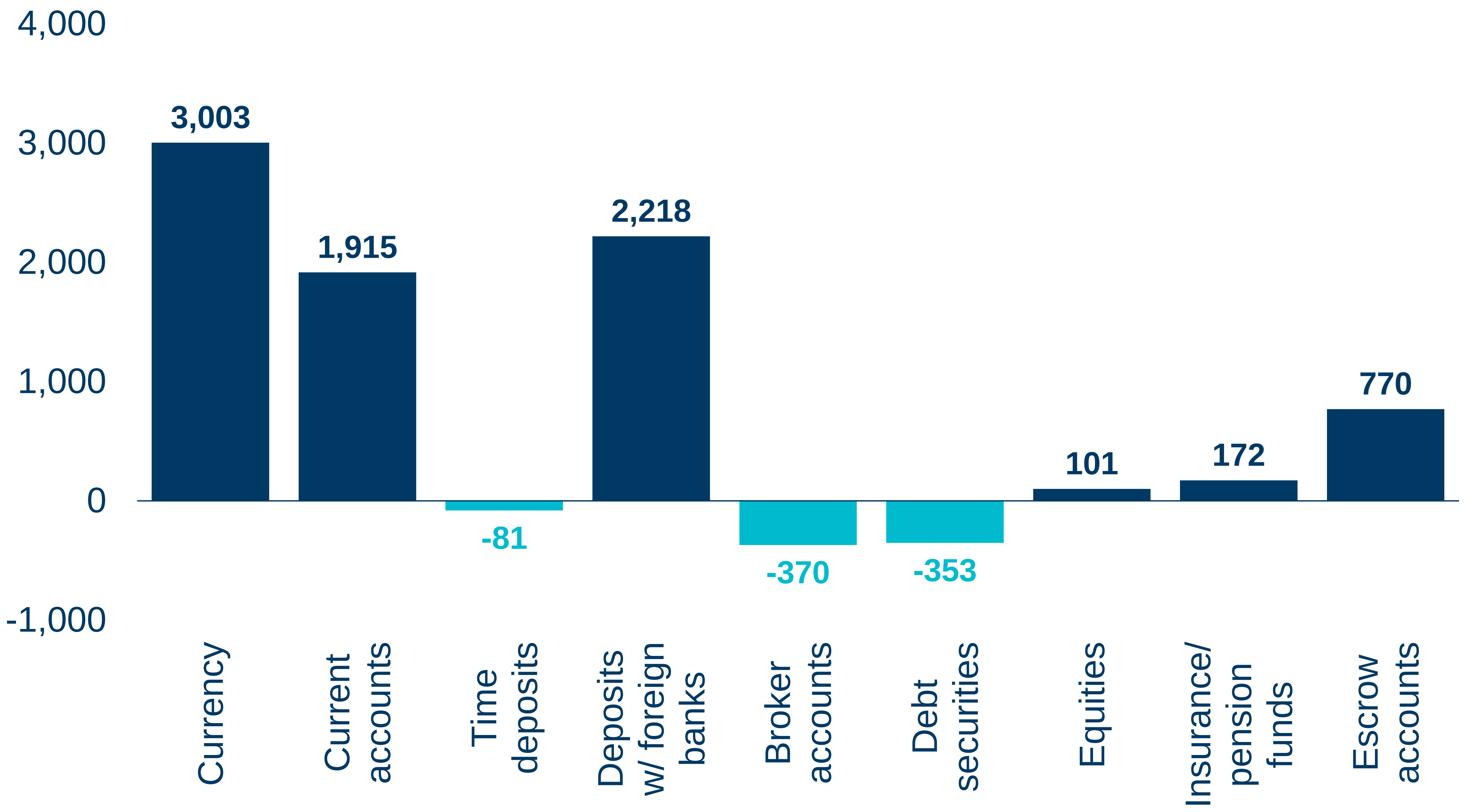


Source: Bank of Russia, KSE Institute

Underlying vulnerabilities remain and could resurface quickly.

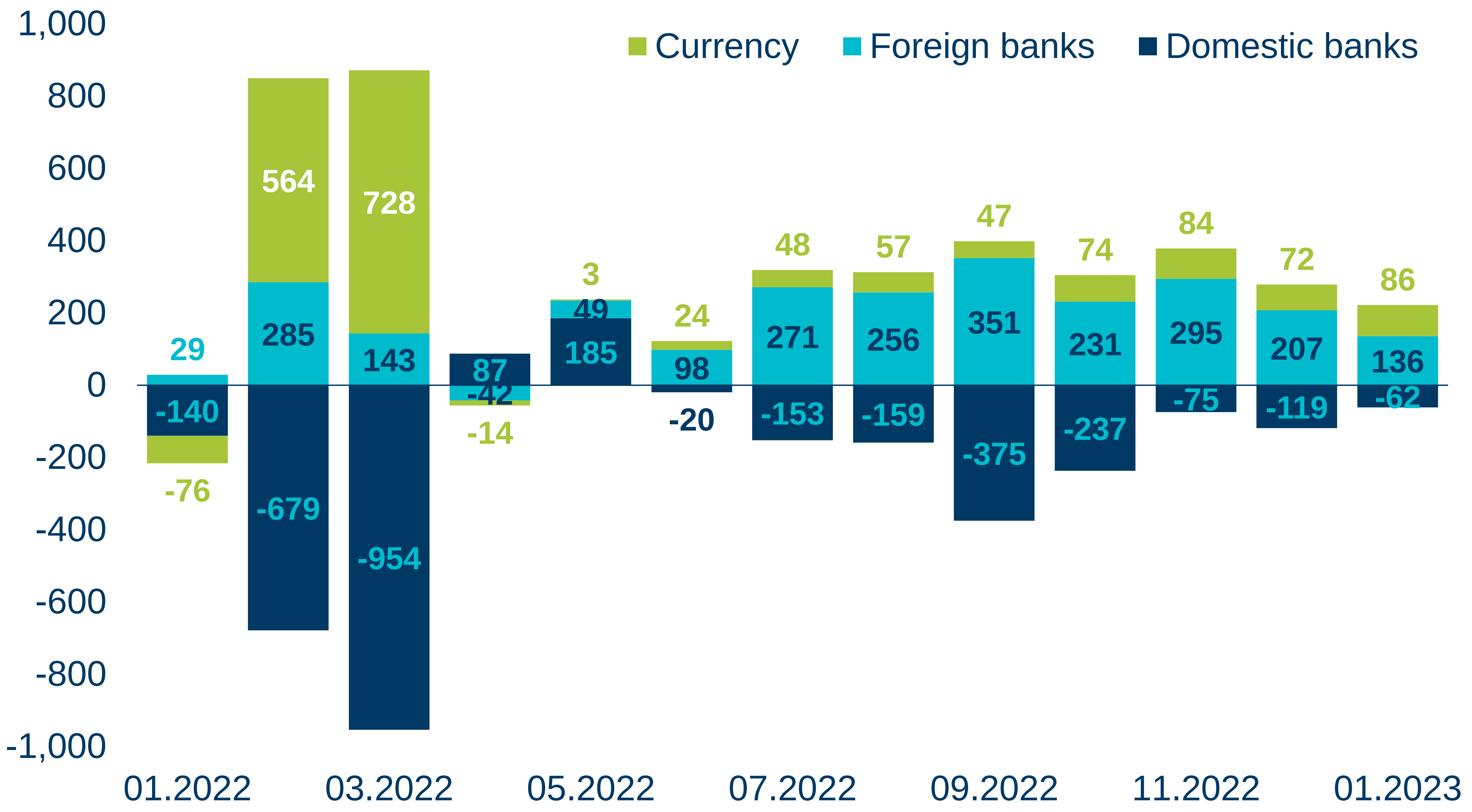
- While a systemic financial crisis was avoided, clear signs of vulnerabilities exist, including household asset movements.
- For instance, households moved funds from longer-term investments to cash holdings, current accounts, and foreign banks.
- As in previous crises, foreign currency was pulled from domestic banks—at the start of the war and surrounding mobilization.

Household assets since the start of the war, in ruble billion



Source: Bank of Russia, KSE Institute

Foreign currency cash and deposits, in ruble billion



Source: Bank of Russia, KSE Institute

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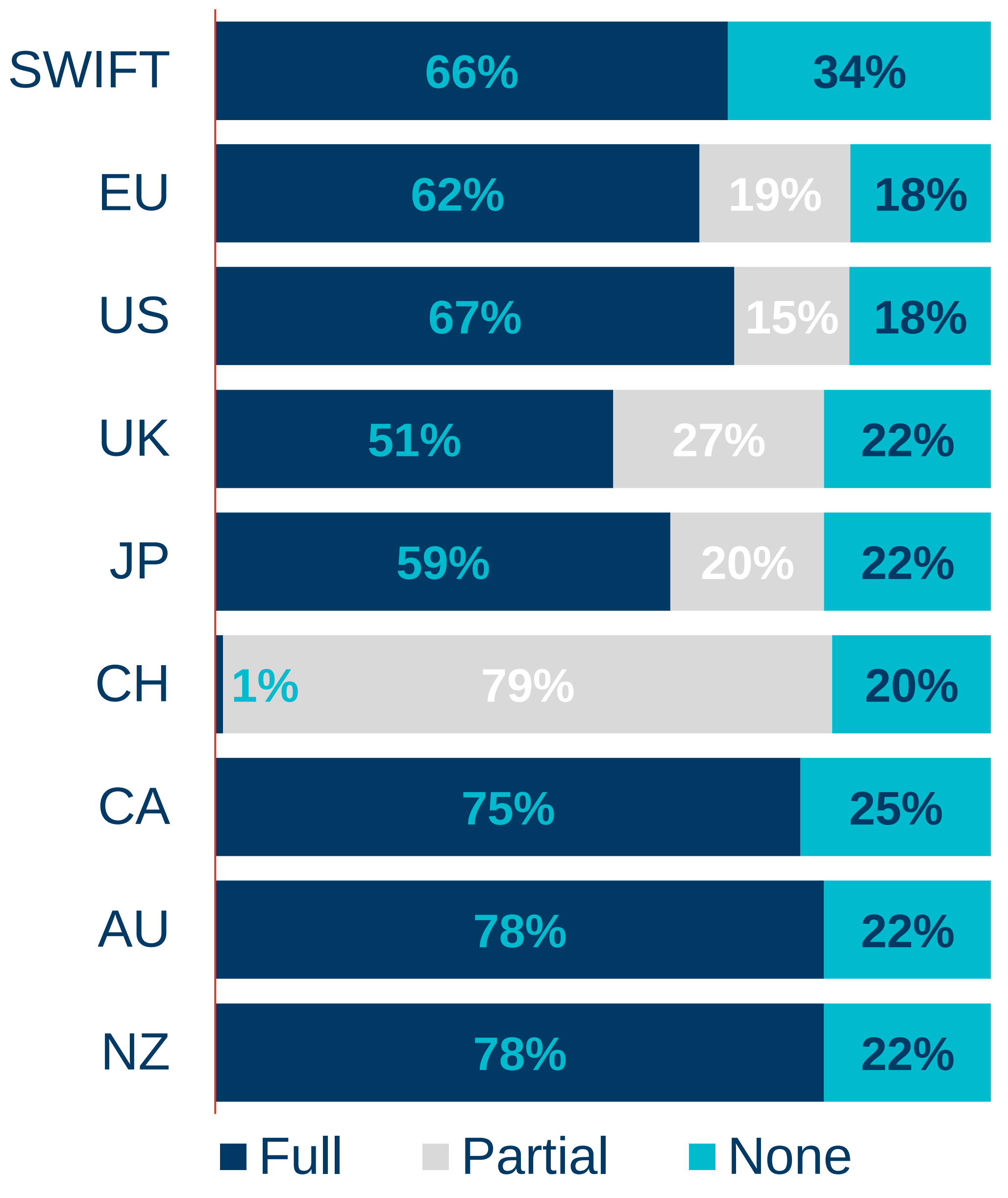
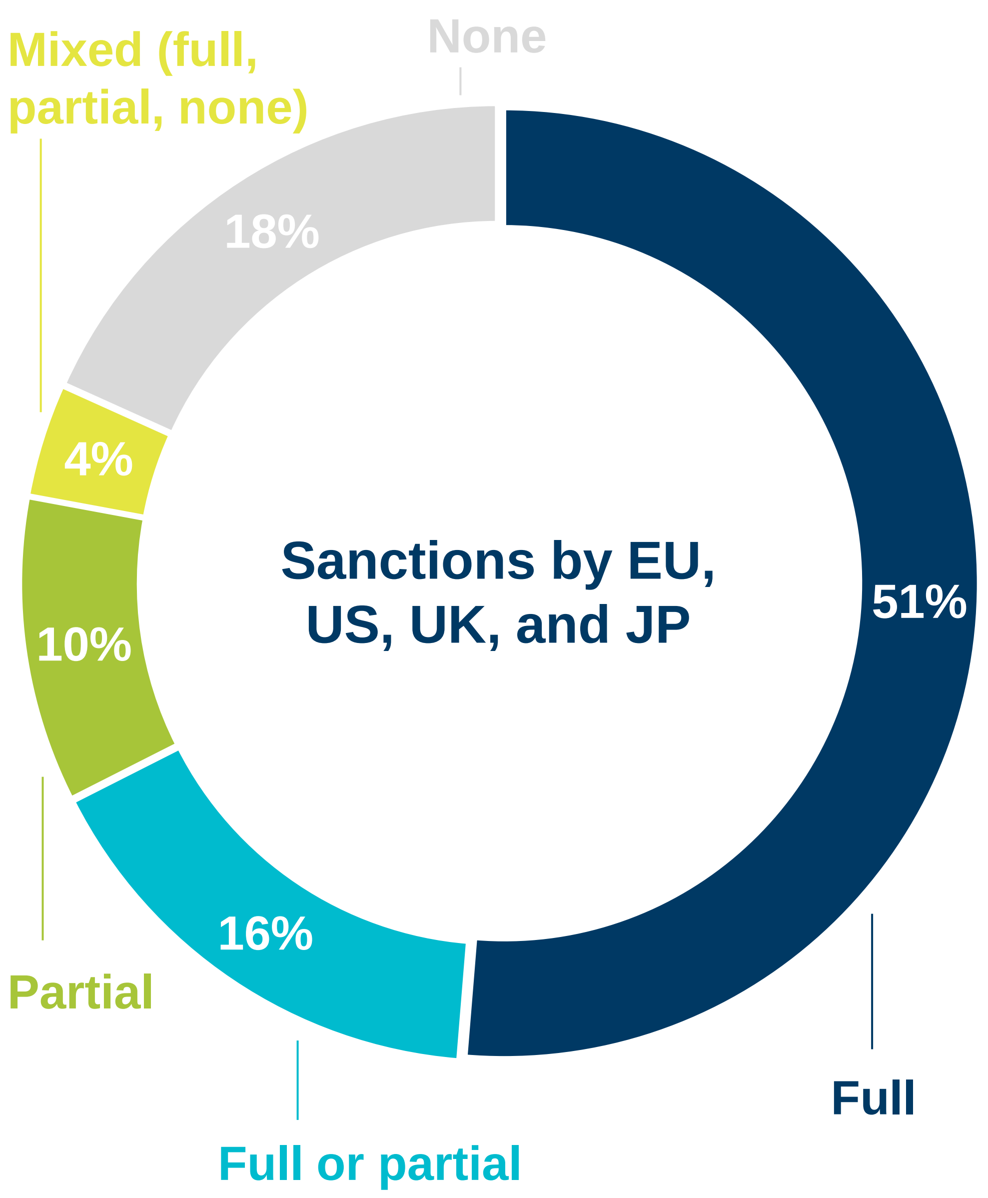
We see considerable room to strengthen the sanctions regime.

- The U.S., EU, and UK have imposed fairly comprehensive sanctions, but room for tightening remains.
- Arguments in favor of the exemption of Gazprombank are getting weaker as energy trade with Russia drops.
- Regulators should also set clear deadlines for the exit of foreign banks from the Russian market.

Sanctions coverage, in % of total banking system assets





Source: national authorities, KSE Institute

Summary of financial sector sanctions

	SWIFT	EU	US*	UK	JP	CH	CA	AU	NZ
Sberbank	🟢	🟢	🟢	🟢	🟢	🟡	🟢	🟢	🟢
VTB Bank	🟢	🟢	🟢	🟢	🟢	🟡	🟢	🟢	🟢
Gazprombank	🔴	🟡	🟡	🟡	🟡	🟡	🟢	🟢	🟢
Alfa-Bank	🔴	🟡	🟢	🟡	🟡	🟡	🟢	🟢	🟢
Rosselkhozbank	🟢	🟢	🟡	🟡	🟢	🟡	🟢	🟢	🟢
Credit Bank of Moscow	🟢	🟡	🟢	🟡	🟡	🟡	🔴	🟢	🟢
Bank Otkritie	🟢	🟢	🟢	🟡	🟡	🟡	🟢	🟢	🟢
VEB	🟢	🟢	🟢	🟢	🟢	🟡	🟢	🟢	🟢
Promsvyazbank	🟢	🟢	🟢	🟡	🟢	🟡	🟢	🟢	🟢
Sovcombank	🟢	🟡	🟢	🟡	🟢	🟡	🟢	🟢	🟢
Rosbank	🔴	🟡	🟢	🔴	🟡	🔴	🔴	🔴	🔴
Tinkoff Bank	🔴	🟡	🔴	🔴	🔴	🔴	🔴	🔴	🔴
Bank Rossiya	🟢	🟢	🟢	🟡	🟡	🟡	🟢	🟢	🟢
Russian Reg. Dev. Bank	🔴	🟢	🟡	🔴	🔴	🟢	🔴	🔴	🔴

🟢 – SWIFT ban/sanctioned, 🟡 – partially sanctioned, 🔴 – no SWIFT ban/not sanctioned
*exceptions for energy transactions for Sberbank, VTB, Alfa, Otkritie, VEB, and Rosbank
Source: national authorities, KSE Institute

Sanctions efforts need to refocus from pre-invasion reserves to newly accumulated foreign assets.

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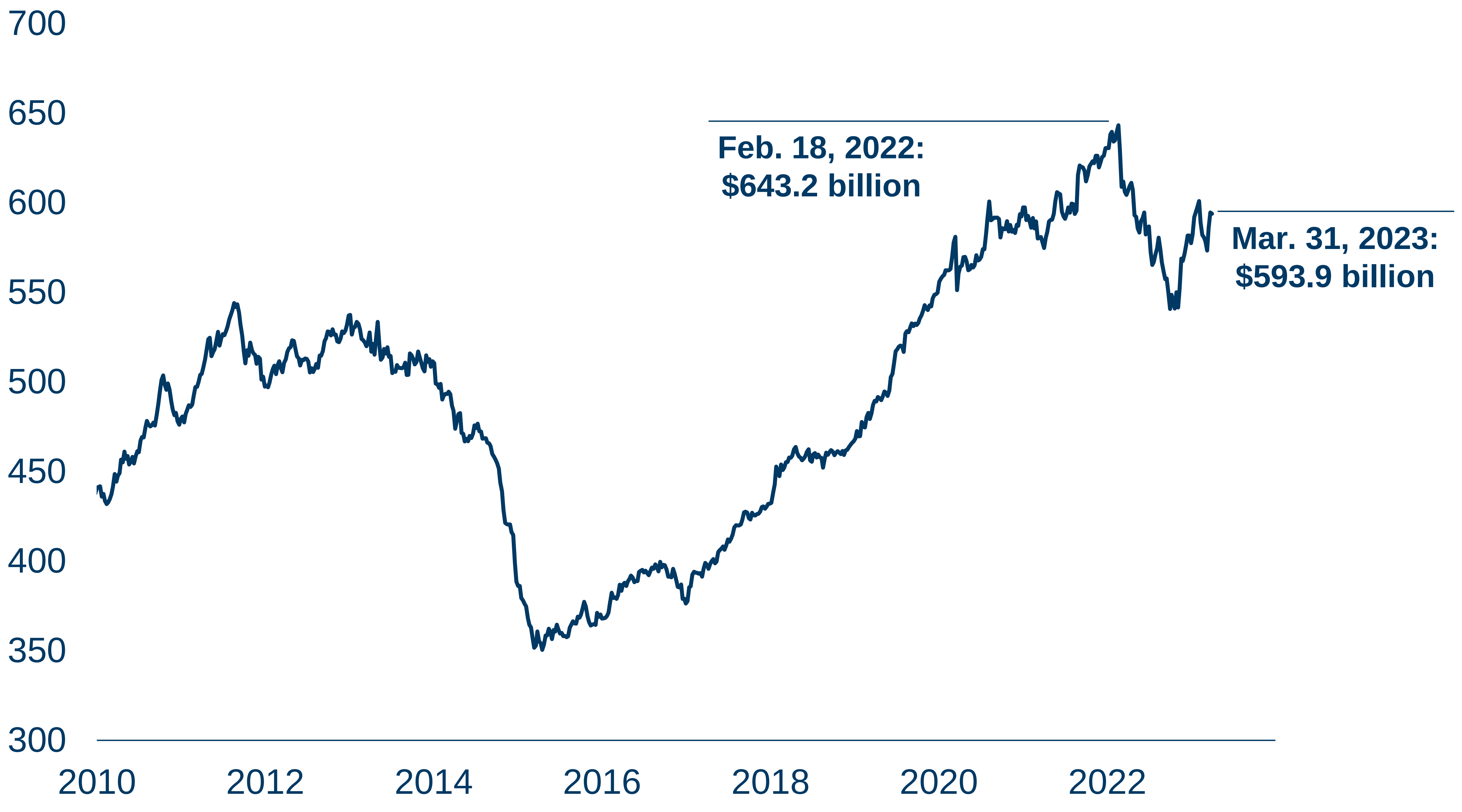
A significant share of international reserves has been immobilized.

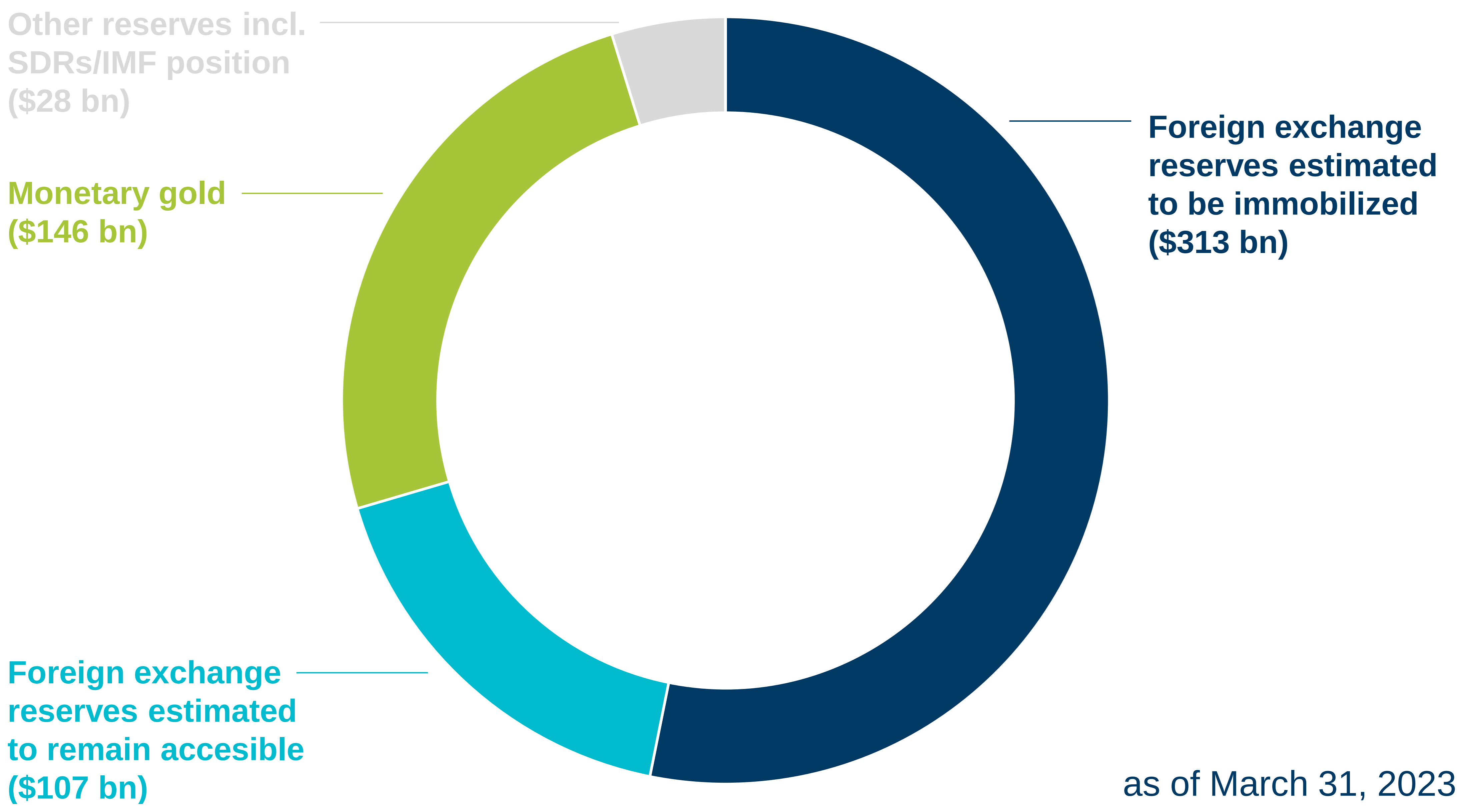
- Before the invasion, Russia held $634 billion in international reserves, part of what is described as *“Fortress Russia”.*
- We estimate that around $313 billion are currently immobilized due to international sanctions on CBR and NWF.
- This leaves Russia with access to $146 billion in monetary gold and roughly $107 billion in FX assets (largely yuan).

Total reserves, in U.S. dollar billion



Source: Bank of Russia, KSE Institute

Estimated composition of reserves, in U.S. dollar billion



Source: Bank of Russia, KSE Institute

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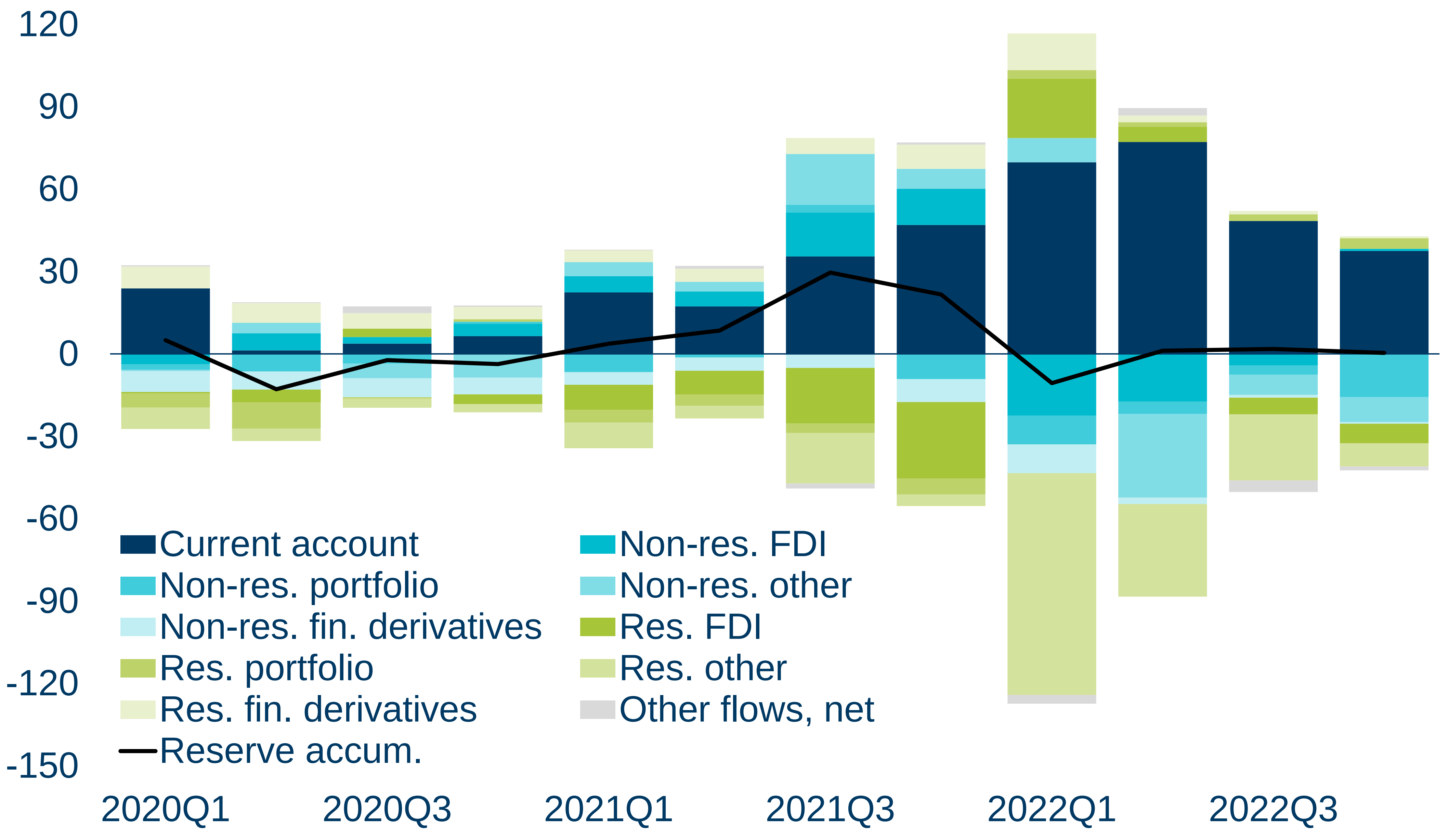
Significant accumulation of new foreign assets in 2022.

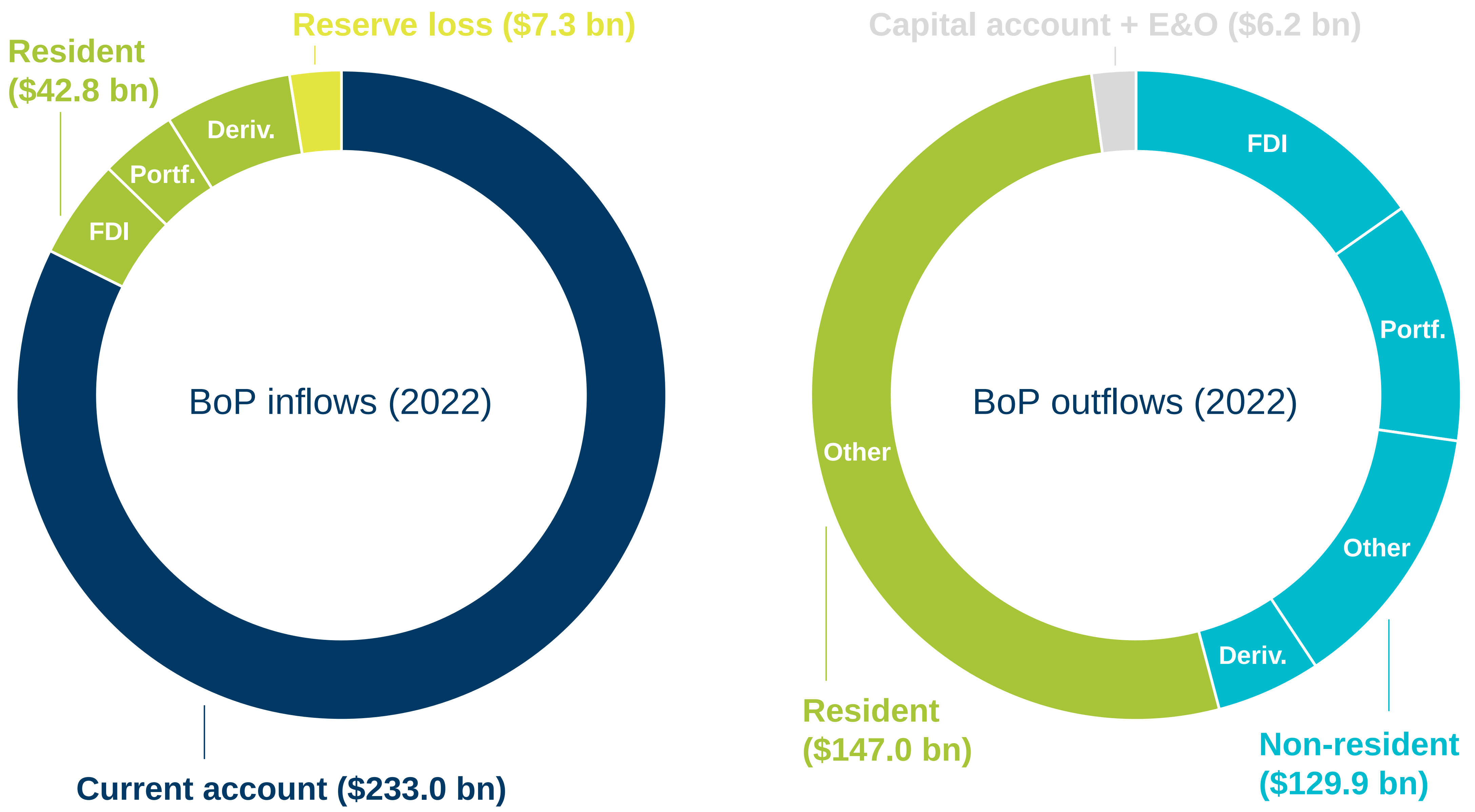
- It is time to refocus attention to foreign assets that Russia has been able to accumulate due to favorable BoP dynamics.
- Non-resident outflows ate up some of the sizable inflows – $233 billion in current account surplus and $43 in resident flows.
- But Russian residents were able to acquire $147 billion in assets abroad in 2022, which need to be kept out of reach.

Balance of payments, in U.S. dollar billion



Source: Bank of Russia, KSE Institute

2022 balance of payments inflows and outflows, in U.S. billion

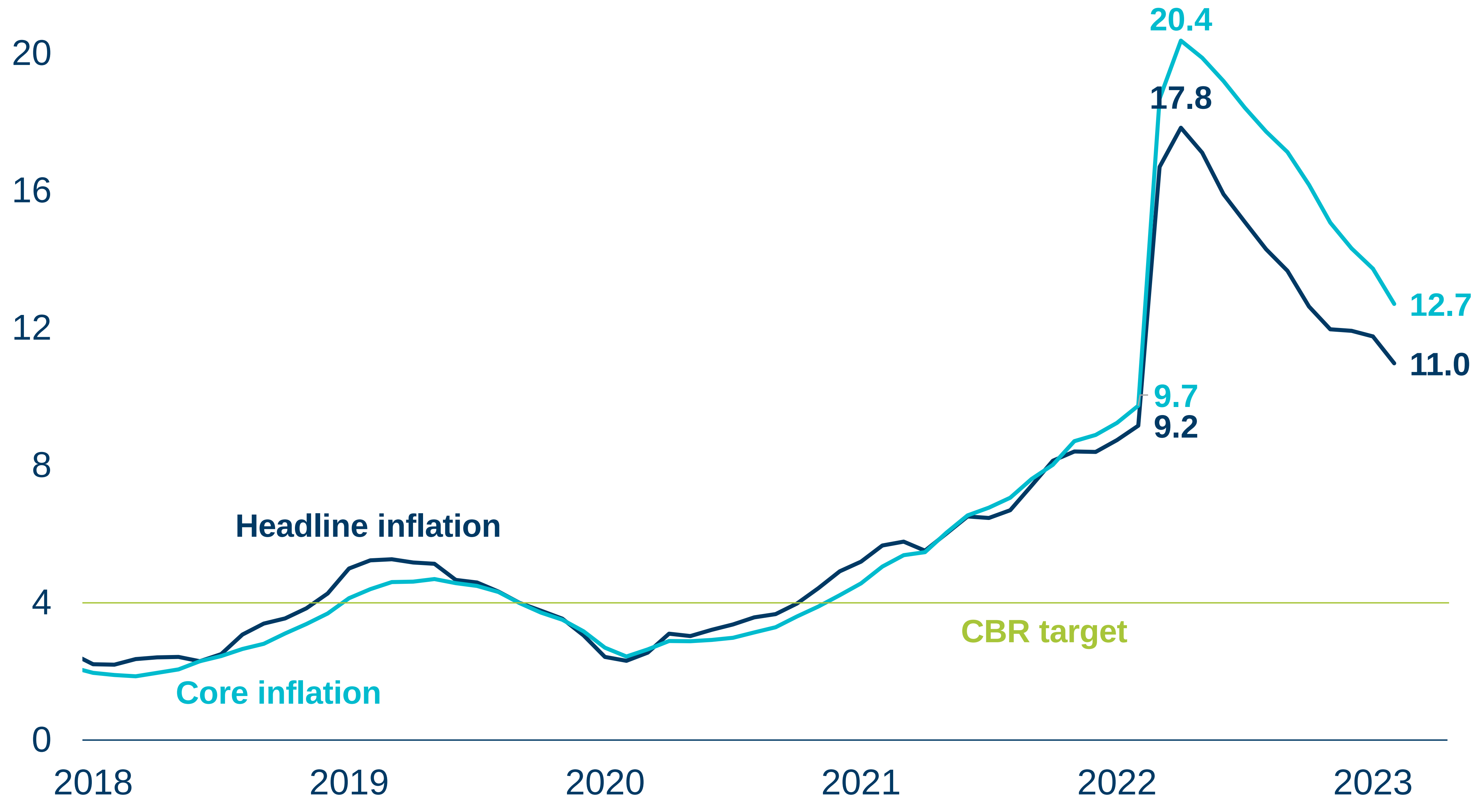


Source: Bank of Russia, KSE Institute

Need to distinguish between current price dynamics and base effects.

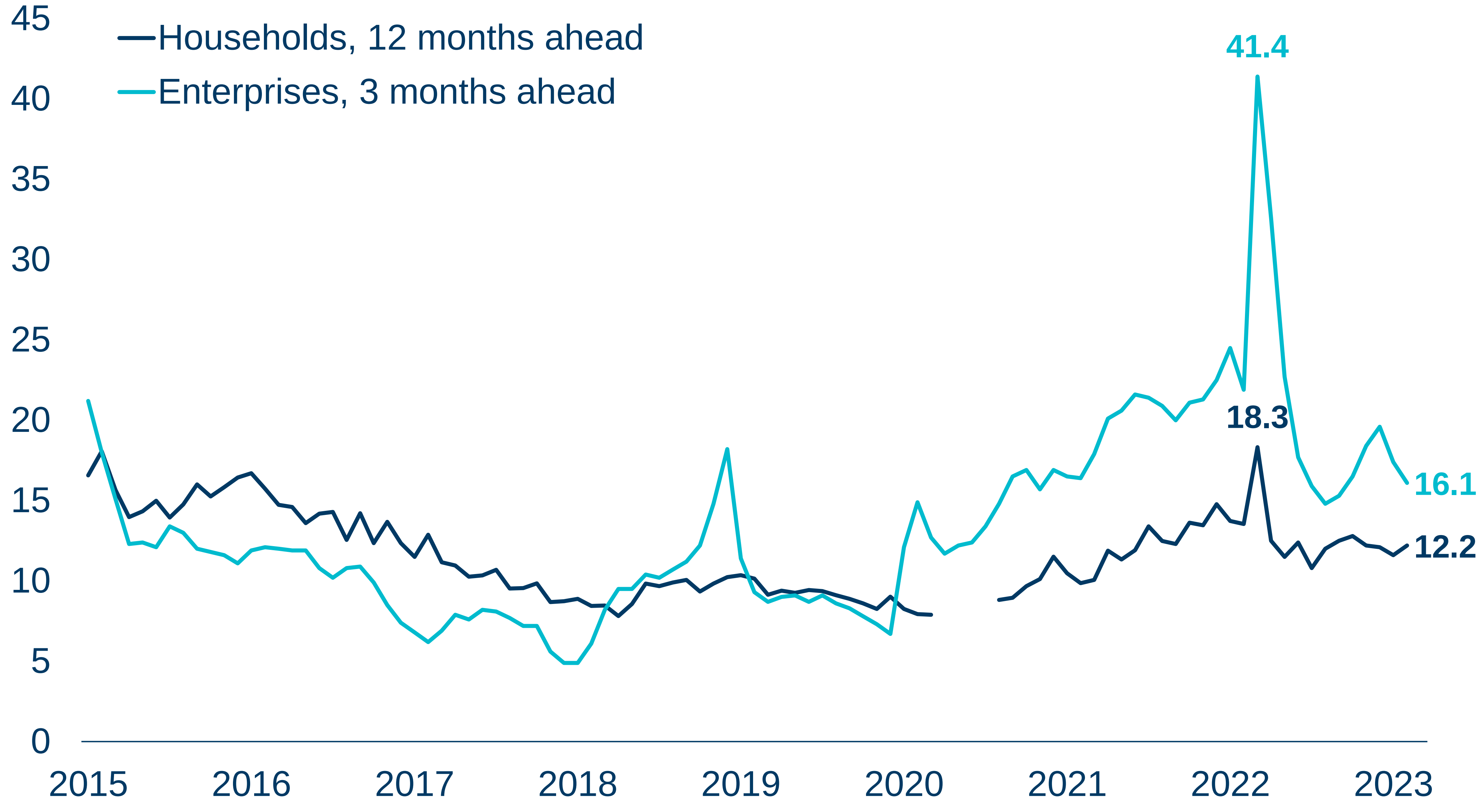
- Both headline and core inflation will drop sharply in coming months due to the disappearance of base effects from 2022.
- But we expect that the weaker external environment will weigh on the ruble and, in turn, increase inflationary pressures.
- Recent data releases show that inflation expectations, especially those of enterprises, are not well-anchored.

Inflation, in % year-over-year



Source: Bank of Russia, KSE Institute

Inflation expectations, in %

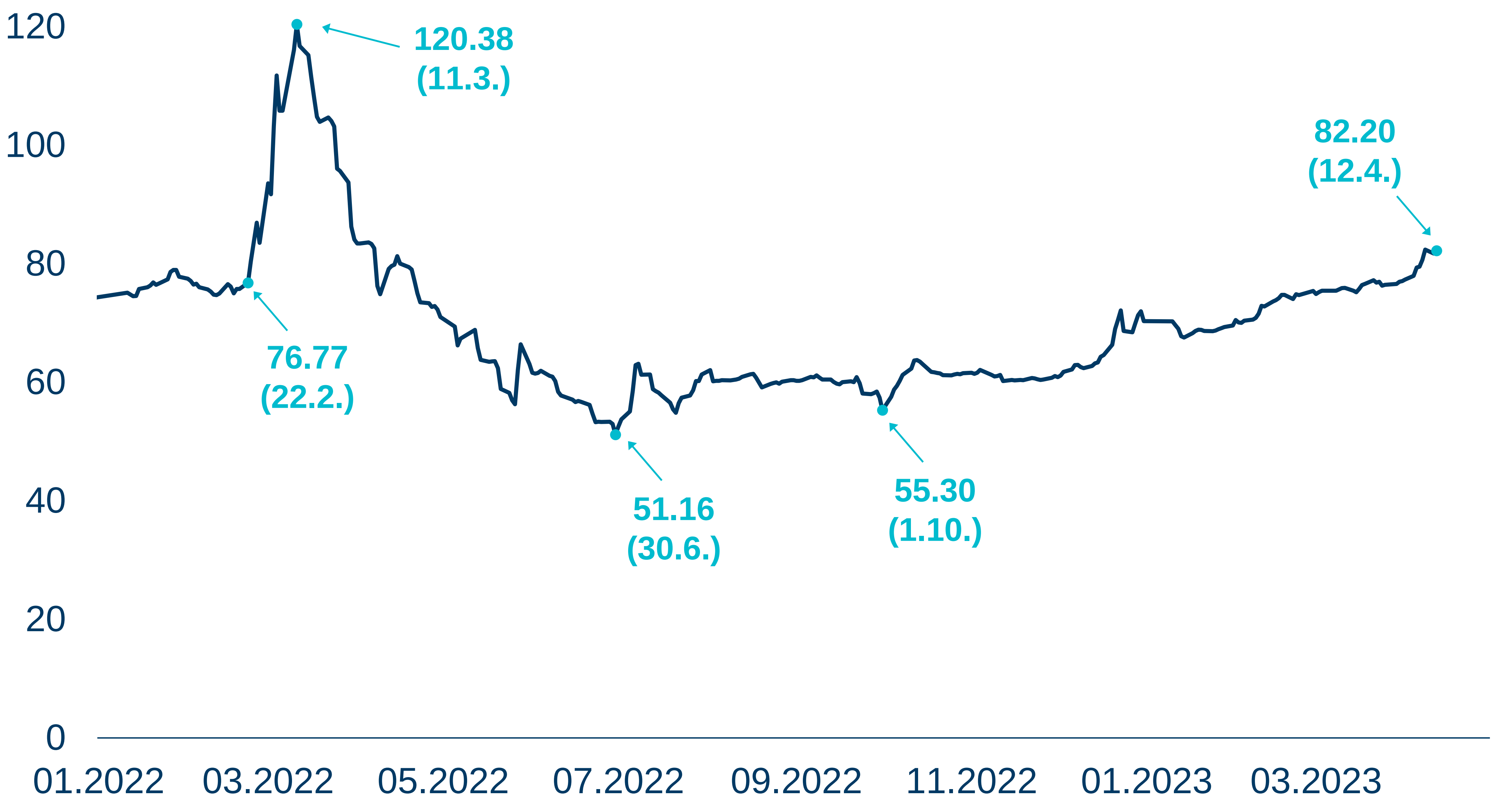


Source: Bank of Russia

A less supportive external environment will put pressure on the ruble.

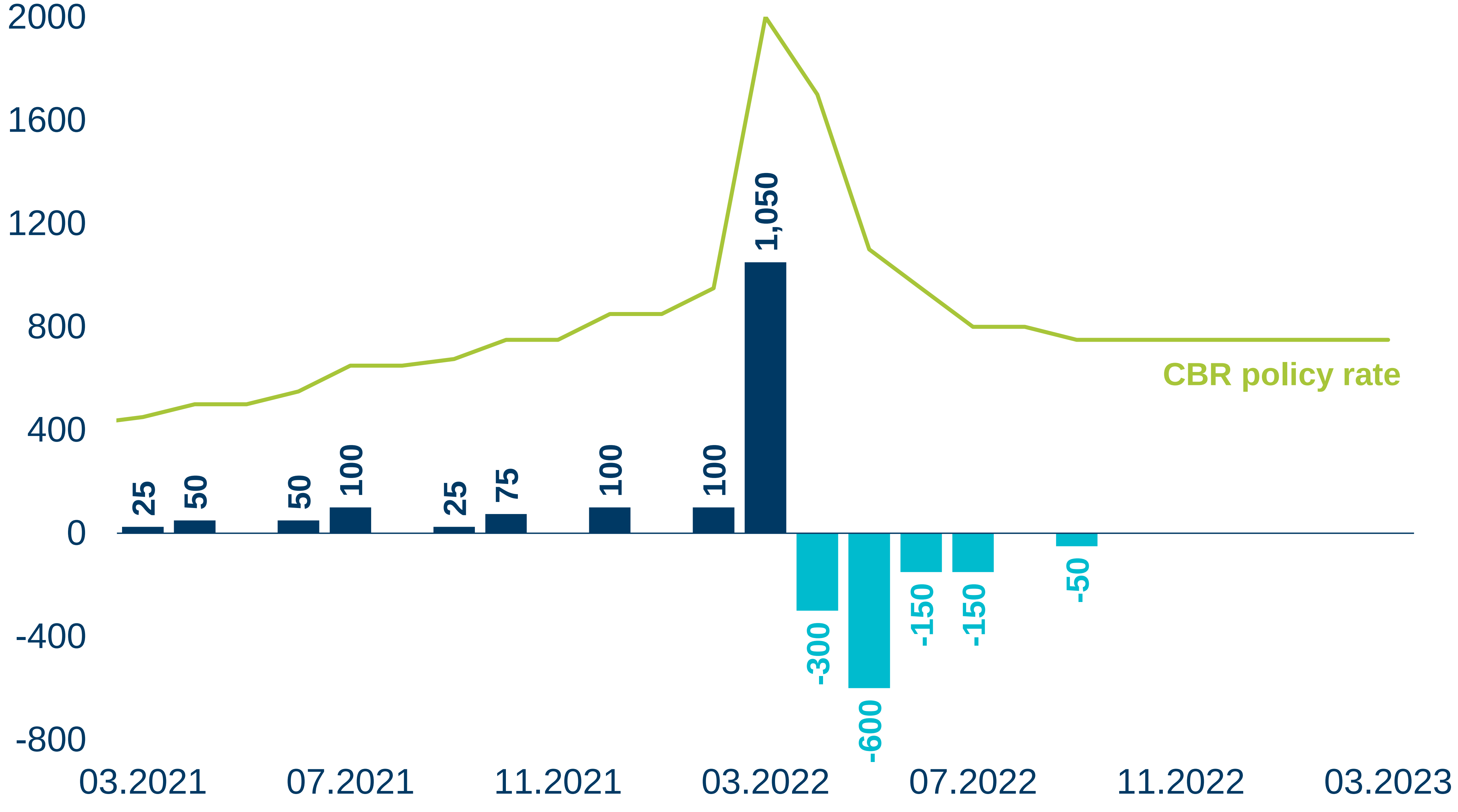
- As the external environment turned less supportive, the ruble started to weaken again (by ~33% since October).
- We expect that the CBR will have to respond robustly to the weaker ruble and rising inflationary pressures.
- Tighter monetary policy could come in the form of rate hikes (of ~300 bps) or equivalent regulatory measures.

Ruble-U.S. dollar exchange rate



Source: Bank of Russia, KSE Institute

CBR policy rate and MPC decisions, in bps



Source: Bank of Russia, KSE Institute

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Russia's economy is facing an extended period of stagnation.

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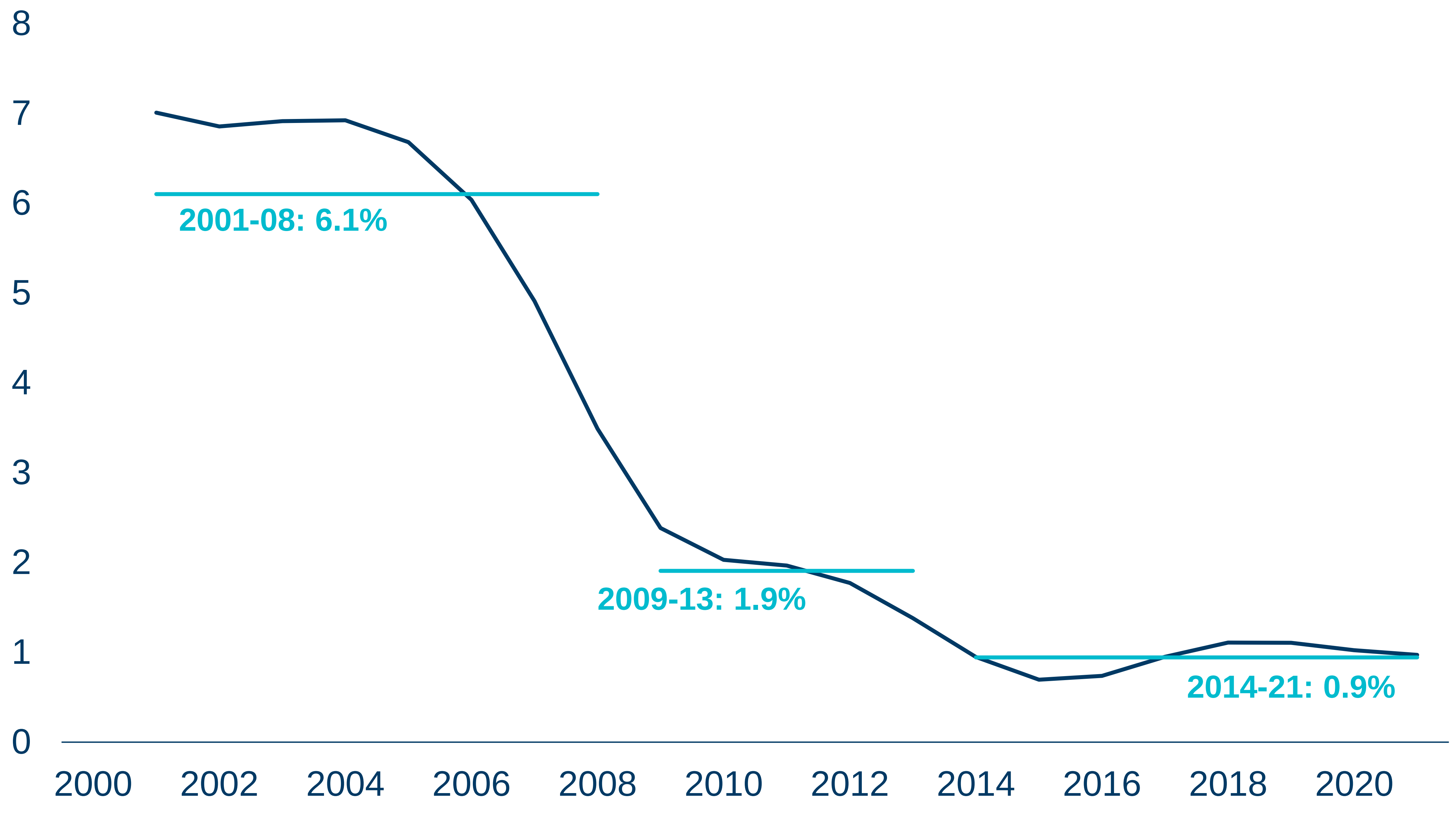
Low productivity growth has weighed on potential GDP for years.

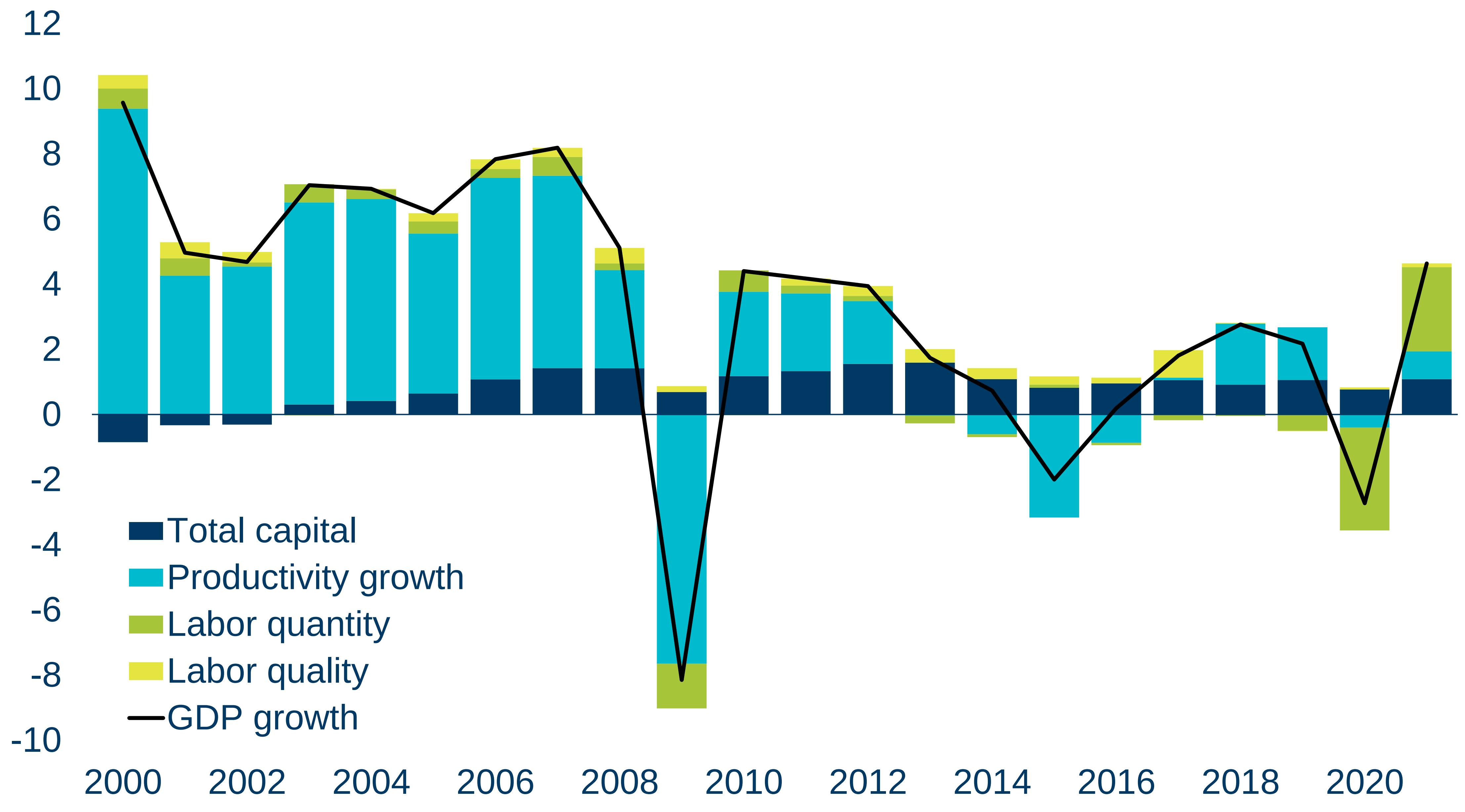
- Russia’s economy has experienced a pronounced decline in potential growth, to around 1% by 2021.
- An initial decline in the aftermath of the global financial crisis was followed by another 50% drop post-2014.
- The main driver appears to be markedly weaker growth of total factor productivity in recent years.

Potential GDP growth, in % year-over-year*



Source: Rosstat, KSE Institute *calculated using H-P filter

Contributions to GDP growth, in percentage points



Source: Conference Board, KSE Institute

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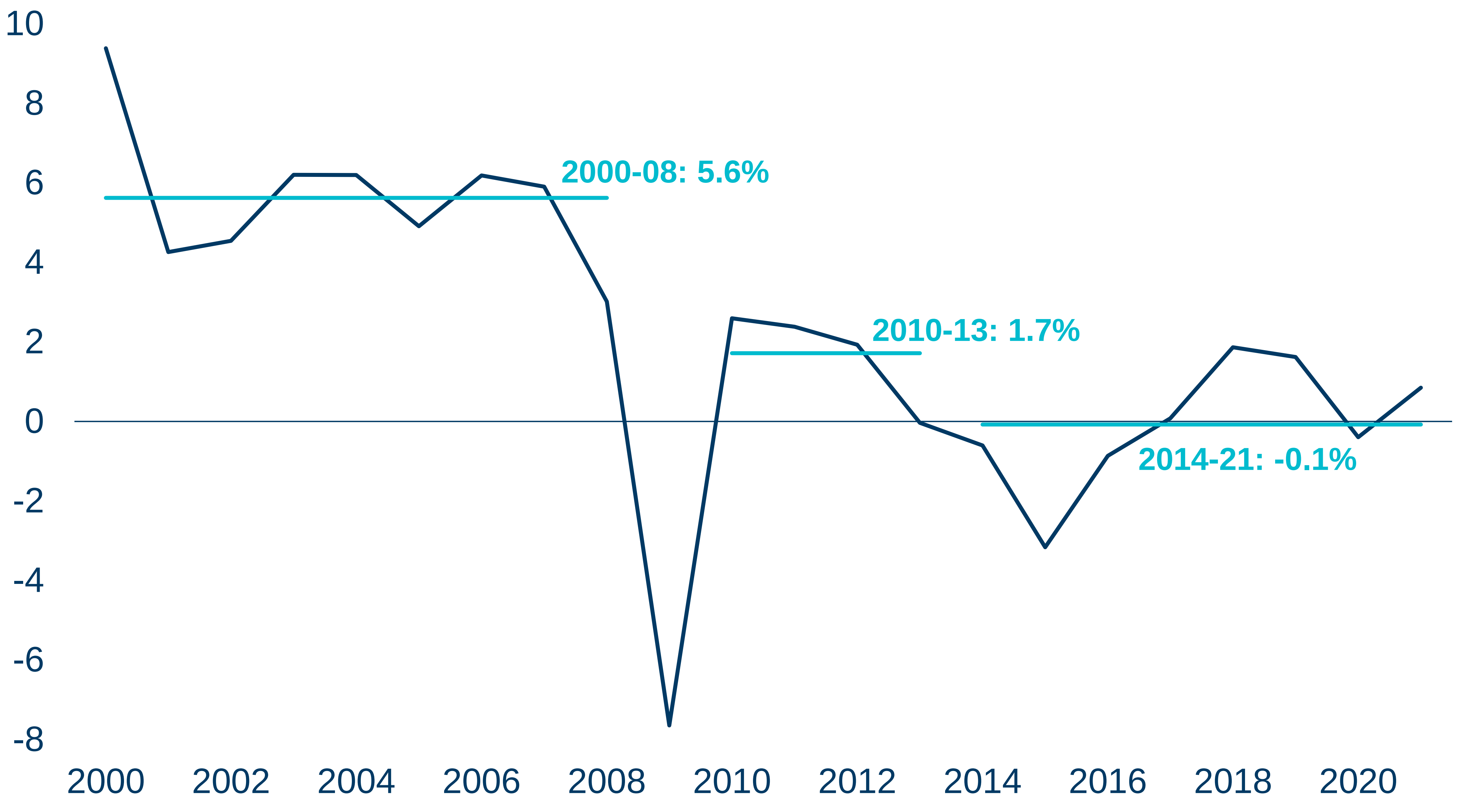
Higher emigration will further weaken prospects going forward.

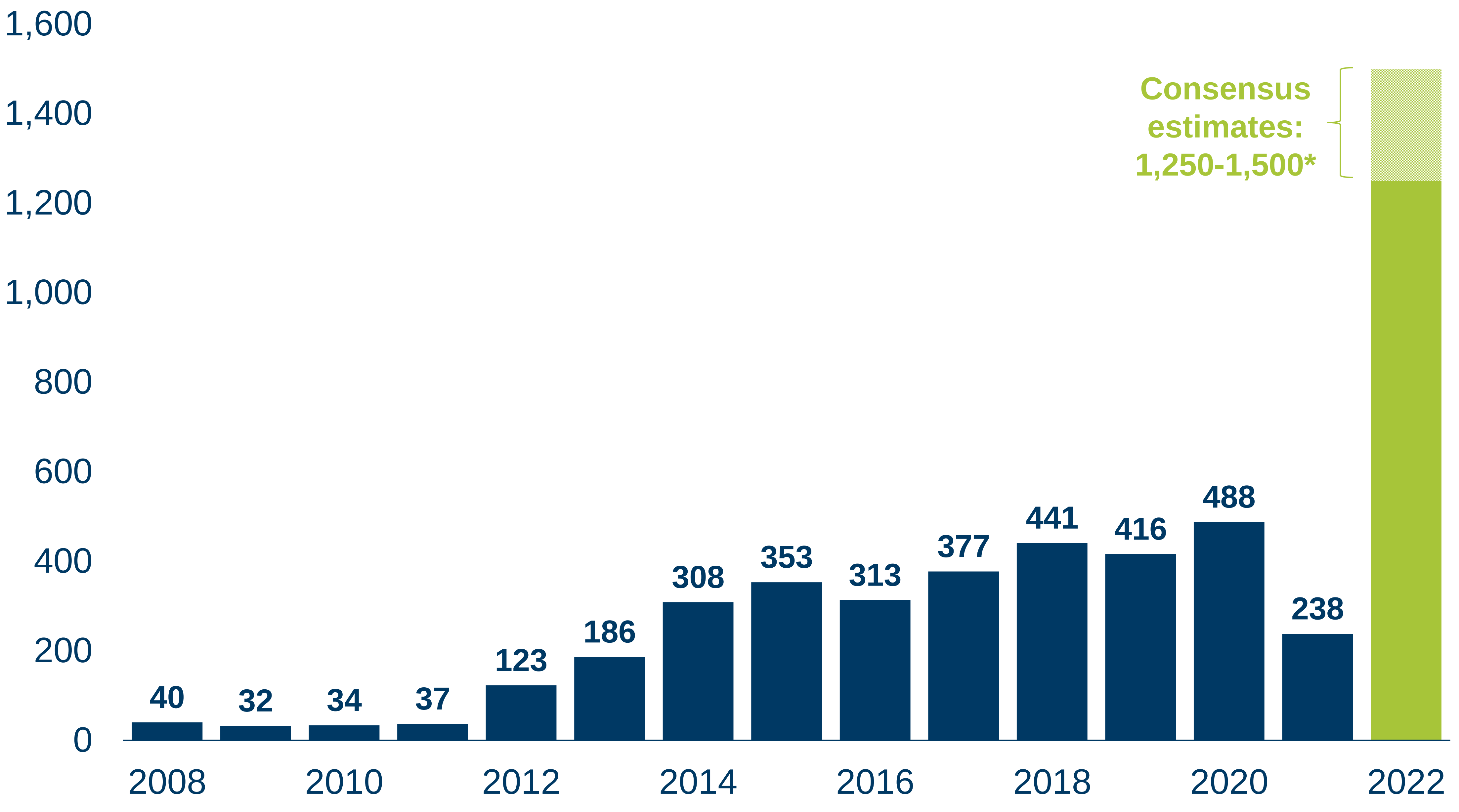
- Productivity growth was essentially absent post-2014 and will likely turn negative due to the war and sanctions.
- At the same time, the Russian economy is set to suffer from a lack of skilled workers as emigration picks up sharply.
- Altogether, we expect an extended period of economic stagnation, with major impacts on real incomes.

Total factor productivity growth, in % year-over-year



Source: Conference Board, KSE Institute

Emigration from Russia, in thousand persons



Source: Rosstat, KSE Institute
*observers estimate that 1.33 million people under the age of 35 left Russia in 2022

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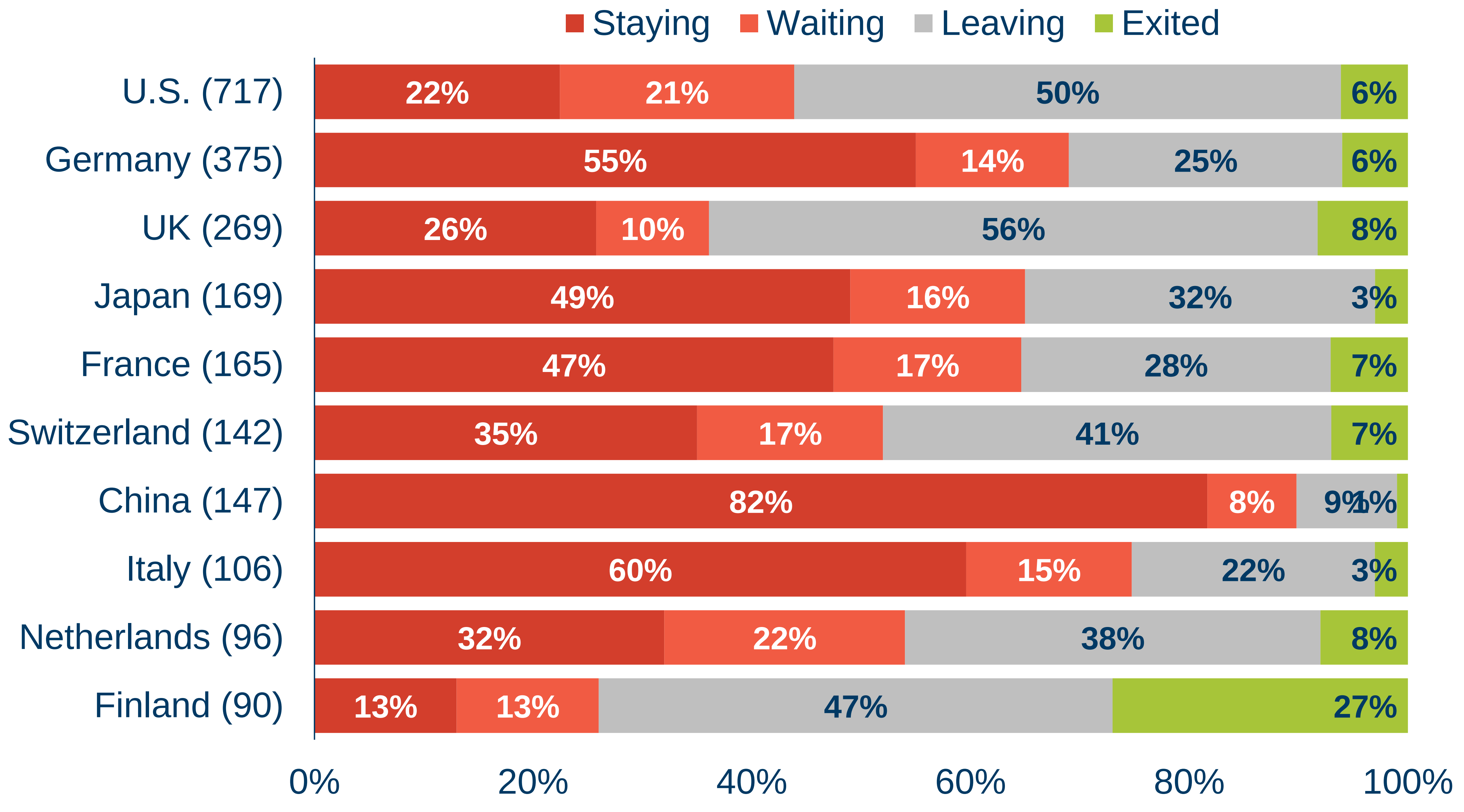
The departure of foreign companies presents another challenge.

- Our analysis shows that only 7% of foreign companies have left Russia, while 38% are in the process of leaving.
- Trends differ considerably among countries with Chinese and Italian businesses most hesitant to depart.
- Many companies are still biding their time and steps should be taken to accelerate their exit.

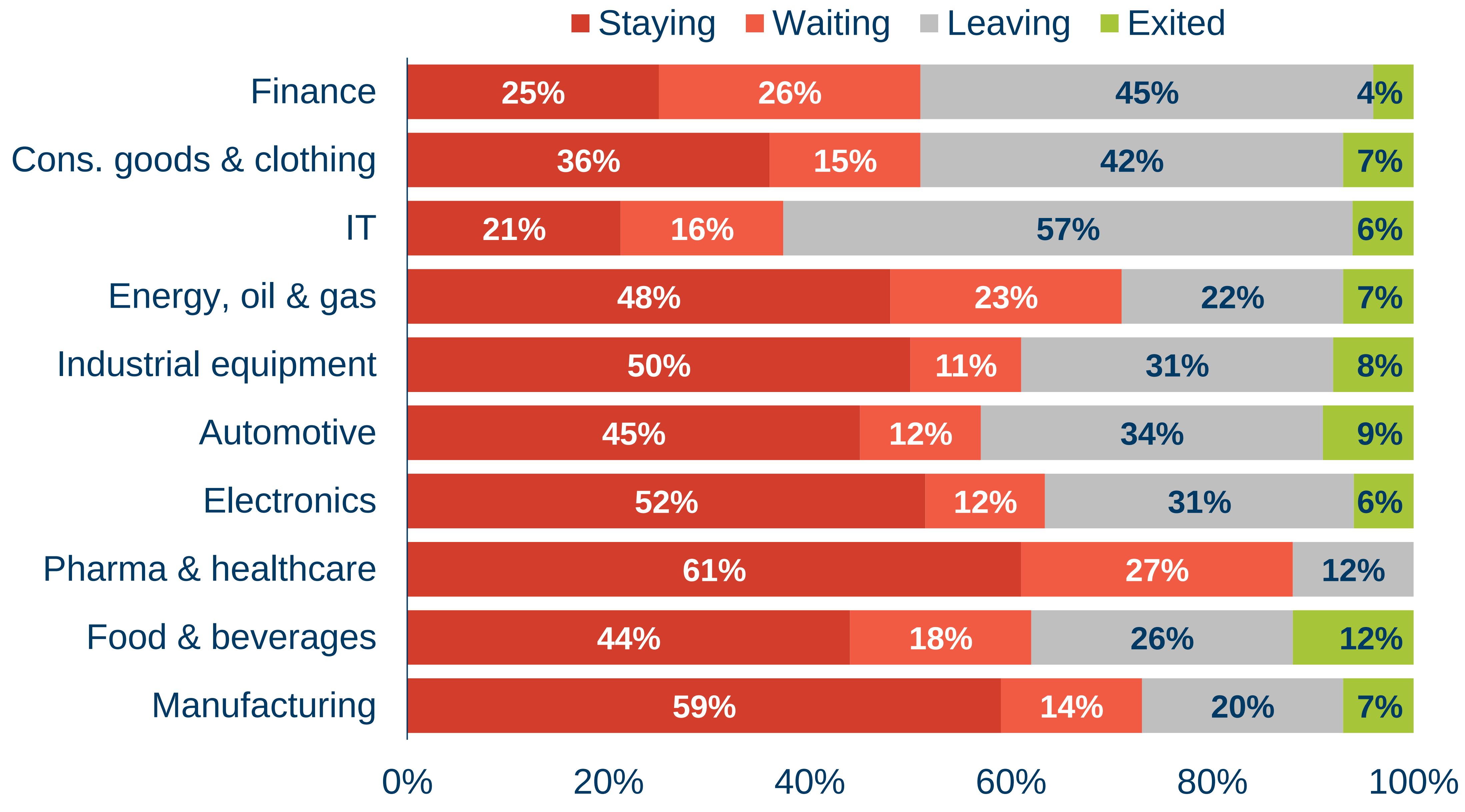
Visit KSE Institute's "Leave Russia" project website

Status of foreign companies in Russia by country, in %*



Source: KSE Institute *figure shows countries with largest number of companies

Status of foreign companies in Russia by sector, in %*



Source: KSE Institute *figure shows sectors with largest number of companies

New targeted sanctions would have a meaningful impact at this critical junction.

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KSE Institute proposal for additional sanctions on Russia

We believe that Russia's economy is approaching a turning point in 2023H1. Ukraine's allies should take advantage of increasing vulnerabilities, significantly step-up pressure on the country, and bring its brutal invasion of Ukraine to an end.

To this end, we propose several measures that, together, would significantly reduce Russia's ability to continue the war.

1. Price cap on Russian crude oil of $50/barrel at the next review and, ultimately, $30/barrel
2. Price caps on products in line with the crude cap and pre-invasion spreads between product and crude prices
3. Ban of natural gas imports into the EU via pipelines controlled by Russia; ban of all LNG imports into the EU
4. Full sanctions on Gazprom and Russian oil companies; personal sanctions on board members
5. Extension of financial sector sanctions to all Russian banks, including Gazprombank
6. Creation of deadlines by regulators for exit of foreign financial institutions from Russia
7. Full sanctions on all military-industrial enterprises as well as Rosatom; personal sanctions on board members
8. Complete ban on mining products, ferrous metals, and diamonds from Russia
9. Price cap on Russian fertilizer exports, except if exported through Odessa
10. Significant strengthening of monitoring and enforcement capacities

Read KSE Institute's latest sanctions impact assessment and action plan for 2023 "One Year of War".