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KSE Institute Russia Chartbook
Enforcing Energy Sanctions to Maintain Pressure on Russia

May 2023

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Executive Summary

1. **Sanctions targeting Russian energy exports are showing results.** Ukraine's allies succeeded at keeping Russian oil on the global market—and, thus, prevent rising prices—after the embargo's taking effect by allowing G7/EU service providers to remain engaged in the trade with Russian oil—if it is sold at or below the price cap. At the same time, the loss of the European market forced Russia to accept sharply lower prices to maintain volumes, which weighed on export earnings and budget revenues. READ MORE
2. **Evidence for potentially widespread price cap violations is emerging.** Despite these encouraging signs, an analysis by KSE Institute shows that export prices remained significantly above the price cap in certain segments of the Russian oil market, while G7/EU service providers were involved in a substantial share of shipments—clear evidence for price cap violations. In addition, there are signs that Russian entities may attempt to capture oil trade arbitrage through more complex schemes. READ MORE
3. **Stepped-up enforcement is critical for effectiveness of sanctions.** Given these developments, we believe that the enforcement of energy sanctions, in particular the price caps, needs to be tightened significantly. This includes efforts to strengthen the attestations regime through risk-based audits, expanded reporting requirements, and higher penalties. Financial sector sanctions can also play a key role in improving transparency by limiting channels through which energy-related transactions can take place. READ MORE
4. **Budget remains key area of macroeconomic concern.** Russia's federal government deficit reached 3.4 trillion rubles in January-April with a 1 trillion gap emerging in April following the small March surplus. This is already 17% more than had been planned for the entirety of 2023. Revenues, especially those from oil and gas, continue to underperform while the war drives up expenditures. The fiscal outturn is in line with our projection of a deficit of around 12 trillion rubles this year (or ~7-8% of GDP). READ MORE
5. **Higher deficits will put significant pressure on financing.** Both withdrawals from the NWF as well as OFZ issuance—the two most important financing channels—were quite muted in recent months as Russia benefitted from "overfinancing" towards the end of last year. At the same time, MinFin is likely running up arrears. Going forward, we expect that reliance on the NWF as well as domestic borrowing will need to pick up again. This will use up macro buffers and put a heavy burden on domestic banks. READ MORE

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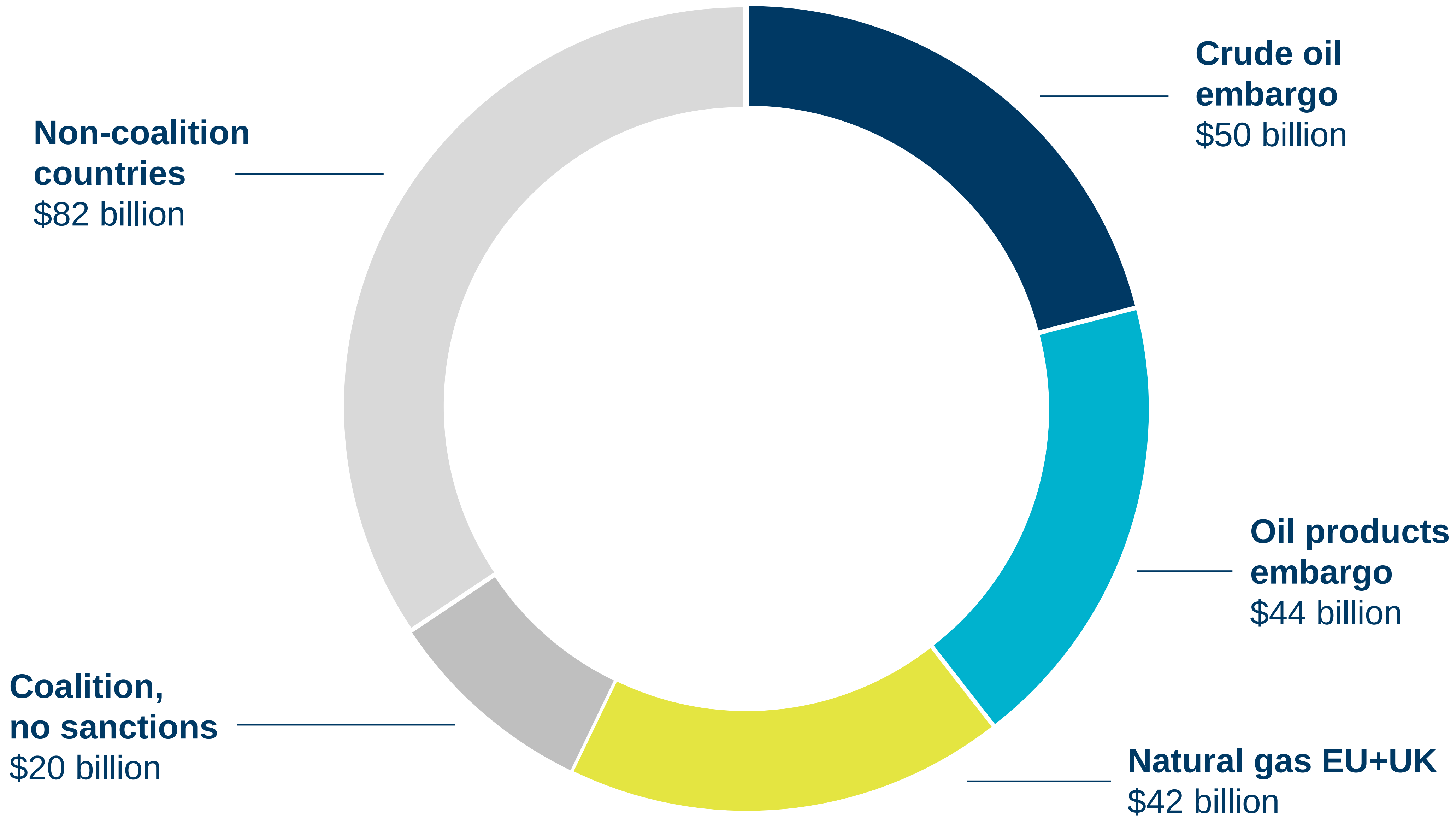
Sanctions on Russian energy exports: noticeable effect on export earnings and budget revenues—but evidence for potentially widespread violations.

Key elements of the energy sanctions regime: embargoes and price caps.

- Energy sanctions began in earnest with the EU embargoes on crude oil (Dec. 5, 2022) and oil products (Feb. 5, 2023).
- Together with Europe’s sharply-reduced purchases of Russian gas, a significant share of exports are now impacted.
- Another key element of the sanctions regime are the G7/EU price caps for seaborne crude oil and oil products.

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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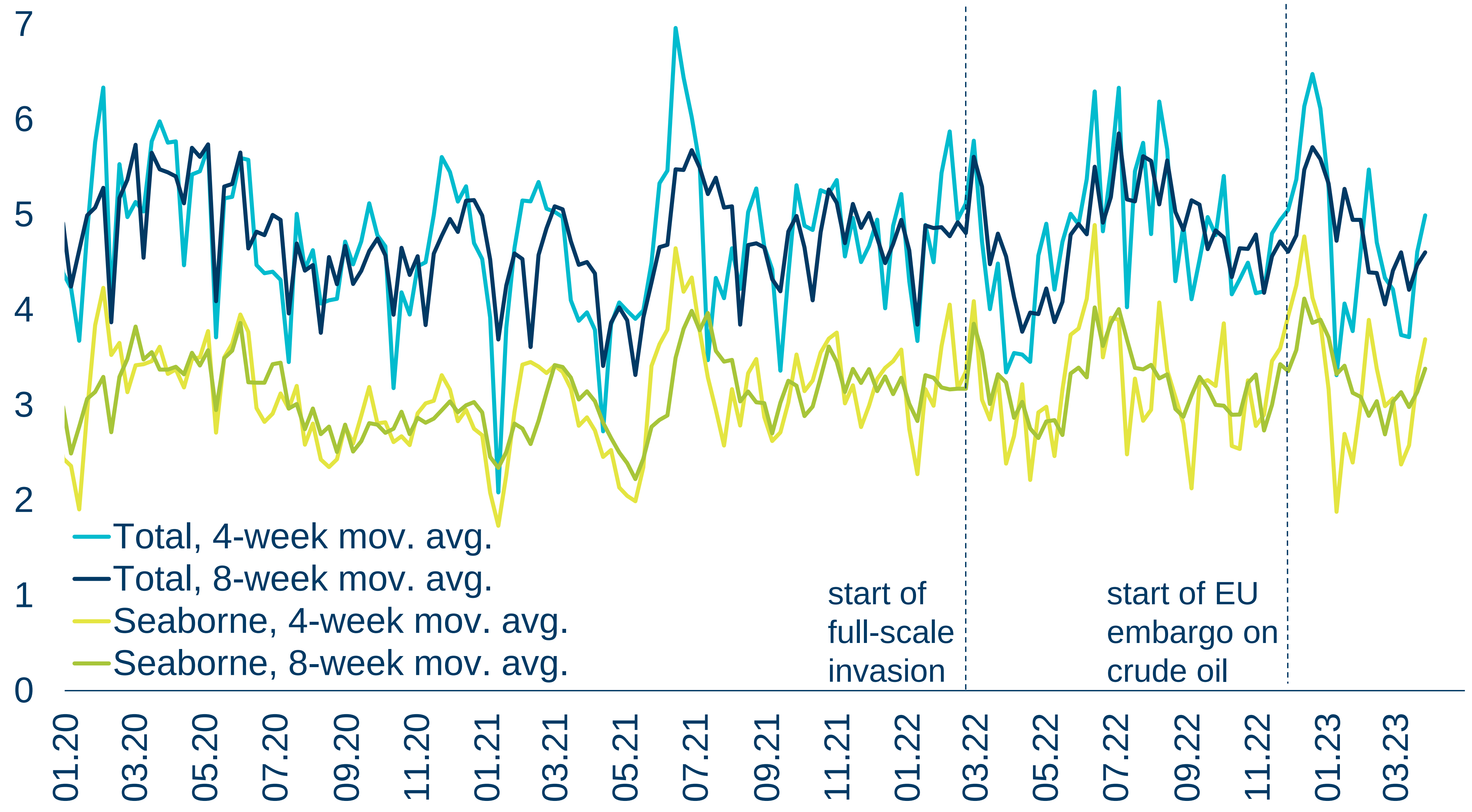
Sanctions regime has succeeded at keeping Russian oil on the market.

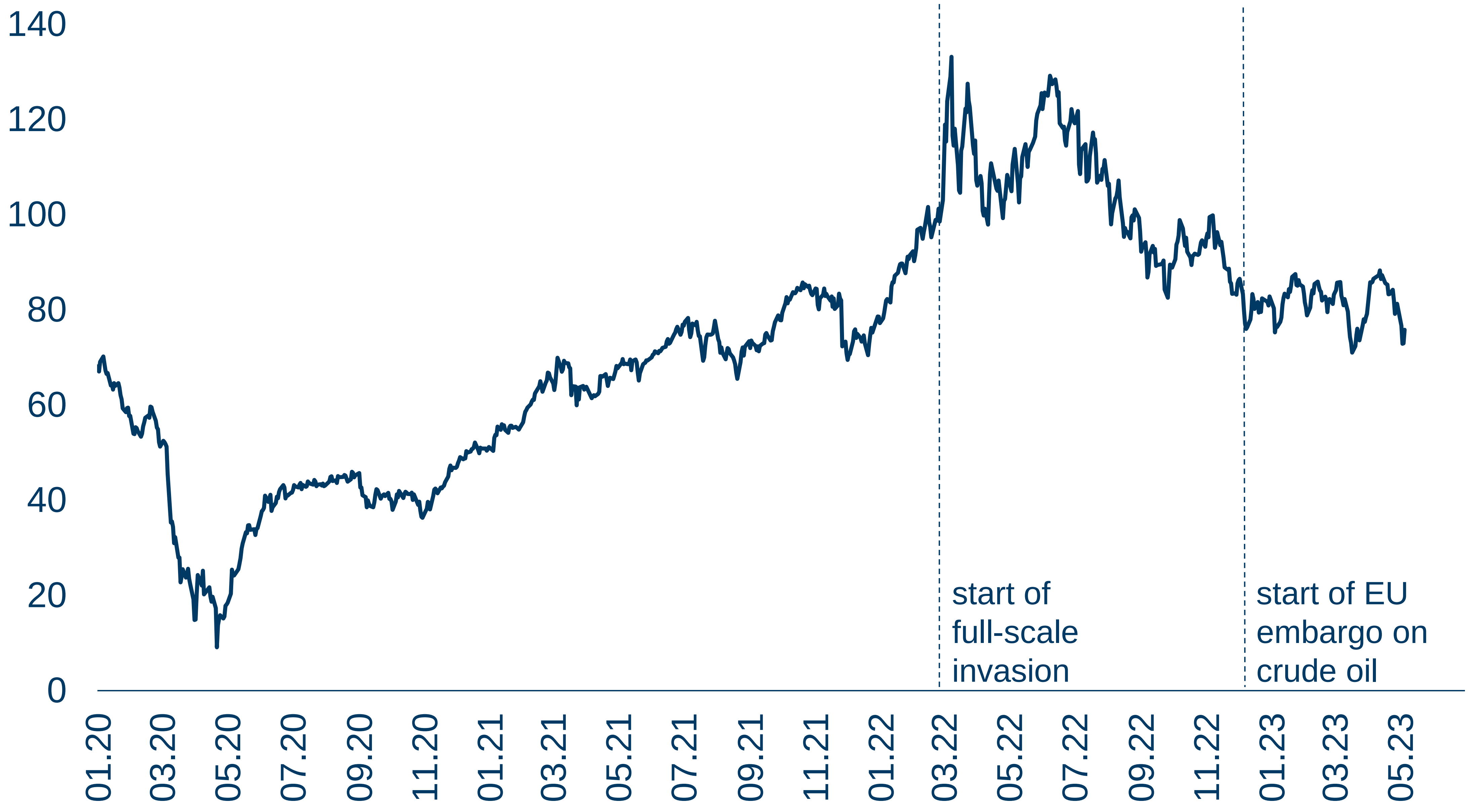
- The price cap attempts to reconcile objectives of global oil market stability and lower revenues for Russia.
- Approach seems to have succeeded at keeping Russian crude oil on the global market in the post-embargo period.
- In turn, prices have been remarkably stable—including in the aftermath of the OPEC production cut announcement.

Weekly Russian crude oil exports, in million barrels/day



Source: KSE Institute

Price of North Sea Brent crude oil, in U.S. dollar/barrel



Source: U.S. Energy Information Agency

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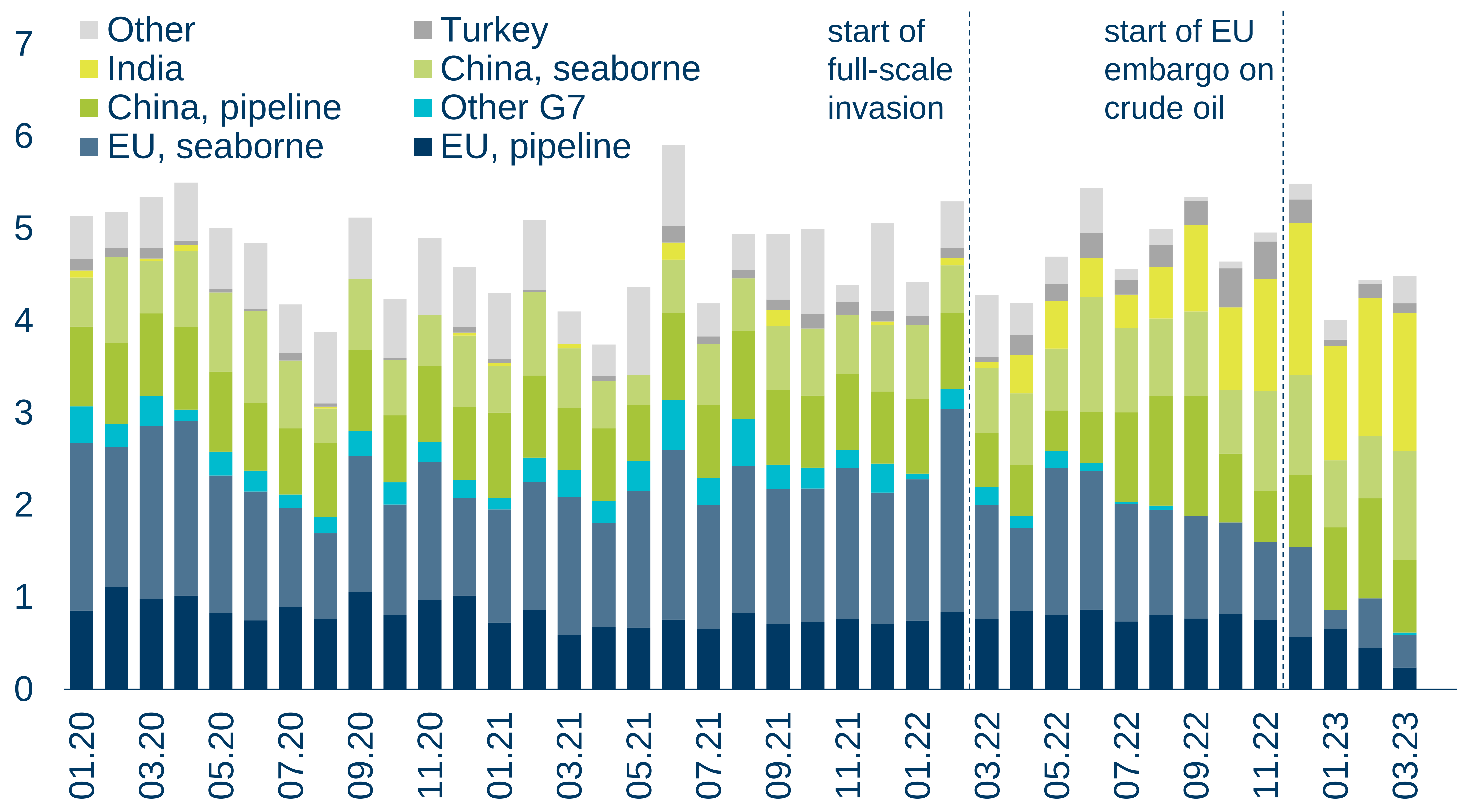
Growing challenge to sell oil to alternative buyers widens discount.

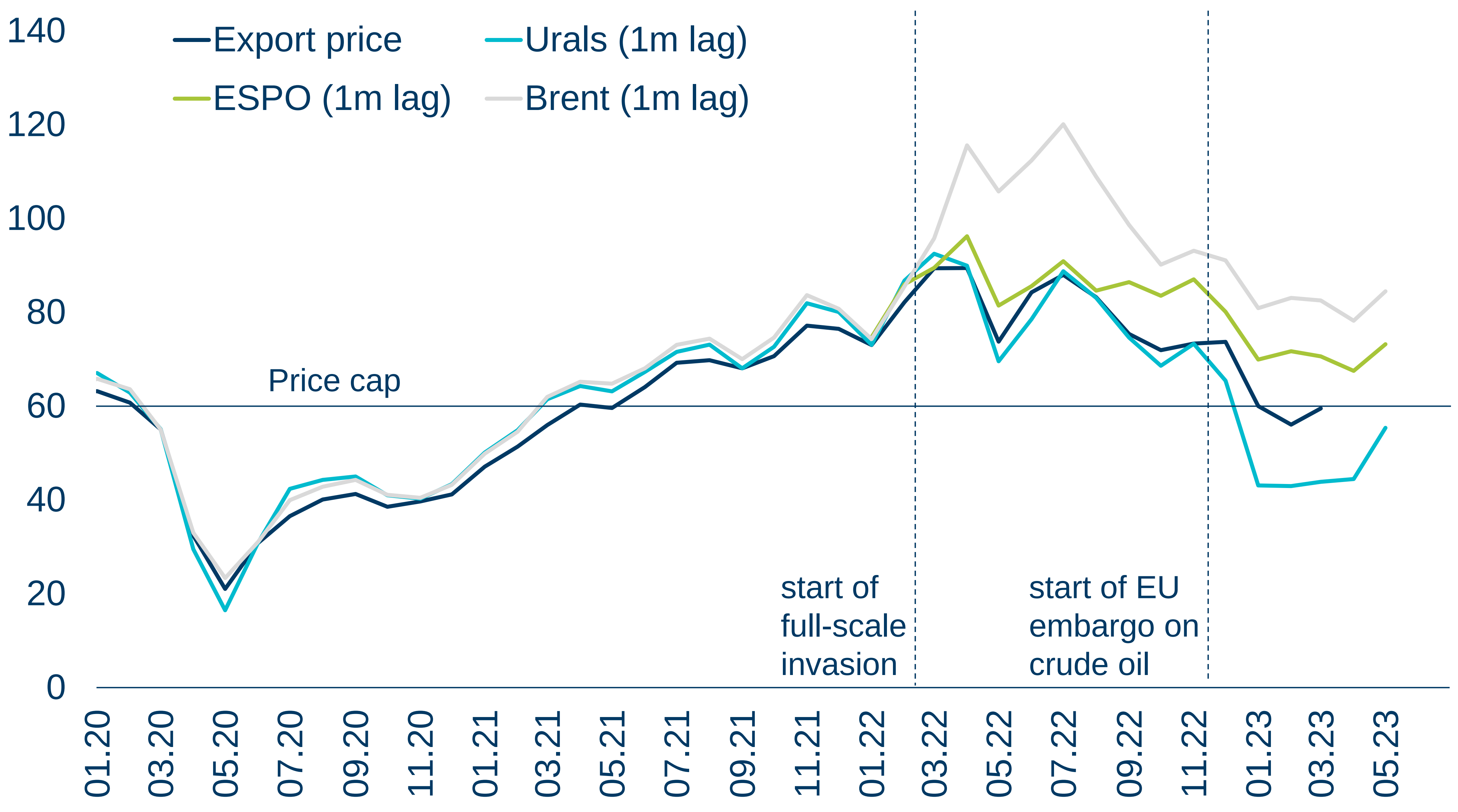
- With European demand for its crude oil essentially gone, Russia appears to struggle to find sufficient alternative buyers.
- To maintain export volumes, Russia is accepting lower prices—but the discount appears to be narrowing again.
- The decision to cut production by 500k barrels/day also shows that China and India cannot fully offset the embargo effect.

Monthly Russian crude oil exports, in million barrels/day



Source: KSE Institute

Export price for Russian crude oil, in U.S. dollar/barrel



Source: KSE Institute

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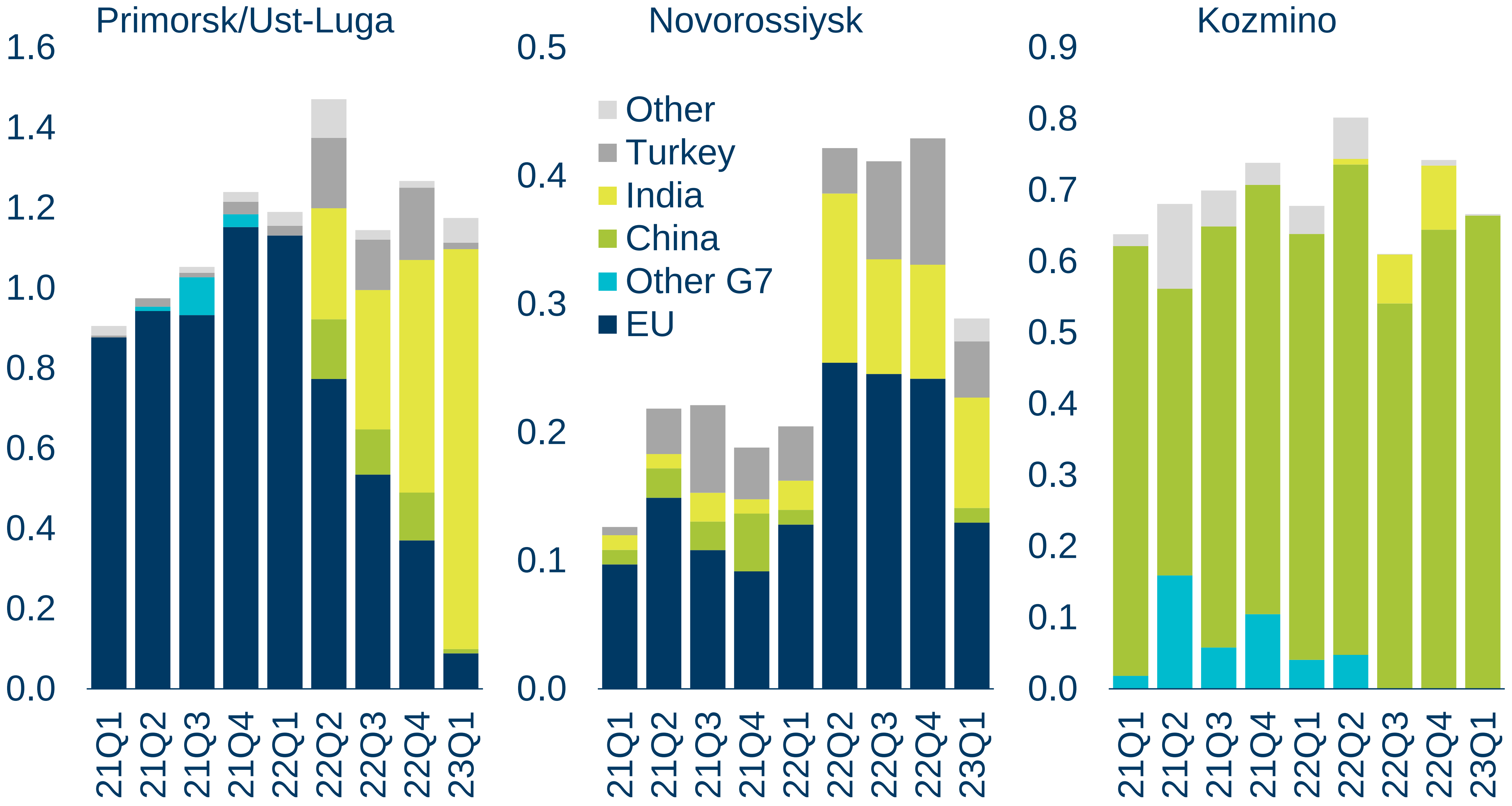
EU embargo has led to a fragmentation of the market for Russian oil.

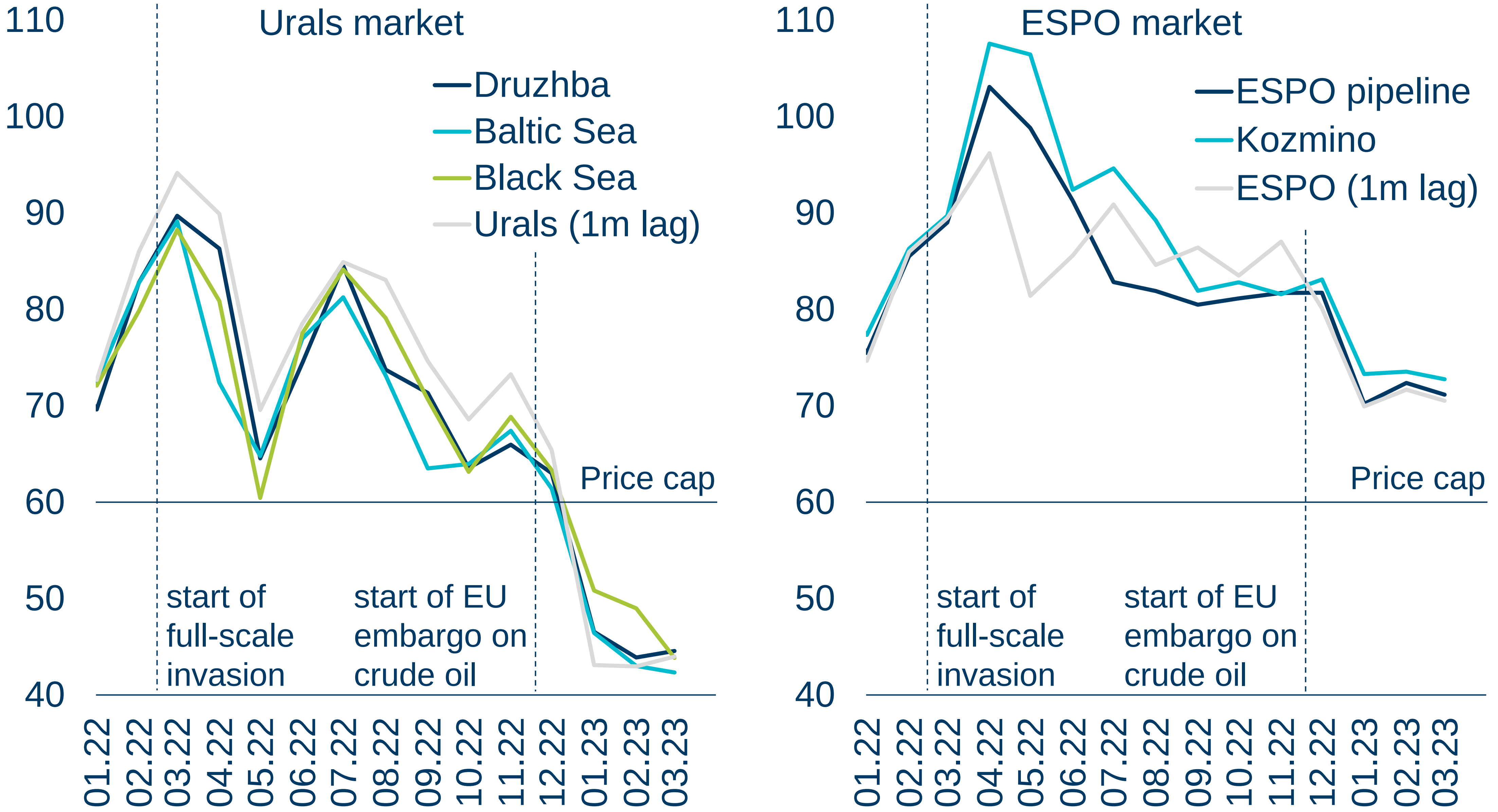
- Different segments of the market for Russian crude oil display diverging demand and price dynamics.
- Where European demand had played a key role (e.g., Baltic and Black Sea), prices fell by $20-25/barrel post-embargo.
- Where demand conditions have not changed materially (e.g., Pacific Ocean), prices moved with Brent (-$10-15/barrel).

Composition of crude oil exports, in million barrels/day



Source: KSE Institute

Export price for Russian crude oil, in U.S. dollar/barrel

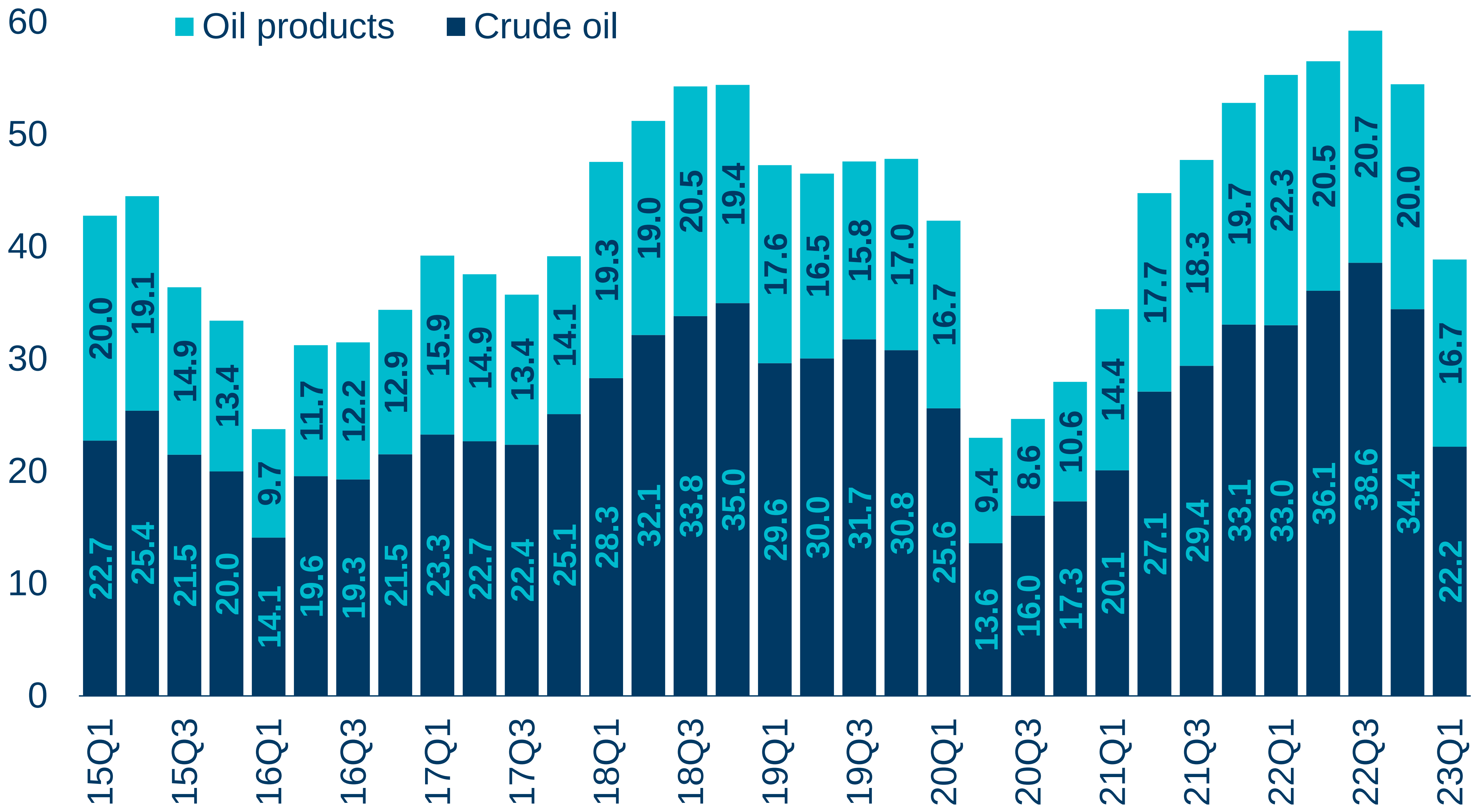


Source: International Energy Agency, KSE Institute

Noticeable effect on export earnings and budget revenues.

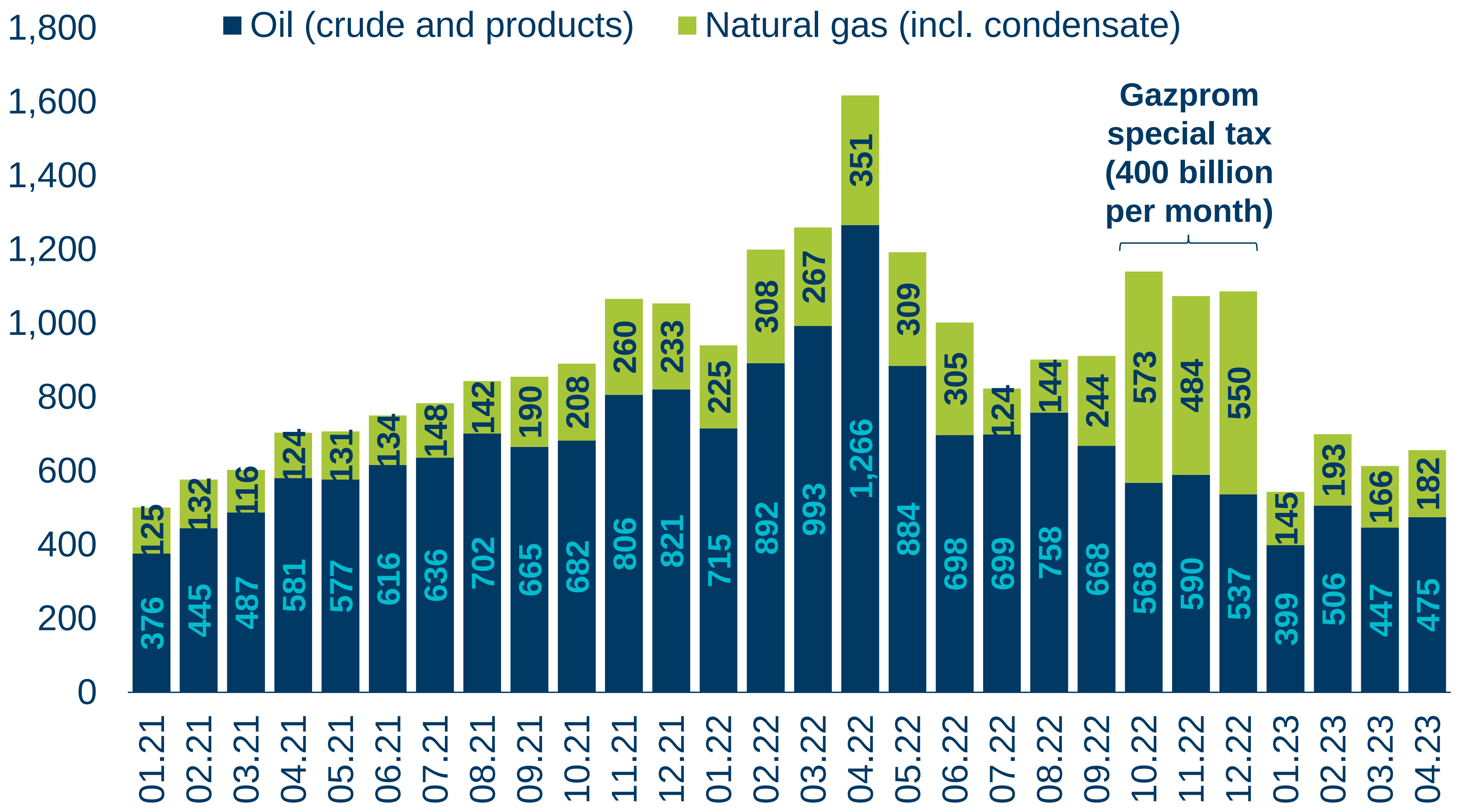
- Somewhat lower export volumes and sharply wider discounts have weighed on export earnings and fiscal revenues.
- Oil exports fell by 29% in 2023Q1 vs. 2022Q4, with the drop for crude oil (-36%) much larger than for products (-17%).
- Fiscal revenues are also down noticeably vs. 2022 averages—41% for oil and 23% for natural gas (x/ Gazprom tax).

Oil export earnings, in U.S. dollar billion



Source: Federal Customs Service, KSE Institute

Federal budget oil and gas revenues, in ruble billion



Source: Ministry of Finance, KSE Institute

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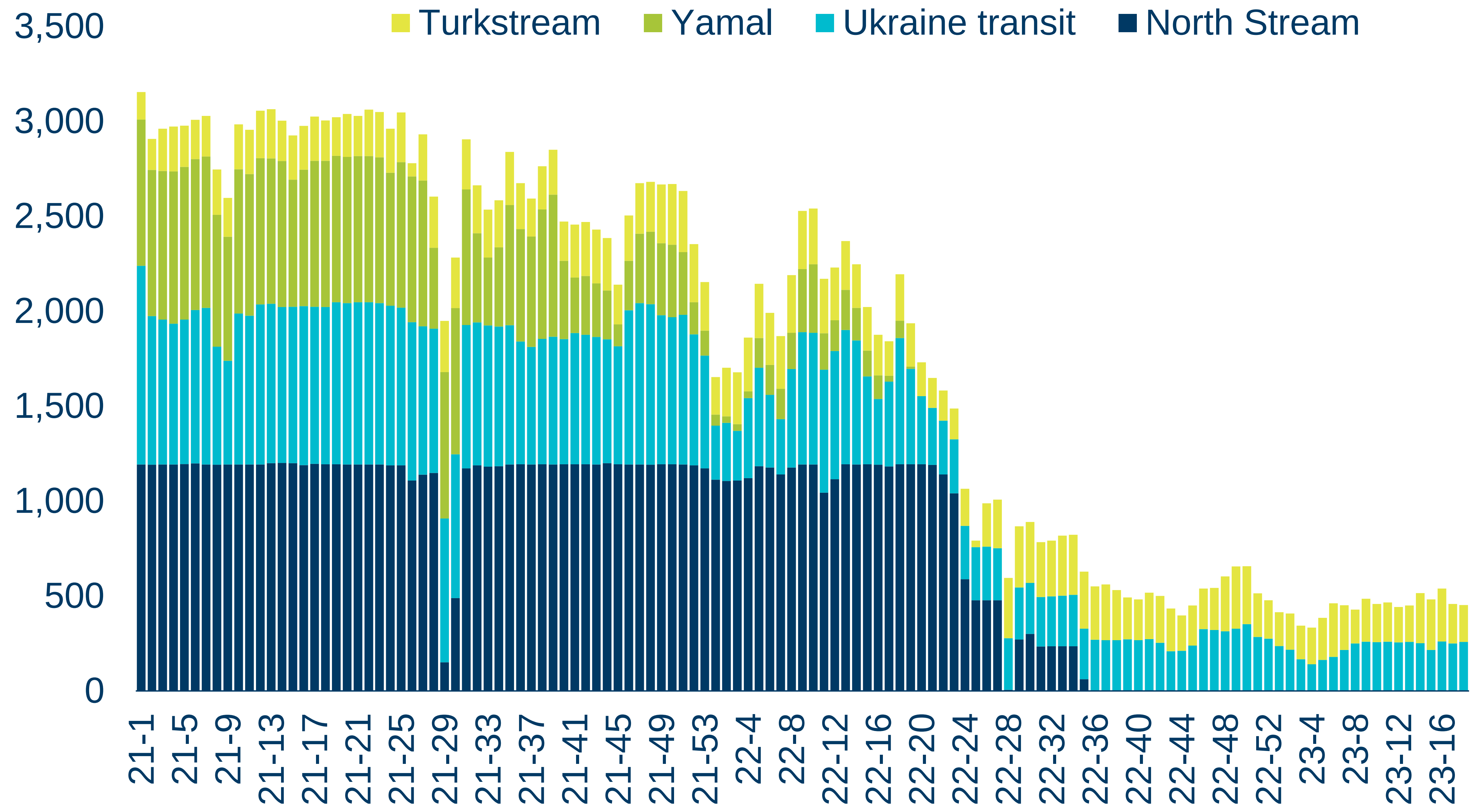
Loss of the European gas market has weighed heavily on production.

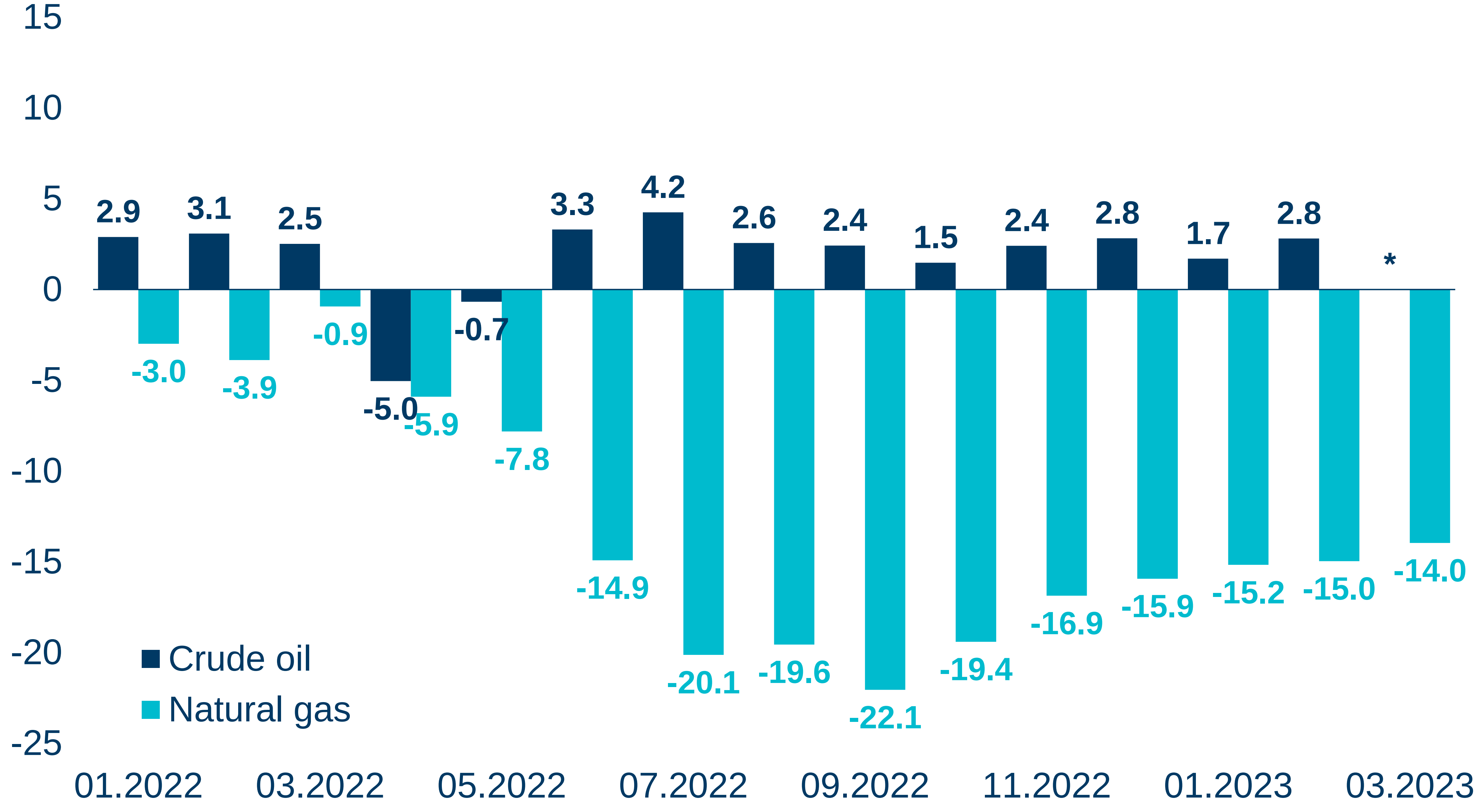
- Russia’s attempts to weaponize natural gas exports to Europe has led to a sharp drop in volumes (-84% vs. 2021 average).
- With infrastructure to reroute flows to alternative customers or store natural gas lacking, production had to follow suit.
- But not only did export volumes suffer, European gas prices have also returned to levels not seen since the fall of 2021.

Weekly EU natural gas imports from Russia, million cubic meters



Source: Bruegel, KSE Institute

Russian production volumes, % change vs. 2021 average volumes



Source: Rosstat, KSE Institute *series appears to have been discontinued

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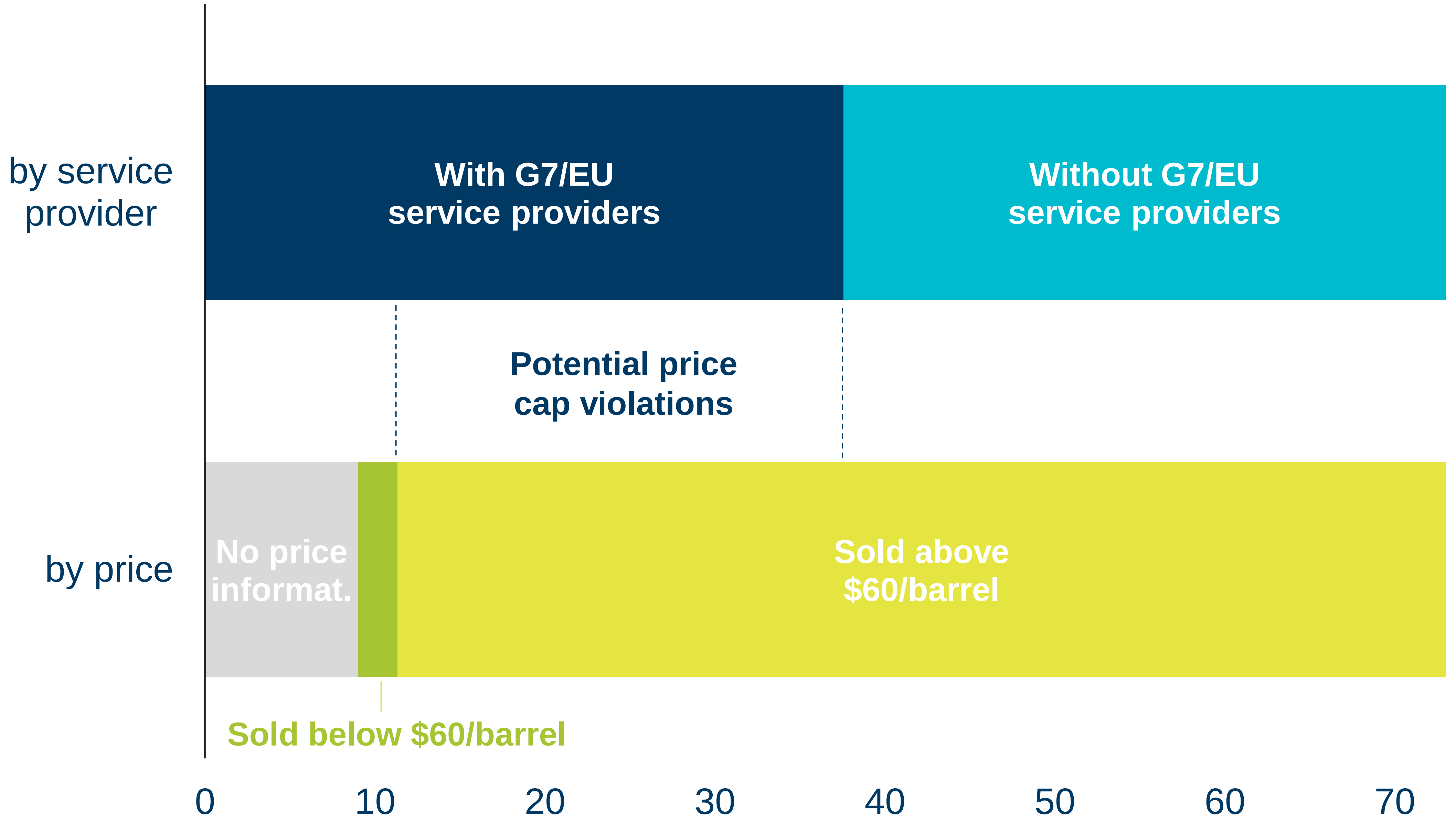
Evidence for potentially widespread price cap violations is emerging.

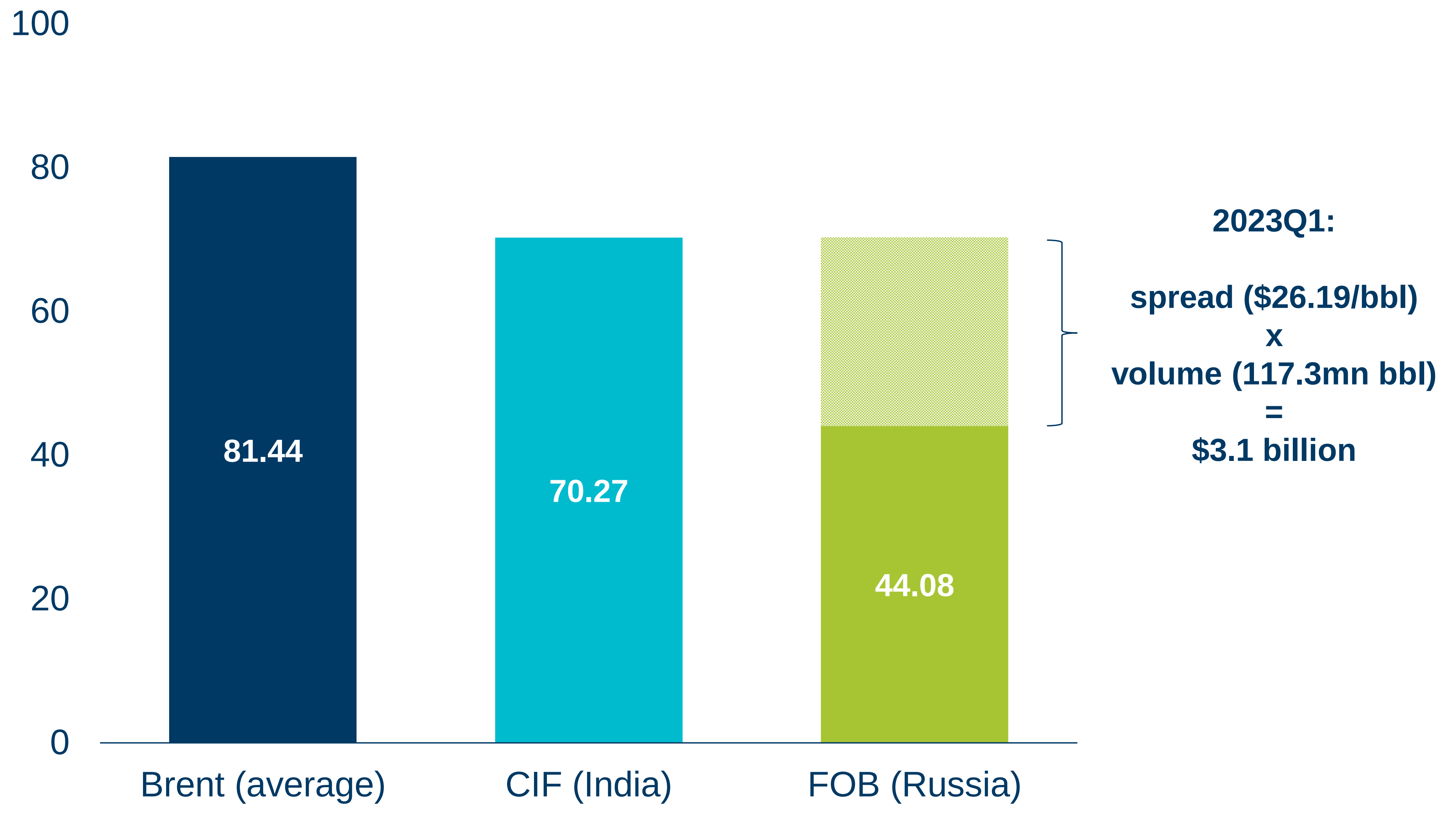
- In 2023Q1, 96% of crude oil exported from the port of Kozmino was priced above the $60/barrel price cap.
- At the same time, Western companies were involved in roughly half of the shipments—pointing to widespread violations.
- Elevated spreads between FOB and CIF may indicate that Russian companies are trying to capture oil trade arbitrage.

2023Q1 crude oil exports from Kozmino, in million barrels



Source: KSE Institute

Price of 2023Q1 crude oil exports to India, in U.S. dollar/barrel



Source: KSE Institute

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Stepped-up enforcement of the price cap regime is critical.

Due to evidence for potentially widespread price cap violations and schemes to capture oil market arbitrage, we propose several measures to strengthen enforcement and ensure that Russian export earnings and budget revenues remain constrained.

1. **Improve existing attestations system**
   1.1. Implement risk-based audits of attestations, i.e., focus on transactions with the highest risk of price cap violations.
   1.2. Require all actors (Tier 1-3) to retain and provide underlying evidence (e.g., contracts with pricing information).
   1.3. Make documentation requirement imperative by removing currently-existing practicability qualification.
   1.4. Require Tier 1-2 actors to notify implementing agencies of any participation in transactions regarding Russian oil.
   1.5. Shorten time periods for notification and evidence provision by all actors (Tier 1-3) considerably.
   1.6. Enforce the price cap on a “strict liability” basis to eliminate loopholes via “safe harbor” procedures.

2. **Strengthen overall sanctions regime**
   2.1. Align penalties for violations across jurisdictions and increase fines as well as lock-out periods.
   2.2. Investigate third-country entities that “caused” sanctions violations by G7/EU service providers and impose penalties.
   2.3. Monitor complex schemes intended to conceal cargo or contractual terms (e.g., transportation costs).
   2.4. Impose financial sanctions to reduce channels through which oil trade-related transactions are conducted.

Read KSE Institute’s latest analysis of Russian oil exports under sanctions.

Overall external environment: less supportive with potential for additional sanctions to further reduce the current account surplus.

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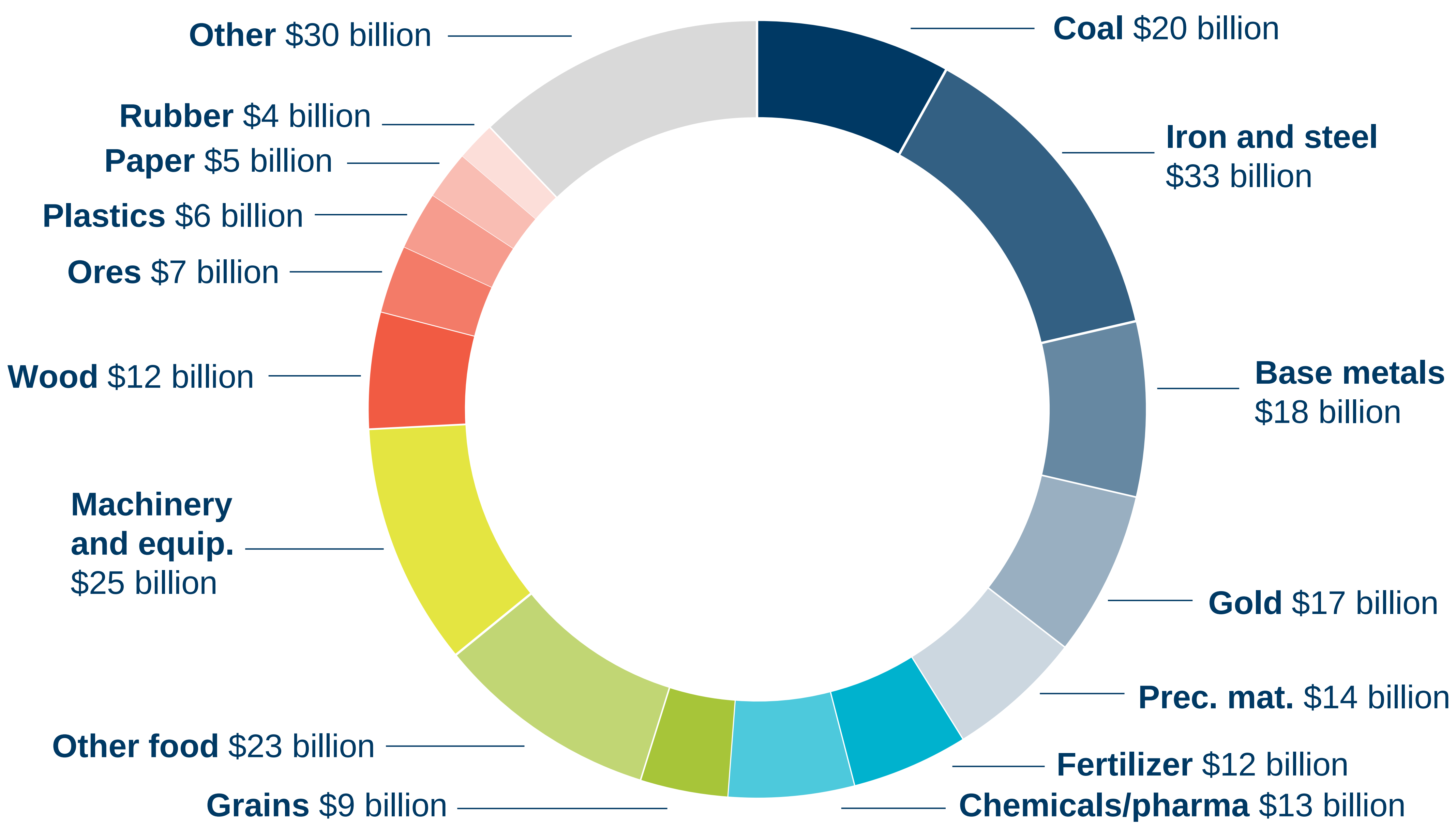
Significant room remains for additional trade sanctions outside of energy.

- 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	🟡	🟡	🟡	🟡	🟡	🟢	🔴	🔴	🔴
Machinery and equip.	🟡	🟡	🟡	🟡	🟡	🔴	🟡	🔴	🔴
Coal	🟢	🟢	🟢	🟢	🟢	🔴	🔴	🟢	🟢
Gold	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Fertilizer	🟡	🟡	🟡	🟡	🔴	🔴	🔴	🔴	🔴
Timber	🟢	🟢	🟢	🟢	🟡	🔴	🟡	🔴	🔴
Various chemicals	🟡	🟡	🟡	🟡	🟡	🔴	🔴	🔴	🔴
Wheat	🔴	🟡	🔴	🔴	🔴	🔴	🔴	🔴	🔴
Fish and seafood	🟡	🟡	🟡	🟡	🟡	🟡	🔴	🔴	🔴
Wood pulp and paper	🟡	🟡	🟡	🟡	🟡	🔴	🔴	🔴	🔴
Non-industrial diamonds	🔴	🔴	🔴	🔴	🟢	🔴	🔴	🔴	🔴
Iron ore	🔴	🟡	🔴	🔴	🟡	🔴	🔴	🔴	🔴
Rubber and products	🟡	🟡	🟡	🟡	🟡	🔴	🔴	🔴	🔴
Bituminous substances	🟢	🔴	🟢	🟢	🔴	🔴	🔴	🟢	🟢

🟢 – sanctioned, 🟡 – partially sanctioned, 🔴 – not sanctioned
Source: UN Comtrade, KSE Institute

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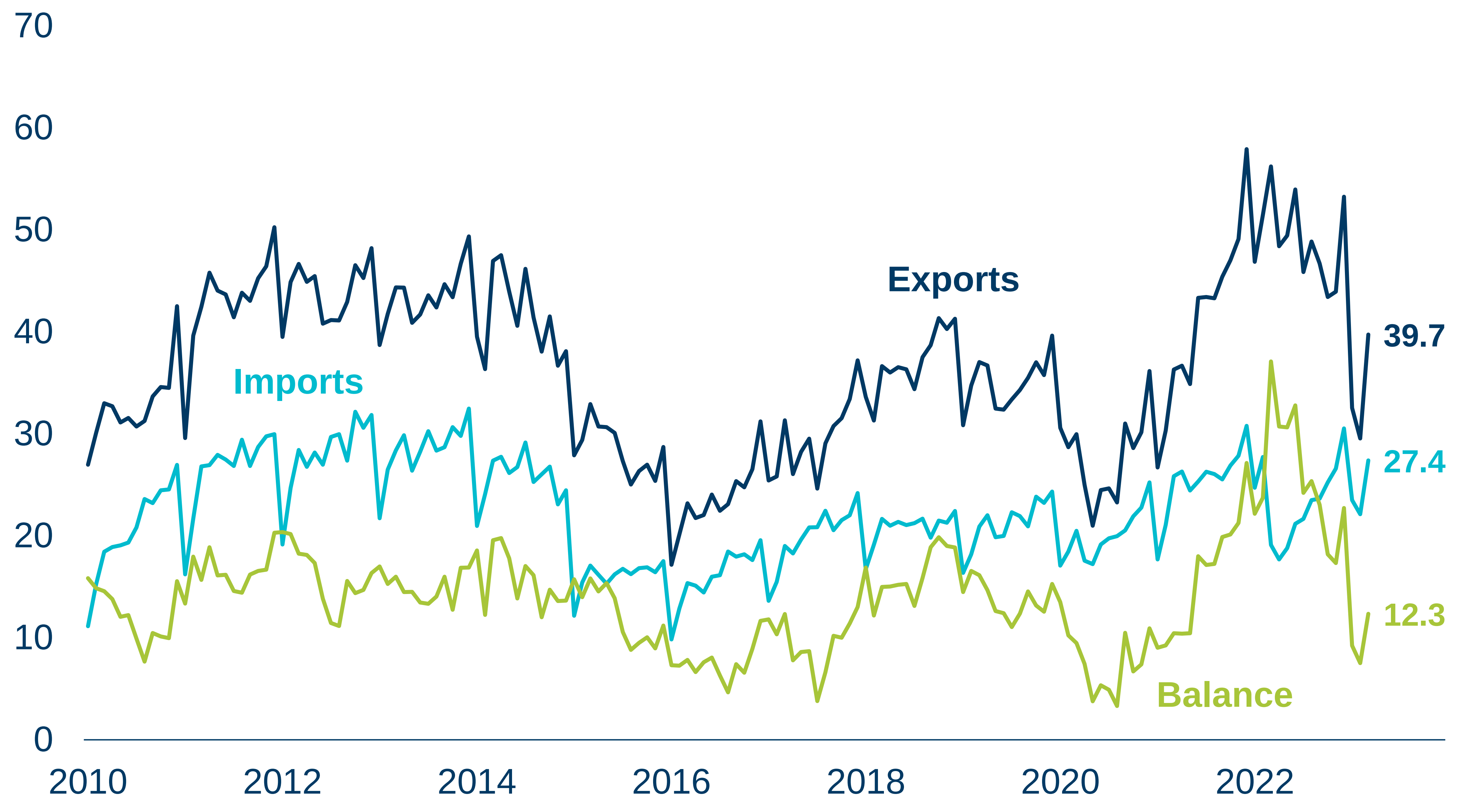
Trade balance lower in 2023Q1 driven by a sharp drop in exports.

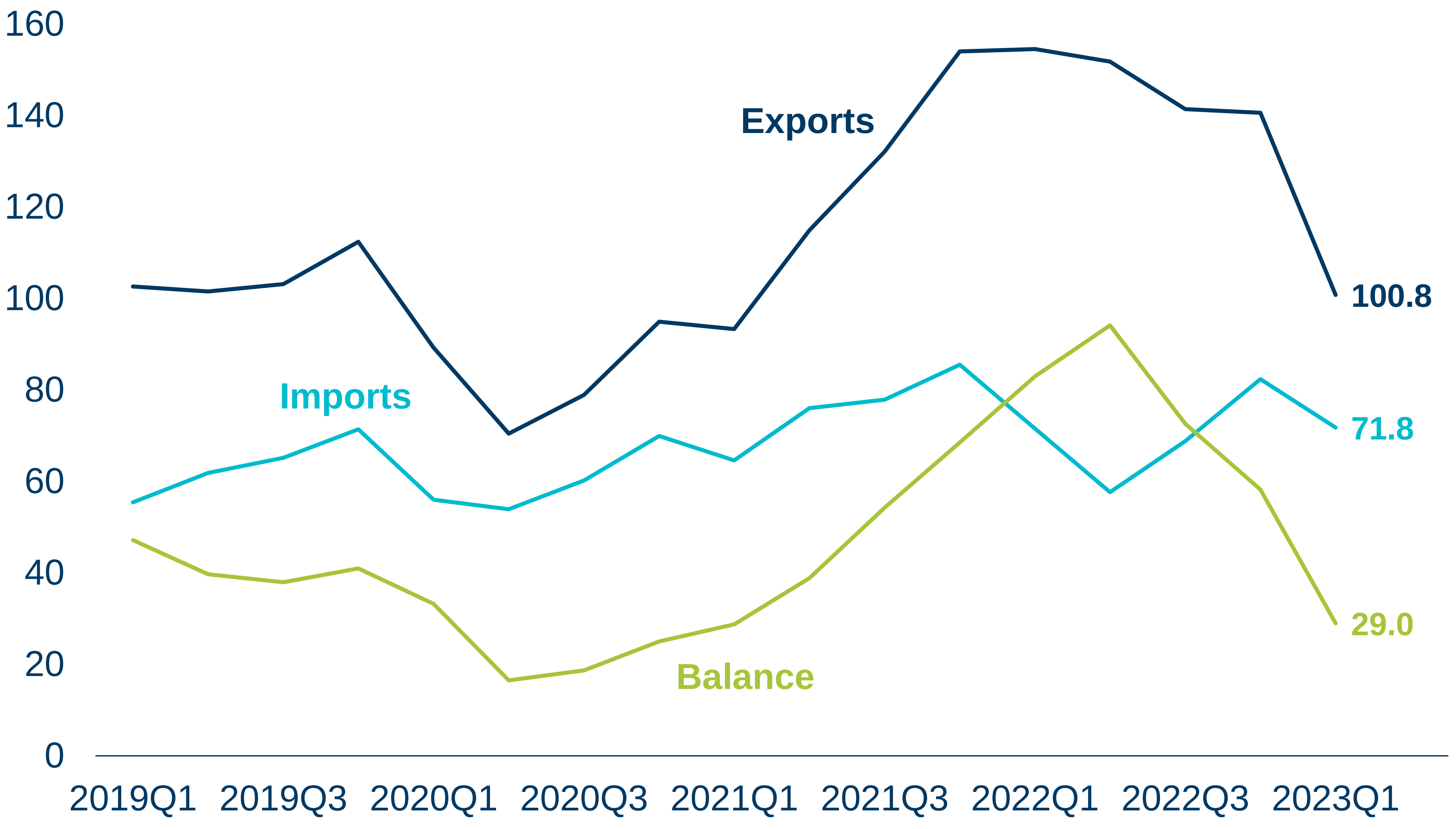
- Total goods exports reached $588 billion in 2022 (+19% vs. 2021) and imports $280 billion (-8%).
- In 2023Q1, the trade surplus was the smallest since 2021Q1 at $29 billion (-50% vs. 2022Q4).
- However, March-April data indicates a somewhat stronger performance ($12.3 billion and $12.7 billion).

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

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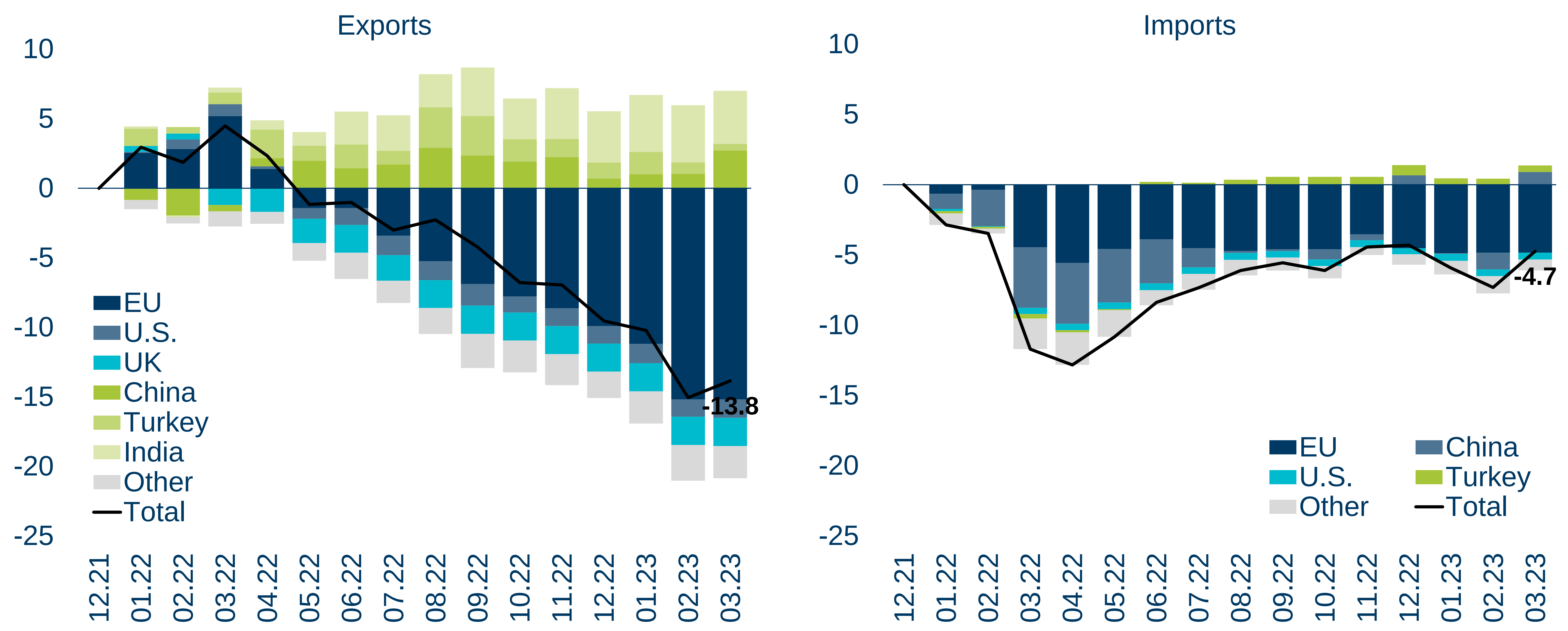
Key drivers are declining exports and a partial recovery in imports.

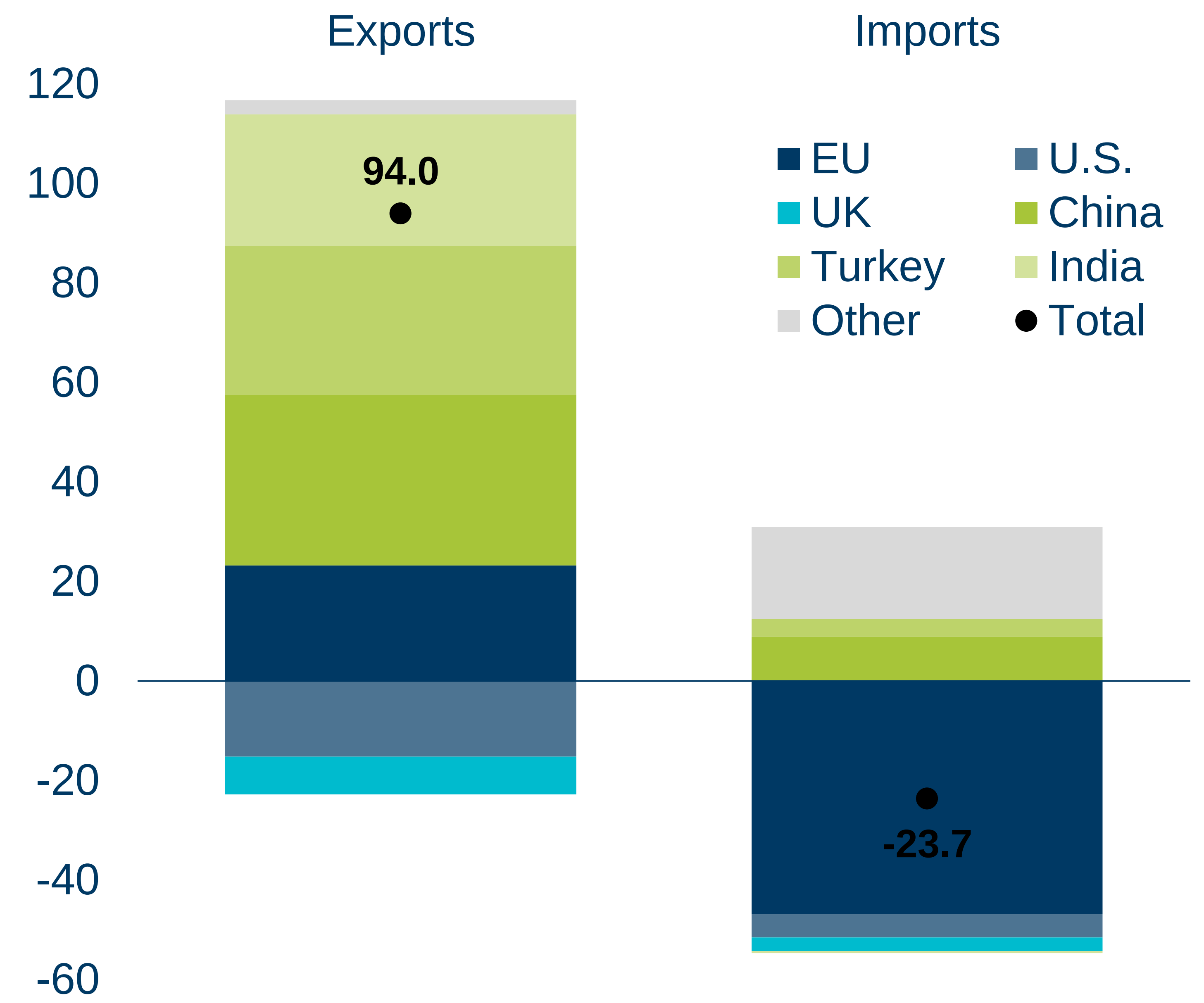
- Higher prices for key goods—and redirection to alternative buyers—supported Russian exports for parts of 2022.
- But total exports have weakened since 2022Q4 as energy prices moderated and additional sanctions took effect.
- On the imports side, Russia has not been able to replace EU and US trade –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

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



Source: national authorities, KSE Institute

Change 2022 vs. 2021, in U.S. dollar billion



Source: national authorities, KSE Institute

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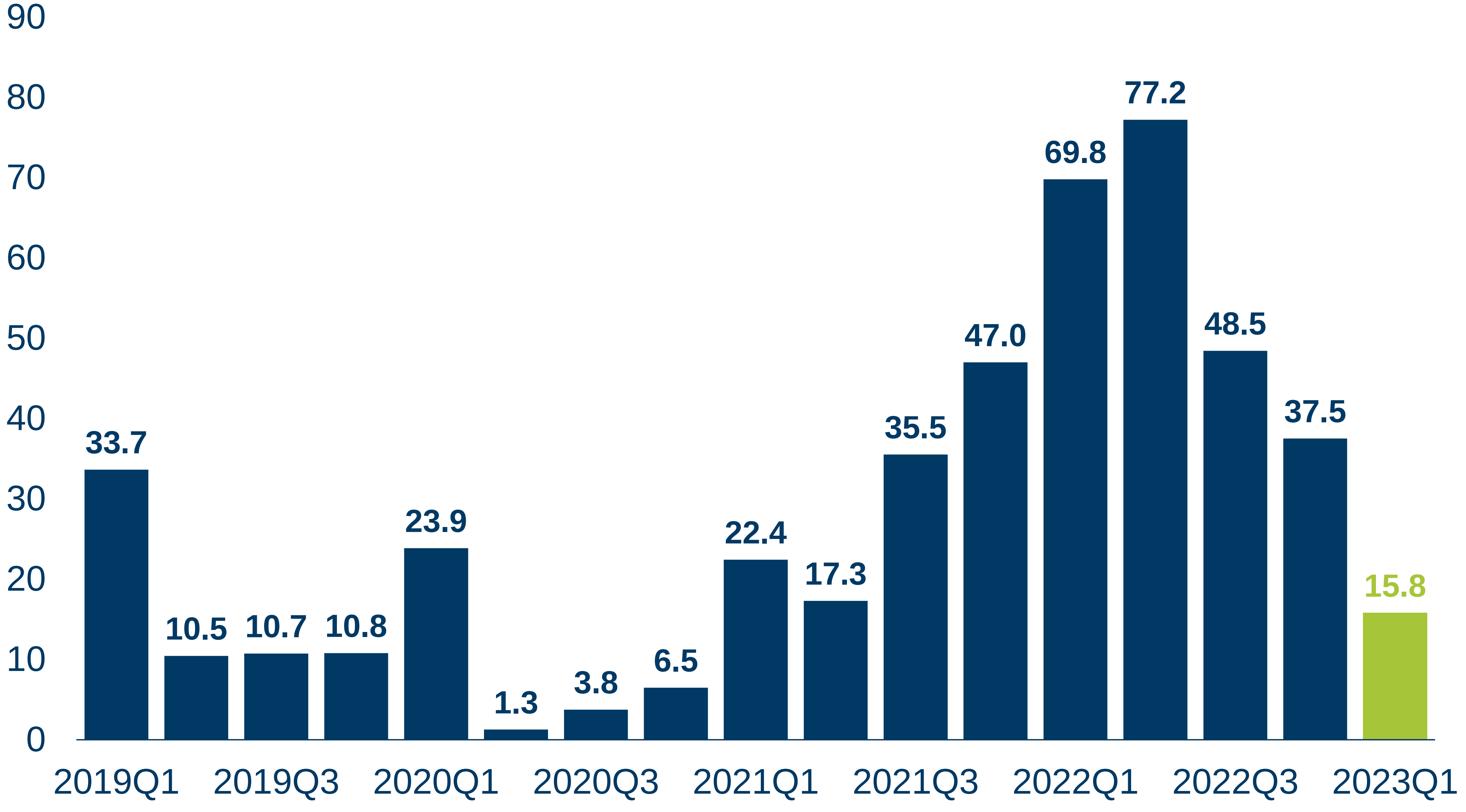
The external environment remained less supportive in April.

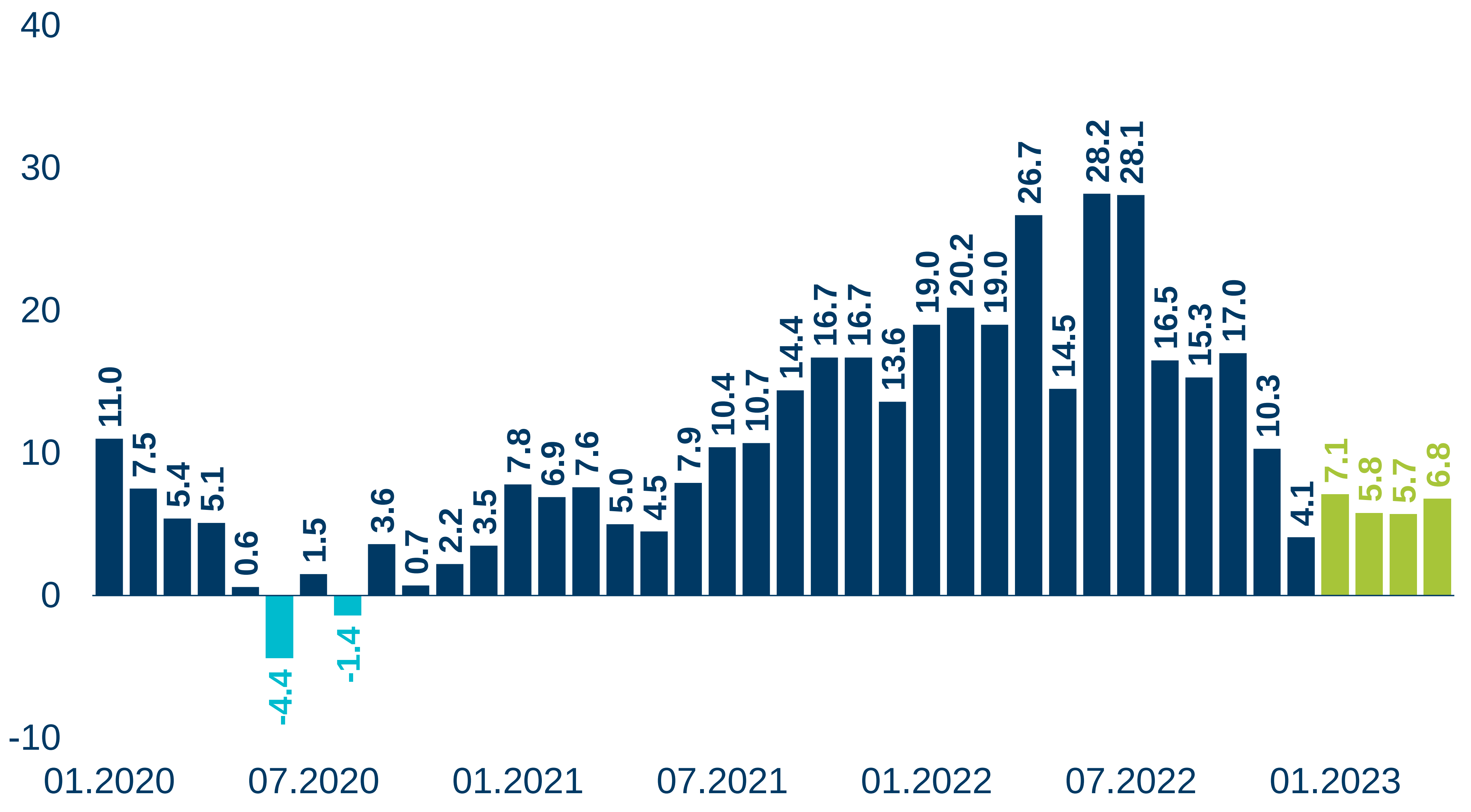
- The EU embargo on crude oil and products, Europe’s moving away from Russian gas, and lower prices clearly take a toll.
- In January-April, the current account surplus reached $22.6 billion with monthly readings between $5.7 billion and $7.1 billion.
- Key driver is a sharply lower trade surplus—$30.7 billion in January-April 2023 vs. $113.7 billion last year (-64%).

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



Source: Bank of Russia, KSE Institute

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

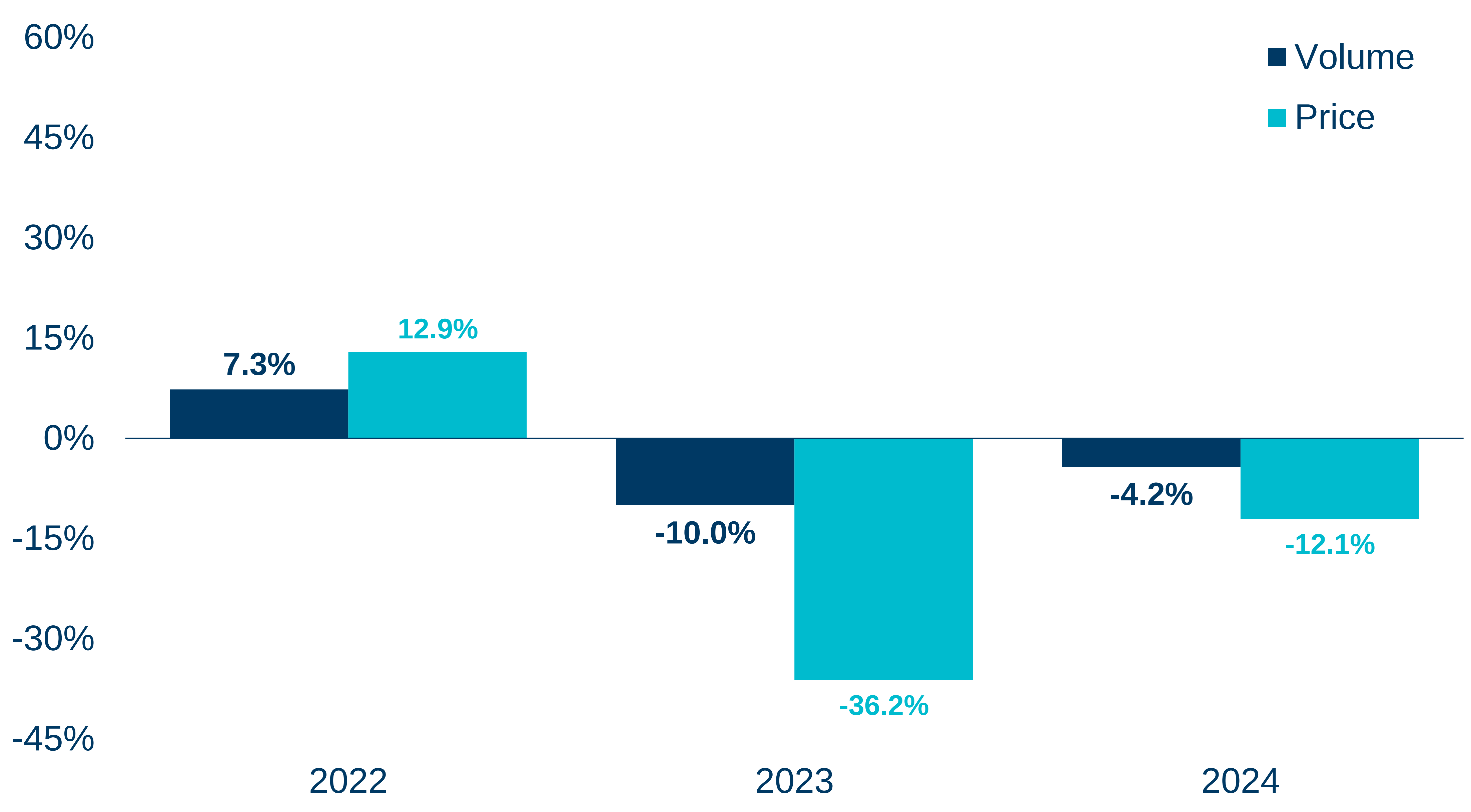


Source: Bank of Russia, KSE Institute *monthly and quarterly data do not always fully align

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

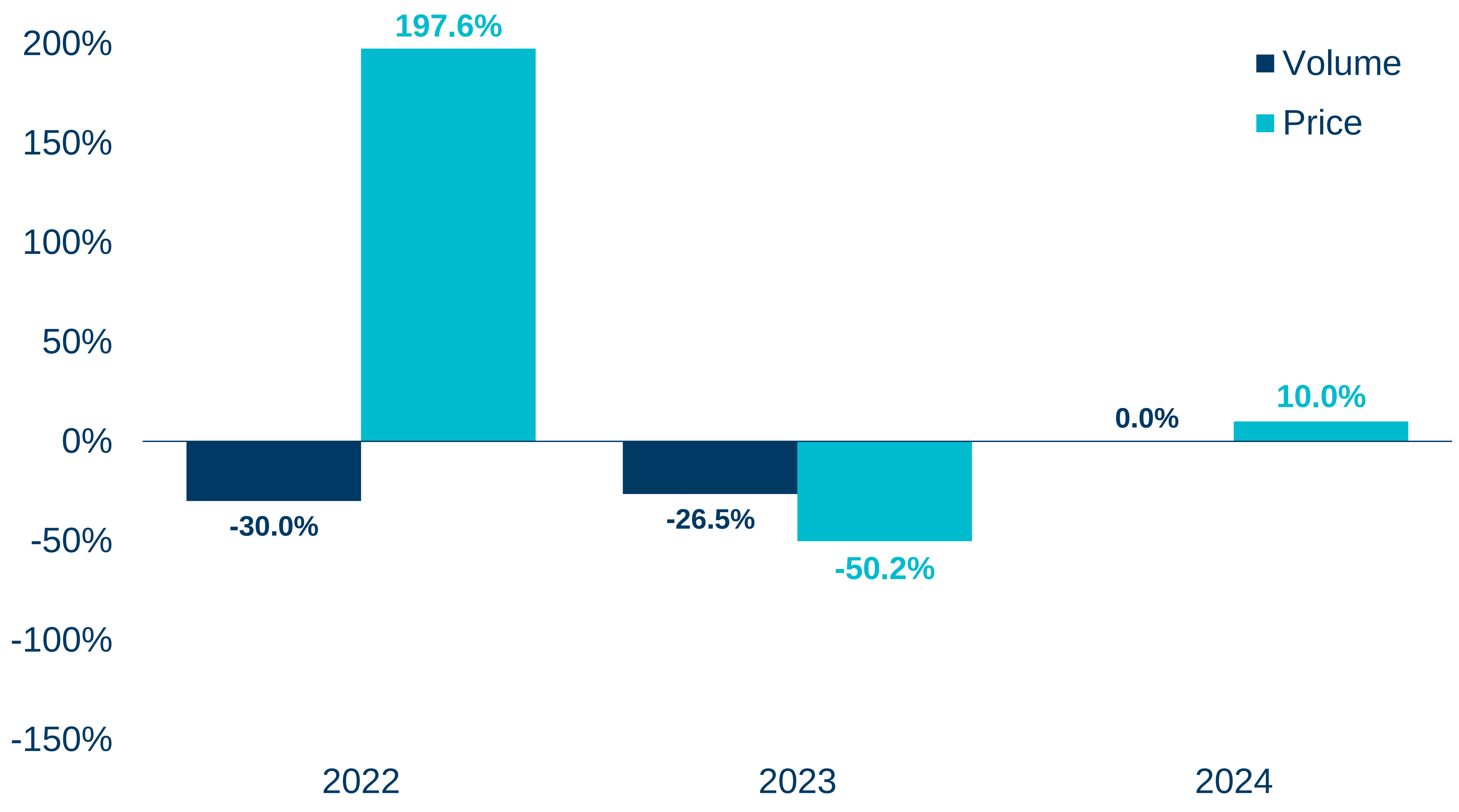
- We expect significant declines in oil and gas export volumes (-10.0%, -26.5%) as well as prices (-36.2%, -50.2%) in 2023.
- Oil prices rose by $15/barrel following the OPEC announcement but have now returned to just above $70/barrel for Brent.
- At the same time, forward gas prices have declined further 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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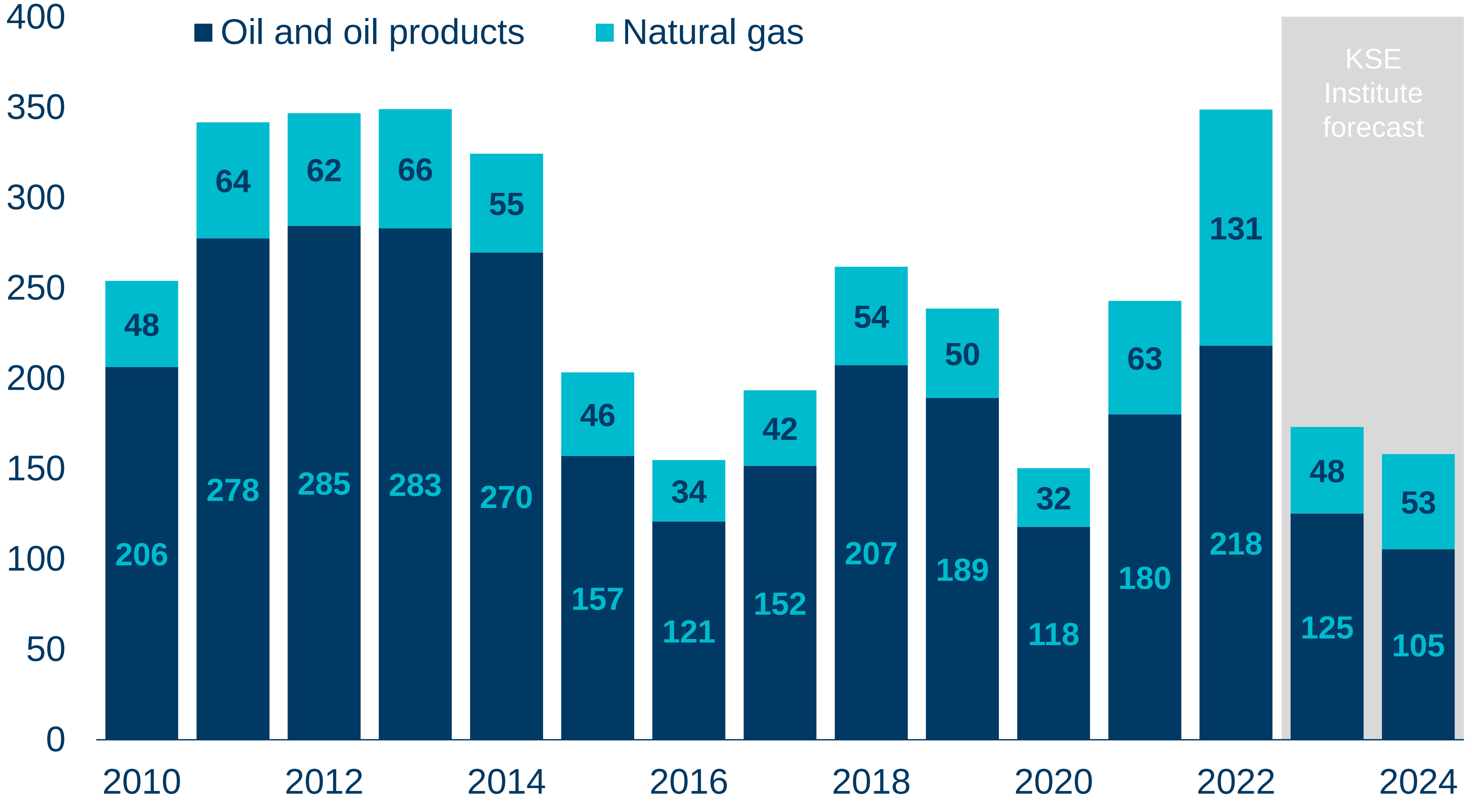
As a result, lower hydrocarbon earnings will weigh on the current account.

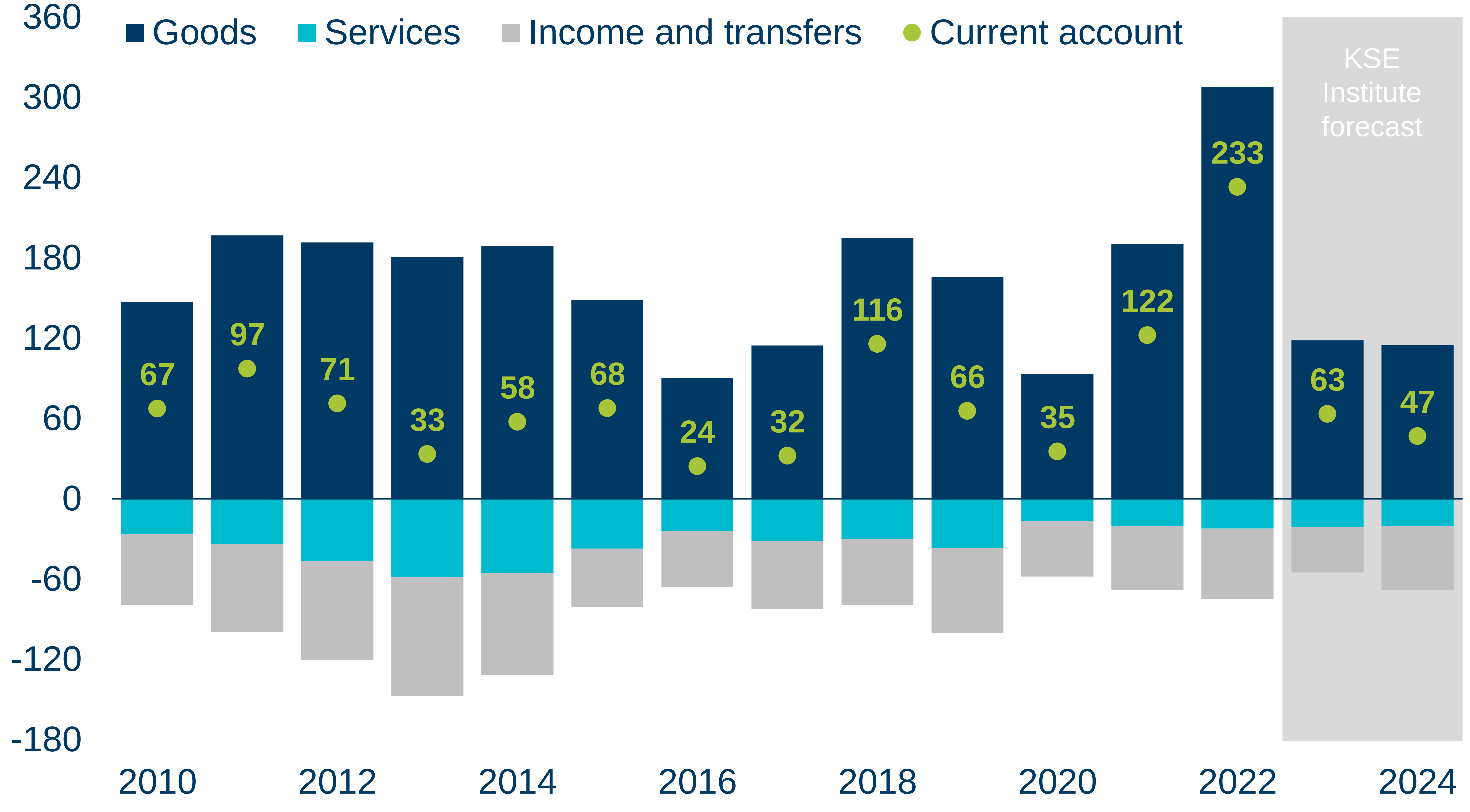
- We project lower oil and gas volumes and prices will cut earnings in half this year (43% for oil, 63% for gas).
- In turn, the current account surplus will narrow sharply—to $63 billion—with our forecast unchanged from April.
- This is sharply lower than the $123 billion which were assumed by the Ministry of Finance for the 2023 budget.

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 $48 billion and $71 billion in 2023-24, respectively.
- This would deprive Russia of financing for imports, wear down buffers, and expose economic and financial vulnerabilities.

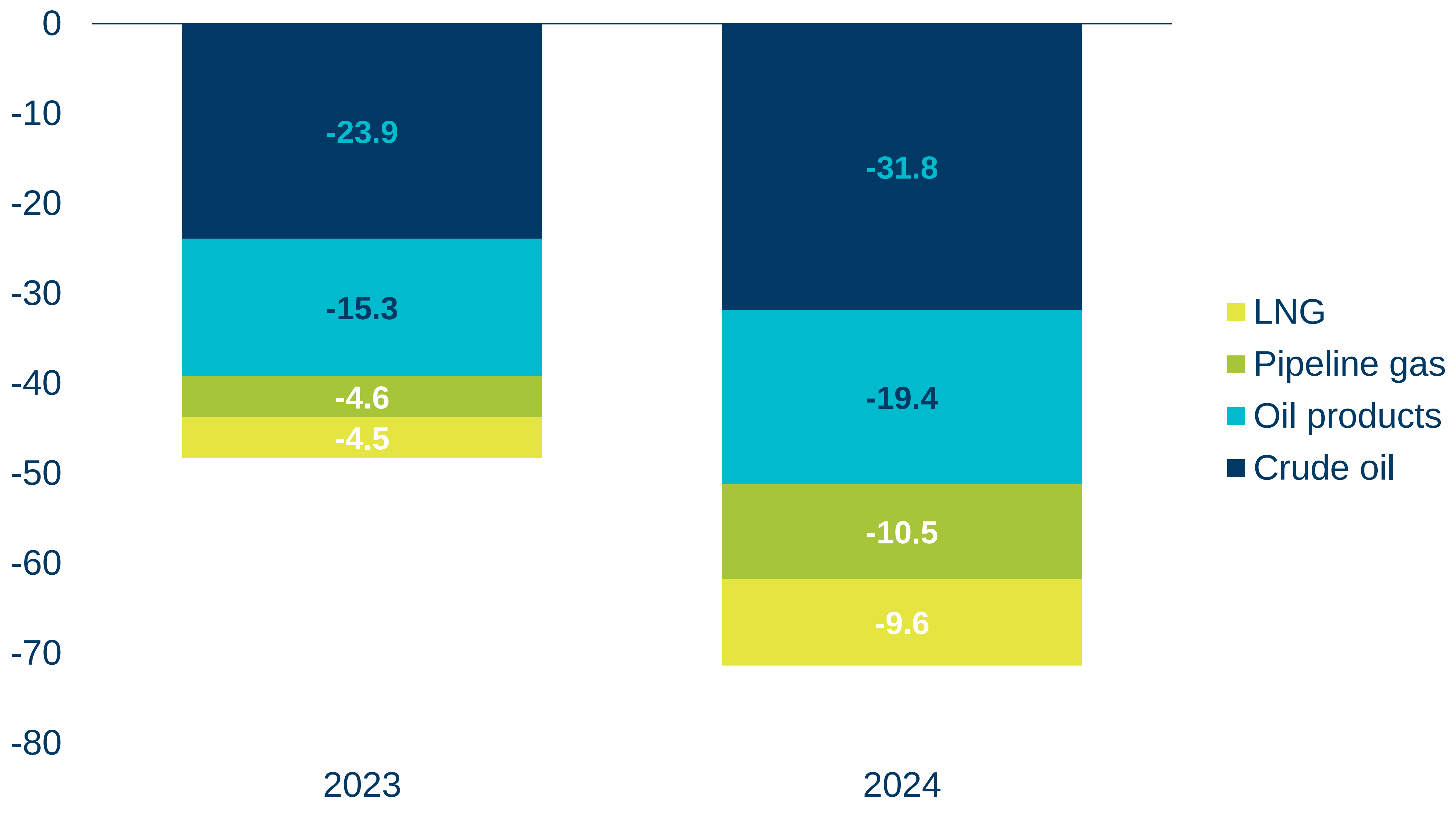
KSE proposal for further sanctions on Russian oil and gas

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

Government finances remain the primary area of macro concern.

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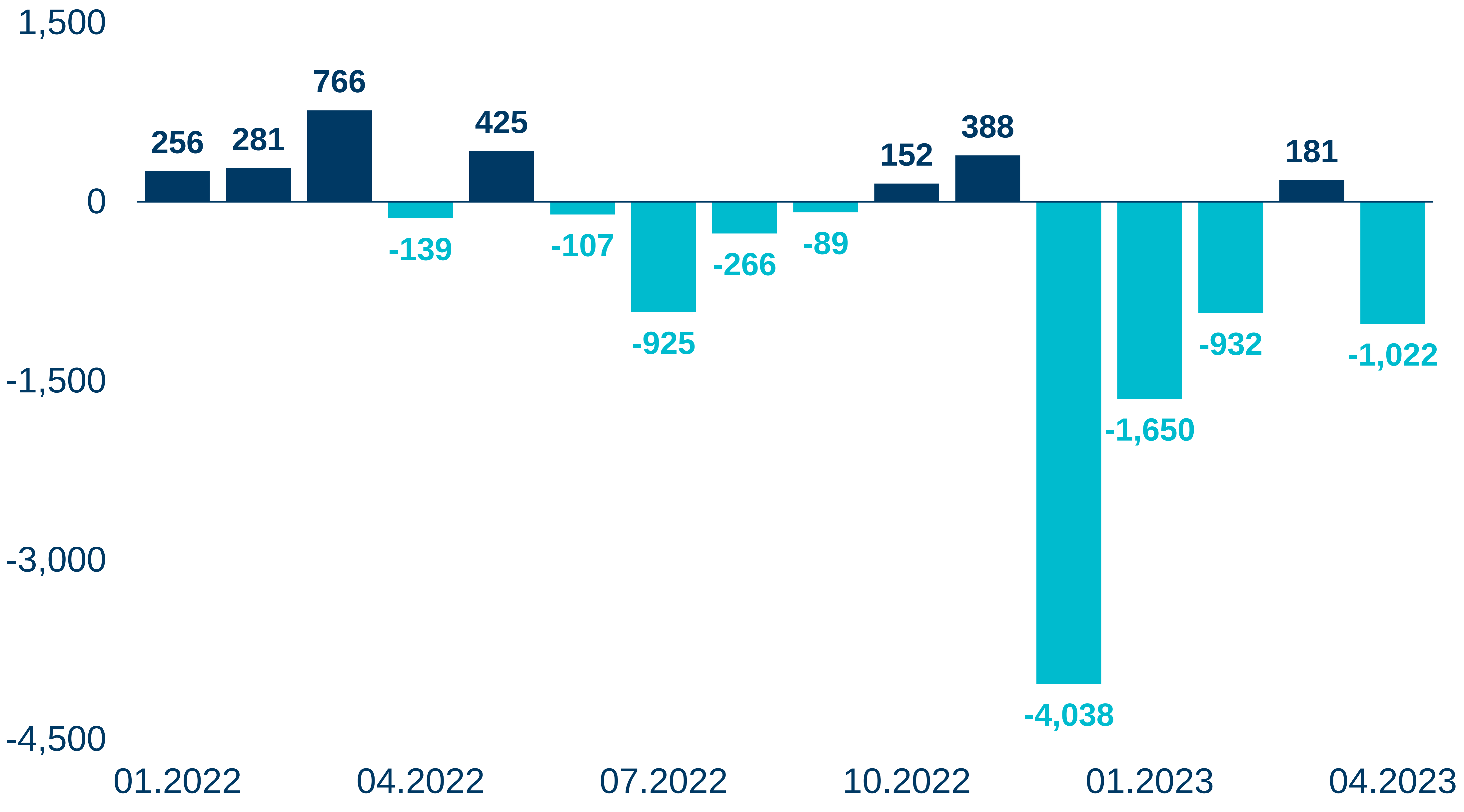
Fiscal picture continued to deteriorate in the first four months of 2023.

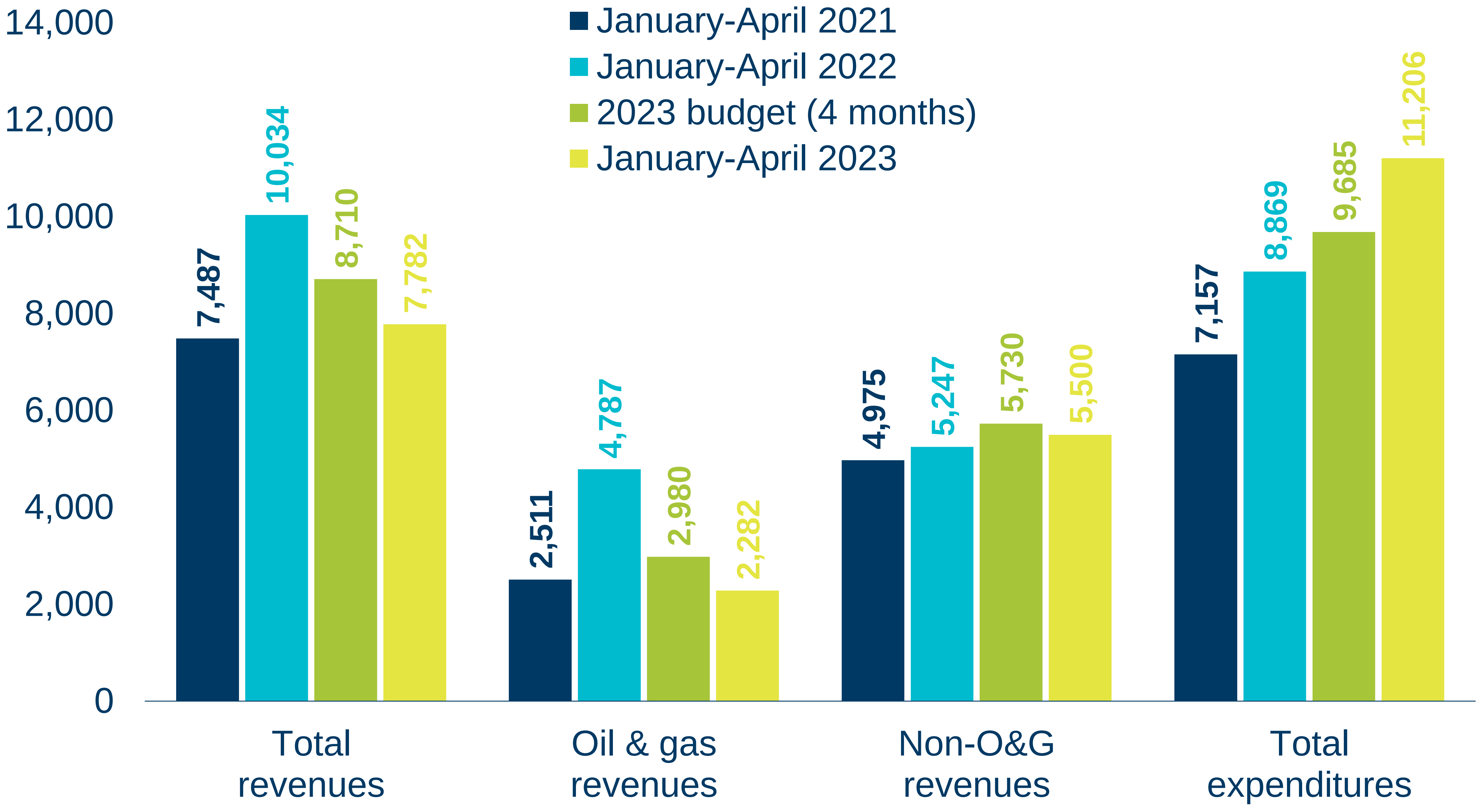
- Following a small surplus in March, Russia's federal budget returned to a hefty deficit of 1.0 trillion rubles in April.
- This means a deficit of 3.4 trillion for the first four months of 2023—already 17% above the full-year budget target.
- Revenues continue to underperform (-22% vs. 2022M1-4) but the bigger problem are soaring expenditures (+26%)

Federal government balance, in ruble billion



Source: Ministry of Finance, KSE Institute

Revenues and expenditures, in ruble billion

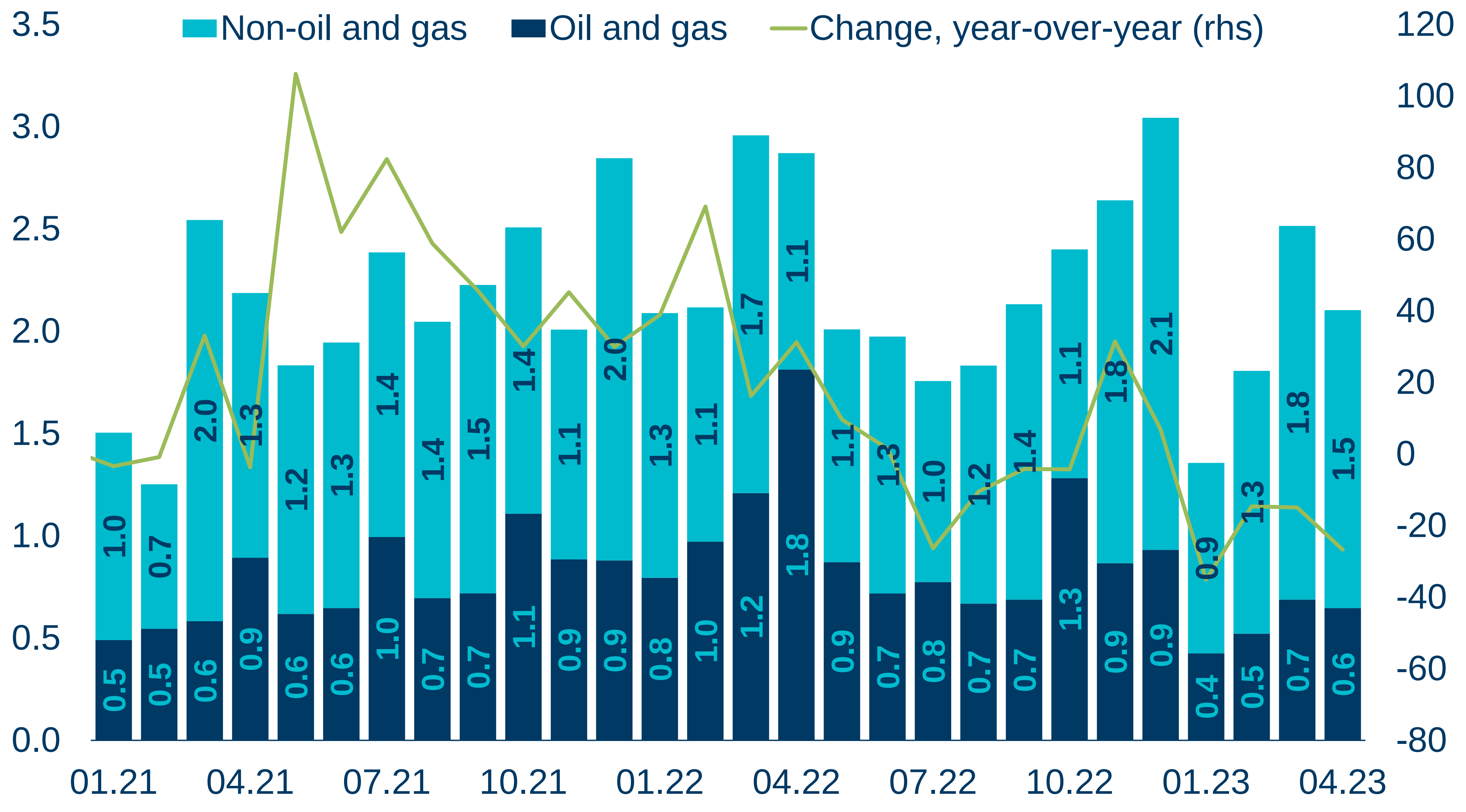


Source: Ministry of Finance, KSE Institute

Oil and gas revenues underperform—but expenditures also soar.

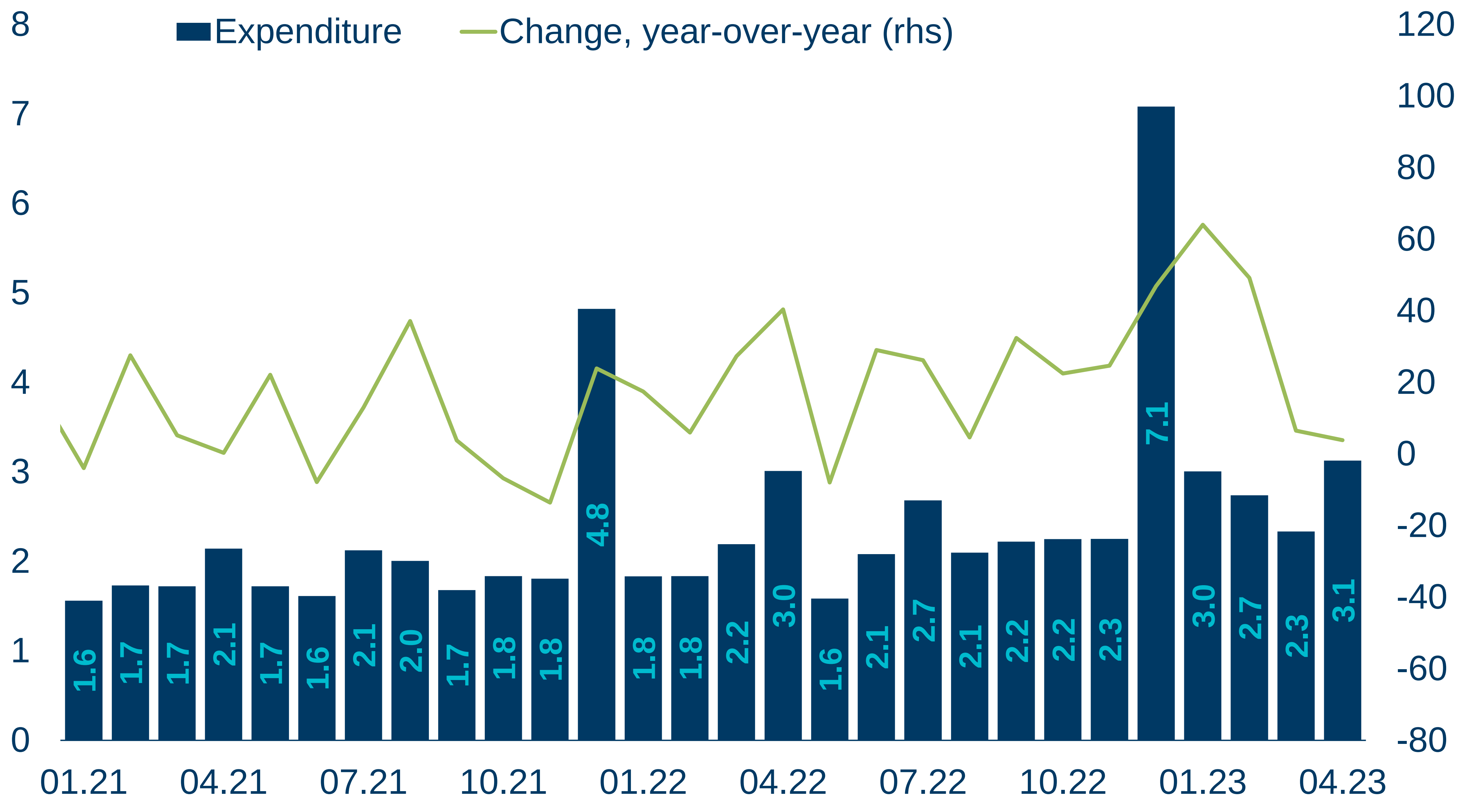
- Oil and gas revenues over January-April came in 52% below their level in the corresponding months of 2022.
- This has triggered changes to the benchmark tax oil price, but we believe the effect will be limited (~600 billion rubles).
- April expenditures rose sharply to 3.1 trillion—the highest monthly value on record (aside from December/year-end).

Federal budget revenues, in ruble trillion



Source: Ministry of Finance, KSE Institute

Federal budget expenditures, in ruble trillion



Source: Ministry of Finance, KSE Institute

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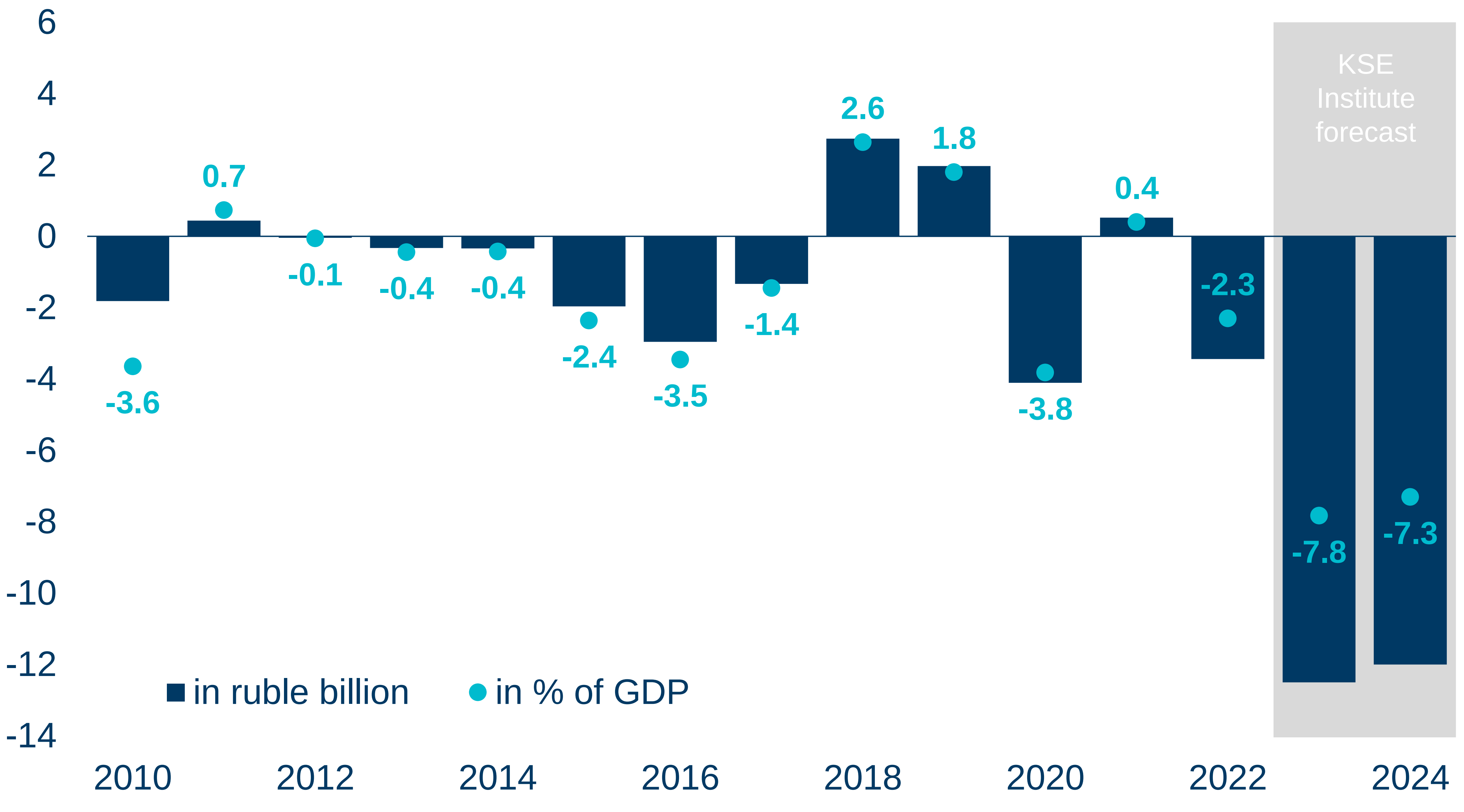
Russia is facing a sharply wider deficit—but no immediate financing challenge.

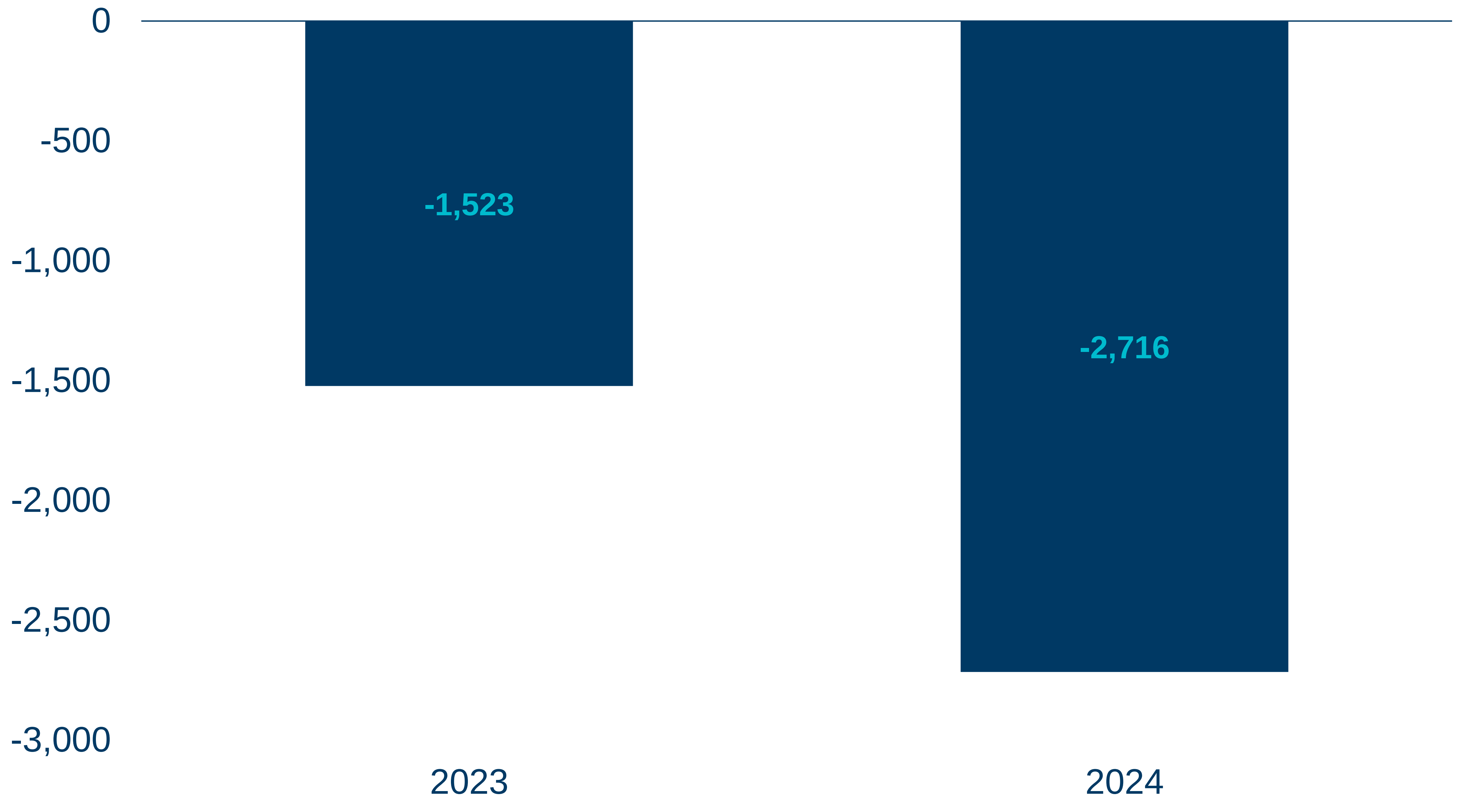
- The outturn for January-April is in line with our forecast of a ~12.5 trillion rubles deficit for 2023 (or 7-8% of GDP).
- While this represents a marked deterioration, it does not lead to immediate financing problems in our view.
- The key question for the coming months is if Russia can manage to offset war expenditures with spending cuts.

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

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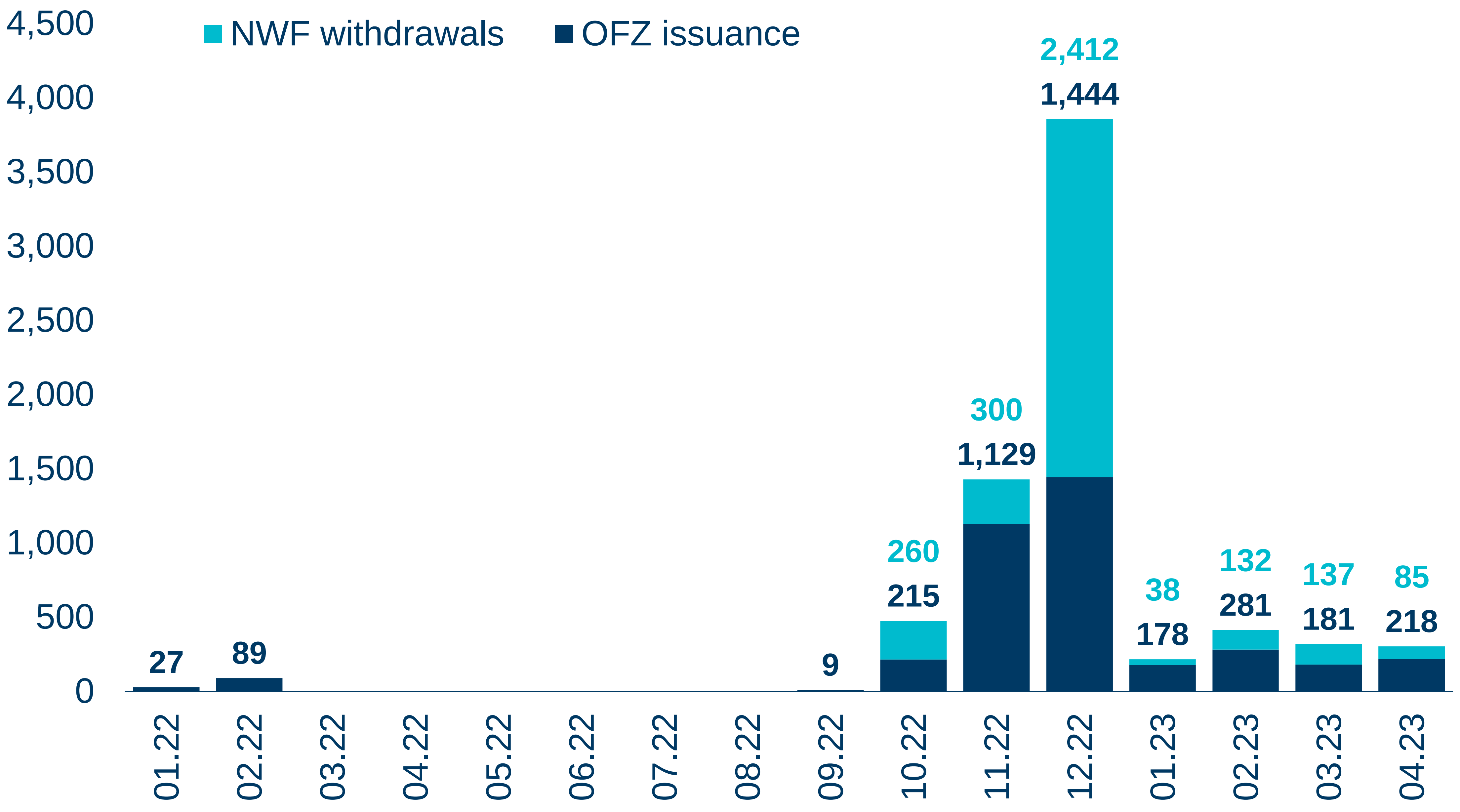
Reliance on NWF and OFZ issuance will pick up in the coming months.

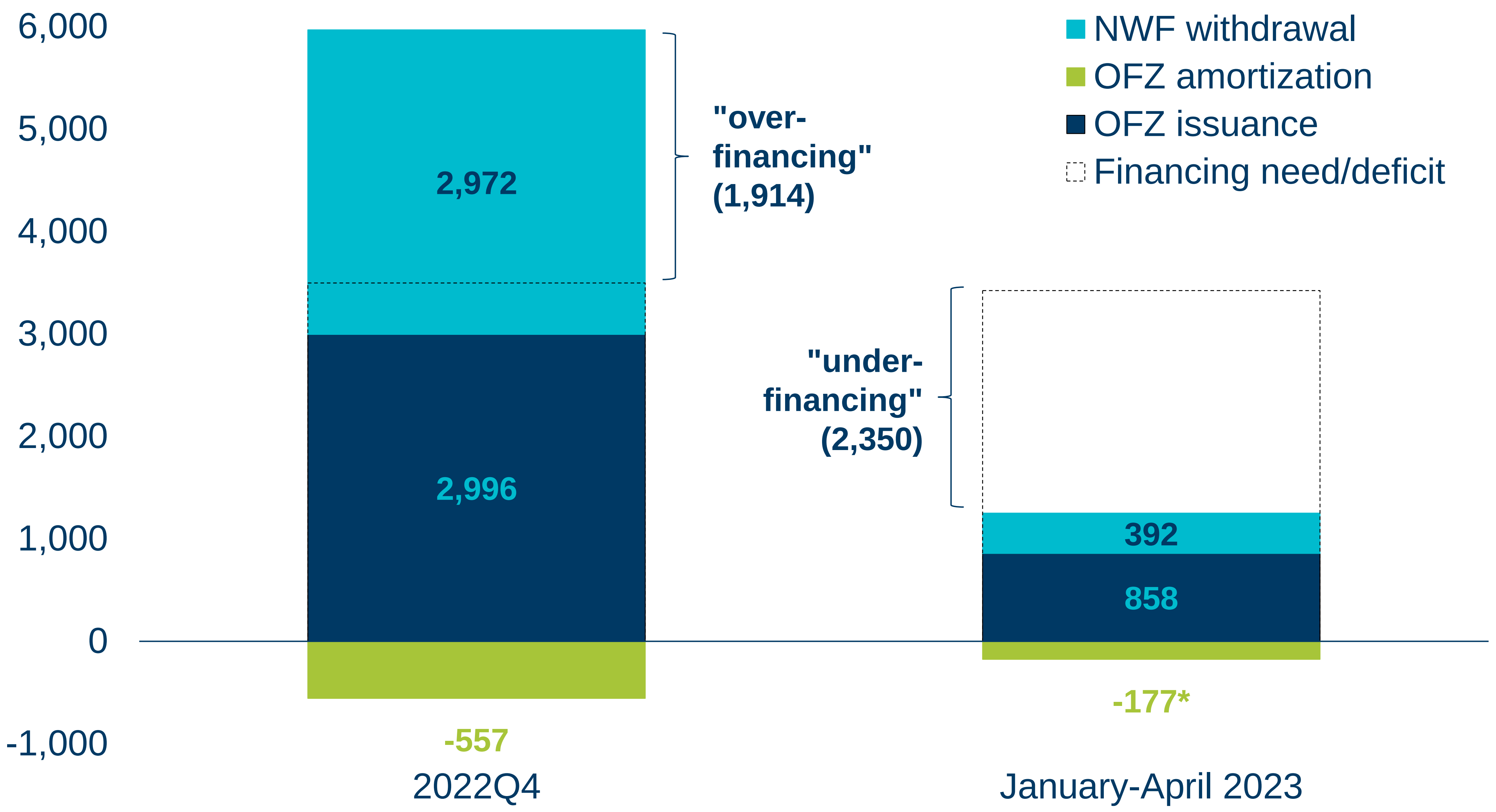
- Russia relied less on the two key financing channels—NWF withdrawals and OFZ issuance—in January April 2023.
- “Overfinancing” in 2022Q4 has played a key role here but we also believe Russia may be accumulating arrears.
- With these tools limited in scope—and deficits remaining high—reliance on the NWF and domestic borrowing will pick up.

Key fiscal financing channels, in ruble billion



Source: Ministry of Finance, KSE Institute

Fiscal financing summary, in ruble billion



Source: Ministry of Finance, KSE Institute *estimated as the difference between total 2023 amortization as of December 1, 2022, and remaining 2023 amortization as of May 1, 2023.

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

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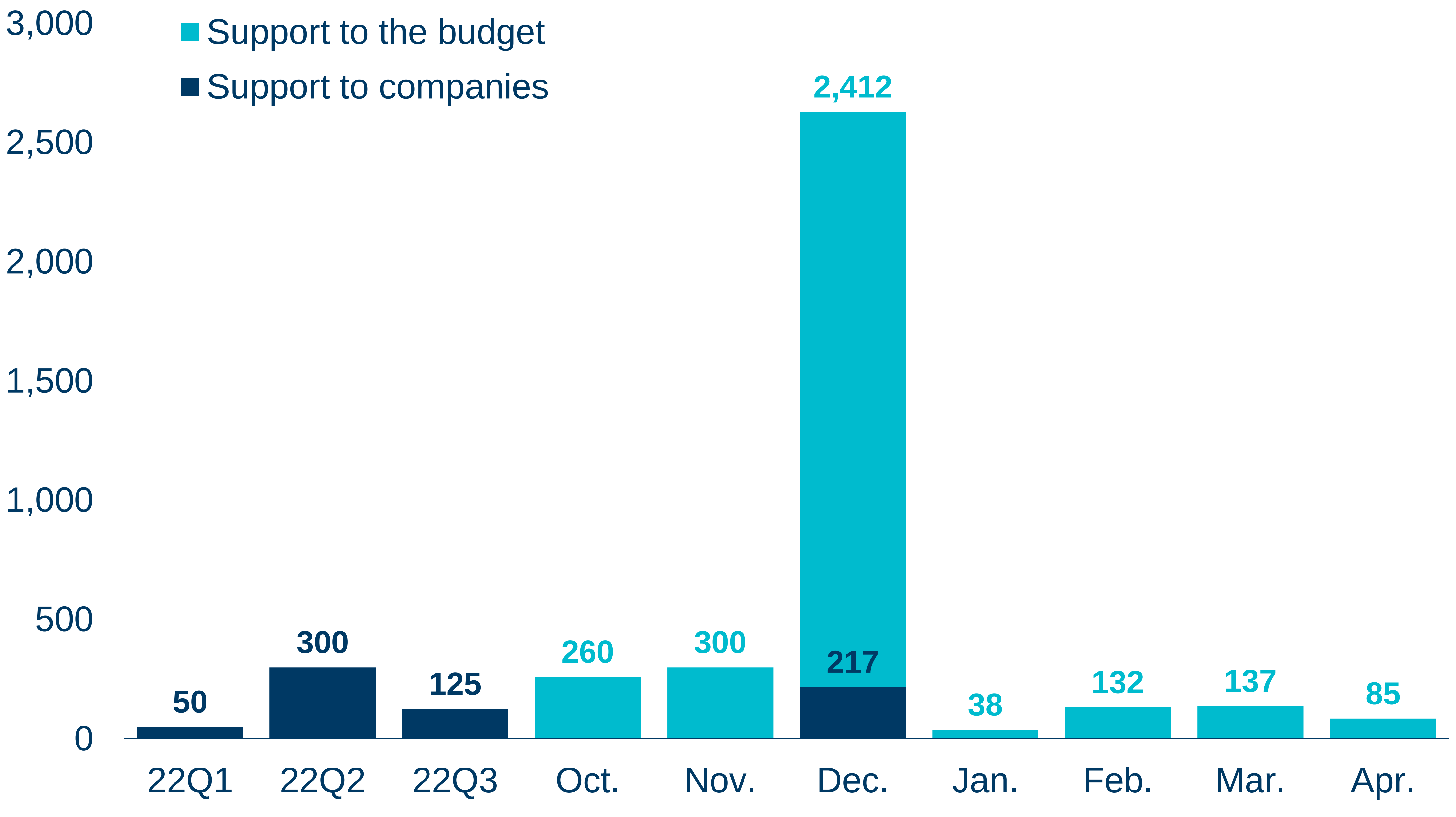
Russia has relied extensively on the NWF for budgetary support.

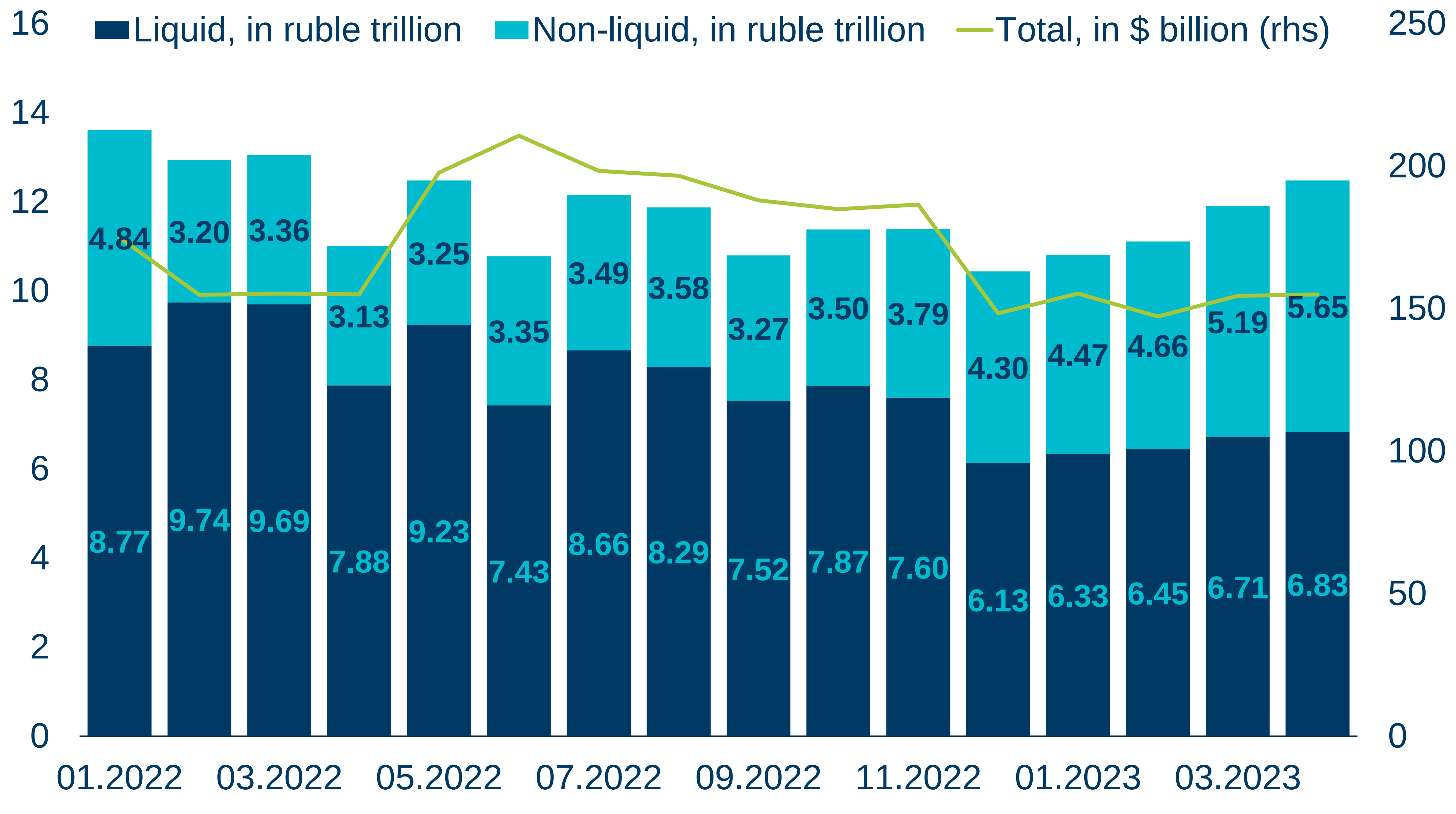
- Russia has spent 4.1 trillion rubles (~$55 billion) to support the budget and companies since the start of the war.
- Benefitting from valuation/FX effects, NWF currently stand at 12.5 trillion rubles ($155.0 billion or 8.4% of GDP).
- Importantly, roughly 45% of the remaining holdings are not liquid 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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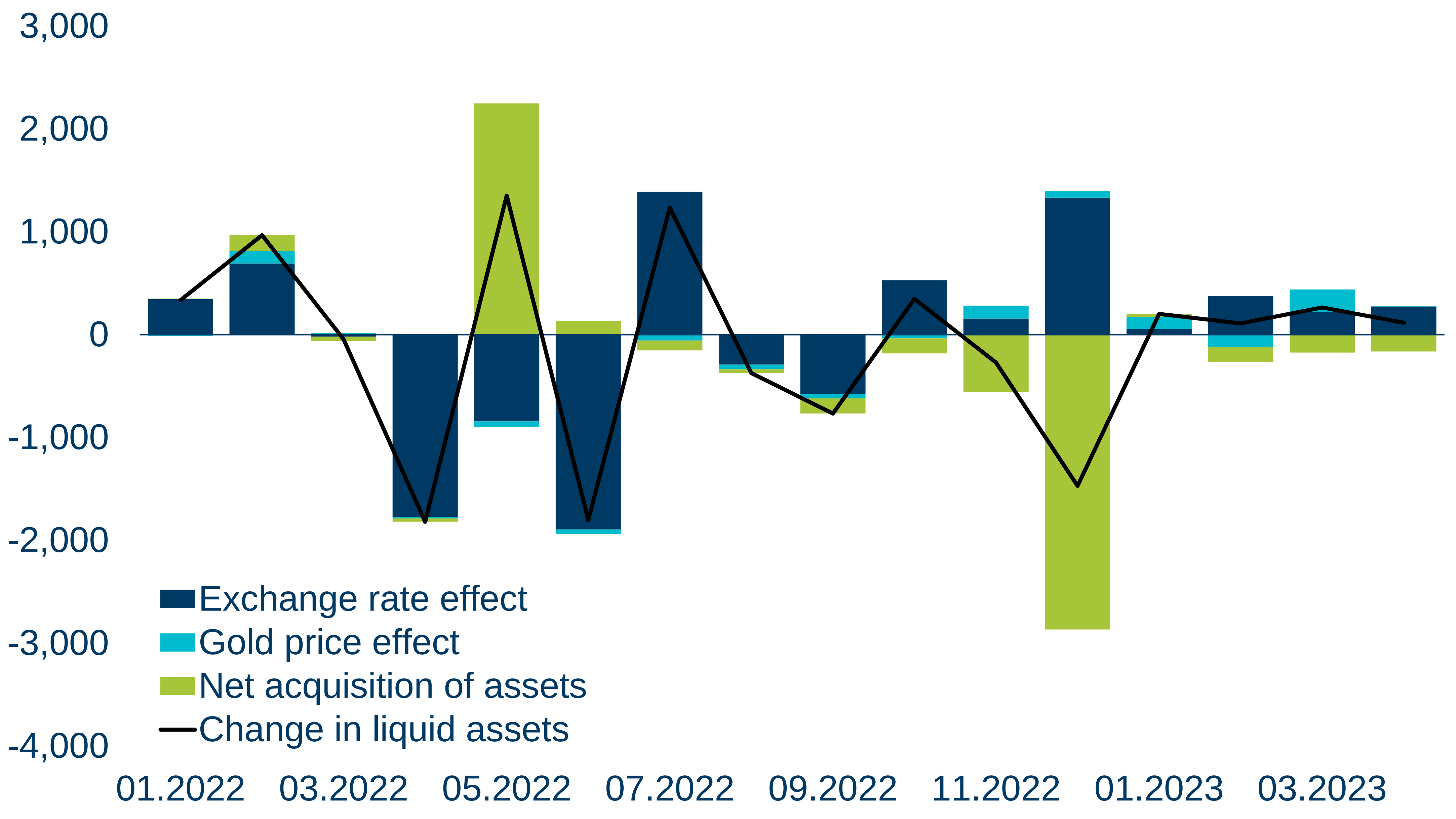
NWF is currently benefitting from valuation effects.

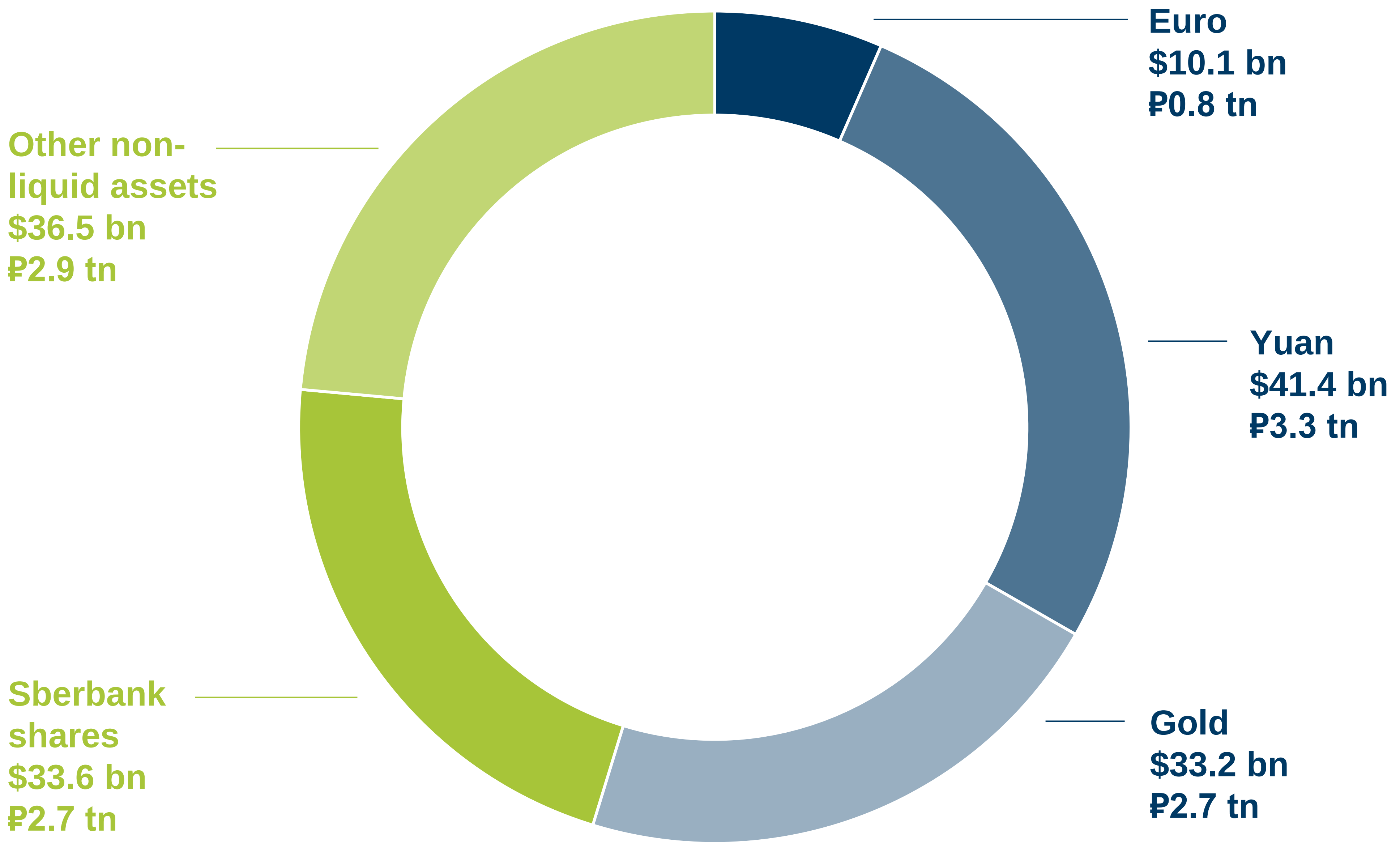
- The increase in total funds in January-April is a result of higher gold prices, a weaker U.S. dollar, and Sberbank share gains.
- Authorities sold some additional gold and yuan in recent months and widening budget deficits will require more of the same.
- We maintain our view that the National Welfare Fund’s liquid portion will be largely used up within the next 12 months.

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 May 1, 2023*

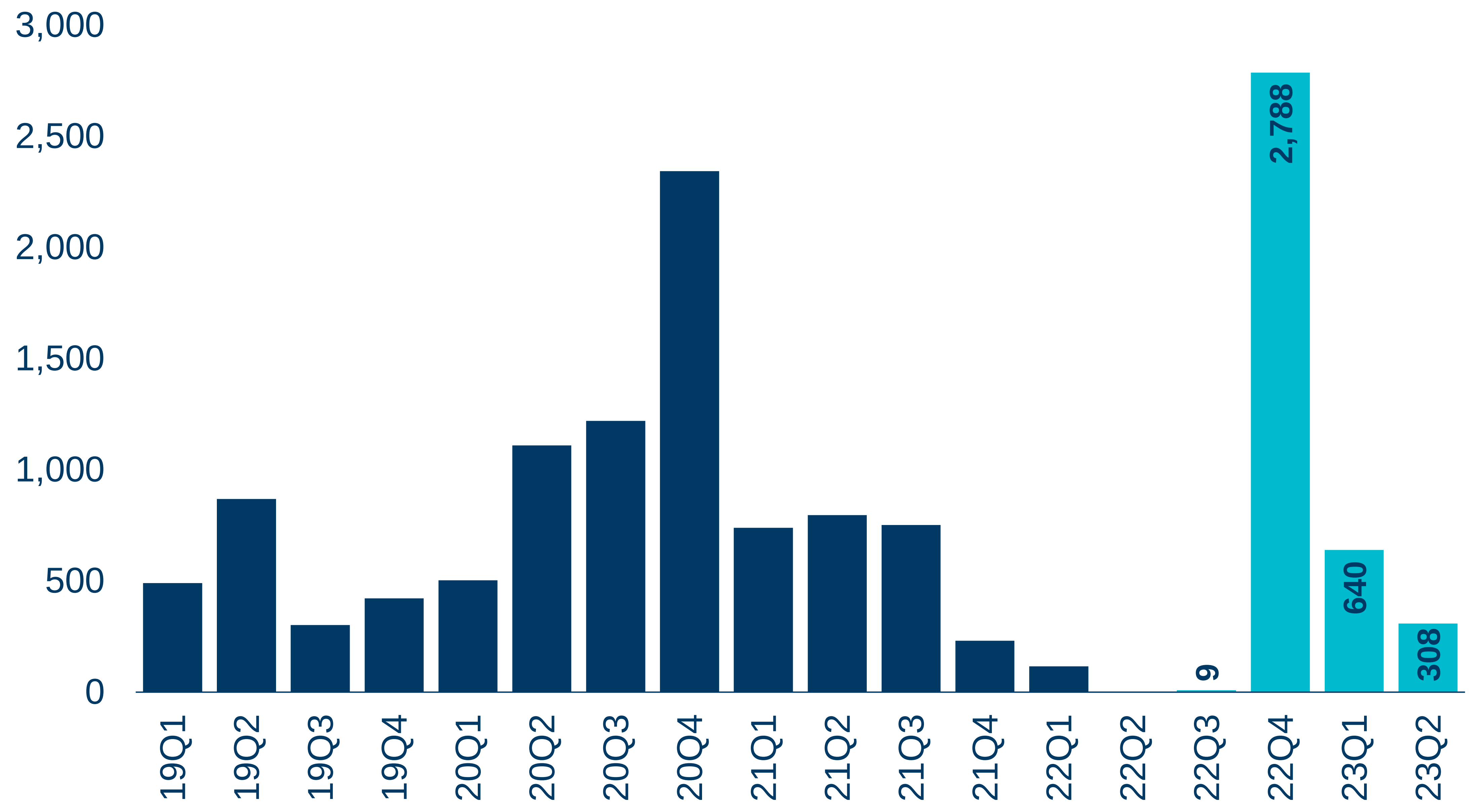


Source: Ministry of Finance, KSE Institute *based on market exchange rates/prices

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

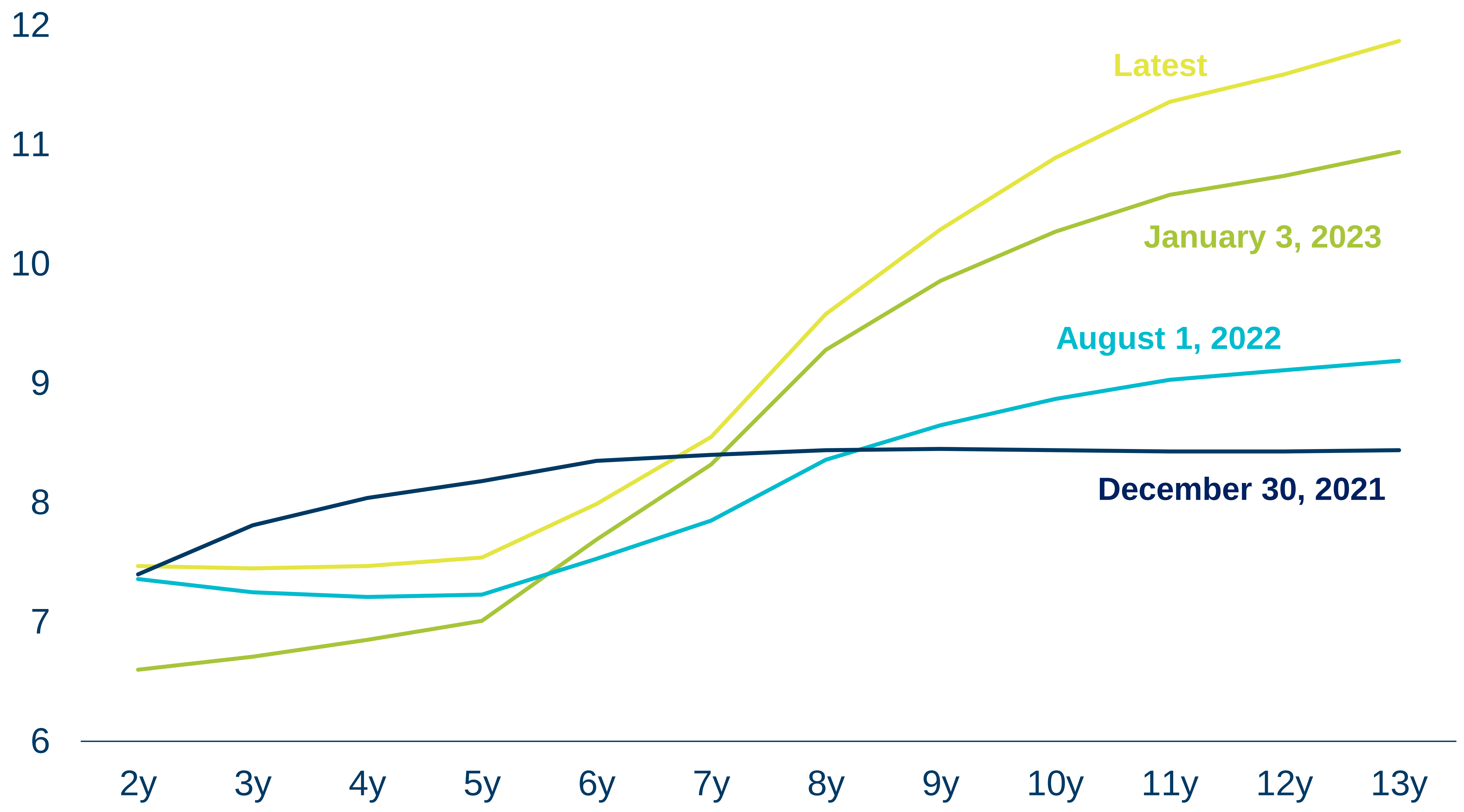
- In addition to NWF use, the Ministry of Finance issued a record 2.8 trillion rubles (~$47 billion) in OFZ in 2022Q4 alone.
- Issuance in January-April was lower, but wider deficits will require to rely on domestic borrowing in the coming months.
- OFZ yields have been rising and upward pressure will continue with issuance picking up and banks as the only buyers.

New domestic debt (OFZ) issuance, in ruble billion



Source: Ministry of Finance, KSE Institute

OFZ yield curves, in %



Source: Bank of Russia, KSE Institute

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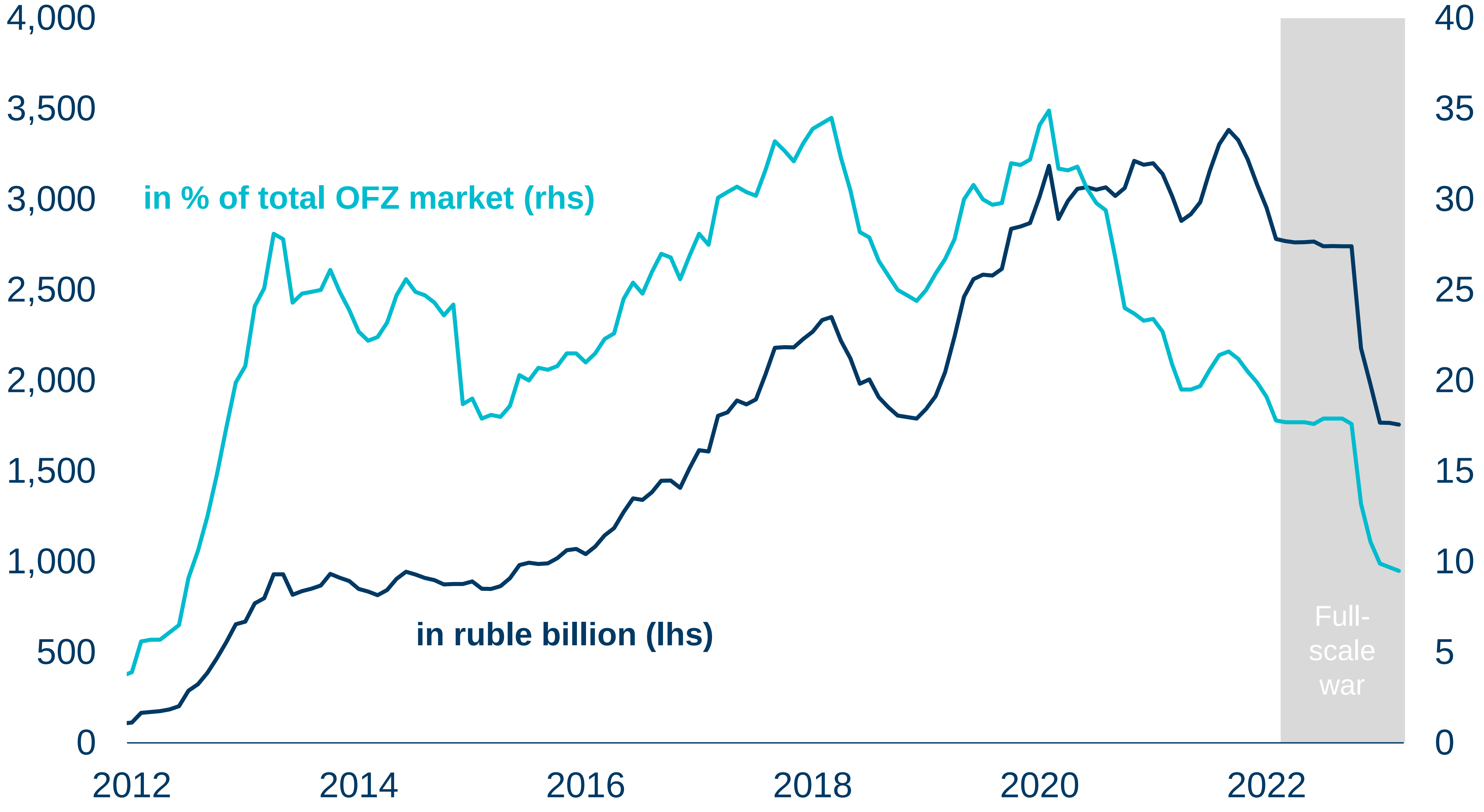
The banking system will have to bear most of the burden.

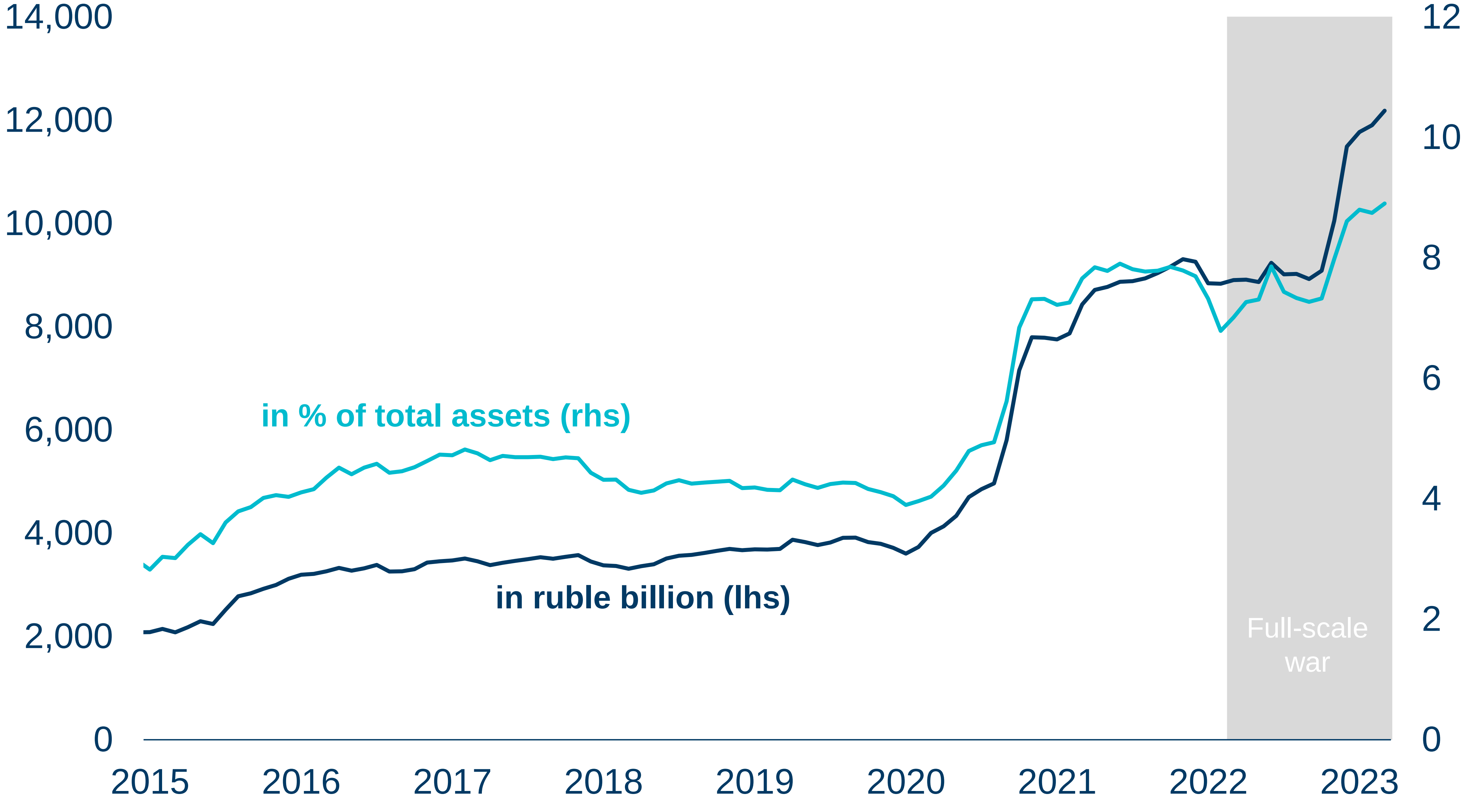
- Foreigners have largely disengaged from the Russian sovereign debt market since the start of the war.
- Following a period with little movement, remaining holdings dropped sharply since November (by ~35%).
- With foreigners no longer participating, domestic banks will need to bear even more of the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

Non-resident OFZ holdings



Source: Bank of Russia, KSE Institute

Credit institutions OFZ holdings



Source: Bank of Russia, KSE Institute

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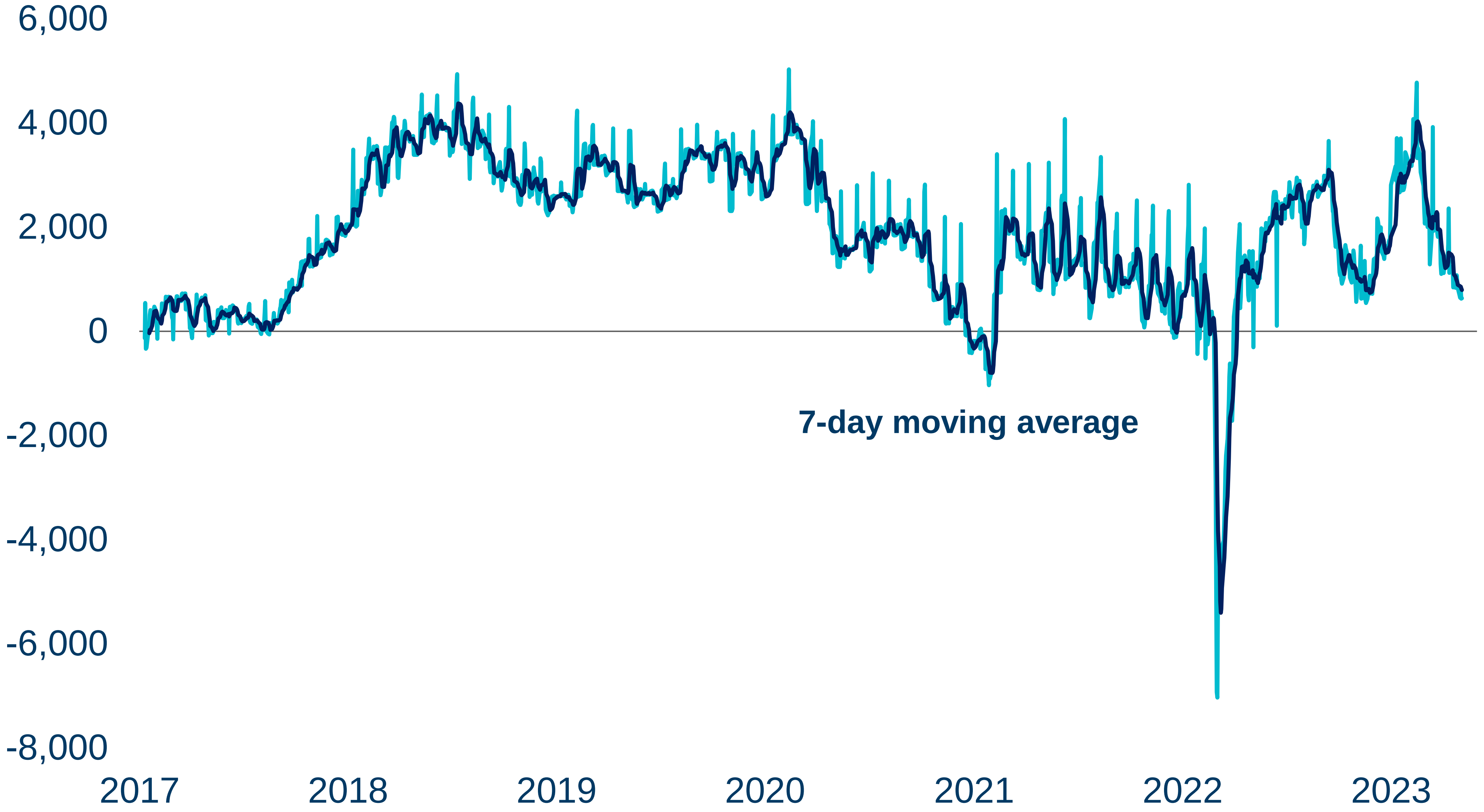
Financial sector sanctions did not trigger a systemic crisis.

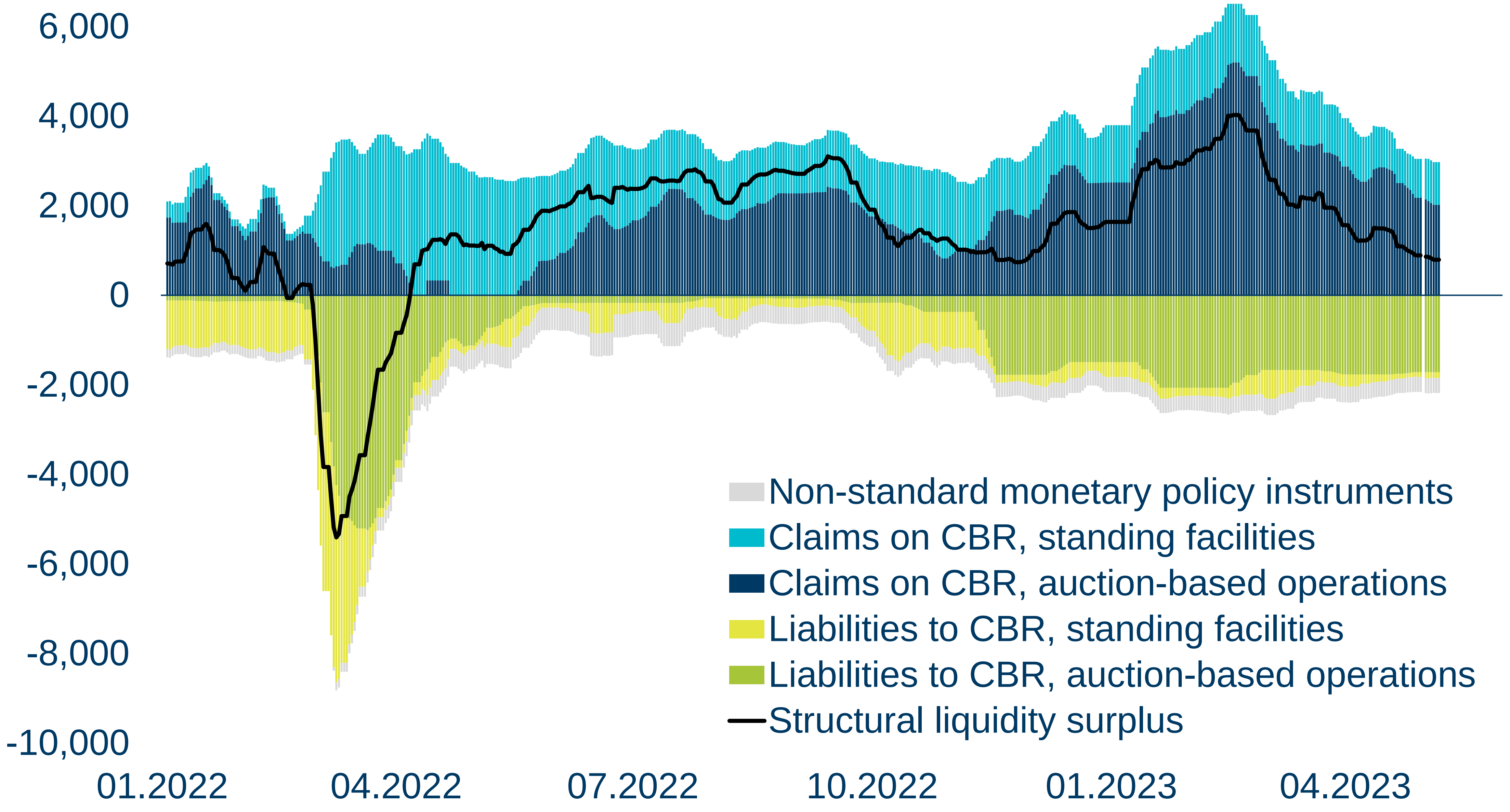
- Liquidity conditions recovered quickly after the initial shock from the war and the imposition of sanctions.
- However, a closer look at the composition of the structural surplus points to stress in the interbank market.
- Additional financial sanctions could trigger another stress episode – at a time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

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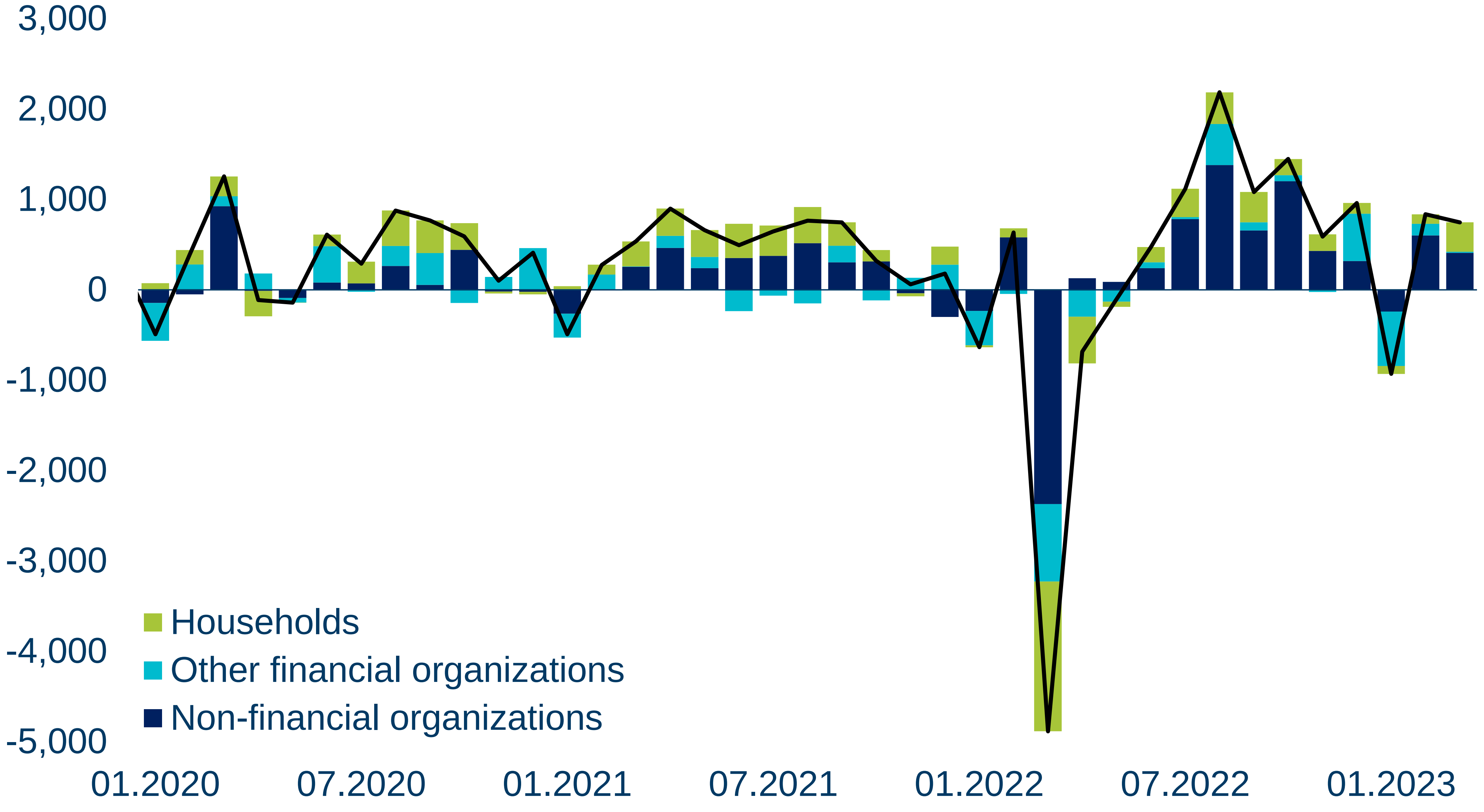
Robust private sector credit and no spill-overs into the real economy.

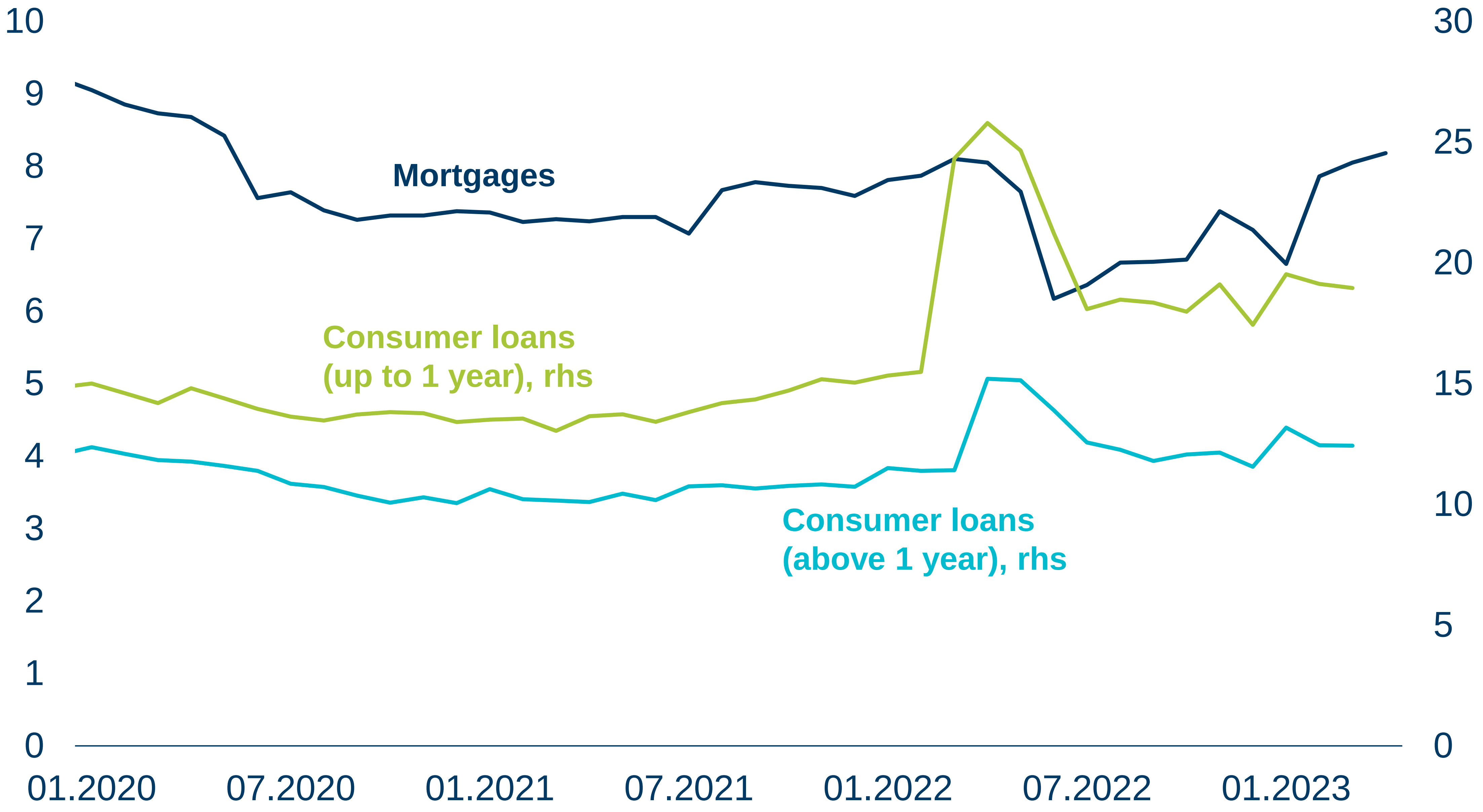
- Due to the provision of sufficient liquidity by the CBR, banks have been able to provide the private sector with credit.
- This is one of the main reasons for the Russian economy’s outperformance of initial expectations in 2022.
- Rising interest rates on rate-sensitive credit types such as mortgages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

New ruble-denominated credit, in 2020 ruble billion*



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

Average weighted interest rates, in %

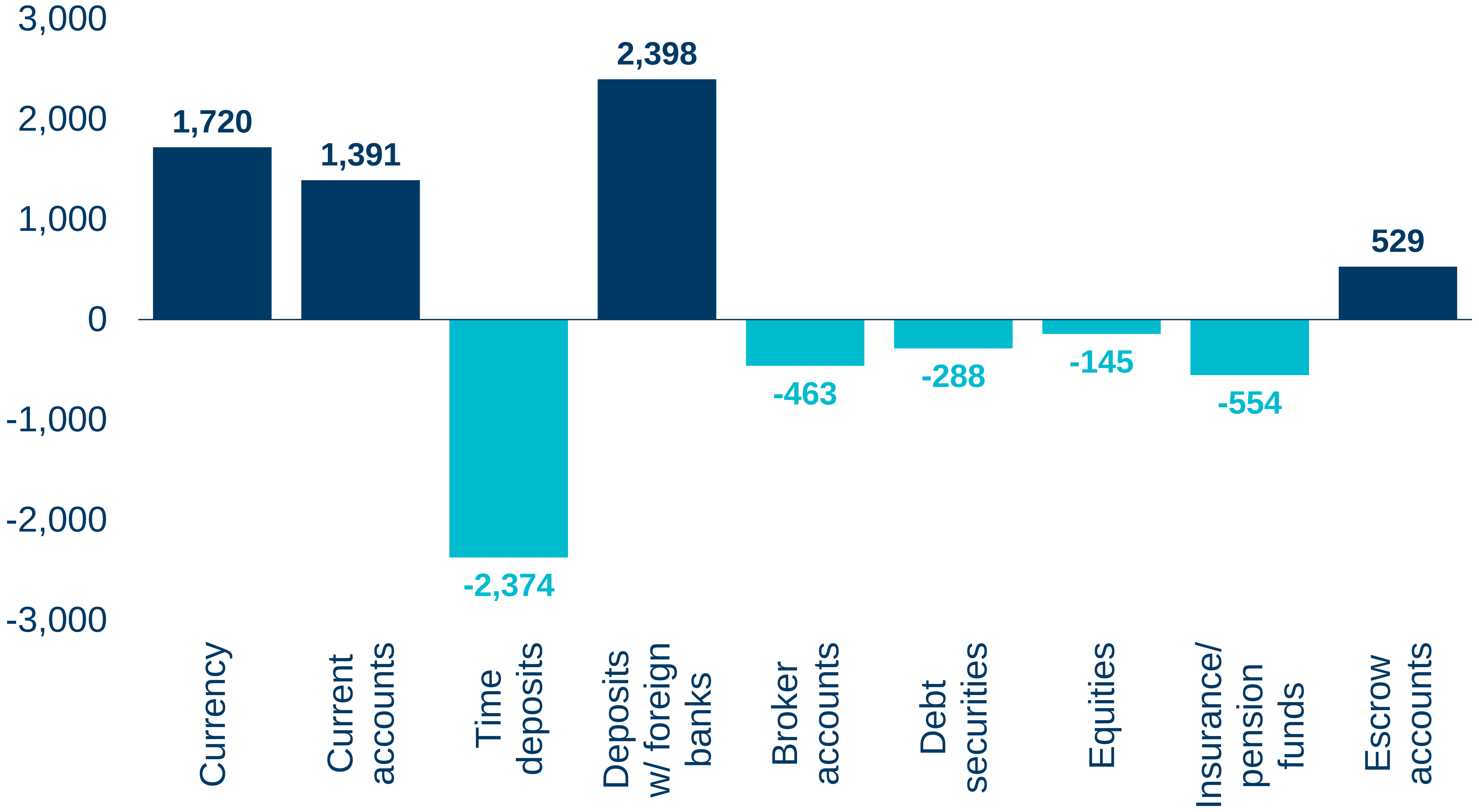


Source: Bank of Russia, KSE Institute

Underlying vulnerabilities remain and could resurface quickly.

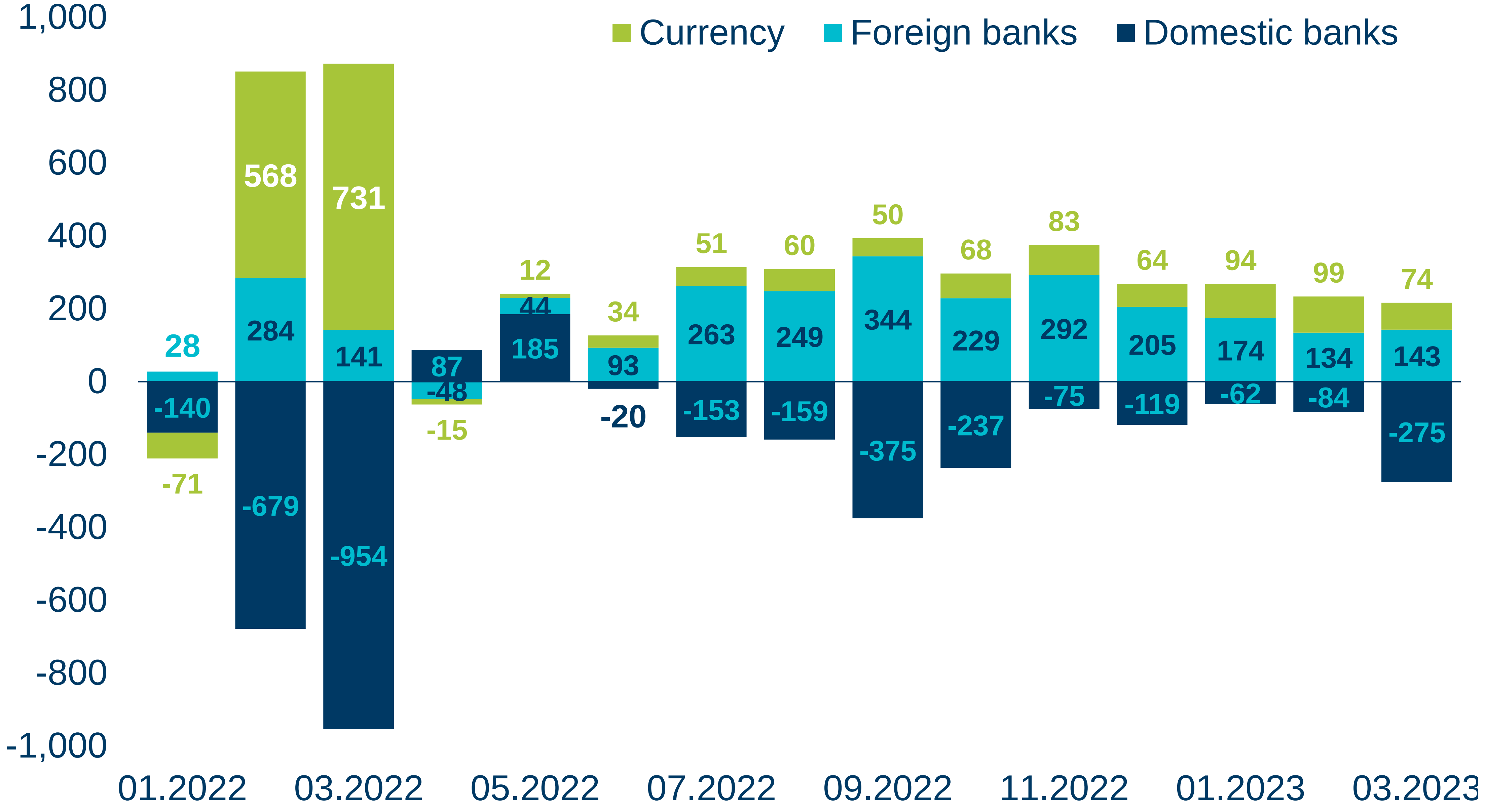
- While a systemic financial crisis was avoided, clear signs of vulnerabilities exist, including household asset movements.
- For instance, households moved funds from longer-term investments to cash holdings, current accounts, and foreign banks.
- As in previous crises, foreign currency was pulled from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

Real change in household assets vs. February 2022, in ruble billion



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

Change in foreign currency cash and deposits, in ruble billion



Source: Bank of Russia, KSE Institute

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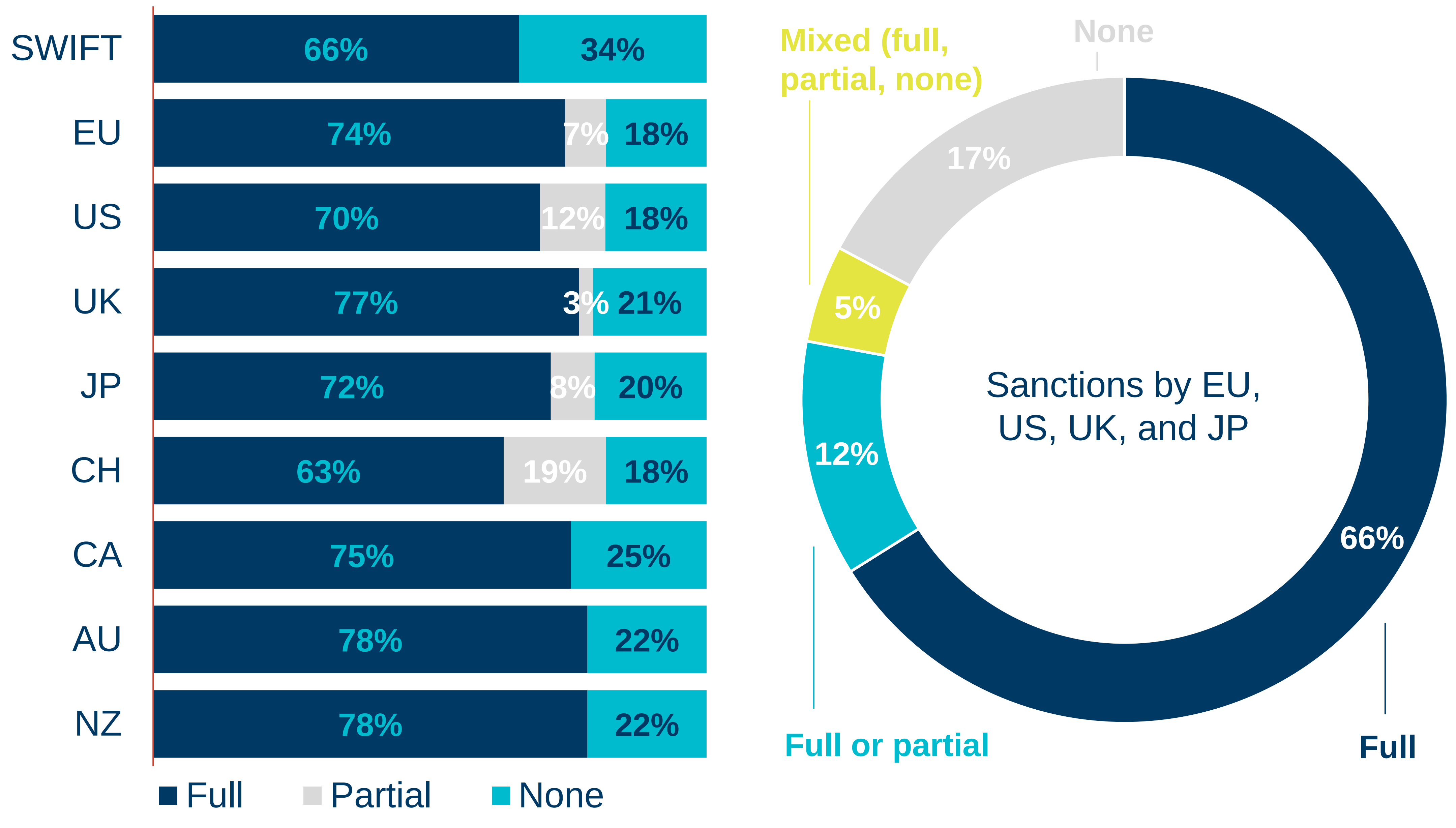
We see considerable room to strengthen the sanctions regime.

- The U.S., EU, and UK have imposed fairly comprehensive sanctions, but room for tightening remains.
- Financial sector sanctions could also play a key role in the stepped-up enforcement of the oil price cap.
- Another are of concern is the build up of “shadow reserves” abroad—and their use to widen policy space.

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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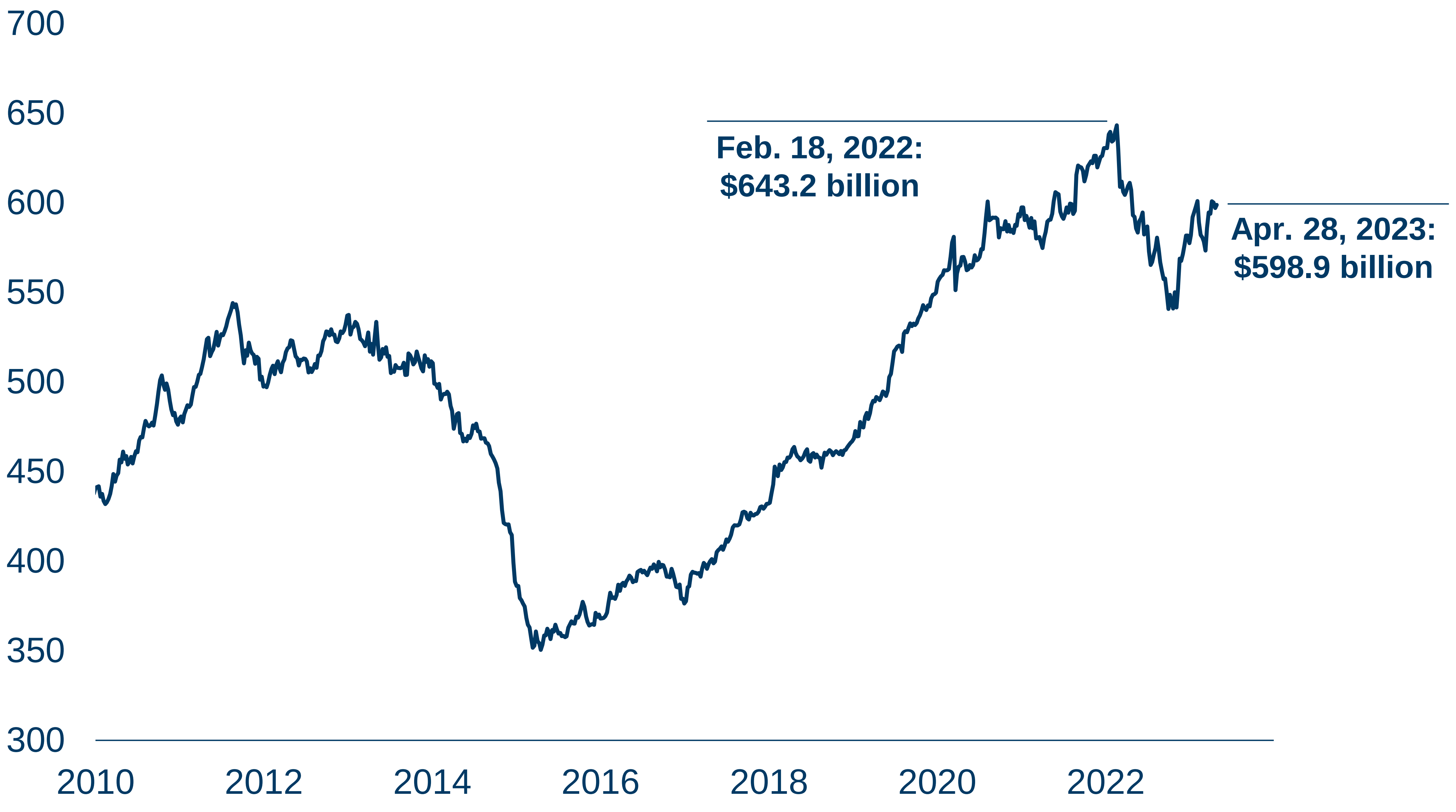
A substantial share of international reserves have been immobilized.

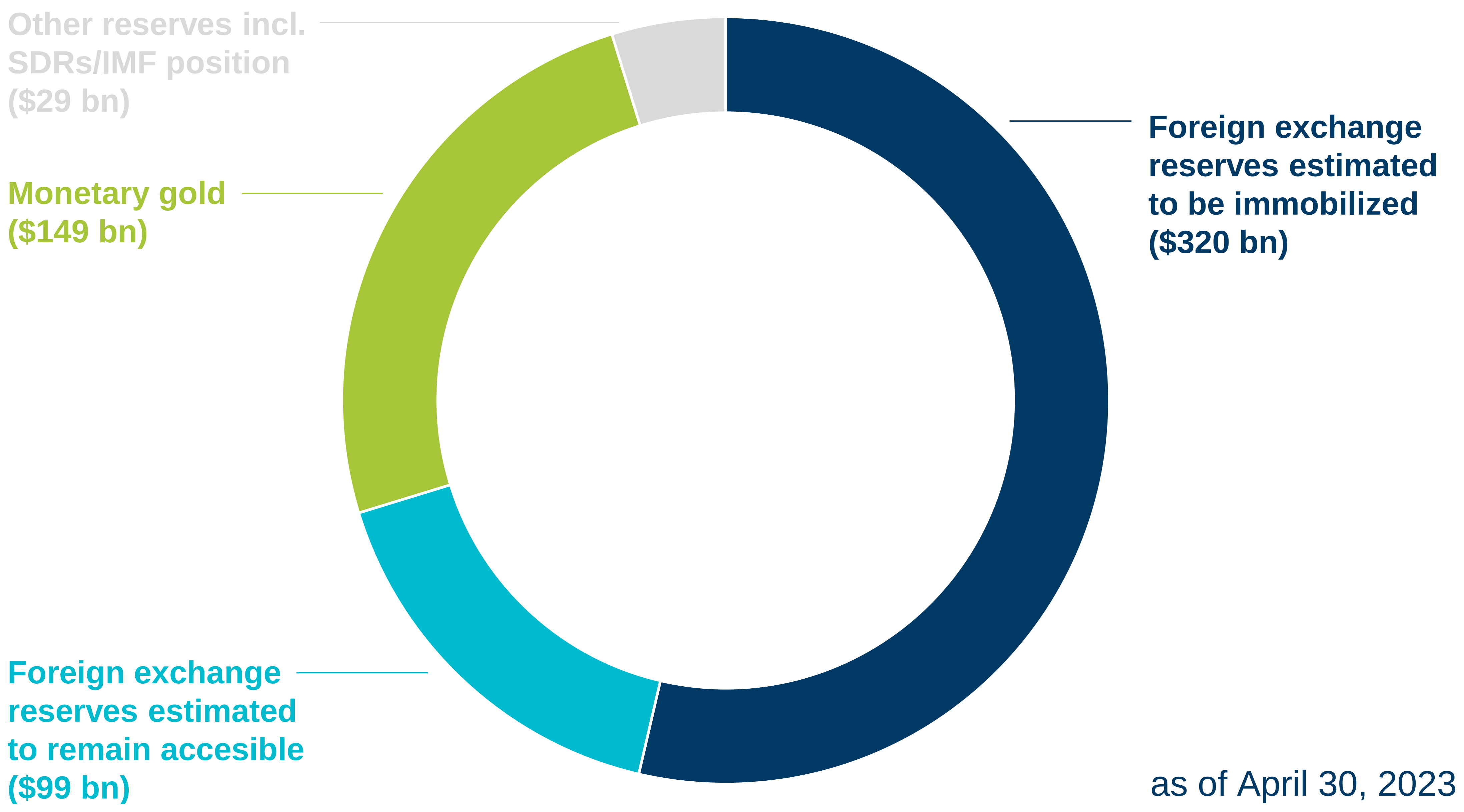
- Before the invasion, Russia held $634 billion in international reserves, part of what is described as *"Fortress Russia".*
- We estimate that around $320 billion are currently immobilized due to international sanctions on CBR and NWF.
- This leaves Russia with access to $149 billion in monetary gold and roughly $99 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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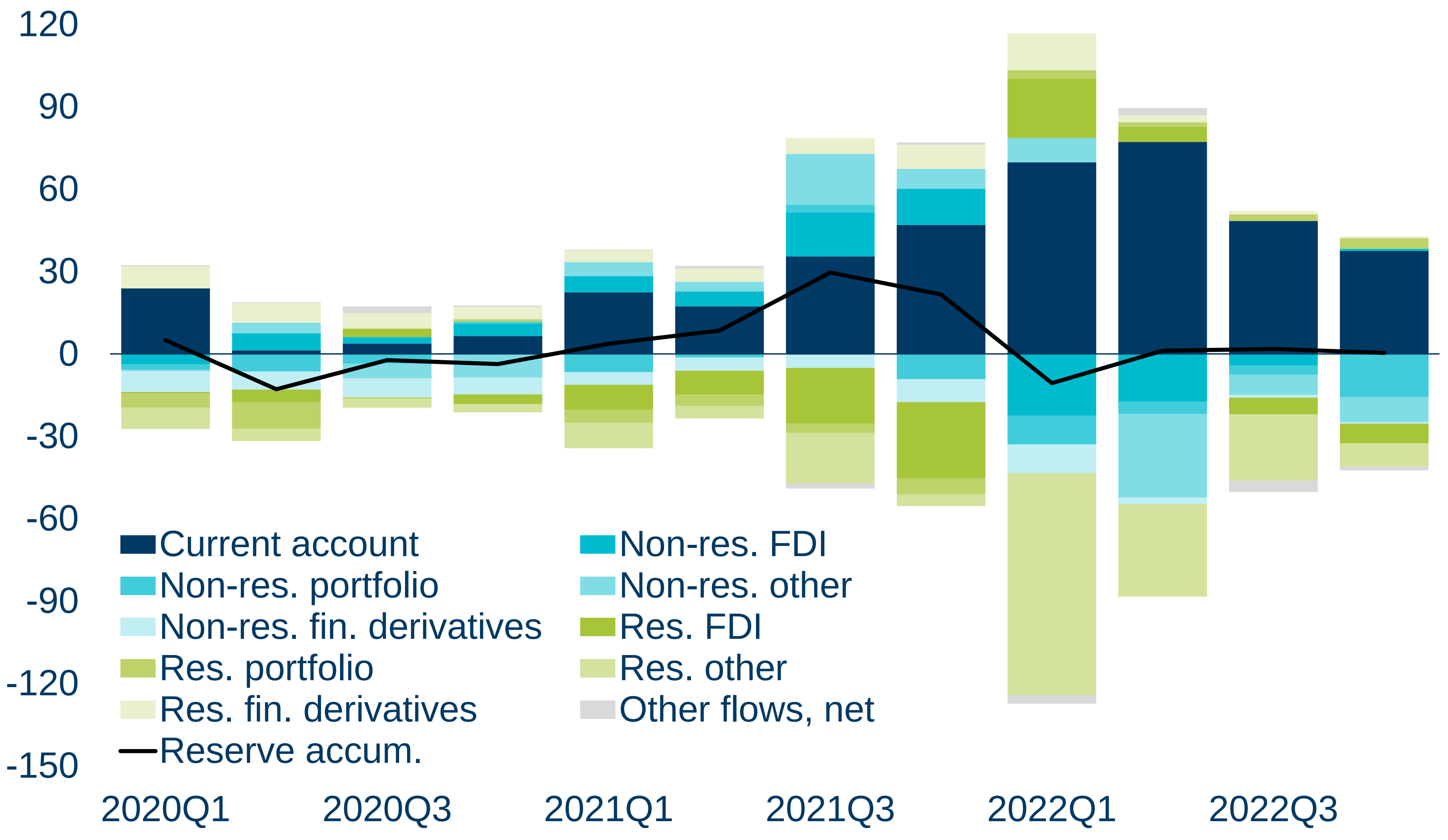
Significant accumulation of new foreign assets in 2022.

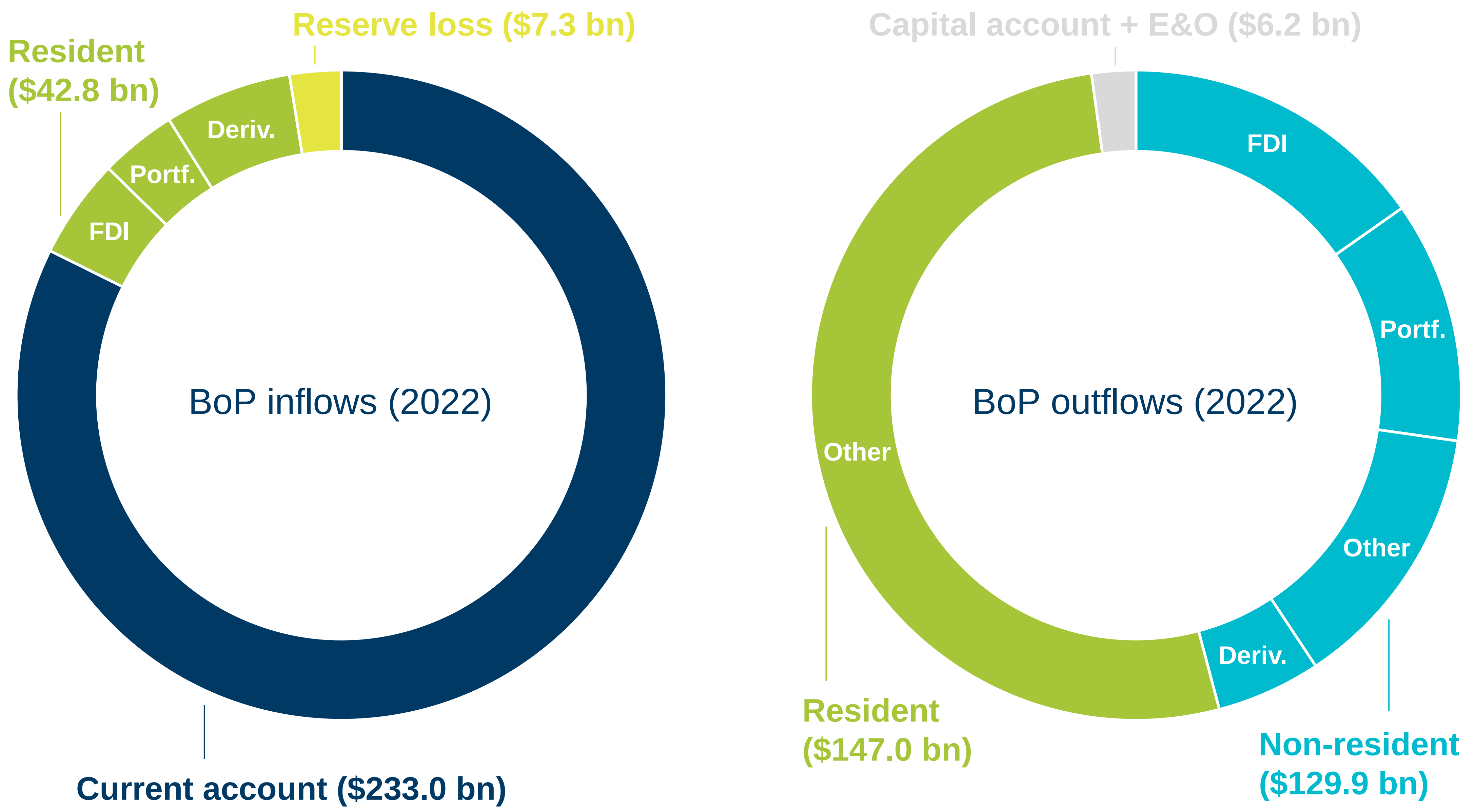
- It is time to refocus attention to foreign assets that Russia has been able to accumulate due to favorable BoP dynamics.
- Non-resident outflows ate up some of the sizable inflows – $233 billion in current account surplus and $43 in resident flows.
- But Russian residents were able to acquire $147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

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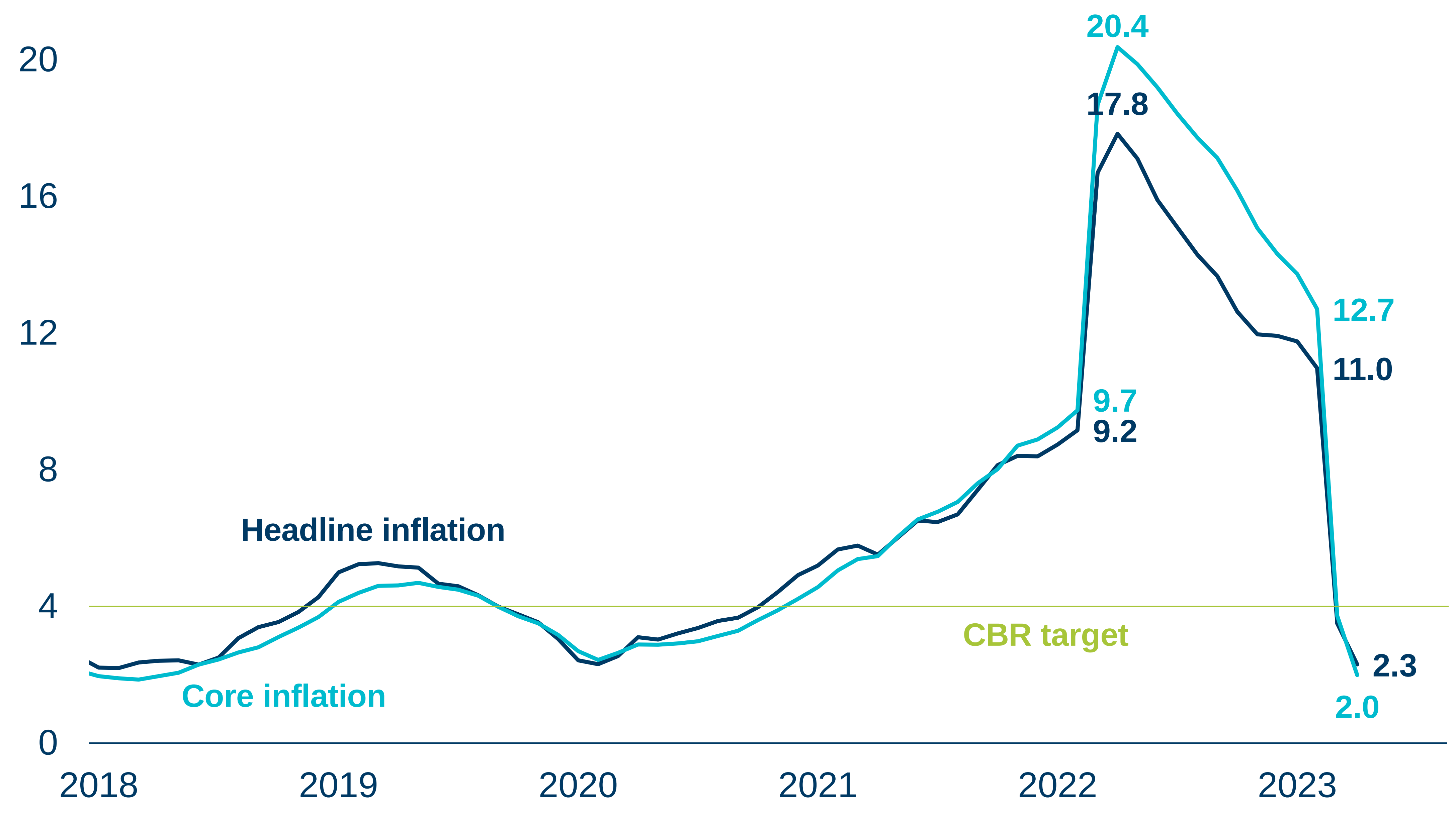
Need to distinguish between current price dynamics and base effects.

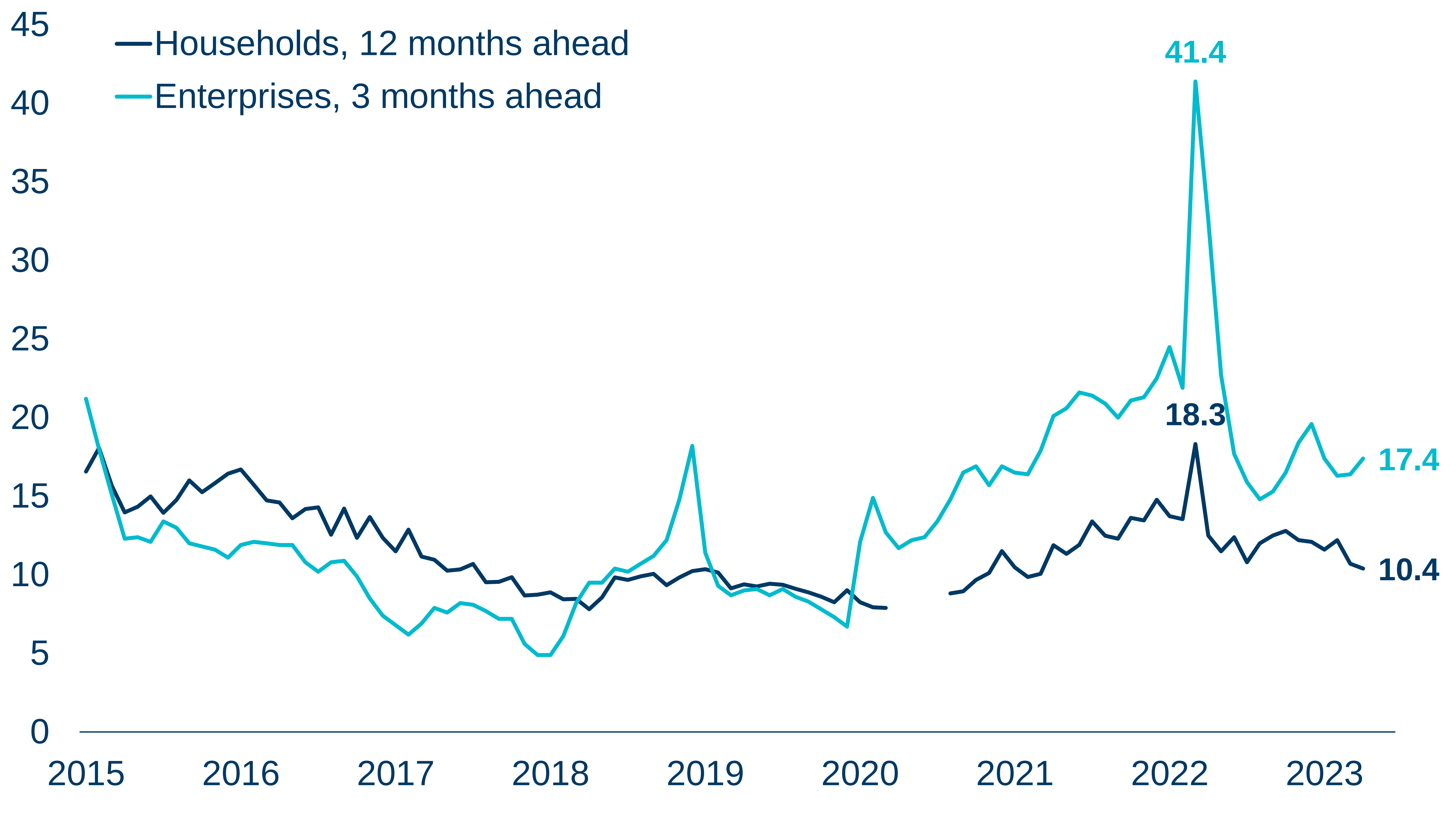
- Both headline and core inflation dropped sharply in March-April due to the disappearance of base effects from 2022.
- But we expect that the weaker external environment will weigh on the ruble and, in turn, increase inflationary pressures.
- Recent data releases show that inflation expectations, especially 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

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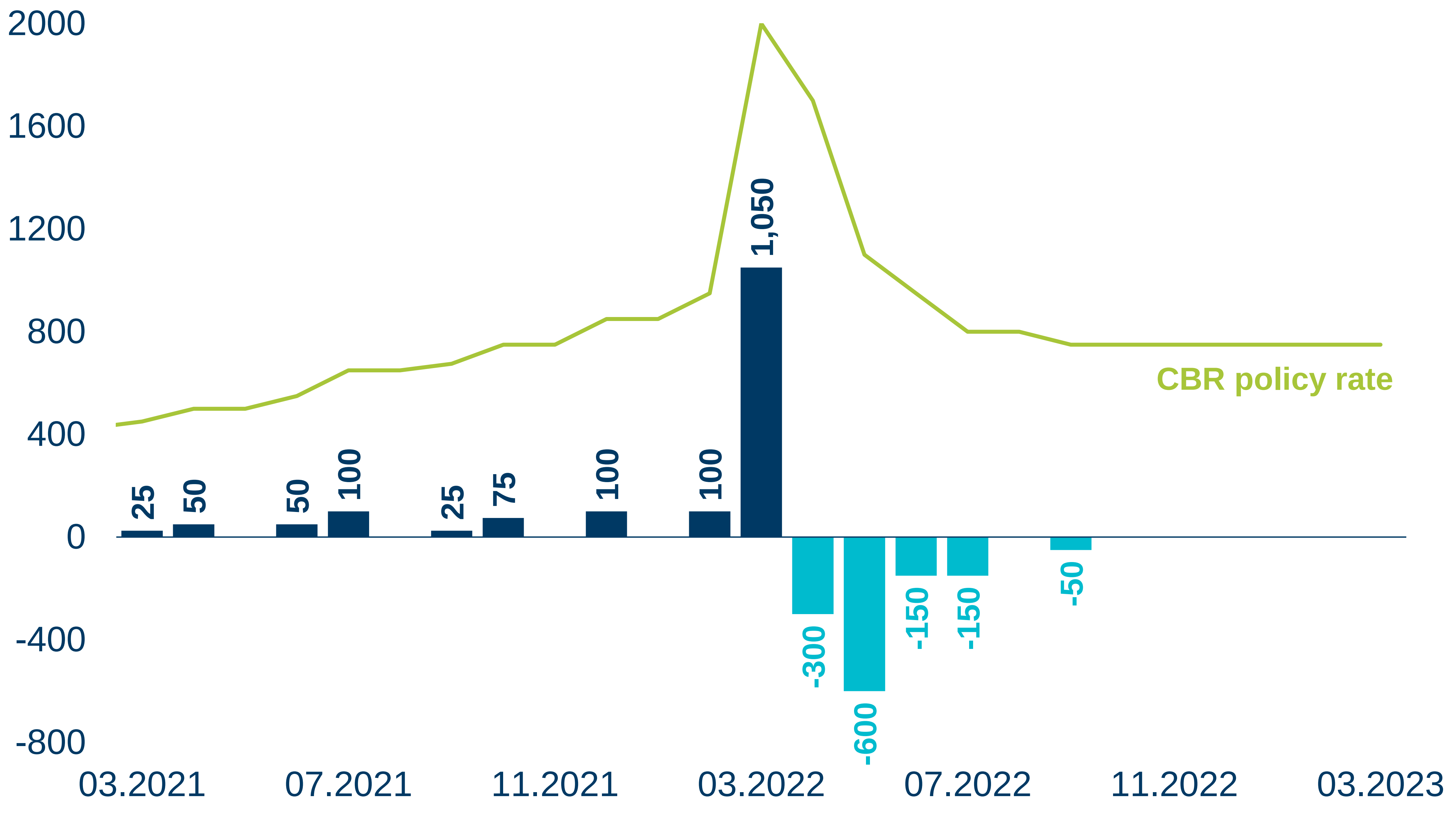
The less supportive external environment puts pressure on the ruble.

- As the external environment turned less supportive, the ruble started to weaken again (by ~30% 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



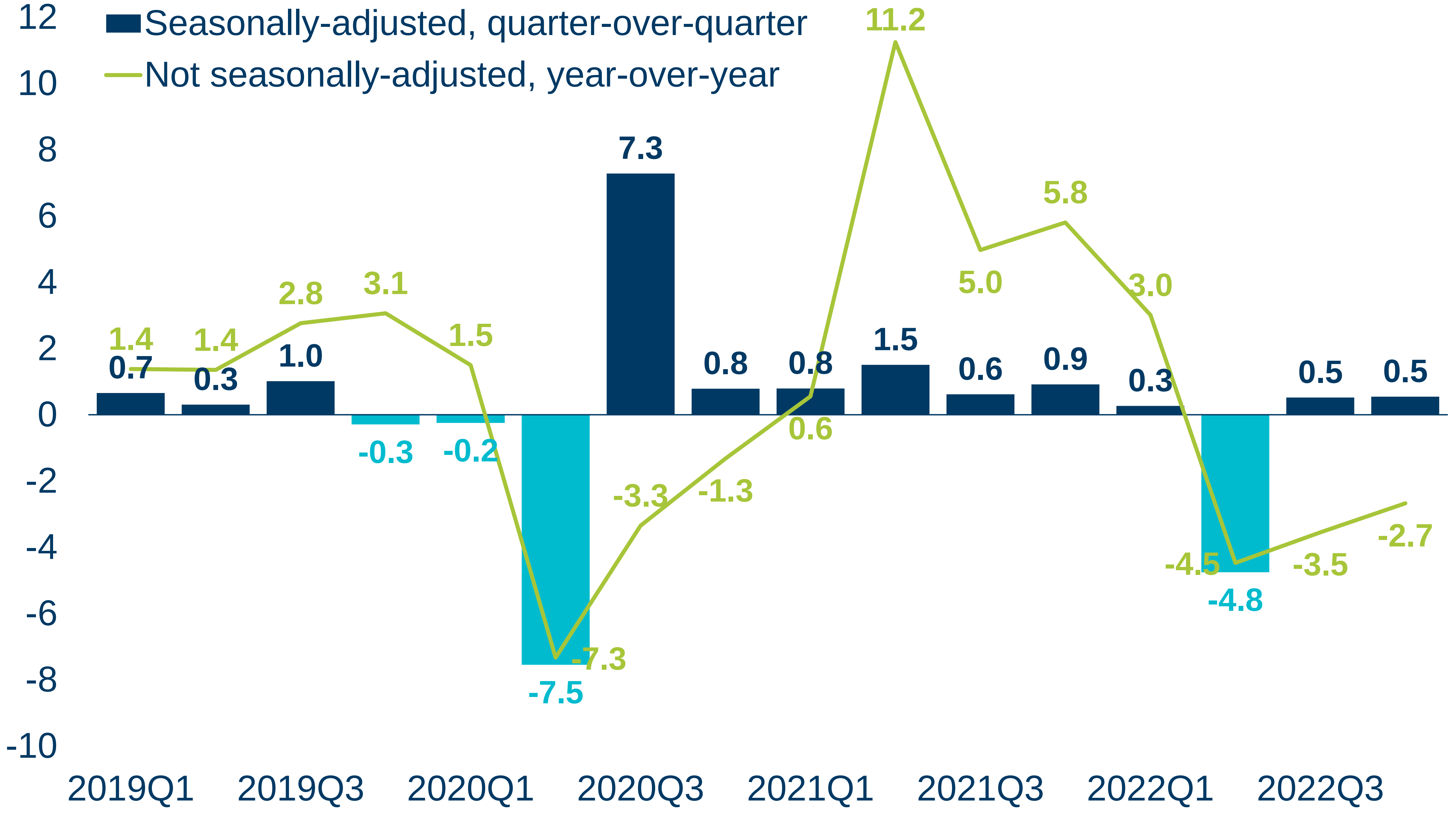
Source: Bank of Russia, KSE Institute

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

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

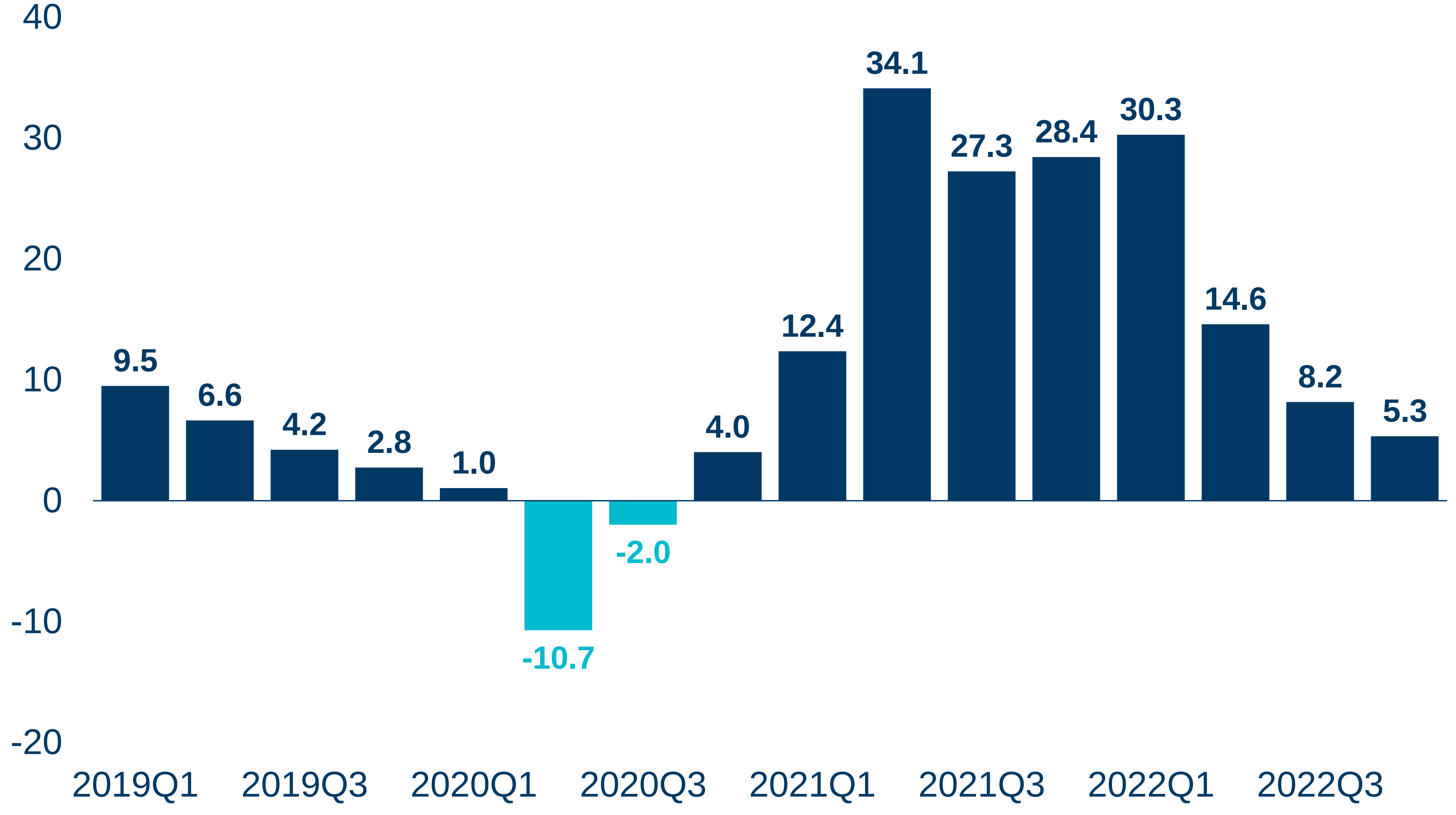
- Russia’s economy outperformed expectations in 2022, with GDP only falling by 2.1% according to Rosstat.
- Recently released quarterly numbers show a small sequential recovery in Q3 and Q4 following a sharp drop in Q2.
- Nominal GDP grew by 12% last year despite the contraction in real terms – but deflator 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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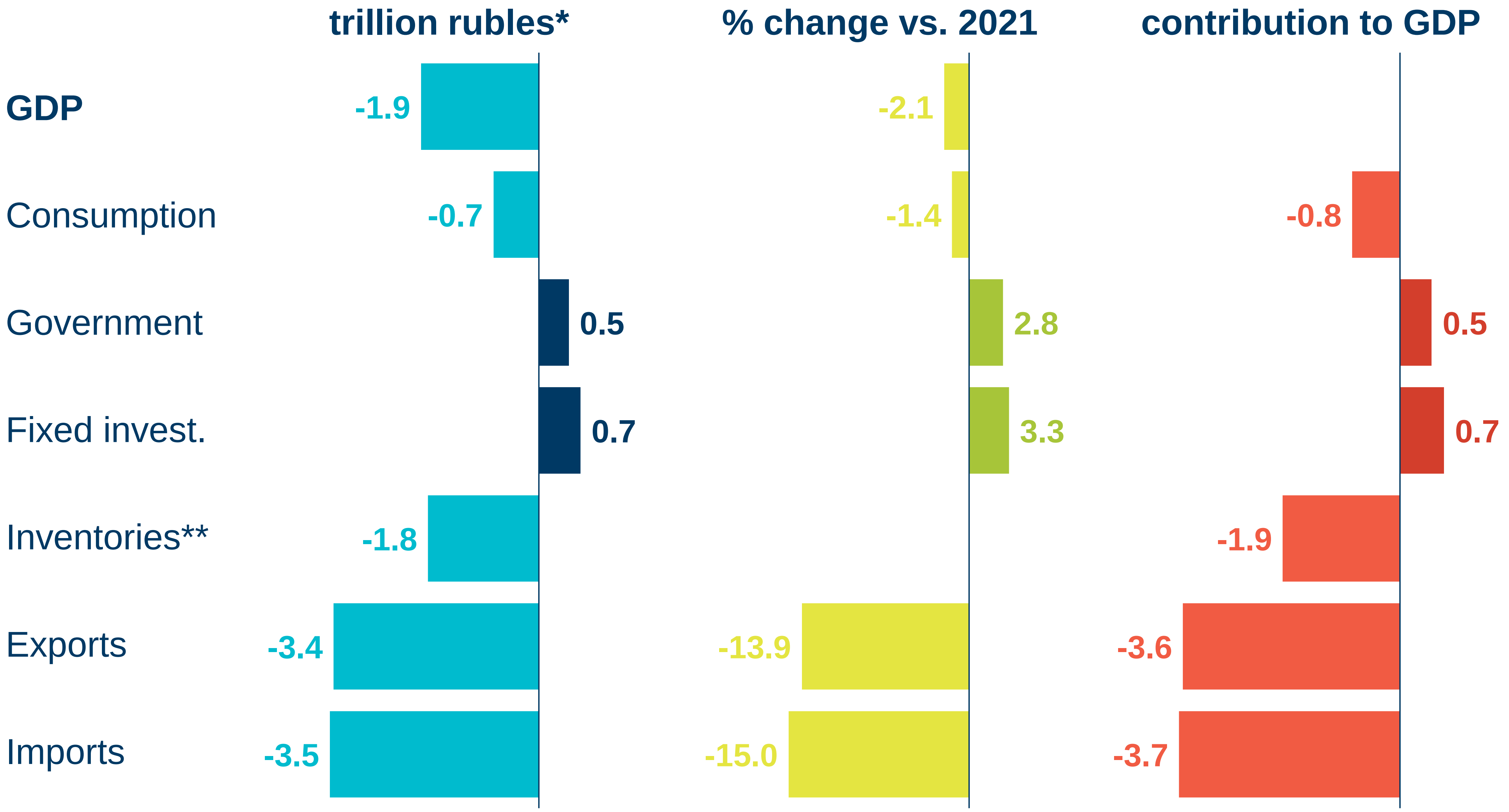
Net exports did not support overall economic activity in 2022.

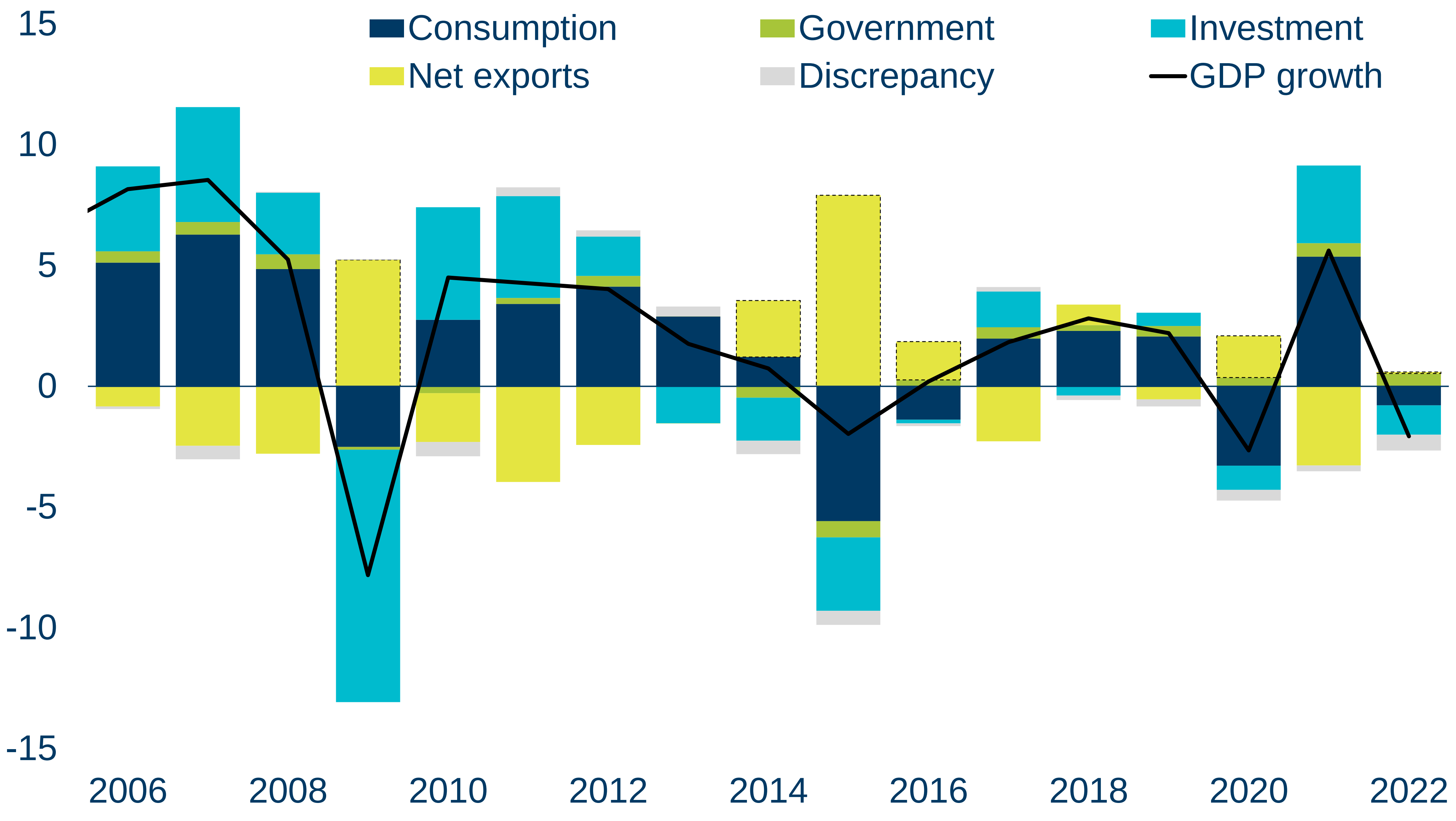
- Private consumption and capital formation (fixed invest. + inventories) had the largest negative effects on GDP.
- Comparing national accounts and BoP numbers shows what large role prices played for Russian trade in 2022.
- The missing positive contribution from net exports is unusual during a GDP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

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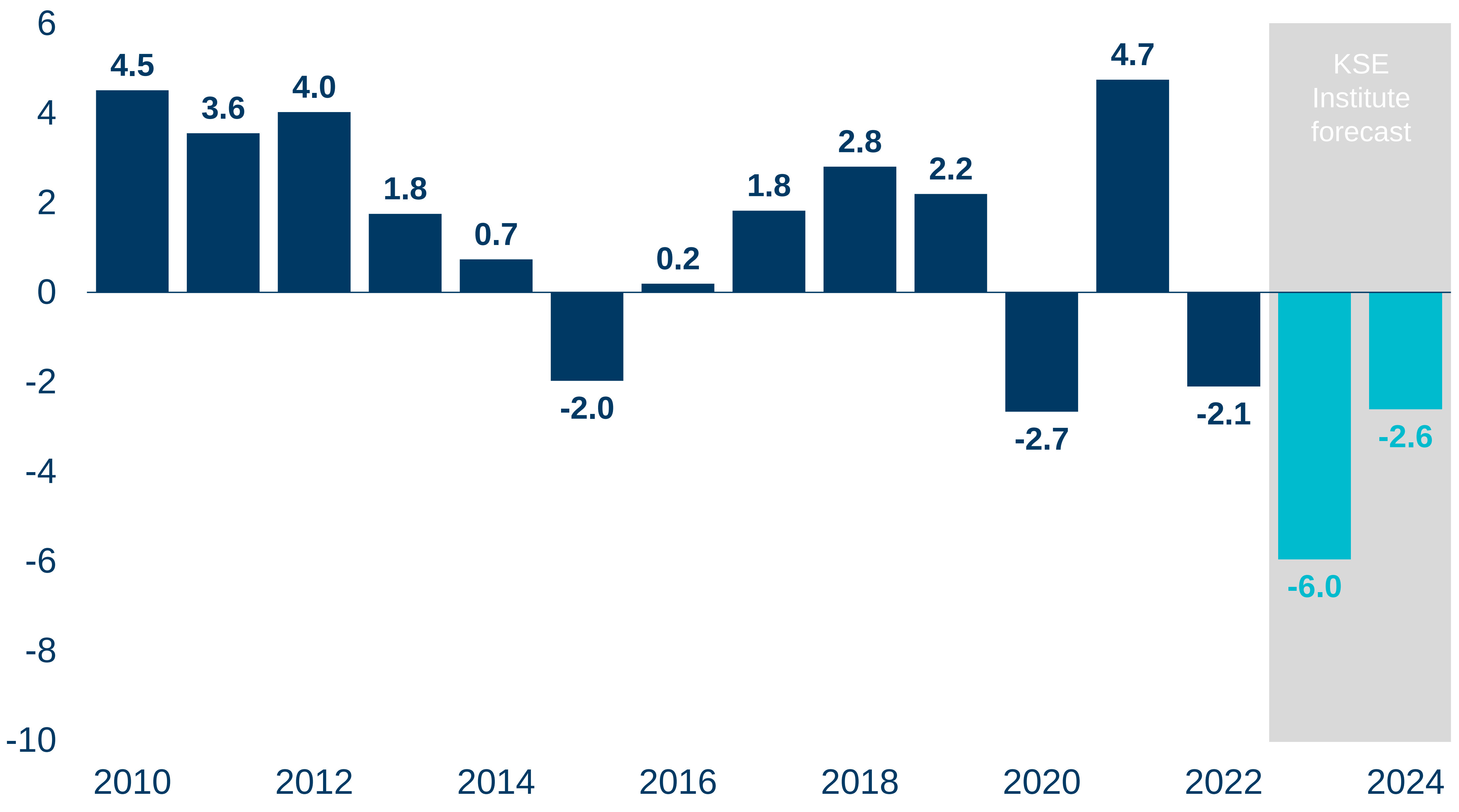
We forecast a sharp contraction of Russia's economy this year.

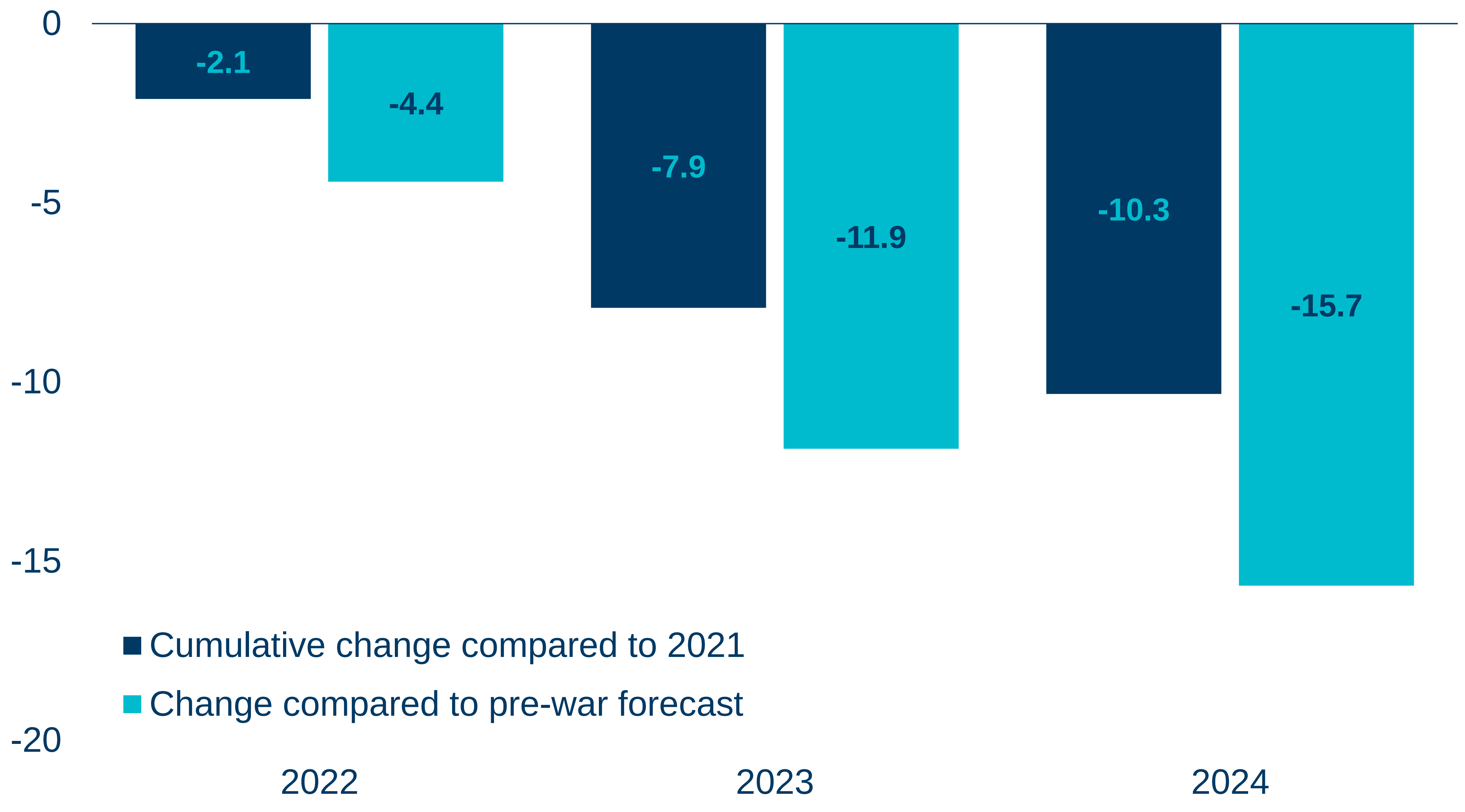
- We project that the economic crisis will deepen this year (-6%) and next (-2.6%) as net exports weigh on activity.
- Importantly, the war/sanctions-driven crisis will not be followed by a rebound but, rather, an extended period of stagnation.
- By 2024, the Russian economy will be roughly 10% smaller 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 %

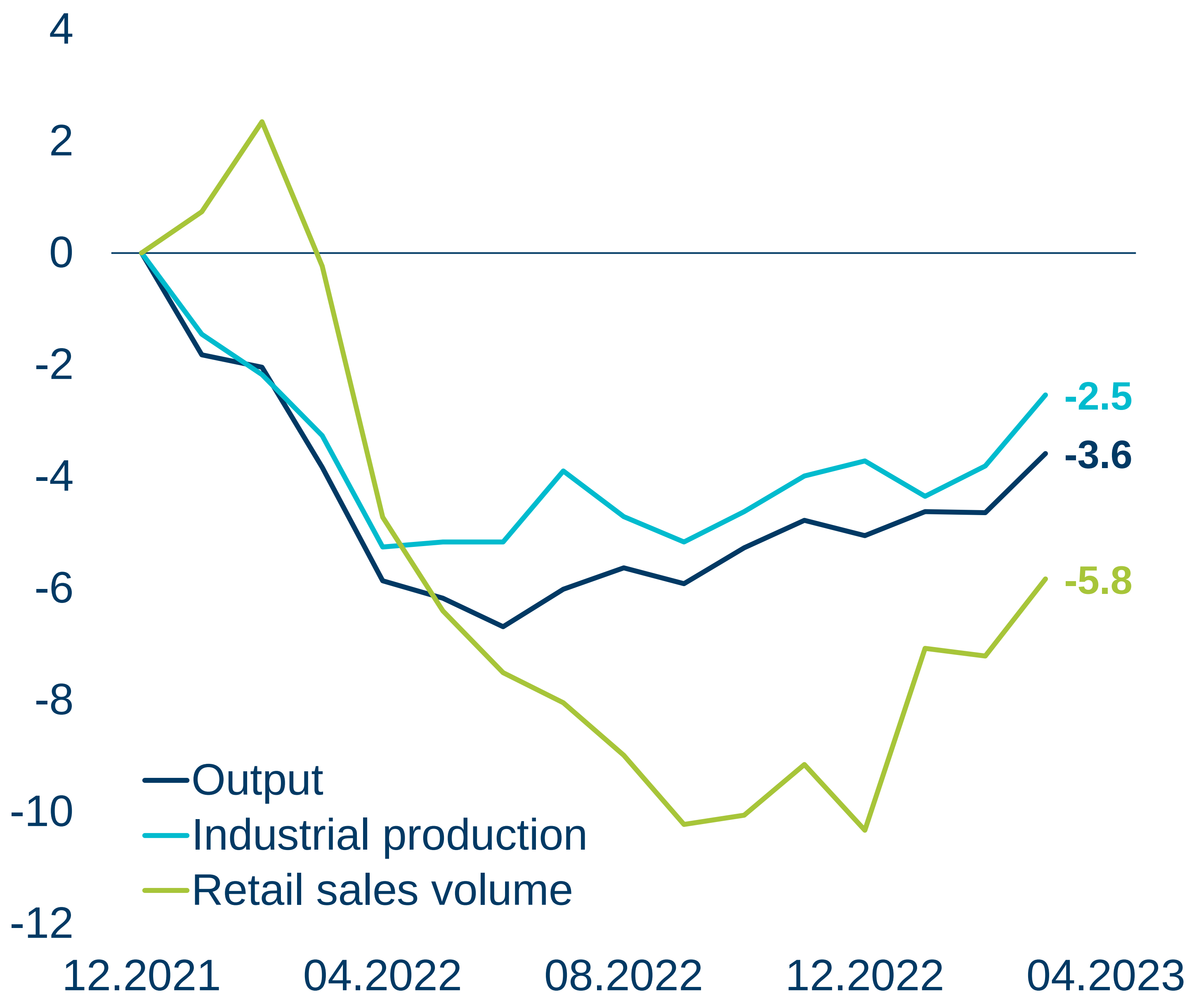


Source: International Monetary Fund, KSE Institute

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

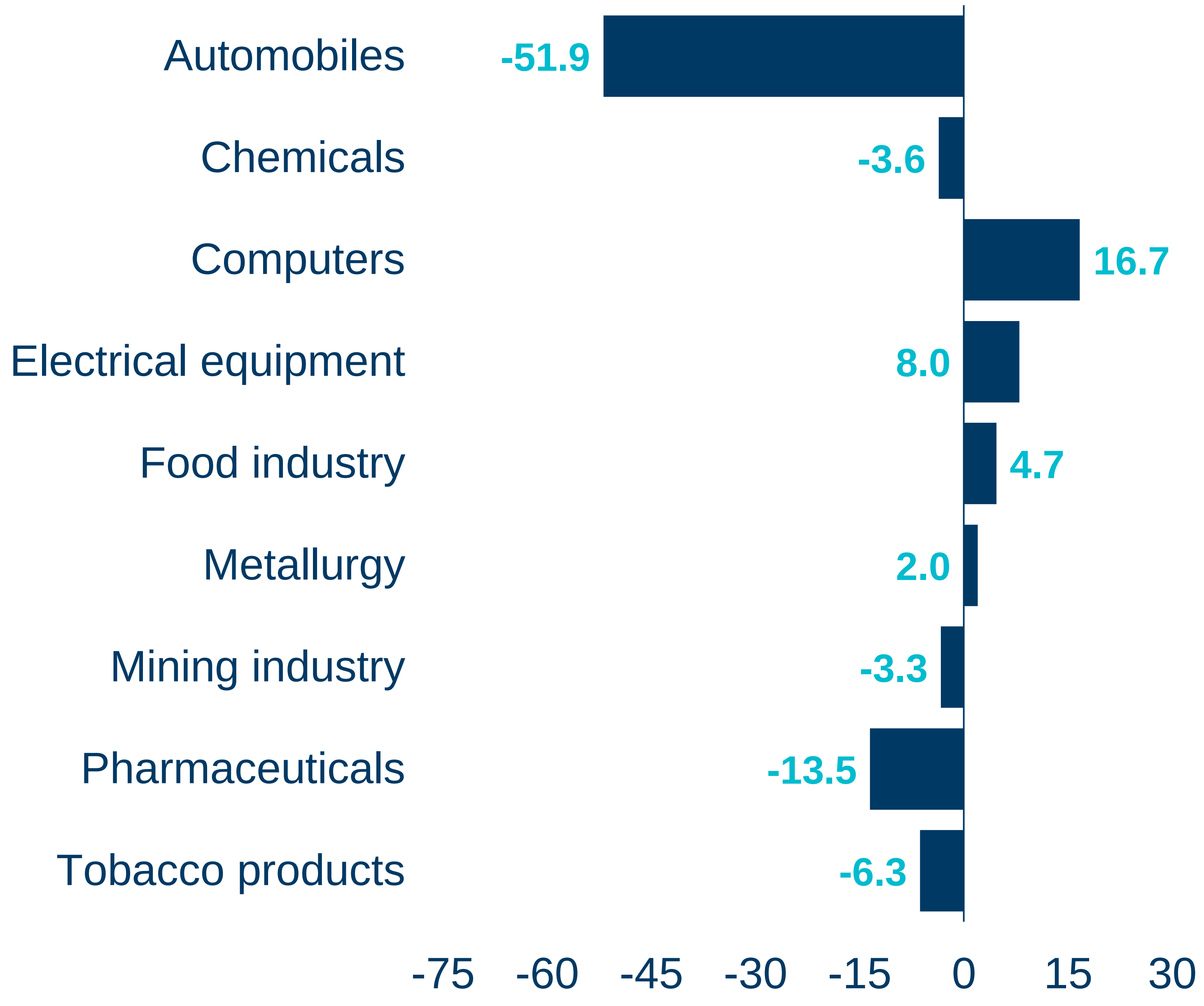
- High-frequency activity indicators point to noticeable and continued weaknesses in the Russian economy.
- Retail sales show a recovery in recent months, which is consistent with the bounce back in the services PMI.
- Sectoral performance differs considerably with car production and pharmaceuticals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

Activity indicators vs. December 2021, in %



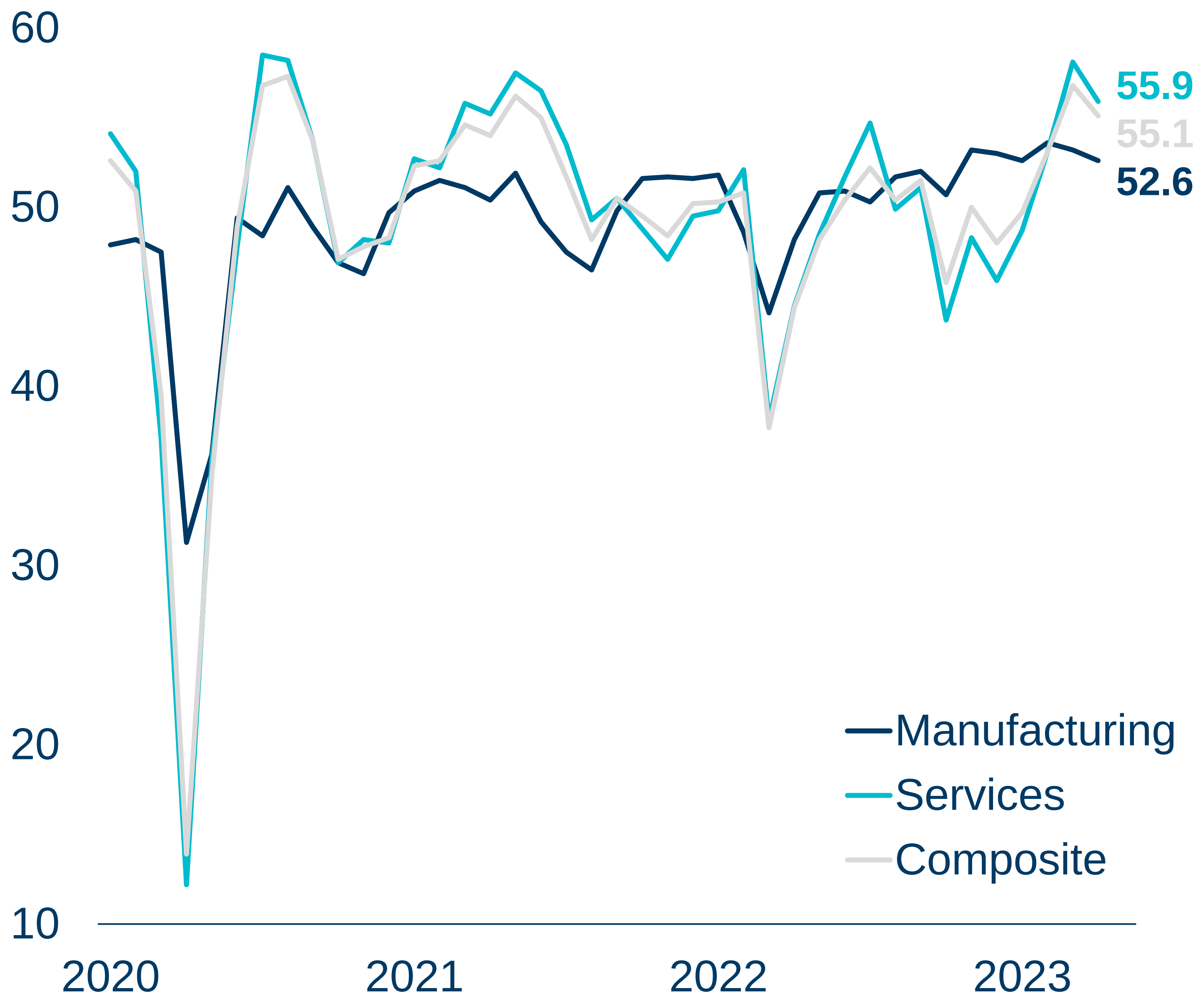
Source: Rosstat, KSE Institute

Sectoral production, in % year-over-year*



Source: Rosstat, KSE Institute *for 2023Q1

PMIs, index (50+ = expansion)



Source: S&P Global, KSE Institute

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

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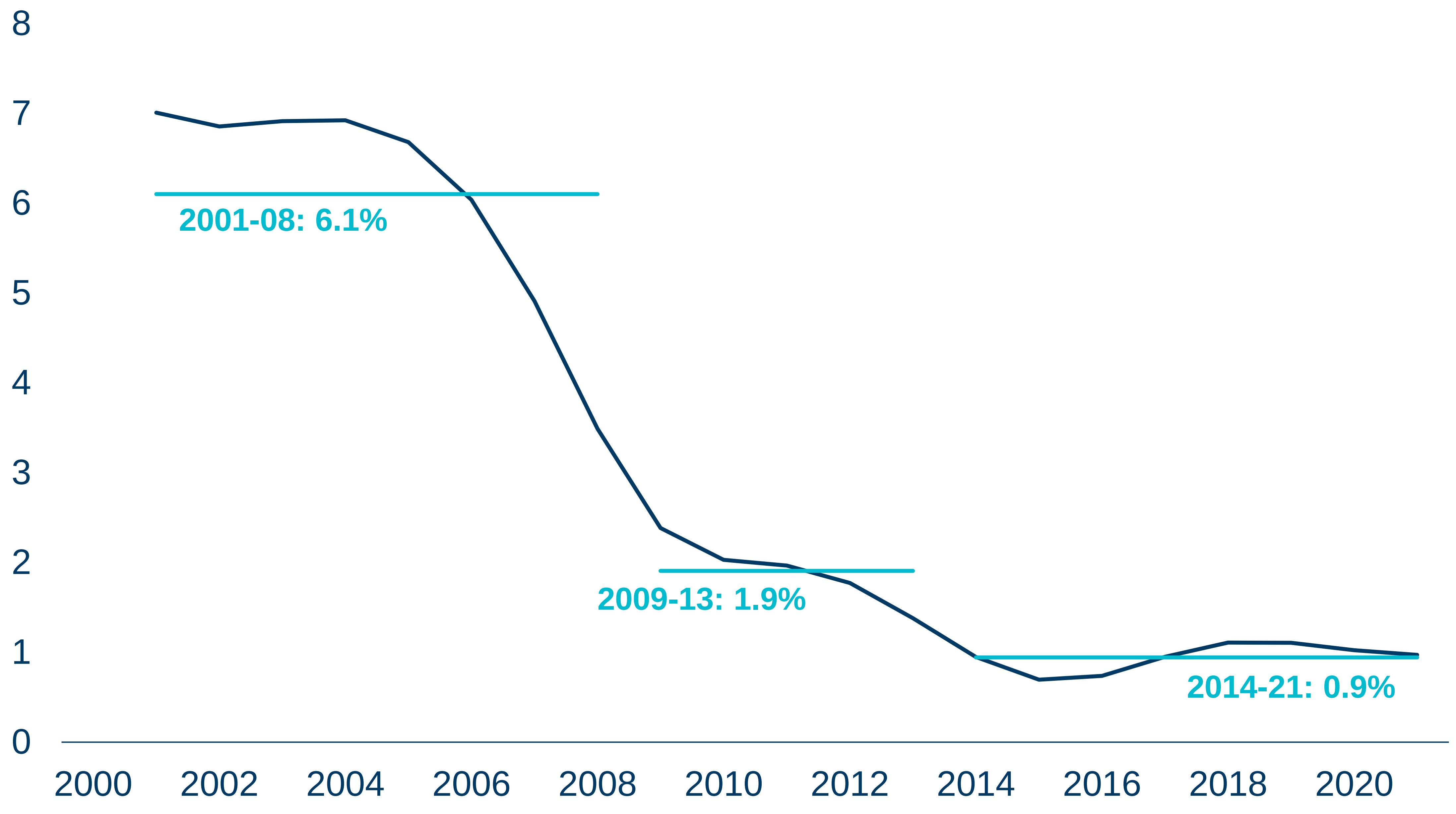
Low productivity growth has weighed on potential GDP for years.

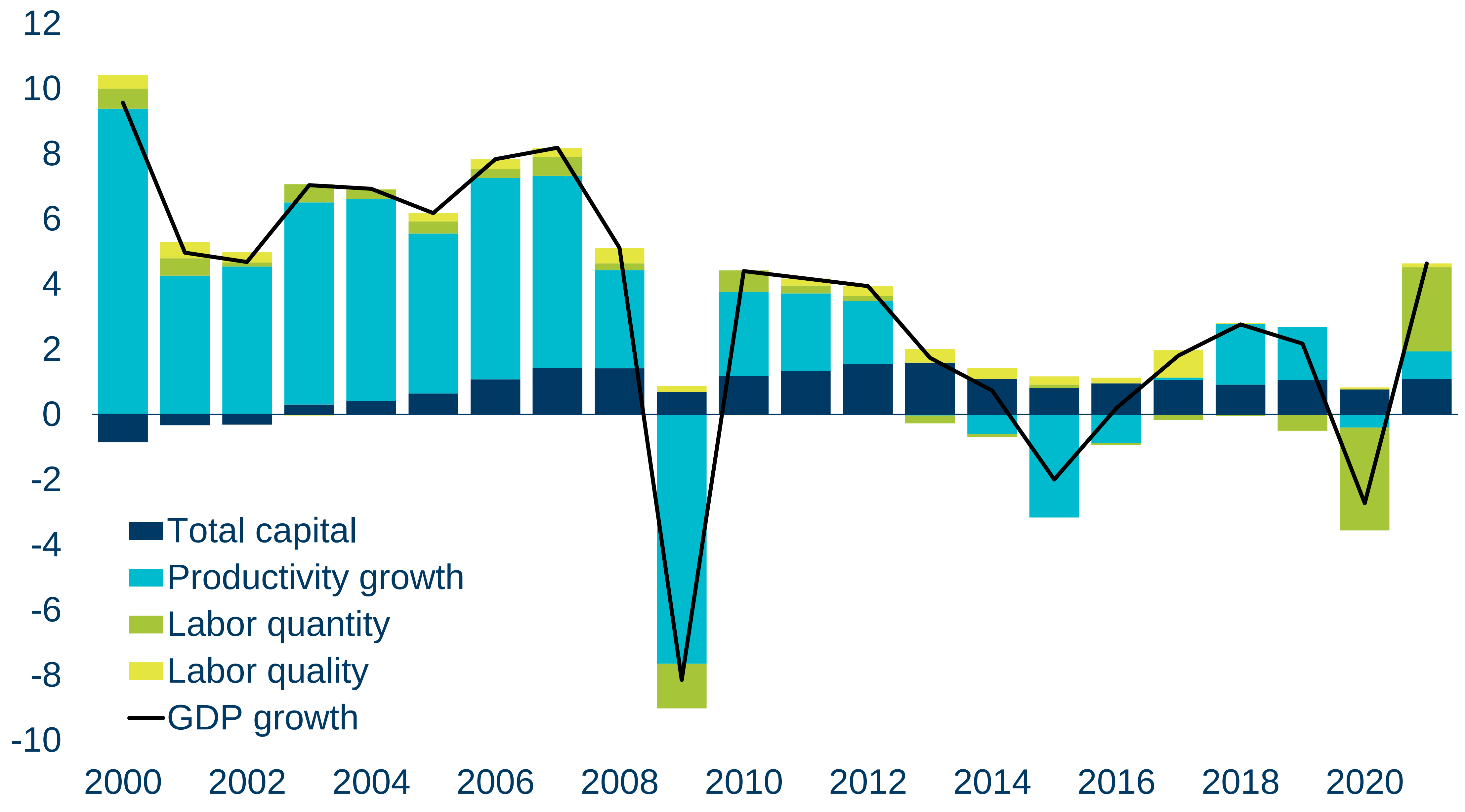
- Russia’s economy has experienced a pronounced decline in potential growth, to around 1% by 2021.
- An initial decline in the aftermath of the global financial crisis was followed by another 50% drop post-2014.
- The main driver appears to be markedly weaker growth of total factor productivity in recent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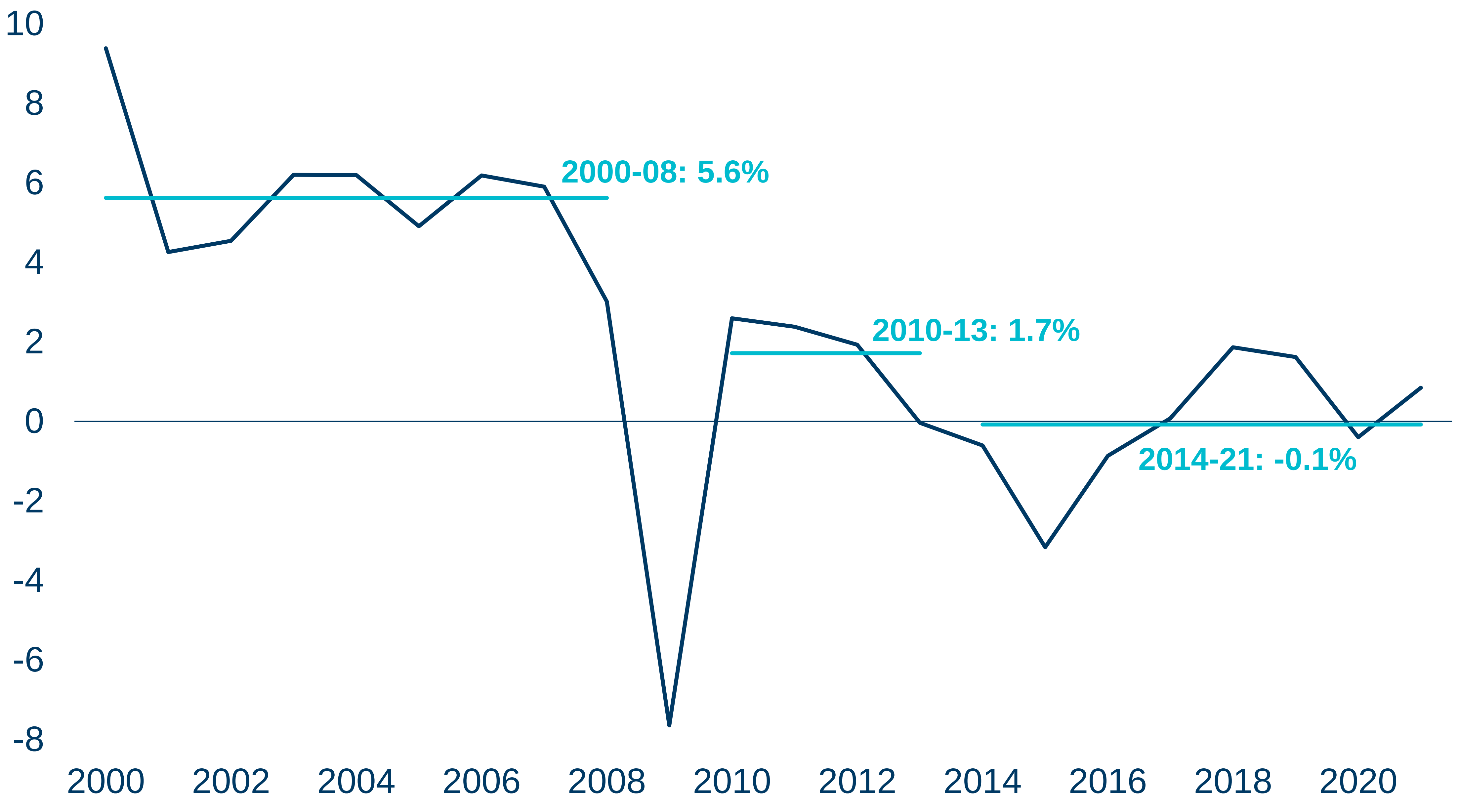
Higher emigration will further weaken prospects going forward.

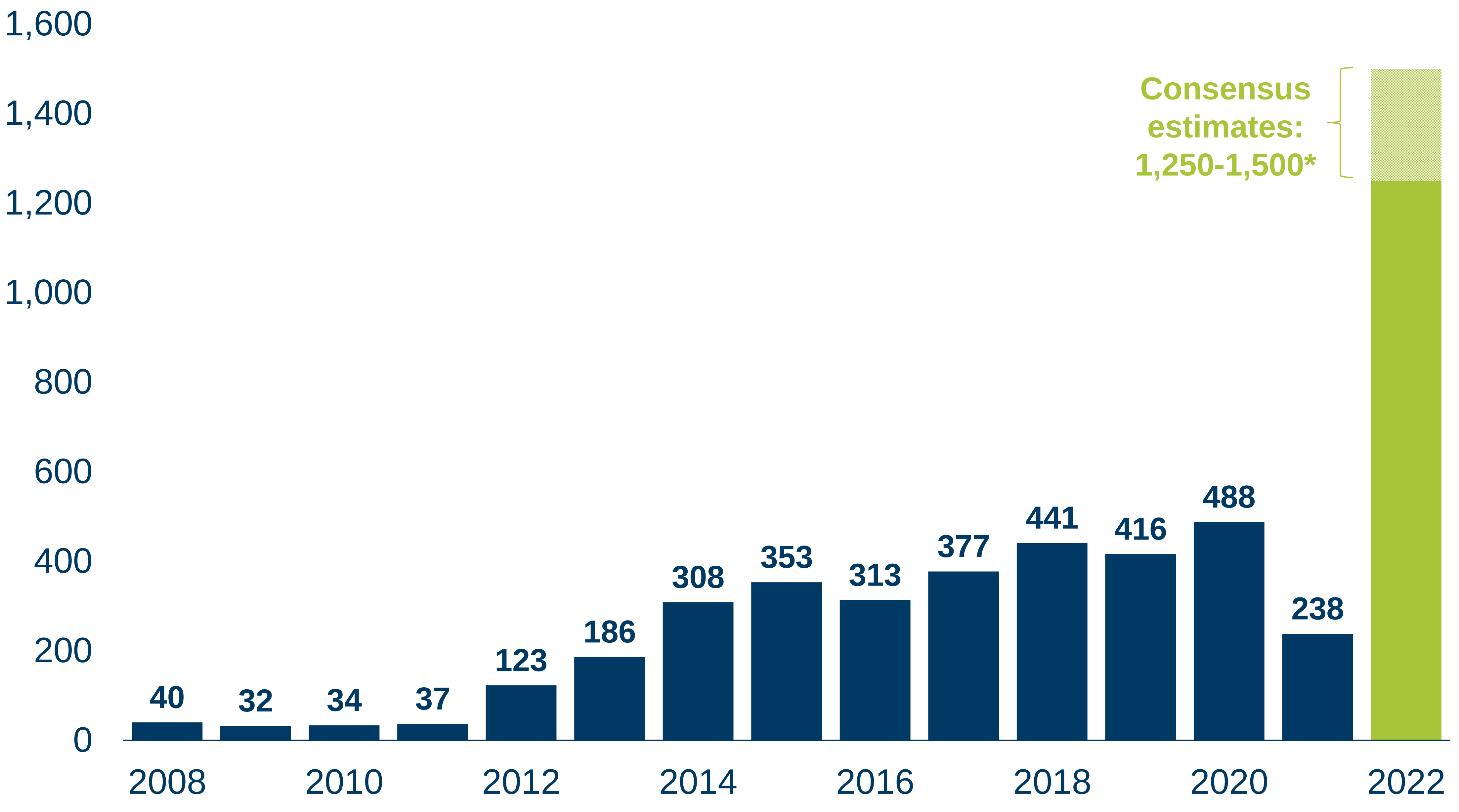
- Productivity growth was essentially absent post-2014 and will likely turn negative due to the war and sanctions.
- At the same time, the Russian economy is set to suffer from a lack of skilled workers as emigration picks up sharply.
- Altogether, we expect an extended period of economic stagnation, 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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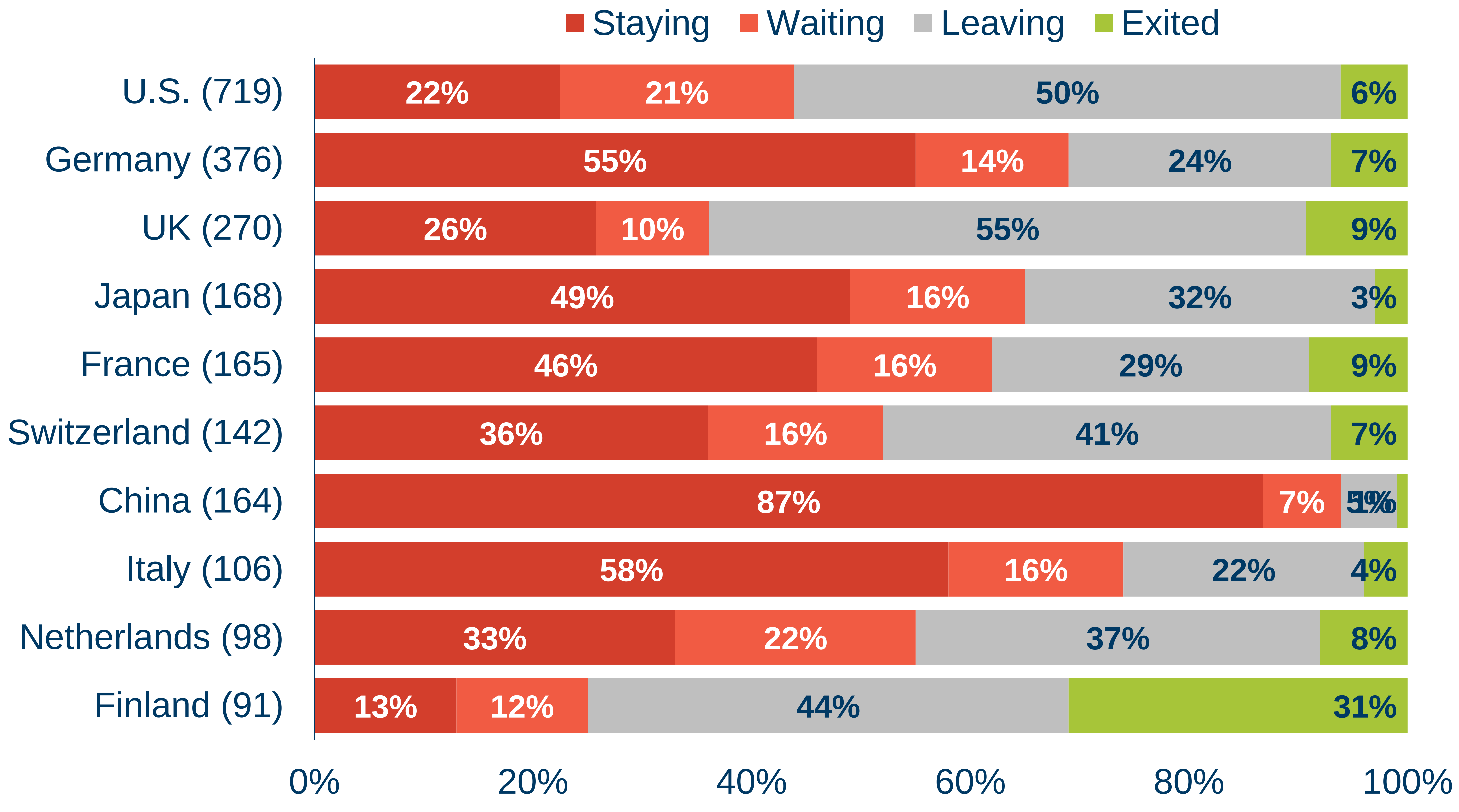
The departure of foreign companies presents another challenge.

- 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.

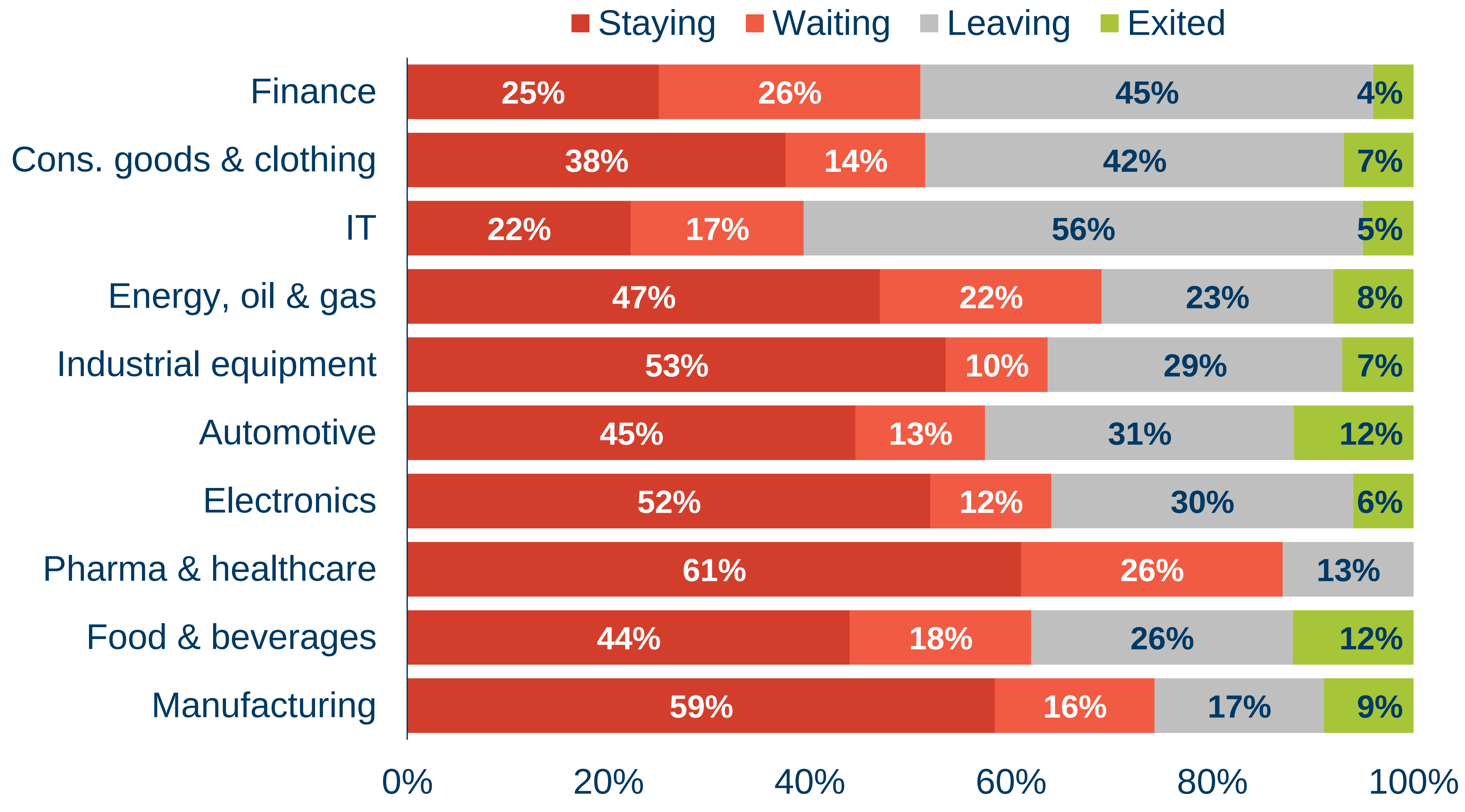
[Visit KSE Institute's "Leave Russia" project website]

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".