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KSE Institute Russia Chartbook

Addressing the Shadow Fleet Challenge: Stepped-up Enforcement Weighs on Russia's Ability to Evade the Price Cap

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Executive Summary

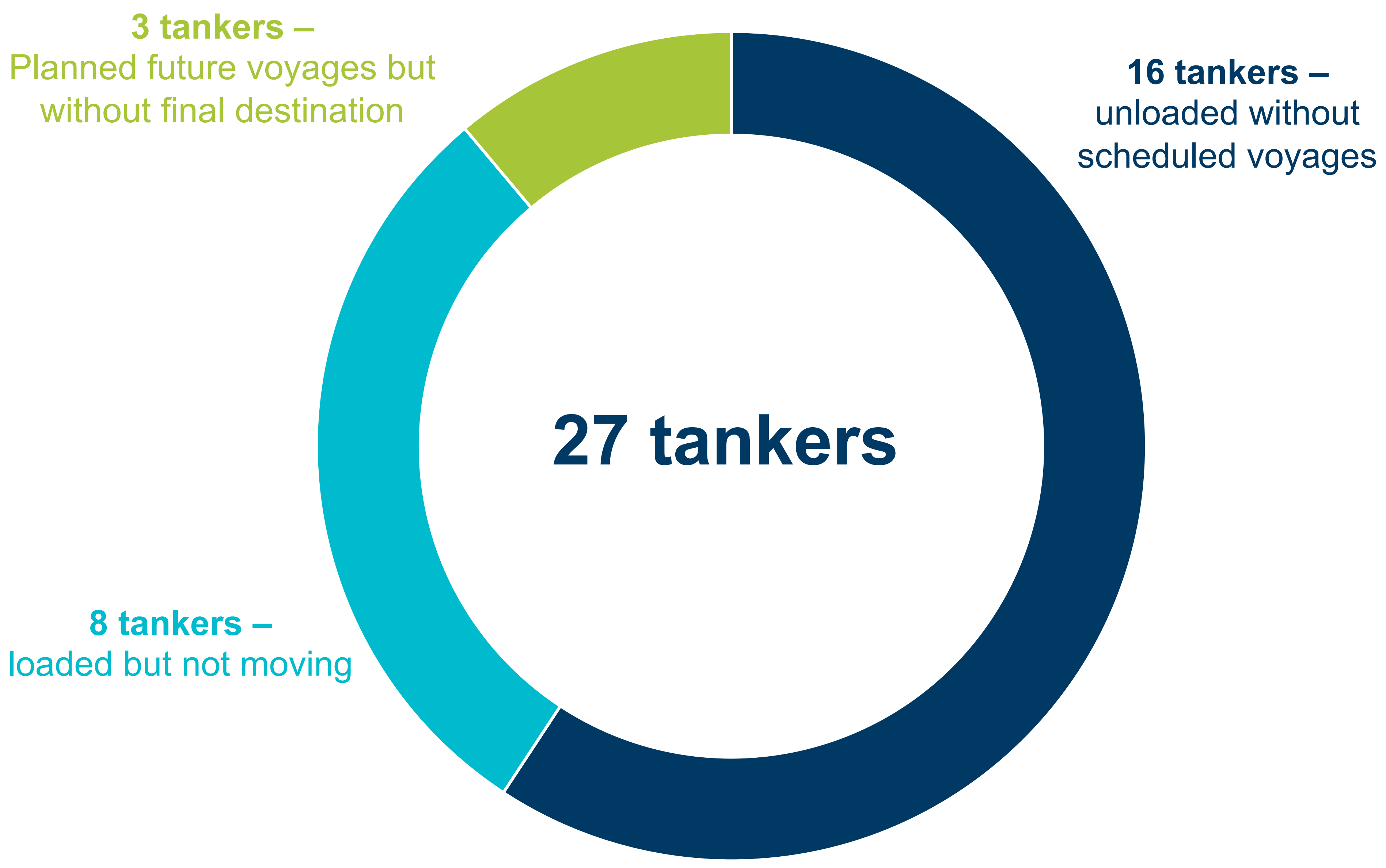
1. **External environment has become dramatically less supportive.** The most important change to Russia' macroeconomic situation over the past 12 months has been the sharp deterioration of its external balance. In 2023, total goods exports reached $424 billion, a decline of 28% vs. the previous year. This has contributed to much smaller trade ($120 billion, -62%) and current account ($51 billion, -79%) surpluses and is fundamentally eroding macroeconomic stability. As a result of sharply lower inflows of foreign currency, the ruble has lost more than 40% of its value against euro and U.S. dollar since the fall of 2022. In turn, this has increased inflationary pressures and forced the CBR to hike interest rates by cumulative 850 bps as well as reintroduce capital controls.
2. **Signs of stepped-up energy sanctions enforcement having impact.** Following a period during which the price cap's shortcomings had become apparent and threatened the overall effectiveness of the energy sanctions regime, coalition authorities have stepped up enforcement measures, including by sanctioning individual shadow tankers. These measures have had an effect—the vessels have been sidelined, participants in the trade (e.g., buyers, traders, and banks) are becoming much more cautious as they may force enforcement actions themselves, and the discount on Russian oil vs. Brent has started to widen again in recent months.
3. **Macro buffers under stress due to the war and sanctions.** While the 2023 budget deficit reached only 1.9% of GDP and rising non-oil and gas revenues allowed authorities to spend 3 trillion rubles more than originally expected, financing is set to become more challenging. With external sources cut off due to sanctions, Russia has had to rely primarily on the NWF. In fact, almost half of the fund's liquid assets, including all hard currency, have been used up since the February 2022. Going forward, the Russian banking system will likely have to carry more of the burden. Sanctions have also significantly constrained access to reserves.
4. **Robust economic recovery conceals underlying vulnerabilities.** The Russian economy is benefitting from a large war-related fiscal stimulus, with growth reaching 3.6% in 2023 according to Rosstat. At the same time, the statistics agency revised the 2022 contraction down to 1.2%. The stimulus will become even stronger this year as military spending could add around 2.5pp to GDP growth in 2024. Thus, it is not surprising that economic activity has essentially fully rebounded from the initial shock due to the war and sanctions. However, the underlying fundamentals of the economy are weak, and problems will eventually resurface.

Energy: stepped-up sanctions enforcement is showing early signs of success, but further action is needed to stop price cap violations and inhibit shadow fleet growth.

Recent enforcement actions: designation of individual vessels

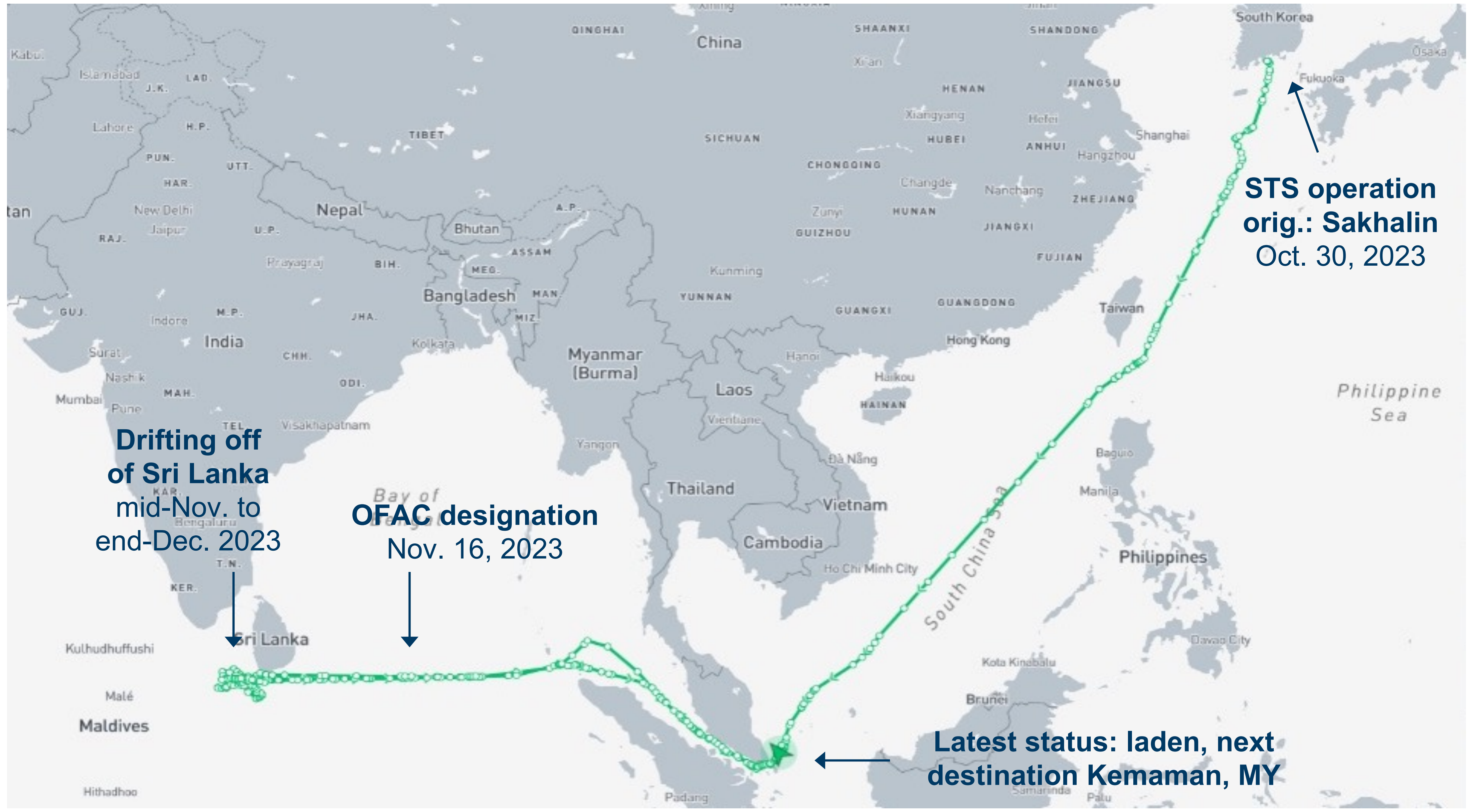
- The U.S. Treasury Department (OFAC) has listed 27 vessels as assets of sanctioned entities.
- So far, they are of operation: either unloaded/stuck in port or not finding a buyer for the cargo.
- We estimate that ~125 more could be targeted, due to (past) links to U.S. service providers.

OFAC-designated vessels remain out of the market



Source: Kpler, KSE Institute

Effects of vessel designations: the case of the NS Century



Source: Kpler, KSE Institute

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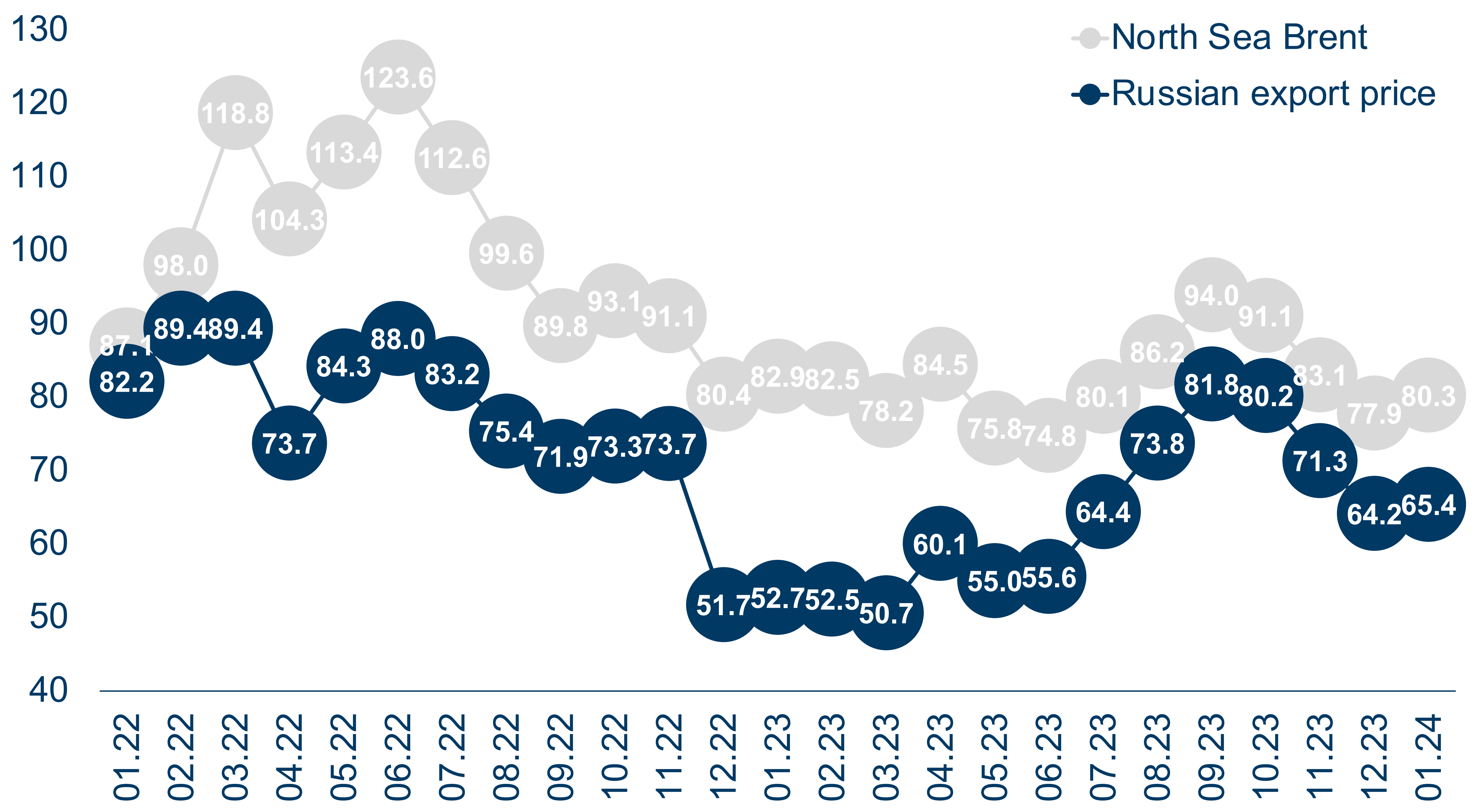
Discounts widen again as coalition countries step up enforcement.

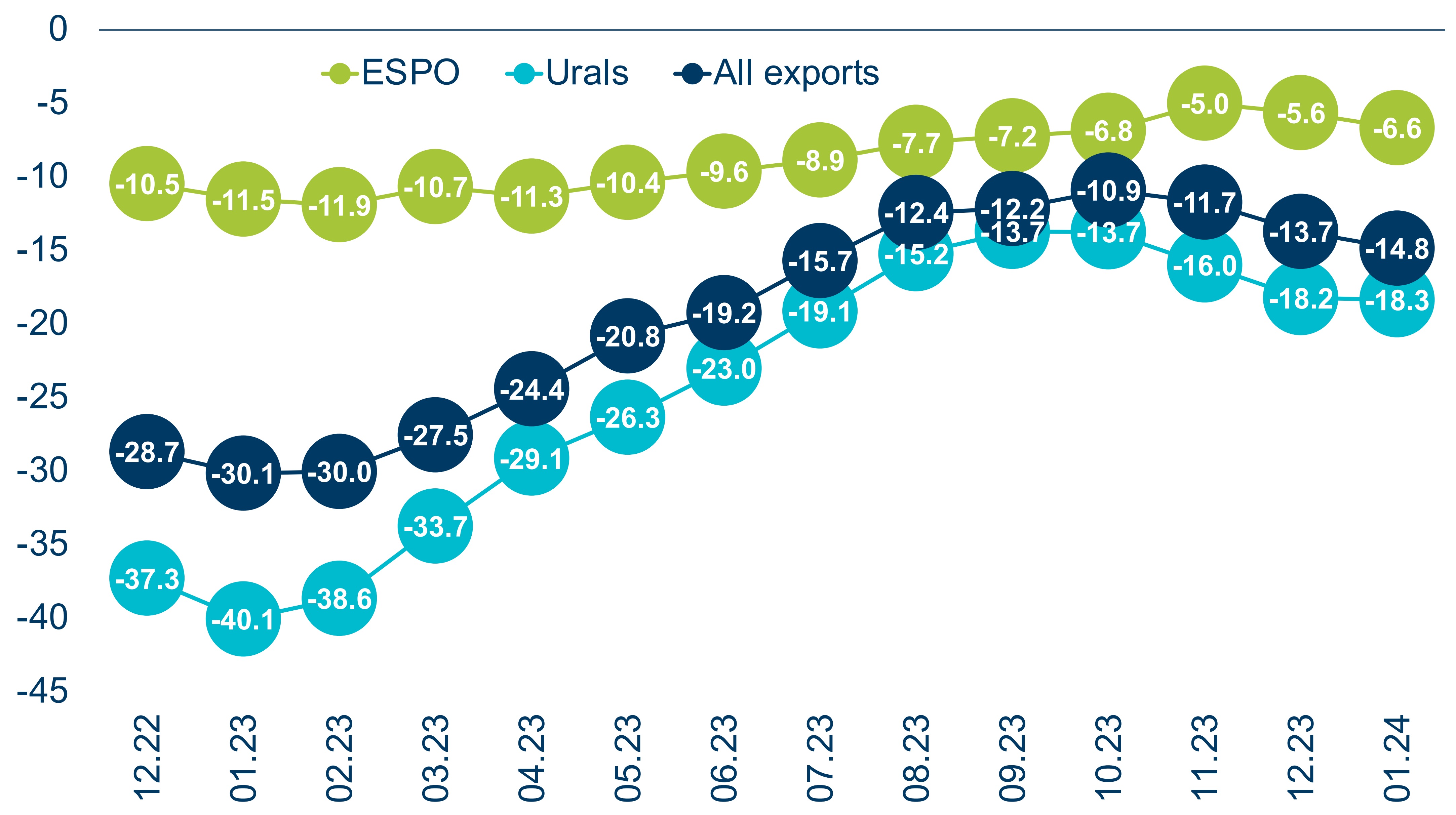
- Energy sanctions, in particular the EU embargo, weighed on Russian export earnings via wider price discounts.
- Since early 2023, we have observed a sharp narrowing—from $40/barrel in January to $13.7/barrel in October for Urals.
- However, recent G7/EU enforcement efforts are having an impact, with the Urals discount widening to $18.3/barrel.

Crude oil prices, in U.S. dollar/barrel*



Source: Federal Customs Service, International Energy Agency, KSE Institute
*export price until November 2022 from Russian customs, all other numbers from IEA

Discount of Russian export prices vs. Brent, in U.S. dollar/barrel



Source: International Energy Agency, KSE Institute

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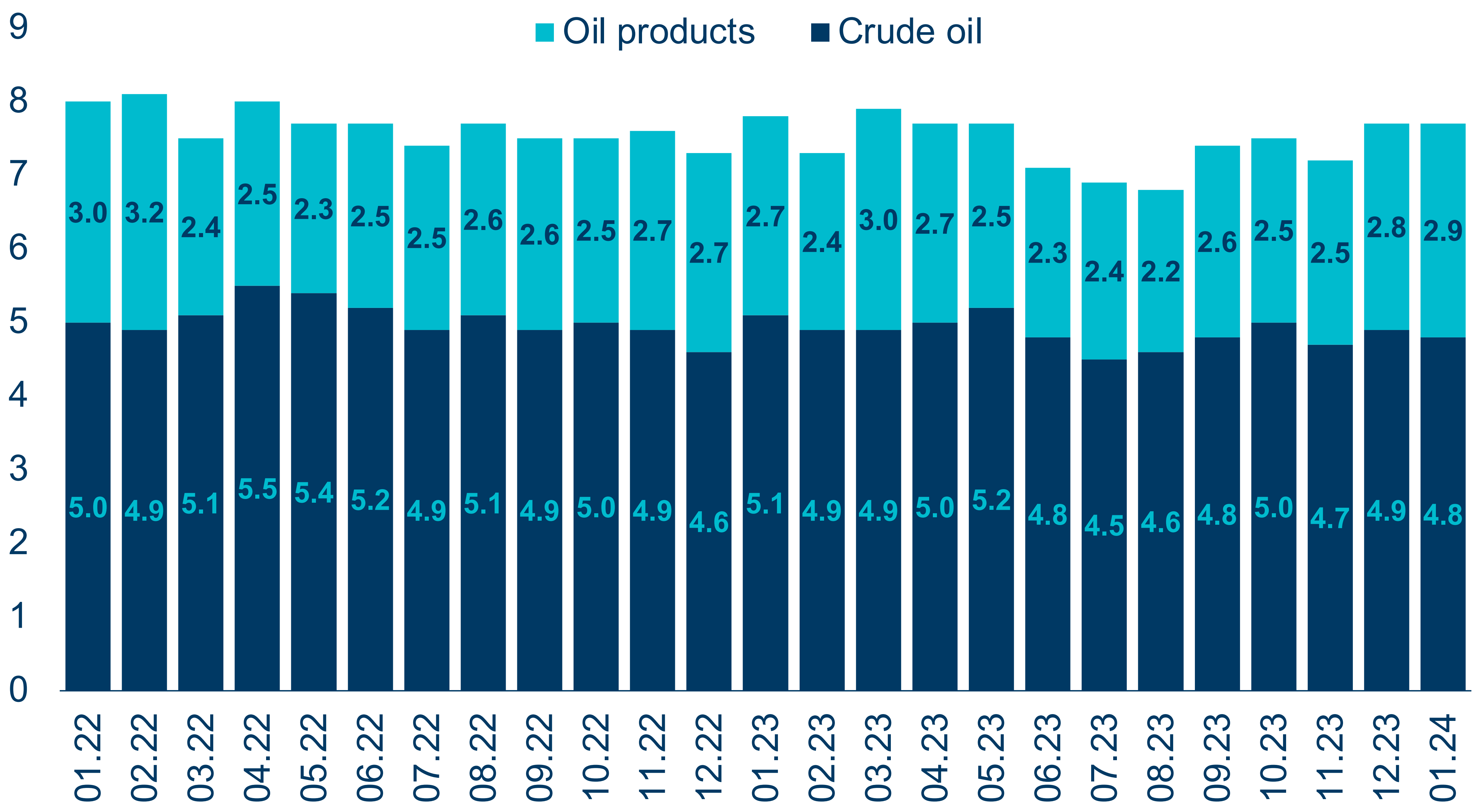
Russian oil export volumes remained stable in January.

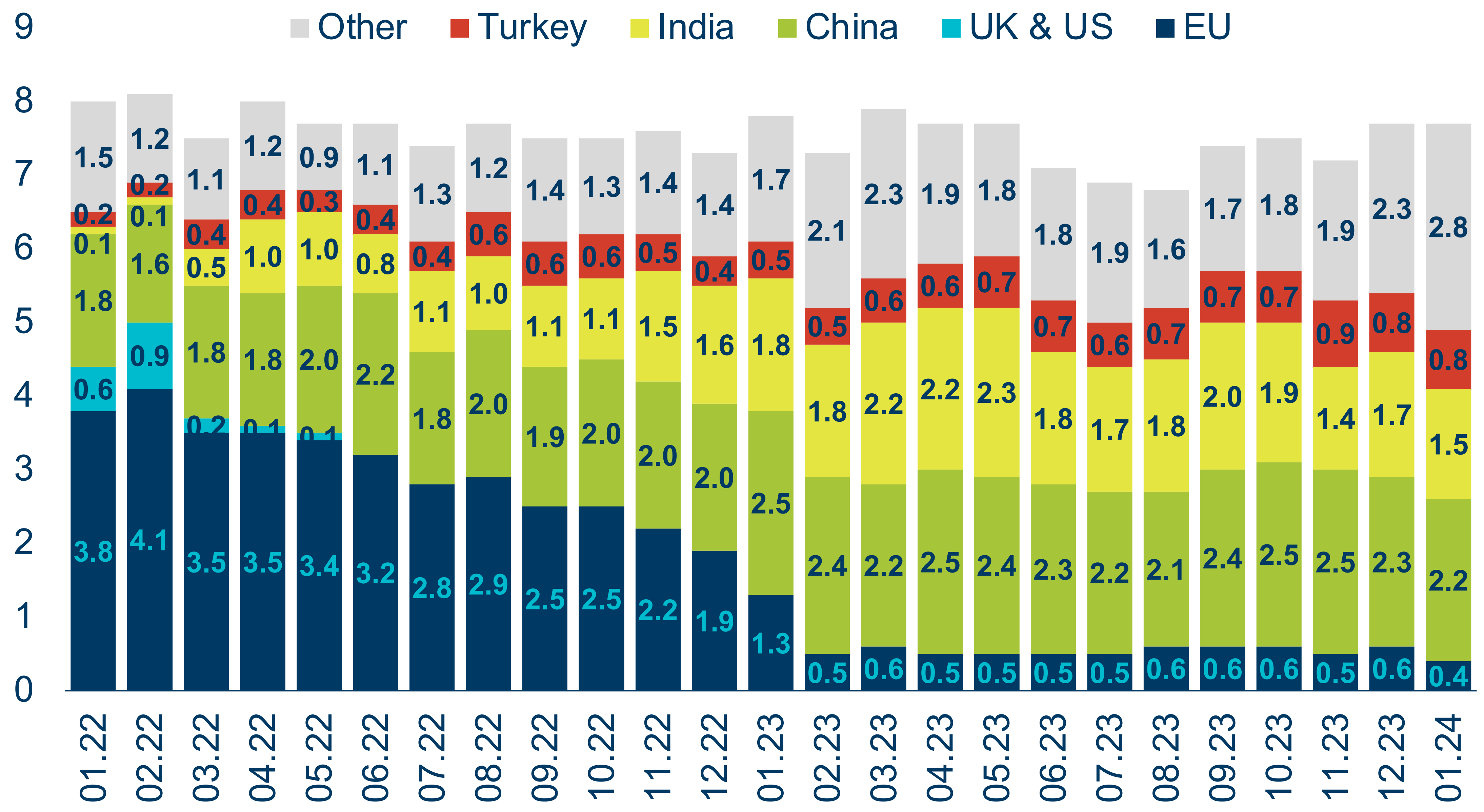
- Russian oil exports did not change significantly in January: crude oil declined by 2% and products rose by 3.6%.
- Shipments to China weakened further to 2.2 mbd, while those to India remain weaker than in most of last year.
- Overall stable export volumes throughout 2023 show that the price cap has achieved its goal of oil market stability.

Russian oil export volume by type, in million barrels/day



Source: International Energy Agency, KSE Institute

Russian oil export volume by destination, in million barrels/day



Source: International Energy Agency, KSE Institute

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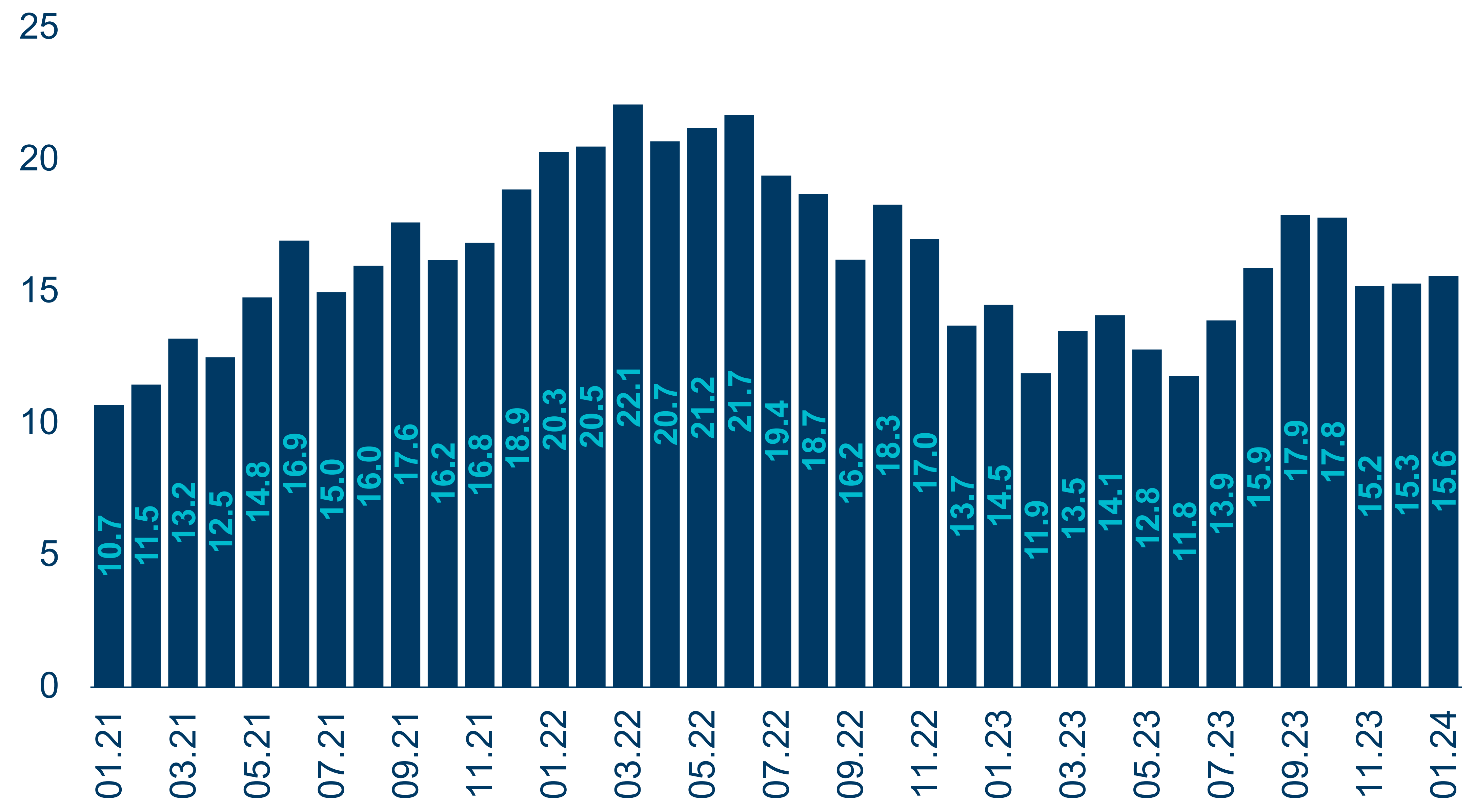
Strain on export earnings and budget revenues has returned.

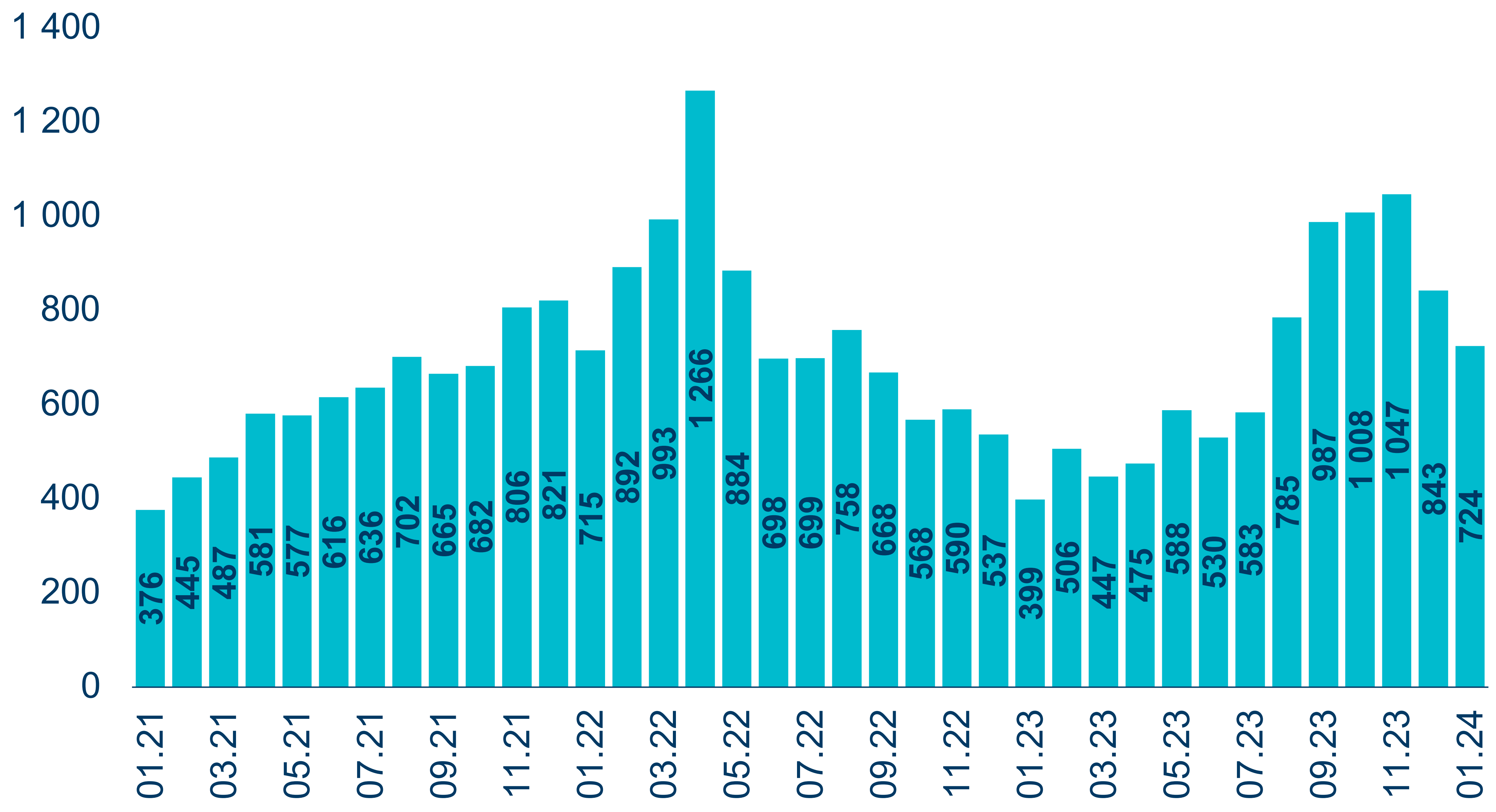
- After reaching close to $18 billion in the fall, Russian oil exports have hovered around $15.4 billion in recent months.
- The somewhat stronger ruble has also weighed on budget revenues, which fell to their lowest level since July 2023.
- Ukraine's allies need to continue their efforts to improve enforcement and preserve the price cap's leverage.

Oil export earnings, in U.S. dollar billion



Source: Federal Customs Service, International Energy Agency, KSE Institute
*2021 data from Russian customs service, 2022-23 data from IEA

Federal budget oil revenues, in ruble billion*

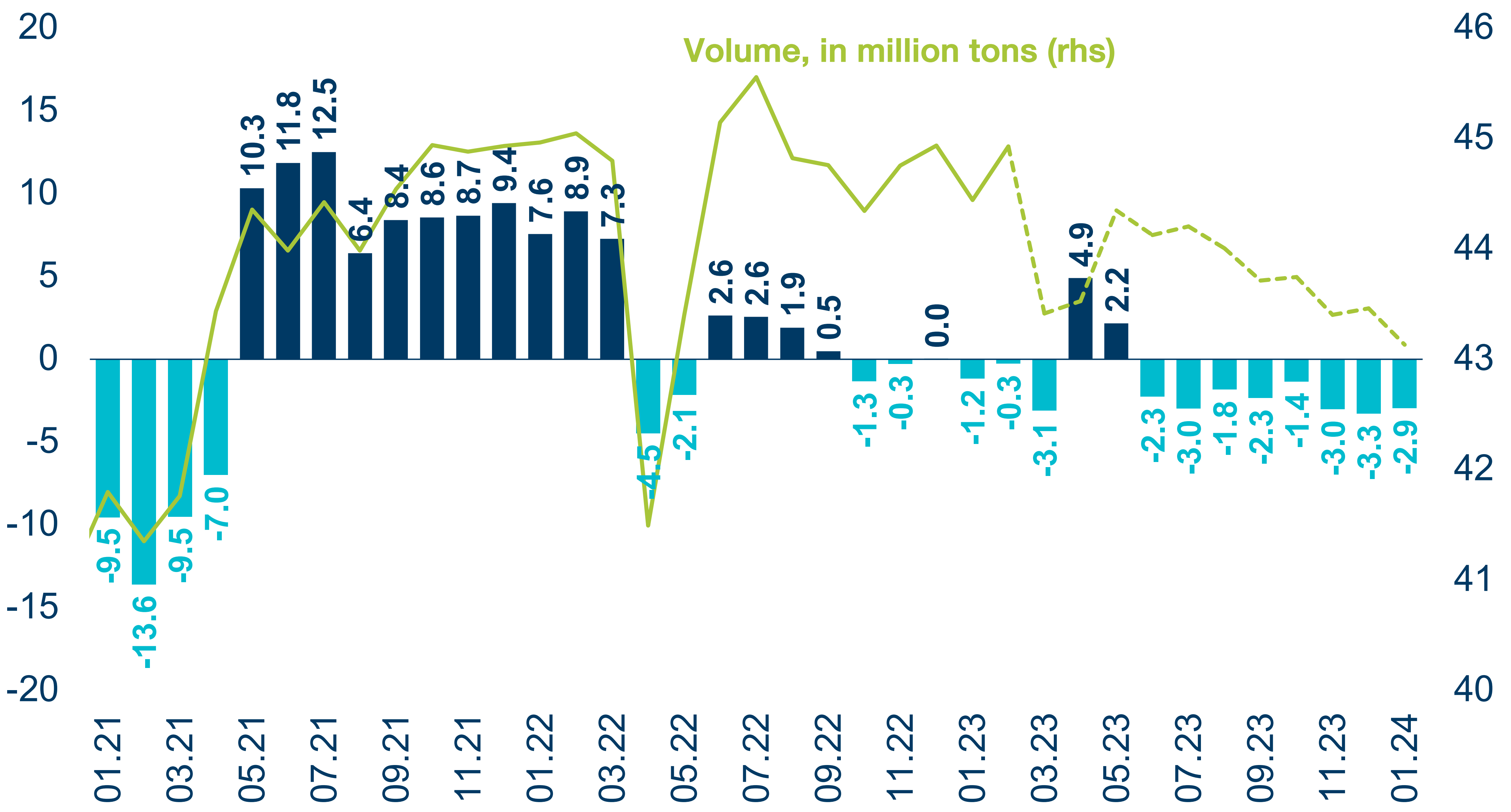


Source: Ministry of Finance, KSE Institute *includes extraction tax and export duty

Oil production stable, gas production under pressure.

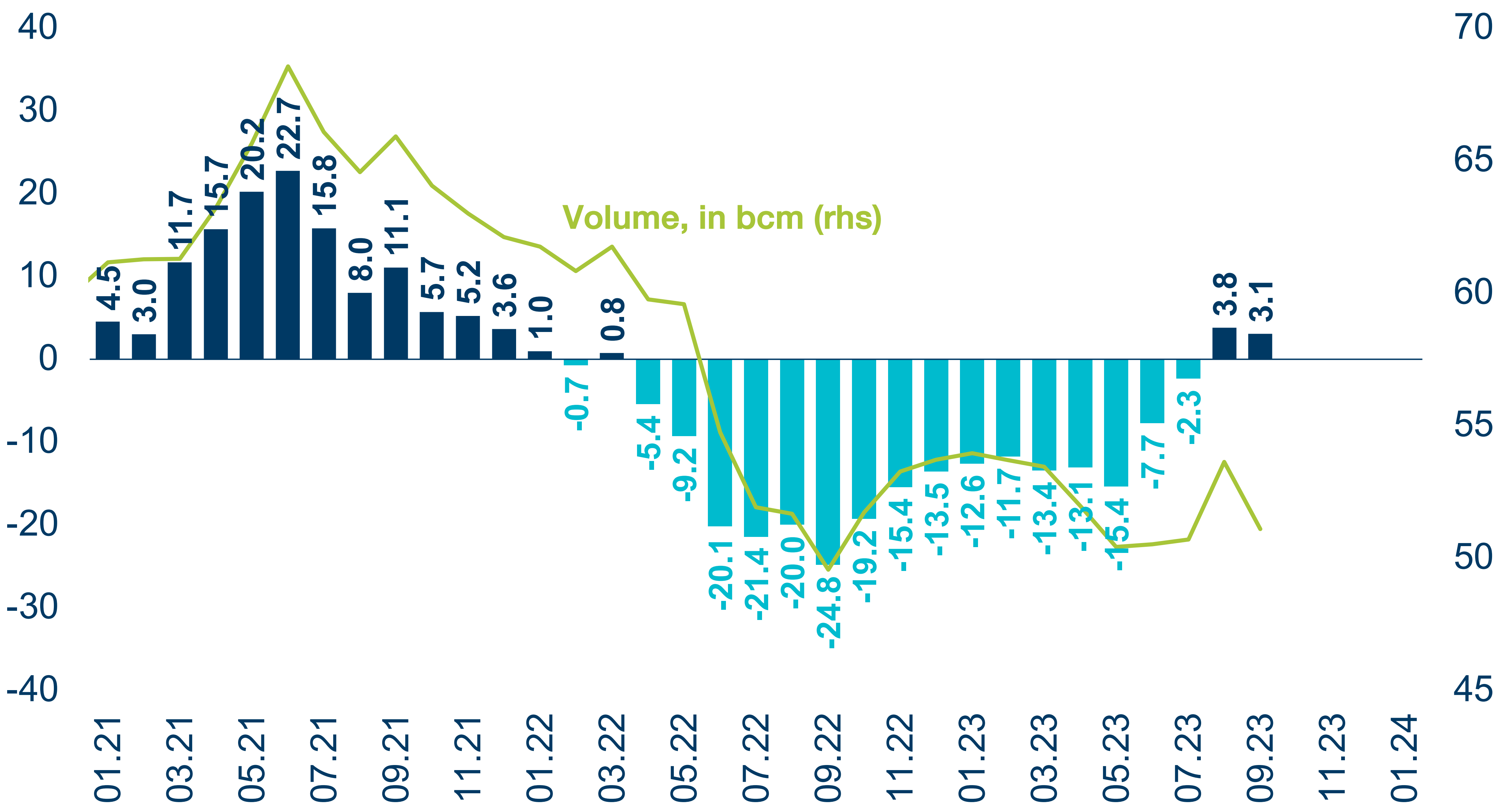
- Russian crude oil production declined marginally in 2023—by 1.3% compared to 2022 (+0.6% vs. 2021).
- But natural gas production dropped sharply 6.6% in January-September 2023 vs. 2022 (-18.4% vs. 2021).
- Key driver: Russia has been able to redirect oil exports to new buyers, but not succeeded regarding gas.

Russian crude oil production, in % change year-over-year



Source: International Energy Agency, Rosstat, KSE Institute
*numbers for March 2023-January 2024 appended based on IEA data

Russian natural gas production, in % change year-over-year

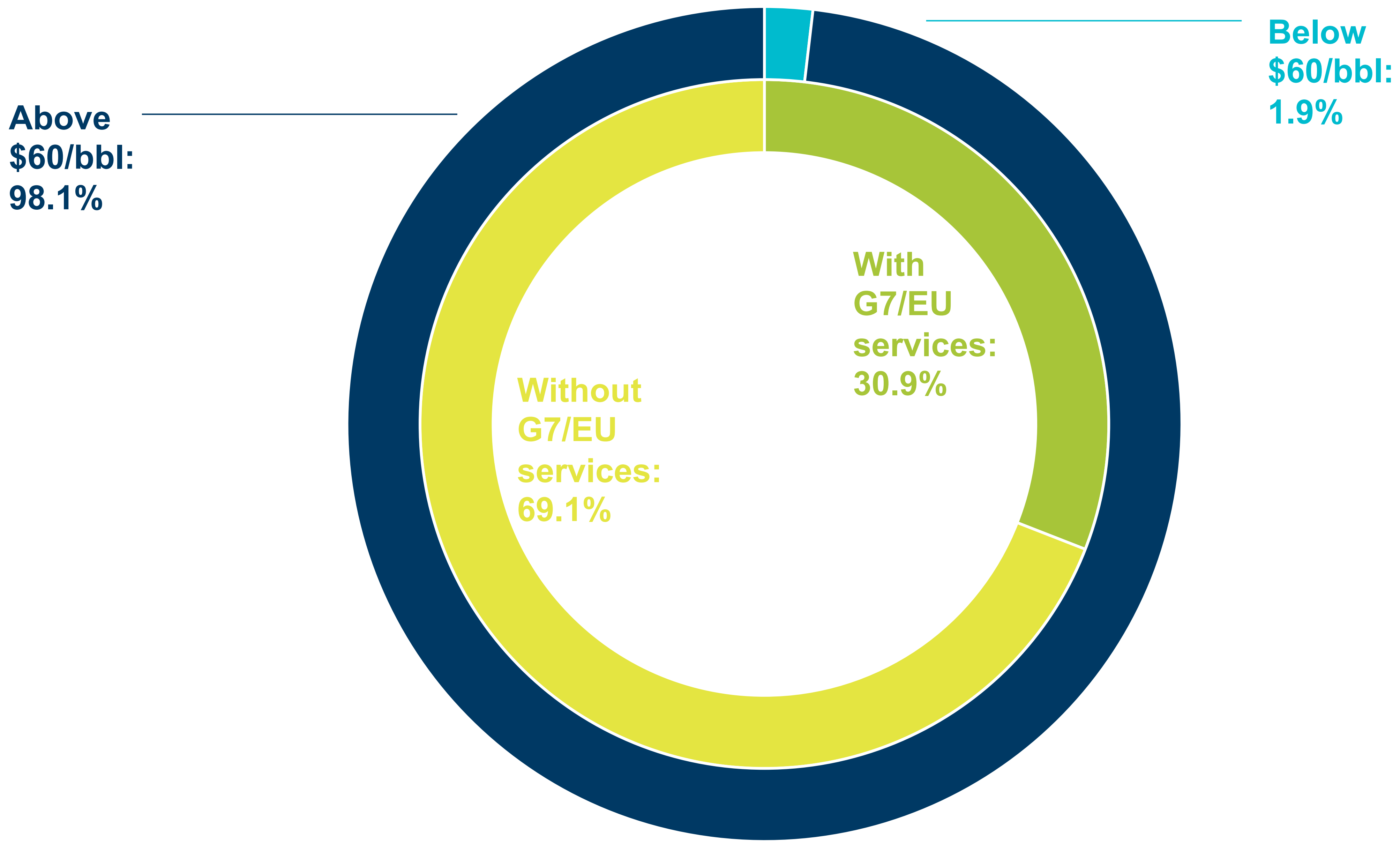


Source: Rosstat, KSE Institute

Price cap challenges: violations and the shadow fleet.

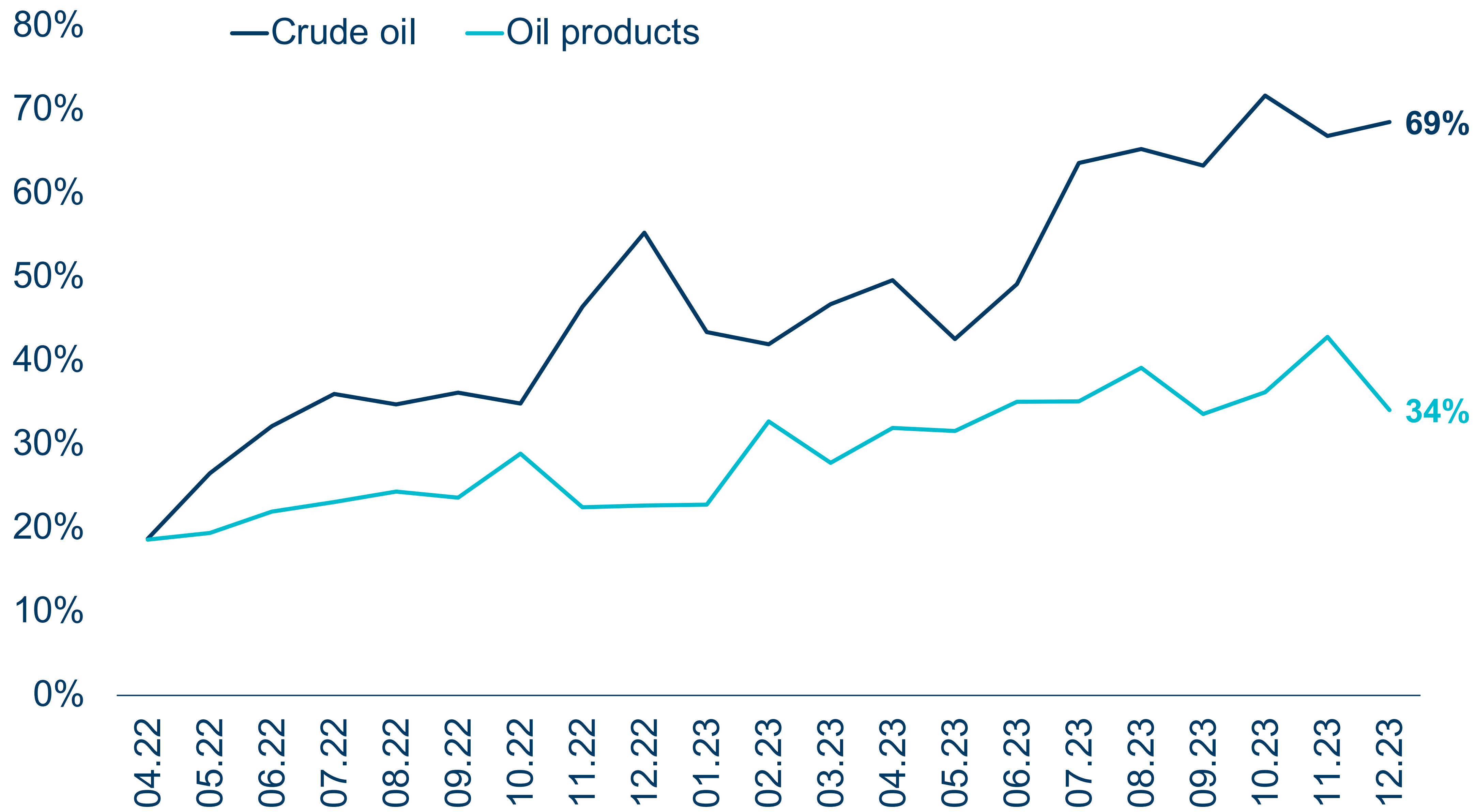
- The price cap continues to face two key challenges: compliance remains low, and the shadow fleet threatens its leverage.
- In Q4 2023, only ~2% of seaborne crude oil exports took place <$60/barrel, while G7/EU services played a role in ~30%.
- The volume share of the shadow fleet has risen to 69% in January 2024 for crude oil and remains at ~1/3rd for products.

Composition of Russian seaborne crude oil exports in Q4 2023, in %



Source: Kpler, P&I Clubs, KSE Institute

Volume share of the Russian shadow fleet, in %



Source: Kpler, P&I Clubs, KSE Institute
Read KSE Institute's January 2024 *Russian Oil Tracker*.

Energy sanctions: four key steps to constrain Russia in 2024 and beyond.

Strengthening price cap enforcement and lowering the caps:

1. **Stop the Russian shadow fleet**, which circumvents the price cap and threatens the environment. By expanding the number of shadow tankers under sanctions and enforcing existing mandatory oil spill insurance requirements for all tankers passaging through coalition waters, we can force Russia to rely much more heavily on the mainstream fleet once again, which falls under price cap restrictions. Further, **step up investigations and penalties** to alter trade participants' risk calculations. By requiring greater transparency around price cap compliance, conducting comprehensive investigations into suspect transactions, and increasing penalties for violations, service providers and importers will demand higher fees (such as freight rates) and deeper price discounts.
2. **Ratchet down the price cap** once its efficacy is ensured and enforcement challenges addressed to deprive Russia of critical foreign currency inflows. We propose initially to reduce the crude oil price cap and the discount product price cap by $10/barrel each, and to reduce the premium product price cap of $100/barrel more substantially, which has generally been above the market price.

Further steps to reduce oil and gas earnings in the medium run:

1. **Complete the EU/G7 ban on Russian hydrocarbons** by eliminating all purchases of LNG and banning Russian gas flows to Europe. Such a measure would demonstrate the coalition's commitment to a permanent decoupling from Russian energy and deprive the aggressor of important future export earnings. This ban should be phased in over the next one to two years, as other gas supply comes onto the market, to avoid any sharp market tightening and rising prices.
2. **Target oil and gas-related services** that Russia relies on for production and exports. Russia's hydrocarbon sector has had restricted access to western technology since 2014, resulting in a negative impact on new developments. Many foreign companies also exited after February 2022. However, a significant number continue to operate in Russia. Cutting off such services completely could restrict future LNG production, while pushing up costs for oil production by eroding technology-driven efficiencies.

Read the latest working paper by the Yermak-McFaul International Working Group on Russian Sanctions here.

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Trade: sharp reduction in exports in 2023; much smaller trade and current account surpluses undermine macro stability.

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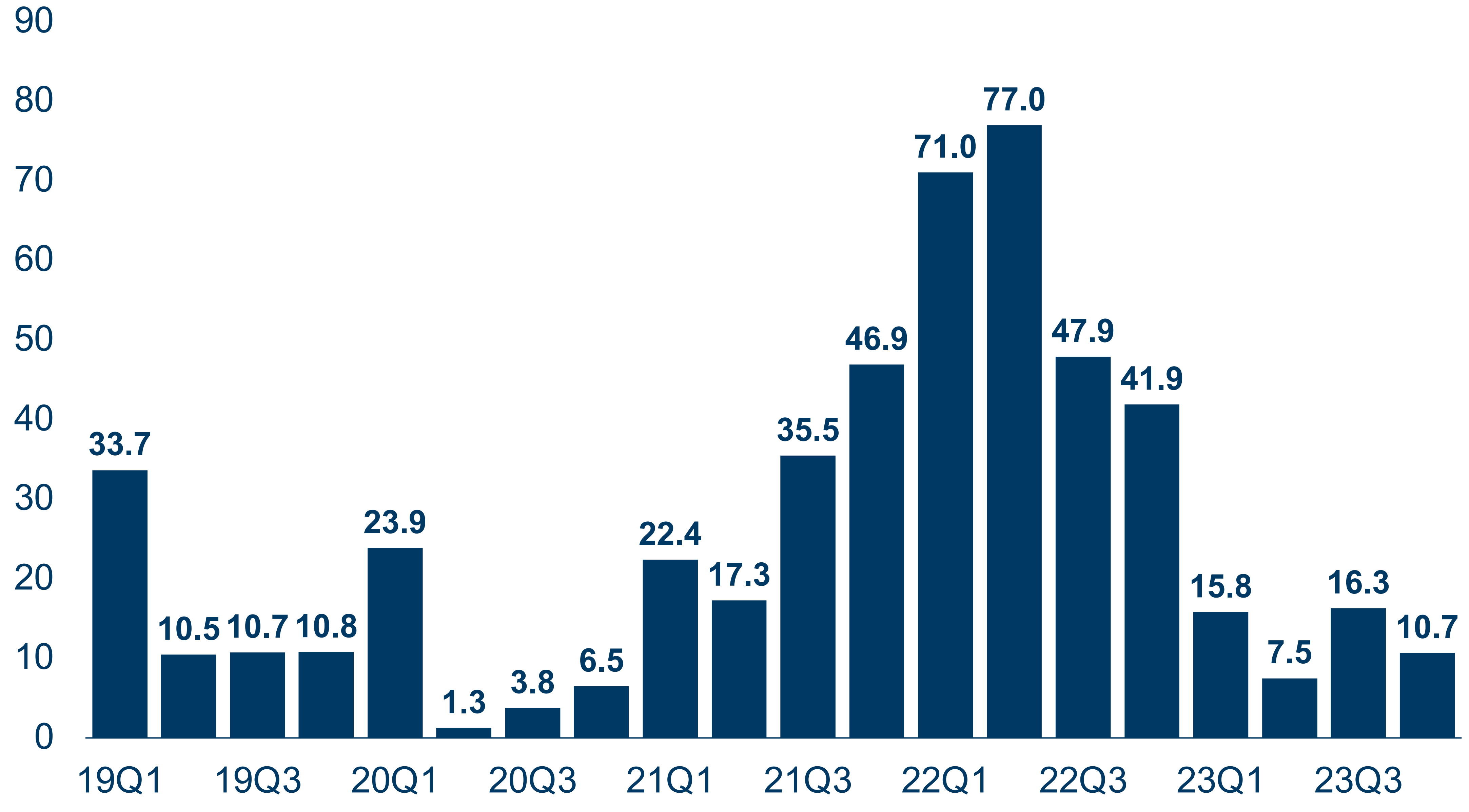
External environment dramatically less supportive than in 2022.

- The 2023 current account surplus reached $50.6 billion—79% lower than the record-high 2022 reading of $238.0 billion.
- This is largely driven by a much smaller trade surplus ($120.1 billion, -62% vs. 2022) as goods export dropped by 28%.
- Russia's external environment has become dramatically less supportive in 2023, which is undermining macro stability.

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



Source: Bank of Russia, KSE Institute

Composition of the current account, in U.S. dollar billion

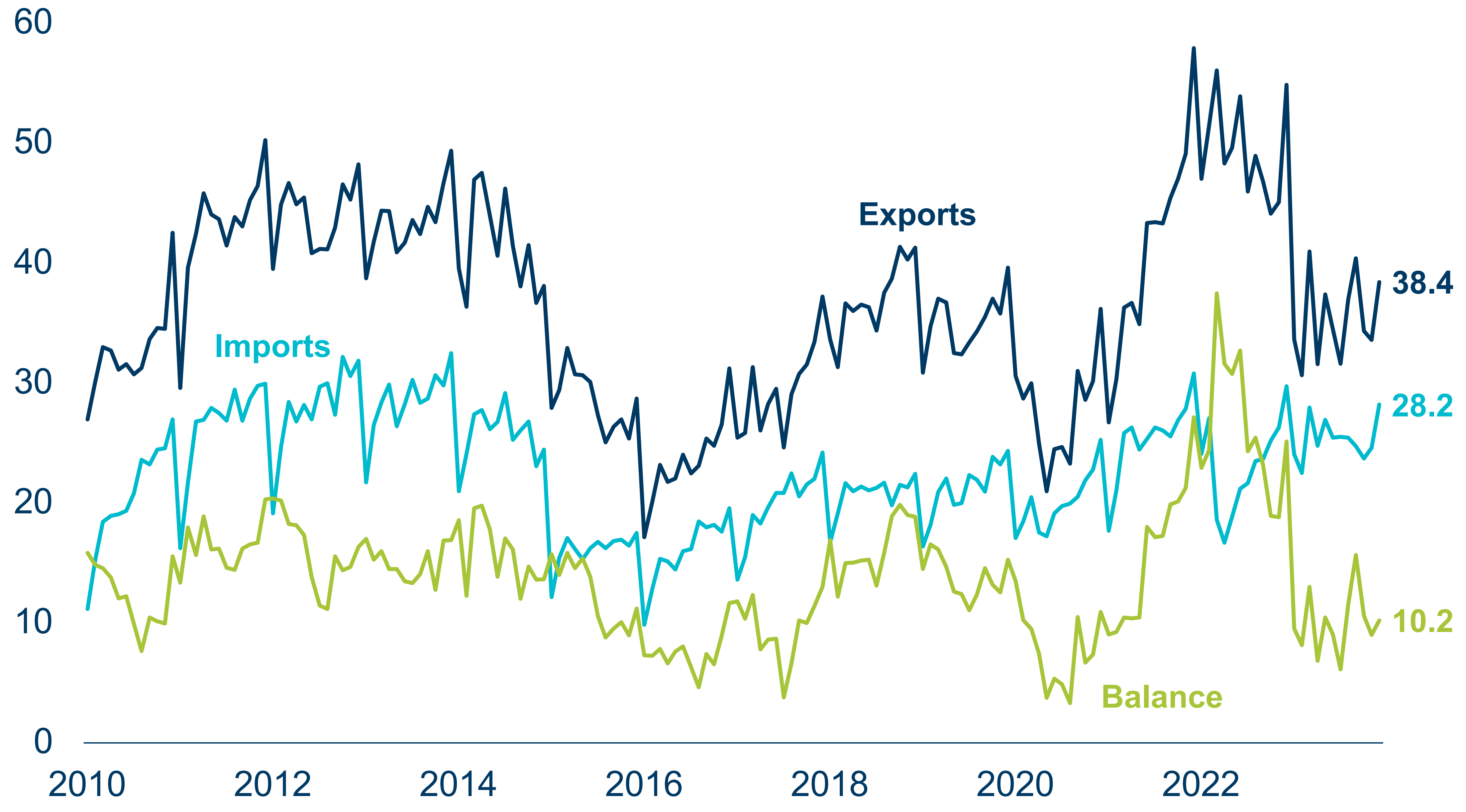
		C/A	Goods			Services			Income & transfers		
	Time period	Bal.	Bal.	Exp.	Imp	Bal.	Cred.	Deb.	Bal.	Cred.	Deb.
	Oct. 2023	5.3	10.6	34.3	23.7	-2.3	3.3	5.6	-3.0	3.3	6.3
	Nov. 2023	5.0	9.0	33.6	24.6	-1.9	3.2	5.1	-2.1	3.0	5.1
	Dec. 2023	0.7	10.2	38.4	28.2	-4.2	4.4	8.6	-5.3	4.3	9.5
	Jan. 2024	6.4	9.7	29.8	20.1	-1.6	2.8	4.4	-1.7	3.3	5.0
	Q1 2023	15.8	30.7	105.2	74.5	-7.6	9.8	17.4	-7.3	11.3	18.6
	Q2 2023	7.5	26.3	103.4	77.1	-8.9	10.4	19.3	-9.9	12.6	22.5
	Q3 2023	16.3	33.3	108.9	75.7	-9.7	9.7	19.4	-7.3	10.2	17.5
	Q4 2023	11.1	29.8	106.3	76.5	-8.4	10.9	19.3	-10.3	10.6	20.9
	2023	50.6	120.1	423.9	303.8	-34.7	40.7	75.4	-34.9	44.7	79.6
Memorandum	Q1 2022	71.0	84.8	154.6	69.8	-3.5	13.9	17.4	-10.2	12.6	22.8
	Q2 2022	77.1	95.1	151.8	56.7	-3.6	11.1	14.7	-14.4	12.0	26.4
	Q3 2022	48.2	72.8	141.7	68.8	-6.7	11.4	18.1	-17.9	12.8	30.7
	Q4 2022	41.7	62.8	144.0	81.2	-8.4	12.3	20.7	-12.7	14.2	26.9
	2022	238.0	315.6	592.1	276.5	-22.2	48.6	70.9	-55.3	51.5	106.8
	2021	122.1	19.3	494.4	304.0	-20.4	55.6	18.1	-47.8	96.3	144.1

Source: Bank of Russia, KSE Institute

Foreign trade has settled in at a new post-invasion baseline.

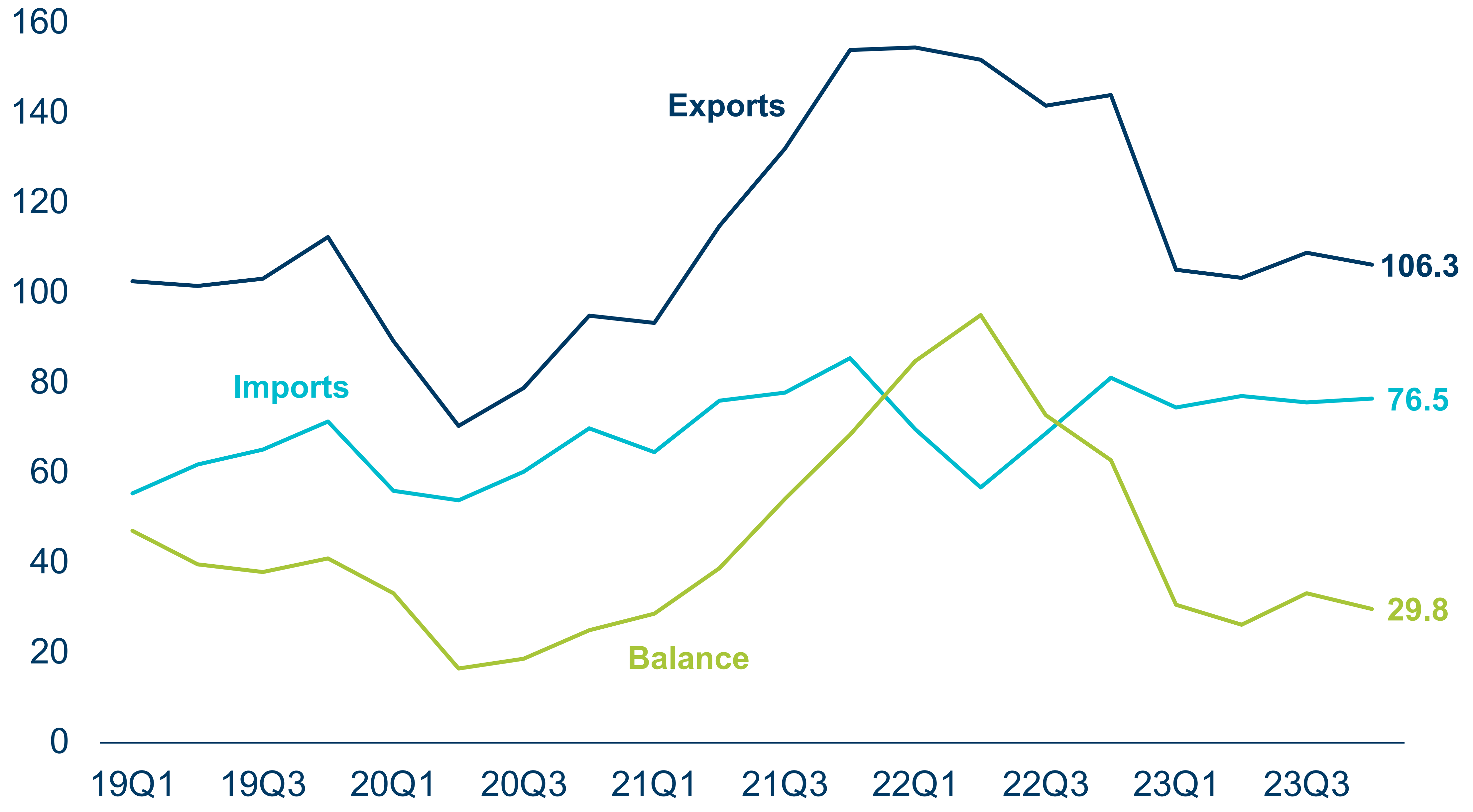
- Russia's foreign trade has stabilized at a new baseline of $30-40 billion/month in exports and $20-30/billion in imports.
- Weaker exports due to sanctions and moderating energy prices cost Russia ~$14 billion per month compared to 2022.
- If enforcement of the price cap is stepped up, Russia's foreign currency inflows could reach a critically-low level in 2024.

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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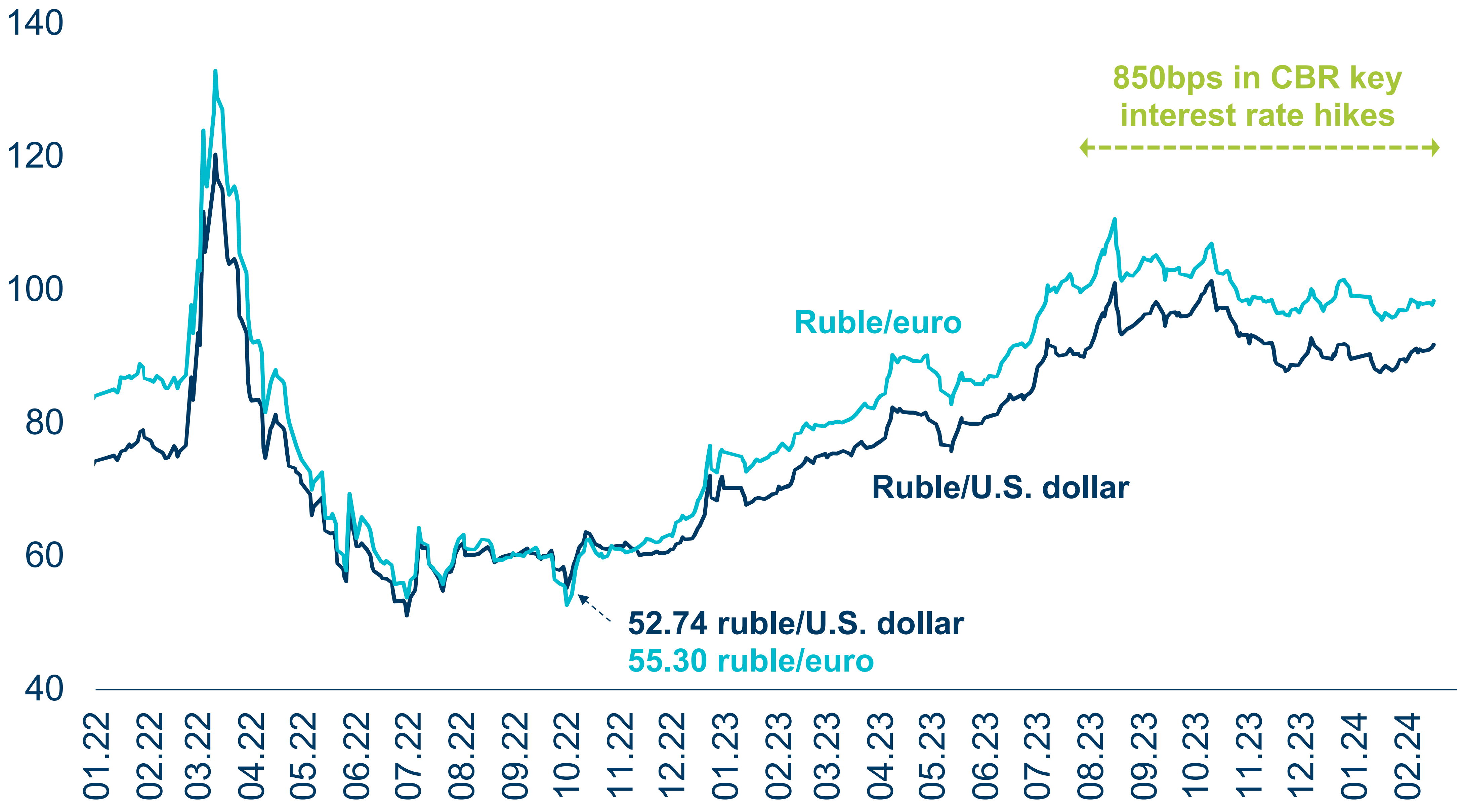
Ruble has stabilized, but only due to tough policy response.

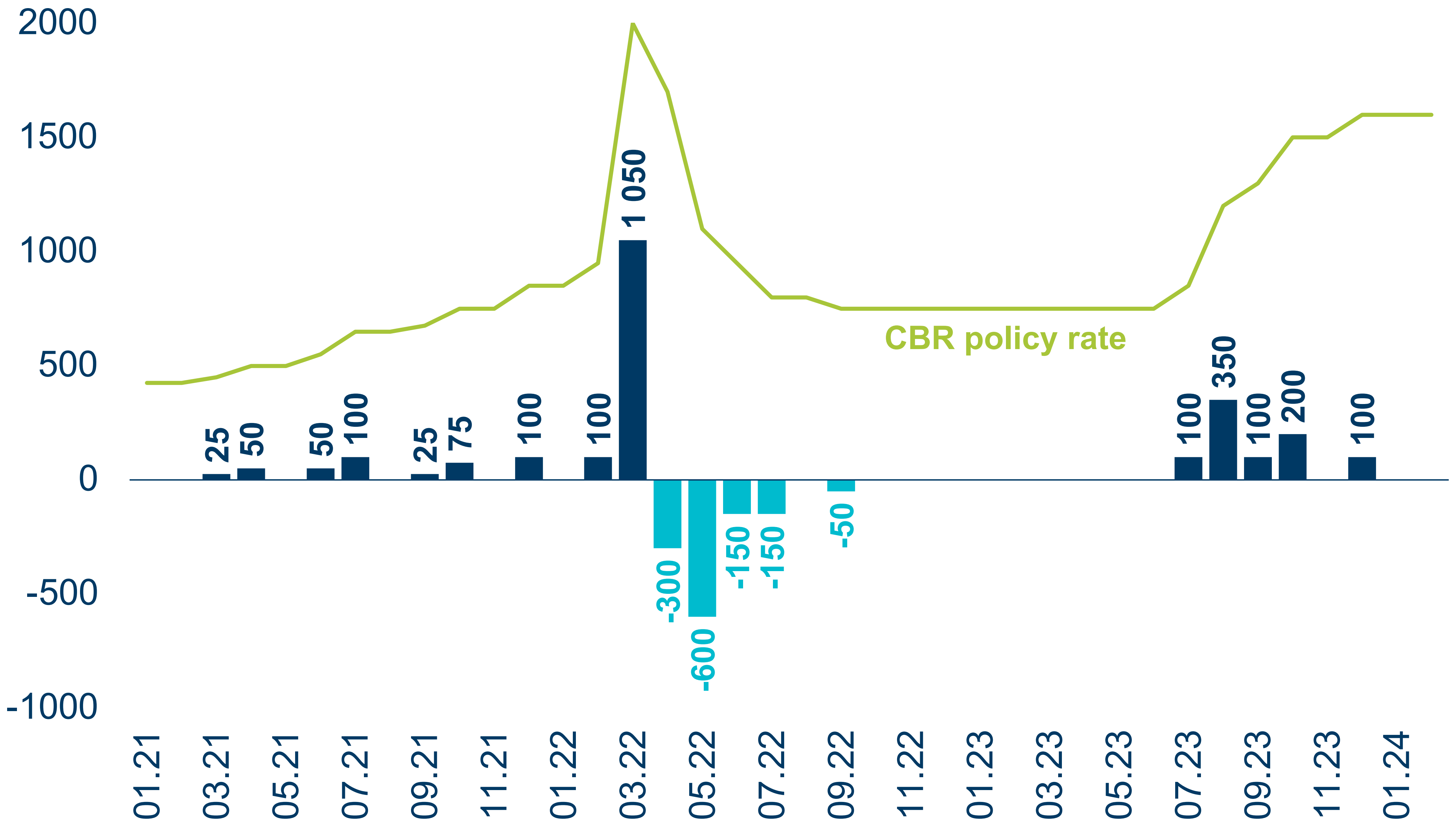
- Since October 2022, the ruble has lost ~43% of its value against the U.S. dollar and ~44% against the euro.
- The re-introduction of capital controls and additional CBR interest rate hikes have led to some stabilization.
- These measures will cause ripple effects throughout the economy, however, and weigh on economic activity.

Ruble exchange rate vs. U.S. dollar and euro



Source: Bank of Russia, KSE Institute

CBR policy rate and MPC decisions, in bps



Source: Bank of Russia, KSE Institute

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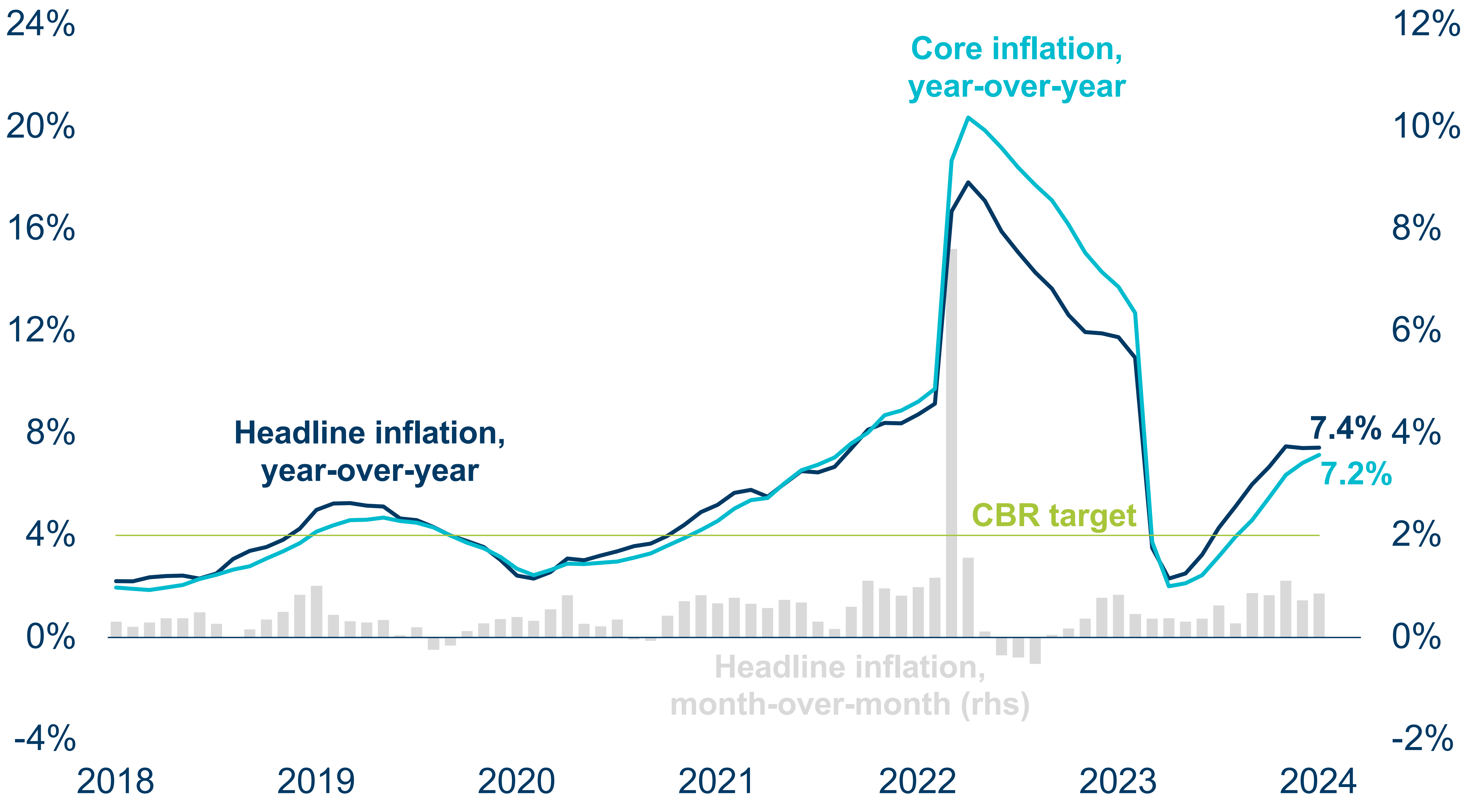
Headline and core inflation, expectations continue to rise.

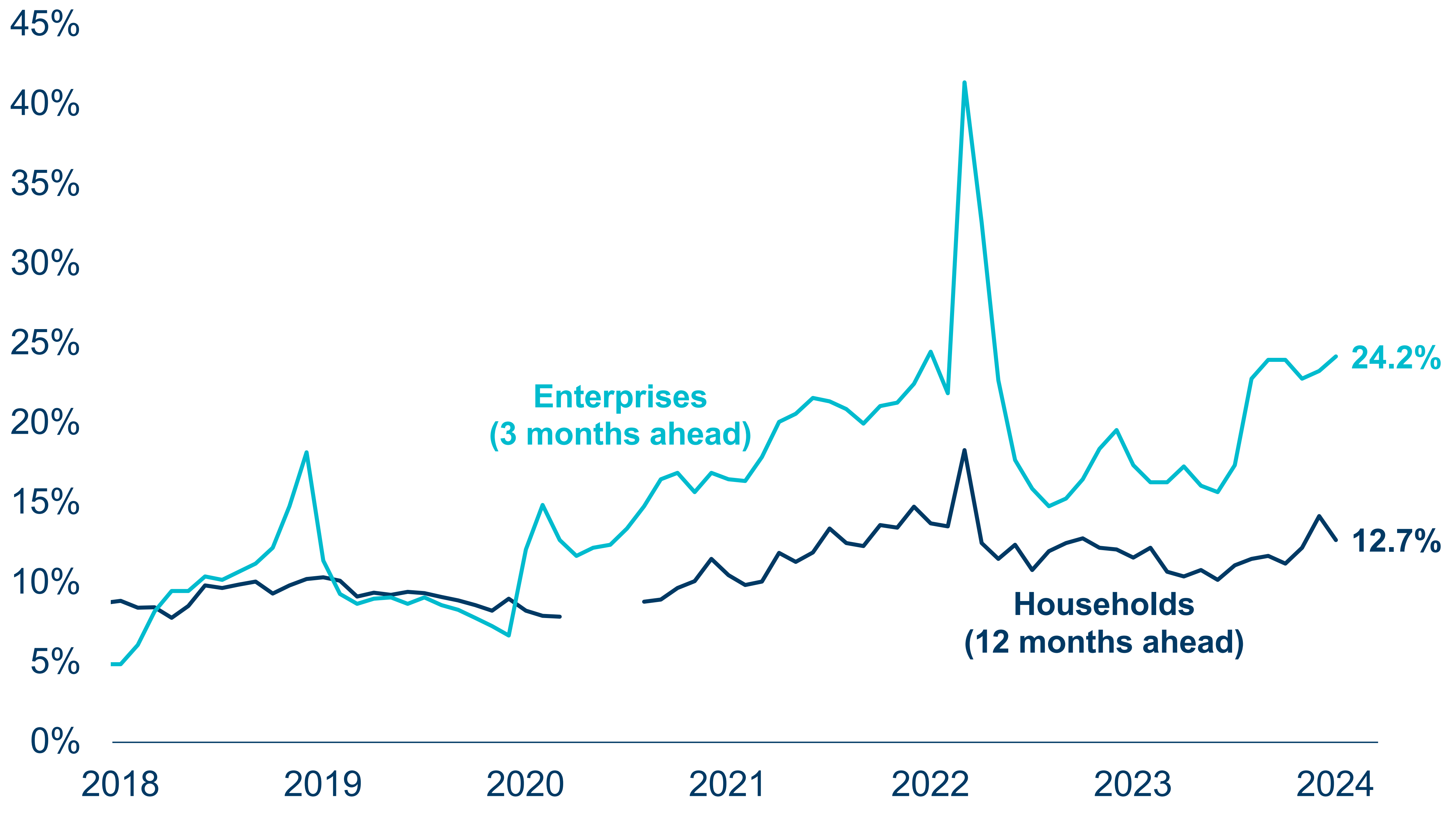
- Following a base effects-driven drop in spring/summer 2023, both headline and core inflation are rising again.
- Based on current month-to-month dynamics, headline inflation will likely reach double-digits again in H2 2024.
- Rising inflation expectations of enterprises also indicate that more CBR action may be needed going forward.

Inflation, in %



Source: Bank of Russia, KSE Institute

Inflation expectations, in %



Source: Bank of Russia, KSE Institute

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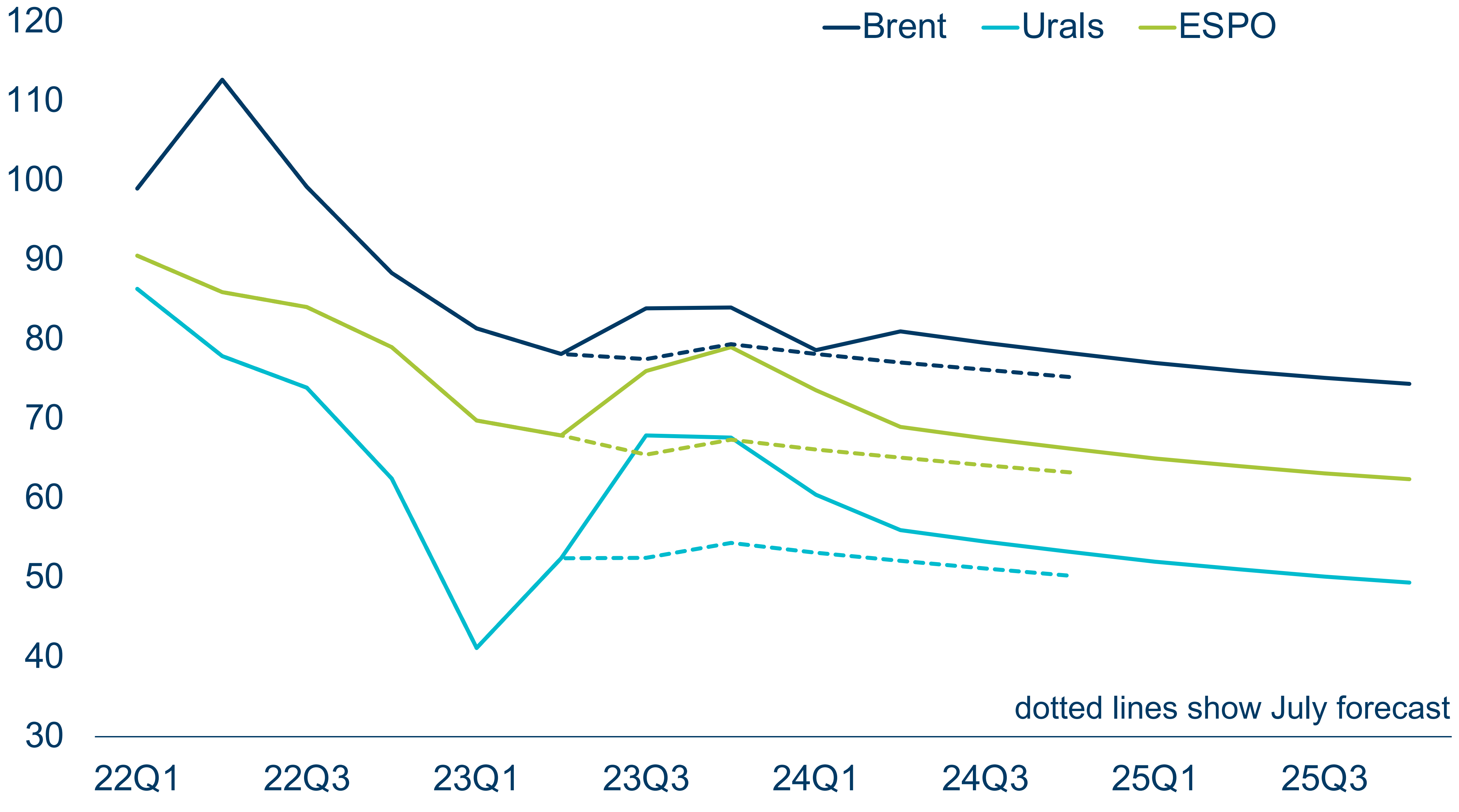
Additional export earnings in 2023, return to baseline forecast in 2024.

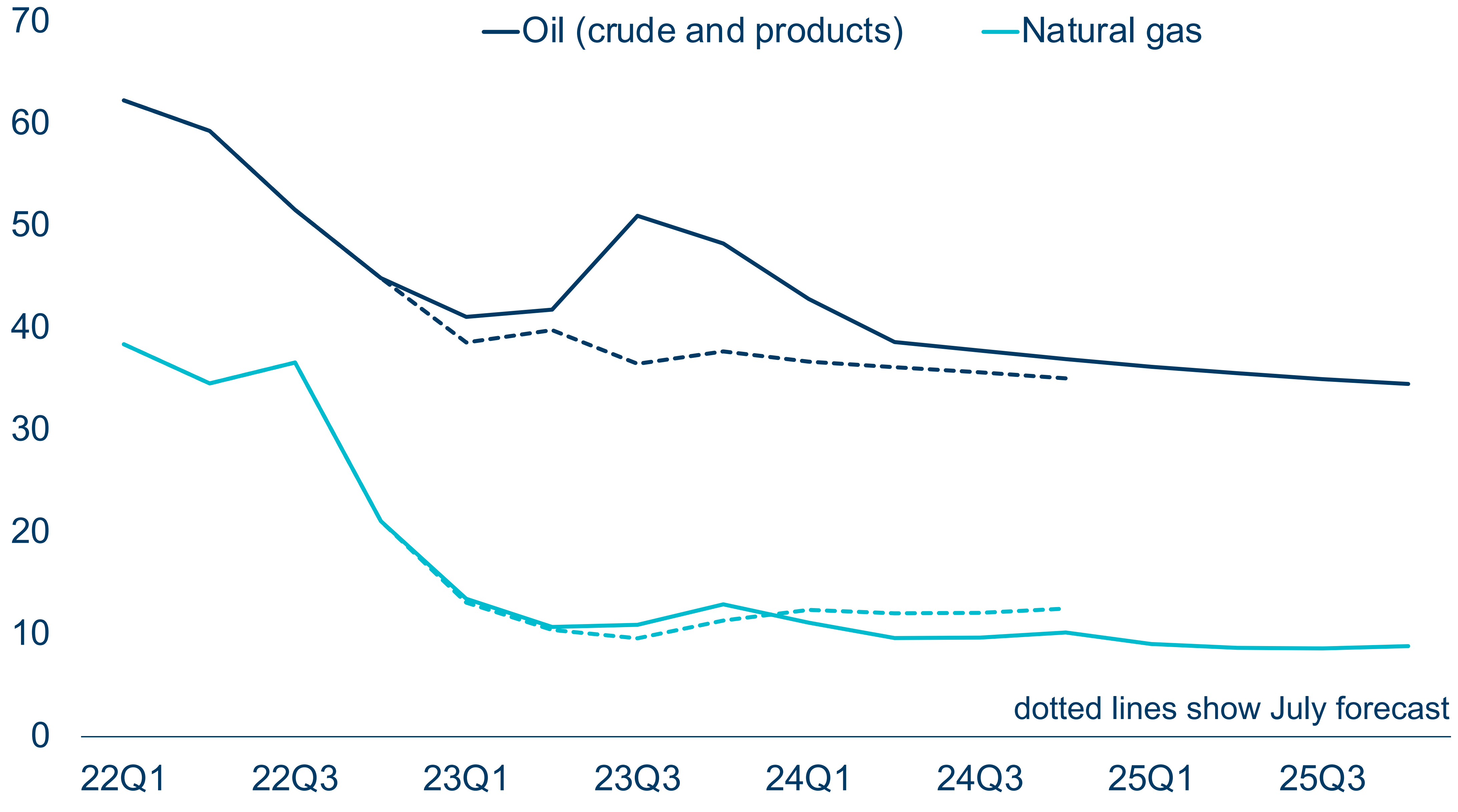
- Higher global prices and smaller discounts on Russian exports have led to significant upward revisions of oil prices.
- This has allowed Russia to collect an additional $30 billion from oil exports in 2023 compared to the original scenario.
- However, we assess that prices and export earnings will largely return to their previously expected paths by mid-2024.

Oil prices, in U.S. dollar/barrel



Source: KSE Institute

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



Source: KSE Institute

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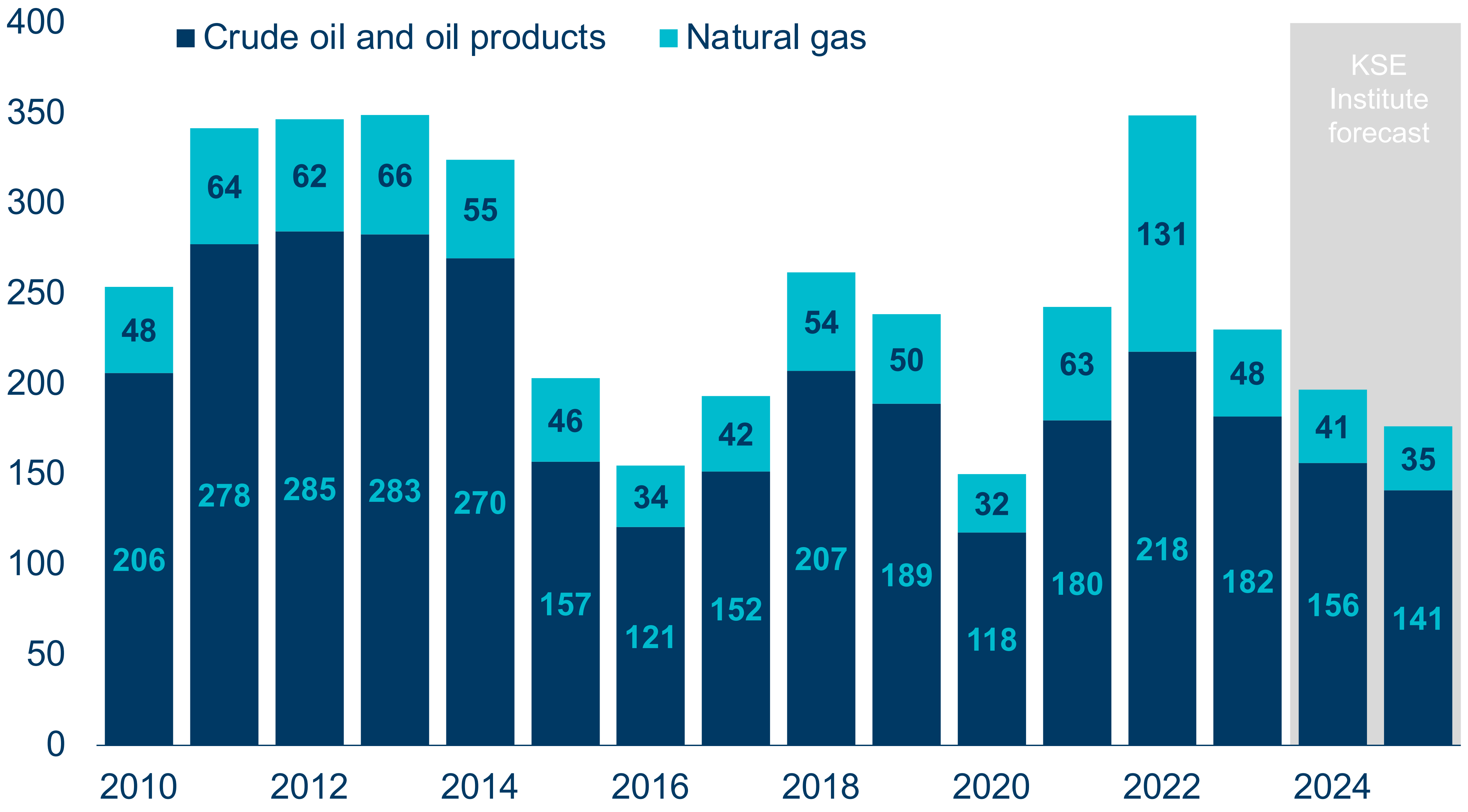
Significant drop in the current account surplus beyond 2023.

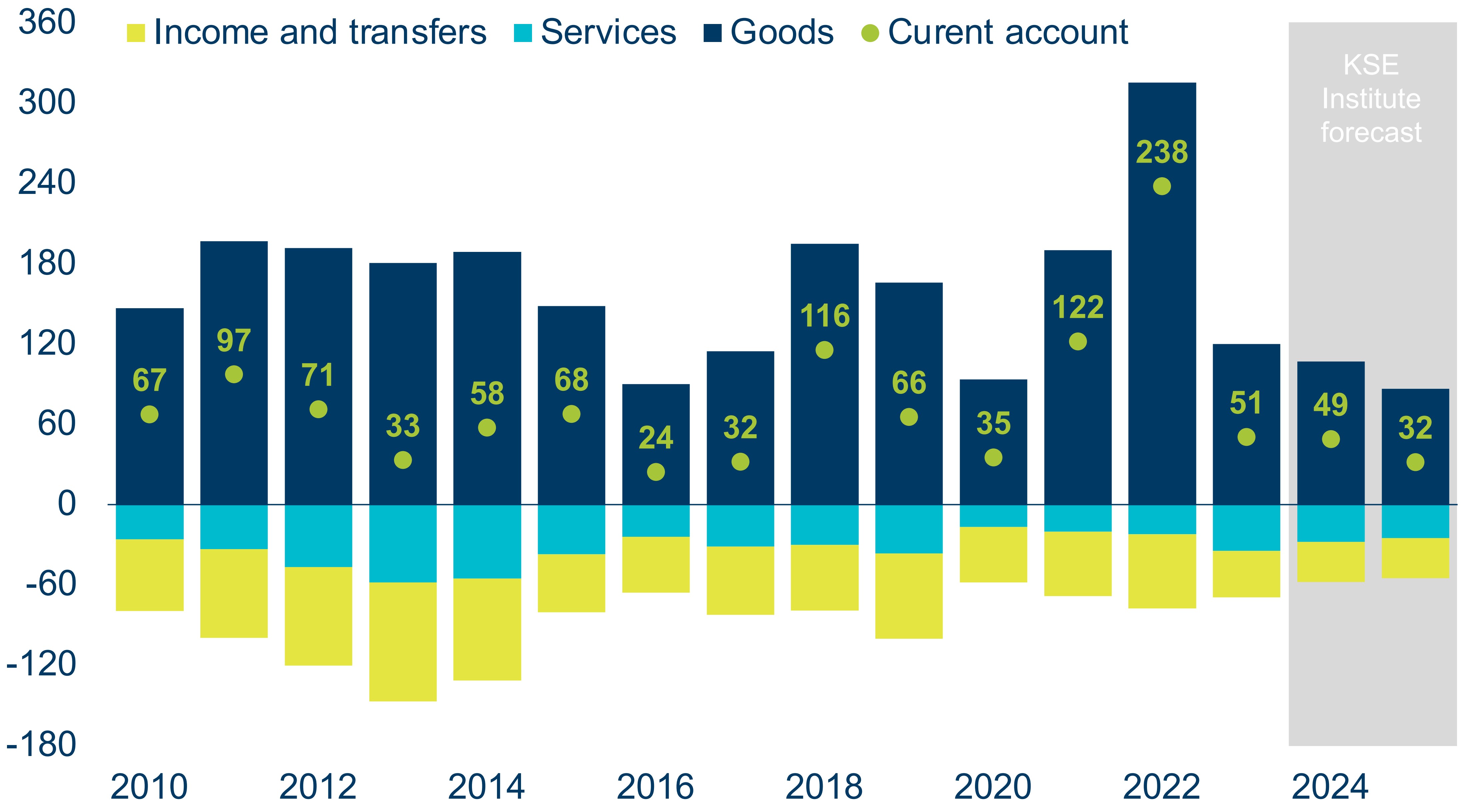
- We assess that oil and gas exports reached $230 billion in 2023 and will drop to $197 billion in 2024, $177 billion in 2025.
- This will weigh on the overall current account, with surpluses of only $49 billion and $32 billion in 2024-25, respectively.
- It is critical to main pressure through sanctions as $10/barrel in oil prices change export earnings by ~$25-30 billion/year.

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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Budget: deficit in line with plan, no fundamental financing constraints, war spending to rise sharply in 2024.

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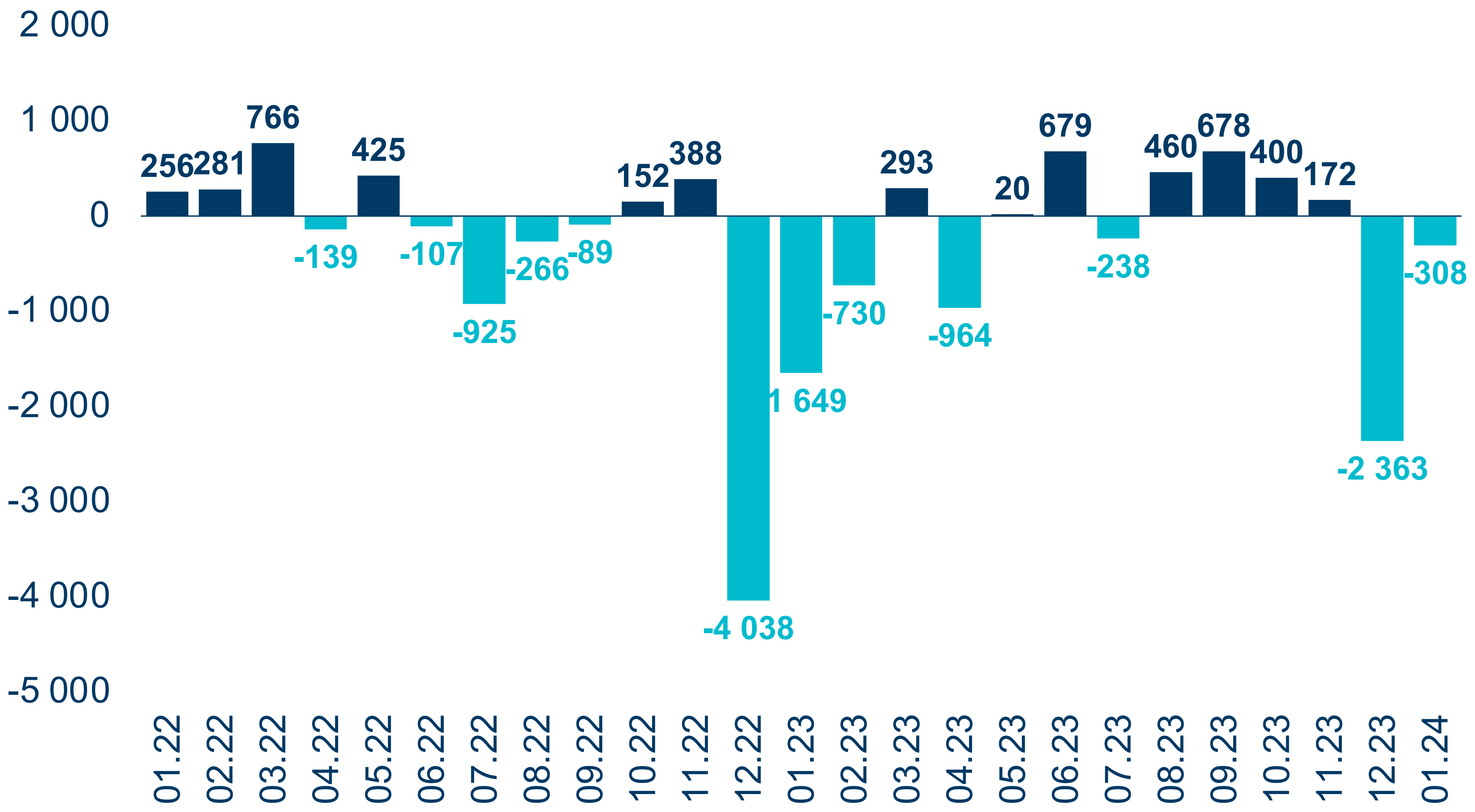
Benign fiscal dynamics extend into January 2024.

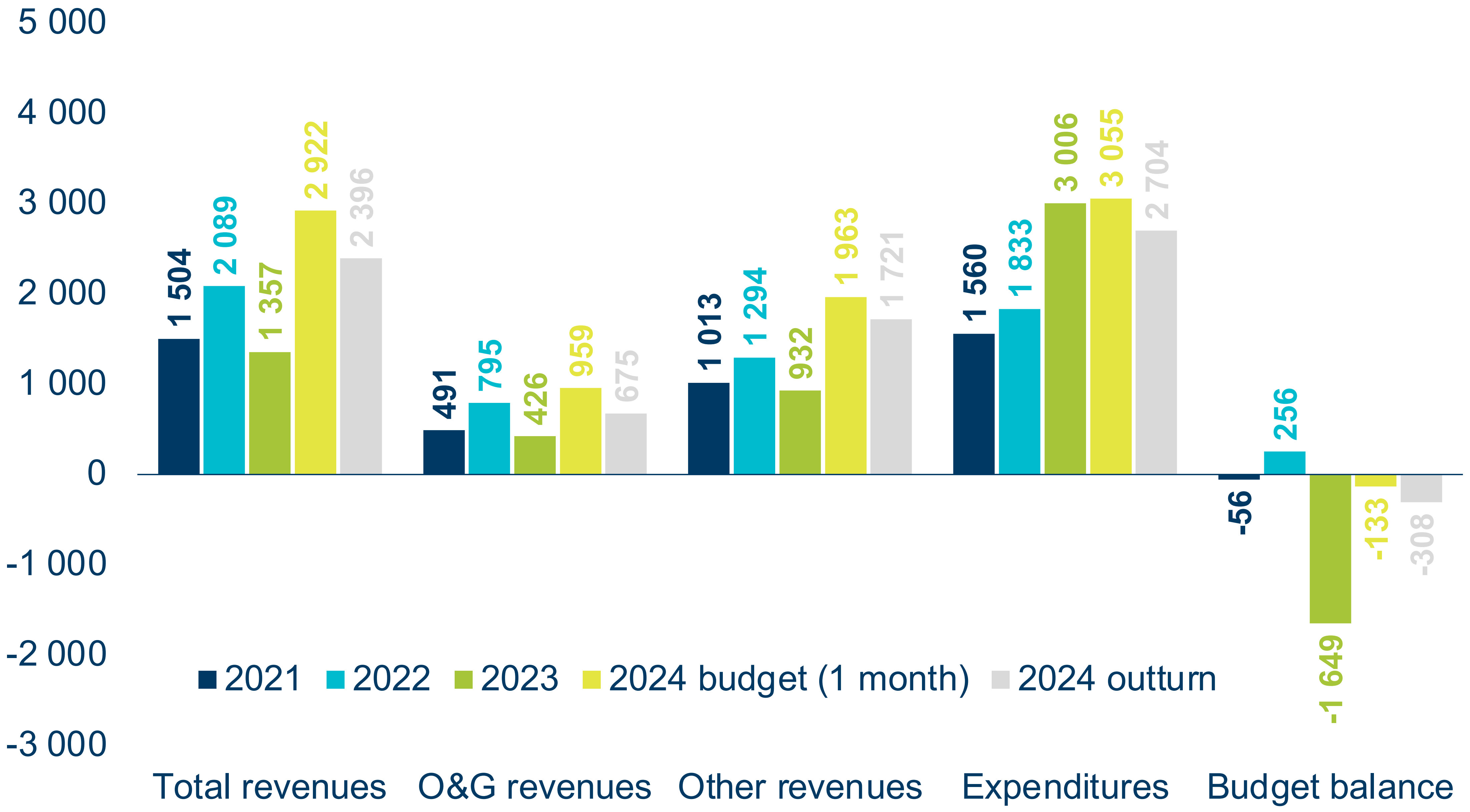
- Russia's federal budget deficit reached 3.2 trillion rubles in 2023—1.9% of GDP or roughly $45 billion.
- This is broadly in line with the original budget plan, which had assumed a full-year deficit of 2.9 trillion.
- In January 2024, the deficit was ~300 billion rubles, as non-O&G revenues continue to perform well.

Federal government balance, in ruble billion



Source: Ministry of Finance, KSE Institute

Revenues and expenditures, in ruble billion



Source: Ministry of Finance, KSE Institute

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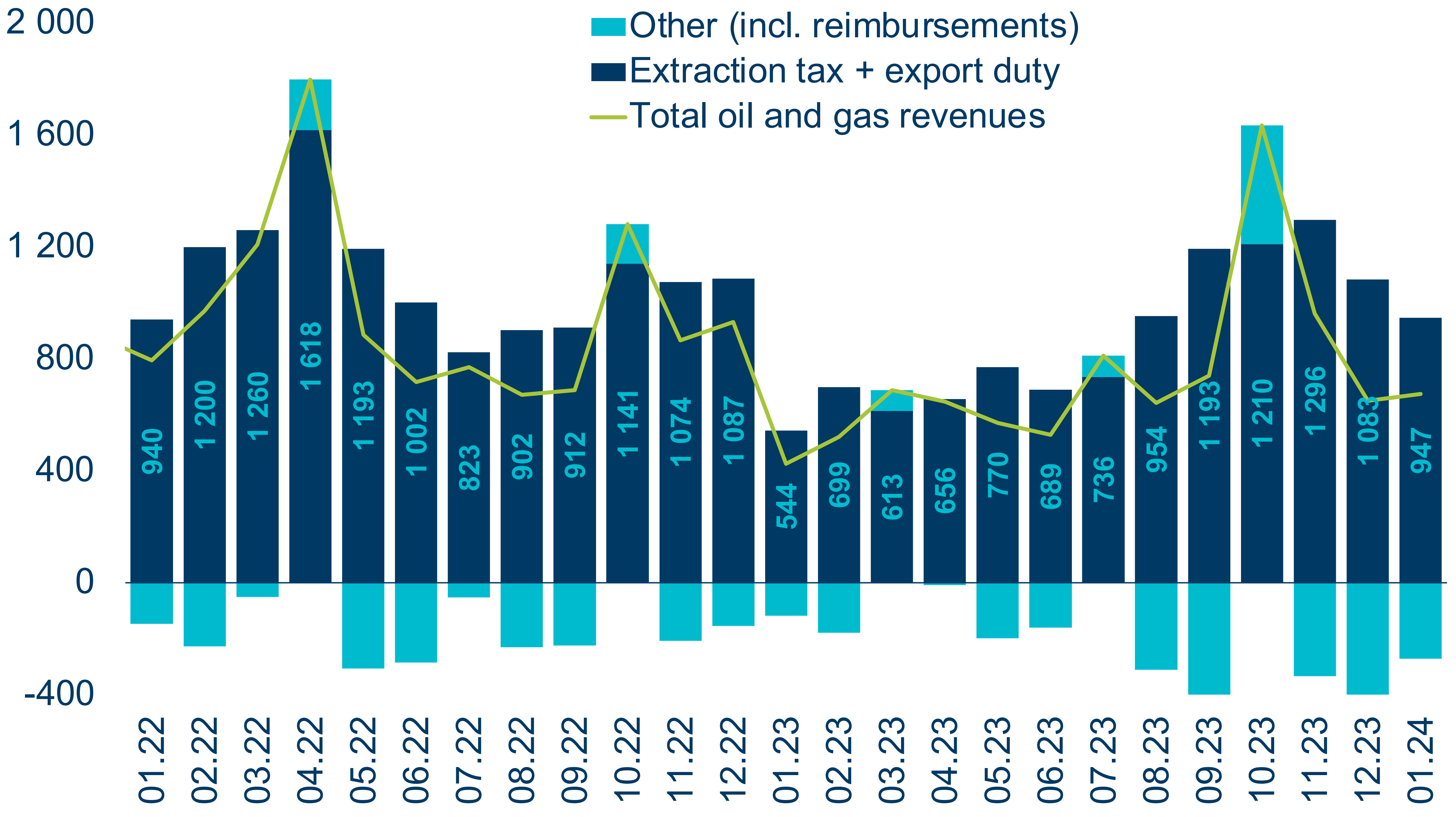
Oil and gas revenues are weakening following strong H2 2023.

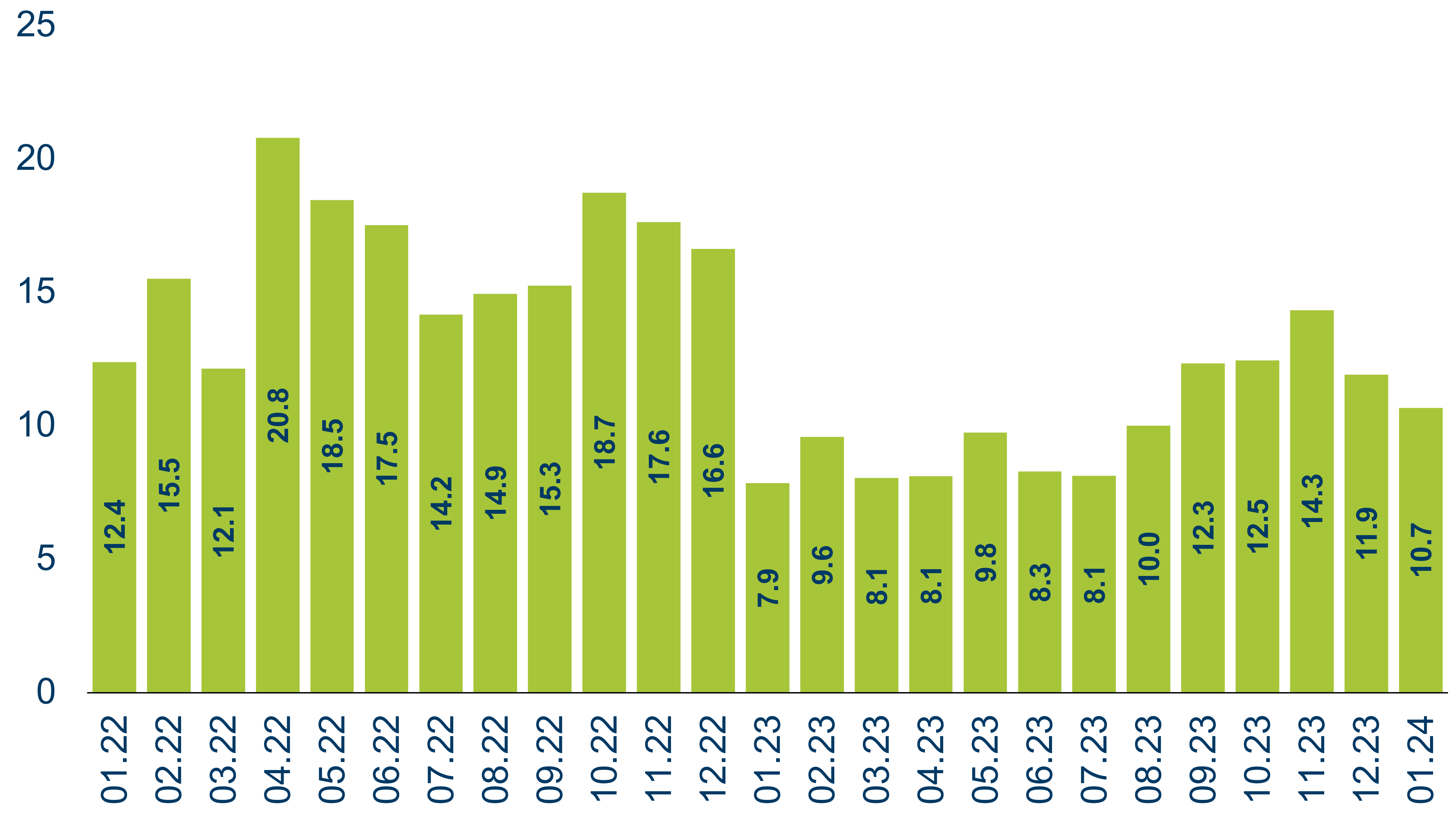
- In January 2024, extraction taxes and export duties fell to their lowest level since last July.
- Two key drivers are lower revenues in U.S. dollar-terms and the somewhat stronger ruble.
- Stepped-up energy sanctions enforcement has reversed the “positive” dynamics of H2 2023.

Federal oil and gas revenues, in ruble billion



Source: Ministry of Finance, KSE Institute

Federal oil and gas revenues, in U.S. dollar billion*



Source: International Monetary Fund, Ministry of Finance, KSE Institute
*includes extraction tax and export duty; calculated with monthly average exchange rate

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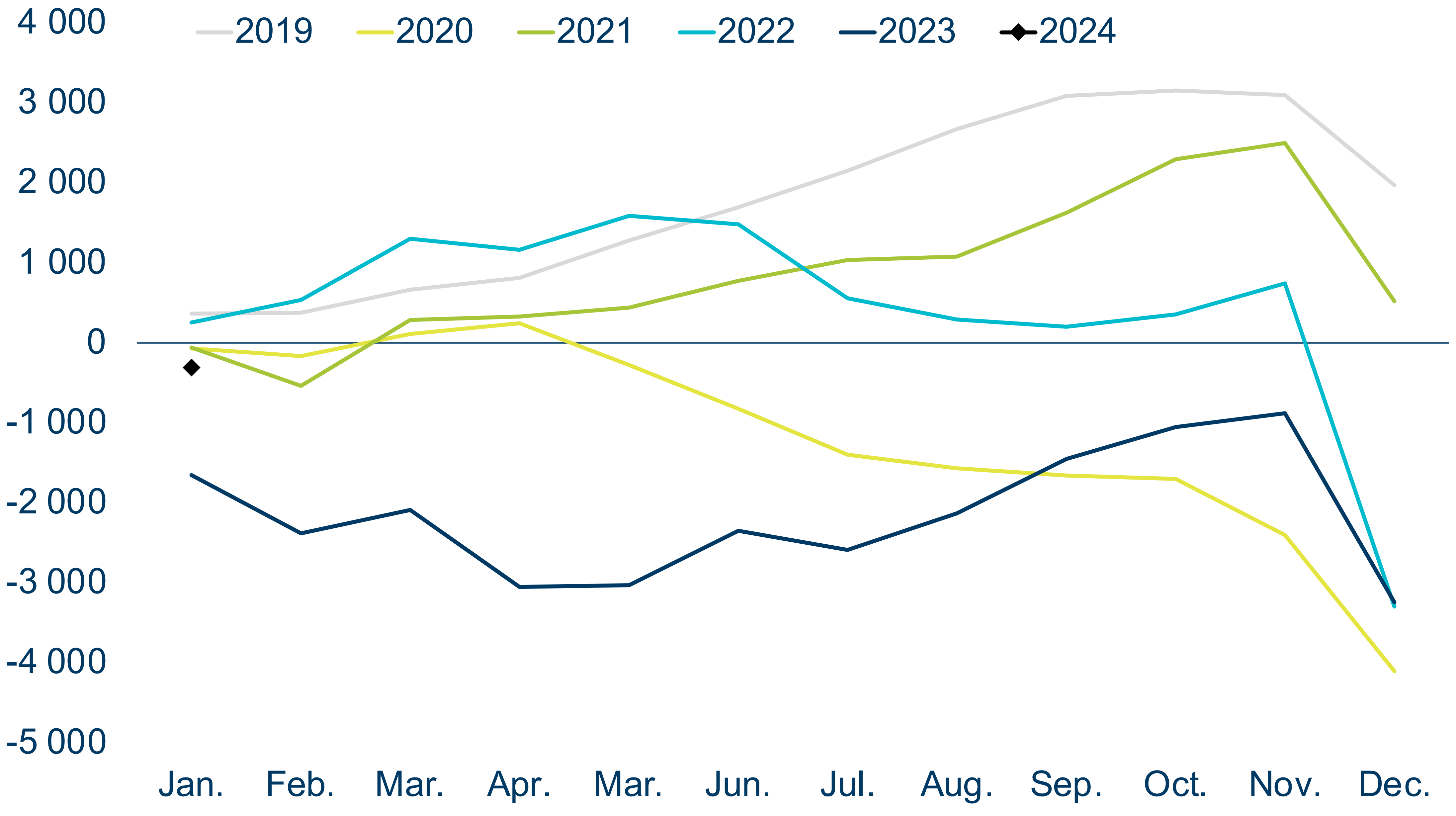
Moderate reliance on NWF and OFZ issuance for financing.

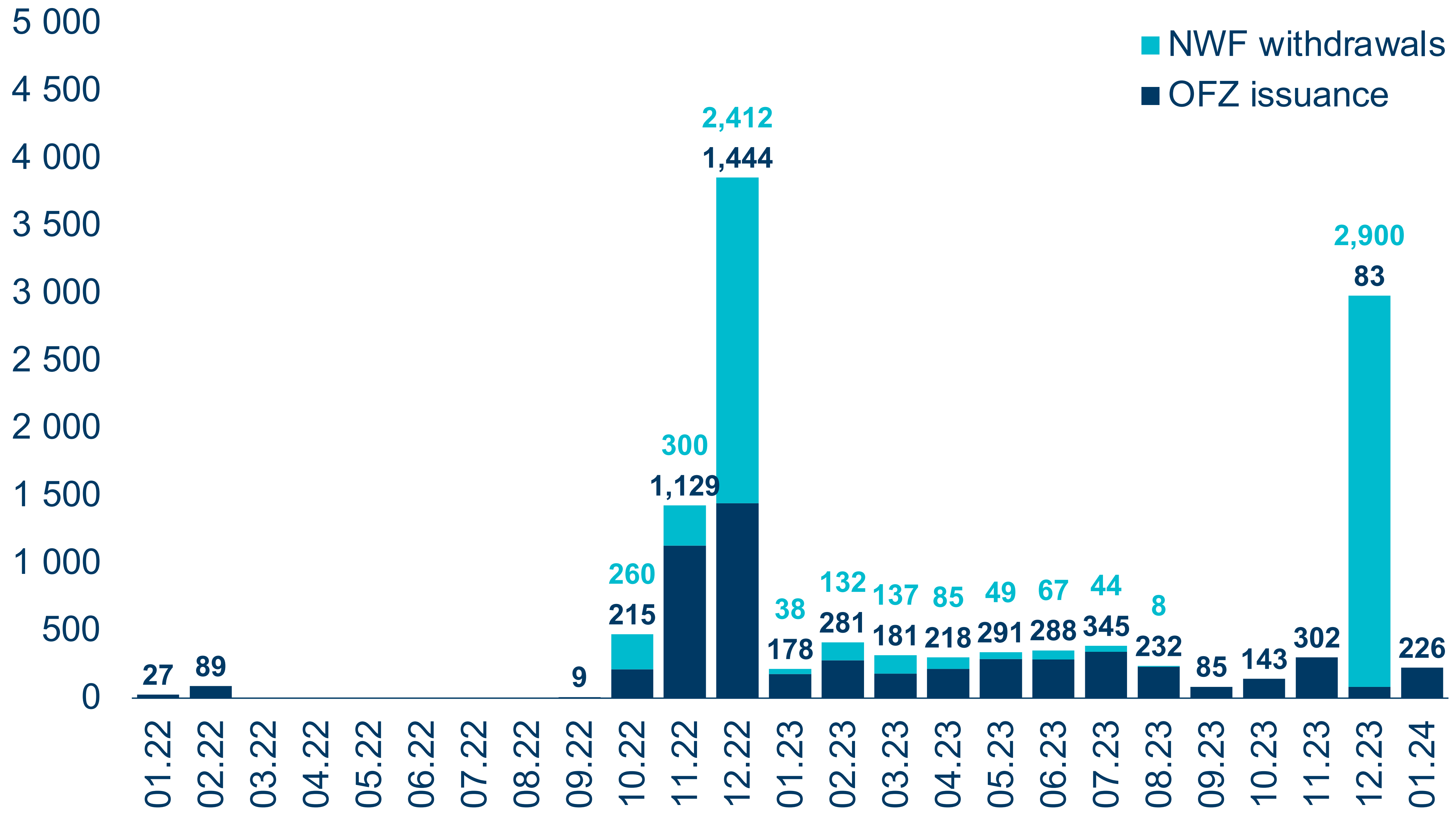
- The small January deficit meant that Russia did not have to rely on the NWF, and new OFZ issuance was moderate.
- In 2023, authorities used 3.5 trillion rubles from the NWF for financing, +16% vs. 2022 but less than originally expected.
- Due to the contained deficit, domestic borrowing declined by 10% in 2023—to an average 220 billion rubles per month.

Cumulative federal budget balance, in ruble billion



Source: Ministry of Finance, KSE Institute

Key fiscal financing channels, in ruble billion

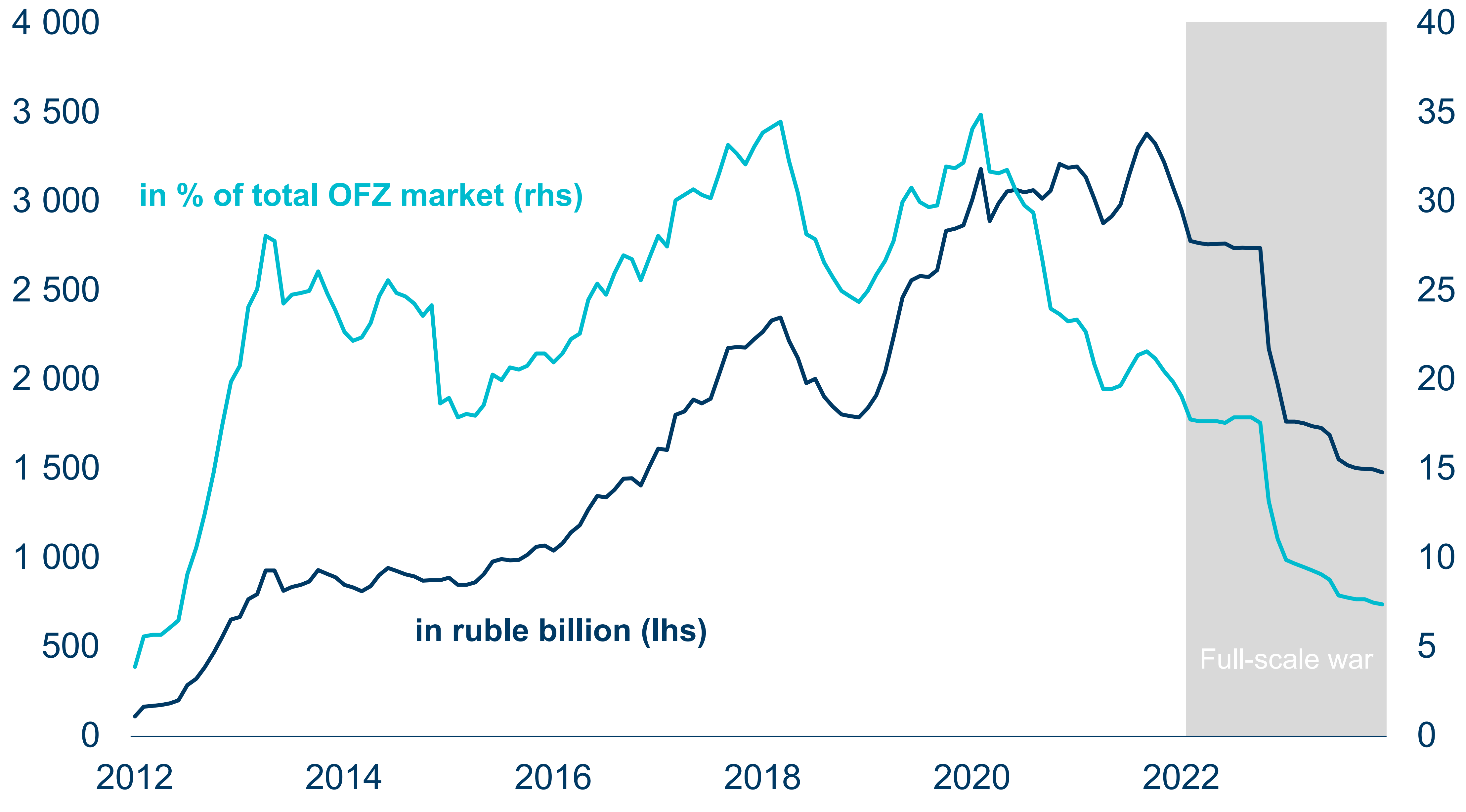


Source: Ministry of Finance, KSE Institute

Domestic banks are the only remaining buyers for OFZs.

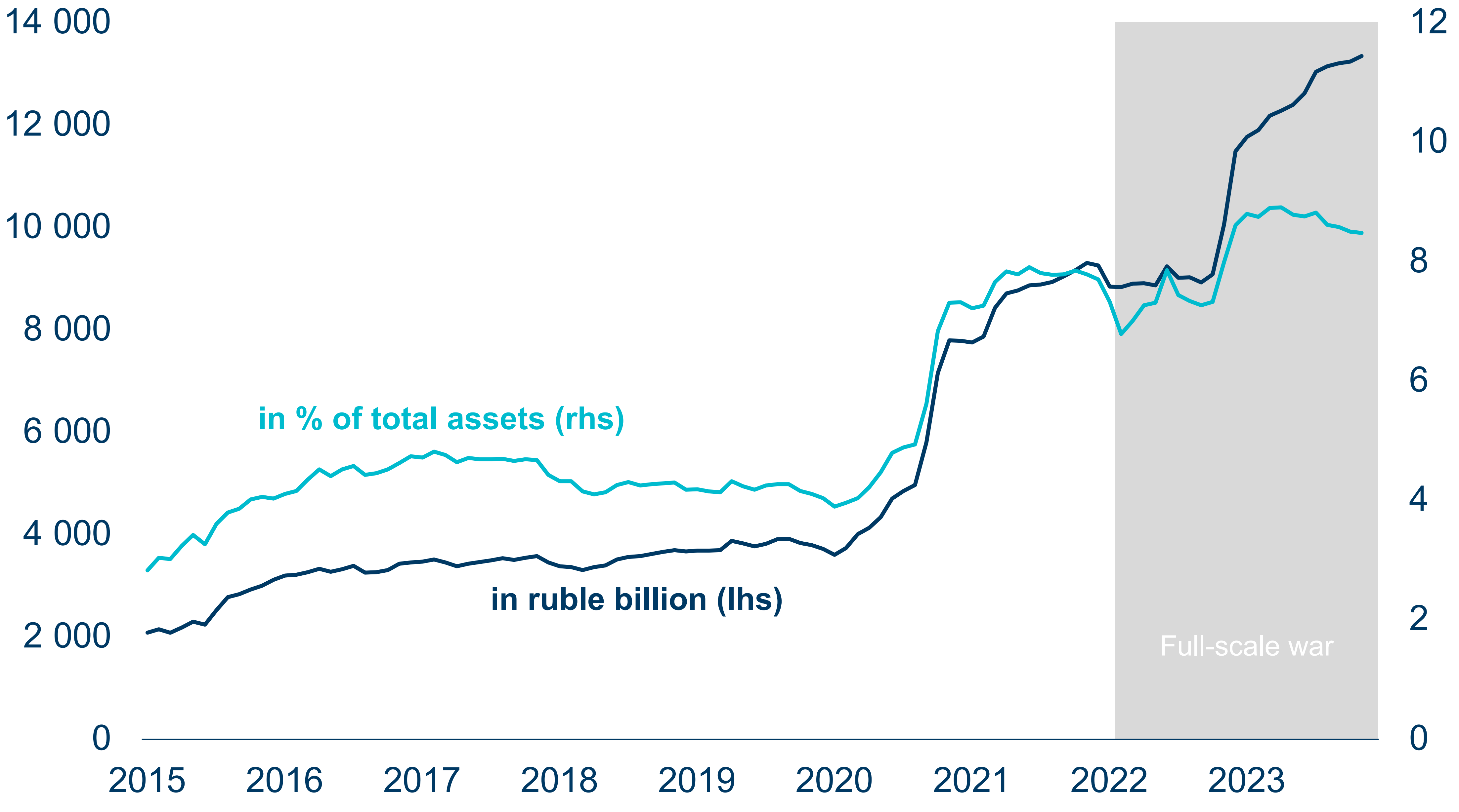
- Foreigners have largely disengaged from the Russian sovereign debt market since the start of the war.
- Non-resident holdings have dropped 1.3 trillion rubles (or 46%) since October 2022 as bonds matured.
- Over the same period, credit institutions’ holdings have risen by close to 4.3 trillion rubles (or 47%).

Non-resident OFZ holdings



Source: Bank of Russia, KSE Institute

Credit institutions OFZ holdings

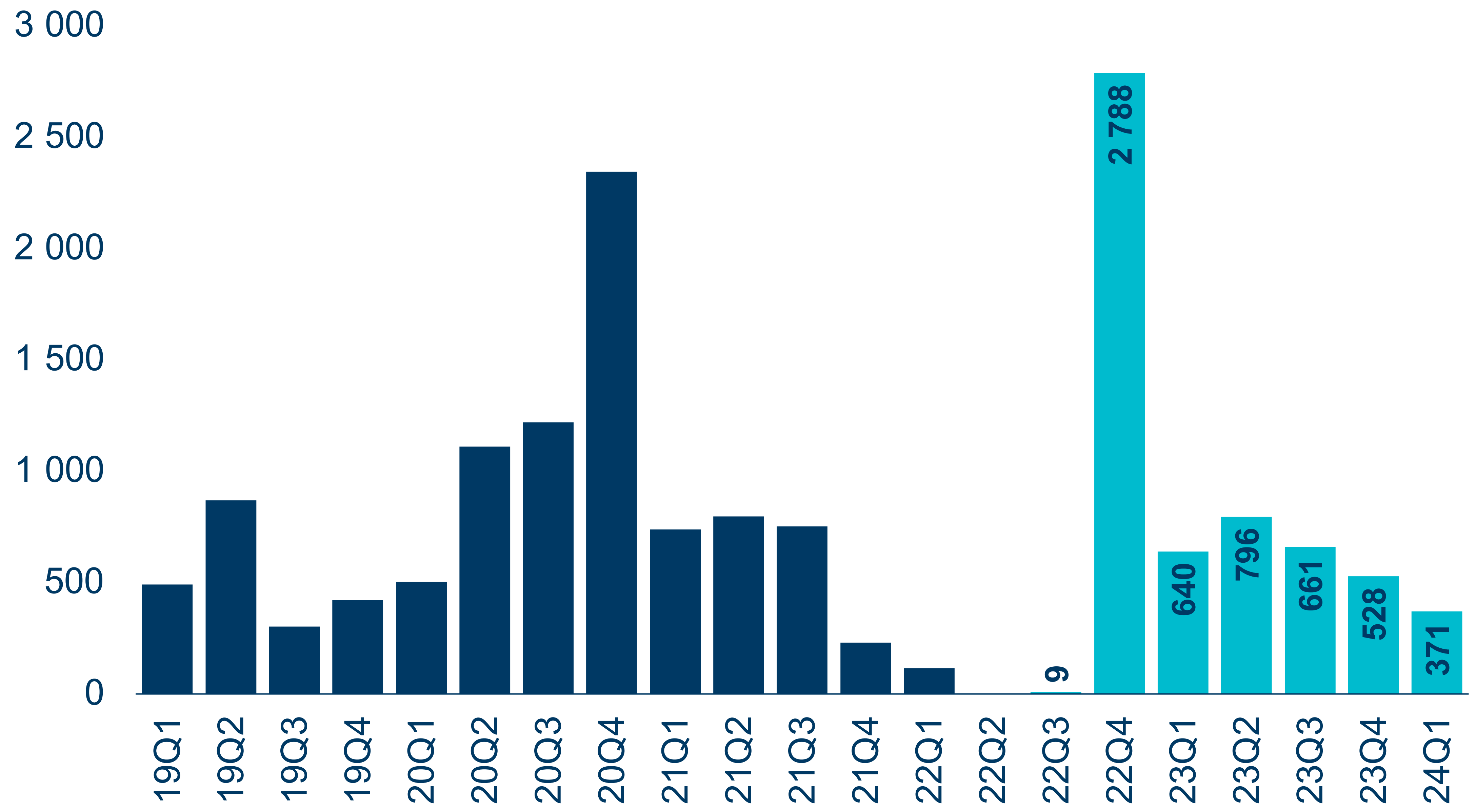


Source: Bank of Russia, KSE Institute

The cost of borrowing has been rising since early-2022.

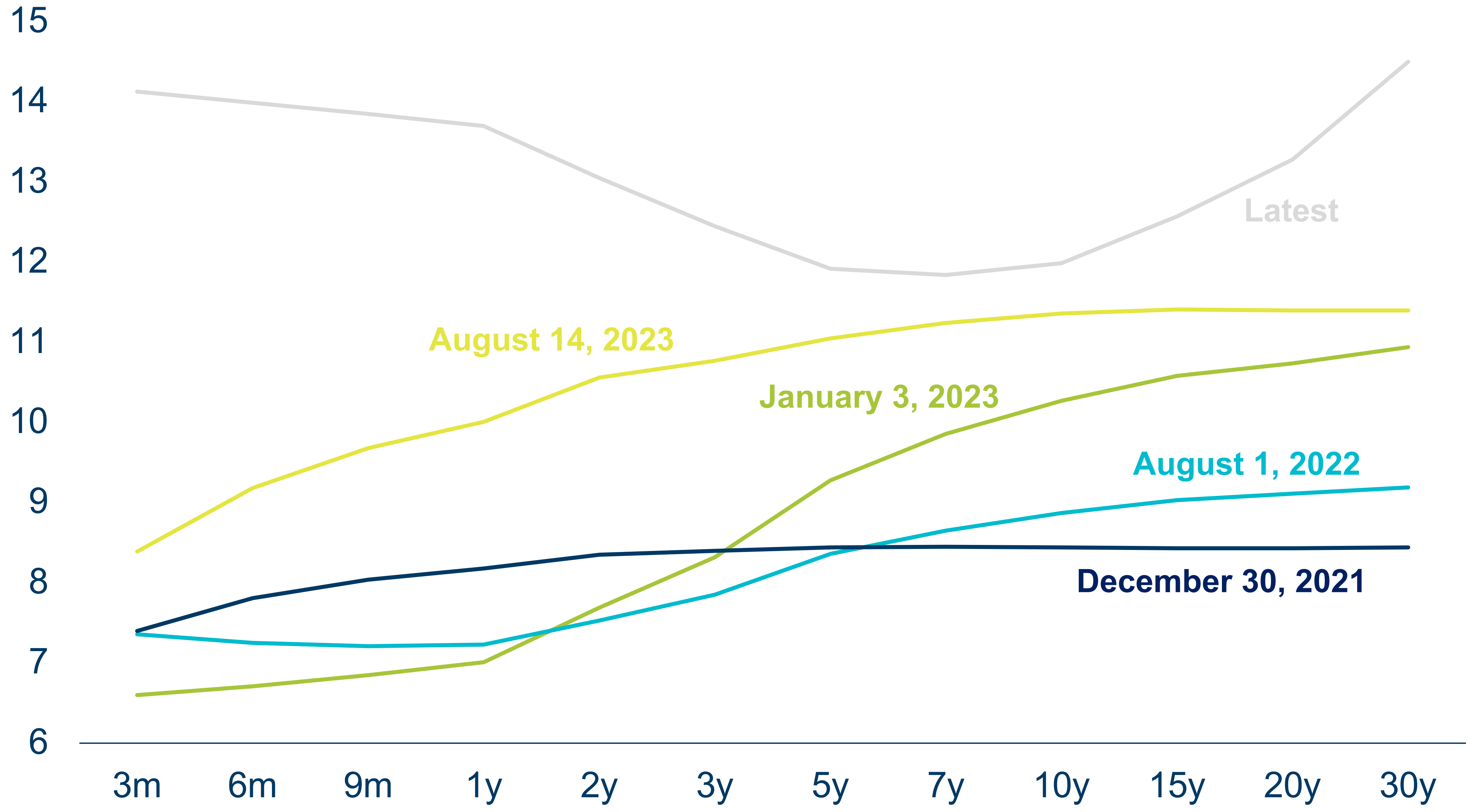
- The OFZ yield curve reflects the recent CBR rate hikes (of cumulative 850bps) with the short end shifting up sharply.
- Longer maturity interest rates will inevitably follow suit in the coming weeks/months, driving up overall borrowing costs.
- Domestic debt issuance may pick up in 2024 as the financing mix has to shift away from the National Welfare Fund.

New domestic debt (OFZ) issuance, in ruble billion



Source: Ministry of Finance, KSE Institute

OFZ yield curves, in %



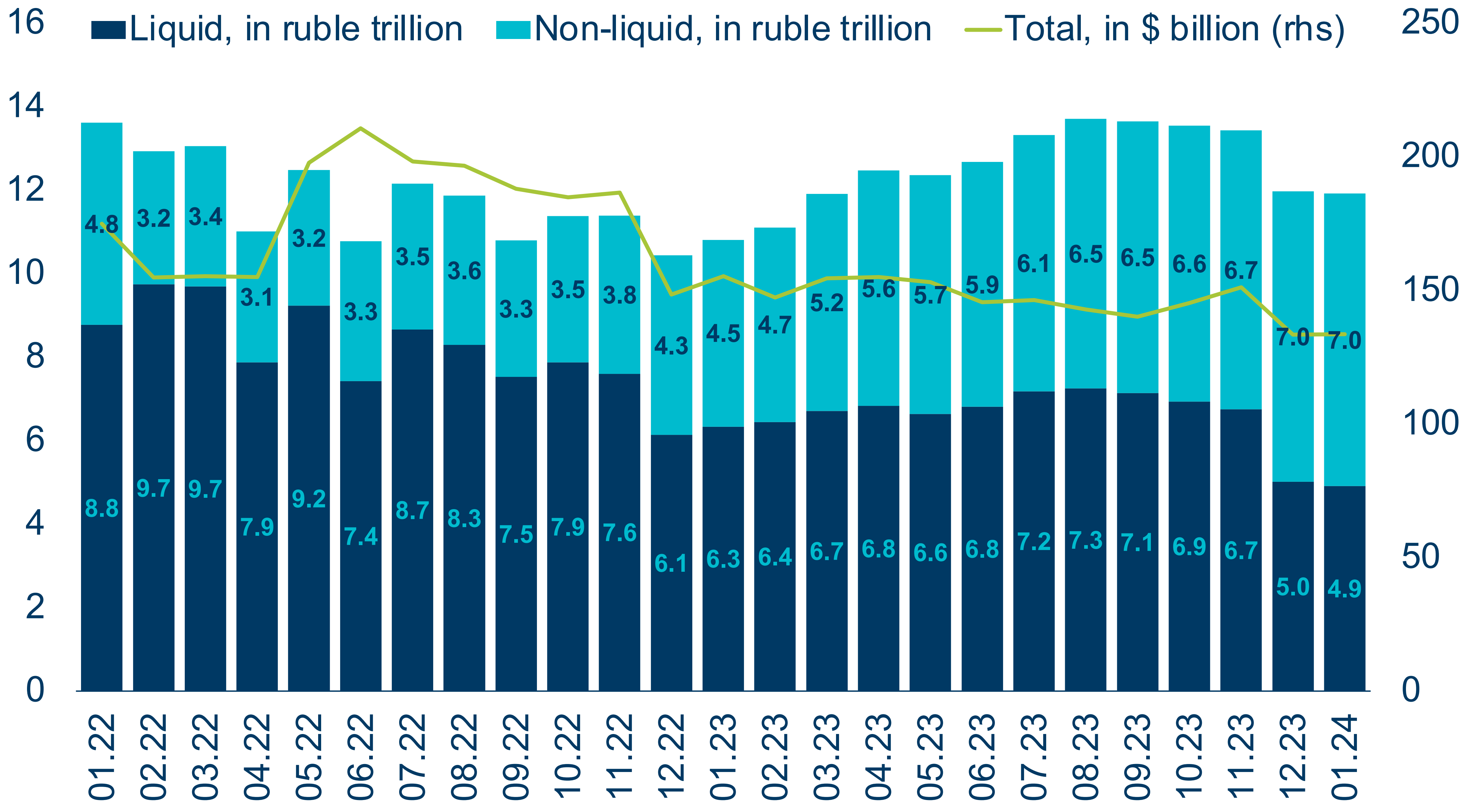
Source: Bank of Russia, KSE Institute

Macro buffers: Russia has used up half of the NWF's liquid assets, including all hard currency; access to reserves seriously constrained.

Half of the NWF’s liquid assets have been used up.

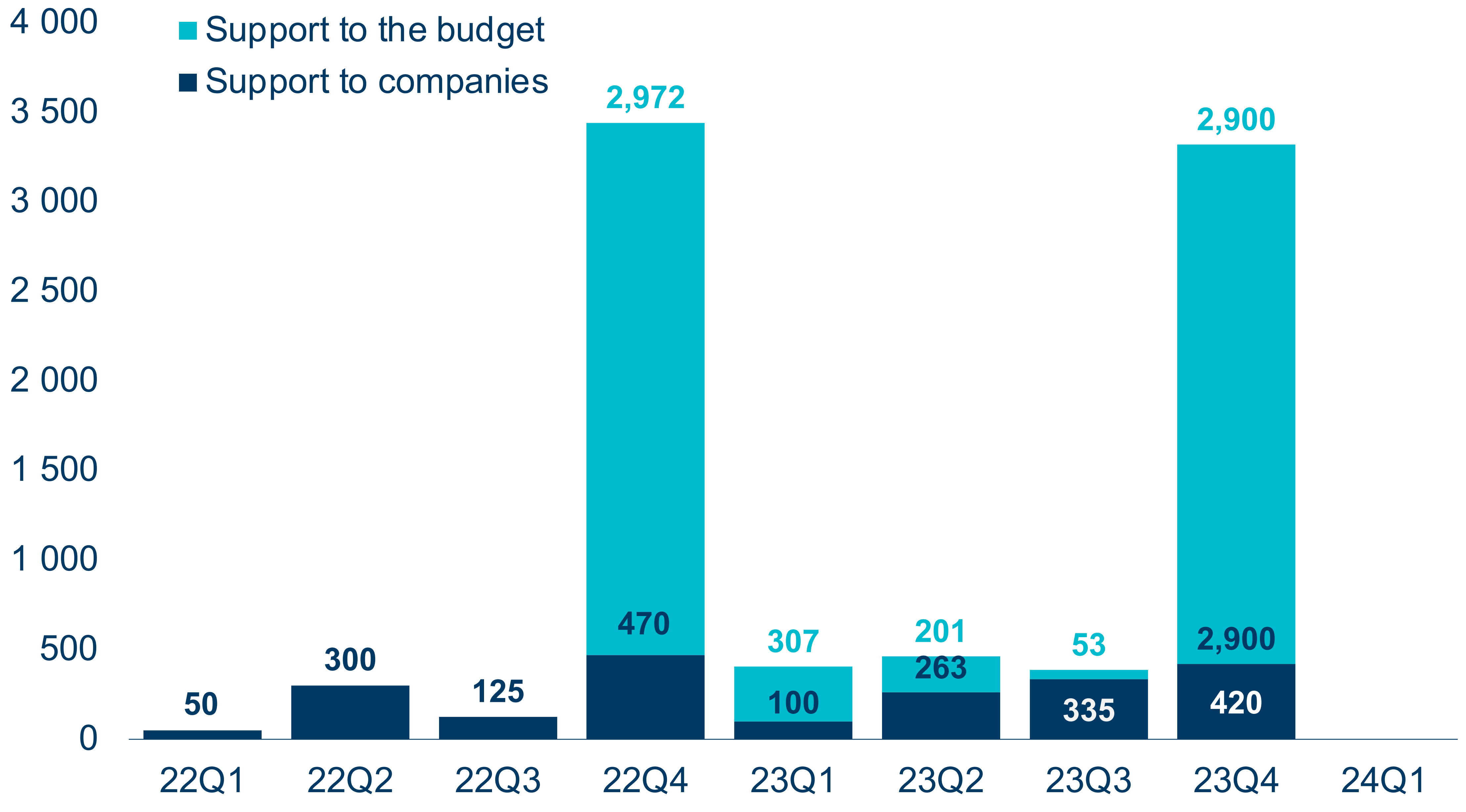
- Total assets of the National Welfare Fund stood at 11.9 trillion rubles ($133.5 billion, 6.6% of GDP) in January 2024.
- The liquid portion now only accounts for 41% of the total as funds were withdrawn for budgetary support in December.
- Since the start of the full-scale invasion, Russia has, thus, used up almost half (~4.8 trillion) of the NWF’s liquid assets.

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



Source: Ministry of Finance, KSE Institute

Utilization of the NWF, in ruble billion

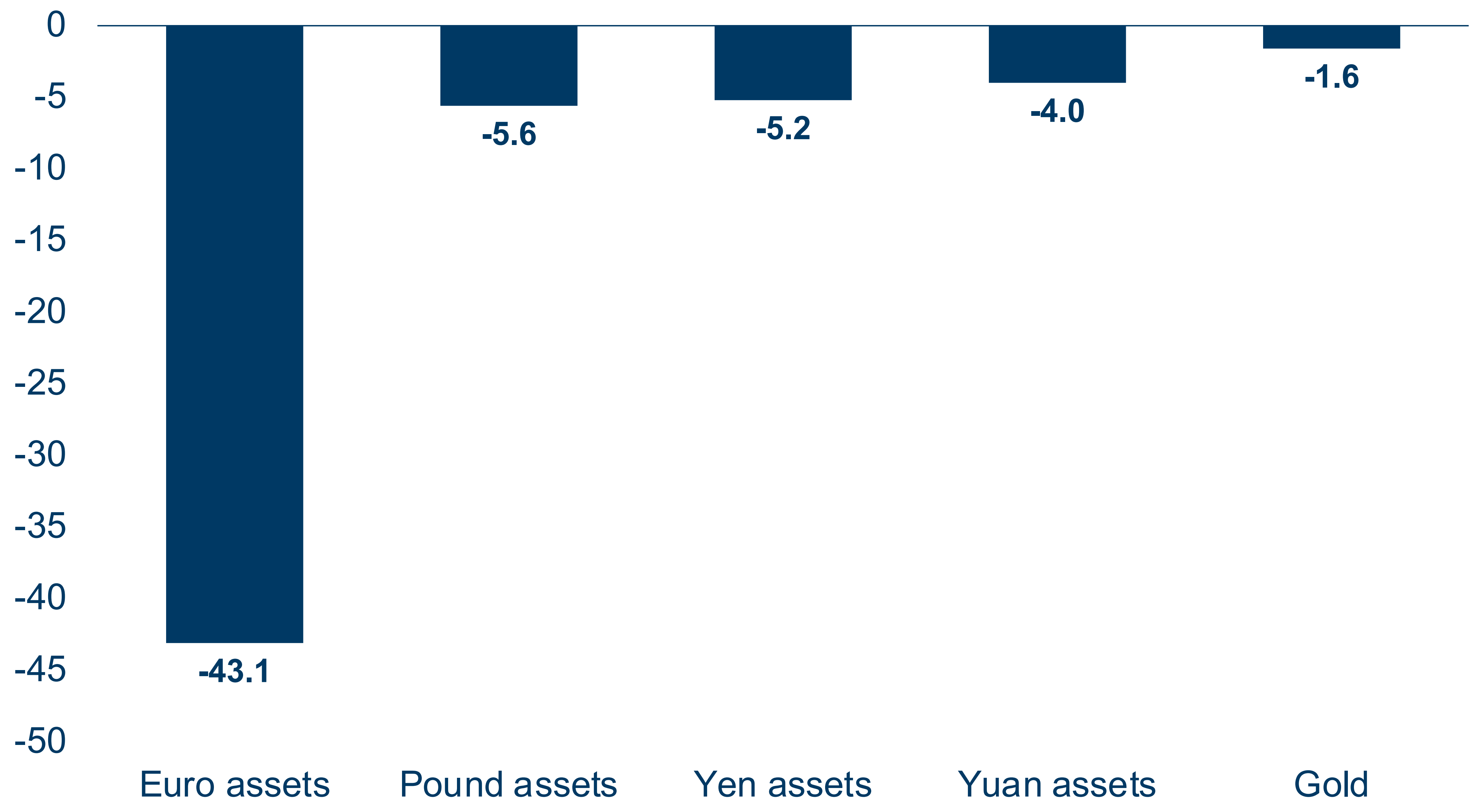


Source: Ministry of Finance, KSE Institute

Headline NWF numbers conceal that hard currency assets are gone.

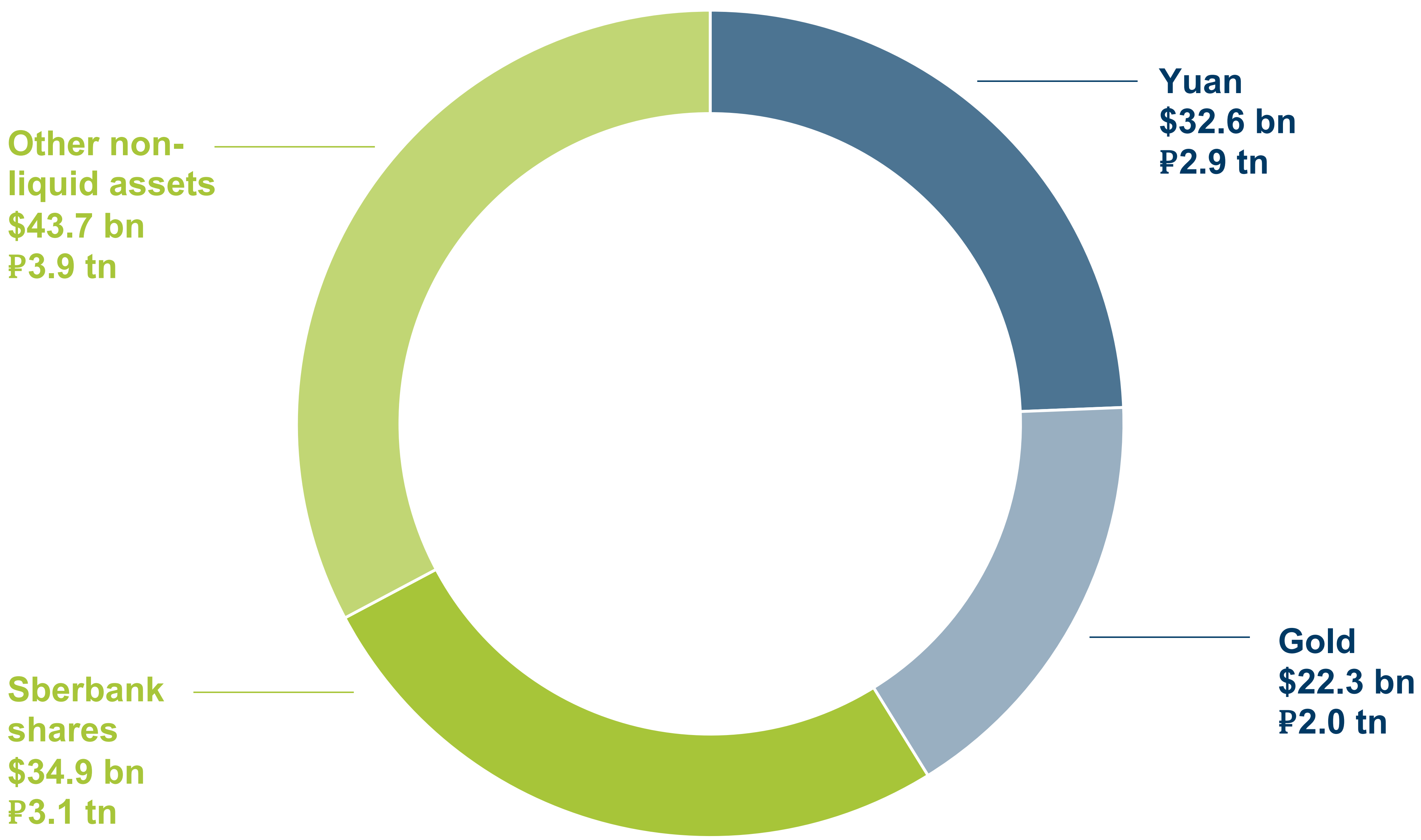
- Russia has depleted all hard-currency holdings of the NWF, with euro assets falling to zero in December 2023.
- Only yuan-denominated assets and gold remain in the liquid portion, totaling 4.9 trillion rubles (or $55 billion).
- As these are more difficult to use, at least at scale, budgetary funding via the NWF will become more challenging.

Change in liquid assets (Jan. 2024 vs. Jan. 2022), in U.S. dollar billion



Source: Ministry of Finance, KSE Institute

Composition of NWF assets as of February 1, 2024*



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

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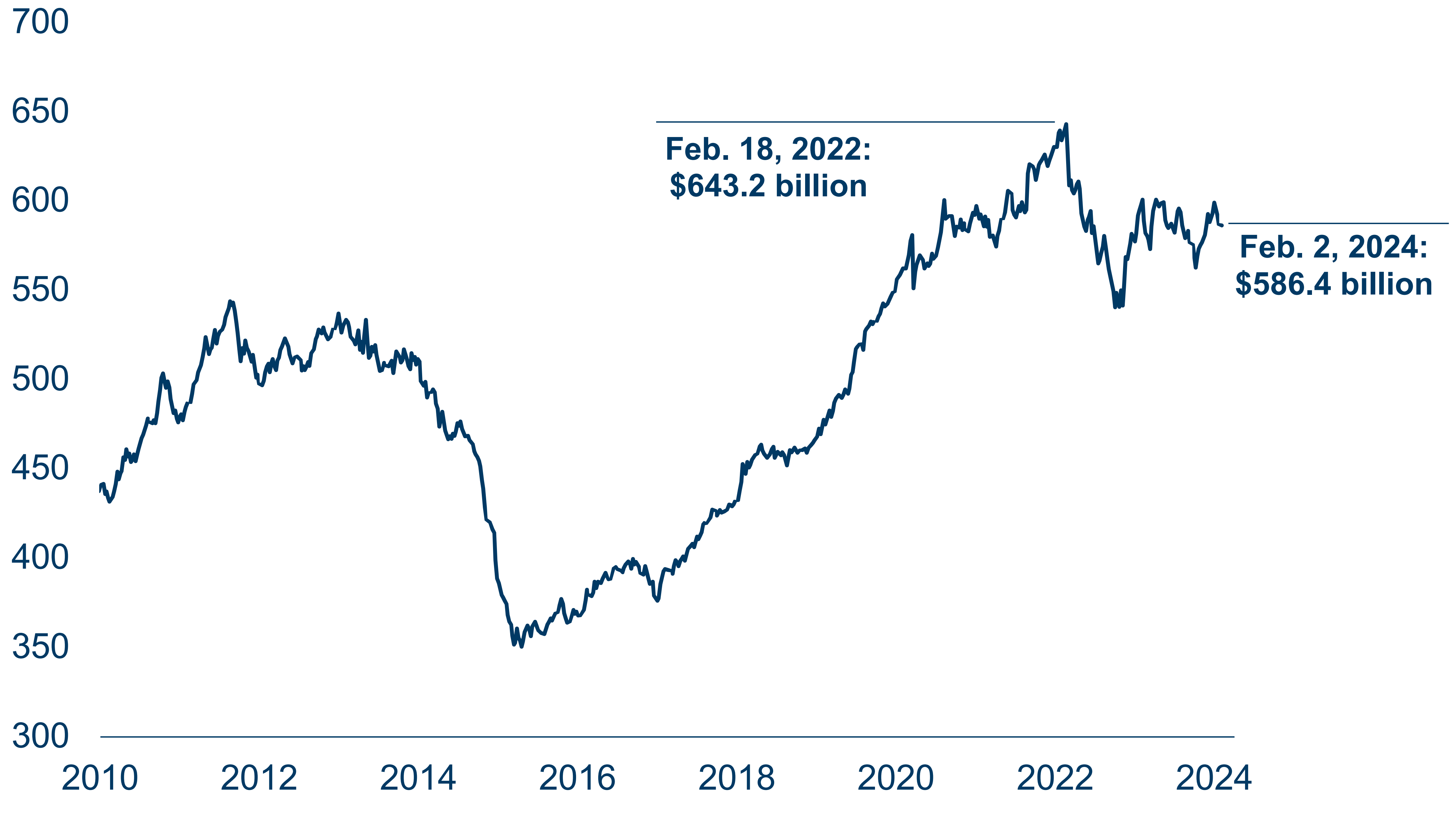
A substantial share of international reserves remain immobilized.

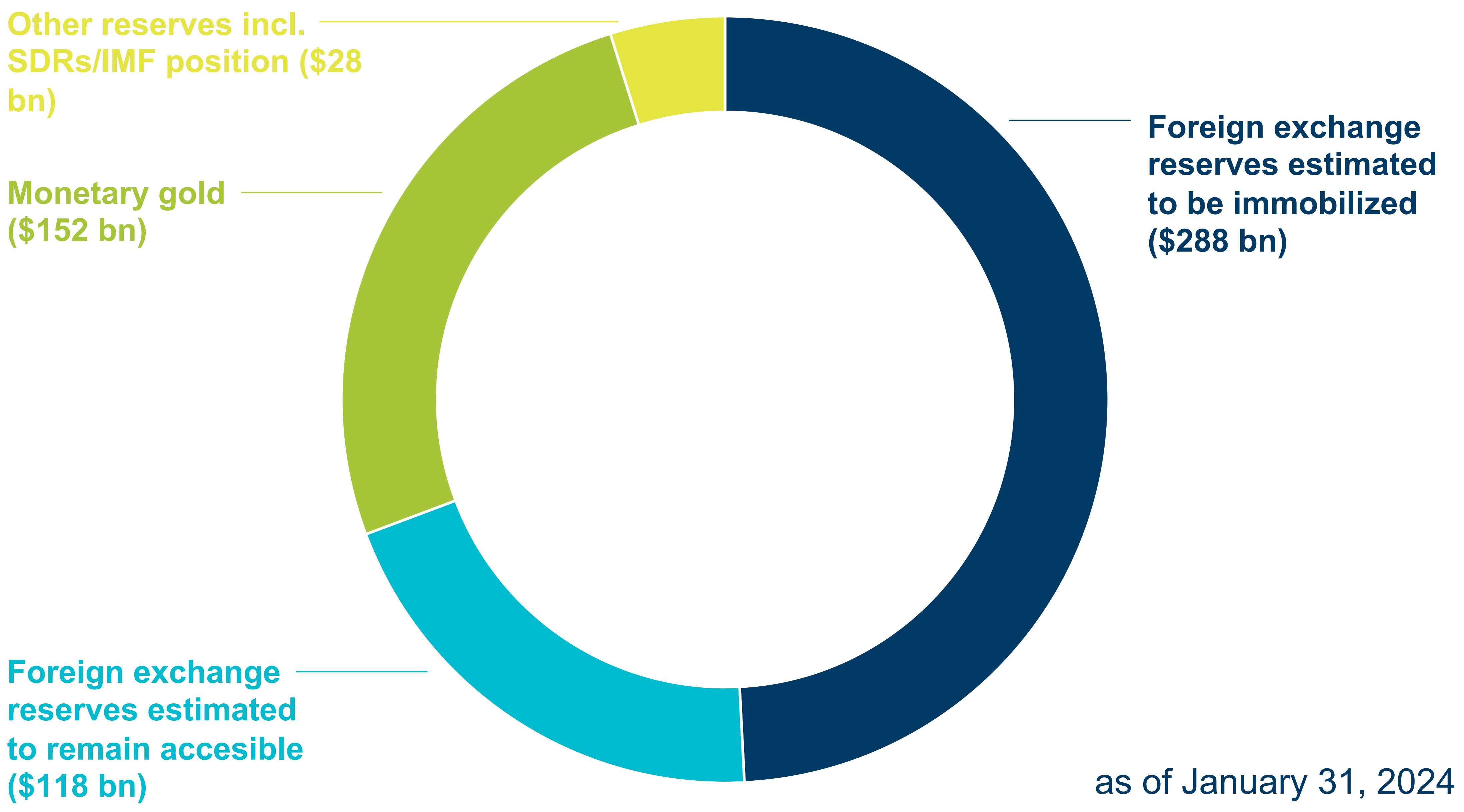
- Before the invasion, Russia held $634 billion in international reserves, part of what is described as *"Fortress Russia".*
- We estimate that around $288 billion are currently immobilized due to international sanctions on CBR and NWF.
- This leaves Russia with access to $152 billion in monetary gold and roughly $118 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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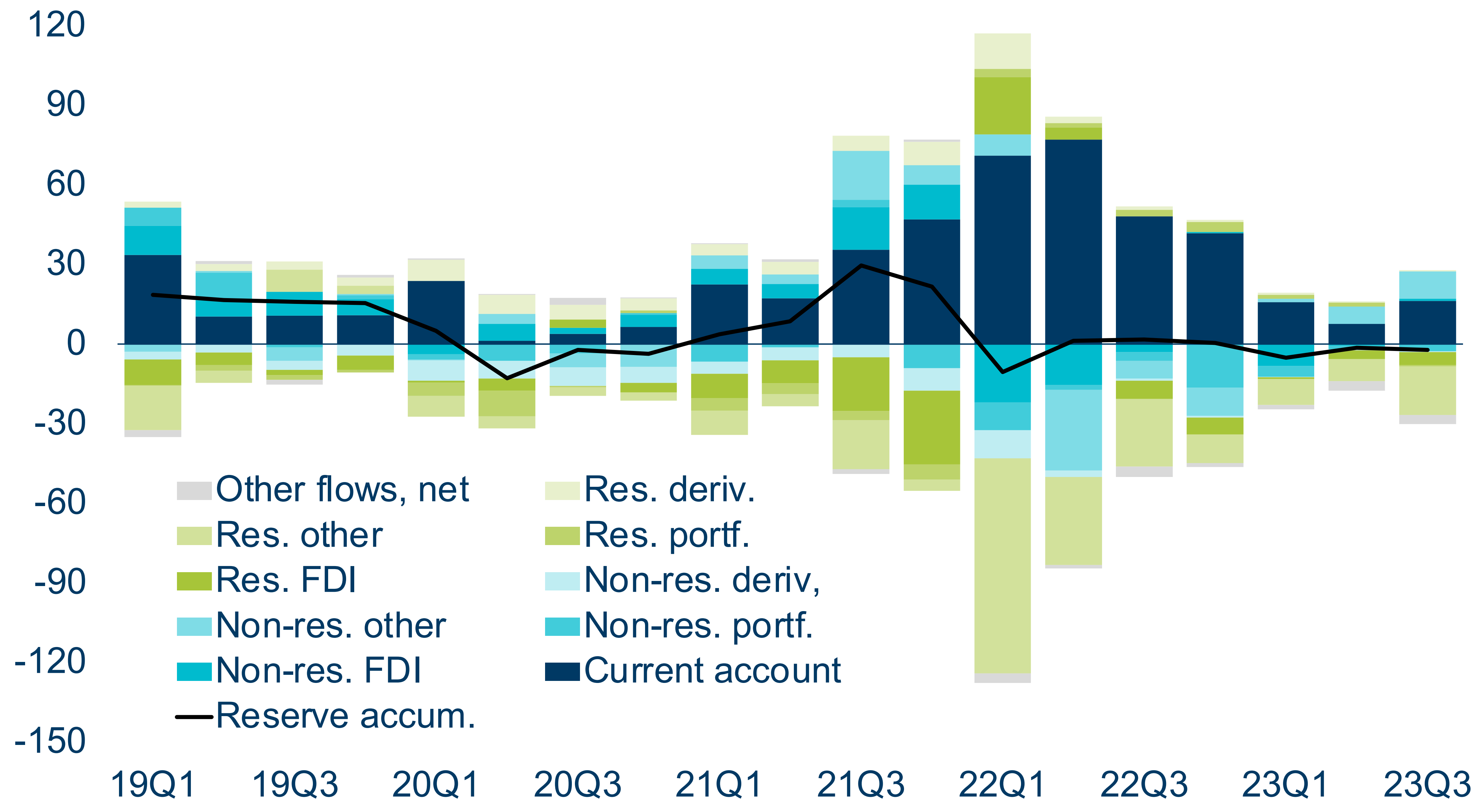
Significant accumulation of new foreign assets in 2022-23.

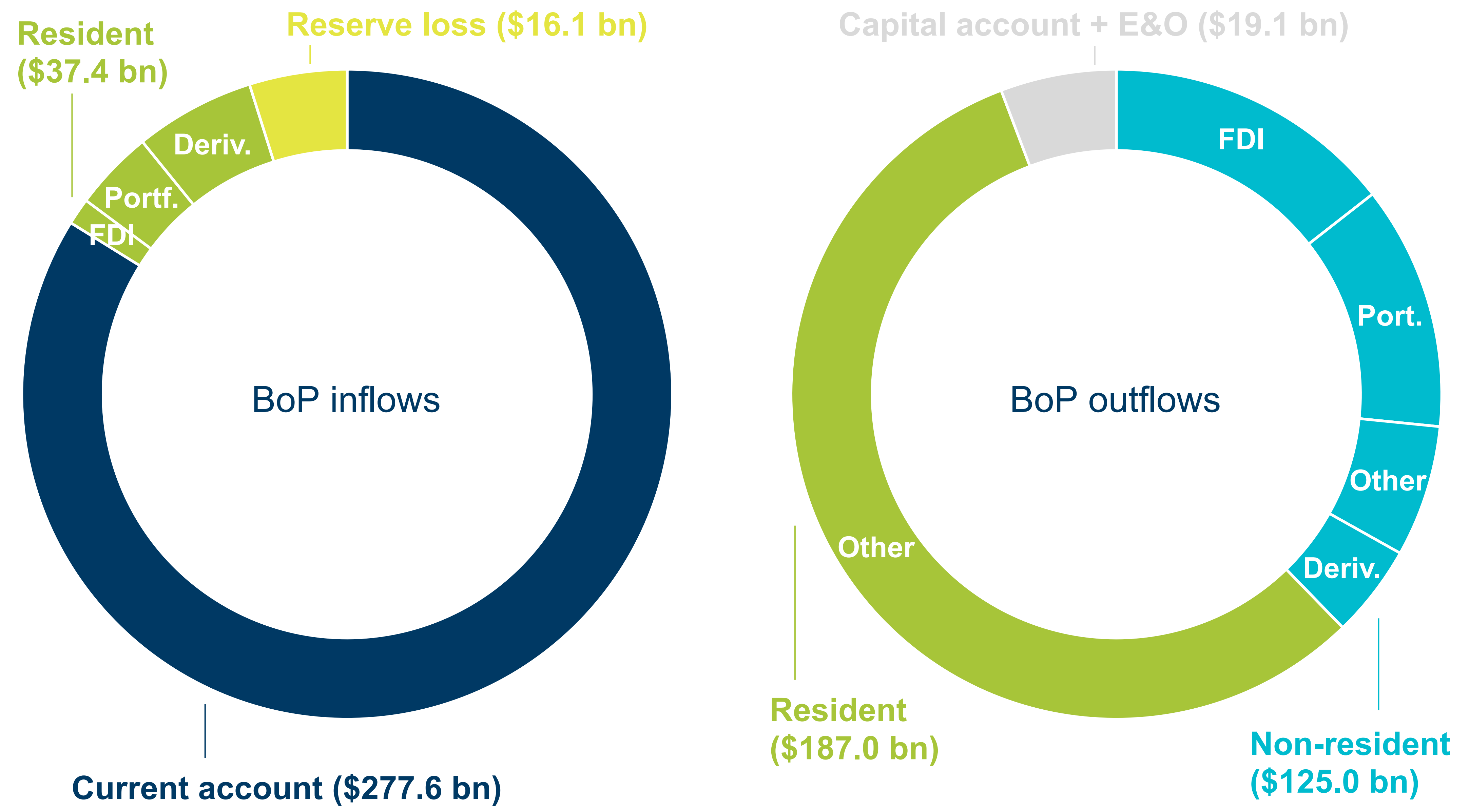
- It is time to focus attention on foreign assets that Russia has been able to accumulate due to favorable BoP dynamics.
- Non-resident capital outflows partially ate up the large current account surplus and resident inflows in Q1 2022-Q3 2023.
- But Russian banks and corporates were able to acquire $187 billion in assets abroad, which need to be kept out of reach.

Balance of payments, in U.S. dollar billion



Source: Bank of Russia, KSE Institute

2022Q1-2023Q3 balance of payments flows, in U.S. dollar billion

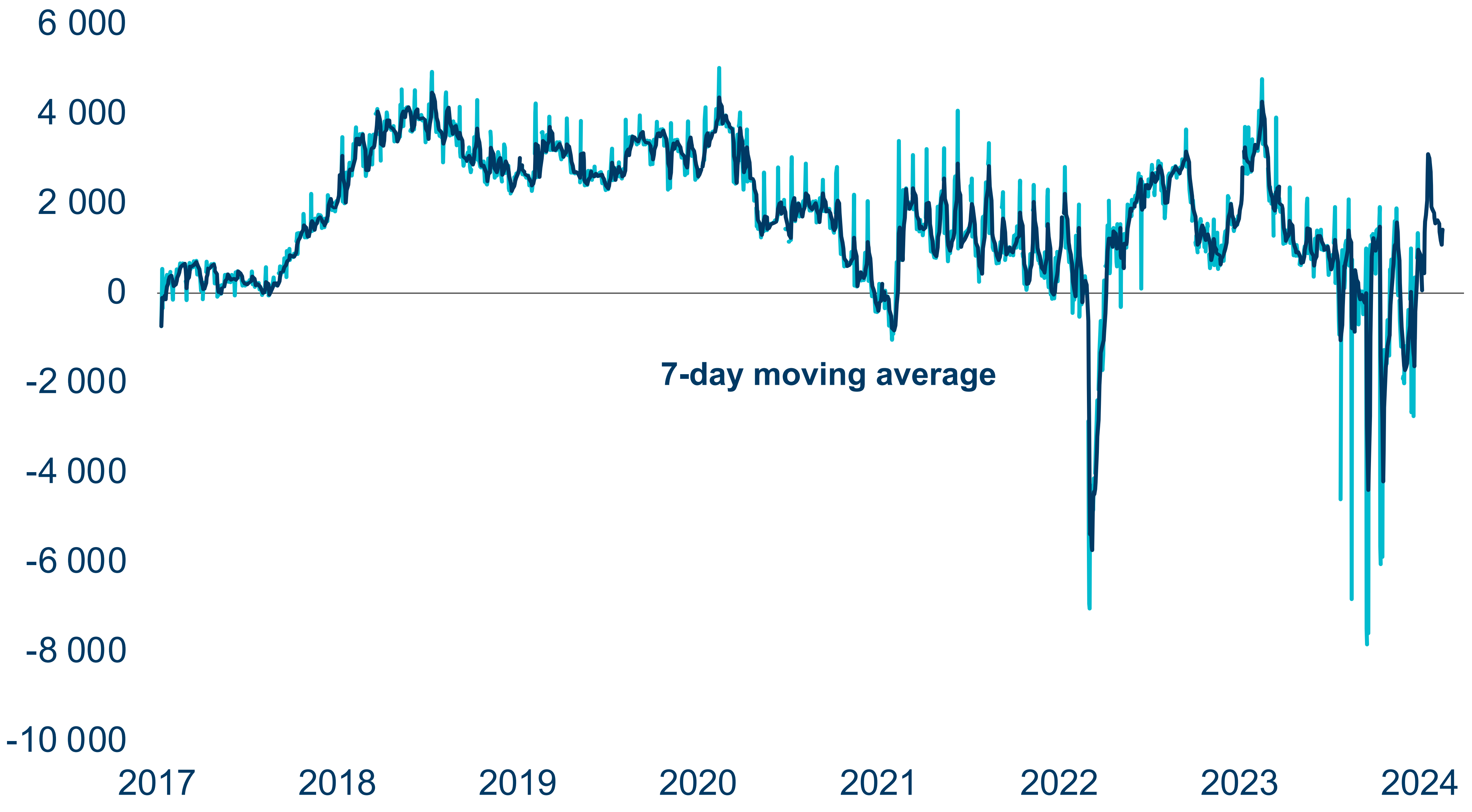


Source: Bank of Russia, KSE Institute

CBR rate hikes have impacted banking system liquidity in recent months.

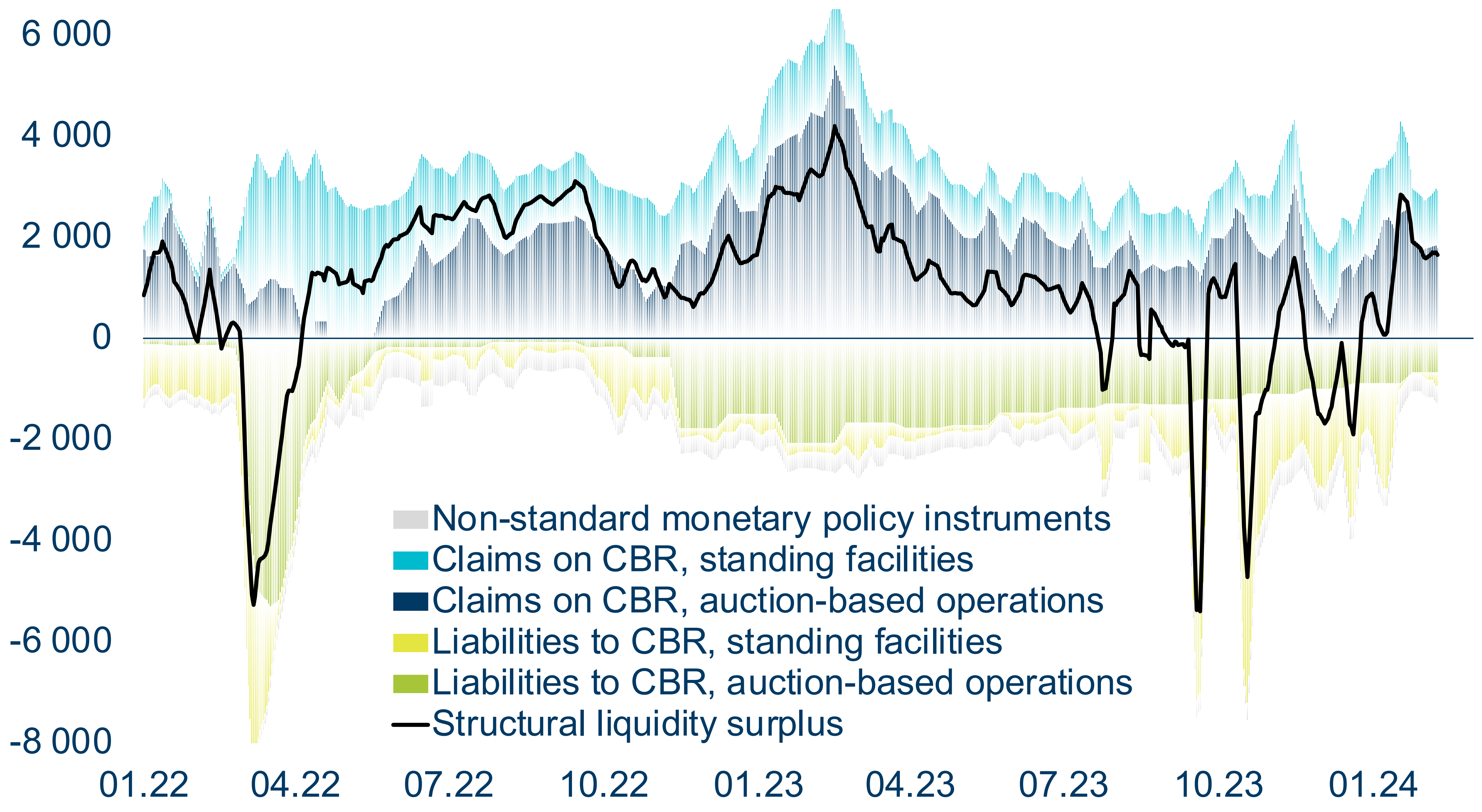
- Liquidity conditions recovered quickly after the initial shock from the full-scale war and imposition of sanctions.
- A closer look at the composition of the structural liquidity surplus points to some stress in the interbank market.
- The data clearly shows the effects of the CBR's monetary tightening in July-December 2023 (cumulative +850 bps).

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 *7-day moving average

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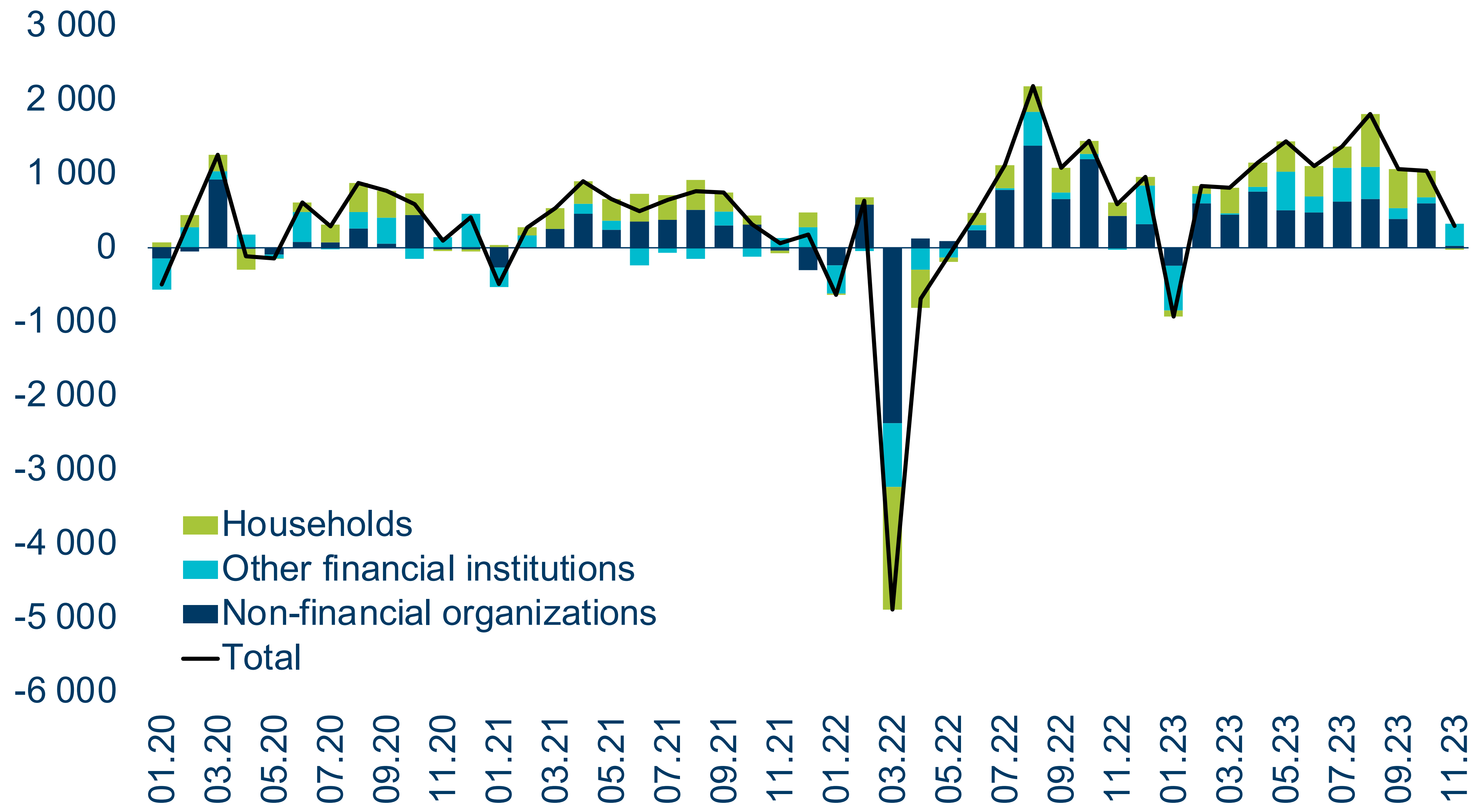
Private sector credit growth robust for the moment.

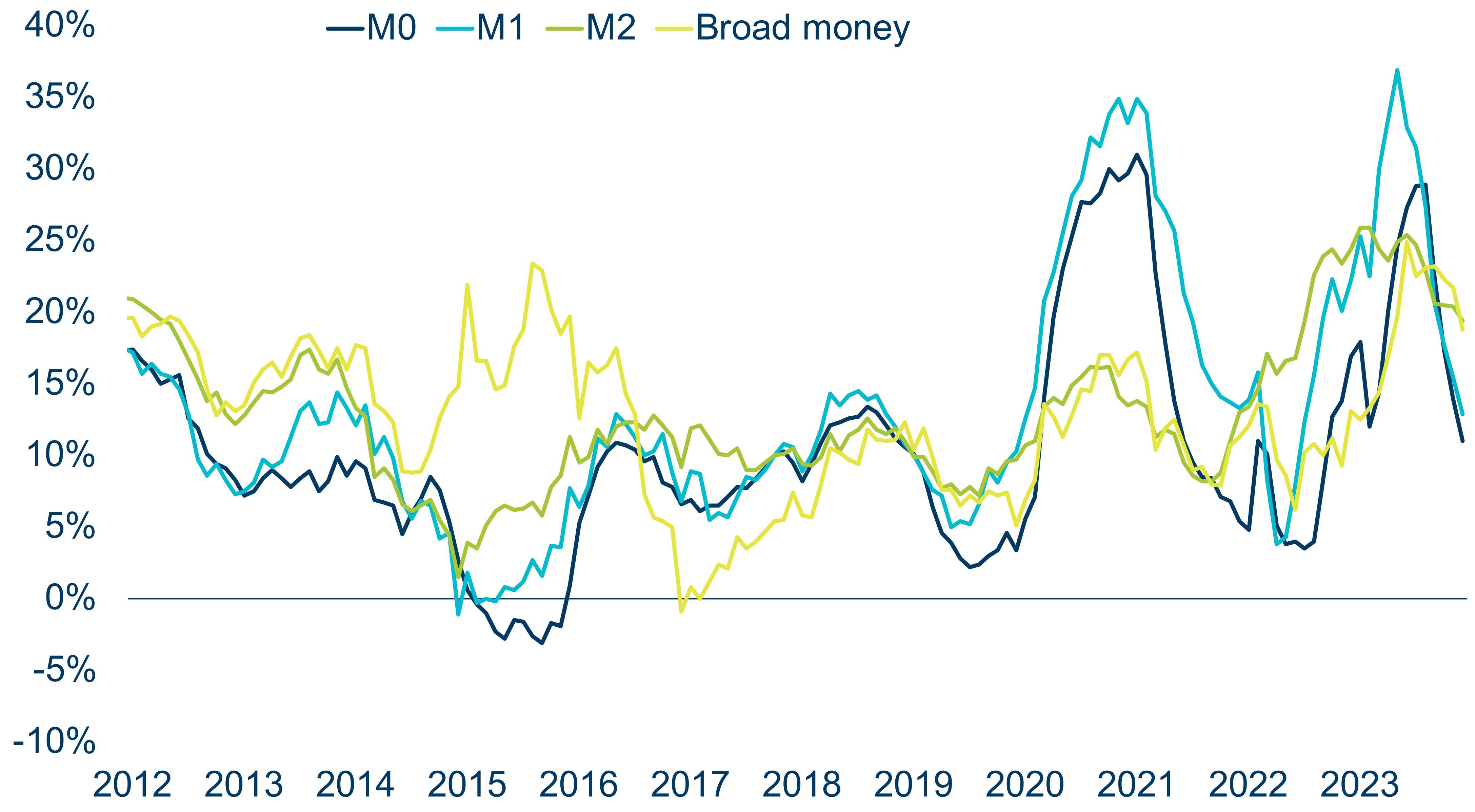
- Due to the provision of sufficient liquidity by the CBR, banks have been able to provide the private sector with credit.
- The CBR was able to simultaneously address monetary and financial stability in 2022 due to the supportive environment.
- With FX inflows down and the ruble under pressure, conflicts between the two objectives will increasingly emerge again.

New ruble-denominated credit, in 2020 ruble billion*



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

Growth of monetary aggregates, in % year-over-year



Source: Bank of Russia, KSE Institute

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Economic activity: robust growth in 2023-24 due to large fiscal stimulus from military spending

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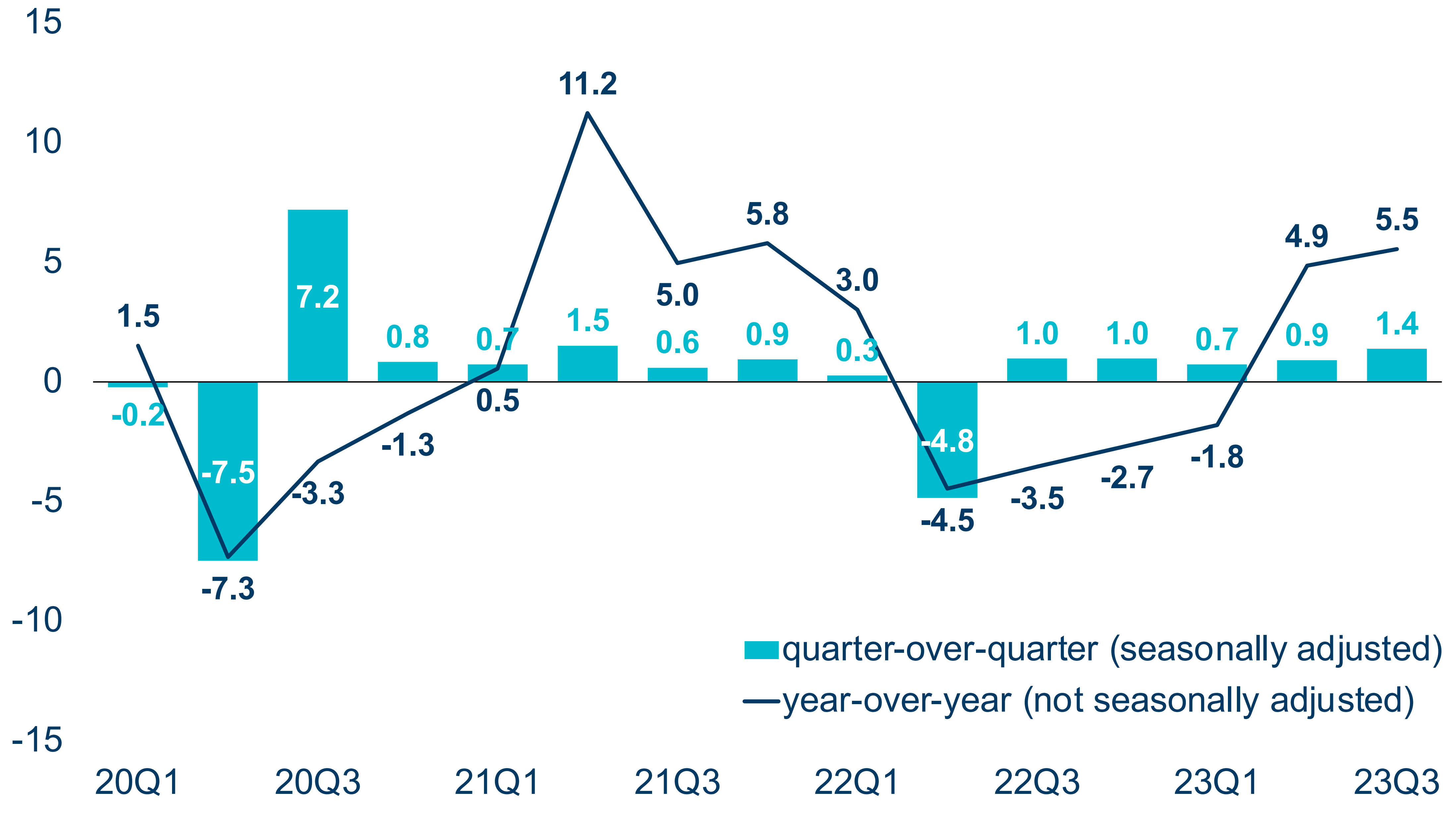
Russia's economy grew at 3.6% in 2023 on the back of war spending.

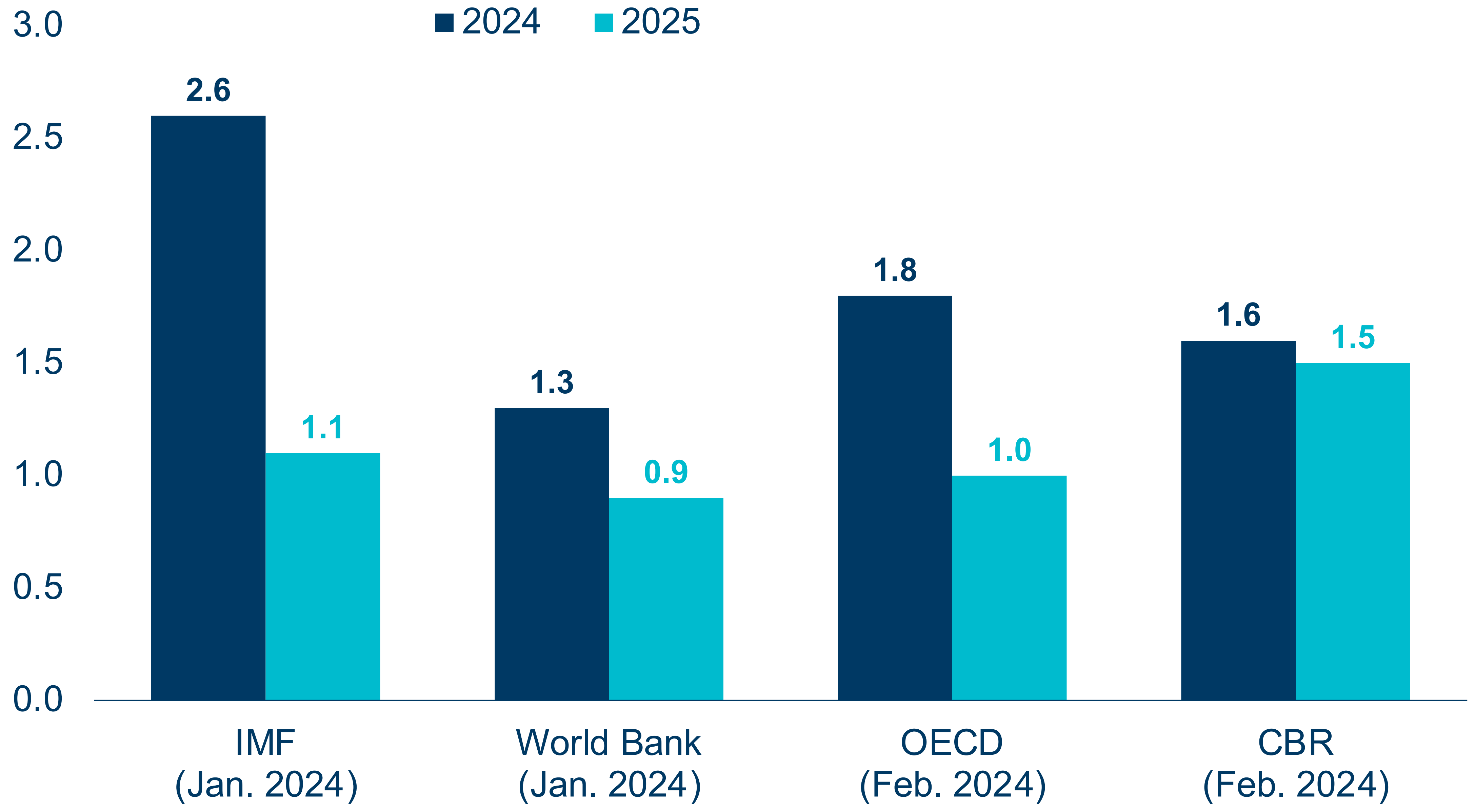
- Rosstat revised 2022 real GDP growth up to -1.2% (from -2.1%) and estimates 2023 growth at 3.6%.
- Key factors: strong fiscal stimulus from high defense spending and robust private sector credit growth.
- Quarterly numbers have not been published for Q4 2023 and not been revised for the previous year.

Quarterly real GDP dynamics, in %



Source: Rosstat, KSE Institute

2024-25 forecasts for Russian real GDP, in % year-over-year



Source: Bank of Russia, Bloomberg, IMF, OECD, World Bank

Previous editions of KSE Institute's Russia Chartbook

- January 2024
- December 2023
- November 2023
- October 2023
- September 2023
- July 2023
- May 2023
- April 2023
- March 2023
- February 2023
- December 2022