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Impact of sanctions. December 2022

Turning Point: Russia Under Pressure as Sanctions Bite

Authors:

J.Nell, B. Hilgenstock, N.Shapoval, Y.Pavytska, V.Ivanchuk, B. Dodonov, M. Fedoseienko, D.Pokryshka

Impact of sanctions. December 2022

Fortress Russia is showing signs of financial stress. In Q4 22, as oil and gas revenues fell and mobilisation increased the cost of the war, the Russian Ministry of Finance has started to draw heavily on the oil fund to finance the budget, tapped Gazprom's gas windfall with a special tax and unexpectedly started large-scale domestic bond issuance, mostly at a floating rate. On the external side, despite the strong current account, Russia has lost reserves this year. More generally, "Fortress Russia" has been eroded through the freezing of CBR assets and financial sanctions which shut Russia off from external markets and put the banking system under pressure. Russia is now in a potentially fragile financial position with high-quality reserves in convertible currencies only covering one month of imports, and sanctions obstructing conversion of Russia's foreign assets into liquid reserves.

Up to now during the war, Russia's economy and financial system performed better than expected. Largely as a result of buoyant oil and gas revenues which surged to a record of over $350 bn (20% of GDP), Russia's economy and budget have been disappointingly robust during the war so far. Instead of the double-digit contraction projected in the immediate aftermath of Russia's invasion, consensus has now revised up its estimates to a 3-4% GDP decline in 2022. Given Q2 and Q3 outcomes, we broadly concur – but see some downside to consensus estimates from the impact of mobilisation and falling commodity prices. Russia's outperformance reflects an improved trade balance, higher government spending, and a slow phase in of sanctions, which largely offset weaker domestic demand. This is disappointing, particularly when compared with the 30-35% contraction which Russia's invasion has driven in the Ukrainian economy.

But we are now at a turning point for Russia's economy and budget, as oil and gas earnings collapse. We expect Russia's earnings to fall below the critical level of $40 billion per quarter as the oil price cap and loss of access to the European gas market bite, eroding macro buffers further. As a result, Russia will face substantial difficulties in financing the war and experience renewed financial instability. At the same time, with Europe pledging €18 bn and the US $13 bn in support, Ukraine in 2023 is now in a much stronger position to finance its budget.

To exacerbate the pressure, we urge Ukraine's allies to impose additional sanctions and vigorously enforce existing measures. Lowering the oil price cap to $35/bbl and extending financial sector sanctions to non-sanctioned institutions, particularly Gazprombank, are of critical importance.

Why Russia's economy proved more resilient than initially expected this year:

1. **Most importantly, Russia's trade surplus expanded strongly this year due to high oil and gas prices and record oil and gas export earnings, shielding the economy and financial system.** For oil, volumes have fallen very modestly, with the EU embargo on crude oil only taking effect in December and a significant redirection of exports to China, India and Turkey, while higher global prices have until recently more than offset the discount on Russian oil. Similarly, lower gas export volumes due to Russia's squeeze on gas flows to Europe have until recently been compensated by a dramatic increase in the price. This was reinforced by the EU's commitment to fill its gas storage, leading to inelastic demand. As a result, Russian oil and gas earnings are on track to reach a record $350-360 bn in 2022. Total exports in Q1-Q3 were 27% higher than during the same period in 2021, while a 10% decline in imports over this period also widened the trade surplus. As a result, net exports largely offset the drag from weak domestic demand due to sanctions and overall uncertainty.

2. **Despite sanctions, Russia financed additional government spending this year thanks to strong oil and gas revenues - but now, as these revenues fall, it is starting to eat through its oil and gas savings.** After the invasion, the NWF was used to support a wide range of companies which were in distress after the initial imposition of sanctions. Now, with oil and gas revenues weakening,

Russia is consuming saved oil and gas revenues more intensively. Starting in October, Russia started heavy monthly withdrawals form the NWF - in the 250-300 bn RUB range- to finance the budget. Additionally, Russia has is extracting 1.2 trillion Ruble (or ~$20 bn) from Gazprom in 4Q-22 through a special tax.

3. **Another factor is that, in practice, sanctions have been phased in only gradually.** For example, the crucial EU oil embargo, while agreed in July, has only just come into force and similar restrictions on petroleum products kick in in February 2023. Other sanctions have not materialised at all, e.g., the EU embargo on metal slabs which takes effect two years from now. Importantly, some countries such as China and Turkey stepped in and increased trade with Russia, thereby mitigating the impact of sanctions. In addition, many restrictions have significant exemptions for large producers, undermining the effectiveness of the sanctions regime.
4. **Also, financial sector sanctions did not trigger a systemic crisis and, thus, did not spill over into the real economy as expected in the spring.** Despite their unprecedented nature, which included freezing of CBR assets and cutting off most large Russian banks from the U.S. and European financial systems, a combination of significant loopholes—to which fungible finance flows—and the strong external account helped Russia to weather the initial storm. The central bank played a key role in stabilising the situation through the provision of additional Ruble liquidity to the banking system, while also underpinning confidence in the Ruble and fighting inflation through aggressive interest rate hikes. However, this balancing act—the simultaneous pursuit of financial stability by providing liquidity and monetary stability by tightening policy —was supported by the country's strong external position.
5. **While the dramatic collapse of car manufacturing and the withdrawal of Western firms is often the focus of media coverage, so far the overall impact on industry has been less dramatic.** Industrial production is down a relatively modest 2.6% YoY on October 2021, while industrial production in January-October 2022 is flat on the same period of 2021. On the latest data, Russian industry looks stable, with industrial output and investment both continuing to recover modestly.

Why sanctions nonetheless are working, and Russia is starting to lose the economic war:

1. **Sanctions have clearly hurt Russia this year and its economy has dramatically underperformed both pre-invasion expectations as well as its oil-producing peers.** The 3-4% contraction that is now expected for 2022 represents an 8-10 pp of GDP change compared to pre-war forecasts and a 10-12 p.p. of GDP growth differential vs. Saudi Arabia, an oil exporter of similar scale.
2. **Russia is undoubtedly showing signs of financing stress.** On the budget side, as oil and gas revenues started to decline in the second half of this year — reflecting falling global prices, the strong Ruble and the collapse in European gas exports — the budget has shifted into deficit. Russian authorities expect it to reach 2% of GDP in 2022. The Ministry of Finance responded by tapping Gazprom's gas windfall in Q4 22 through a 1.2 trillion Ruble (0.9% of 2021 GDP) special tax, using 1 trillion Ruble from the NWF for financing the budget, while also launching large-scale unplanned issuances of domestic debt, raising over 2.2 trillion Rubles (1.7% of 2021 GDP) in recent weeks, mostly at floating rates. On the external side, reserves have fallen despite the strong current account. In fact, Russia faces a substantial challenge from lack of access to "proper" foreign currency reserves—i.e., liquid assets in convertible reserve currencies (G10 currencies) which are widely accepted to make payments and settle obligations.

Looking ahead, we are optimistic about the sanction coalition's success on the economic front:

1. **The crucial factor, in our view, is trade. In particular, we expect a collapse in oil and gas export earnings by more than 50% in 2023.** This reflects several developments, including the impact of the European embargo on crude oil (in effect since December) and petroleum products (taking effect in February), the G7 oil price cap, and the collapse in natural gas flows to Europe. Every time oil and gas earnings, which account for 60% of exports and 40% of federal budget revenues, have fallen sharply — e.g., after 1986, in 1998, in 2008, in 2014, and in 2020 — the country has faced an economic crisis. Without the protective shield of high hydrocarbon exports, we expect that in

2023, as in previous episode, Russia's underlying financial fragilities will resurface, with an enhanced risk of bank runs and a potential Ruble collapse. This should significantly constrain Russia's ability to continue financing the war. Specifically, based on recent experience, we see oil and gas export earnings of $40 bn or less per quarter as a critical benchmark, beyond which Russia will struggle to finance imports and government spending. To maximise the impact, *we urge the sanctions coalition to lower the oil price cap to $35/bbl at the earliest opportunity* — a level which reduces oil and gas earnings below the critical level while remaining well above average production costs of $10-15/bbl and so maintaining Russia's incentive to supply.

2. **As the external balance worsens, Russia's reserves will come under additional pressure.** We see the lack of high-quality reserves — liquid reserves in G10 currencies which can be used to make external payments and settle liabilities—as a key weakness. While Russia continues to hold substantial foreign assets — $570 bn in reserves as of mid-December — a significant share has been sanctioned (~50%) and holdings in gold (~$130 bn) and yuan-denominated assets (~$100 bn) cannot easily be converted at scale into high-quality reserves. Consequently, a key focus of further sanctions action and enforcement efforts should be measures to prevent Russia from replenishing its high-quality liquid reserves. In this context, we propose to address loopholes by application of secondary sanctions on any financial hubs and third-country institutions that facilitate financial flows with Russia. In this context, we see jurisdictions such as Turkey or UAE whch have recently seen substantial inflows of Russian capital as particularly high-risk.
3. **As oil and gas revenues fall and reserves come under further pressure, the Ruble will likely weaken, increasing financial instability and threatening monetary stability via pass-through to inflation.** This will put policy makers in a challenging position. As in 2022, the CBR will have to provide liquidity to the financial system to support banks and mitigate the risk of bank runs. At the same time, the central bank will have to hike interest rates to retain deposits in the banking system, support the currency, and respond to rising inflation — which will then hit the economy and compromise bank asset quality over time. Without a strong external balance, the CBR will find it much harder to reconcile these objectives. To accelerate these developments, we propose that sanctions are extended to currently non-sanctioned financial institutions. In particular, with the EU embargo on Russian oil fully in effect from February and gas flows down dramatically, we believe that Gazprombank's exemption from sanctions to facilitate energy transactions with Europe will no longer be justified.
4. **On the budget, the advantage is also moving to Ukraine.** Up until now, Russia has had a much stronger fiscal position. Ukraine's revenues were heavily hit by the war, including a contraction of around one third in the economy and the destruction of many cities and enterprises, while Russia's revenues have been boosted by strong oil and gas revenues. Next year, Russia's budget allocates 30% of spending to defence, while Ukraine is allocating around 50% of its budget to finance the war. But now the tables are turning. Russia's oil and gas revenues will fall next year, and it will struggle to finance the resulting deficit, with external markets closed, and a banking system under pressure. By contrast, Ukraine with €18 bn in funding now agreed from the EU and $13 bn in funding agreed from the US, now has the resources in place — supplemented by some additional donor support — to finance its 2023 budget.
5. **The sharp decline in foreign investment, access to high-tech imports and loss of skilled labour will have a marked effect over time on Russia's productivity and potential growth.** In fact, this has already started in certain sectors, e.g., car manufacturing and aviation. While Ukraine, and those countries that Russia is targeting with the weaponization of energy exports, will experience an economic recovery in 2023 and beyond, Russia itself is set to remain stalled for the foreseeable future. To maximise this effect, *we propose to target circumvention of sanctions and enhance export controls.* The sharp rise in imports from alternative suppliers, including Turkey, likely reflects a diversion of trade to circumvent restrictions.

In summary, we see Russia back in a crisis situation in the near term as the oil embargo and price cap bite. This will help to shorten the war. The country has seen weak growth since annexation of

Crimea in 2014 as Putin has pursued foreign aggression over the domestic economy. Now, cut off from critical markets, foreign investment and Western technology, trend growth — already running at an anaemic 1-1.5% — is likely to decline further. At the same time, macro buffers are being eaten up, squeezing resources that are critical to support the financial system and finance public services and pensions. Russia will be more dependent than ever on oil and gas, which are likely to be shrinking sectors as the energy transition progresses, and in the precarious role of raw material supplier to China and other emerging markets. While Russia faces economic twilight, Ukraine is set to bounce back, with support from allies, access to Western markets, and the prospect of EU membership. Over the medium run, catching up with Poland — Ukraine's peer at the time of the Soviet Union's breakup and a similar economy in many ways, but currently three times richer — appears a feasible objective, which would imply a decade of strong growth. With the first half of 2023 a turning point for Russia's economy, we urge Ukraine's allies to urgently impose further measures — particularly by lowering the oil price cap to reduce oil and gas earnings, by imposing full sanctions on remaining systemic financial institutions and addressing third-country loopholes, and by eliminating sanction exemptions for large producers in key industries.

Russian Chartbook: December 2022
Oil Embargo and Price Cap

Key Facts

The near-term outlook for the Russian economy has continued to improve. Instead of the double-digit contraction projected by economists in the spring, we have now revised up our estimates to a 3-4% GDP decline in 2022, as high oil and gas earnings shielded the economy and financial system. Next year, we expect the contraction to continue, while over the medium term, Russia faces an extended period of stagnation due to sanctions and collapsing foreign investment.

In 2022, Russia benefited from high prices for oil and gas, so that oil and gas earnings are expected to come in at a record $350-360 bn this year, and, over January-October, the current account surplus stood at $215 bn, more than twice the corresponding 2021 number.

These factors are turning less favourable, however, as the European embargo on oil and the associated G7 oil price cap come into effect, gas flows to Europe have collapsed, and commodity prices are falling. In our view, 2023 will be a turning point with oil and gas receipts more than halving, and likely to drop below the critical level of about $40 bn a quarter, significantly eroding macro buffers.

In particular, Russia's squeeze on Europe's gas supply has driven record high gas and power prices across Europe, driving inflation and hitting consumption and growth. This year it seemed to work as Russia pressured Europe while realising record revenues from European gas sales. But there has been an impressive adjustment in European gas markets - with demand now running 25% lower, and supply from other sources, notably LNG, up strongly - reflected in a record gas inventory build this year and full storage as winter started, even as Russian flows collapsed. This implies Europe no longer needs Russian gas, and Russia faces the permanent loss of its European gas market share and revenues.

Due to international sanctions, the Bank of Russia has lost access to around $300 bn in reserves, and much of the remainder is in less liquid and fungible yuan and gold. The stock has also declined through withdrawals from the National Welfare Fund. As fiscal revenues drop because of the oil price cap and government expenditures remain elevated due to the cost of the war, Russia will have to rely on the NWF and domestic borrowing to finance deficits.

With less support from Russia's trade surplus, underlying fragilities in the banking sector and currency will resurface. Importantly, the CBR will have a much harder time to provide liquidity to the financial system while keeping inflation under control. A substantial weakening of the financial system will have an important effect on the financing of the government.

For the time being, inflationary dynamics have moderated with the stabilization of the Ruble exchange rate and the CBR's effective policy response. Nonetheless, headline and core inflation remain elevated at 12% and 16% YoY, respectively. With pressure on the exchange rate likely to re-emerge in 2023, we expect price pressures to return forcefully.

Russia's labour market remains tight with the unemployment rate standing at a historically low 3.9% and only a moderate increase expected in the coming months. Challenges are emerging, however, from different directions, including the recent mobilization and war-related emigration. In addition, and despite a robust labour market, real incomes have been falling.

According to our estimates, seven sectors of the Russian economy accounting for 70% of total value-added — manufacturing (16.1% in 2021), retail trade (13%), mining (12.8%), real estate transactions (9.9%), public sector and military (7.1%), transport (6%), and construction (5.1%), **— grew**

Full version of **Russian Chartbook: December 2022** can be found in Annex.

by a cumulative 7.1% in Q1-Q3, driven almost exclusively by almost 70% growth in the public sector and military as well as growth in construction (21.5%). Numbers frequently cited in the media about the collapse of some industries such as a 43.5% YoY contraction of car manufacturing are misleading as these sectors only make up less than 1% of the economy.

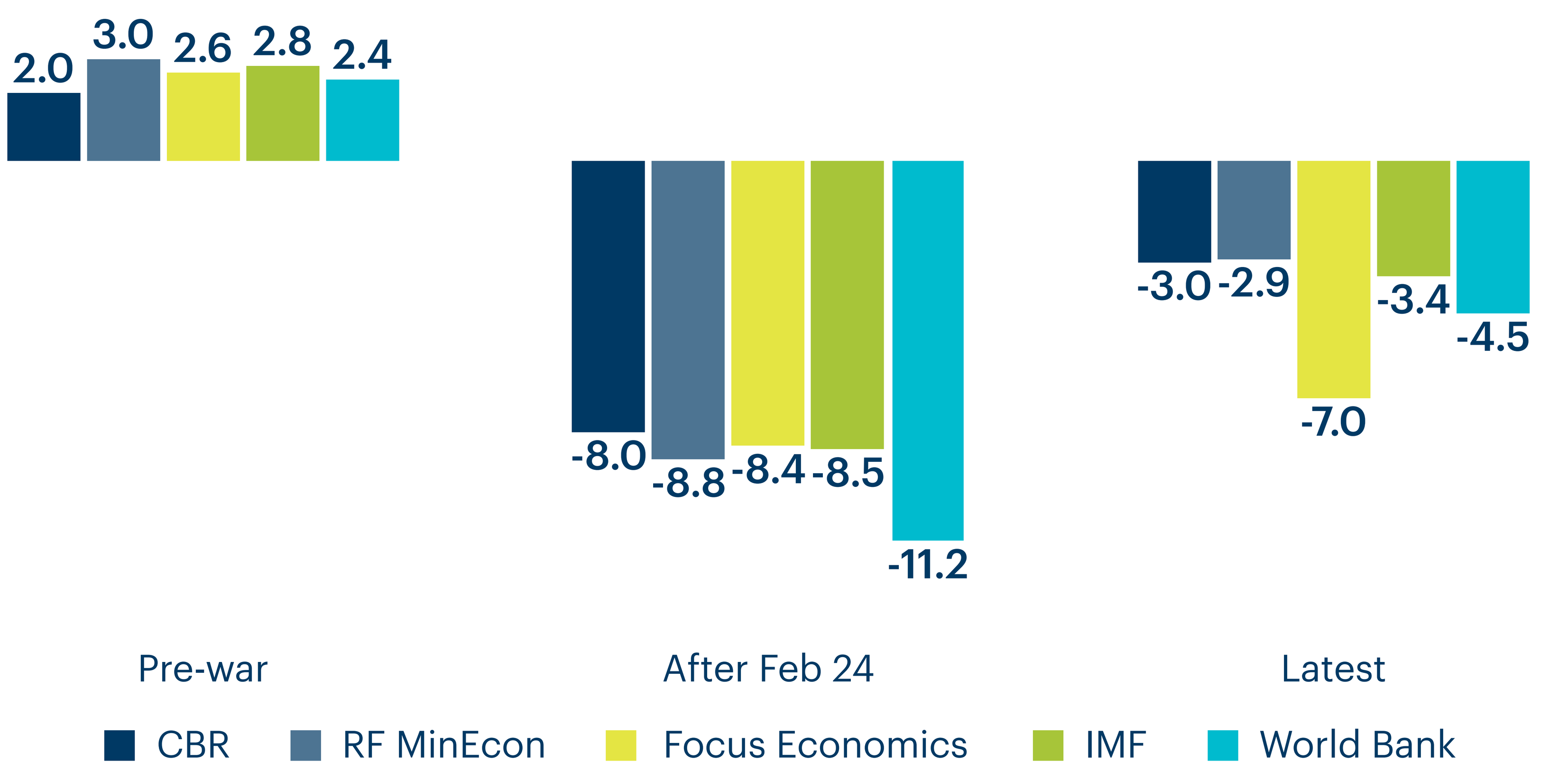
Sectoral sanctions also exempted some of the biggest producers. For example, in one of the largest industries, steel production, among the top eight steel producers covering 95% of the industry, the U.S. sanctioned only three companies and the EU only four. This approach is characteristic of many other sectors as well.

Full version of **Russian Chartbook: December 2022** can be found in Annex.

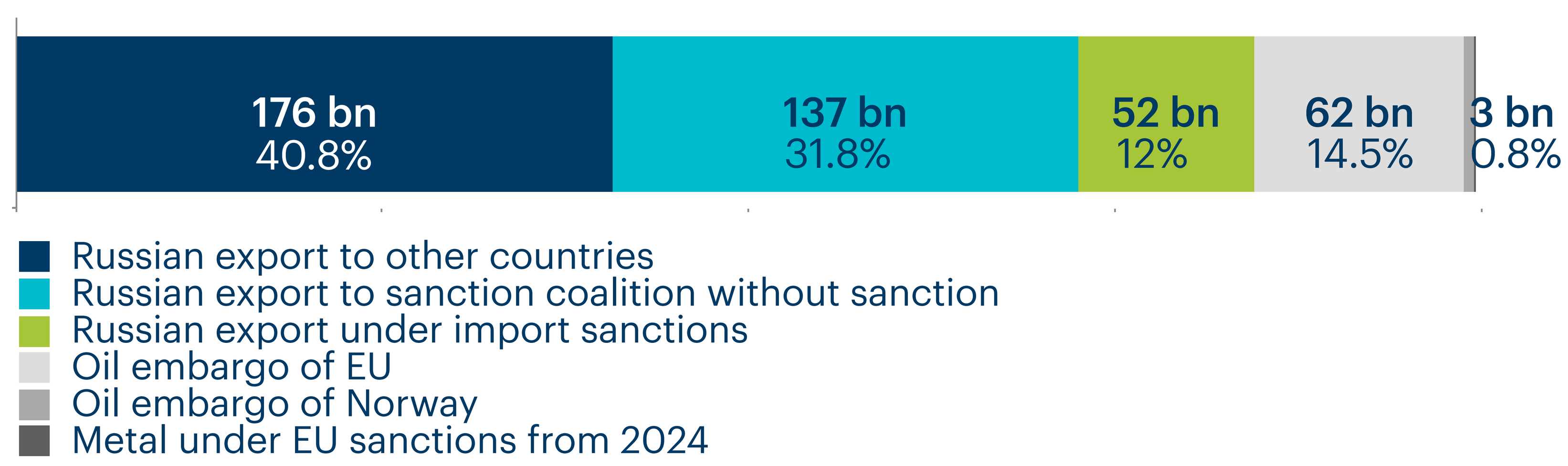
Russian Chartbook: December 2022
Oil Embargo and Price Cap

Key Charts

GDP growth forecasts for 2022



Russian EXPORTS in 2021 by group of countries and coverage by sanctions



Goods exports and imports, bn USD

Russian IMPORTS in 2021 by group of countries and coverage by sanctions

Industrial Index for Metallurgy & Engineering Industries

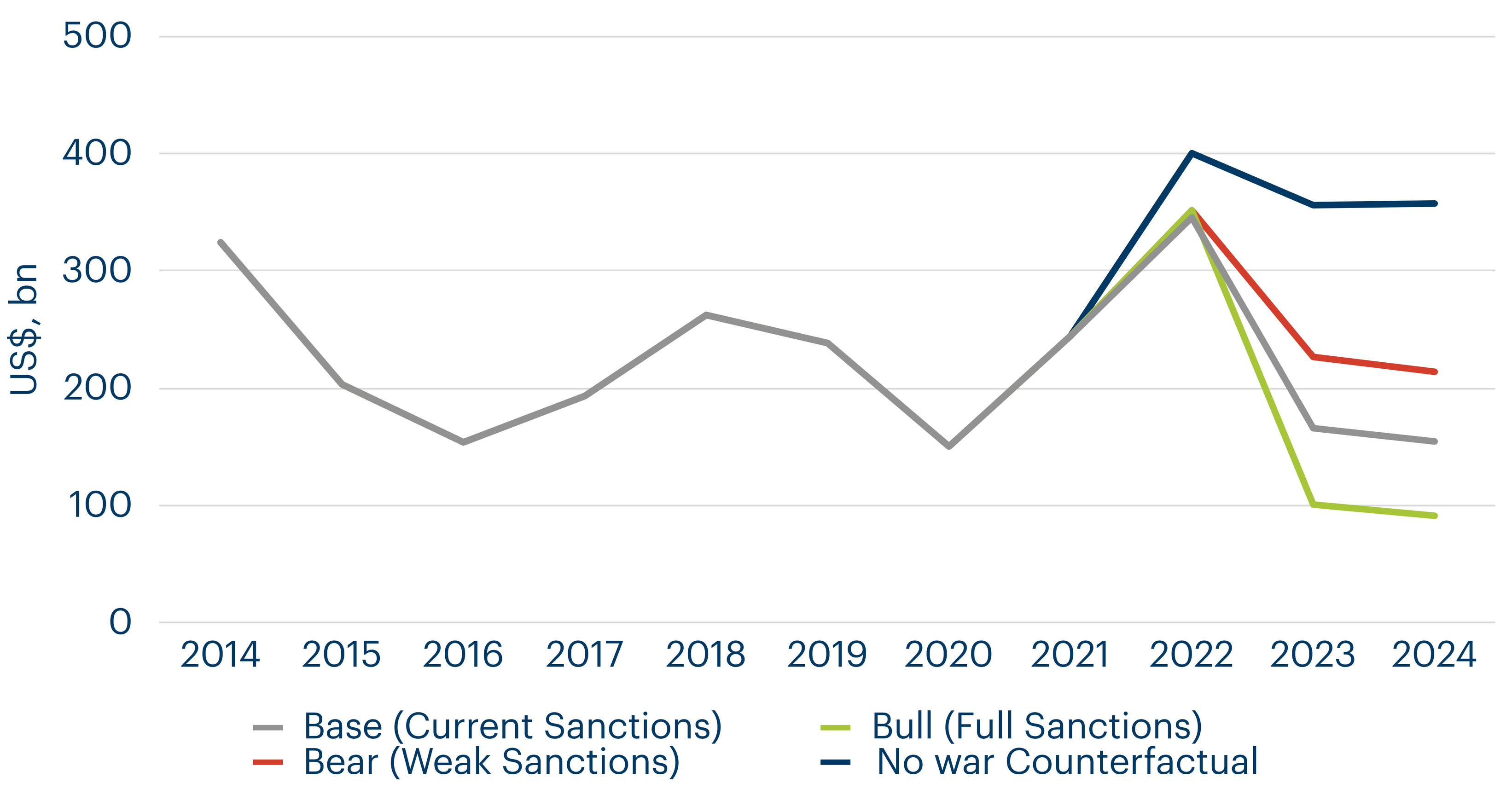
Industries	Revenue of Russian producers 2021, bn USD	Sanctions coverage, % (Under Sanctions / Not U/S)	RF producers under sanctions, %	RF export under sanctions, %	Foreign companies (coalitions*) left RF, %
Ferrous metallurgy	92	45 %	45 %	27 %	100 %
Automotive construction	48	80 %	20 %	19 %	81 %
Precious metals (gold, silver, platinum)	16	19 %	16 %	13 %	100 %
Aircraft construction	16	83 %	83 %	12 %	N/A
Aluminum	12	5 %		5 %	N/A
Shipbuilding	9	86 %	80 %	47 %	N/A
Railway transport	5	58 %	38 %	13 %	100 %
Titanium	1	1 %		1 %	N/A
Total	$199 bn	54% / 46%			

Full version of **Russian Chartbook: December 2022** can be found in Annex.

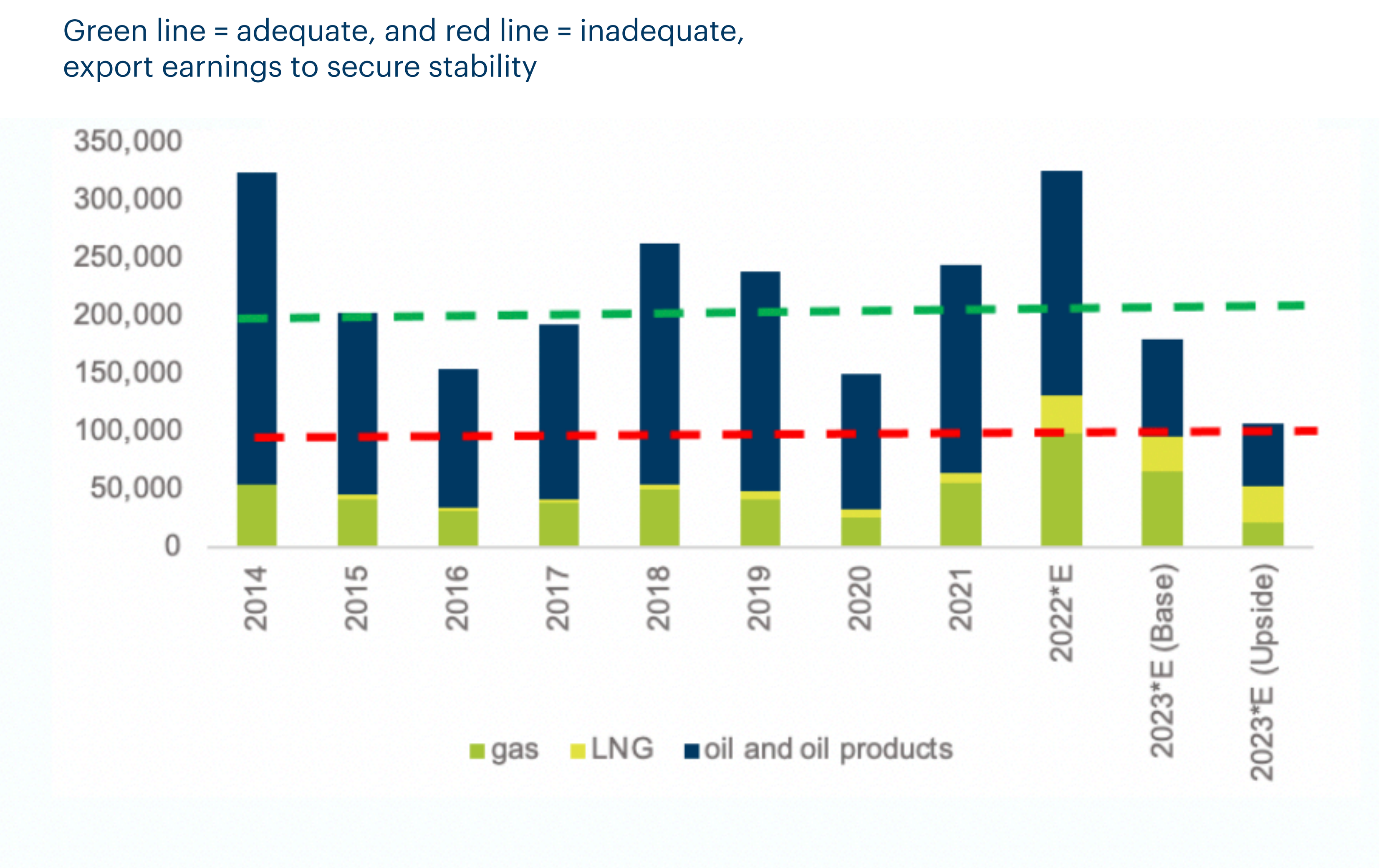
Russian Chartbook: December 2022
Oil Embargo and Price Cap

Key Charts

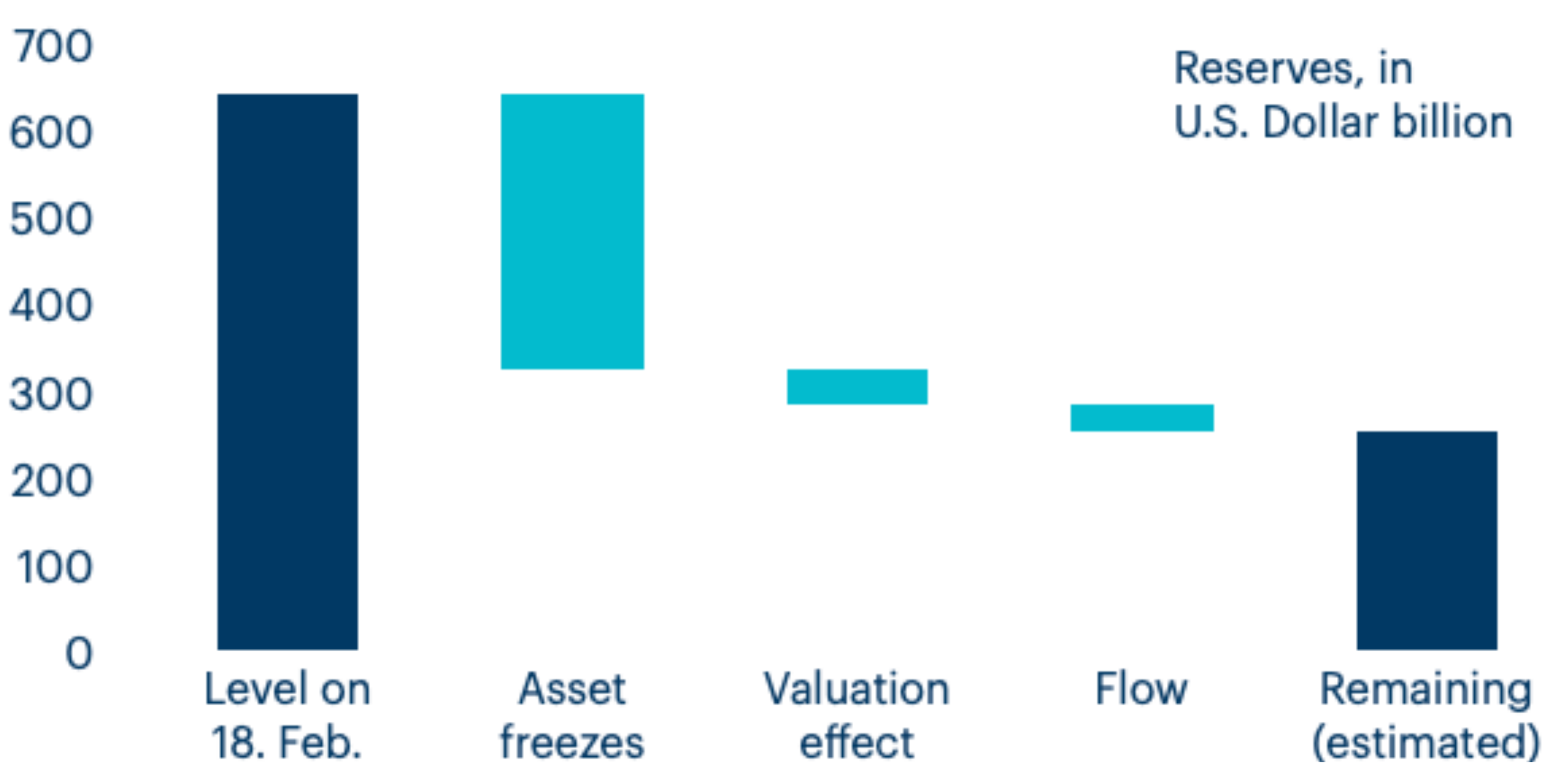
Actual & projected Russian oil revenues in 2014-2024



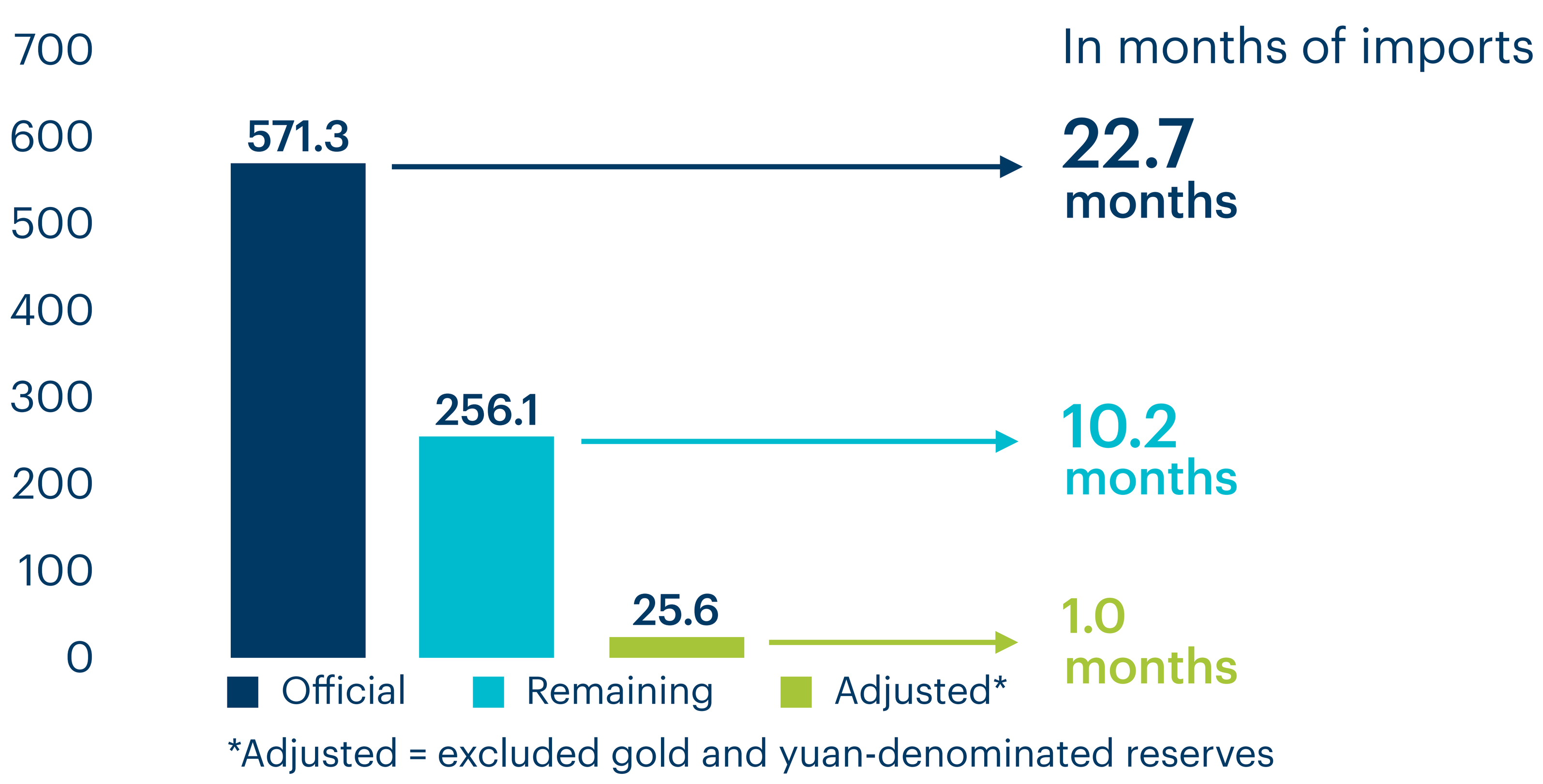
Russian Oil&Gas export earnings 2014-2023, USD mln



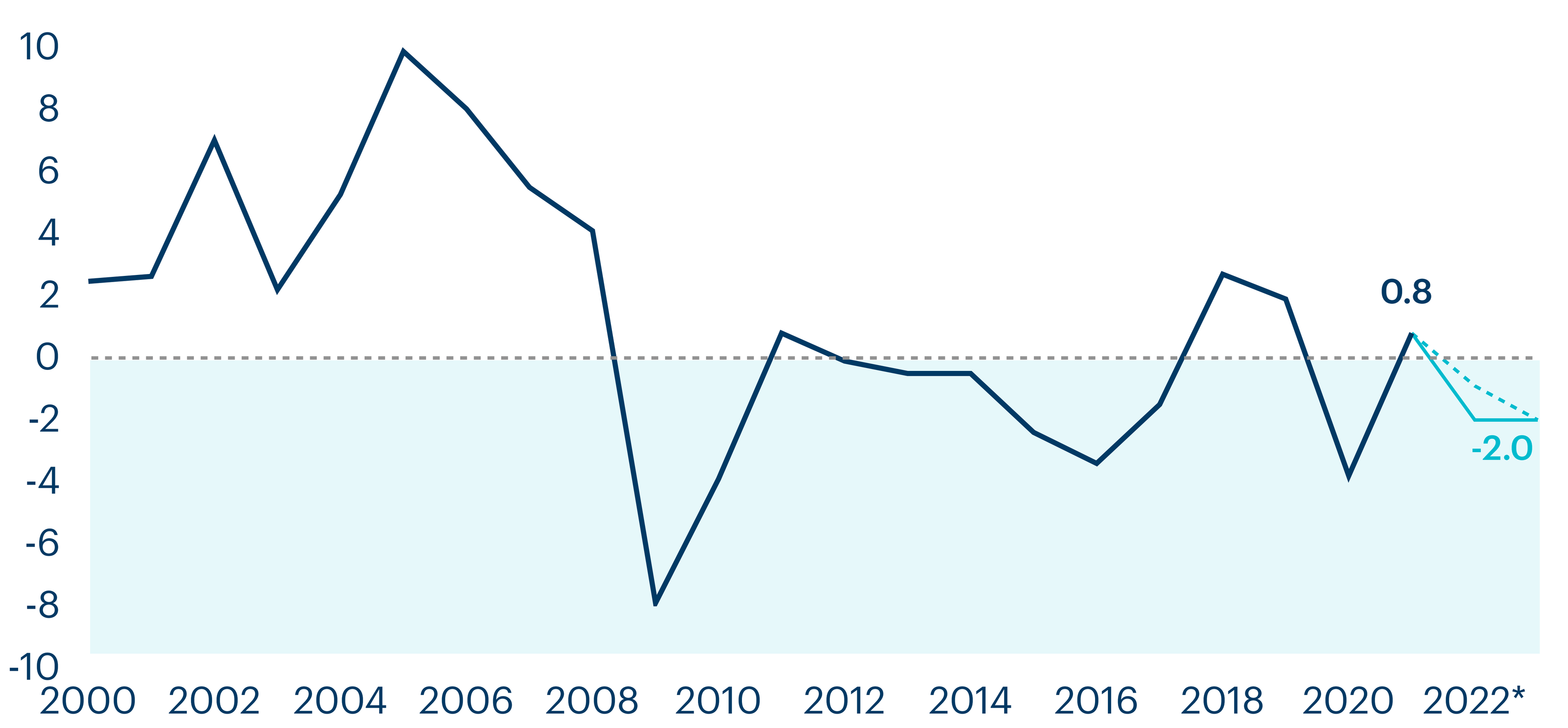
Availability of international reserves



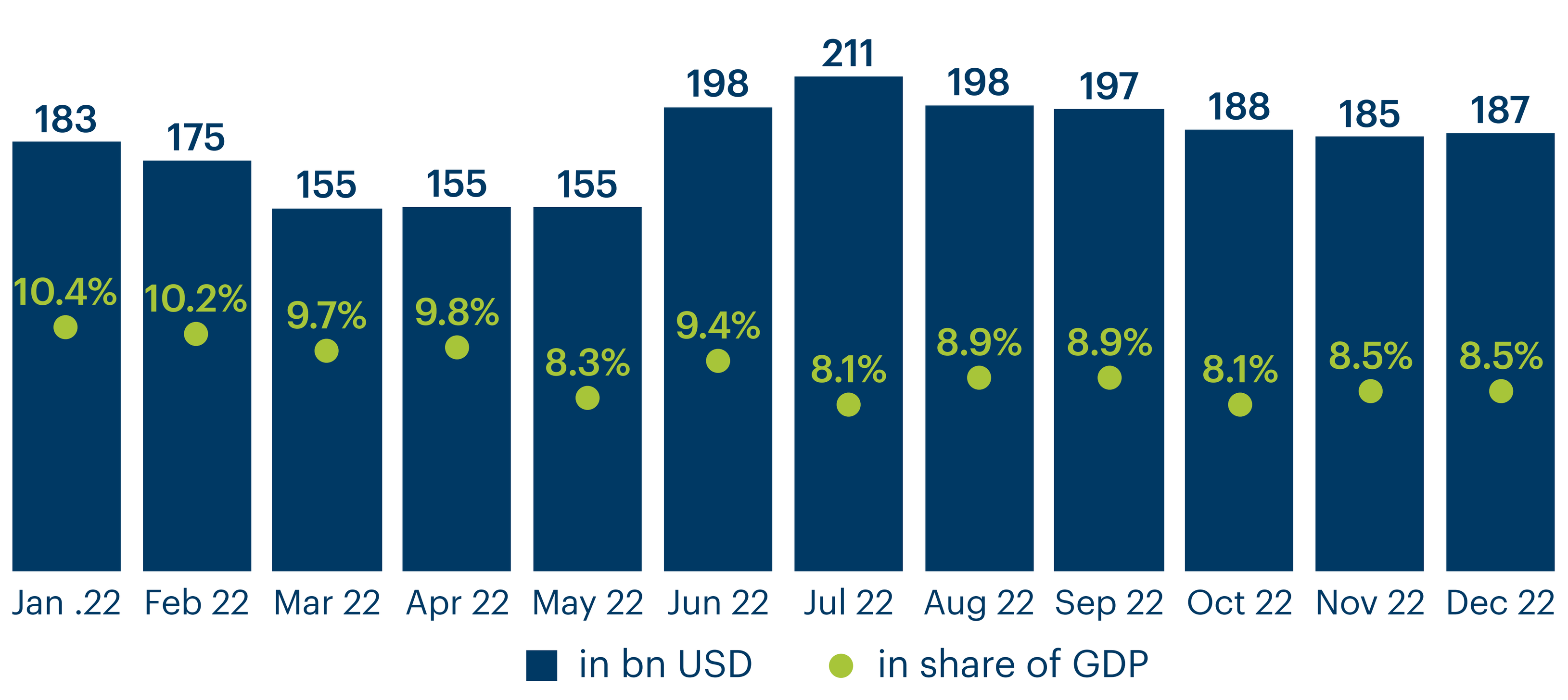
Adequacy of international reserves, bn USD



RF Budget balance, % of GDP



NWF dynamics



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Annex

Russian Chartbook: December 2022 Oil Embargo and Price Cap

Authors:

J.Nell, Y.Pavytska, V.Ivanchuk, B. Hilgenstock, B. Dodonov, M. Fedoseienko, N.Shapoval

December 2022: Oil embargo and price cap

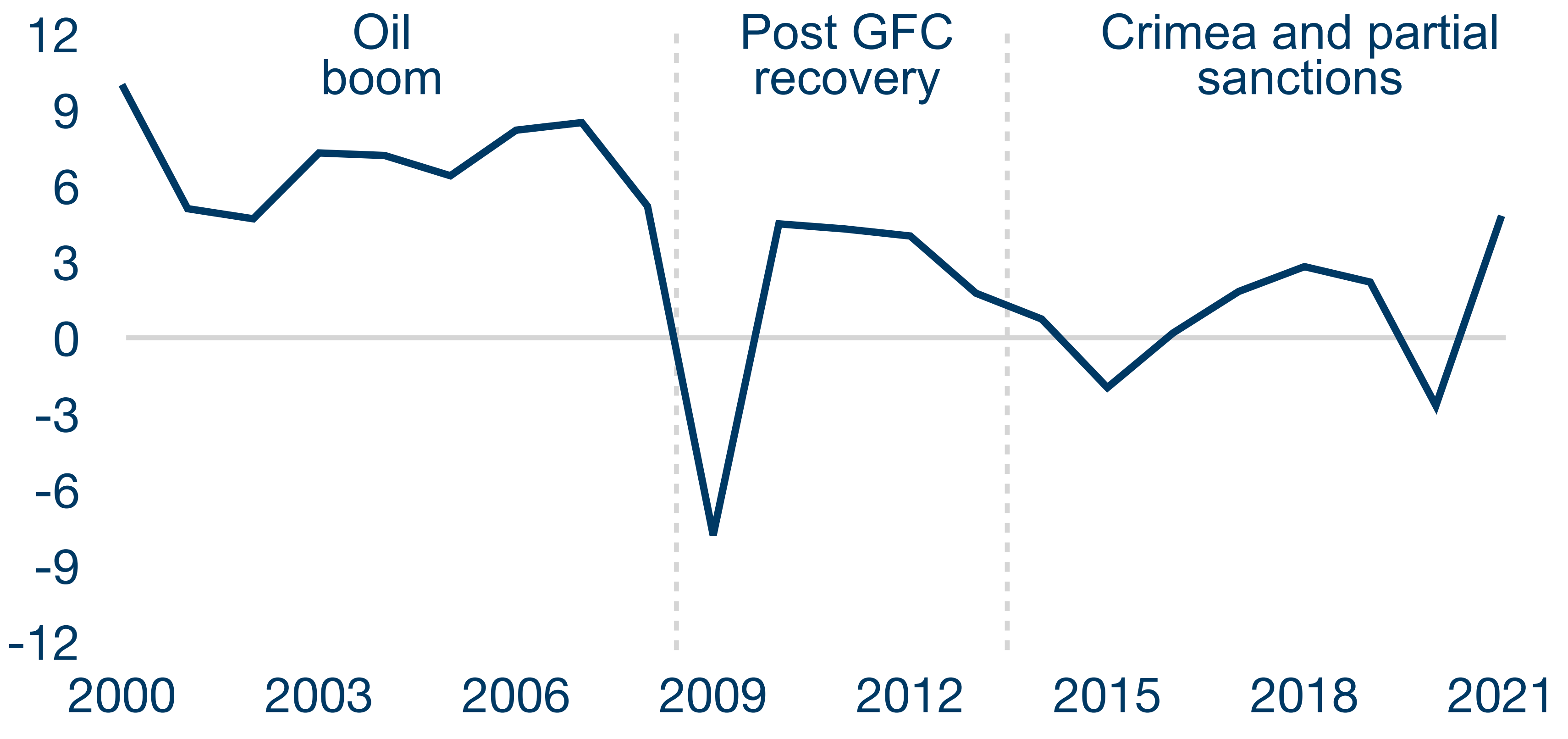
European oil embargo and G7 and EU oil price cap: Today, the EU embargo on seaborne crude oil imports from Russia comes into effect, as does the price cap on all Russian oil sales which use services from companies based on the G7, EU and Australia. We see this as a key step, which lower Russian oil exports and revenue earnings. However, to be fully effective, we have proposed a lower oil price cap — at $35/bbl rather than $60/bbl – which would still be significantly higher than Russia's production costs, and so maintain Russia's incentive to supply, but would cut Russia's export earnings to a level which would constrain Russia's ability to wage war on Ukraine.

Russian contraction set to deepen: The initial wave of sanctions hit the Russian economy hard in spring, driving the CBR to hike rates to 20% and introduce capital controls. But then high oil and gas revenues and the collapse of imports drove record inflows which stabilized the economy, driving the RUB higher, reducing inflation and allowing the CBR to reverse its rate hikes. Even so, Russia is still heading for a substantial contraction this year - albeit revised up to -3-3.5%, according to recent CBR and IMF forecasts. But looking ahead, we expect contraction to deepen. This partly reflects the impact of Russia's September mobilization, which appears to have driven a major liquidation of household financial assets. More importantly, it reflects the looming collapse in oil and gas revenues — which account for over 60% of exports and over 40% of budget revenues — thanks to the European oil embargo, the G7 oil price cap, and the collapse in Russian gas sales to Europe. Subject to robust implementation of the price cap, we forecast Russian oil and gas revenues will fall below the critical point – around $150 bn per annum — next year. At this point, as in previous episodes of weak oil prices, we expect Russia's underlying financial fragilities in the currency and at banks to resurface, constraining Russia's ability to continue financing the war.

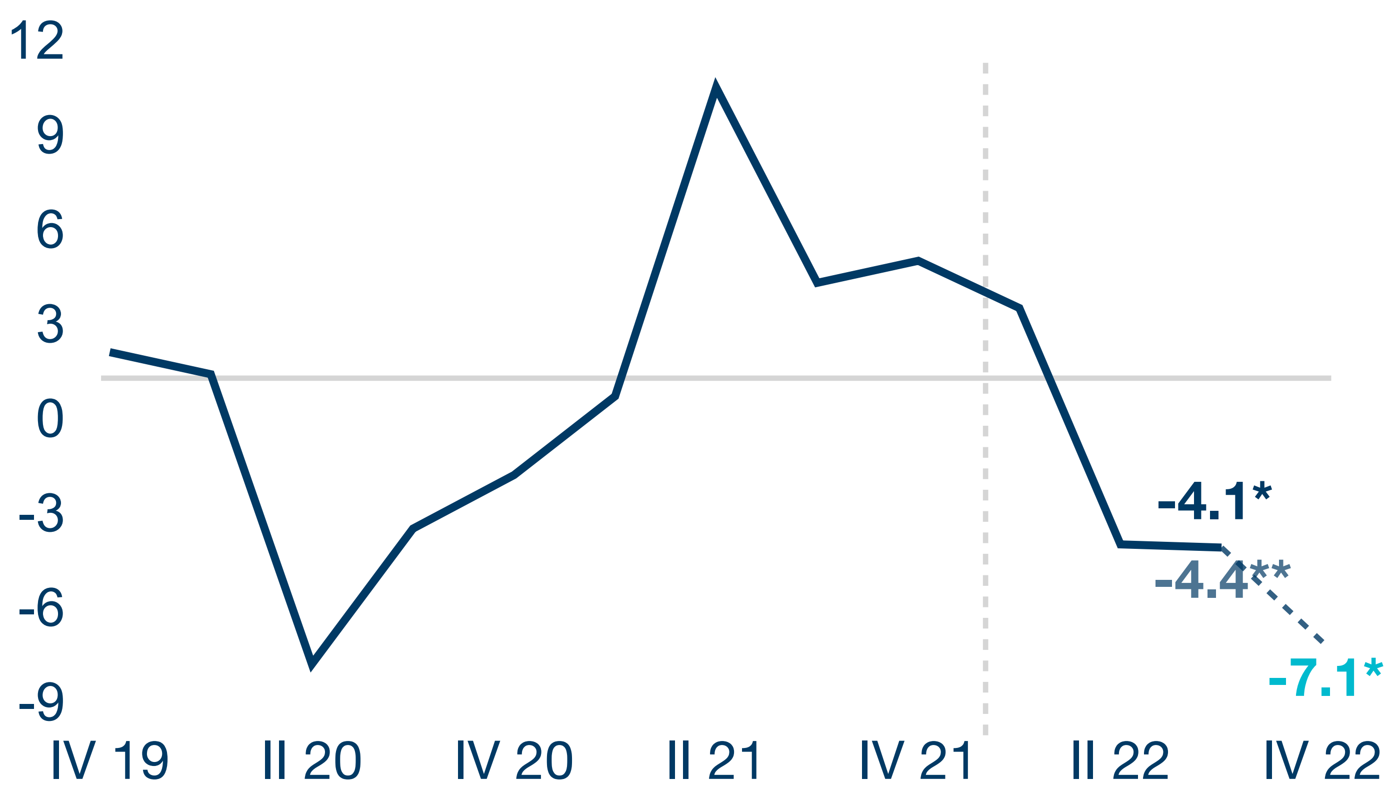
Growth Overview

Economic contraction likely to worsen in Q4-22: The YoY contraction in GDP in Q3-22 was -4%, virtually unchanged on the -4.1% YoY contraction seen in Q2. Looking ahead, we expect the contraction to accelerate in Q4-22, given the impact of mobilization as well as the collapse in gas export earnings and the impact of the December oil embargo and oil price cap hitting oil exports.

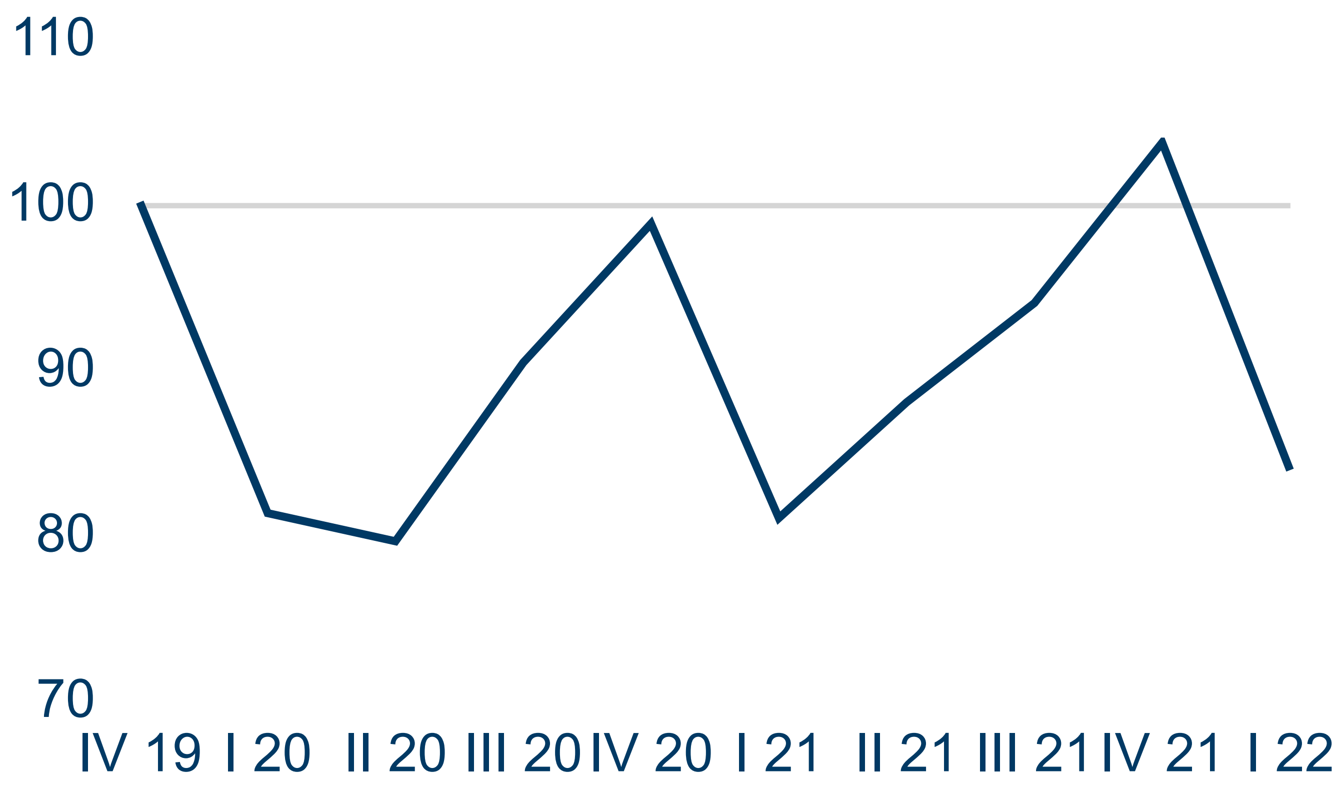
GPD growth, %, YoY



GPD growth, quarterly, %, YoY



GPD growth, IV 19 = 100



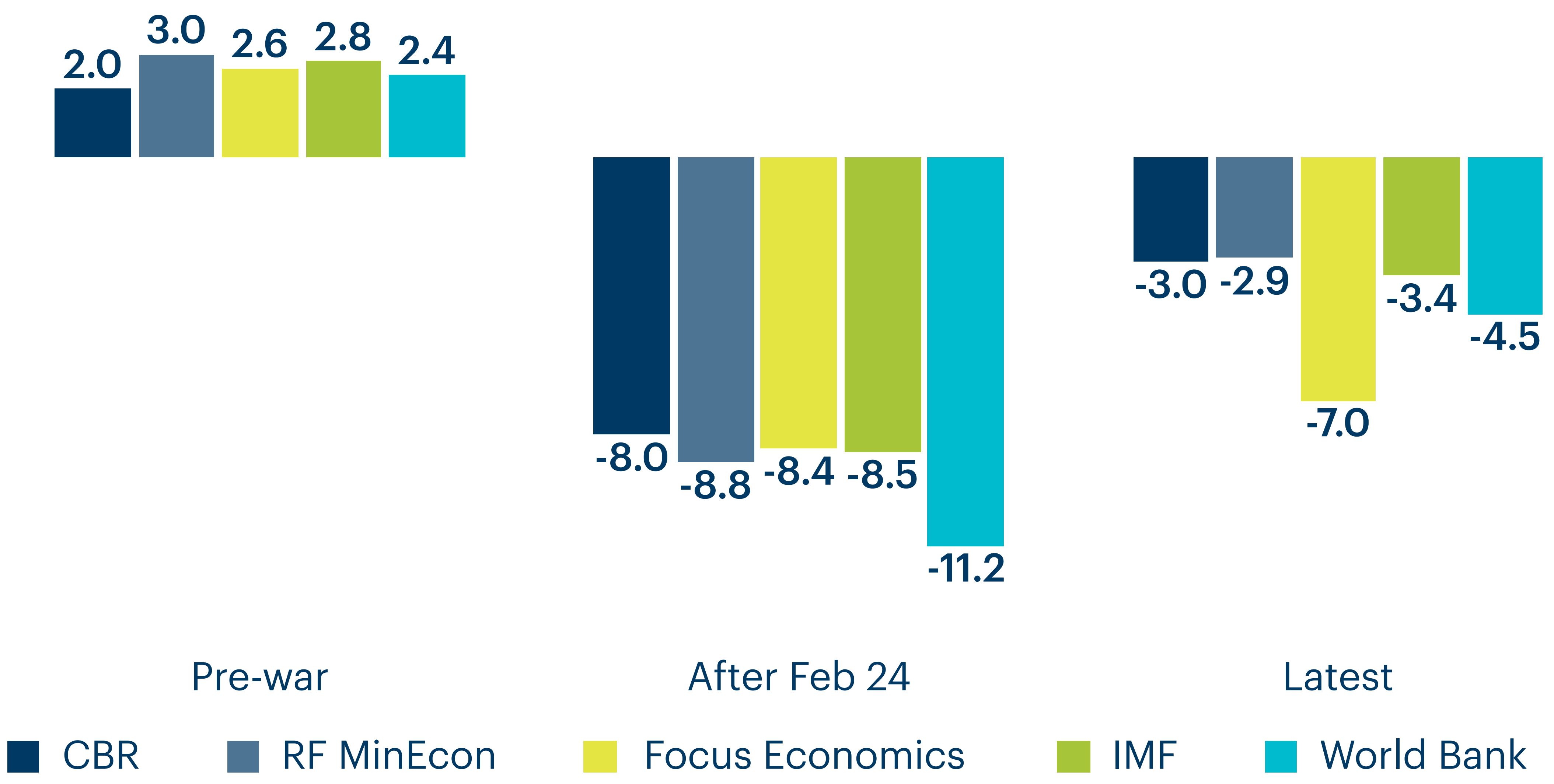
* CBR Assessment & Forecast. ** RF MinEcon assessment

Growth Outlook

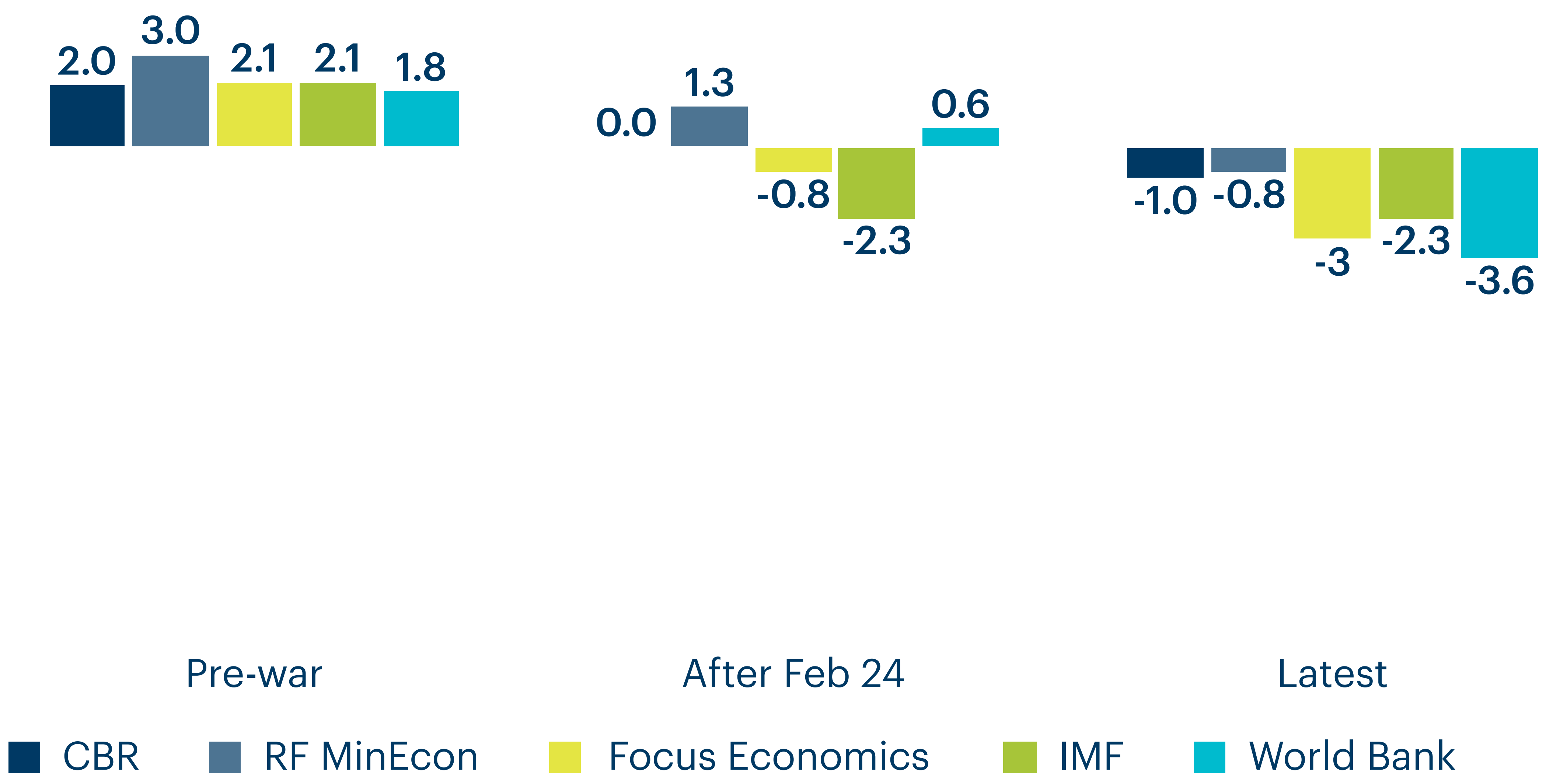
Some upgrades to the 2022 growth outlook…: The CBR has upgraded its forecast from a contraction of 8-10% to a GDP decline of 3-3.5%. The IMF, in its October ***World Economic Outlook***, also published an improved outlook, -3.4% instead of -8.5%. However, we see this upgrade as premature, reflecting he summer stabilization, and not fully accounting for the collapse in gas exports since August and the impact of September mobilization.

…but contraction extended into 2023: At the same time, projections for next year reflect an extended period of economic weakness, with a further contraction expected by both Russian authorities as well as international institutions.

GDP growth forecasts for 2022



GDP growth forecasts for 2023



All forecast can be found in Annex #1

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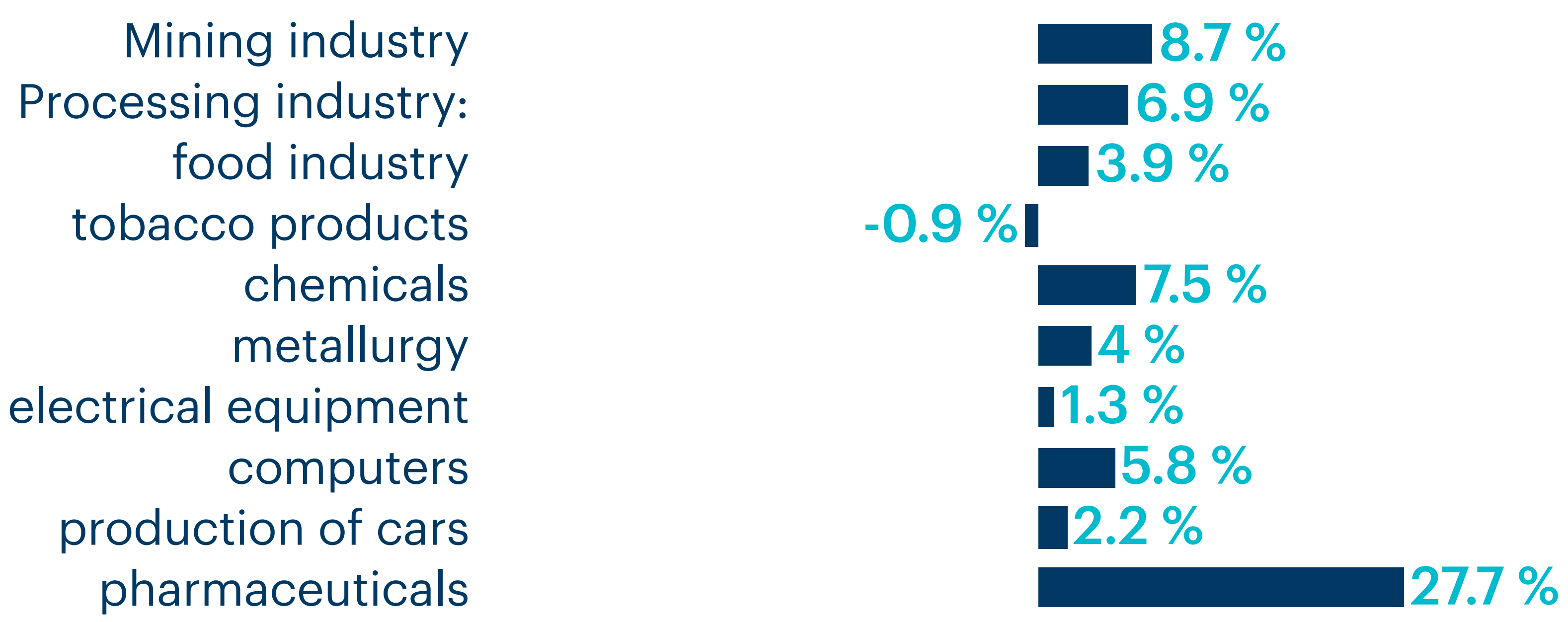
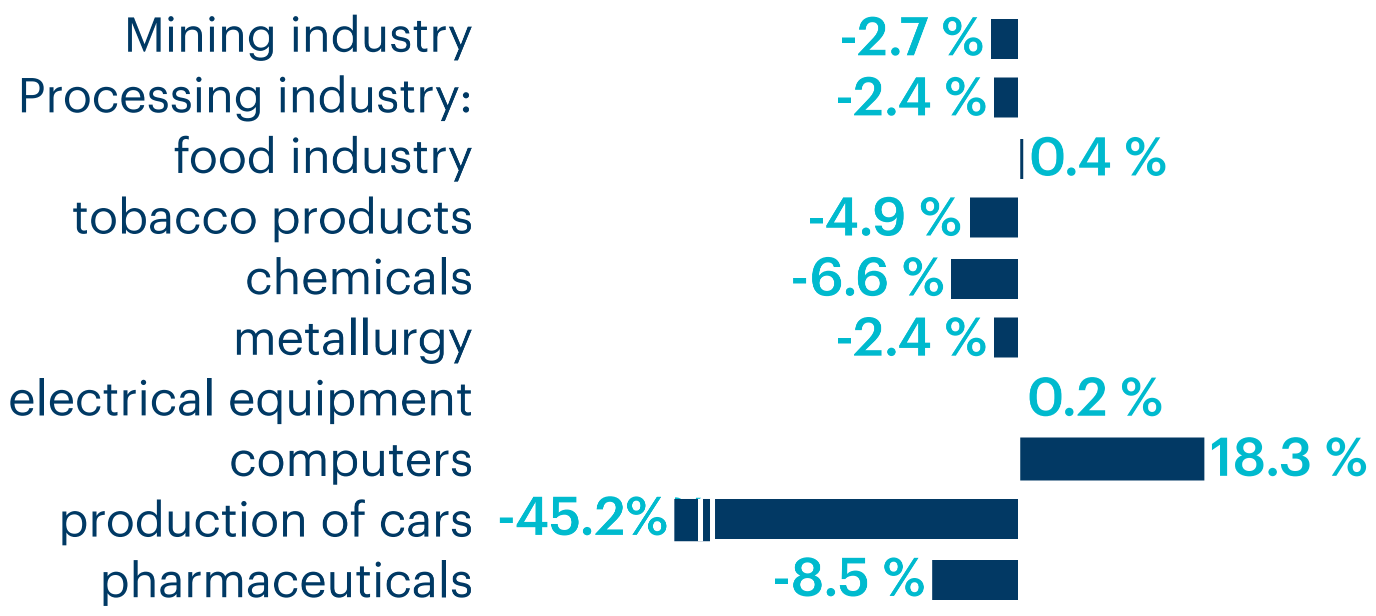
Sectoral Economic Activity

Output in selected industries

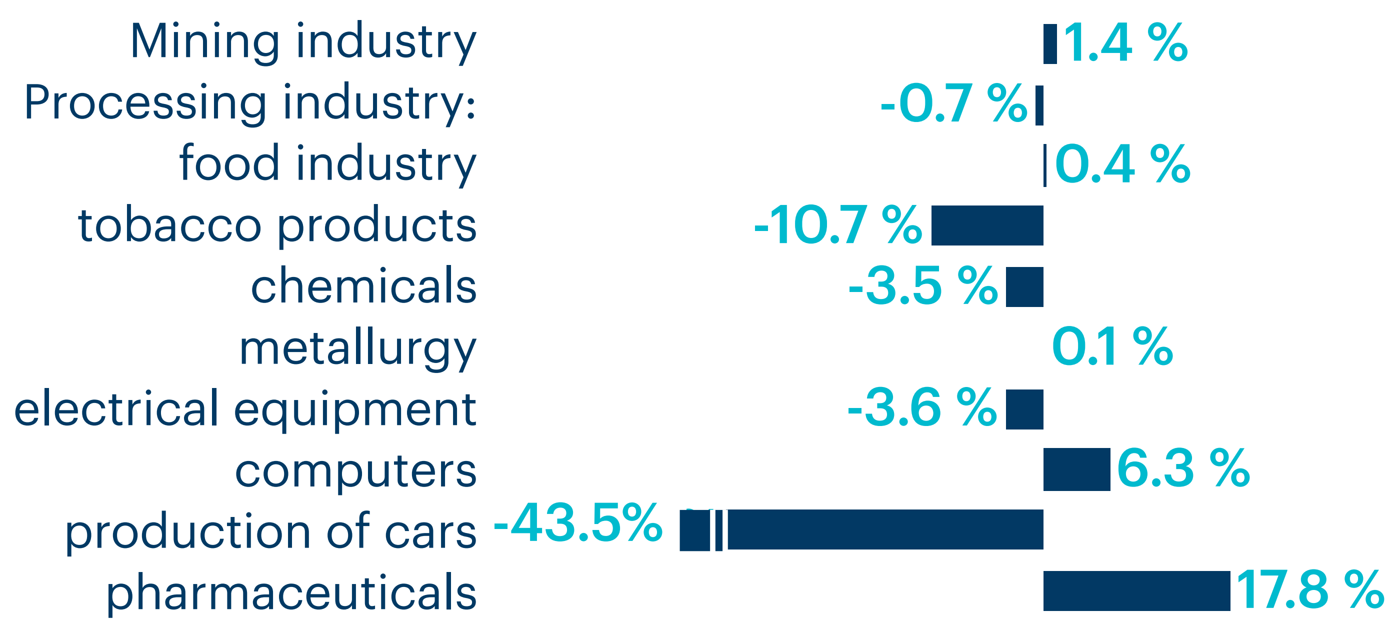
Feb 2022, %, YoY



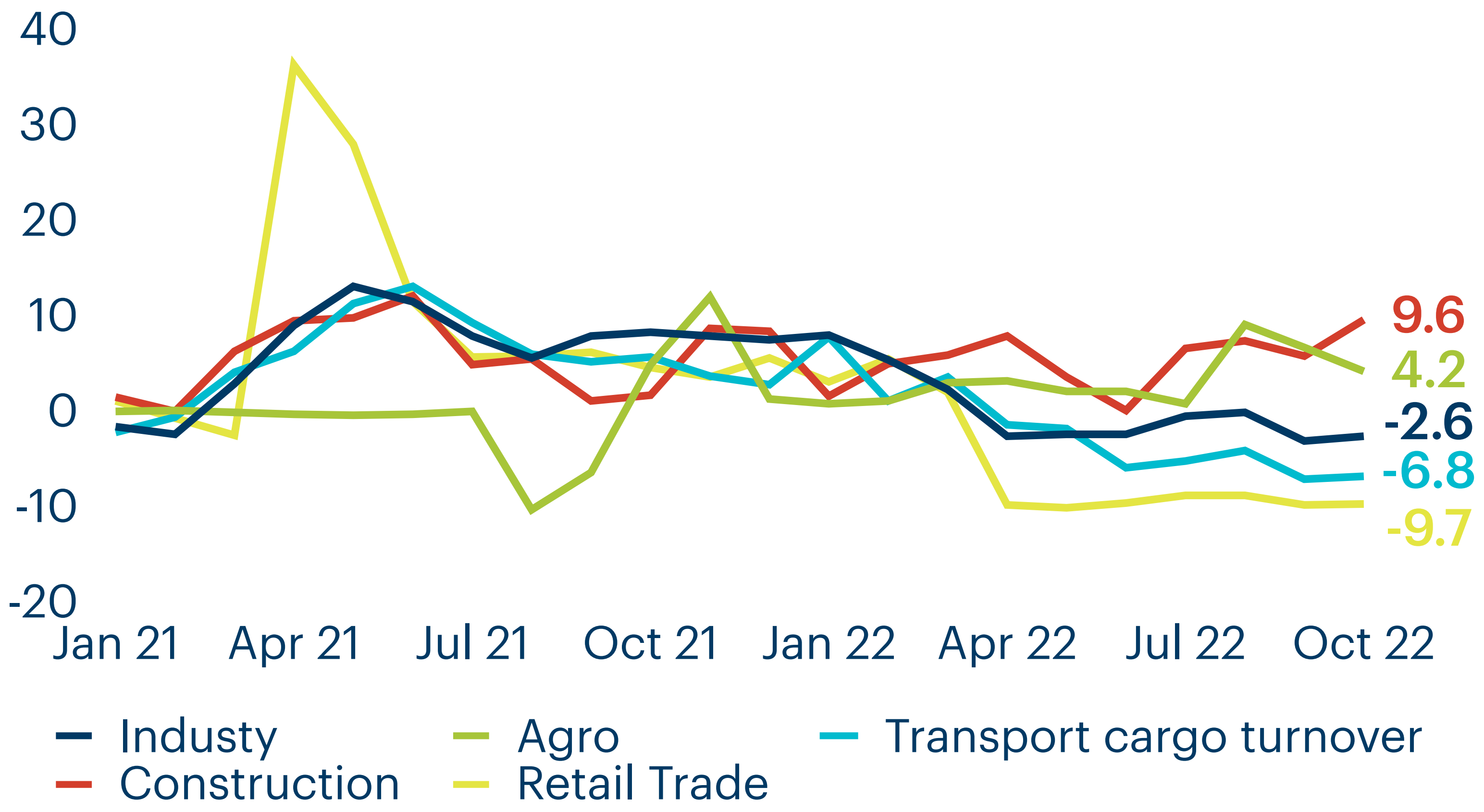
October 2022, %, YoY



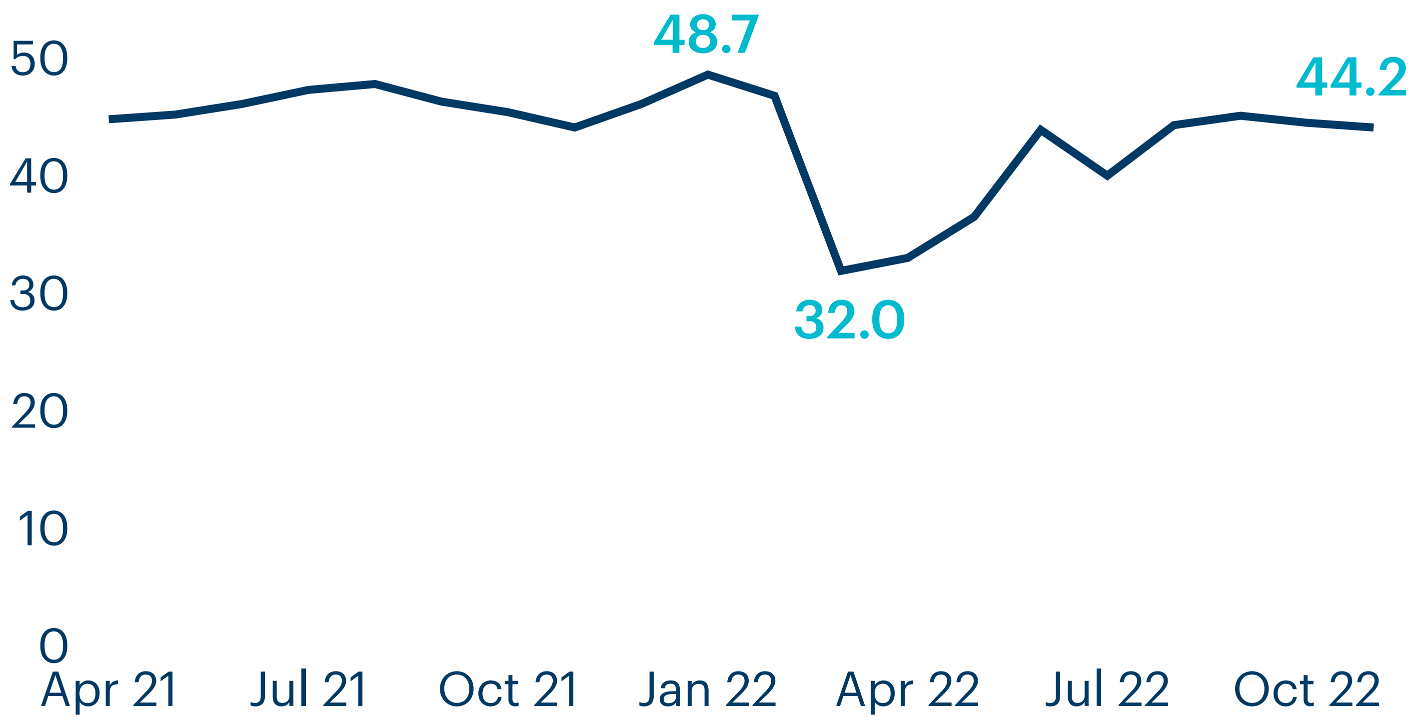
Jan-Oct 2022, %, YoY



Change in production of key sectors, YoY, %

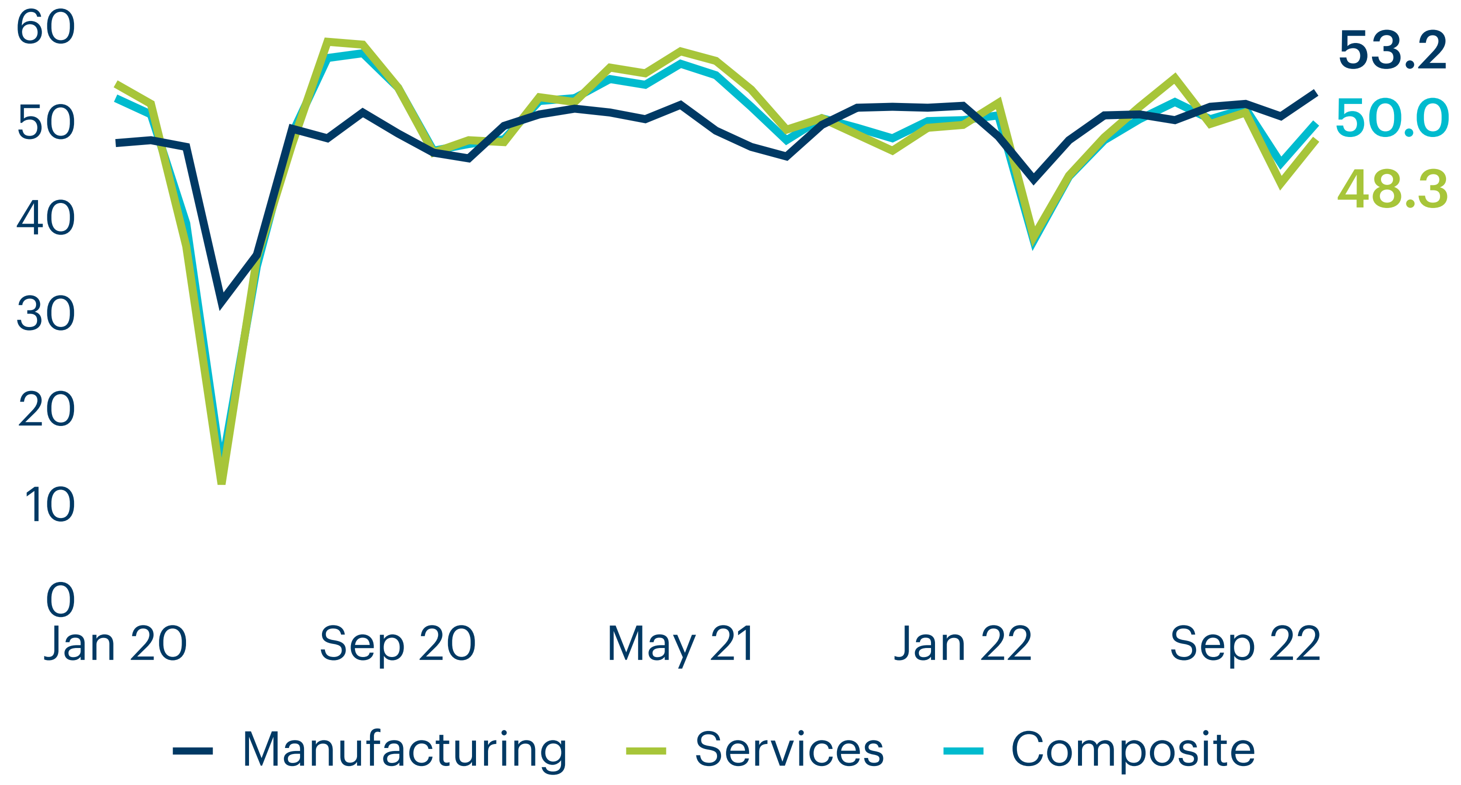


Business Environment Index



Max value = 50 points
Fall means deterioration of business environment

PMI



Source: Rosstat, Russian Union of Industrialists and Entrepreneurs (RSPP), S&P Global

Industrial Index for Metallurgy & Engineering Industries

As of November 2022, 54% of Russian metallurgy and mechanical engineering industries are covered by the coalition's sanctions*. To increase the scope of sanctions and enhance their impact on the Russian industrial sector, it is necessary to impose sanctions against Russian manufacturers and Russian exports.

Industries	Revenue of Russian producers 2021, bn USD	Sanctions coverage, % (■ Under Sanctions ■ Not U/S)	RF producers under sanctions, %	RF export under sanctions, %	Foreign companies (coalitions*) left RF, %
Ferrous metallurgy	92	45 %	45 %	27 %	100 %
Automotive construction	48	80 %	20 %	19 %	81 %
Precious metals (gold, silver, platinum)	16	19 %	16 %	13 %	100 %
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Shipbuilding	9	86 %	80 %	47 %	N/A
Railway transport	5	58 %	38 %	13 %	100 %
Titanium	1	1 %		1 %	N/A
Total	$199 bn	54% / 46%			

Source: KSE Institute estimates.

* - EU, USA, Republic of Korea, Japan, United Kingdom, Singapore, Norway, Canada, Switzerland, New Zealand, Australia, North Macedonia, Albania, Iceland, Montenegro, Andorra

** - Renault sold business to Russian governments for 1 ruble. Without this transaction, the indicator will be 100%

External Balance

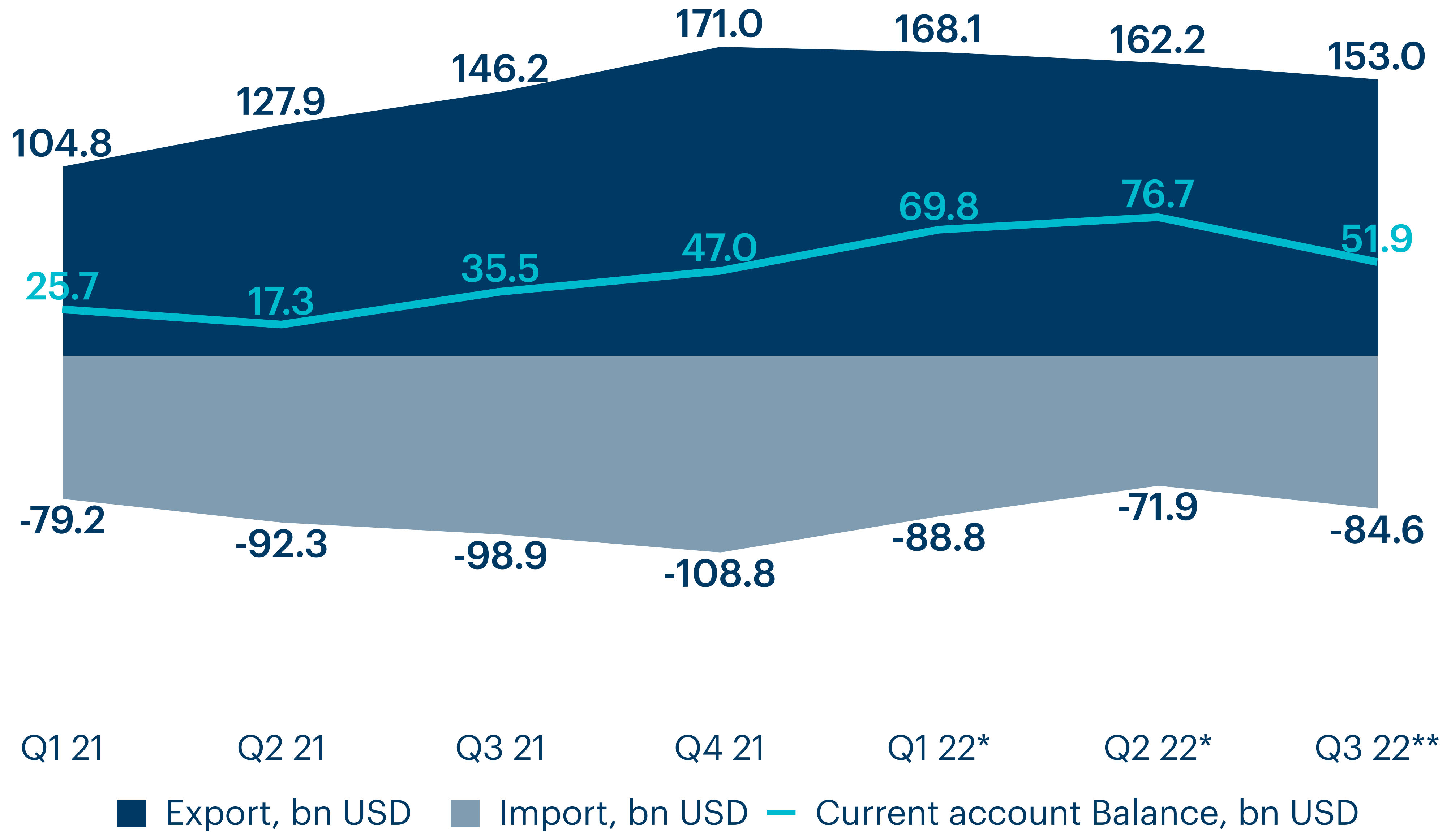
The current account surplus declines but remains high: According to the CBR, Russia's current account surplus came in at $52 bn in Q3 22, 32% lower than in Q2 22 ($77 bn). However, it is still 46% higher than in Q3 22. Growth of goods exports slowed down to 4.7% YoY while imports recovered and contracted at a more modest rate of 14.5%.

High commodity prices continue to support Russia's external accounts: Q3 22 data shows an increased effect of sanctions on Russian exports while persistently high oil and natural gas prices offset volume reductions. Imports have increased compared to Q2 22, which may reflect increased trade with friendly countries.

RF Current account and trade balance in 2021 and 2022, bn USD

	2021, bn USD					2022, bn USD			Growth, YoY		
	Q1	Q2	Q3	Q4	Year	Q1*	Q2*	Q3**	Q1	Q2	Q3**
Exports of goods and services	104.8	127.9	146.2	171	550	168.1	162.2	153	60.4 %	26.8 %	4.7 %
Imports of goods and services	79.1	93.2	98.9	108.8	379.9	88.8	71.9	84.6	12.3 %	-22.9 %	-14.5 %
Trade balance in goods and services	25.7	34.8	47.4	62.2	170.1	79.3	90.3	68.4	208.6 %	159.5 %	44.3 %
Current account	22.4	17.3	35.5	47	122.3	69.8	76.7	51.9	211.6 %	343.4 %	46.2 %

RF Current account balance, bn USD



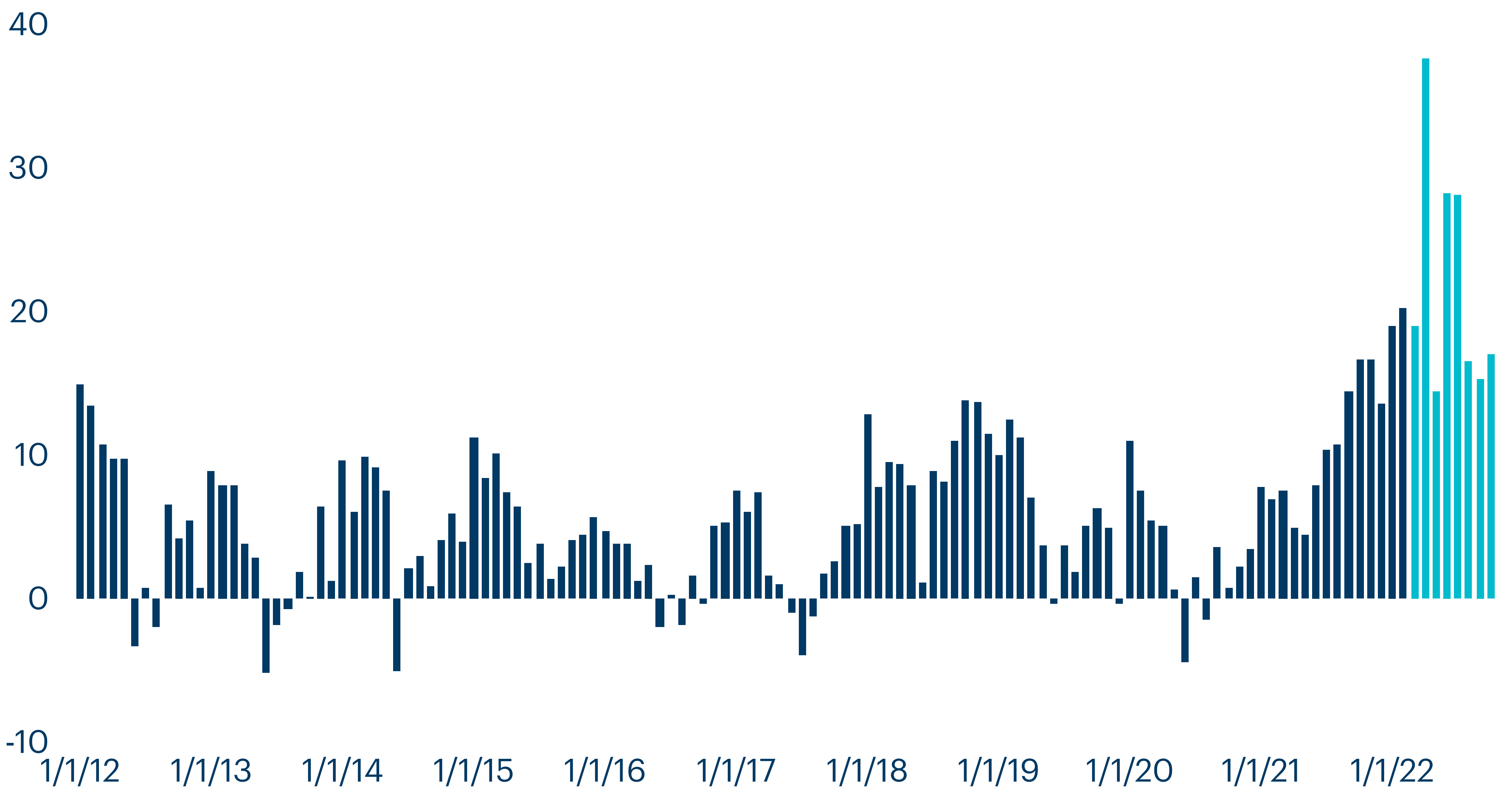
Source: CBR. * Reviews values, ** CBR Assessment

Current Account Dynamics

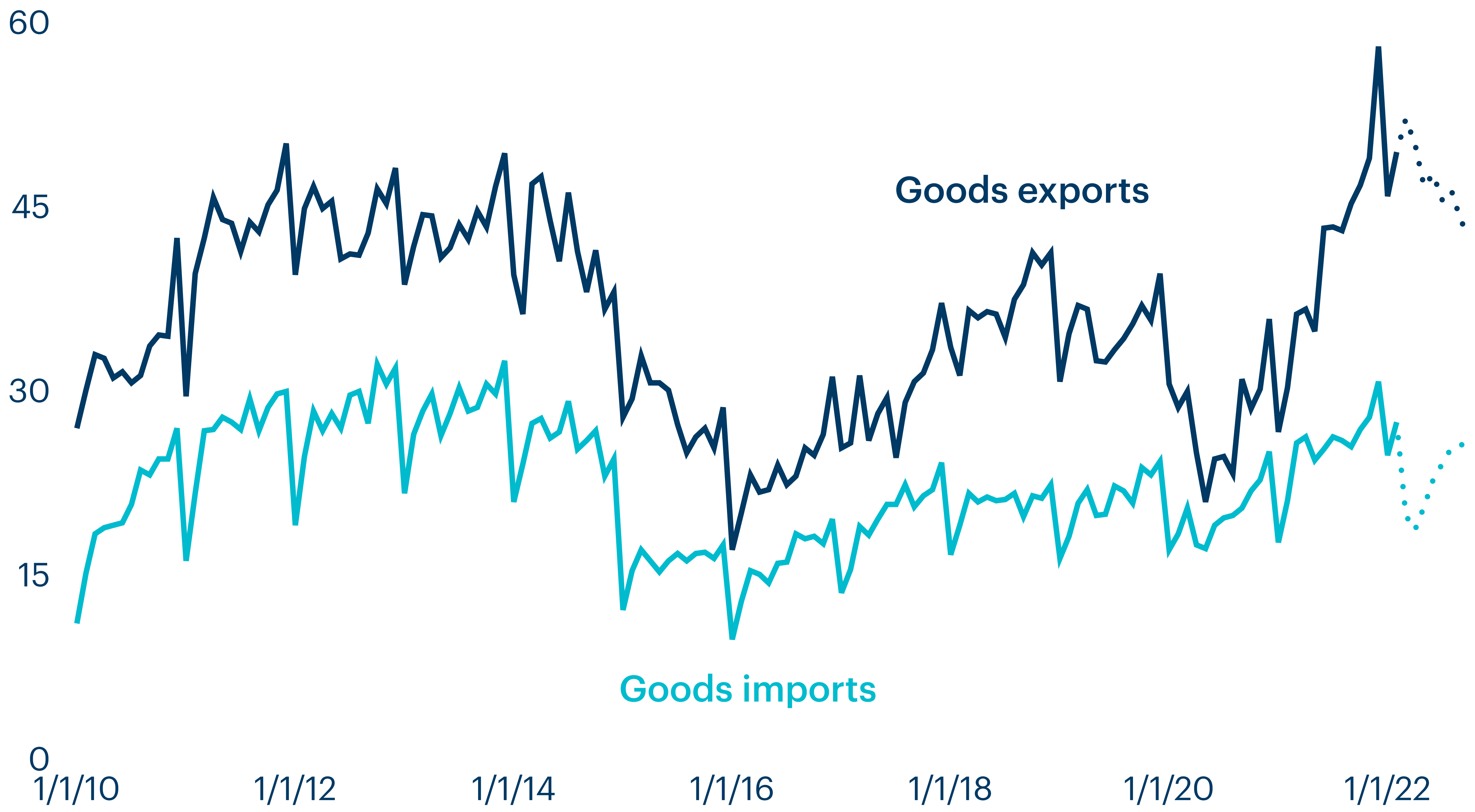
Elevated commodity prices continue to support external balance: High prices for Russia's key exports lead to persistently high current account surpluses. Year-to-date (January-October), Russia's external balance stands at $215.4 bn — more than double the number over the corresponding period last year and already nearly $100 bn higher than the 2021 total.

Trade dynamics are beginning to change: Monthly current account surpluses are smaller than over the summer, likely due to three factors: (1) commodity prices have fallen somewhat in recent months, in particular oil and gas prices; (2) export volumes of oil and gas are beginning to decline as a result of sanctions and Russia's reduction of flows to Europe; and (3) goods imports have bounced back after a sharp drop in Q2 22.

Monthly current account surplus, bn USD



Goods exports and imports, bn USD

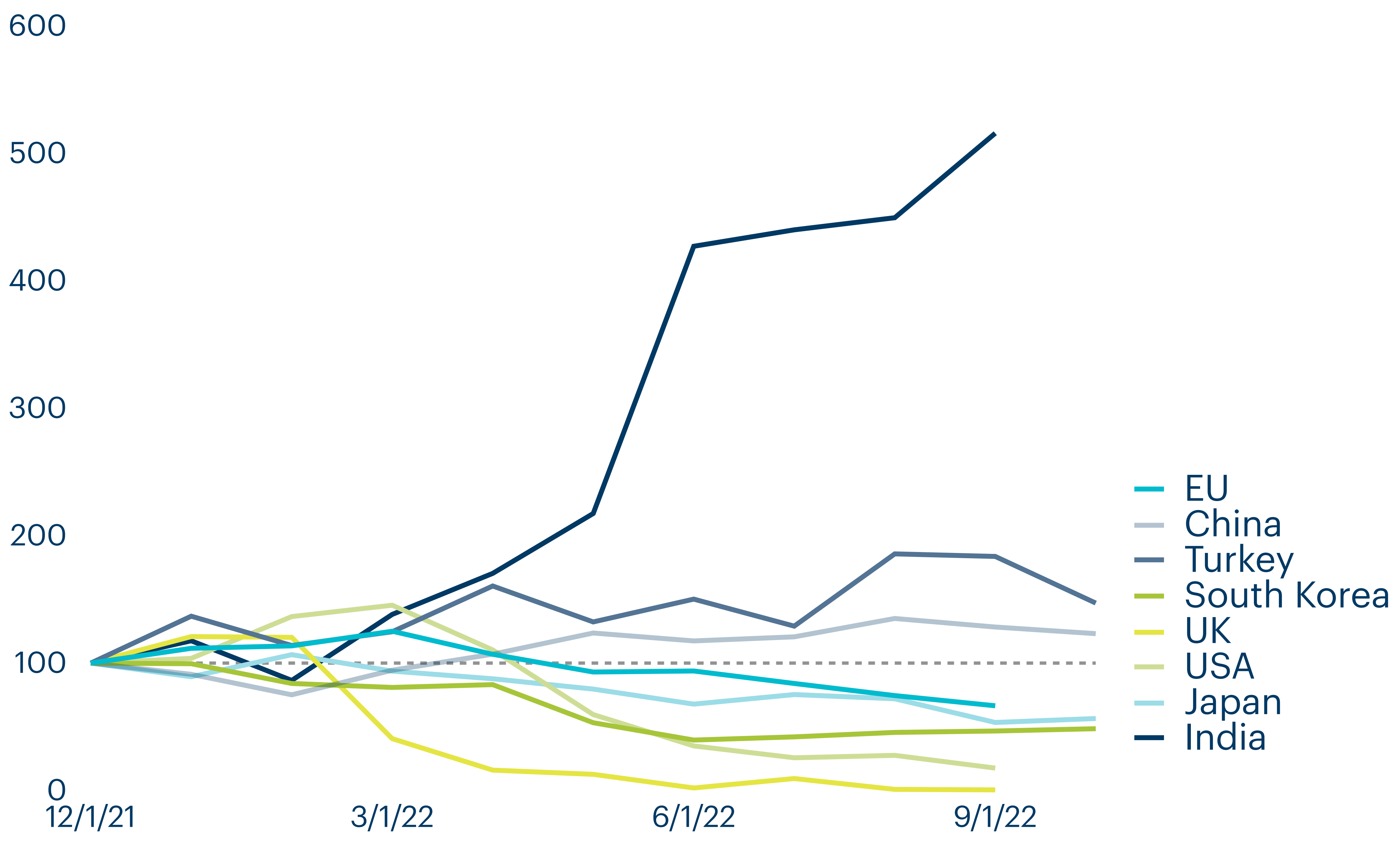


Source: CBR (left chart). CBR plus other countries' national authorities

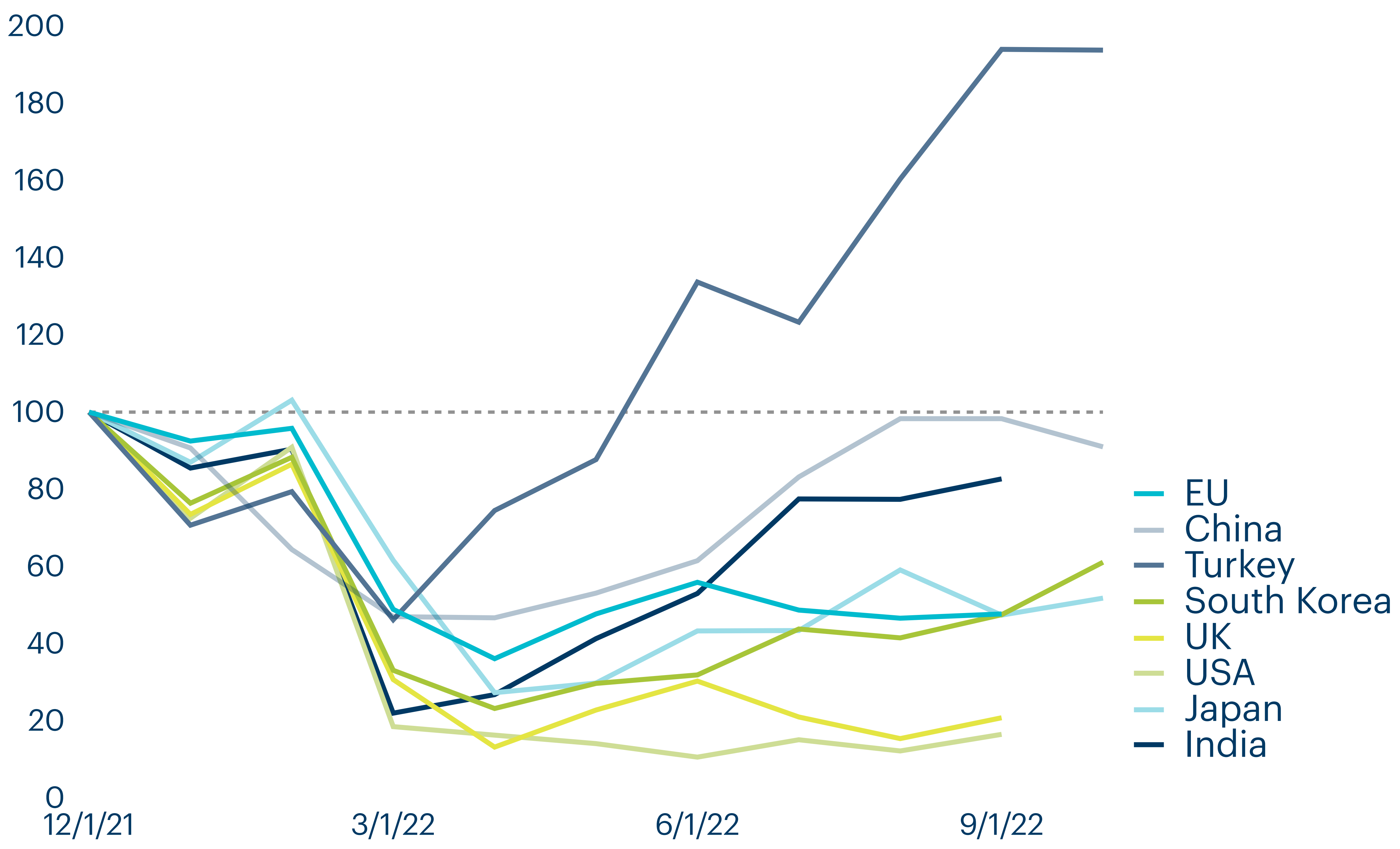
Trade Dynamics

Shifting composition of exports and imports: Due to the imposition of sanctions, the destinations of Russian exports and origins of Russian imports have changed significantly. Overall, we see a reorientation toward China, India, and Turkey while traditionally important trading partners such as the European Union are becoming less important.

Exports by country, index (Dec. 2021 = 100)



Imports by country, index (Dec. 2021 = 100)

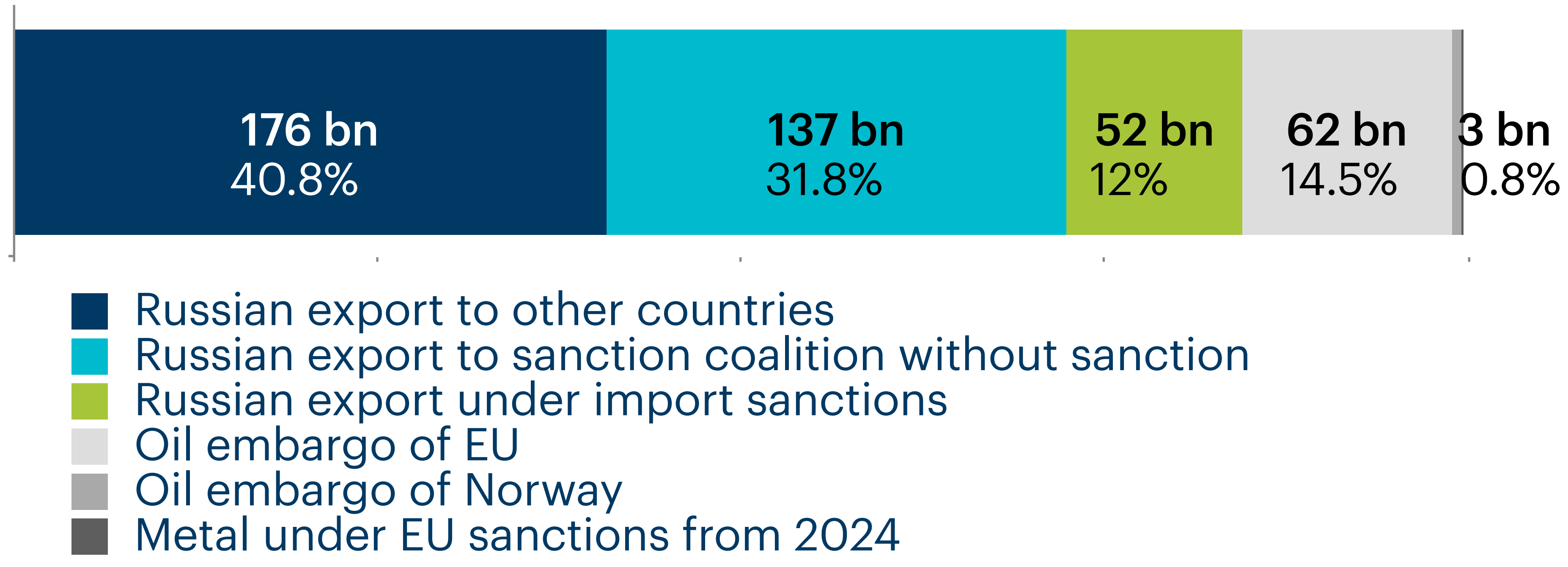


Source: CBR plus other countries' national authorities

Coverage of Russian Trade with Sanctions

As of Nov 2022, 12% of Russian exports are covered by sanctions imposed by the sanctions coalition*. When the EU and Norway` oil embargo are in place, ie by February 5th 2023, 26% of Russian exports will be sanctioned. At the same time, sanctions cover 25% of Russian imports.

Russian EXPORTS in 2021 by group of countries and coverage by sanctions



Russian IMPORTS in 2021 by group of countries and coverage by sanctions

Note: The analysis does not take into account sanctions on dual use goods. If dual use goods were sanctioned not item-by-item, but as complete trade categories of 6 digits, the sanction coalition would sanction an additional ~$15 bn in Russian imports. The EU alone exports $7 bn of such dual use goods to Russia, and overall, Russia imports (2021) ~$22 bn of goods in these categories.

Source: KSE Institute estimates.
*EU, USA, Republic of Korea, Japan, United Kingdom, Singapore, Norway, Canada, Switzerland, New Zealand, Australia, North Macedonia, Albania, Iceland, Montenegro, Andorra

Urals and Brent prices before and after invasion

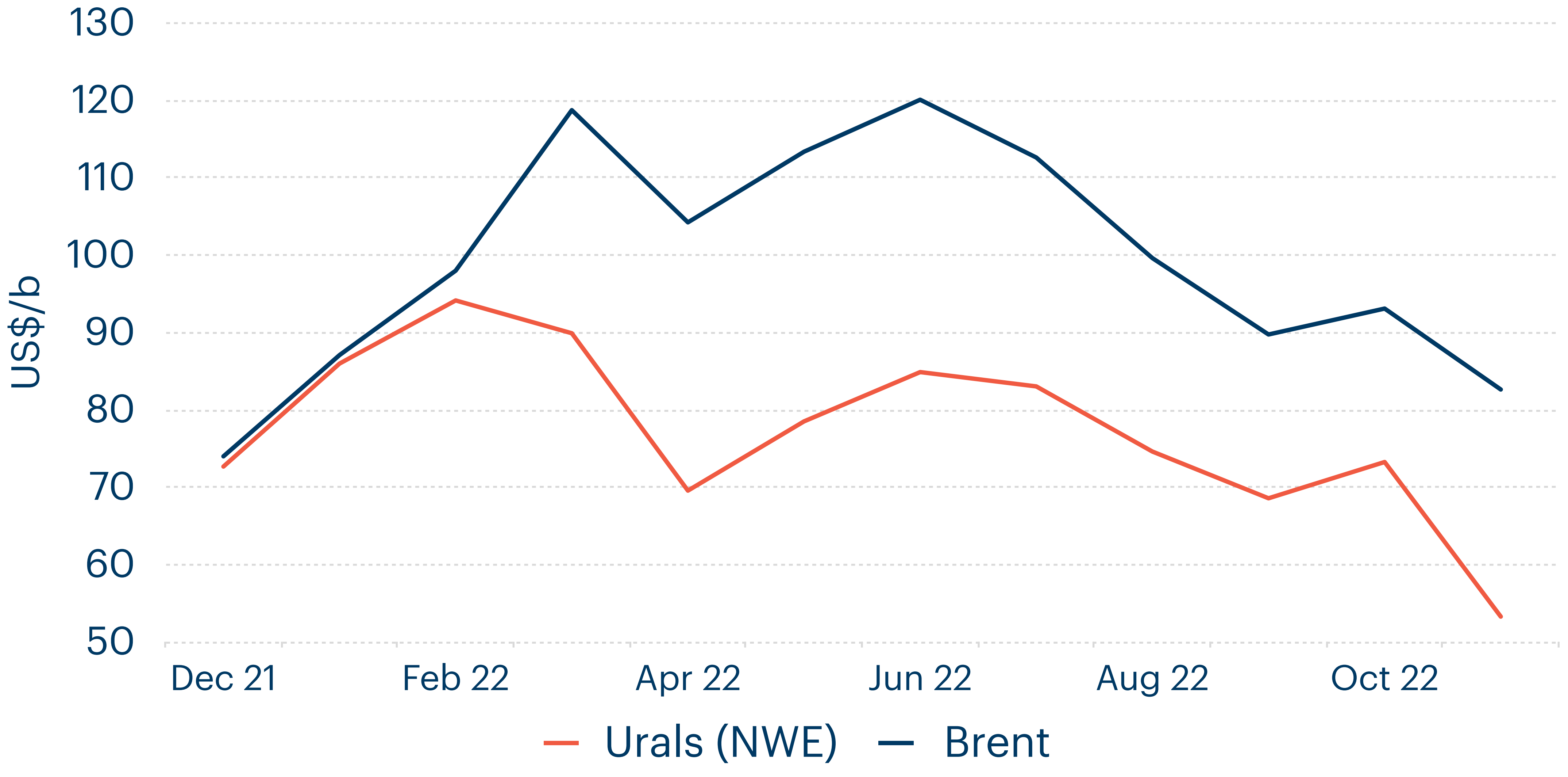
The threat of an embargo and price cap on Russian oil by democratic states has widened the discount on Urals over Brent from US$ 1-2/bbl before the invasion to US$35/bbl in the 2Q202.

The discount narrowed to US$ 20-30/bbl in July-October but it widened again to US$29/bbl on Nov. 28, on the eve of the EU embargo on crude oil which comes into effect on Dec 5, 2022.

The Russian oil revenues were reduced by around $50 bn by the nessecity to reroute oil from the EU, US, UK and OECD Asia to other destinations.

The effective enforcement of sanctions may further widen the discount to current market prices and curb Russian oil earnings limiting its ability to use them to finance the invasion.

Urals and Brent prices in December 2021-November 2022



Source: IEA, *S&P Global for Nov 28, 2022 prices

Potential effects of the Oil Price Cap

Russian oil and gas revenues are projected to rise from just under $250 bn in 2021, around the 10Y average, to $350 bn in 2022

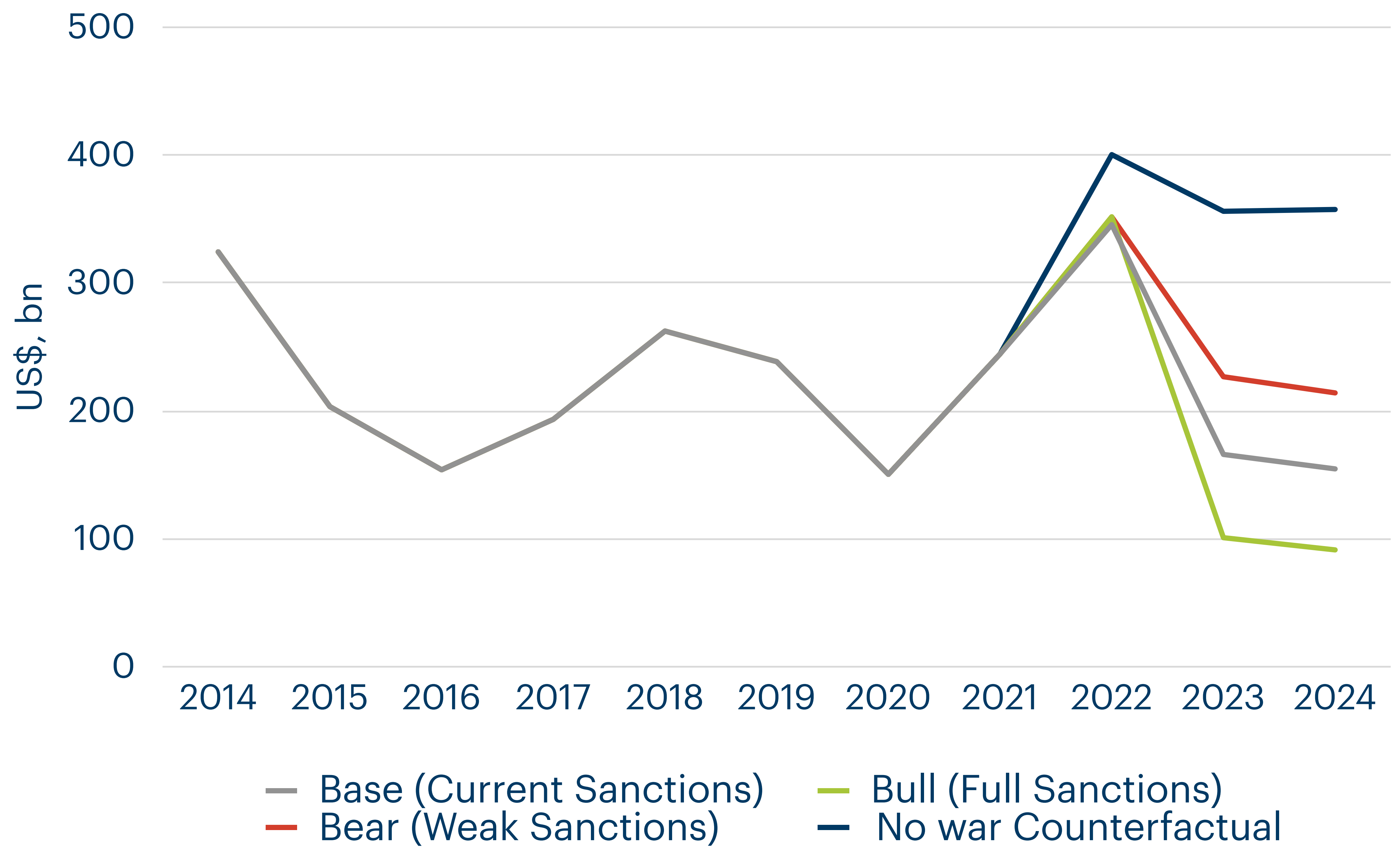
In the BASE case (oil price cap at US$ 55/bbl and status quo of sanctions), they will contract to $165 bn in 2023, and be running at a quarterly pace of under $5e0 bn in 2H-23 - already a problematic level for the Russian economy.

In the BULL (full sanctions) case, with a wider discount on oil (US$ 50/bbl over Brent price forecast, which corresponds to US$ 35/bbl price cap) and lower LNG prices, revenues fall to a record low of around $100 bn.

In the BEAR (weak sanctions) case, with a more modest oil price discount (US$ 10/bbl over Brent price forecast, which is corresponds to US$ 75/bbl price cap) and less decline in oil export volumes, revenues fall but to a still robust $225 bn in 2023.

Capping Russian oil at US$ 35/bbl or US$ 50 below market prices, will effectively curb Russia's oil earnings and help bring the war rapidly to an end. This should be combined with robust enforcement to track Russian oil shipments and name any companies involved in schemes to circumvent sanctions.

Actual and projected Russian oil revenues in 2014-2024



Source: KSE Analysis. See Yermak-McFaul Sanction Groun Working Paper #10 "Implementation of the Oil Price Cap" for more details

Potential Effects of the Oil Price Cap: Conclusions

Price cap at $60-70/b would keep Russian O&G export revenues at ~$230 bn in 2023 not leading to actual financial hardship and rather adding to current account surplus of ~$200bn (E. Ribakova, B. Hilgenstock in Bruegel). It is worse than introducing no price cap at all

Price cap at $30-$50/b leads to ~$100-166 bn export O&G revenues in 2023 which achieves the objective of generating financial hardship in Russia. With full or partial compliance of 3rd countries and Russia with price cap – oil volume lost is 2-2.4 mbd (less than 3.3-3.9 if there is no price cap instead of tankers-insurance embargo)

Late introduction of price cap (generous exemptions) – no financial hardship

If market oil prices grows >30-50% instead of going down by 20% - the effect of oil embargo may be reduced

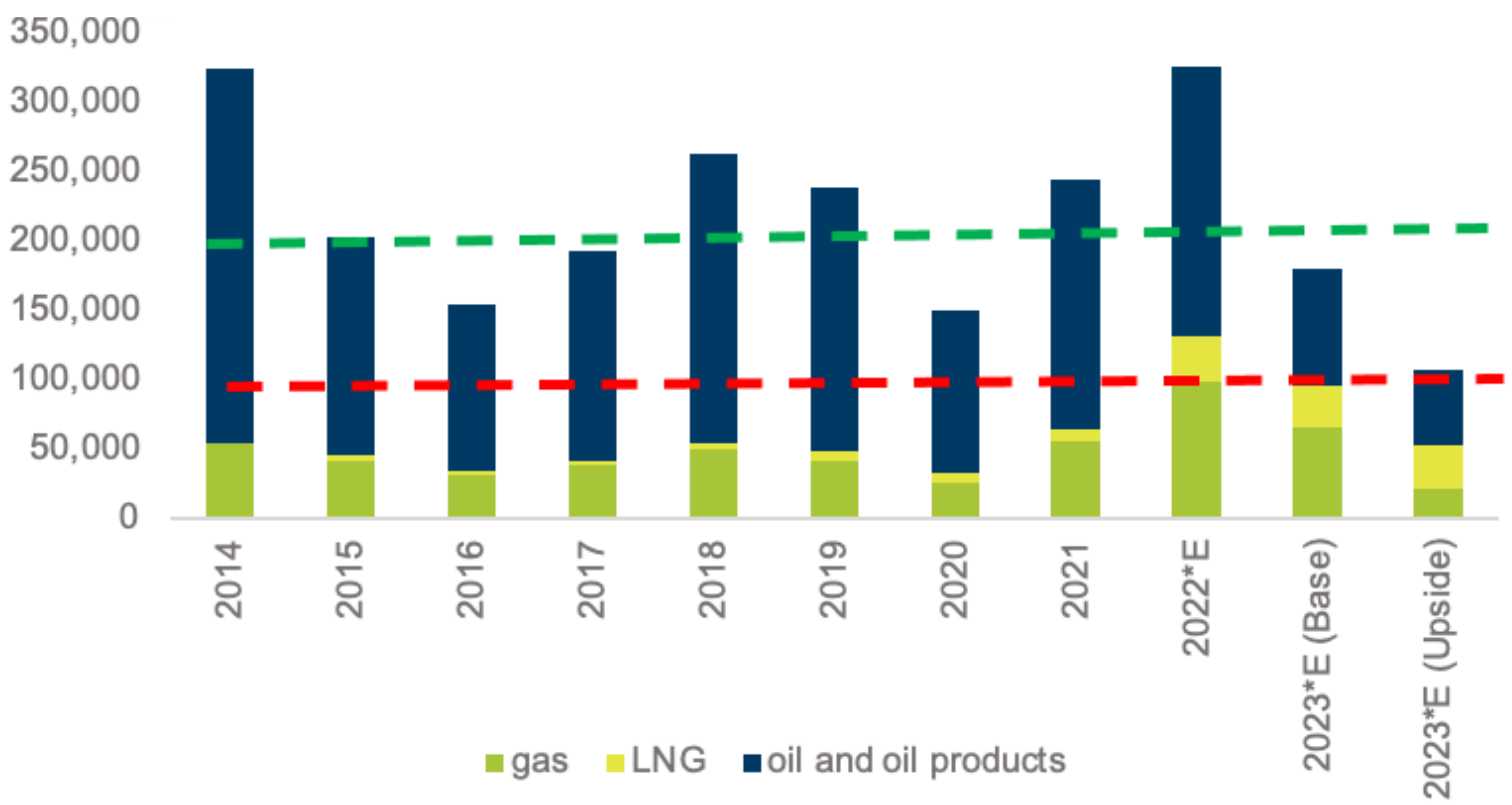
Source: KSE Analysis. See Yermak-McFaul Sanction Groun Working Paper #10 "Implementation of the Oil Price Cap" for more details

Potential effect of Oil Embargo

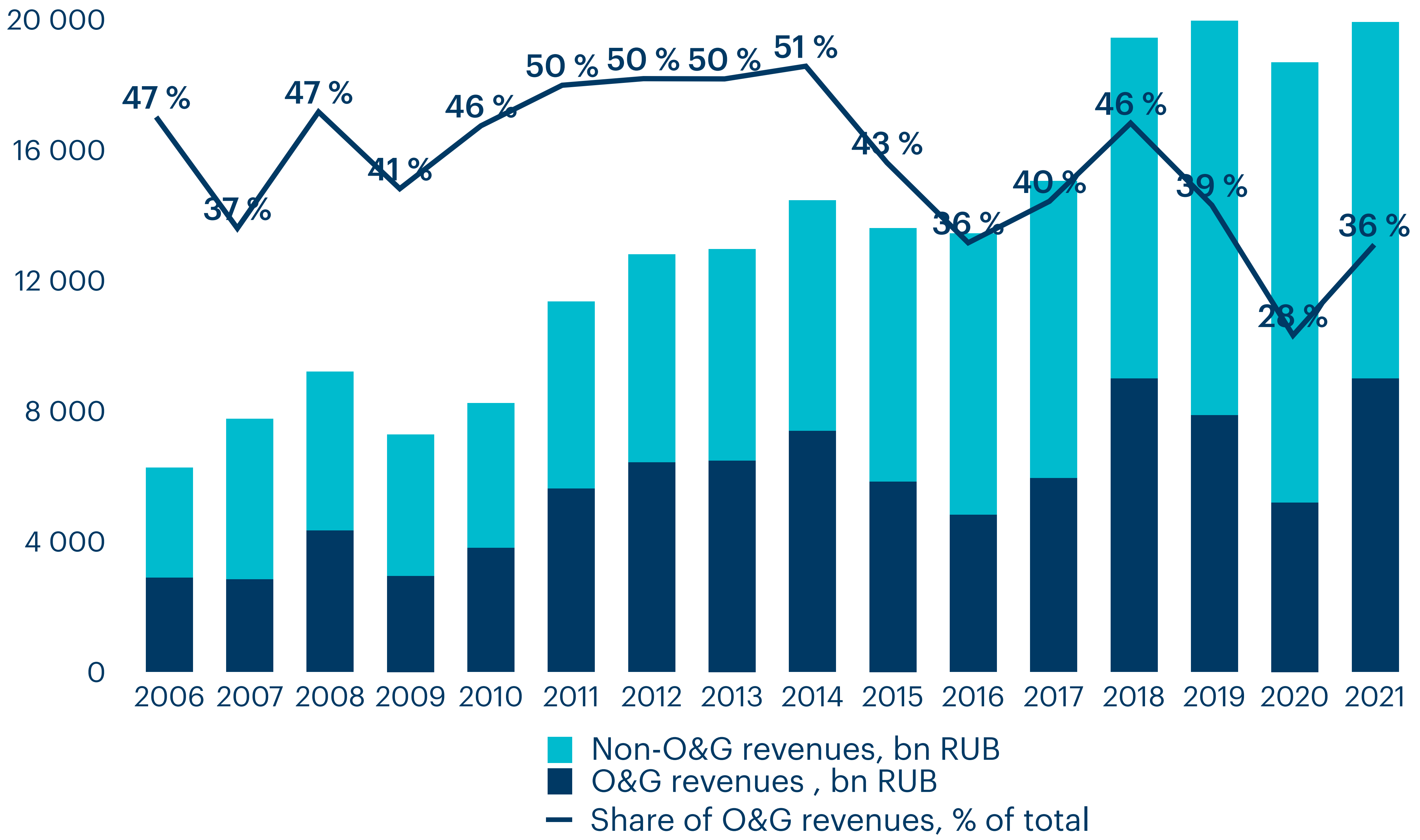
Next year Russia will experience a massive drop in Oil&Gas revenues as the European oil embargo comes into force, with revenues falling by over 40% from around $325 bn in 2022 to $165 bn in 2023 in our base case, and running at around the critical $150 bn a year pace from mid-2023.

Russian oil and gas export earnings 2014-2023, USD mln

Green line = adequate, and red line = inadequate, export earnings to secure stability



Oil&Gas Revenues, as a share of Total Budget Revenues



Source: KSE Institute estimates. See Impact of Sanctions on the Russian Economy for more details

Russian Natural Gas Exports to the EU

Russia loses the gas battle it is waging against the West

Before the invasion of Ukraine, 65% of Russia's total gas exports went to Europe.

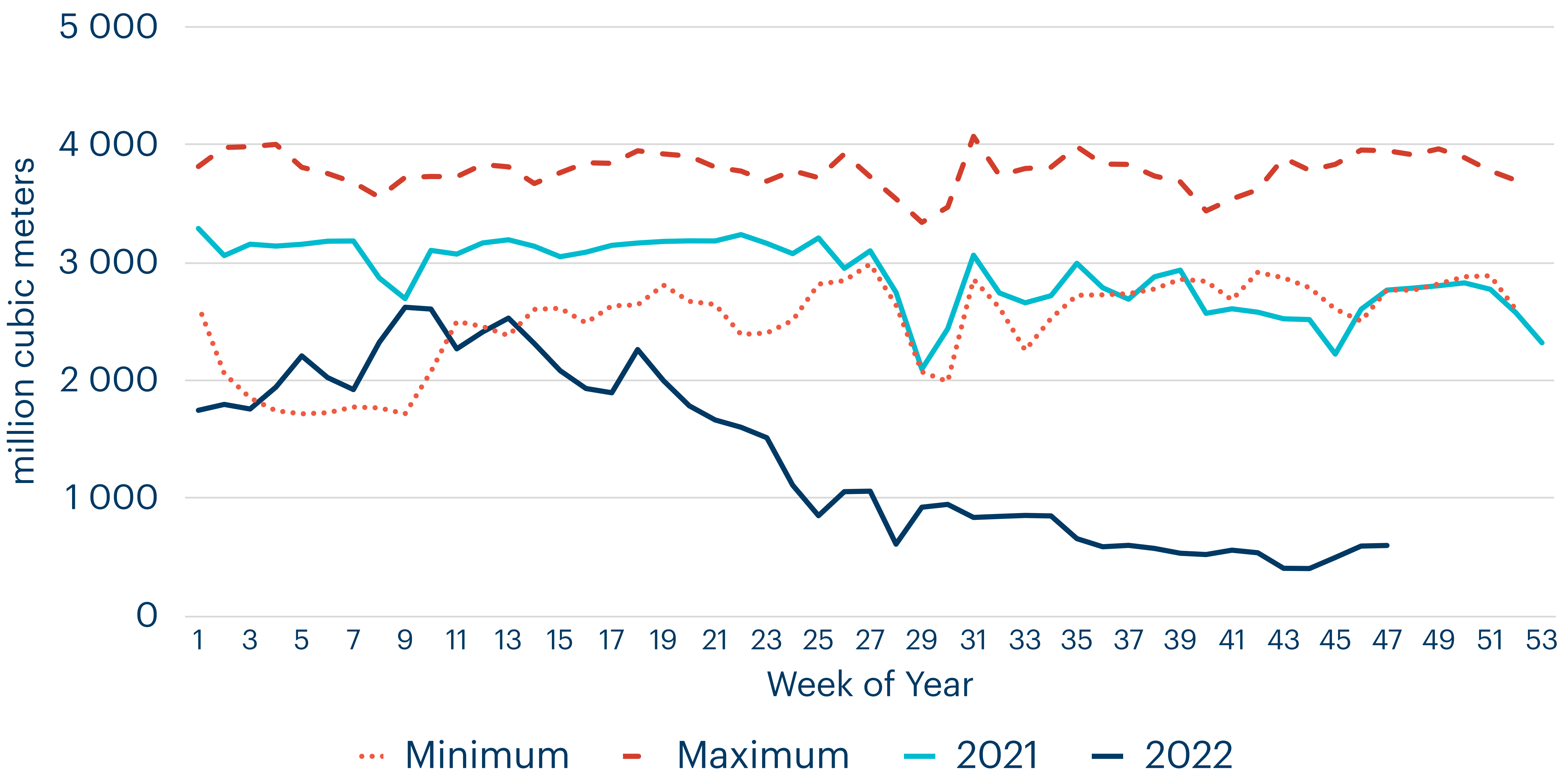
Russia sharply curtailed exports to the EU to blackmail its long-term partner to cease the support for Ukraine. Europe has offset the sharp falls in Russian gas supplies through LNG imports, alternative pipeline supplies from Norway, setting up minimum storage obligations and demand restraint targets for the 2022/2023 heating season.

As of Nov 30, 2022, the EU storages were 92% full, much outperforming the approved target and guaranteeing safe buffer for the upcoming winter.

At the same time, Russia will not be able to redirect the gas to other markets and the IEA forecasts its production cut by 111 bcm in 2022 and 139 bcm in 2023 over 2021.

Overall Russian oil and gas financial losses are estimated by the IEA at US$ 1 trillion by 2030 compared to no invasion scenario.

Total Russian natural gas exports to the EU by all routes



Source: Bruegel datasets

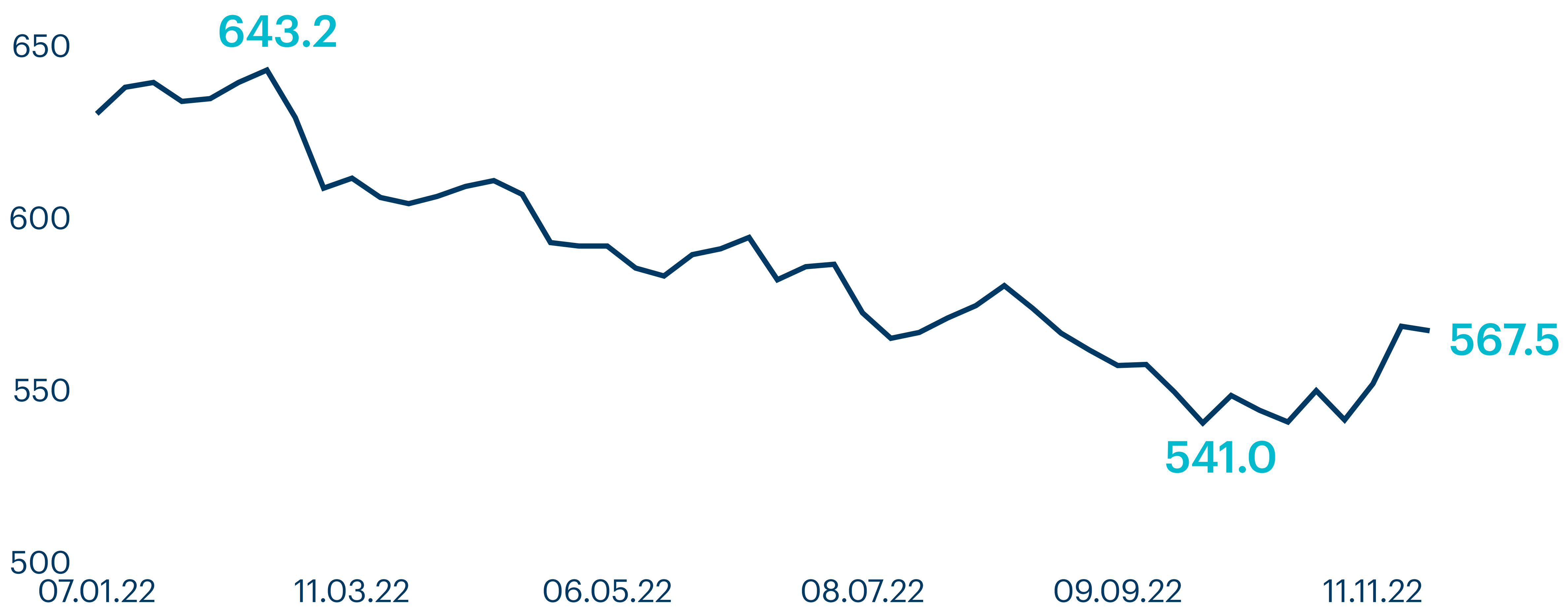
International Reserves

International reserves dropped from a historically high level of $643.2 bn to $567.5 bn (Nov-25) over the nine months of the war, although this decline largely reflected the impact of a stronger dollar on the value of non-dollar reserves, rather than a drain of FX. In addition, over half (~$300bn) of the reserves have been frozen by sanctions imposed on the CBR imposed by Ukraine's allies. As a result these reserves cannot be accessed by the Russian authorities.

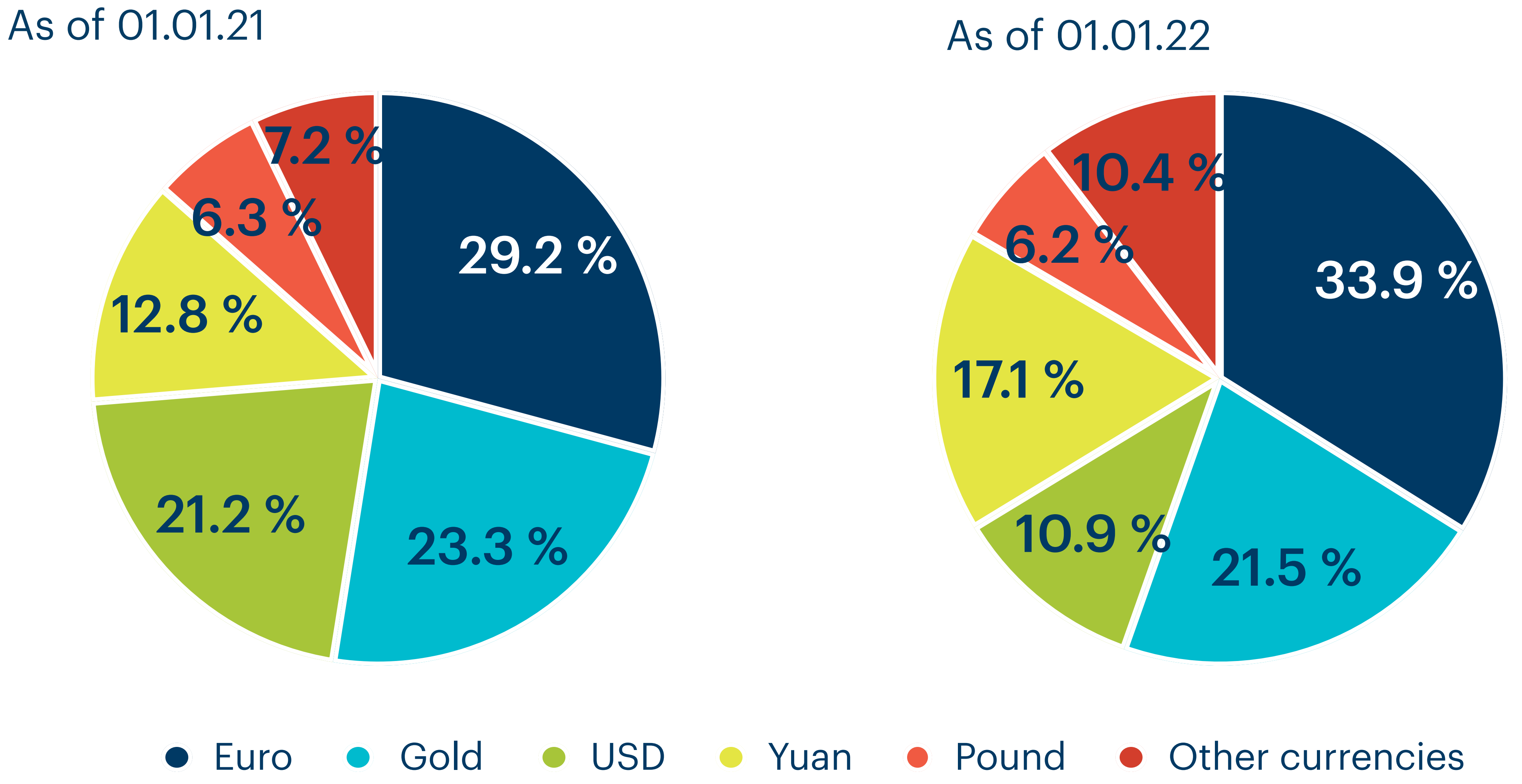
On July 14, Putin signed a law, permitting the suppression of information regarding the value and structure of reserves by classifying as a state secret, although the CB has continued to published weekly data on the total amount of international reserves.

In addition, we expect some state-owned enterprises in oil and gas (notably Rosneft and Gazprom) to have built up significant surplus on their balance sheet as a result of recent high oil and gas prices, and the government would be able to call on these funds.

International reserves, bn USD



Structure of international reserves, %



Source: CBR

National Wealth Fund

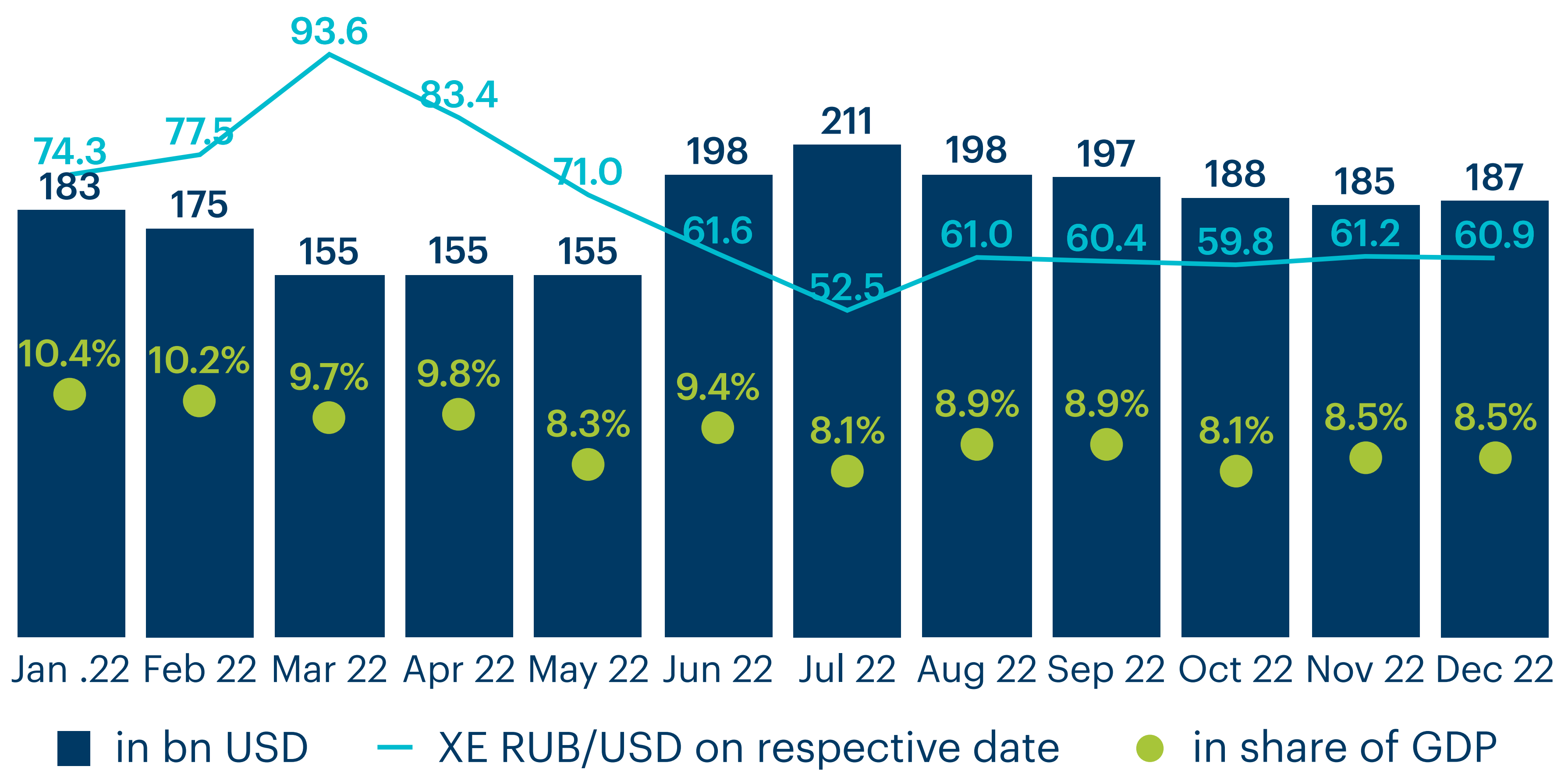
As of December 1, the NWF amounted to $186.5 bn or 8.5% of GDP. Although its absolute value increased as a result of ruble appreciation and revaluation of the Fund's assets, the NWF has lost 1.9 p.p. as a share of GDP since the beginning of year.

NWF is used to support economy. The value of equity and bonds of Russian companies purchased since February 24 amount to 528 bn RUB.

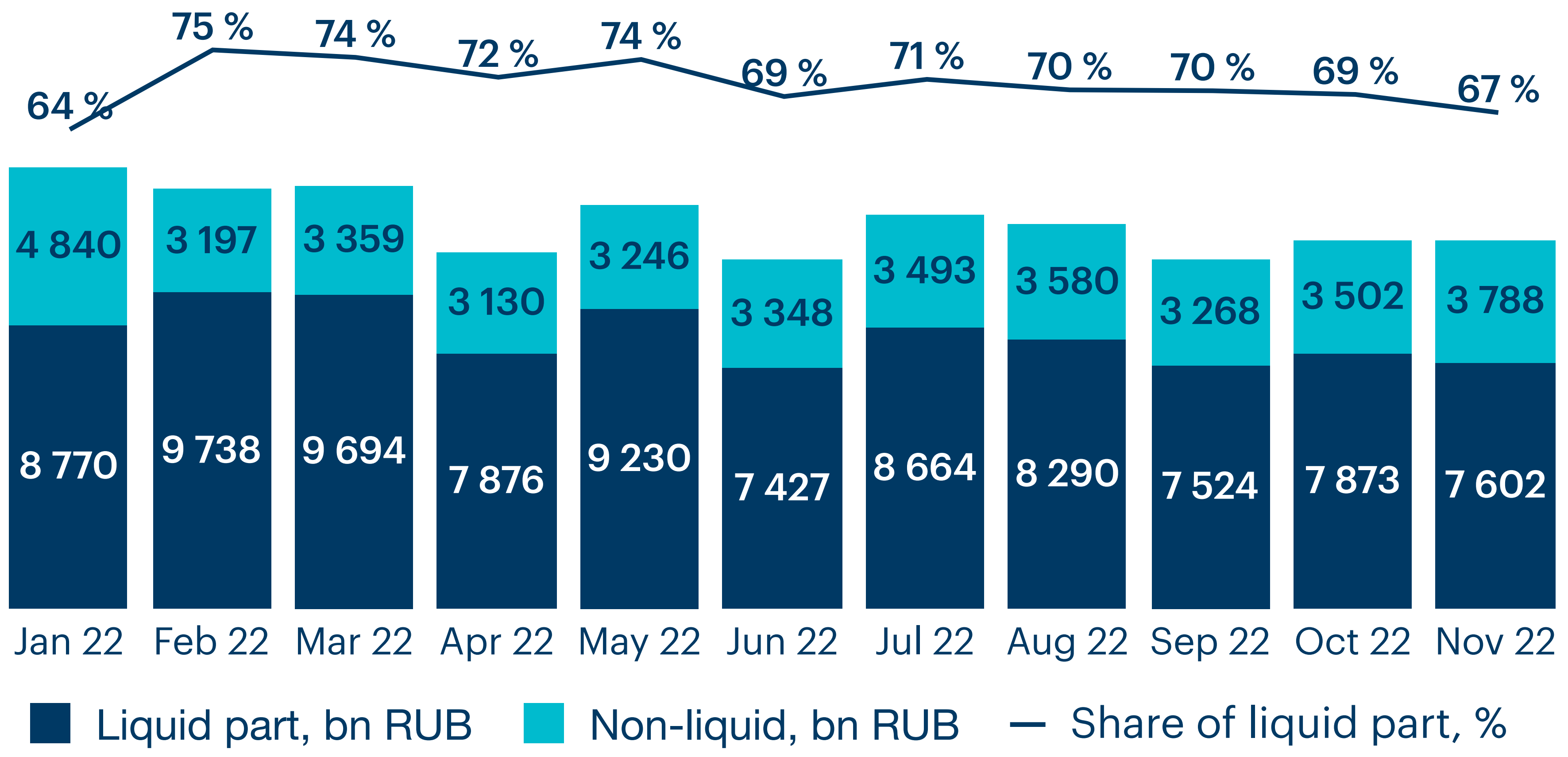
Also, RF MinFin confirmed use of the NWF to cover budget deficit — in October and November a total of 559.7 bn RUB were taken for this purpose. NWF could be reduced to zero in two years, if the Russian authorities continue to use it to support the economy and budget without any restrictions, according to Russian media reports.

Russia has a substantial deficit to finance, and is running down its reserves to do this. Notably, in October and November, the Russian authorities used 800 bn RUB from Gazprom (two trashes of 400 bn RUB) and 559.7 bn RUB from the NWF to finance the budget.

NWF dynamics



Structure of NWF



NWF support of Russian business during war:

	bn RUB*
DOM.RF	50
Russia Railway	268
Gazprombank	50
Aeroflot	52.5
JSC Siberia Airlines	11.9
GTLK	58.3
Ural Airlines	2.3
Rosavtodor	35

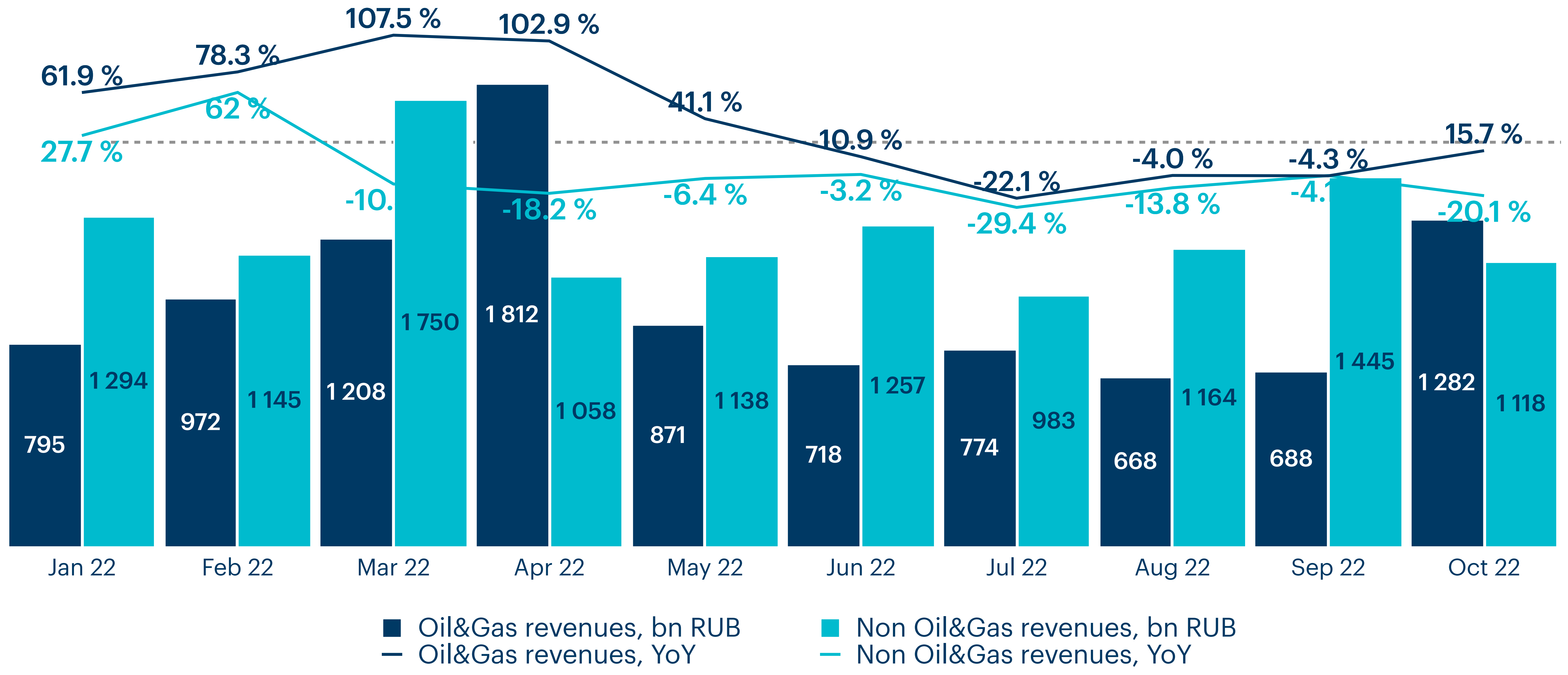
Source: RF MinFin. * Value of shares / privileged shares / bonds purchased at the costs of NWF

Fiscal Accounts

Oil and gas revenues have declined in recent months: Following the sharp pickup in the spring, revenues from extraction and export of hydrocarbons are in decline, reflecting somewhat lower commodity prices, lower volumes, and a stronger Ruble which reduces their value in local currency terms. The October increase reflects a large, and exceptional Gazprom payment of roughly ~400 bn RUB, the first of three tranches totaling 1.2 trln RUB.

Non-oil and gas revenues collapsed: Over the same period other revenues declined by 20.1% YoY. This supports the view that problems with industrial production and other non-Oil and gas sectors as a result of imposed sanctions are growing.

RF Budget revenues, monthly



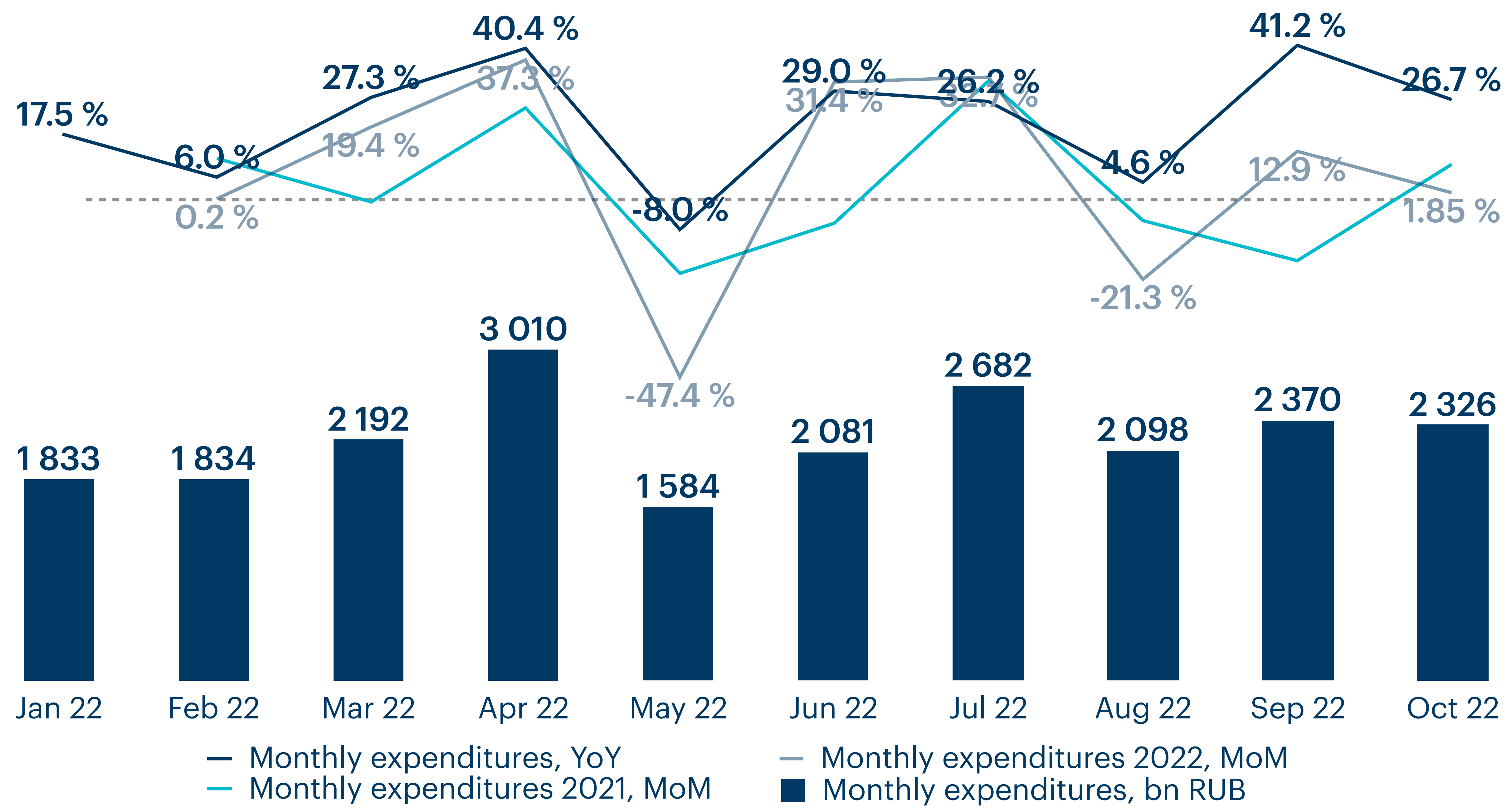
Source: RF MinFin

Fiscal Accounts

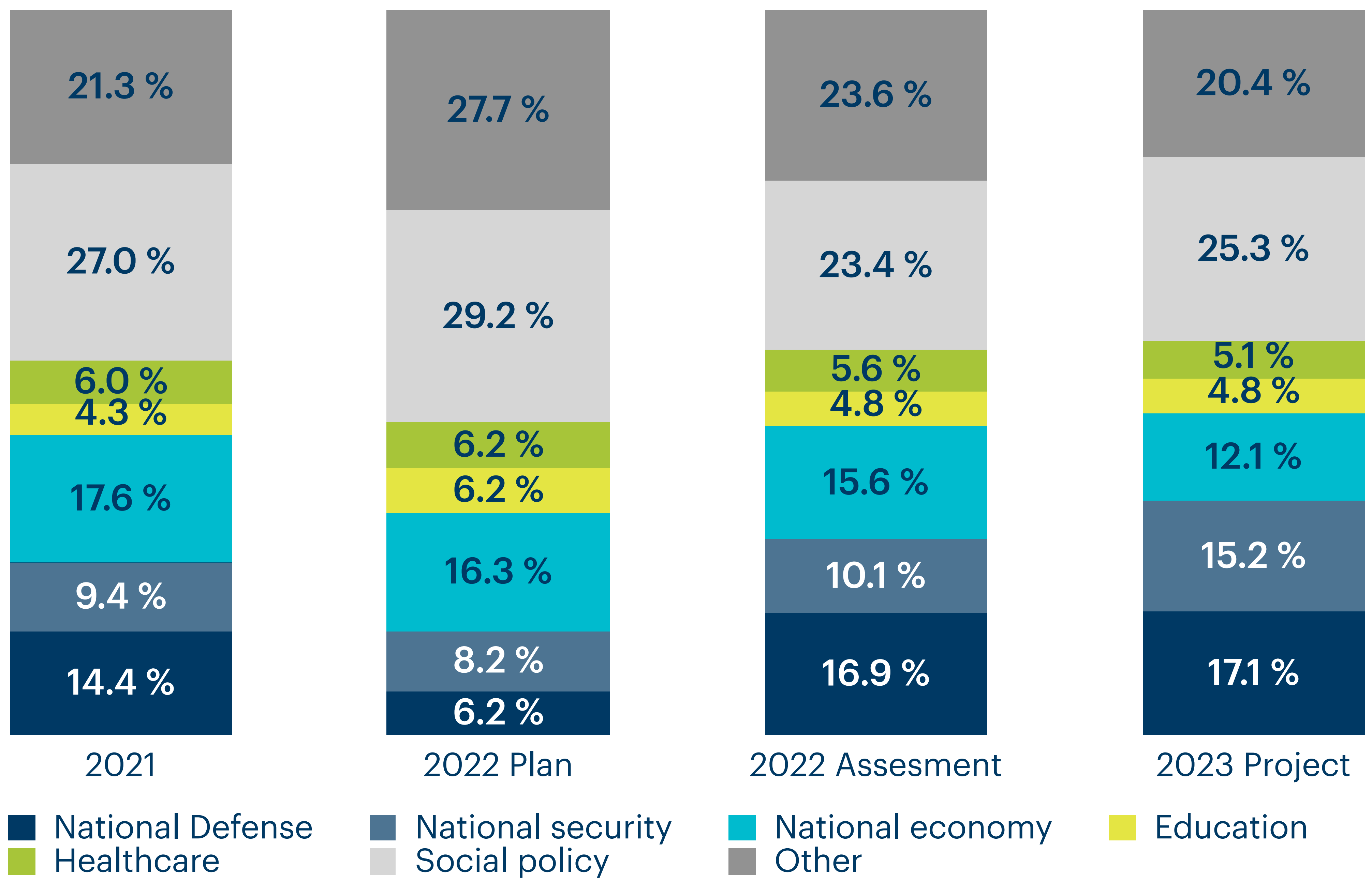
Acceleration of expenditures: Increases in September (+41.2% YoY) and October (+26.7% YoY) are likely to be result of announced mobilization. Compared to the initially adopted budget for 2022, the share of national defense spending increased almost dramatically, while national security added 1.9 p.p. social policy lost 5.8 p.p.

For 2023, further growth of military spending is expected — according to current estimates, the share of national defense spending will increase to 17.1% and of national security to 15.2% next year.

RF Budget expenditures, monthly



Structure of expenditures, %



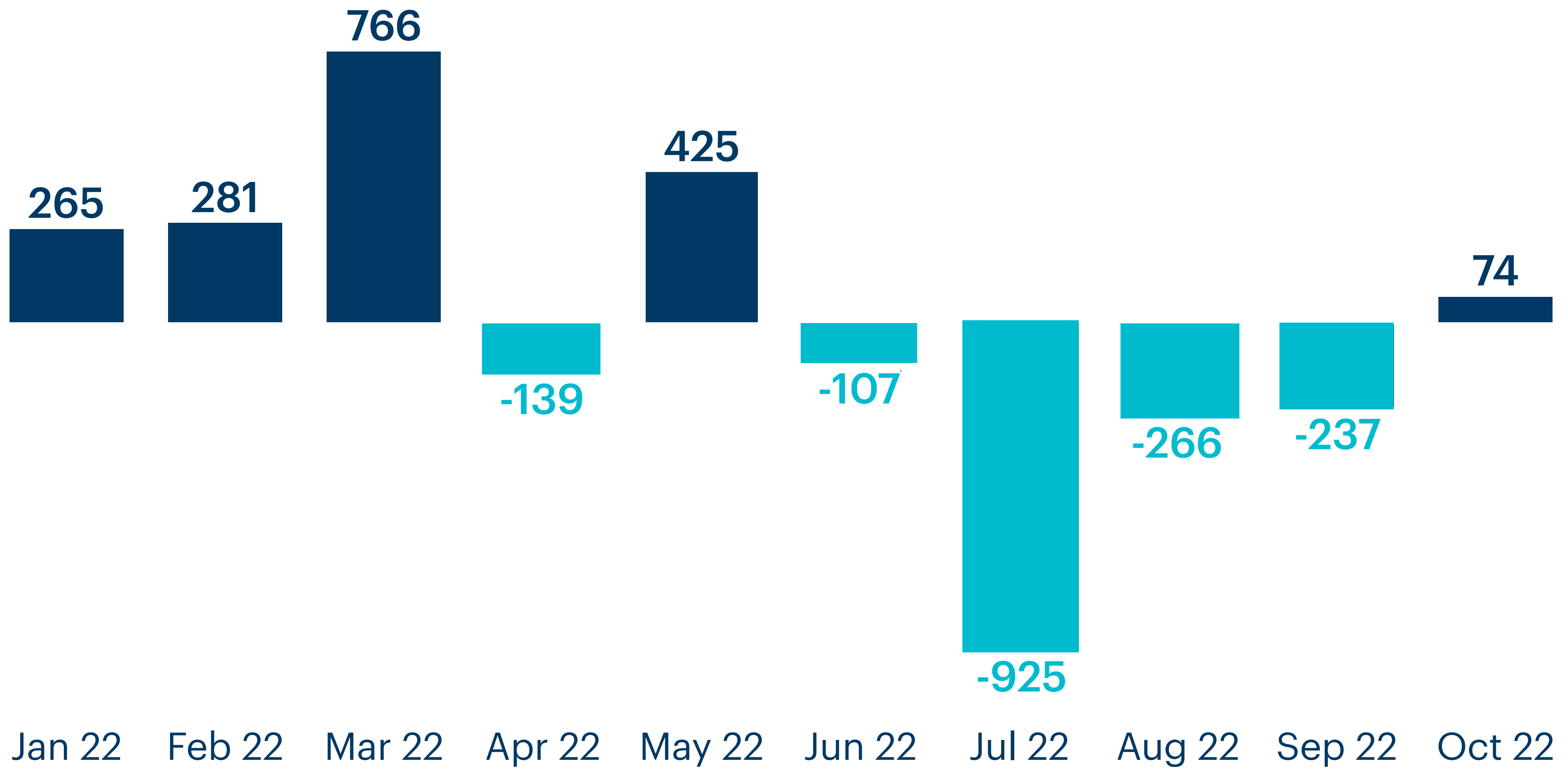
Source: RF MinFin, RF Accounts of Chamber, RF State Duma

Fiscal Accounts

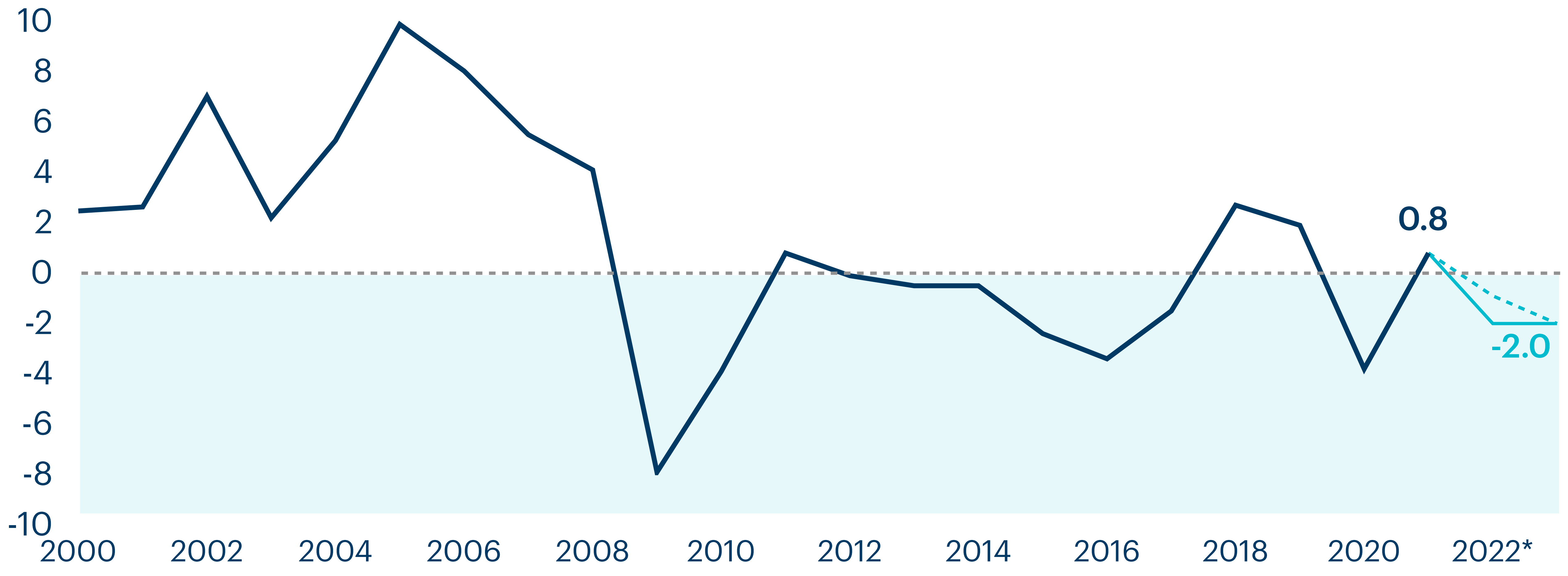
Deficits are accumulating: For four months in a row, the Russian budget has run a deficit, largely wiping out the surplus of the previous months. Over Jan-Sep, the surplus reached 55 bn RUB compared to 1.6 trn RUB over the same period of last year. The budget surplus in October is likely a reflection of the MinFin's reliance on money from the NWF (260 bn RUB) and boosted by Gazprom (400 bn RUB) Oil&Gas revenues. Similar situation should aslo be expected in November, taking into account additional 300 bn RUB from NWF and 400 bn RUB from Gazprom.

Moderate deficit in 2022: The MinFin expects the budget deficit to reach 0.9-2% of GDP this year with the bulk of expenditures to occur in the second half of the year. To cover the deficit of about 1.3-2.9 trln RUB (~$19-43 bn), Russian authorities plan to use funds from the NWF. In addition, fiscal accounts has already benefited from a 800 bn RUB payment from Gazprom (two tranches in October and November), underlining that overall dynamics are turning more and more negative. Fiscal problems are also confirmed by record net issuance of domestic debt. In November and December (to date) RF MinFin placed federal loan bonds (OFZ) totaling around 2.2. trln RUB, mostly at the floating rate.

RF Budget Surplus (-Deficit), monthly, bn RUB



RF Budget balance, % of GDP



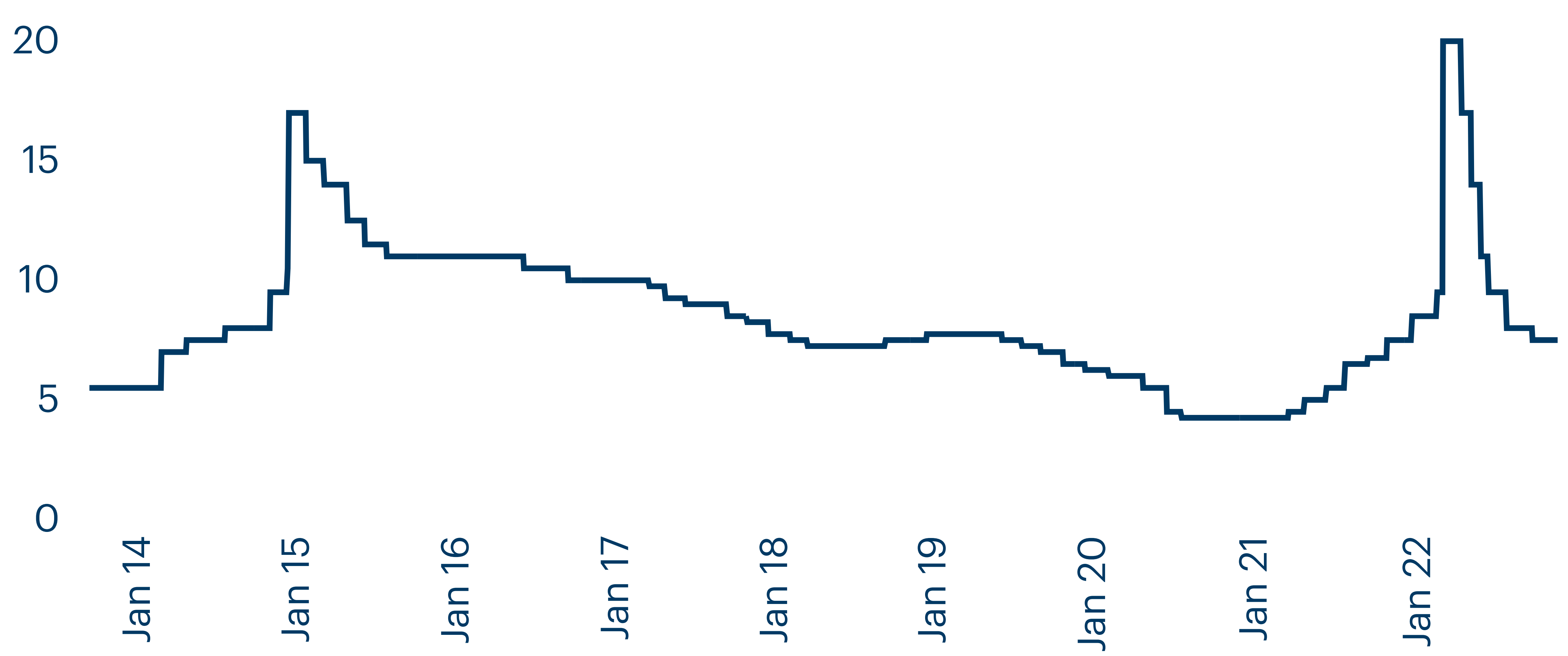
*2022 — RF Minfin expectations, 2023 — Draft of the Federal Budget for 2023. Source: RF MinFin, TradingEconomics

Inflation and Monetary Response

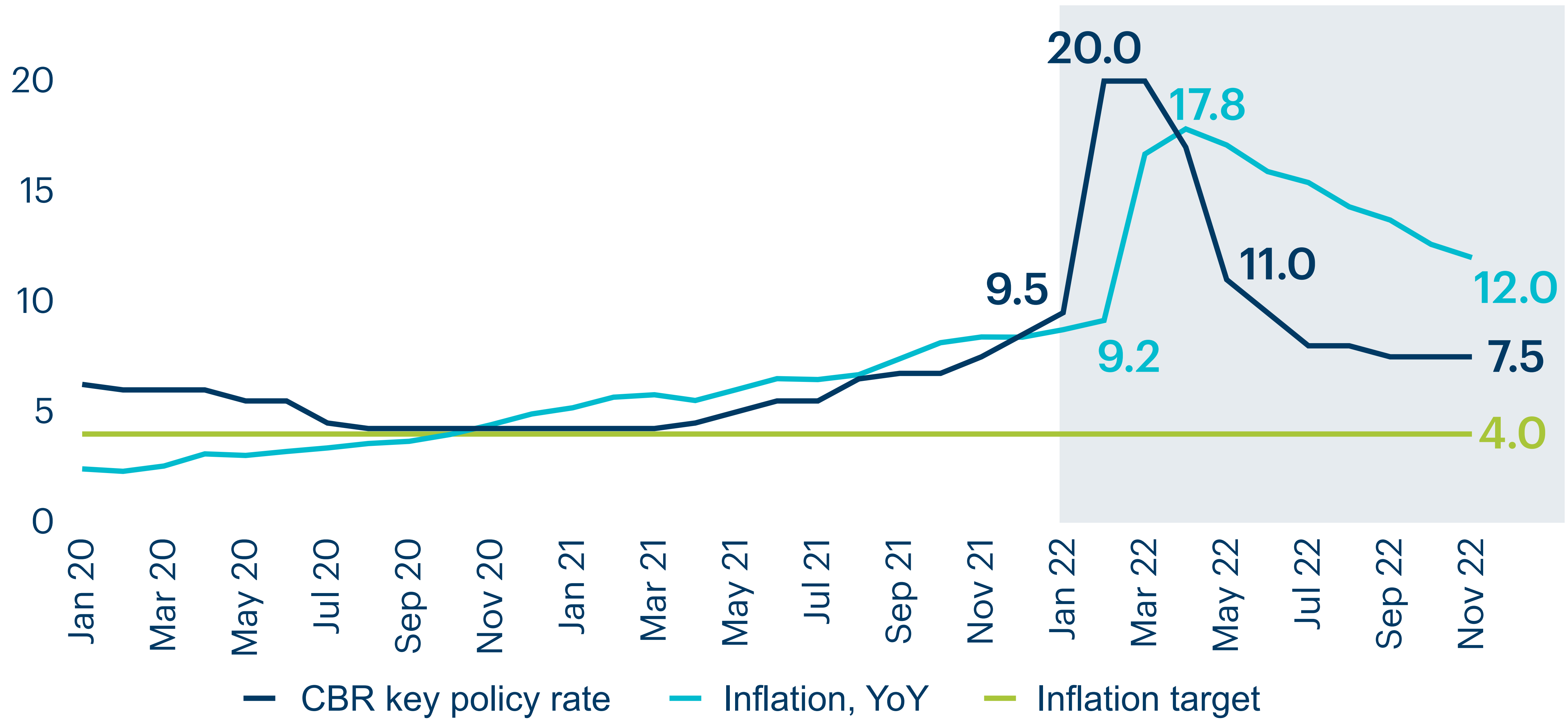
In response to the inflation slowdown – reflecting the stronger RUB and restrained consumer demand and the associated decrease in inflationary expectations — the CBR has cut its key interest rate from a peak of 20% to 7.5%, holding the rate at this level since the end of September).

The CBR expects that mobilization will be a restraining factor for consumer demand and inflation in the coming months.

CBR key policy rate, historical data, %



CBR key policy rate, Inflation, Inflation target, %



Source: CBR.

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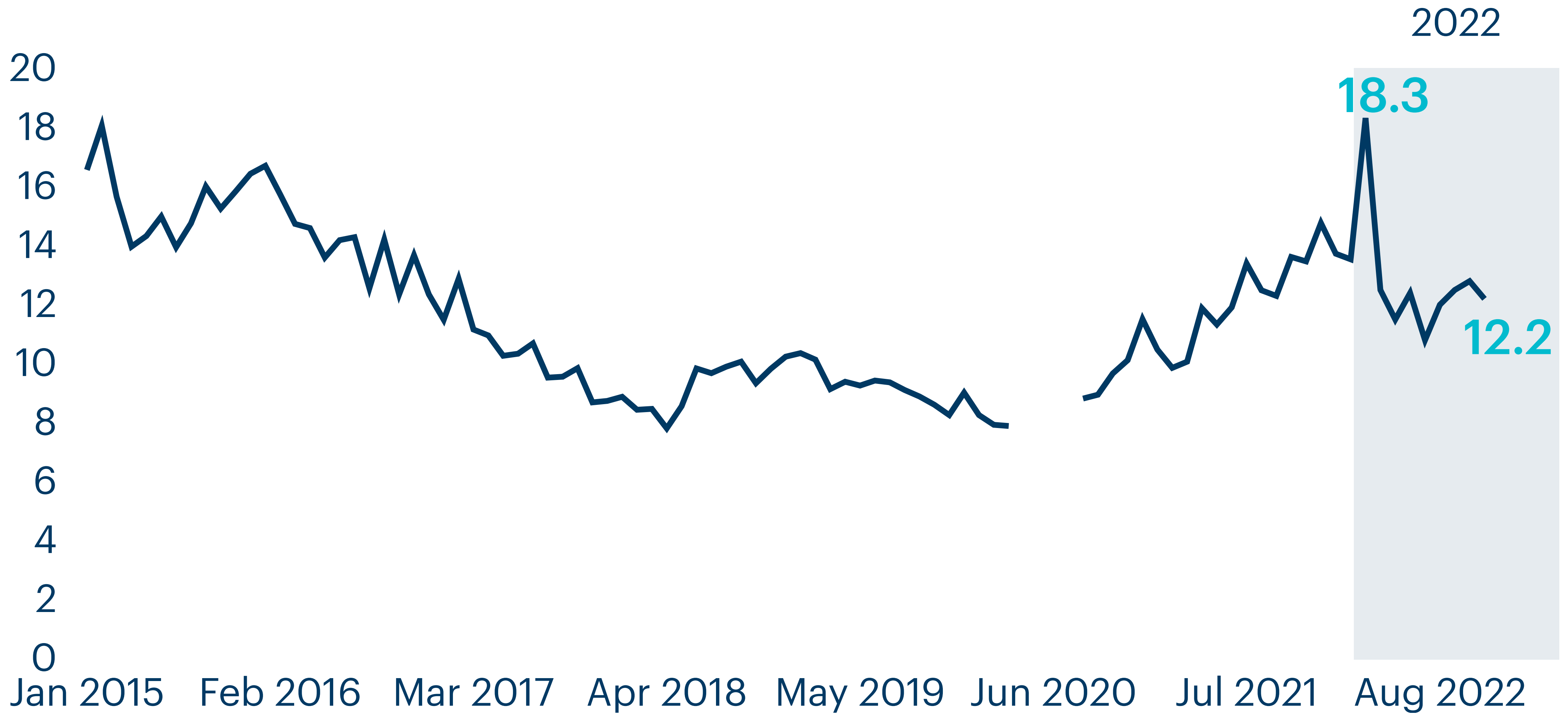
Inflation Expectations

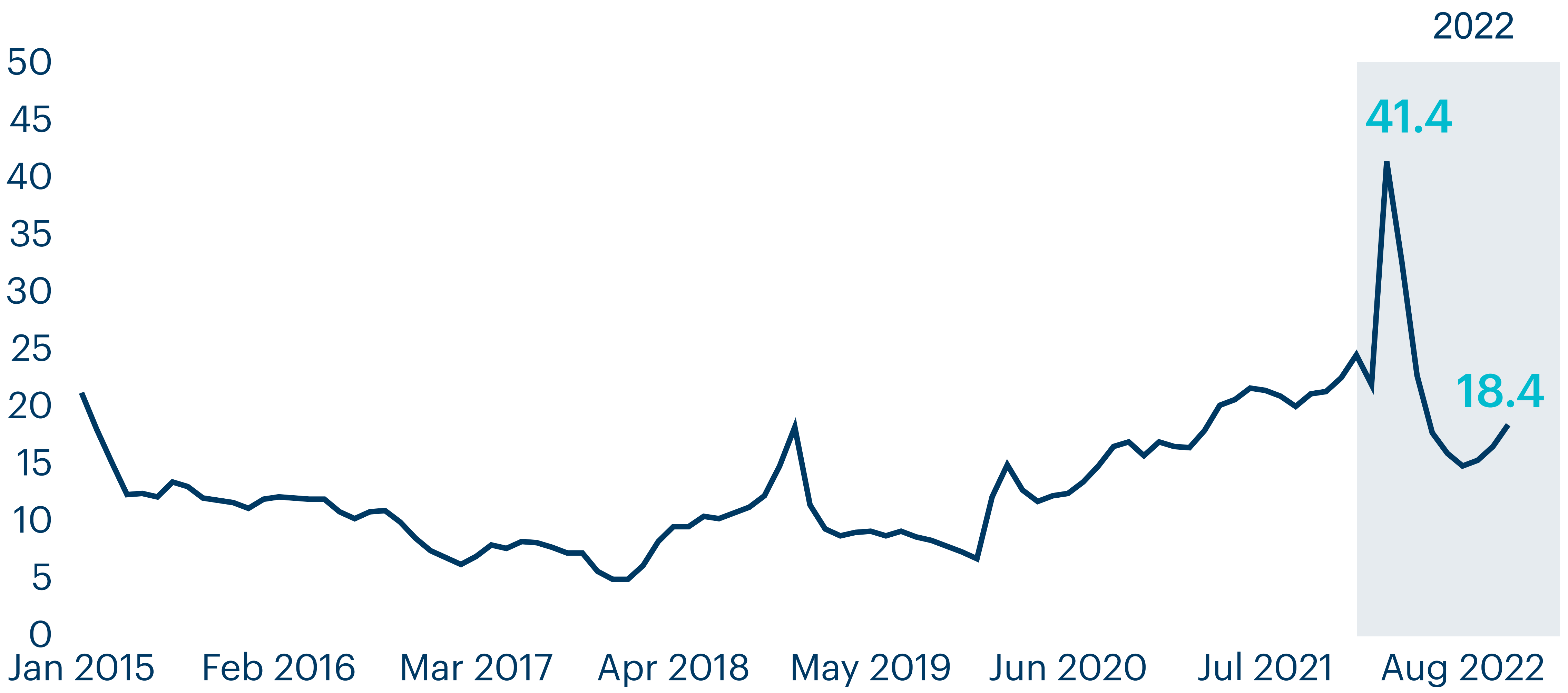
After spiking on the invasion and then falling through the summer, year ahead Inflation expectations have begun to increase again – from July for the population and from August for business.

Increased inflation expectations likely reflect perception of increased risks.

Inflation expectations of consumers, %
(over the next 12 months)



Price expectations of enterprises for the next 3 months, balance of responses in %



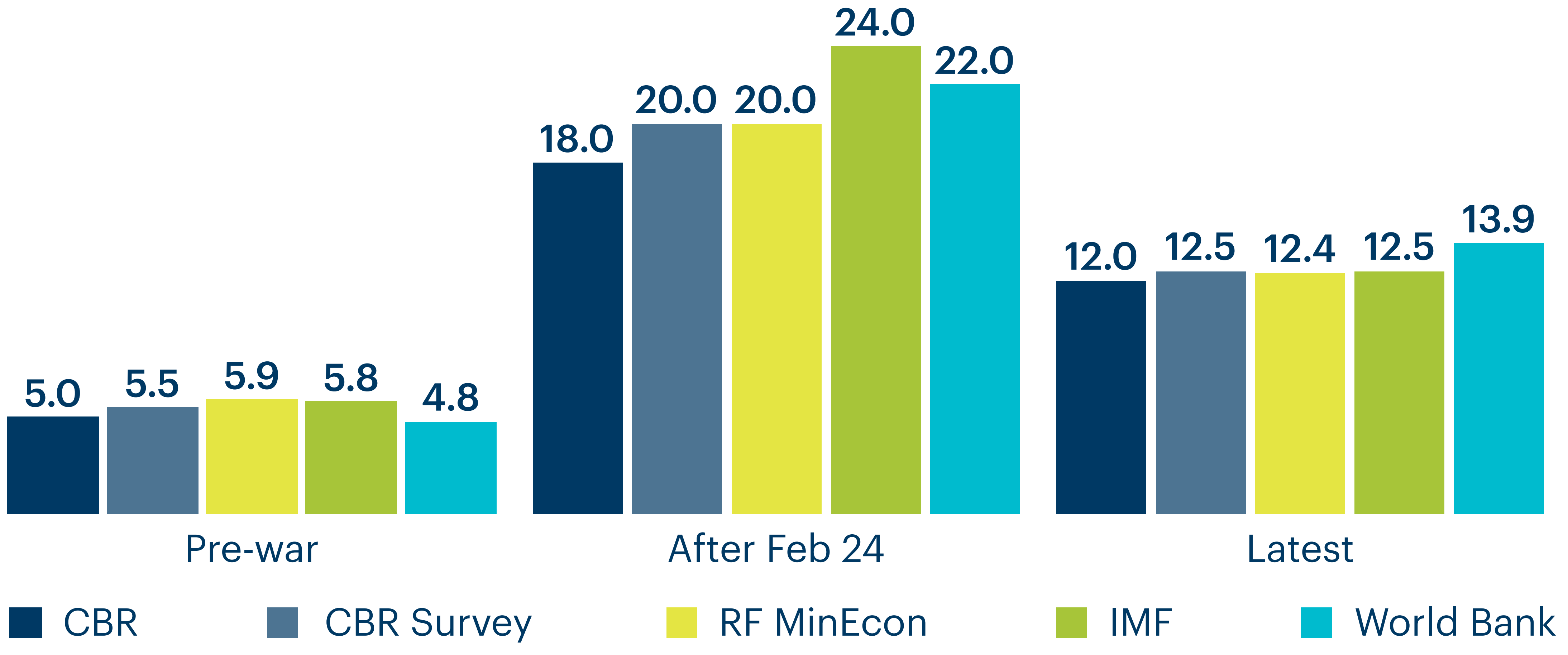
Source: CBR

Inflation Outlook

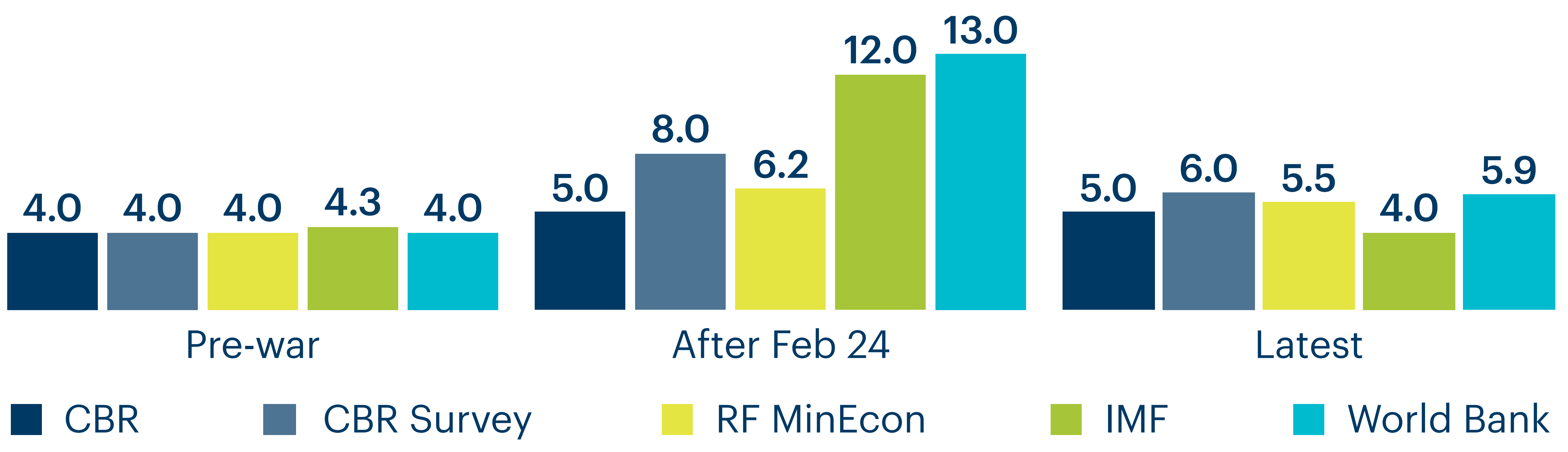
Inflationary pressures are subsiding. Both internal and external inflation forecasts have improved. The CBR now expects inflation to average 12.0-13.0% in 2022 compared to the 18.0-23.0% average expected back in April. The IMF improved its forecast from 21.3% to 13.8% in 2022. Similarly, inflation forecasts for 2023 have also been revised sharply lower from the initial post-invasion estimates.

However, we see these forecasts as optimistic, since we think that Russian external balance, and therefore the RUB, will come under pressure from a 2023 collapse in oil and gas export earnings, which will push 2023 inflation forecasts higher.

Inflation forecasts for 2022



Inflation forecasts for 2023



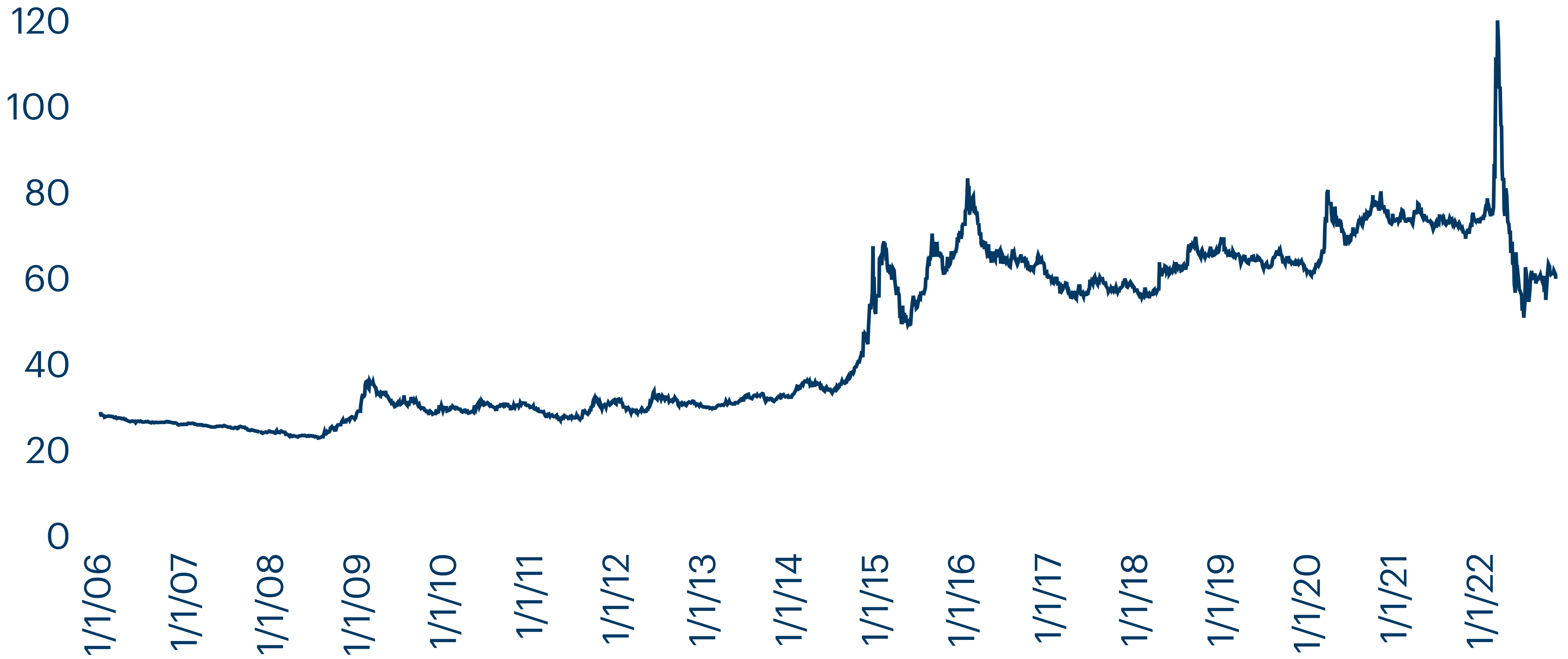
All forecast can be found in Annex #2

Exchange Rate Dynamics

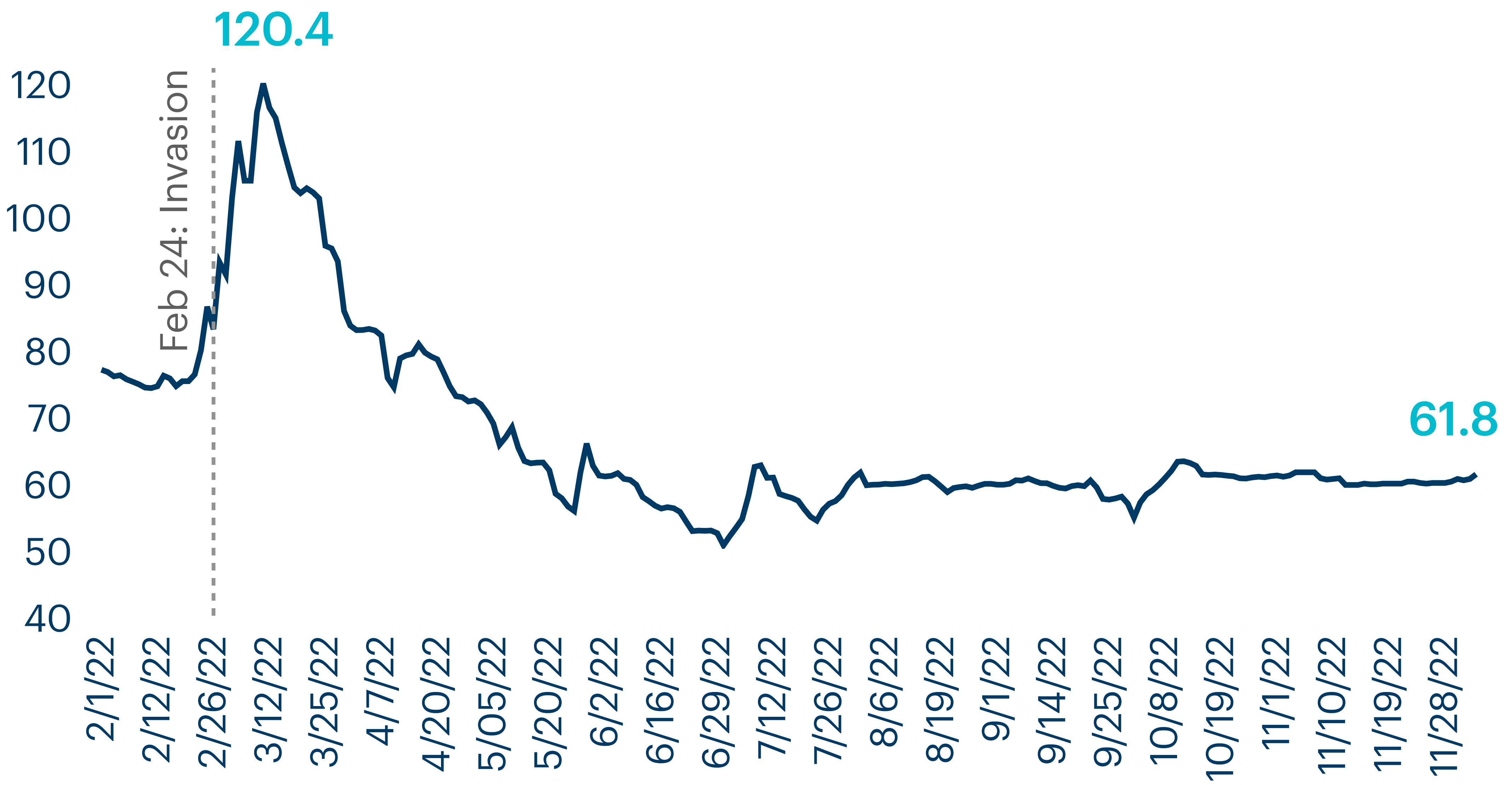
The Ruble exchange rate has stabilized around 60 RUB/$: After the Ruble's strong appreciation due to the major positive trade shock – imports collapsing as high prices supported oil and gas export earnings despite sanctions - the RF authorities eased almost all the capital and foreign exchange controls imposed at the beginning of the war.

Given the impact of sanctions, which has reduced trading flows, we see the current exchange rate as a much less market-determined rate and much more policy-dependent than previously.

Official RUB/USD exchange rate, historical data



War-time official RUB/USD exchange rate



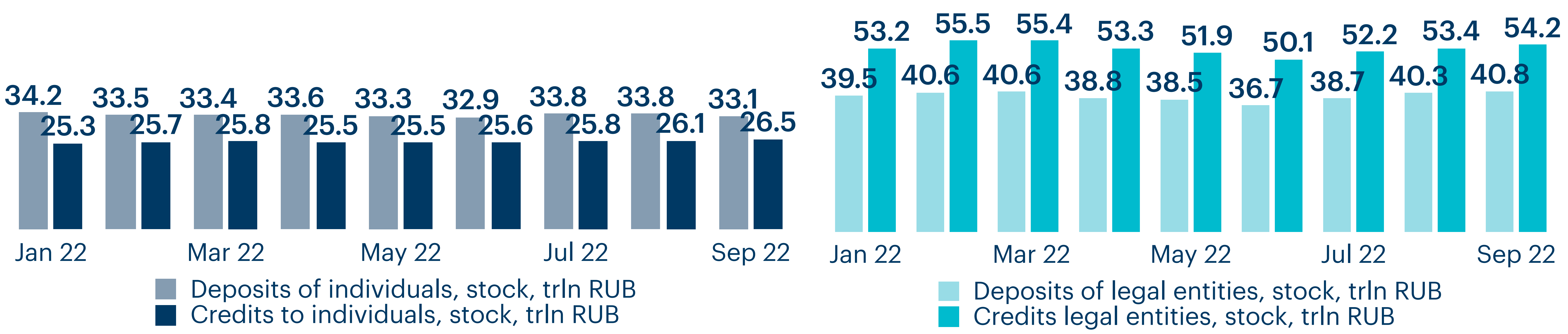
Source: CBR

Financial System

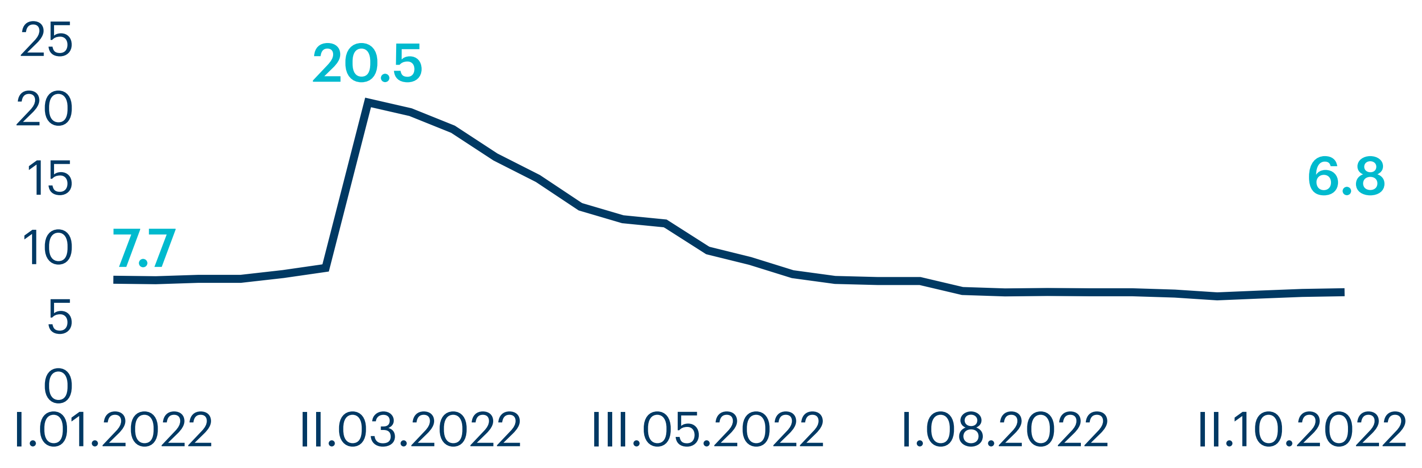
CBR played a key role as a backstop to the banking system through this crisis, stepping in to provide additional liquidity, including through accepting additional collateral, providing longer term funding and a higher volume of funding, and through a wide range of regulatory easements. This put the CBR balance sheet at risk as the impact of sanctions feeds through into bad loans and defaults.

CBR supporting Russia's war. In September, the CBR introduced credit vacations for mobilized SME owners, and recommended elimination or reduction of fees for mobilized investors. According to the Russian media, the CBR is discussing preferential mortgages for residents of occupied Russian regions, while also pressuring residents to accept the Ruble and not the Hyrvnia.

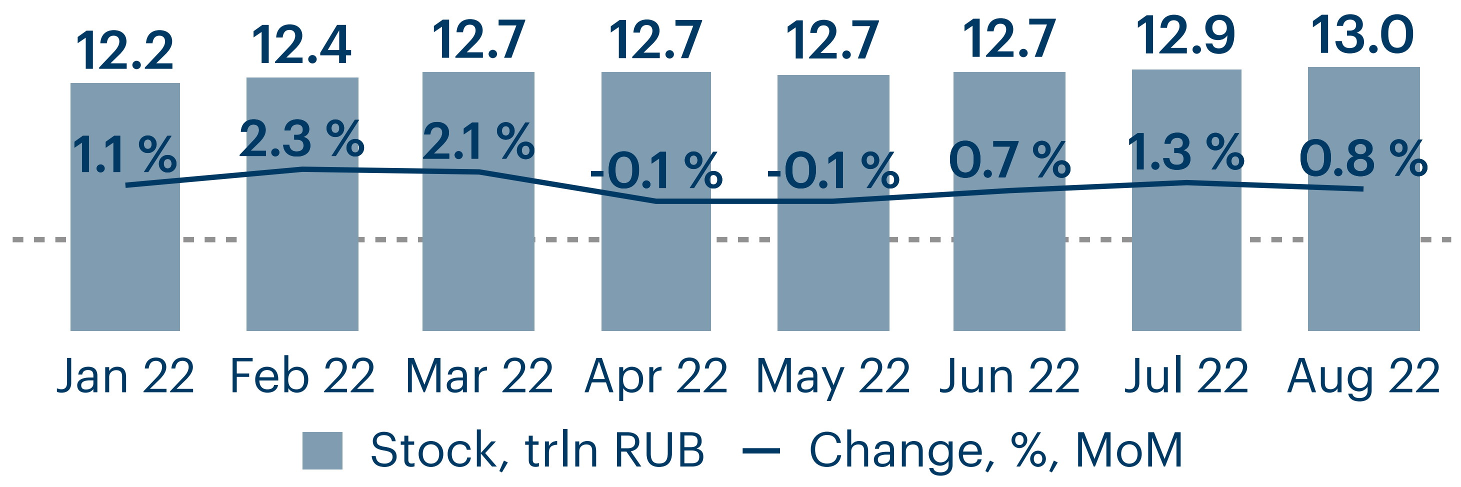
Deposits & Loans in Russian bank system, trln RUB



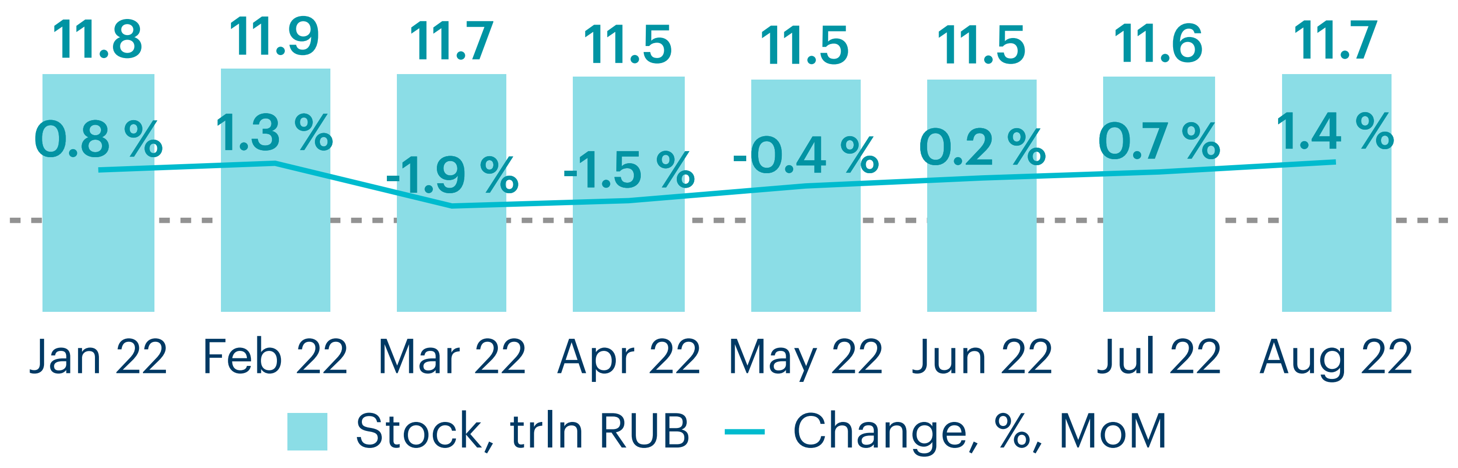
MAX interest rates on deposits in RUB, %



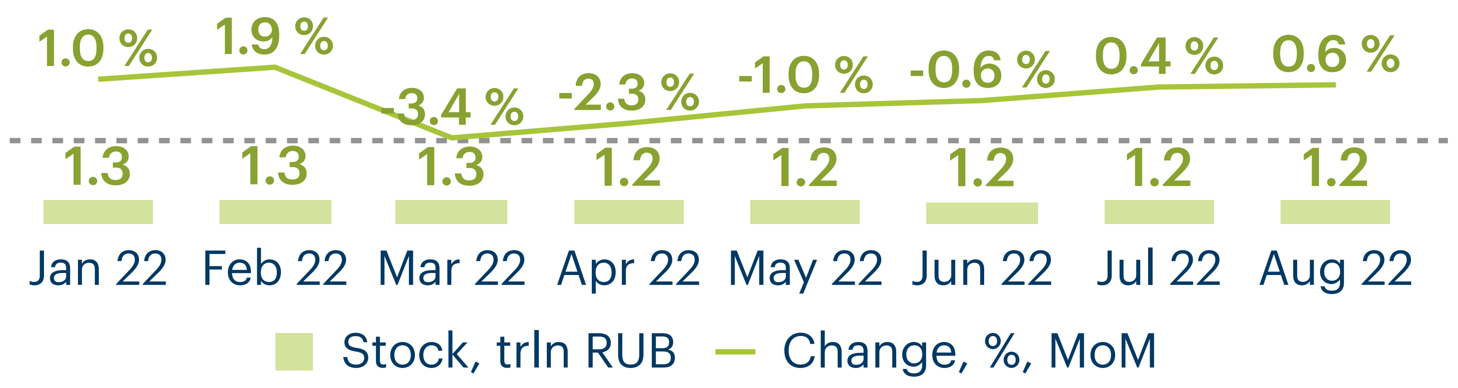
Mortgage loans



Consumer loans



Car loans



Source: CBR

Labor Market

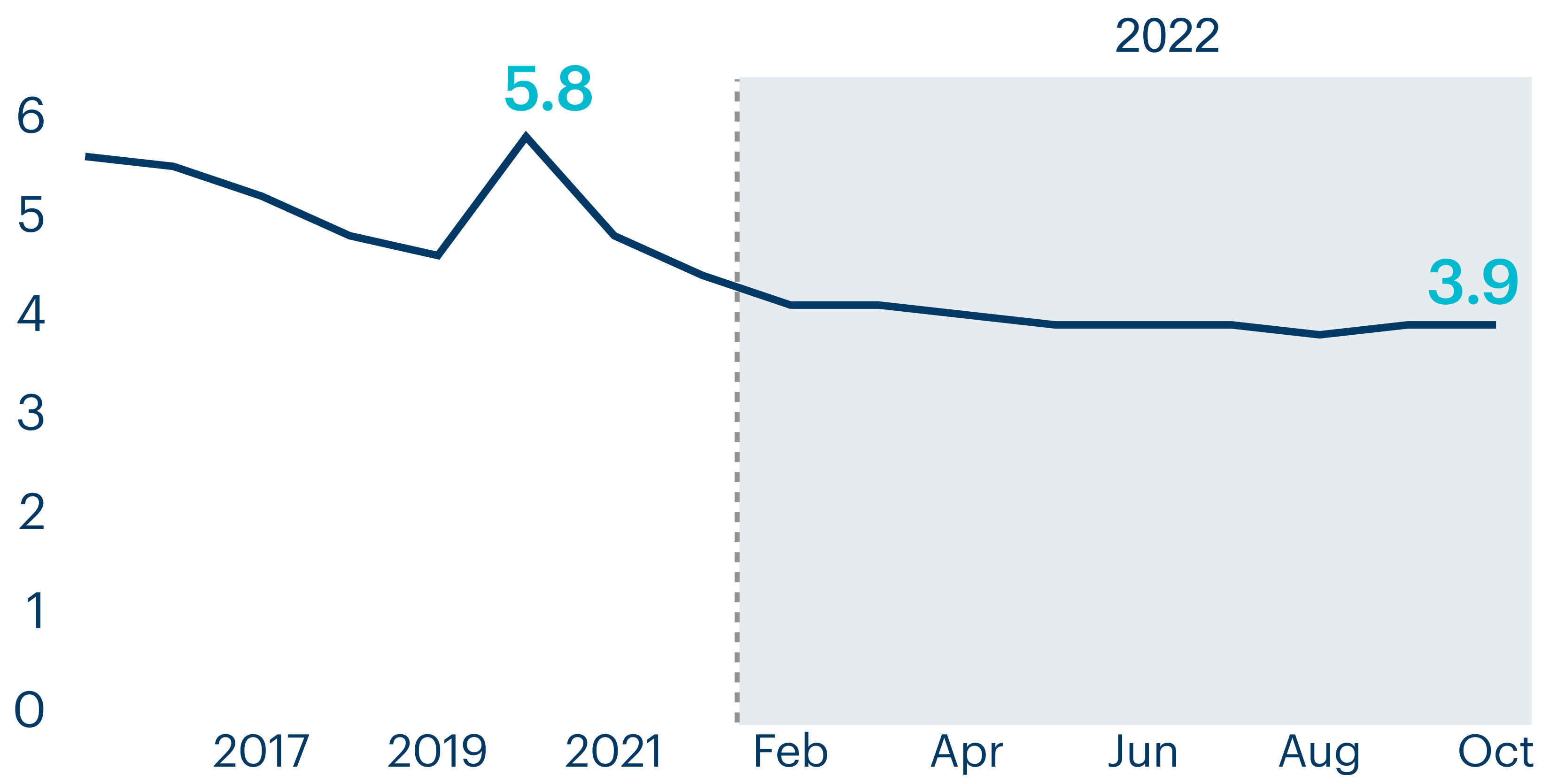
In September, unemployment in RF stayed at historically low levels of 3.9% or 2.9 million people. IMF forecasts unemployment in RF to reach 4.8% in 2022 (Oct WEO).

According to KSE*, companies that have exited the RF market hired at least 283K people, while companies that are in the process of exiting employed 397K people. These people are at risk of losing their jobs — although this likely depends on the decision and financial position of the new owners.

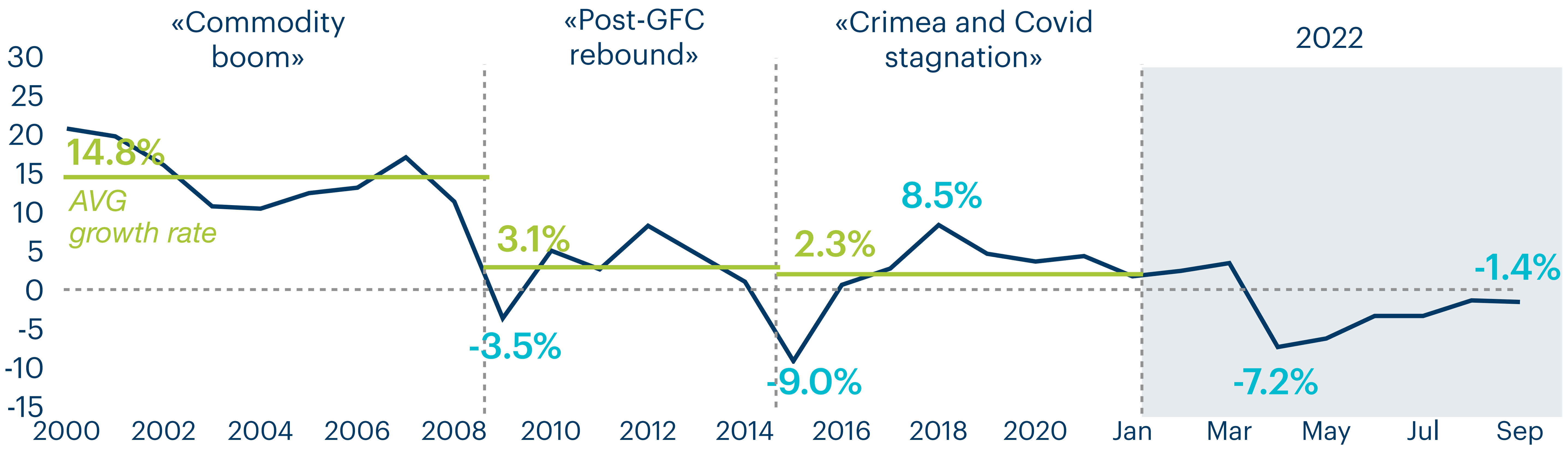
In August, the fall in real wages slowed to -1.2% YoY, helped by slowing inflation, up form the -7.2% YoY drop recorded in April as RUB collapsed and inflation spiked in the aftermath of the invasion. The RF MinEcon has improved its forecast for annual growth in real wages to -2.8% (from -3.8%) in 2022.

Quarterly data shows real incomes in Russia have been falling for three quarters in a row. In Q3 22 real income fell by 2.4% YoY, while real disposable income fell by 3.4% YoY. MinEcon improved its forecast also for real disposable income to -2.2% (from -6.8%) in 2022.

Unemployment, %, YoY



Real wage, %, YoY



Source: Rosstat. * As of December 4, based on data available for ~1300 TOP public companies operated/operating in RF, Weekly digest, 30th issue

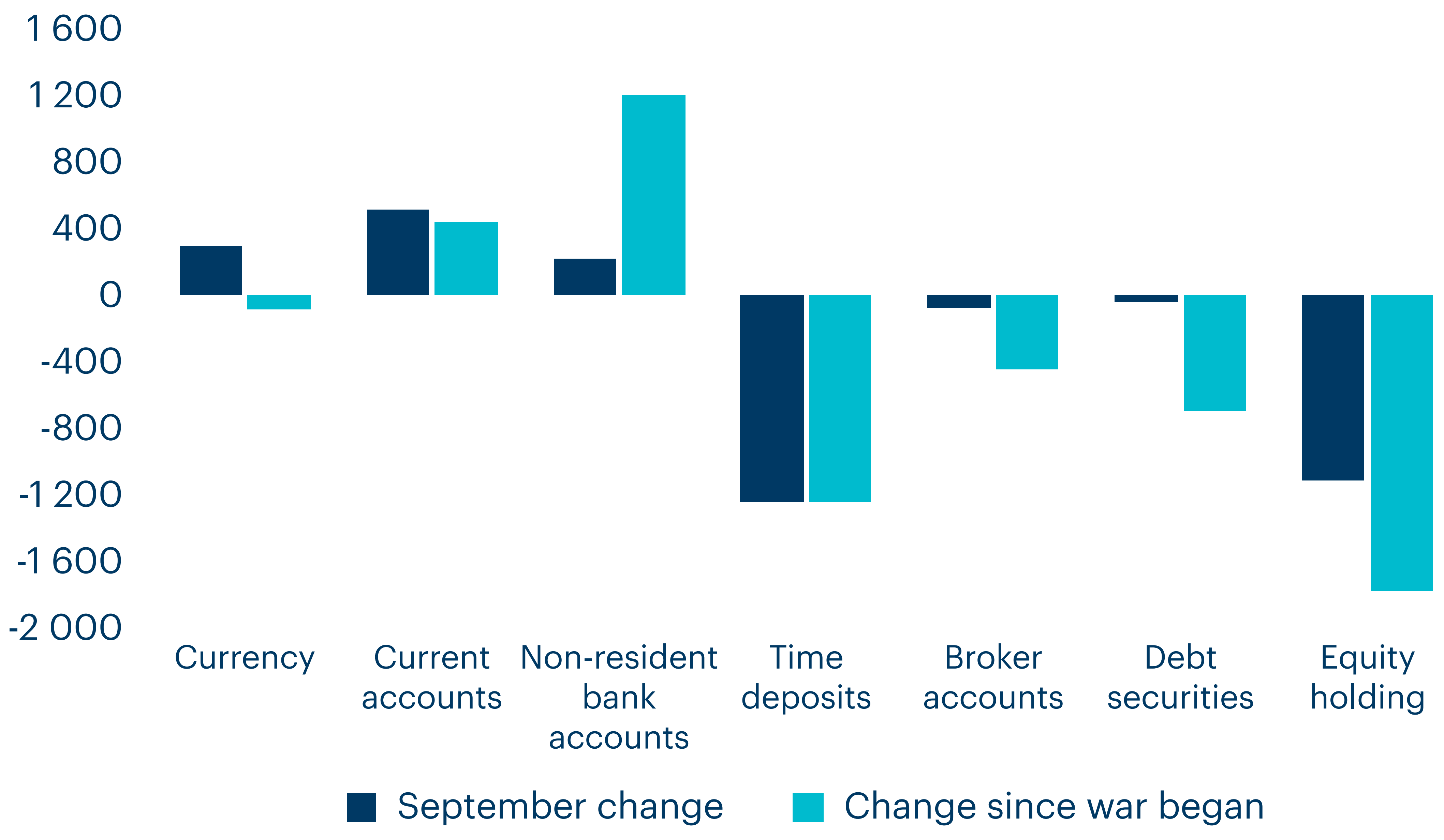
Labor Market: Mobilization impacts

Migration. Russian labor market lost at least 600K of people. According to RF MinEcon, labor force over the age of 15 declined from 75.5 to 74.9 mln in September when mobilization was announced. By the same amount decreased the number of employed (from 72.6 to 72 mln). According to internal estimates, from 700K to 1 mln people have left Russia. At least 300K were mobilized.

Weak consumption. For 9M 22 retail sales dropped by -5.5% YoY, with the fall in September accelerating from -8.8% in August to -9.8%. Another sign of precautionary savings and weak consumption is the accelerating fall in the sales of cars — from -59.6% YoY in September to -62.8% in October.

Shift to more liquid assets. September saw a dramatic decline in household holdings of equities and time deposits, with a shift to cash and current accounts. This is a clear sign of liquidity preference, reflecting increased uncertainty. The scale of the September shift is striking – withdrawals from longer term assets of over 2% of GDP – and greater than the movements in household assets seen in the immediate aftermath of the February invasion.

Mobilization impact: September shift to cash and out of equities and time deposits, mln RUB



Sources: CBR, RF MinEcon, Rosstat, russian media resources

ANNEX #1

GDP growth forecasts for 2022 (2023)

CBR (Oct 22)	-3.0 to -3.5% ((-4,0)-(-1,0%))	FocusEconomics (Sep 22)	-7.0% (-3.0%)	S&P (Mar)	-8.5% (0.3%)
CBR (Jul 22)	-4.0 to -6.0% ((-4,0)-(-1,0%))	FocusEconomics (Jul 22)	-8.1% (-2.5%)	Barclays (Mar)	-12.4% (-3.5%)
CBR (Apr 22)	-8.0 to -10.0% ((-3,0)-0,0%)	FocusEconomics (May 22)	-10.2% (-1.1%)	Fitch (Mar)	-8.0% (-0.2%)
CBR (Feb 22)	2.0 to 3.0% (1.5 to 2.5%)	FocusEconomics (Mar 22)	-8.4% (-0.8%)	EBRD (Sep)	-5.0% (-3.0%)
CBR (Oct 21)	2.0 to 3.0% (2.0 to 3.0%)	FocusEconomics (Feb 22)	2.6% (2.1%)	EBRD (Mar)	-10.0% (0%)
CBR Survey (Oct 22)	-3.5% (-2.1%)	IMF (Oct WEO 22)	-3.4% (-2.3%)	Capital Economics (Mar)	-12 %
CBR Survey (Sep 22)	-4.2% (-1.8%)	IMF (Jul WEO 22)	-6% (-3.5%)	Goldman Sachs (Mar)	-10 %
CBR Survey (Jul 22)	-6.0% (-1.3%)	IMF (Apr WEO 22)	-8.5% (-2.3%)	EU Commission (May)	-10.4% (1.5%)
CBR Survey (Jun 22)	-7.5% (0%)	IMF (Jan WEO 22)	2.8% (2.1%)	Morgan Stanley (May)	-12.0% (1.5%)
CBR Survey (Apr 22)	-9.2% (0%)	World Bank (Oct 22)	-4.5% (-3.6%)	IIF Chief Econ. (May)	-30 %
CBR Survey (Mar 22)	-8.0% (1.0%)	World Bank (Jun 22)	-8.9% (-2.0%)	IIF (Mar)	-15% (-3%)
CBR Survey (Feb 22)	2.4% (2.1%)	World Bank (Apr 22)	-11.2% (0.6%)		
CBR Survey (Dec 21)	2.4% (2.0%)	World Bank (Jan 22)	2.4% (1.8%)		
CBR Survey (Oct 21)	2.4% (2.2%)	World Bank (Oct 21)	2.8% (1.8%)		
RF MinEcon (Dec 22)	-2.9% (-0.8%)				
RF MinEcon (Sep 22)	-2.9% (-0.8%)				
RF MinEcon (Aug 22)	-4.2% (-2.7%)				
RF MinEcon (May 22)	-7.8% to -8.8% ((-2.9)-(-0.7%))				
RF MinEcon (Mar 22)	-8.8% to -12.4% (1,3% - (-1,1%))				
RF MinEcon (Feb 22)	3.0% (3.0%)				

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ANNEX #2

Inflation forecasts for 2022 (2023), CBR inflation target = 4%

CBR (Oct 22)	12,0 -13,0% (5.0 - 7.0%)
CBR (Sep 22)	11,0–13.0% (5.0–7.0%)
CBR (Jul 22)	12.0-15.0% (5.0–7.0%)
CBR (Jun 22)	14.0-17.0% (5.0–7.0%)
CBR (Apr 22)	18.0-23.0% (5.0–7.0%)
CBR (Feb 22)	5.0-6.0% (4.0%)
CBR (Oct 21)	4.0-4.5% (4.0%)
CBR Survey (Oct 22)	12,5% (6.0%)
CBR Survey (Sep 22)	12.9% (6.0%)
CBR Survey (Jul 22)	15% (6.1%)
CBR Survey (Jun 22)	17% (6.7%)
CBR Survey (Apr 22)	22% (7.6%)
CBR Survey (Mar 22)	20% (8%)
CBR Survey (Feb 22)	5.5% (4%)
CBR Survey (Dec 21)	4.8% (4%)
CBR Survey (Oct 21)	4.2% (4%)

RF MinEcon (Dec 22)	12.0% (5.5%)
RF MinEcon (Oct 22)	12.4% (5.5%)
RF MinEcon (Sep 22)	12.4% (5.5%)
RF MinEcon (Aug 22)	13.4% (5.5%)
RF MinEcon (May 22)	17.5% (6.1%)
RF MinEcon (Apr 22)	20 (6.2%)
RF MinEcon (Feb 22)	5.9% (4%)
RF MinEcon (Nov 22)	4% (4%)
RF MinFin (Apr)	~20% (6.2%)
RF MinFin (May)	17,5% (6.1%)

World Bank (Oct 22)	13.9% (5.9%)
World Bank (Apr 22)	22% (13%)
World Bank (Oct 21)	4.8% (4%)
IMF (Oct WEO 22)	12.5% (4%)
IMF (Apr WEO 22)	24% (12%)
IMF (Oct WEO 21)	5.8% (4.3%)
Fitch	18% (15%)
EC	20.5% (10%)