National Bank of Ukraine

Inflation Report (July 2023)

8 Aug 2023

Summary: monetary policy decisions

- The NBU's measures contributed to **improving the situation on the FX market, a faster-than-forecasted slowdown in headline and core inflation, improving inflation and ER expectations, and resuming the growth of term deposits in hryvnia**. The rhythmic inflows of official financing has contributed to the **growth of international reserves to a new record level**
- **The NBU expects that the decline in inflation will continue, albeit at a more moderate pace. The key risk** to inflation dynamics and economic development is still the **longer duration and the unpredictable nature and intensity of the full-scale war**
- Favorable trends have provided the NBU with room to launch a monetary policy easing cycle earlier than the April forecast envisaged. **The NBU Board decided to cut the key policy rate by 3 pp, to 22%.** The NBU Board also decreased the interest rate on overnight certificates of deposit by 2 pp, to 18%, and by 3 pp, to 24%, on refinancing loans. The interest rate on three-month certificates of deposit will continue to equal the key policy rate
- Taking into account improved inflation expectations and the forecast that inflation would decline further, **the current and projected decrease in interest rates on NBU operations will maintain the attractiveness of hryvnia savings**. **This is an important element for ensuring exchange rate sustainability** when FX restrictions are eased and the NBU makes the exchange rate more flexible. At the same time the cut in NBU interest rates will support economic recovery on the back of persisting macrofinancial stability
- **The NBU will continue to cut its key policy rate, provided the FX market remains stable and inflation declines over the forecast horizon**
- **When easing FX restrictions and transitioning to a more flexible exchange rate regime, the NBU will take into account the need to maintain the high attractiveness of hryvnia assets**
- Given high uncertainty, any further decisions and revisions of the NBU’s key policy rate forecasts will largely depend on whether or not the forecast’s assumptions materialize, as well as on the trends of key macroeconomic and financial indicators

Summary: forecast

- **Macroeconomic forecast assumes that Ukraine will consistently meet its commitments under the Extended Fund Facility with the IMF** and pursue coordinated monetary and fiscal policies, and that quasi-fiscal imbalances will be gradually eliminated, in particular those in the energy sector. In addition, it assumes a significant decline in security risks from the middle of 2024, which would contribute to the complete unblocking of seaports, a decrease in sovereign risk premium, and the return of forced migrants to Ukraine
- **Consumer inflation decelerated faster than expected** due to supply factors and the strengthening of the cash exchange rate of the hryvnia. **After considering the favorable dynamics of H1, the NBU revised its 2023 inflation forecast significantly downward**, from 14.8% to 10.6%. The forecast for 2024 was also improved (from 9.6% to 8.5%). The growth in prices will slow due to a gradual decline in global inflation and monetary conditions remaining tight in Ukraine. At the same time, further disinflation is expected to be slower than in H1. It will remain above target due to the effects of the war and significant increases in administrative prices and tariffs
- **The economy has proven to be resilient to the new challenges of war and will grow by 2.9% this year. Further on, economic growth will accelerate** (to 3.5% in 2024 and 6.8% in 2025), based on the NBU's forecast assumption about a decline in security risks in mid-2024**.** A loose fiscal policy will remain important for stimulating the economy
- **Thanks to the external support and revival of domestic borrowings the government was able to cover the wide budget deficit without resorting to monetary financing**. International aid is expected to reach 42 USD bn by the end of this year. These inflows will restrain the widening of the current account deficit and will be sufficient to finance it. International support will remain crucial for maintaining macrofinancial stability in the coming years

Forecast and its assumptions

Forecast	2022	2023	2024	2025
Real GDP growth, %	-29.1	2.9 (2.0)	3.5 (4.3)	6.8 (6.4)
CPI, % yoy (eop)**	26.6	10.6 (14.8)	8.5 (9.6)	6.0 (6.0)
Core CPI, % yoy (eop)**	22.6	8.7 (12.5)	7.0 (7.2)	3.1 (2.8)
Current account balance, USD bn	7.9	-11.0 (-13.5)	-17.2 (-10.6)	-16.1 (-7.7)
Gross reserves, USD bn	28.5	38.3 (34.5)	42.6 (36.1)	44.1 (37.1)
Budget deficit, % GDP (w/o grants)	25.5	26.2 (26.3)	19.8 (15.3)	11.8 (9.5)

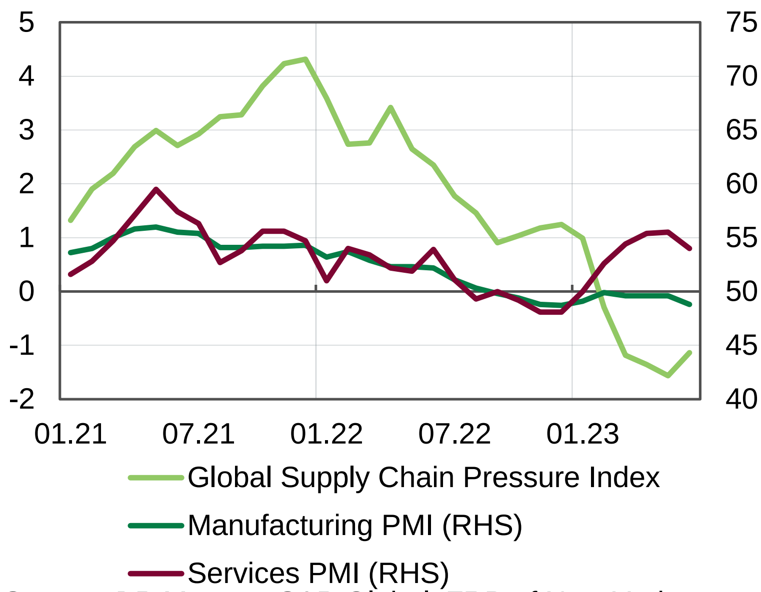
In brackets: previous forecast (April 2023)

Assumptions		2022*	2023	2024	2025
Full access to Black Sea ports		-	-	from H2	+
Official financing	USD bln	32	42	37	25
Migration (net, "+" return)	mln people		0.1	0.5	0.8
Real GDP of Ukraine's MTP (UAwGDP)	% yoy	3.5	1.7	2.9	2.9
Consumer inflation in Ukraine's MTP (UAwCPI)	% yoy	14.0	5.7	3.8	3.3
World prices:**					
Steel price, Steel Billet Exp FOB Ukraine	USD/t	618	580	549	497
Iron ore price, China import Iron Ore Fines 62% FE	USD/t	121	113	82.8	74.7
Steel price, No.1 Hard Red Winter, ordinary protein, Kansas City	USD/t	360	308	273	252
Corn price, Yellow #2 Delivery USA Gulf	USD/t	318	267	229	216
Oil price, Brent	USD/bbl	99.8	82.0	80.7	69.5
Natural gas price, Netherlands TTF	USD/kcm	1356	584	532	432
Volumes of gas transit	bcm	20.6	15.0	15.0	15.0
Harvest of grain and leguminous crops	m t	53.9	46.8	48.9	51.8
Minimum wage**	uah	6550	6700	7665	8200

* actual data
** period average

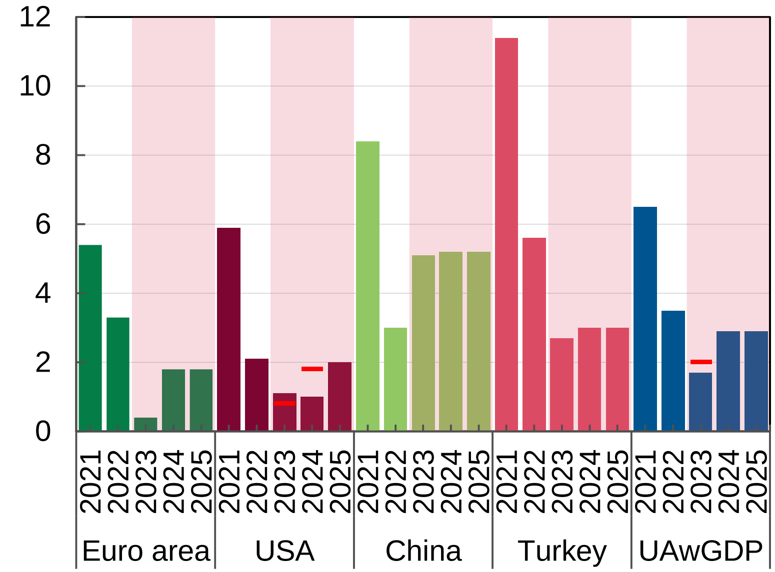
Recovery in MTP countries will be muted in the current year due to tight financial conditions and will accelerate in the coming years

Global PMI and Global supply chain pressure index



Source: J.P.Morgan, S&P Global, FRB of New York.

Real GDP of selected Ukraine's MTP countries, % yoy

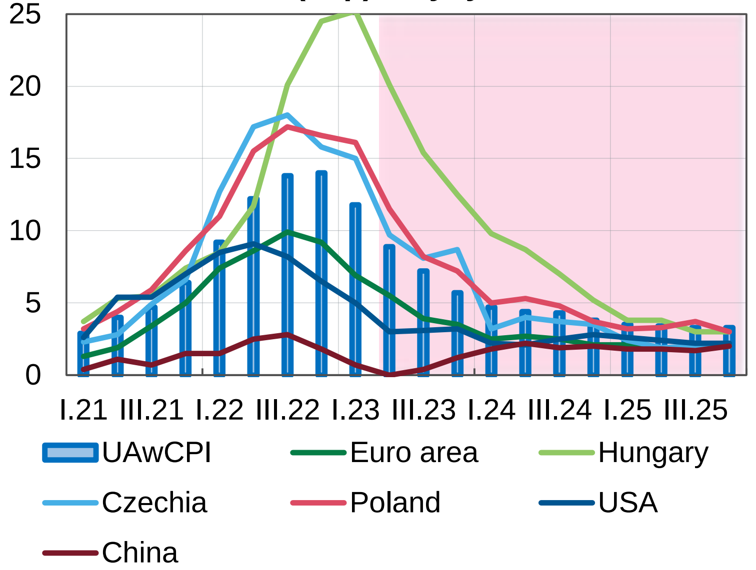


Source: national statistical agencies, NBU staff estimates.

- **In 2023, economic growth in Ukraine's MTP countries will remain sluggish owing to geopolitical tensions and tightening financial conditions**. Despite the easing of supply chain pressures, the downturn in the industry has deepened because of a sharp drop in demand
- The impact of high inflation, tightening financial conditions, and geopolitical tensions are expected to **limit global economic growth until at least mid-2024**
- **Thereafter, a gradual decline in inflation amid a stable labor market will contribute to faster economic growth**

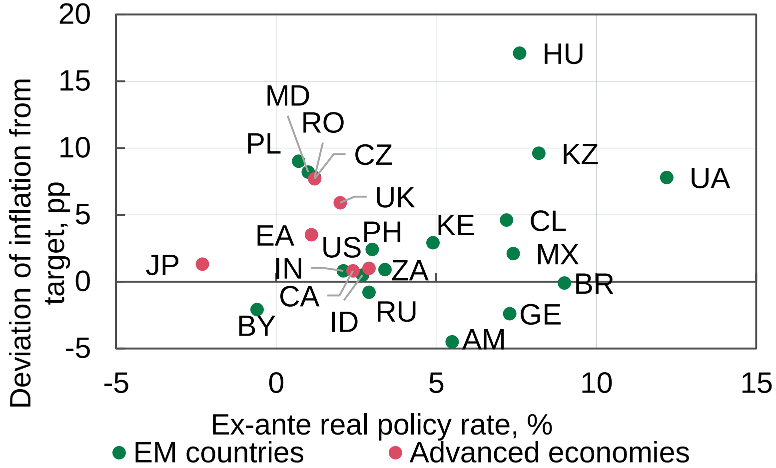
Inflation in Ukraine's MTP countries will decline slowly, in particular owing to monetary policy tightening

UAwCPI (period average) and consumer inflation of selected countries (eop), % yoy



Source: national statistical agencies, NBU staff estimates.

Deviation of inflation from target in June of 2023 and ex-ante real rate* in selected countries

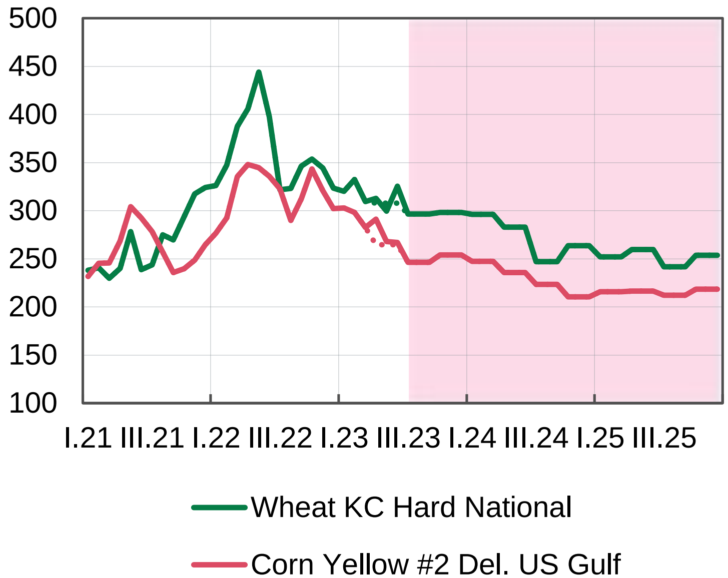


* Nominal rate in June 2023 deflated by forecasted average consumer inflation in 2024.
Source: official web pages of central banks, IMF forecast (April 2023, average CPI in 2024), NBU staff estimates.

- **Weaker inflationary pressure in Ukraine's MTP countries** is attributable to the energy and food components
- **Lower prices of commodities, primarily energy, tightening financial conditions, and the absence of supply chain disruptions will put downward pressure on inflation** in Ukraine's MTP countries
- **Instead, a strong labor market will keep notably impeding the slowdown in inflation.** As a result, inflation targets in most of Ukraine's MTP countries will be reached no earlier than 2024

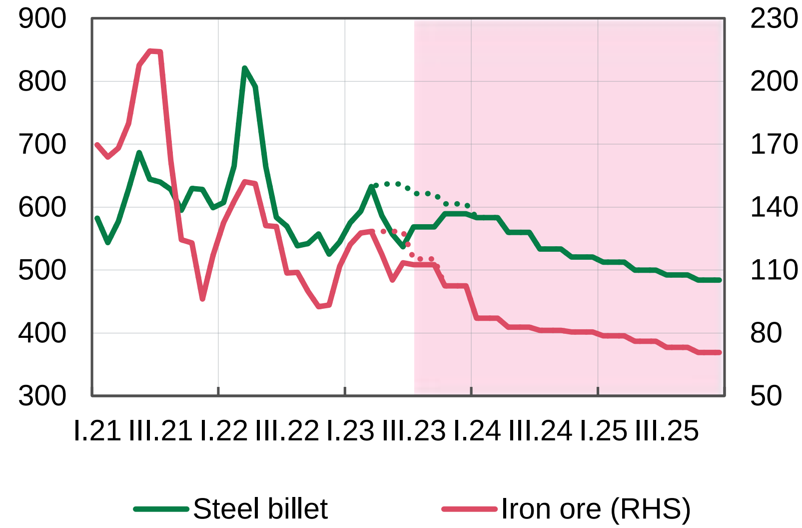
Global commodity prices will go down owing to a faster increase in supply compared to demand

World grain prices, USD/MT



Source: Refinitiv, NBU staff estimates.

World steel and iron ore prices*, USD/MT

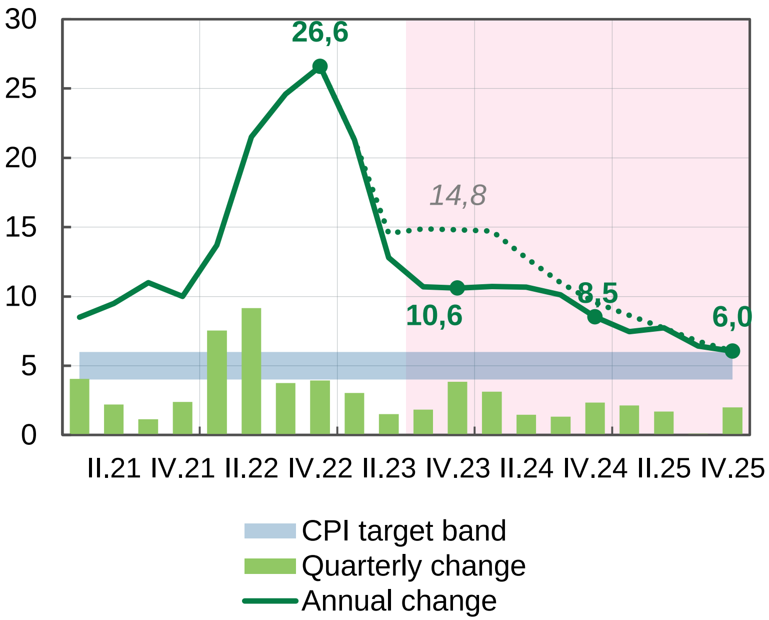


* Steel Billet Exp FOB Ukraine and China import Iron Ore Fines 62% FE spot (CFR Tianjin port).
Source: Refinitiv, NBU staff estimates.

- **Global wheat and corn prices will fluctuate in relatively narrow ranges by the end of 2023.** Weak harvest of 2022/2023 MY amid a dry spring and disrupted operation of the "grain corridor" will keep prices close to current levels, despite the inflow of a new high harvest to the market
- **Global prices for steel and iron ore in 2023 have been revised downward** primarily due to inconsistency between the actual reconstruction of cities in Türkiye and the stated goals of the country's government
- **Global energy prices will trend downward after a short upward correction during the heating period**

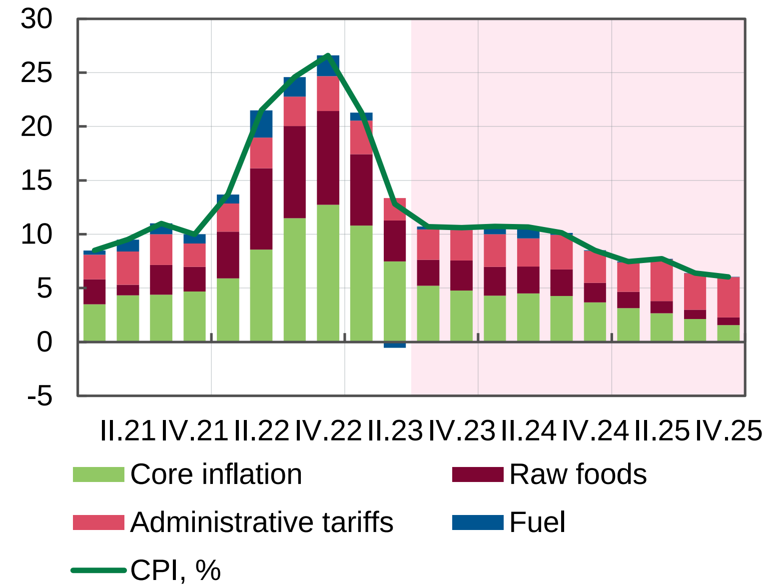
Headline inflation will decline due to tight monetary policy, lower global price pressures and weak demand

Inflation, yoy, %



Source: SSSU, NBU staff estimates.

Contributions to the annual change of CPI, c.p

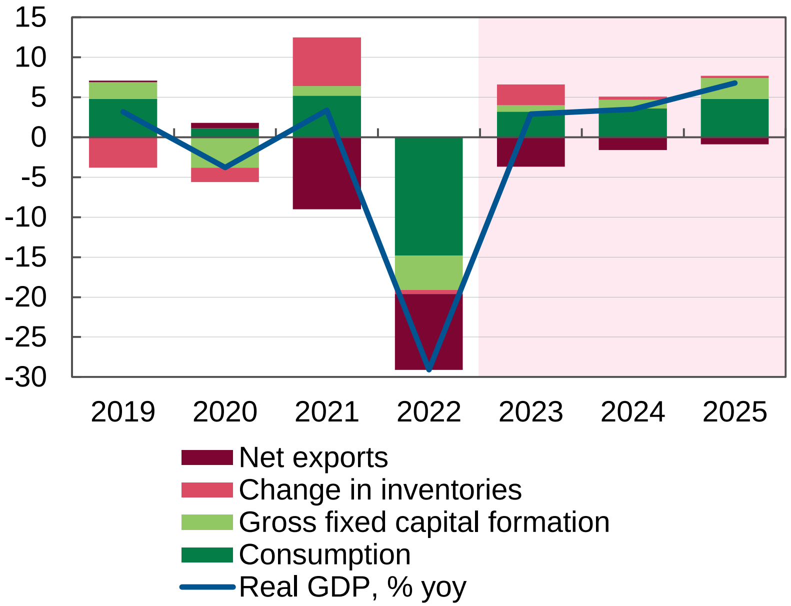


Source: SSSU, NBU staff estimates.

- **Inflation declined more rapidly than expected.** This was facilitated by sufficient supply of food and fuel, a better situation in the energy sector. Inflation was also restrained by the effects of the strengthening of the hryvnia cash rate and moratoriums on utilities tariff increases
- Taking into account the favorable dynamics of the first half of the year, **the NBU significantly improved the inflation forecast for this year** - from 14.8% to 10.6%. Price growth will slow down due to a gradual decline in global inflation and still rather tight monetary conditions in Ukraine. At the same time, inflation will decrease more slowly in the future. It will remain above target due to the effects of the war and the need to increase administrative prices and tariffs

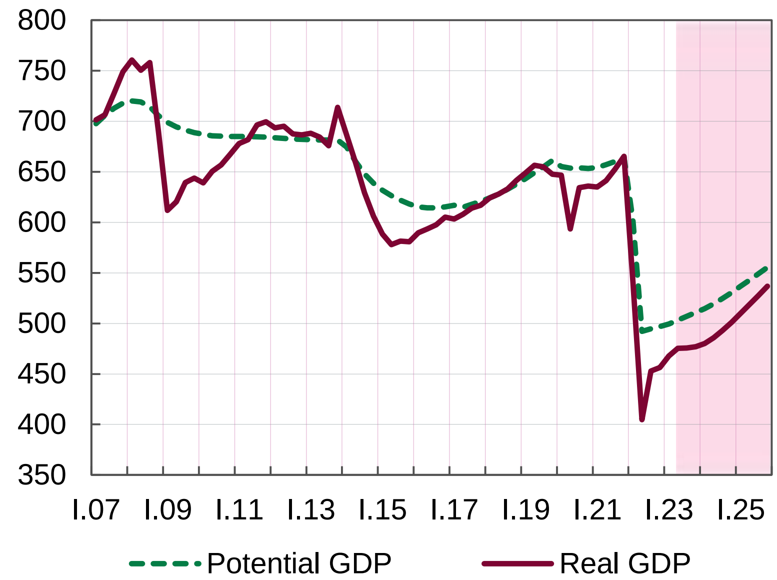
GDP growth will accelerate amid reduced security risks, opening of sea ports and loose fiscal policy

Real GDP, component contributions, p.p.



Source: SSSU, NBU staff estimates.

Real and potential GDP, sa, at 2016 constant prices

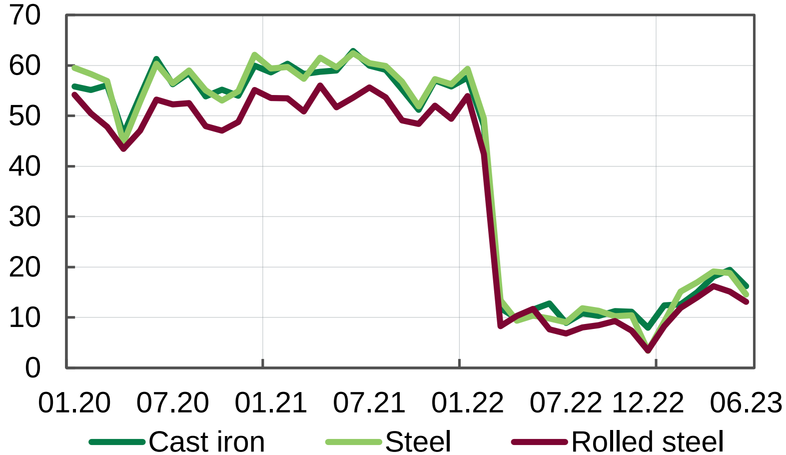


Source: SSSU, NBU staff estimates.

- **The economy has proven to be resilient to new challenges of the war and is to grow by 2.9% this year.** The stable functioning of the energy system and macrofinancial sustainability, coupled with an increase in domestic demand, contributed to the further revival of economic activity with a faster than expected pace
- **Further on, economic growth will accelerate**, based on the NBU's forecast assumption about a decline in security risks in mid-2024. Exports will recover more actively after maritime logistics is restored and attacks on infrastructure cease. A loose fiscal policy will remain important for stimulating the economy
- **However, the economy will remain below its potential level for a long time**

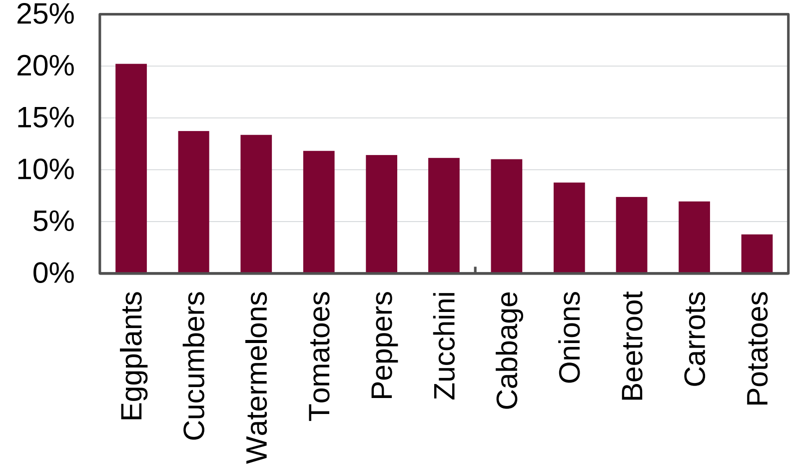
Box. Consequences of the Kakhovka HPP destruction

Average daily production of steel, cast iron and rolled steel, thousand tons per month



Source: NBU calculations based on Ukrmetalurgprom data.

Vegetable harvest at risk due to drainage, % of harvest in the controlled area

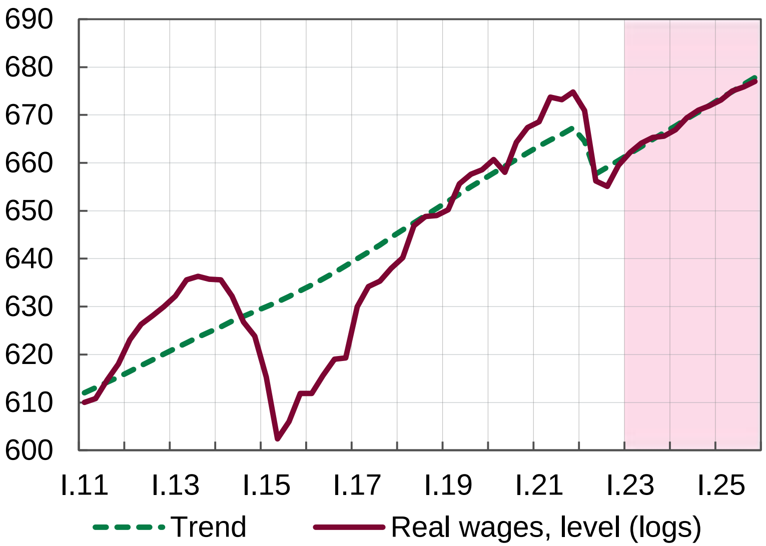


Source: SSSU, NBU staff estimates.

- **The main consequences are humanitarian and ecological.** Territories were flooded, property was lost, infrastructure was destroyed, large areas were polluted, water supply problems
- Despite Kakhovka HPP had a minor contribution **to the energy system of Ukraine** (project capacity of 335 MW, less than 3% of the total volume of electricity production), and has not worked since October 2022, it was important for the maneuverability of the system and the Dnipro Cascade HPP
- **Industry**, primarily metallurgy, was forced to limit operations
- This year's **harvest losses are insignificant** (mainly vegetables, fruits, corn and oilseeds)
- **In 2023**, the lack of water for the industrial enterprises of the region, the reduction of the harvest, the complications of logistics will make a negative contribution to the real GDP of up to 0.2 pp, a 0.3 pp positive contribution to inflation, and an increase in the deficit in trade in goods by up to USD 0.4 billion
- **In the medium term**, these losses will be lower, but permanent mainly due to lower yields of crops, and will affect potential GDP in the years to come and contain disinflation.
- The **expediency of restoring** a complex of hydraulic structures should take into account both the opinion of ecologists and the return on investment

Revival of economic activity will boost employment and wages in the real sector

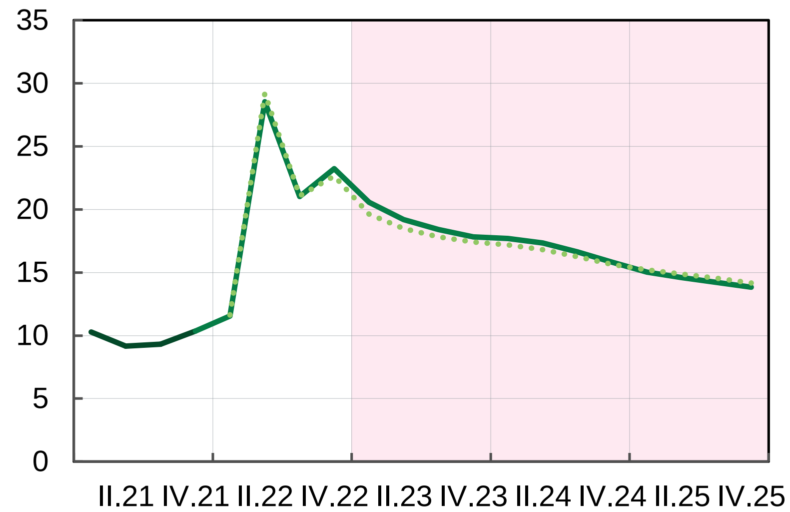
Real wages*, level (logs)



* Until 2022 - the average wages of full-time employees, since 2023 - wages in the compensation of employees according to the SNA

Source: SSSU, NBU staff estimates.

Unemployment (ILO), %, s/a

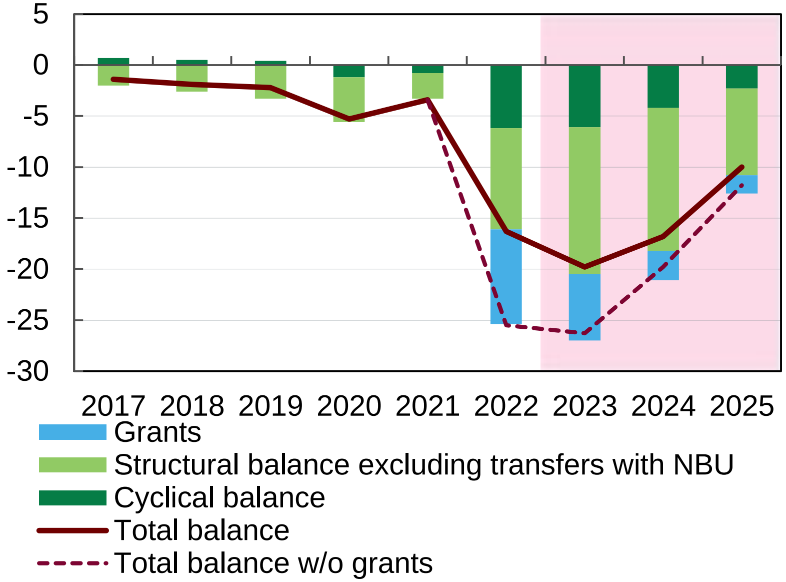


Source: SSSU, NBU staff estimates.

- **The recovery of the economy will lead to a further revival of labor demand,** which against the background of still high inflation will support significant growth rates of nominal labor income, especially in sectors where there will be a shortage of skilled labor. Real income growth will resume this year, but the pace will remain fairly subdued due to still high inflation and sluggish productivity growth
- **Despite the recovery of labor demand, the situation on the labor market remains difficult**: according to the NBU estimates, the unemployment rate decreased slightly in H1, but remained high. Its improvement over the forecast horizon will also be slow due to significant imbalances in the labor market

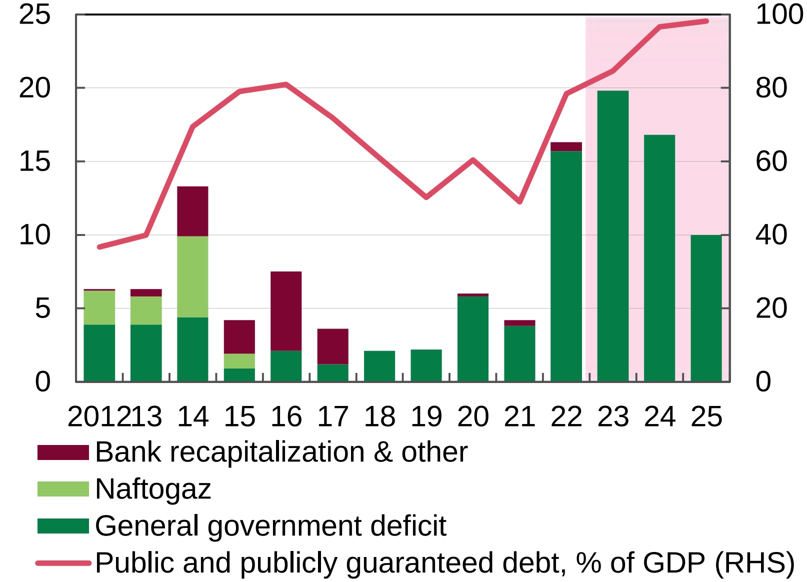
The budget deficit will remain significant in view of the needs of the security, social support and recovery

Consolidated budget balance, % of GDP



Source: SSSU, NBU staff estimates.

Broad public sector deficit, public and publicly guaranteed debt, % of GDP



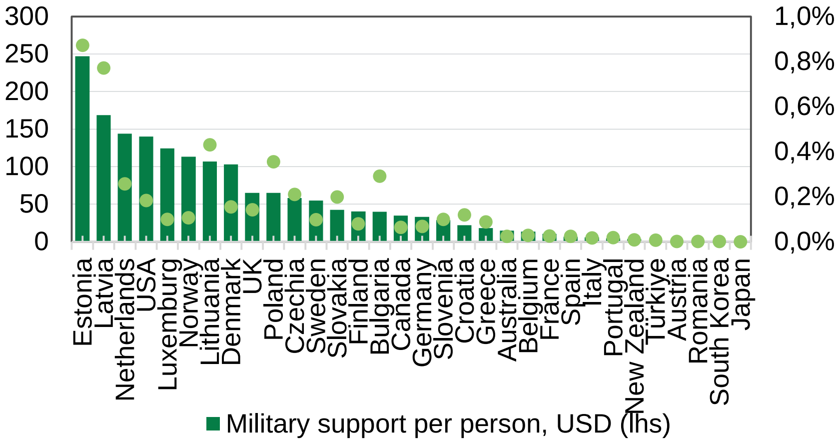
Source: SSSU, NBU staff estimates.

- **The deficit remains significant and is financed primarily by international assistance**
- **In the future, the deficit will gradually decrease, but will remain significant due to the need to maintain defense capabilities and economic recovery.** International assistance will remain a key source of funding for budgetary needs, although but the weight of own revenues will gradually increase
- **Significant budget deficits will lead to a high level of the debt-to-GDP ratio** over the forecast horizon, but this will not create significant pressure on public finances in the coming years due to favorable conditions for attracting international support

National Bank of Ukraine

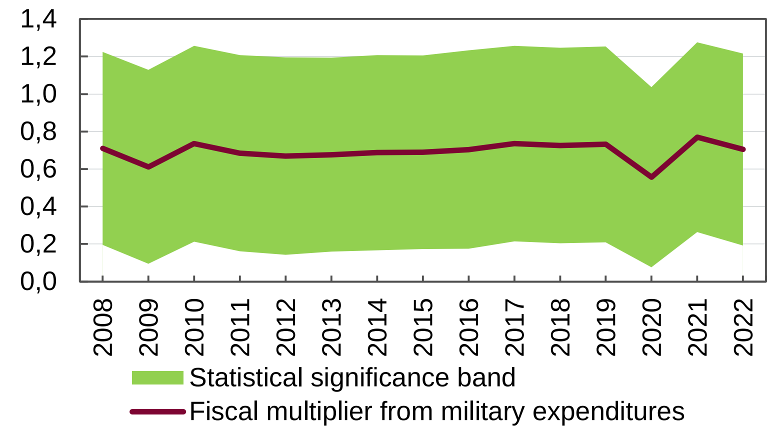
Box. Effects from military support to Ukraine on the partners' economies

Military support to Ukraine by individual countries, 2022



Source: "Ukraine Support Tracker" by Kiel Institute for the World Economy, World Bank.

The immediate effect of military expenditures on GDP growth for different years, USD

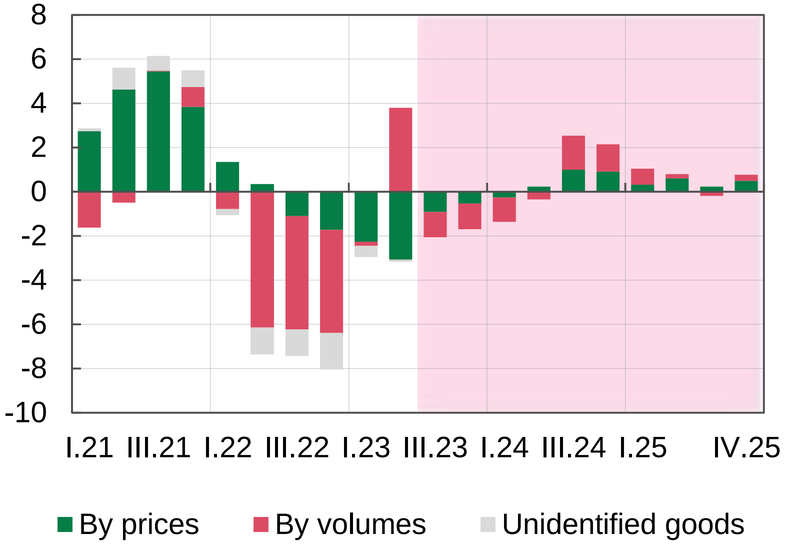


Source: NBU staff estimates.

- After the start of the full-scale invasion, 32 countries provided military **aid to Ukraine worth more than $66 billion in total** just in 2022
- **As part of the information war, the enemy is spreading the narrative that partners are spending too much on military support for Ukraine, while their economies are suffering** from accelerating inflation and slowing economic growth.
- The results of a study with the participation of NBU experts indicate that **1 dollar spent by allies on military needs generates 0.79–0.87 dollars of additional GDP in these countries within one to two years**.
  - A positive effect is observed already in the same year in which military expenditures were made
  - The effect is present even after five years and remains statistically significant
  - The estimates are conservative: the impact of military expenses on the economy is stronger if these expenses go to investments, and the replenishment of the weapons' arsenal by partners consists mostly of investments

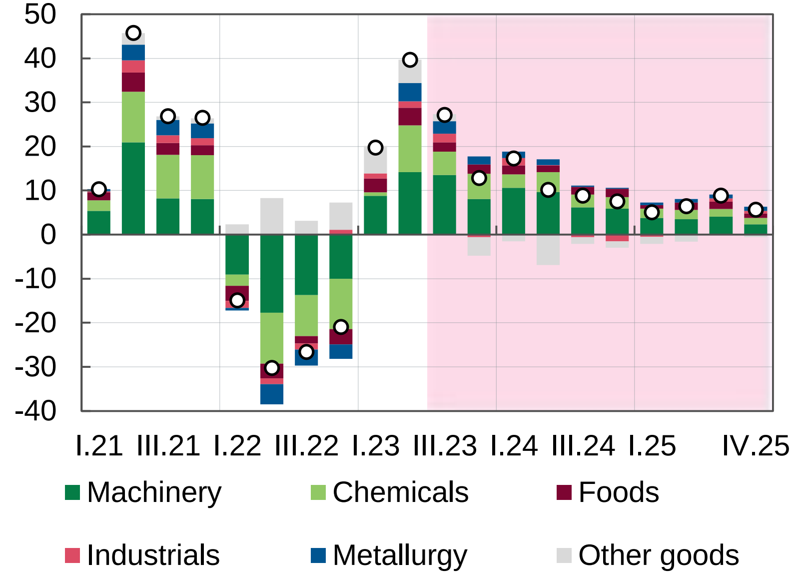
The private sector's FX deficit will remain significant, primarily due to the limited potential for export recovery

Absolute annual change in merchandise exports by prices and volumes, USD bn



Source: SCSU, NBU staff estimates.

Contributions to annual change in non-energy imports, pp

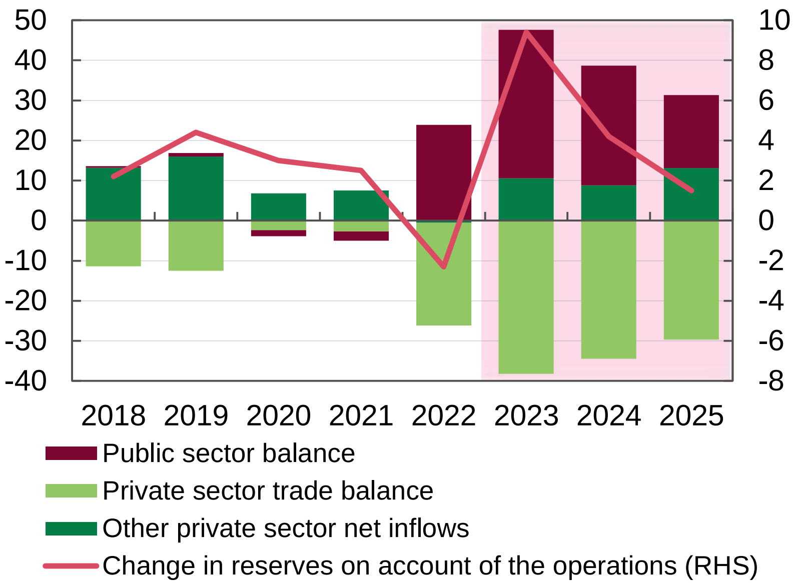


Source: NBU staff estimates.

- **In the second quarter, the deficit of FX in the market decreased significantly** due to lower energy imports and reduced cash withdrawals abroad. These factors offset the decline in exports caused by russia's shutdown of the grain corridor and trade restrictions from certain EU countries
- **Further, the currency deficit will remain significant**. The potential for export recovery in 2023-2025 is expected to remain limited, primarily due to challenges related to food supplies, infrastructure damages, and relatively low harvests. However, during the same period, there will likely be a revival in consumer and investment demand, leading to significant imports of goods and, consequently, FX outflows

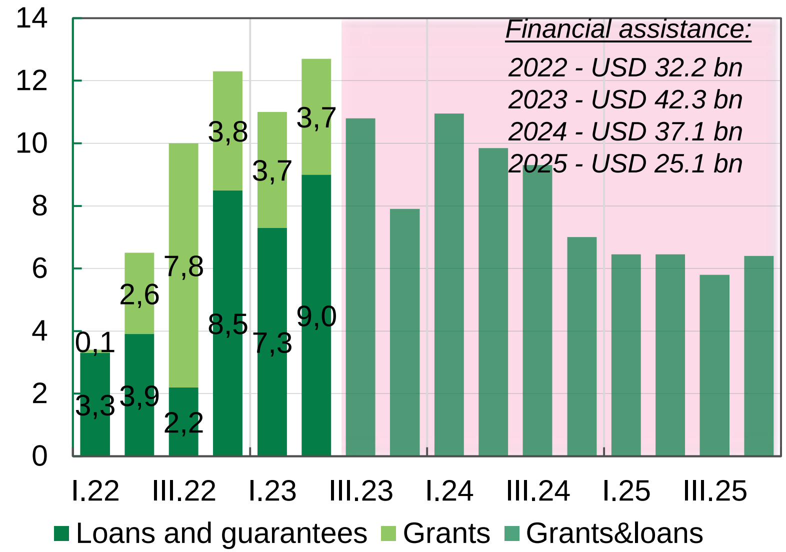
International financial assistance will remain the main source of sustainable reserve growth over the forecast horizon

Gross international reserves, changes on account of selected operations, USD bn



Source: NBU staff estimates.

International financial assistance, USD bn

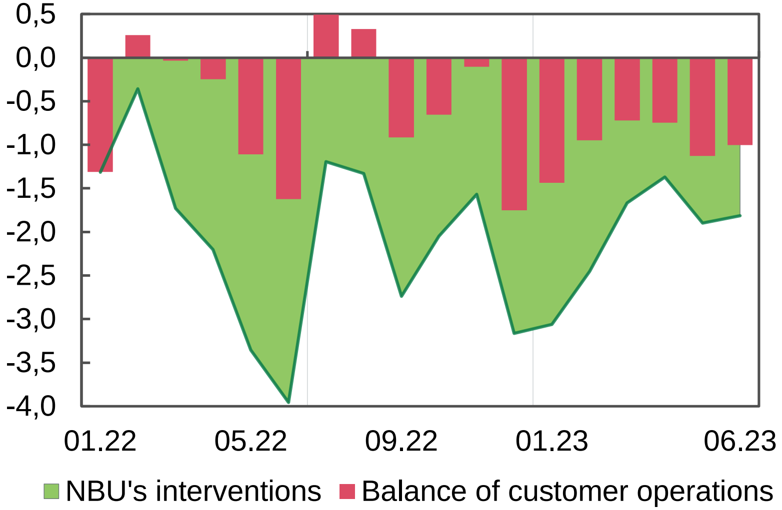


Source: NBU, MoF, data from the open sources, NBU assumptions.

- **In the first half of 2023, Ukraine received USD 23.6 bn** from international partners, and in total, since the start of the full-scale invasion, it reached USD 55.9 bn . As a result, gross international reserves reached a historic record high of 39 USD bn as of the end of June. This amount covered almost 100% of the minimum required level of reserves according to the IMF's composite criteria
- **Financing from international partners will remain the main source of FX inflows over the forecast horizon.** This will offset the significant net outflow of foreign currency from the private sector and enable the increase international reserves to USD 44.1 bn by the end of 2025

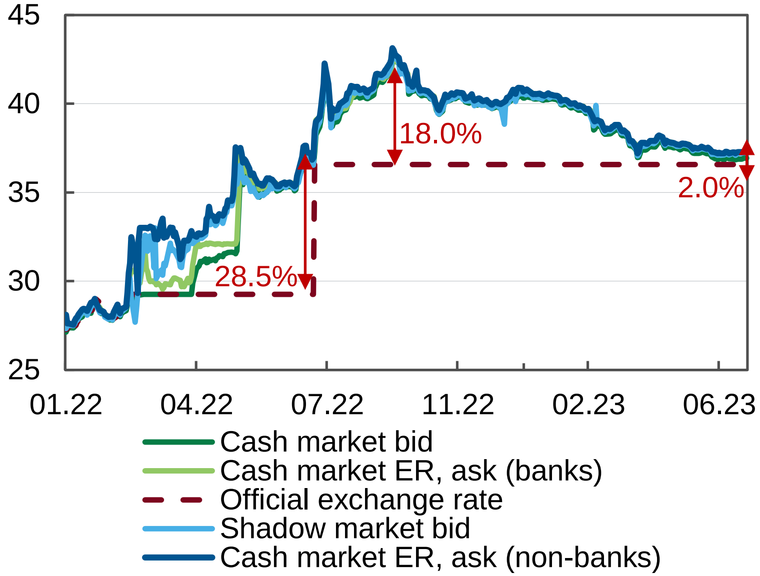
NBU`s measures on the back of sustainable international assistance have helped fortify FX market sustainability

Bank clients' FX transactions and NBU interventions*, USD bn



* Net sale and purchase of non-cash and cash foreign currency by bank clients Tod, Tom, Spot.
Source: NBU.

Hryvnia exchange rates, UAH per USD

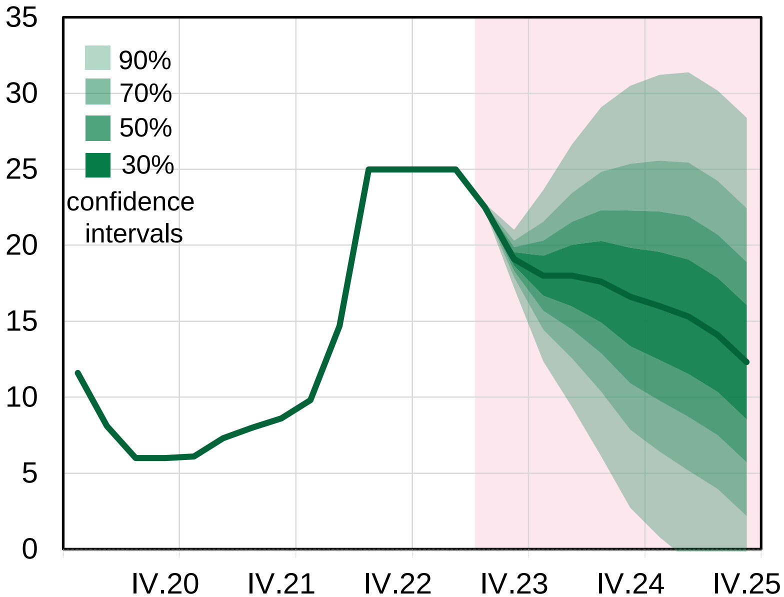


Source: NBU, open data sources.

- **Consistent NBU policy to increase the investment appeal of hryvnia assets have helped fortify FX market sustainability in Q2.** Demand for currency declined, the cash hryvnia exchange rate strengthened, interventions decreased significantly (to USD 5.1 bn compared to USD 7.2 bn in Q1). Exchange rate expectation also improved markedly. This, in particular, was facilitated by further growth of international reserves due to regular international assistance
- **The deviation of cash exchange rate vs the official rate has declined to 2% at the end of June,** whereas in the middle of last year it exceeded 25%

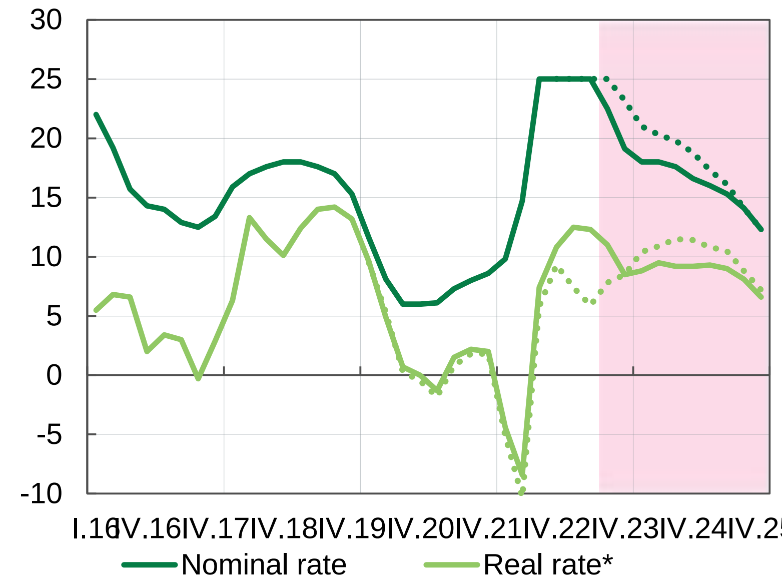
Favorable macroeconomic conditions created the prerequisites for a faster start of the key policy rate reduction cycle

Key rate, %*



* quarterly average
Source: NBU staff estimates.

Key rate (nominal and real), %

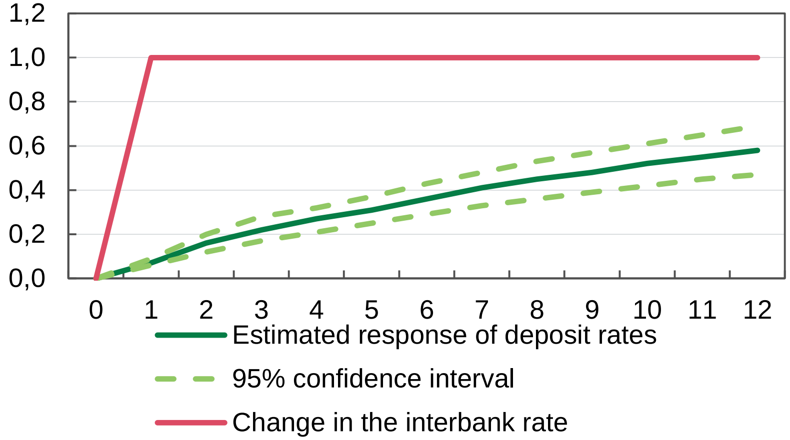


* quarterly average, deflated by model expectations (QPM)
Source: NBU.

- Taking into account an improvement in inflation expectations and expected further disinflation, **hryvnia savings will remain attractive even if interest rates are cut**. This is an important element for ensuring exchange rate sustainability when FX restrictions are eased and the NBU makes the exchange rate more flexible
- **The NBU will continue to cut its key policy rate**, provided the FX market remains sustainable and inflation declines
- When easing FX restrictions and transitioning to a more flexible exchange rate, **the NBU will take into account the need to maintain the high attractiveness of hryvnia assets**

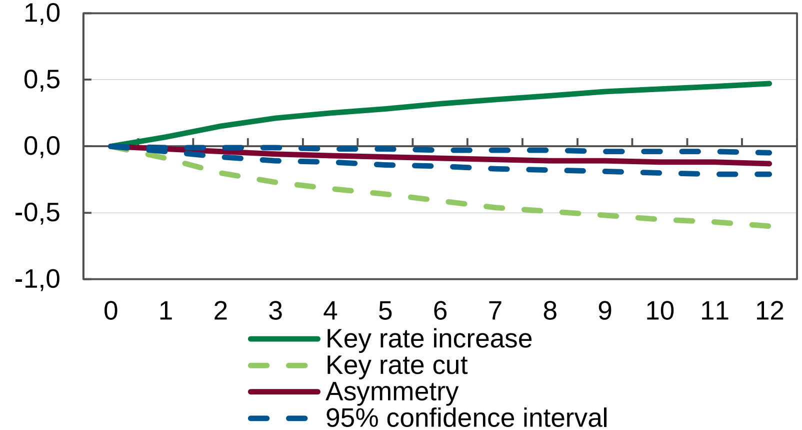
Box. The NBU's key rate transmission to interest rates on hryvnia term deposits of households

The response of the deposit rate to changes in the interbank overnight rate, %



Source: NBU staff estimates.

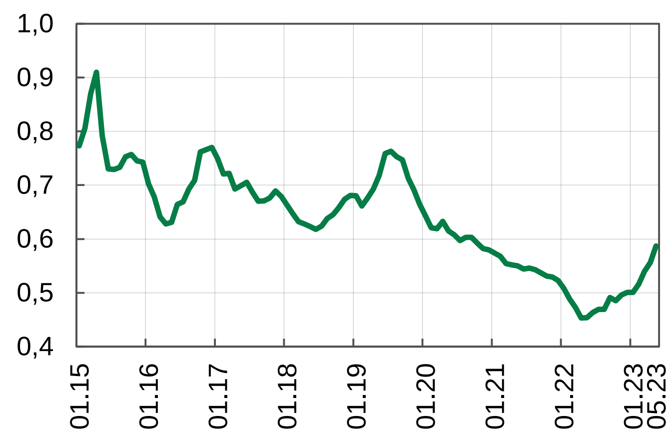
Transmission from the overnight interbank rate increase/decrease to deposits interest rates , %



Source: NBU staff estimates.

- **According to NBU estimates, the strength of long-term transmission in Ukraine is about 0.6.** The change in the interbank rate by 10 p.p. on the horizon of 12 months is expected to change deposit rates by 6 p.p.
- **The reaction of deposit rates to changes in the interbank rate is asymmetric.** A 10 p.p. increase in the interbank rate on average makes deposit rates in Ukraine increase by 4.7 p.p. A 10 p.p. decrease leads to deposit rates decrease by 6.3 p.p..
- **Since the beginning of 2023, thanks to additional measures of the NBU, it has been possible to ensure the growth of transmission strength, which is currently close to the expected value**

The dynamics of the interbank to deposit rates long-run transmission



Source: NBU estimates.

Risks

The degree of influence on the baseline scenario	The likelihood of risk: Low <15%	Average 15%–25%	High 25%–50%
Weak		Extension of the ban on food imports by certain European countries The resumption of “grain corridor” operation	
Moderate	Damage to energy and port infrastructure	Enhanced emigration	
Strong		International aid arriving in lower amounts or on a less regular basis The emergence of additional budget needs and substantial quasi-fiscal deficits, including in the energy sector Rapid implementation of a large-scale plan for the reconstruction of Ukraine "Marshall Plan"	Longer war period, escalation,eco-terrorism of the occupiers