National Bank
of Ukraine

# Inflation report (January 2023)

February 6
2023

# NBU Board Decisions that were adopted on January 26 and the motivation behind them

**To keep the key policy rate unchanged at 25% per annum**

**In order to bring inflation back to the steady decline trajectory and to maintain exchange rate and macrofinancial stability amid high uncertainty, and also considering that:**

- inflation has stabilized but is still high due to consequences of the war;
- despite a stabilization, inflation expectations remained high;
- significant funds' balances on current accounts of HH and businesses and high exchange rate expectations increase the sensitivity of the FX market to situational factors → further increase in the attractiveness of term hryvnia assets is required;
- there is a room for further pass-through of the effects of the June increase in the key policy rate to 25%

**From 11 February to raise by 5 pp the banks' required reserve ratios for:**

- demand deposits and current accounts of businesses and households
- deposits and current accounts of nonresident banks; and for loans from international (other than financial) and other organizations

*For hryvnia and FX funds*

***With the possibility to cover up to 50% of banks' total required reserves with benchmark domestic government debt securities.***

+

**From 11 March to raise by 10 pp the banks' required reserve ratios** for household *hryvnia and FX* demand deposits and current accounts

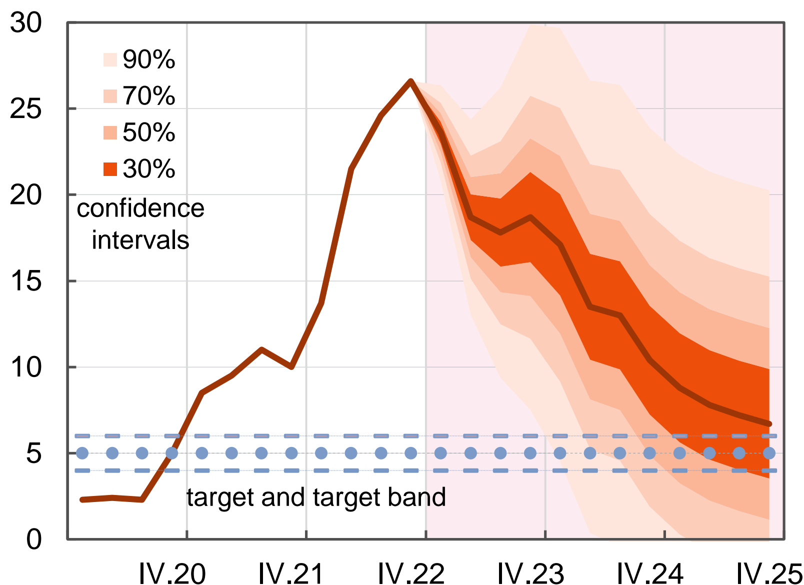
***The banks will not be allowed to use benchmark domestic government debt securities to meet these reserve requirements***

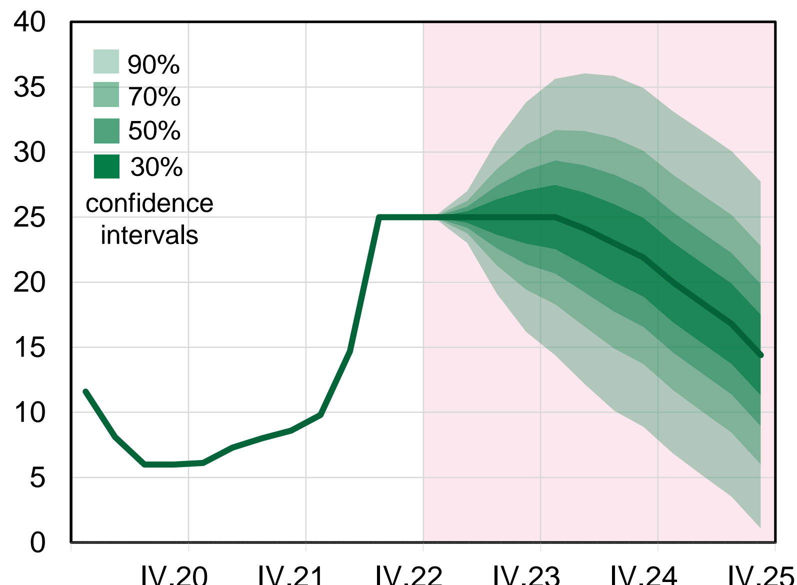
These measures will help decrease the liquidity surplus in the banking system ⇨ will encourage the banks to compete more actively for term deposits ⇨ will push up interest rates on hryvnia assets and increase the share of term deposits ⇨ **will make the FX market more resilient to situational factors, while also enabling the NBU to ease administrative restrictions for businesses and households in future**

**IT IS IMPORTANT:**

The updated forecast envisages **keeping the key policy rate at 25% at least until the end of Q1 2024**. If required, the NBU stands ready to deploy other tools to avoid the monetary financing of the budget deficit, make hryvnia assets more attractive, increase the resilience of the FX market, and lay the proper foundations for easing administrative restrictions

# Elevated price pressure for a long period and the prevalence of inflationary risks necessitate tight monetary conditions




* quarter average

| Indicators * | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|
| **Real GDP growth**, % | -30.3 (-31.5) | 0.3 (4.0) | 4.1 (5.2) | 6.4 |
| **CPI**, % yoy (eop)** | 26.6 (30.0) | 18.7 (20.8) | 10.4 (9.4) | 6.7 |
| **Core CPI**, % yoy (eop)** | 22.6 (24.5) | 15.8 (13.3) | 8.7 (3.0) | 3.0 |
| **Current account balance**, USD bn | 8.6 (6.8) | -20.4 (-8.0) | -8.4 (-5.1) | -5.5 |
| **Gross reserves**, USD bn | 28.5 (26.0) | 27.0 (21.7) | 31.0 (27.4) | 34.6 |

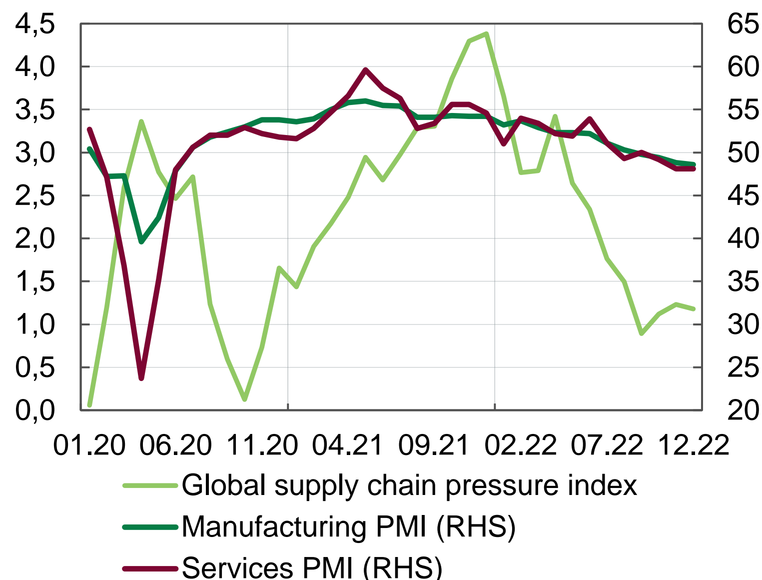
* in brackets – previous forecast
** end of period

## Summary

- **The forecast is based on the assumptions** of the launch of a new program with the IMF, the implementation of a coordinated monetary and fiscal policy, and the gradual leveling of quasi-fiscal imbalances. It is assumed that there will be a significant decrease in security risks from the beginning of 2024, the full unblocking of sea ports, a decrease in the sovereign risk premium and the return of migrants to Ukraine
- **Inflation has stabilized in recent months, although it remains at a high level (26.6% in 2022). It will decrease to 18.7% in 2023**, due to keeping tight monetary conditions, a decrease in global inflation and weaker consumer demand against the backdrop of electricity outages. In the coming years, inflation will slow down faster thanks to the reduction of security risks, the full recovery of logistics and the increase of harvests
- **The economic recovery was interrupted by power outages** caused by Russian attacks on energy infrastructure, so GDP in 2023 will grow by only 0.3%. As security risks decrease, Ukraine will return to sustainable economic growth (from 2024)
- **Limited export opportunities, a significant number of migrants abroad and the economy's significant import needs for reconstruction will determine the high level of the current account deficit in the coming years**
- **Inflows of international support and cooperation with the IMF will make it possible to finance a significant budget deficit**, as well as to maintain international reserves at a sufficient level
- **To return inflation to a path of steady decline, as well as maintain exchange rate and macro-financial stability given the high level of uncertainty, the NBU keeps the discount rate at the level of 25%** and takes additional measures to strengthen the attractiveness of the hryvnia as a means of savings

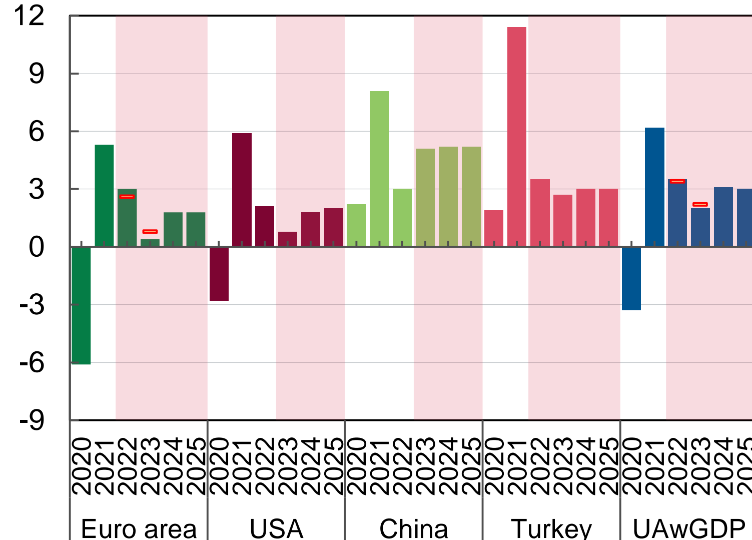
# After a mild recession at the start of the year, the global recovery will be sluggish given the anti-inflationary policies of central banks

**Global PMI and Global supply chain pressure index**




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

**Real GDP of selected countries and UAwGDP, % yoy**

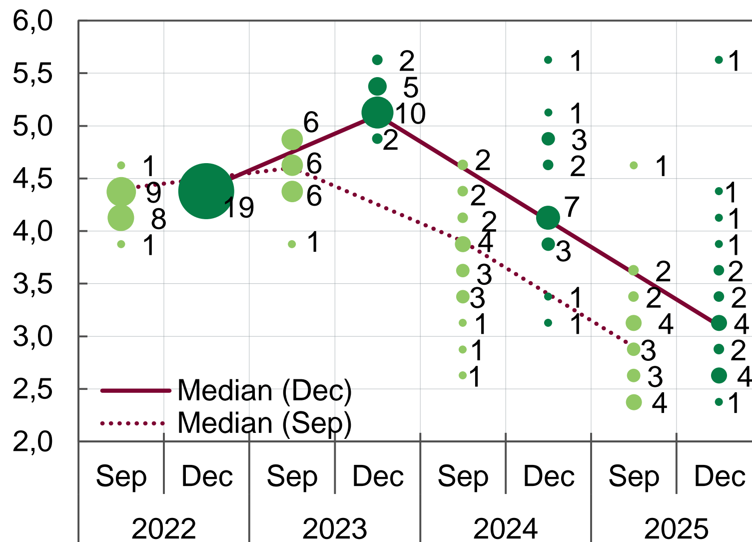



Source: National statistical agencies, NBU staff estimates.

- **The slowdown in economic activity** in the IV quarter deepened due to a decrease in output in both industrial activities and the service sector**. However,** thanks to a warm winter, the lifting of China's zero-tolerance policy on COVID-19, and a robust US labor market**, the recession will be short-lived and shallow**
- Still**, global demand will remain sluggish,** including due to the continued struggle of leading banks (the Fed, the ECB) with inflation, despite the weakening of supply-side factors

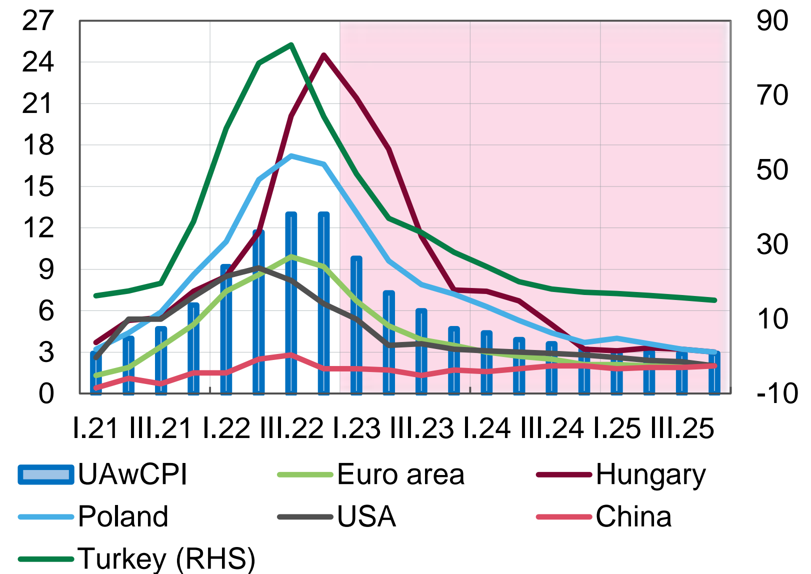
# Global inflation will slowly ease as global financial conditions tighten and demand weakens

**The number of FOMC members that expect the respective policy rate**




Source: Fed.

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

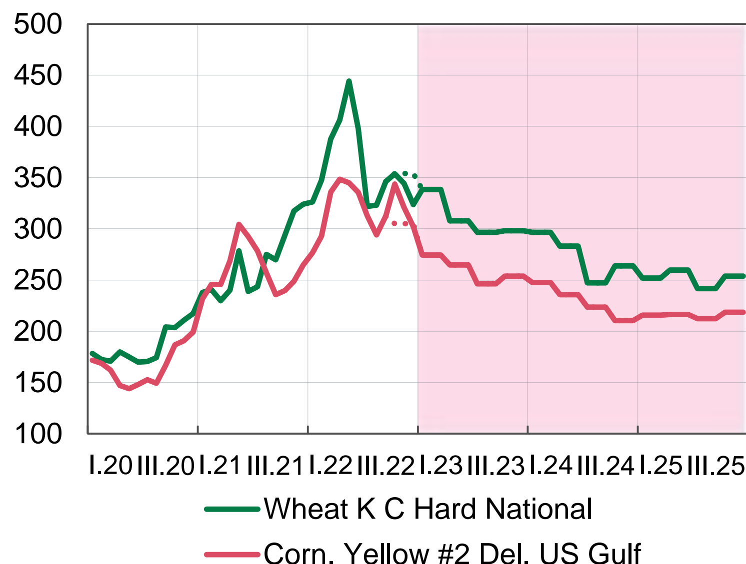



Source: National statistical agencies, NBU staff estimates.

- **Commodity price pressures fell to their lowest level in 2.5 years, according to the Global Price Pressures Index.** Supply pressures, according to the Global Supply Shortages Index, continued to ease as logistics improved and supply shortages eased
- Given the current environment, **inflationary pressures are expected to ease further**. However, due to the effect of secondary effects from the increase in energy prices and the steady growth of wages due to the need to compensate for high inflation, the target price indicators in most Ukraine's MTP countries will be reached only in 2024

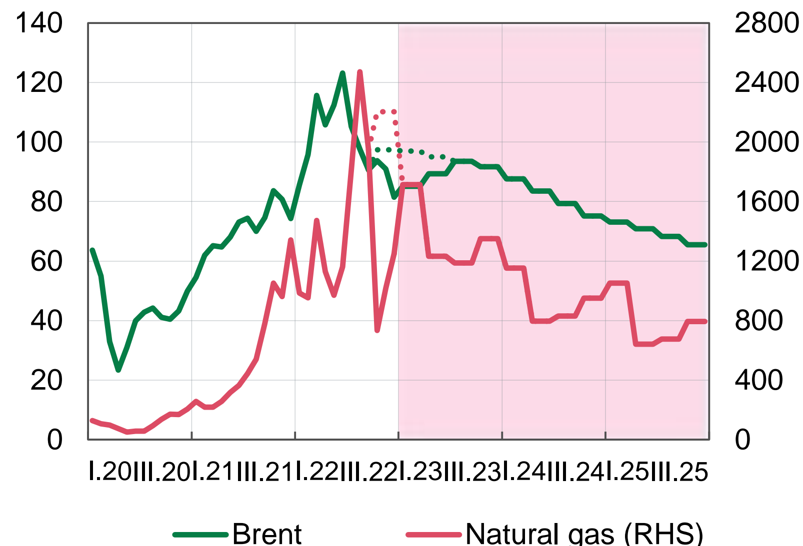
# Global commodity prices will decrease due to a gradual increase in supply and the improvement of logistics

**World grain prices, USD/MT, quarterly average**




Source: Refinitiv, NBU staff estimates.

**World crude oil prices (USD/bbl) and Netherlands TTF natural gas prices (USD/kcm)**

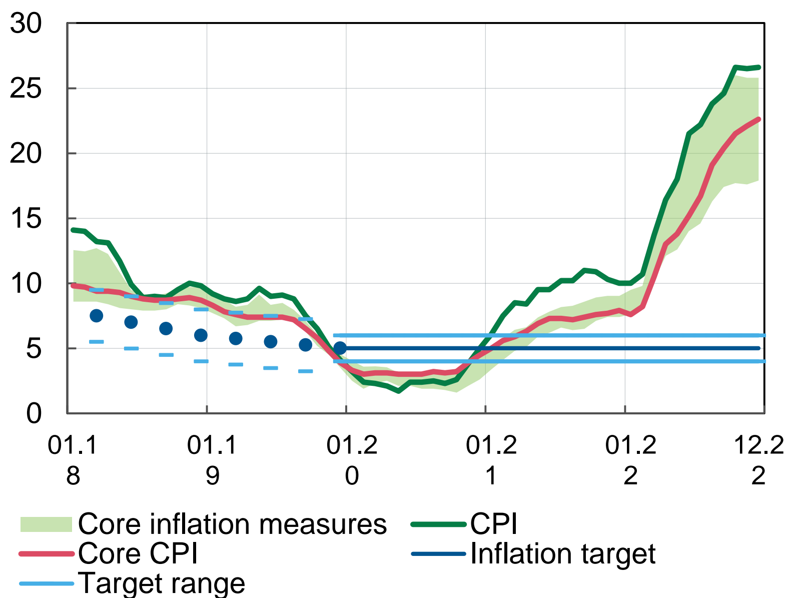



Source: Refinitiv, NBU staff estimates.

- **Grain markets were under downward pressure on prices from the continuation of the grain corridor.** It is expected that the operation of the corridor in the conditions of the expansion of cultivated areas in the world, against the background of improving weather conditions, will contribute to the increase of harvests. Despite the increase in demand, this will allow an excess supply level and lower prices
- **Global steel and iron ore prices** will fall under pressure from increased supply
- **Oil and natural gas prices in EU**, after a short-term upward correction due to some activation of demand, will further decline due to increased supply despite limited supply from russia

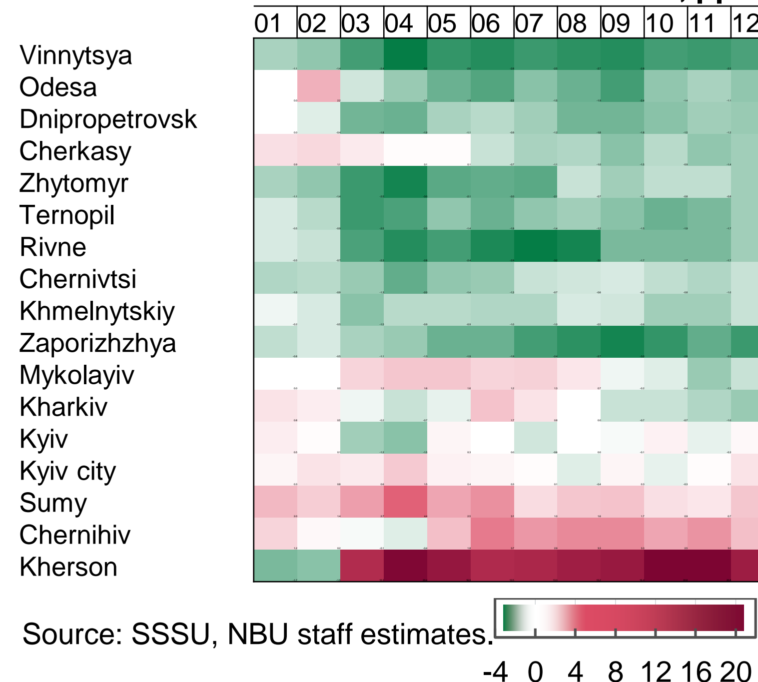
# Inflation expectedly accelerated in 2022 mainly due to the supply factors, but remained manageable

**Underlying inflation trends*, % yoy**




Source: NBU staff estimates.

**Deviation of regional annual CPI growth rates from nationwide inflation in Ukraine in 2022, pp**

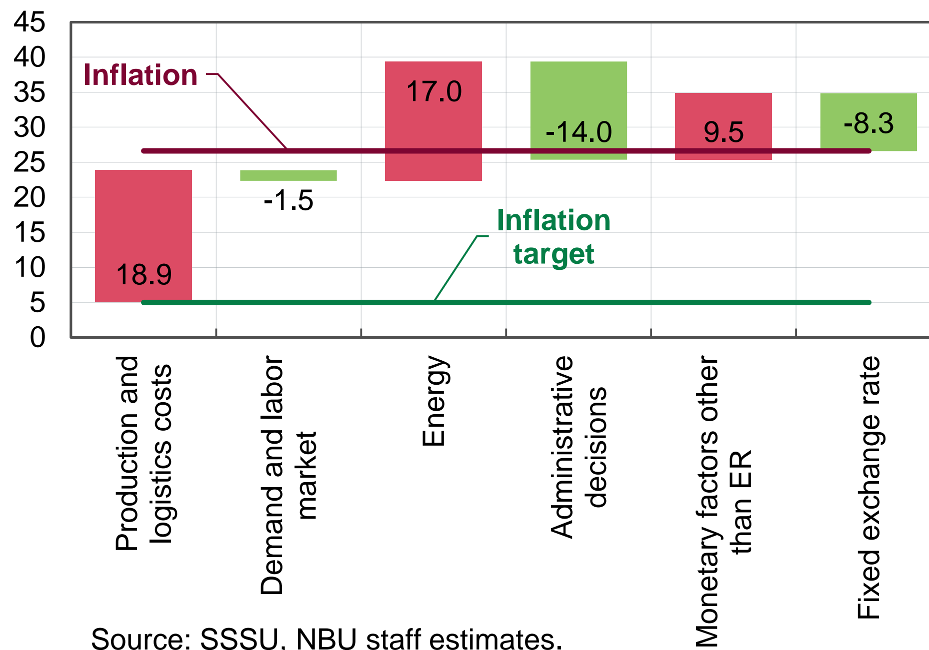



Source: SSSU, NBU staff estimates.

- **Inflation expectedly accelerated mainly due to the supply factors.** The pressure from global processes was also significant - many countries renewed their long-term inflationary maxima. Despite the challenges of the war and the highly inflationary external environment, inflation remained manageable and stabilized at the end of the year
- **Significant regional differences in price growth persist.** Prices are rising at relatively higher rates in the frontline areas due to security risks and complicated logistics, and in the safer western regions due to relatively higher demand. For example, food prices increased in 2022 in Kherson region by 73.5%, but in Vinnytsia region - by only 33%

# **Box.** Factors of inflation deviating from the target

**Decomposition of inflation deviation from the target in December 2022, pp**

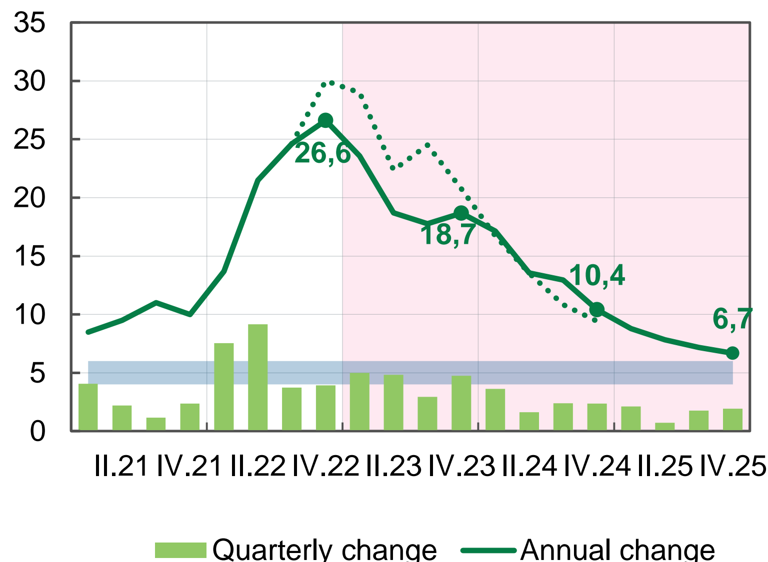



Source: SSSU, NBU staff estimates.

- **Inflation rose primarily due to supply factors related to the russian invasion**, which were only marginally offset by lower consumer demand
- **The impact of high global energy prices was largely restrained by the moratorium** on increasing household utility tariffs
- **Fixation of the hryvnia exchange rate played the main role in keeping inflation manageable.** The transmission of the discount rate to inflation remained weak due to restrictions on capital movements introduced at the beginning of the full-scale invasion and liquidity surplus in the banking system. However, if the rate had remained unchanged at 10%, inflation would have been higher

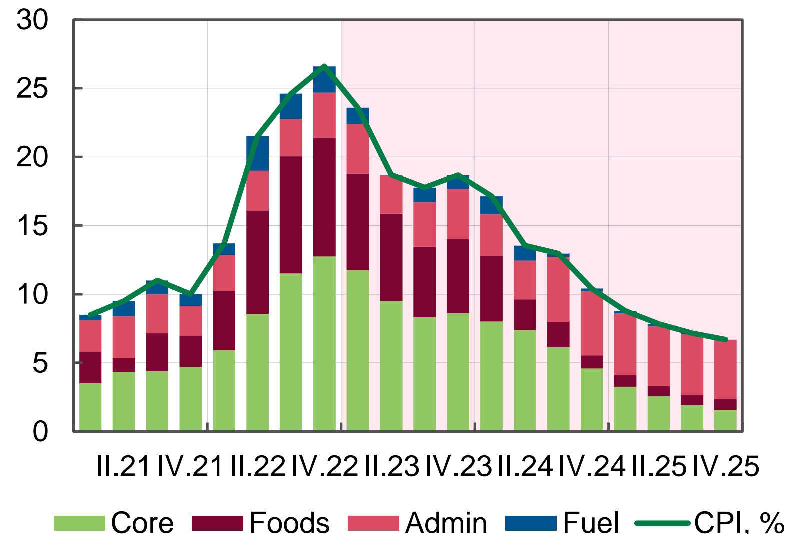
# Disinflation will be achieved thanks to tight monetary policy, a gradual slowdown in global inflation and weak demand

**Headline inflation, %**




Source: SSSU, NBU staff estimates.

**Contributions to Annual CPI Growth by Main Components, pp**

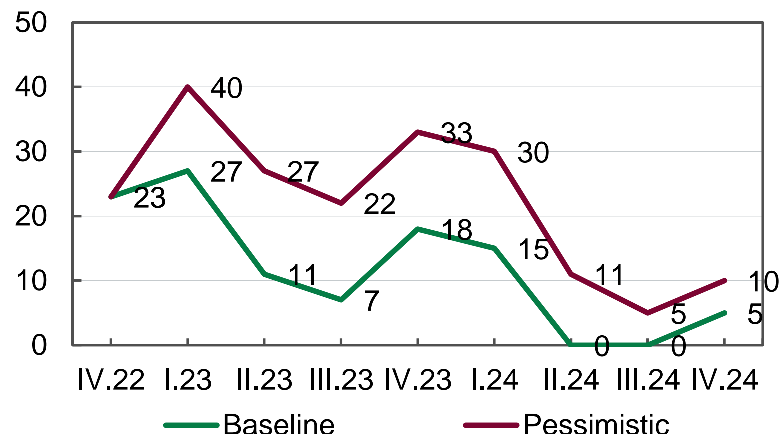



Source: SSSU, NBU staff estimates.

- **Inflation will moderate in 2023 due to tighter monetary conditions, lower global inflation and weaker demand.** In the forthcoming years, the effect of disinflationary factors will intensify. This will be facilitated by the expected reduction of security risks, restoration of logistics and increased harvests
- **Aggregate demand will remain below its equilibrium level for a long time.** Accordingly, inflationary pressure from the demand side will be low
- **In 2023-2025, inflation will exceed the target range** due to significant growth rates of administrative prices and tariffs to bring them to an economically reasonable level

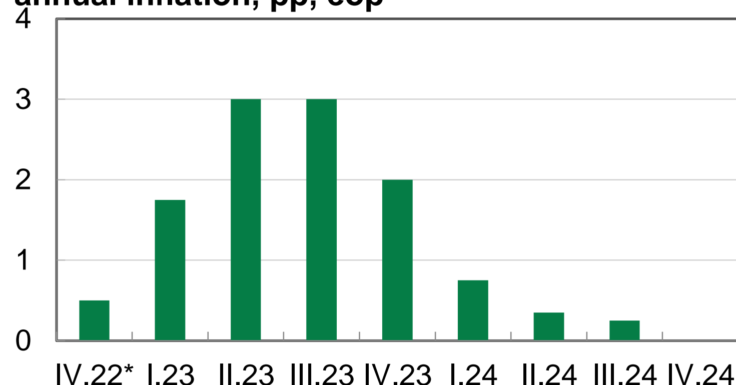
# Box. Impact of the electricity deficit on the Ukrainian economy

### Assumptions about electricity shortages, %




- The baseline scenario assumes a quick recovery of the energy system due to repairs and equipment deliveries
- Pessimistic scenario assumes more significant damage, delays in equipment deliveries, prolonged outages
- GDP losses are connected with lower production and reduced consumer demand, which is only partially offset by generators
- Pro-inflationary effect is related to increased production costs and reduced supply
- Losses for the external trade are related to increased imports of petroleum products and energy equipment
- Risks can be both positive (faster repairs and deliveries) and negative (higher damage, loss of flexibility)

### Impact of electricity supply interruptions on annual inflation, pp, eop




* Offset by other factors.
Source: NBU staff estimates.

### Contributions to the change in real GDP, pp

| scenarios | 2022 | 2023 | 2024 |
|---|---|---|---|
| Baseline | -1.3 | -1.9 | -0.6 |
| Pessimistic | | -3.6 | -1.5 |

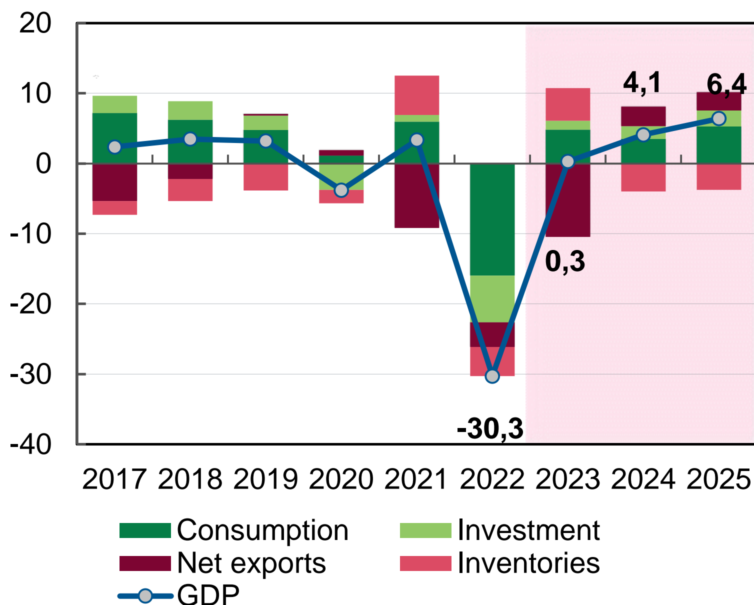
### External trade`s losses, USD bn

| | Baseline scenario | | Pessimistic scenario | |
|---|---|---|---|---|
| | 2023 | 2024 | 2023 | 2024 |
| Exports | -0.6 | -0.2 | -1.2 | -0.6 |
| Imports | 1.2 | 0.3 | 2.6 | 0.6 |
| Balance | -1.8 | -0.5 | -3.8 | -1.2 |

Source: NBU staff estimates.

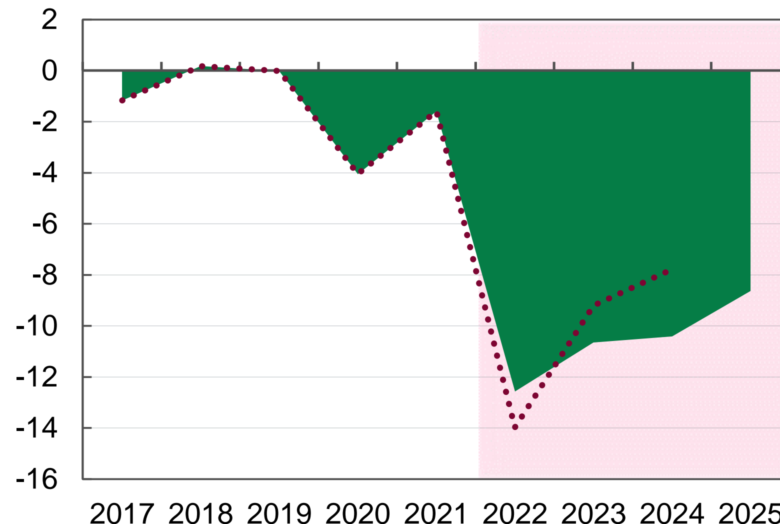
# Reduced security risks, resumption of seaports operations and loose fiscal policy will support economic recovery since 2024

**Real GDP, contributions, p.p.**




Source: SSSU, NBU staff estimates.

**GDP GAP, %**

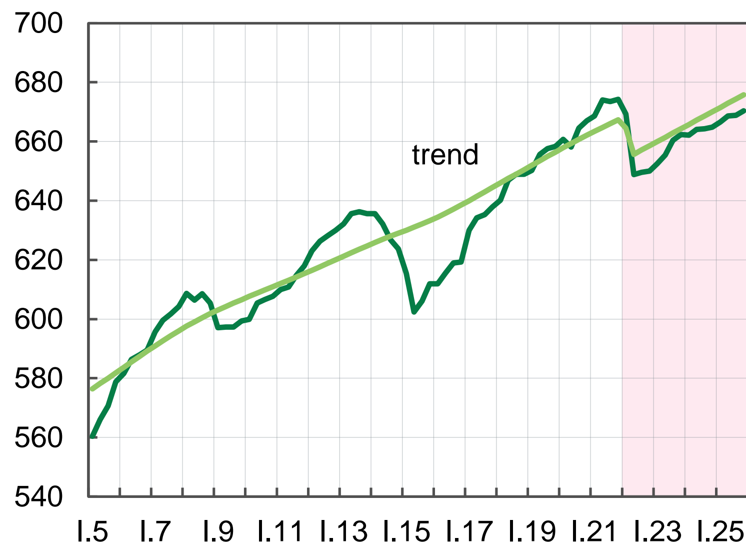



Source: SSSU, NBU staff estimates.

- **Economic recovery in late 2022 was interrupted by power** outages caused by Russian attacks on energy infrastructure
- **With high security risks and lower yields, this will restrain economic activity in 2023,** resulting in real GDP growth of just 0.3%
- **In 2024-2025, the following factors will support economic recovery**: reduction of security risks and restoration of full operation of Black Sea ports, soft fiscal policy and revival of domestic demand
- **Real GDP will resume growth, but will continue to be below its potential level**

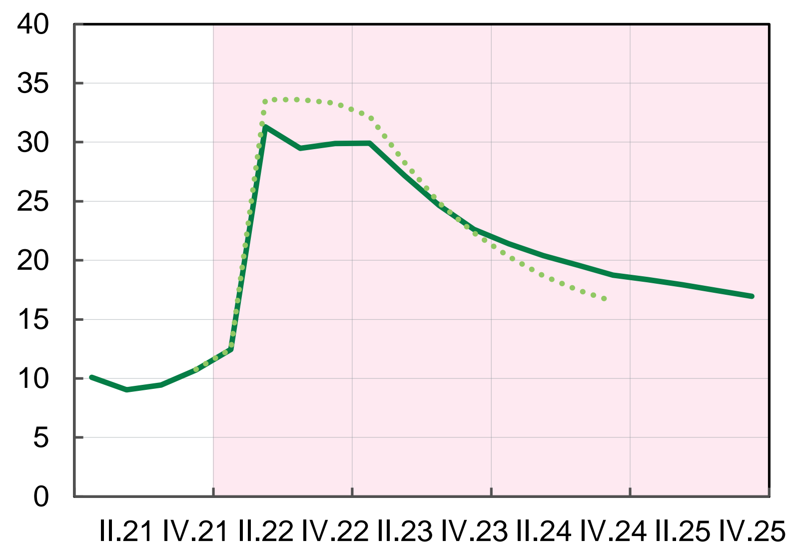
# The recovery of the labor market slowed down after a series of large-scale Russian attacks on the energy infrastructure

**Real wages, level (in logs)**




Source: SSSU, NBU staff estimates.

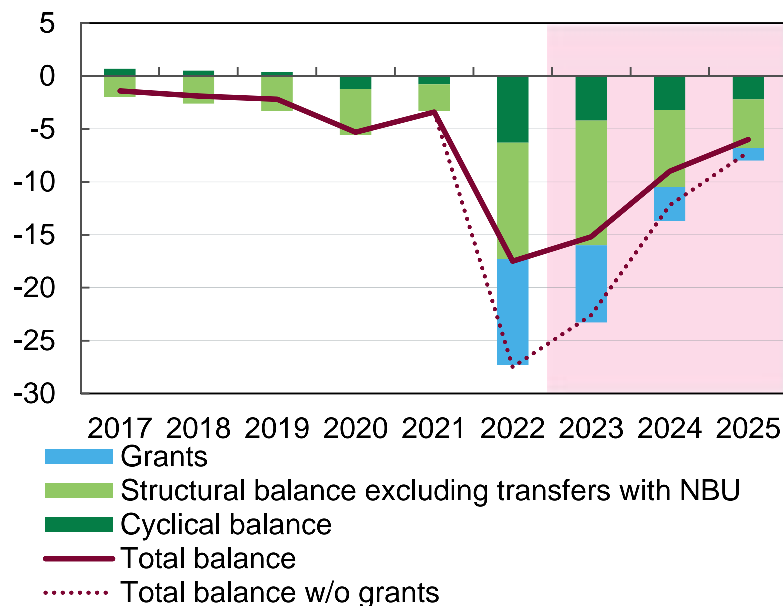
**ILO unemployment, sa, %**



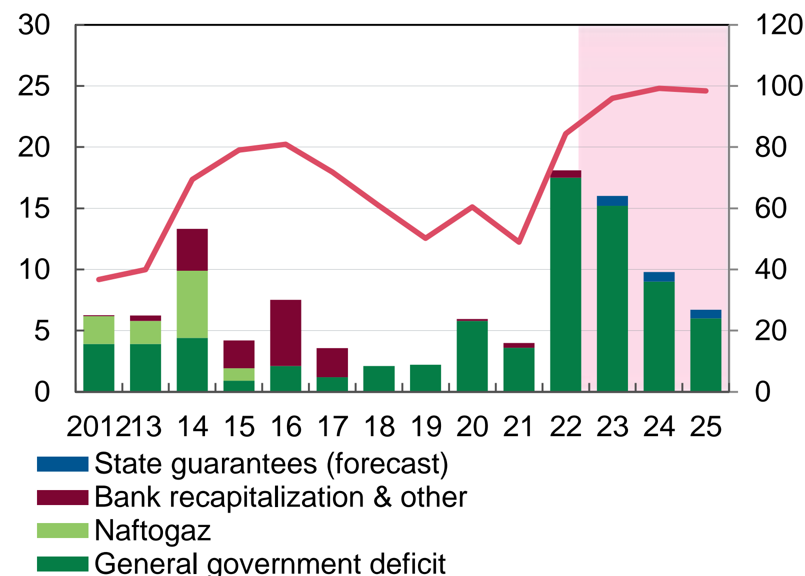

Source: SSSU, NBU staff estimates.

- **Labor supply and demand have decreased, and unemployment remains high.** Instead, the employment of migrants increases as they adapt to life abroad. This partially compensates for the loss of labor income in Ukraine, but poses long-term risks for the Ukrainian labor market
- **In 2023 - 2025, domestic employment will grow slowly due to labor market disparities** that have deepened due to the effects of the war. Real wages will recover at a moderate pace due to high inflation and lower than pre-war productivity

# The budget deficit will remain significant to support the economy both during the war and in the post-war period




Source: STSU, NBU staff estimates.

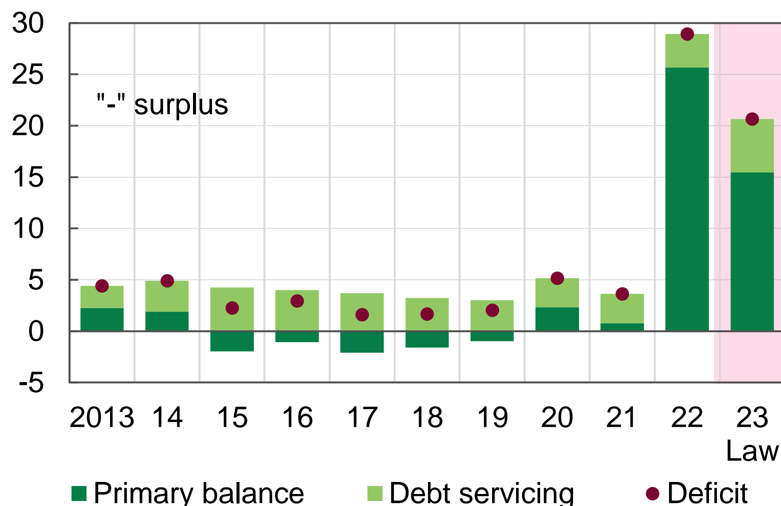



Source: IMF, STSU, MFU, NBU staff estimates.

- **In 2022, fiscal policy was accommodative. The deficit will gradually decrease, but will remain significant** due to the need to maintain defense capabilities and economic recovery
- **In 2023, international aid will be a key source of financing budgetary needs.** An increase in domestic borrowing will help to avoid monetary financing of the budget deficit in the forecast horizon
- **The debt-to-GDP ratio will increase in 2023 and remain high for a long time** (near 100%) due to significant financing needs given the gradual reduction of grant support and the moderate pace of economic recovery

# Box. Ukraine's 2023 State Budget in Figures

**State budget balance*, %**




* To calculate the primary balance for 2013–2022 functional classification was used, and for 2023 – program classification. The 2022 deficit does not include grants.
Source: Treasury, VRU, NBU staff estimates.

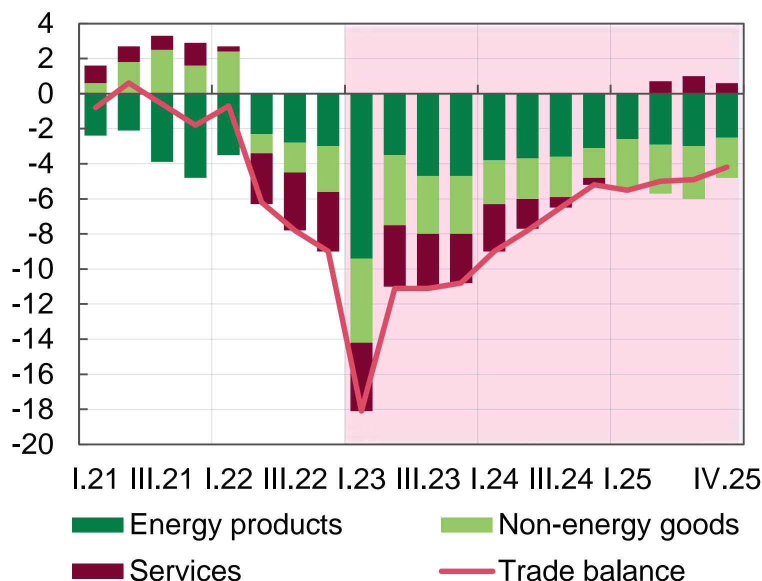
**Macroeconomic indicators***

| Indicator | 2023 | |
|---|---|---|
| | CMU | NBU |
| Nominal GDP, UAH bn | 6 279 | 5 985 |
| Real GDP, % yoy | 3.2 | 0.3 |
| CPI, % yoy, end of period | 28.0 | 18.7 |
| Exports of goods and services (USD bn) | 61.3 | 49.0 |
| Imports of goods and services (USD bn) | 76.6 | 99.9 |
| NER, UAH/USD (average) | 42.2 | - |
| Nominal average wage (average for the period), UAH thousand | 18.3 | 17.6 |

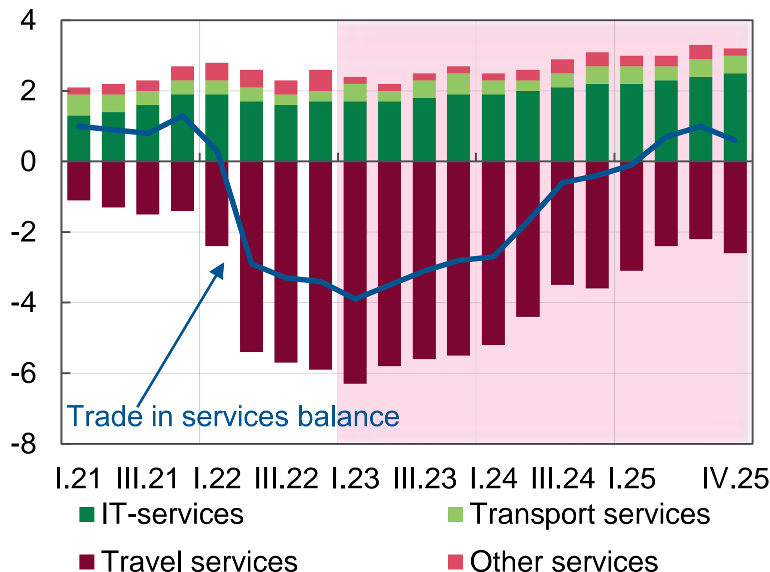
* According to the Explanatory Note to the state budget draft law for 2023. NBU forecast (January 2023).
Source: VRU, NBU staff estimates.

- **The planned state budget deficit in 2023 is to be lower than the actual figure of 2022 (excl. grants). However, almost all budget indicators are at significant risks with the resource side under the highest pressure:**
  - economic losses resulting from power shortages put the fulfillment of planned tax revenues into question
  - the prospects for receiving external financing (USD 38.2 bn) have improved since the draft budget was adopted, however, the volumes of financing to be disbursed remain quite ambitious
- **Meanwhile, following the measures of the NBU & MoF to revive the market the actual domestic borrowing in UAH may exceed the volumes overseen in the budget law**
- **The deficit may expand and overshoot the planned figure,** given the limited potential for optimization of expenditures and given a risk of their expansion in case of worsening security environment and damages to critical infrastructure

# In 2023, the merchandise trade deficit will grow rapidly due to a lower exports and high demand for autonomous power supply




Source: NBU staff calculations.

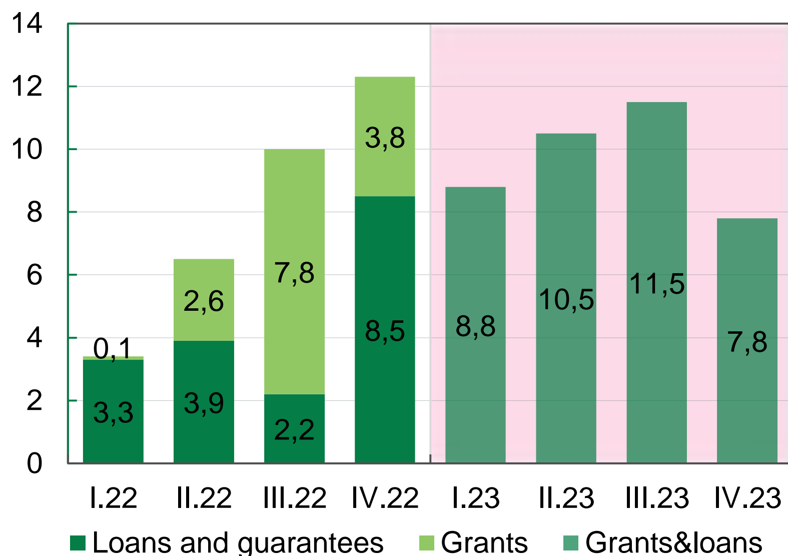



Source: NBU staff calculations.

- **Exports will decrease in 2023 impacted by low harvests and the negative effect of the power shortages on producers**. However, thanks to the economic recovery and the seaports being fully operational, exports will grow. Food exports will gradually increase, despite the lower global prices. At the same time, exports of metallurgical products will remain significantly below the pre-war levels, due to destroyed production capacities and high domestic demand to rebuild infrastructure
- **Non-energy imports will remain high**, but lower energy prices and the recovery of exports will contribute to a reduction of merchandise trade deficit starting from 2024. **A significant number of Ukrainian migrants will result in significant FX outflows in 2023**, which will gradually slow down as people return to Ukraine

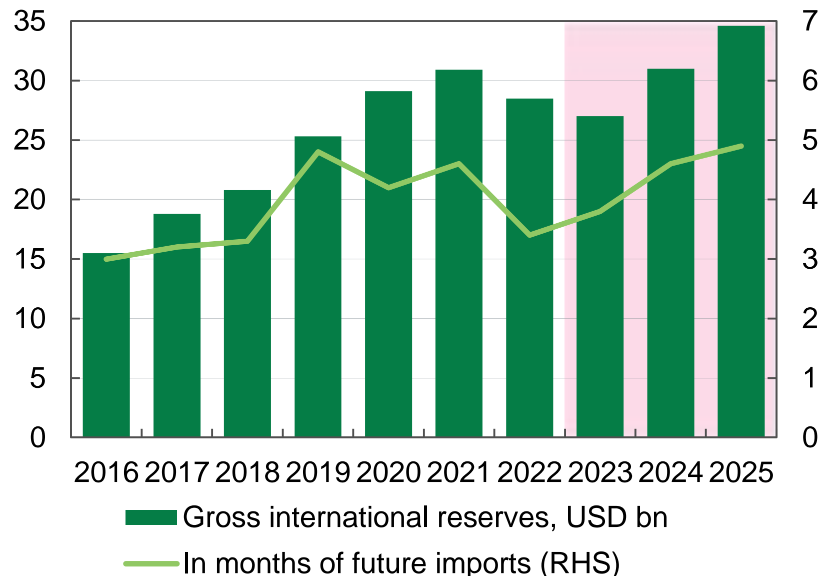
# After the reduction in 2023, the reserves will grow. International aid will remain the major source of their replenishment

**International financial assistance, USD bn**




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

**Gross international reserves, USD bn**

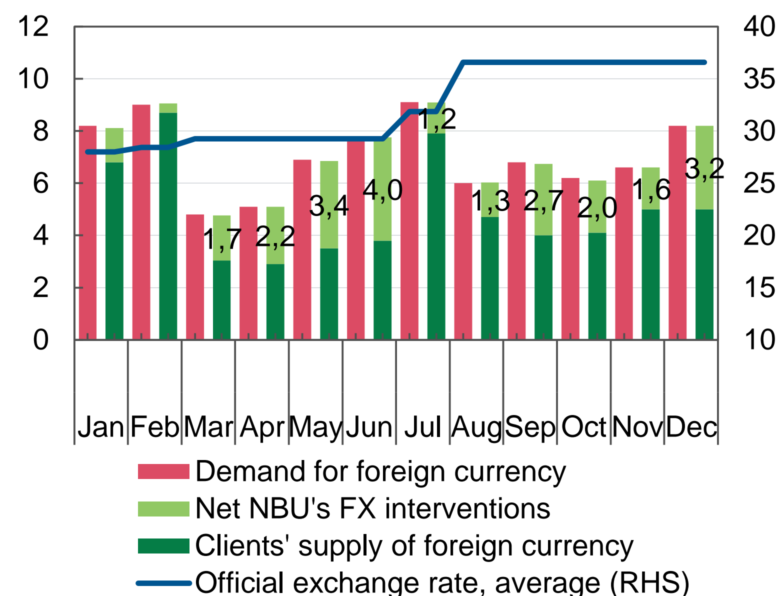



Source: NBU staff calculations.

- **Despite larger NBU's FX interventions in Q4 gross international reserves increased** to USD 28.5 bn by the end of 2022. International financial aid remained the major source covering the private sector's FX deficit
- **Despite the expected increase in official financing volumes in 2023** (compared to the previous forecast) along **with external financing covering energy imports, will only partially offset widened trade deficit**
- **As a result, reserves will decrease to USD 27 bn in 2023.** Official financing will help maintain international reserves at a sufficient level in the following years

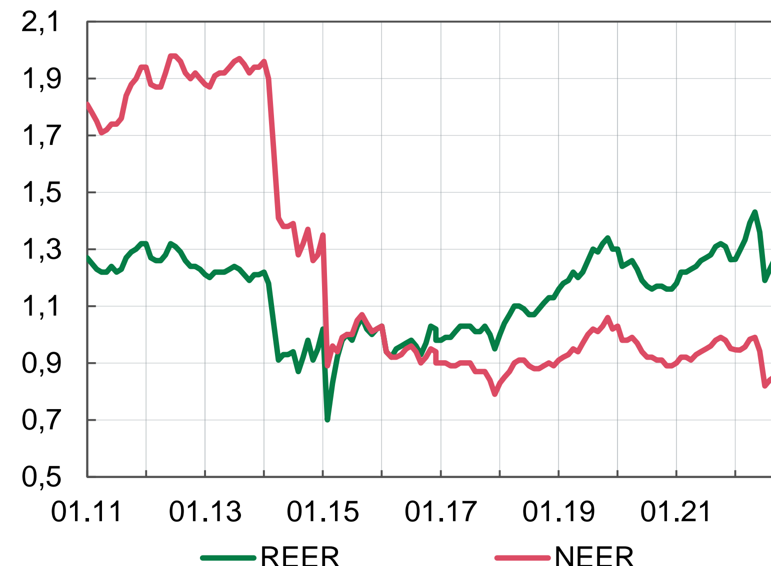
# The fixed exchange rate remains a nominal anchor to ensure macro-financial stability

**Demand and supply in the interbank FX market, NBU interventions, USD bn, and official ER in 2022**




Source: NBU.

**REER and NEER indices, 06.2015 = 1**

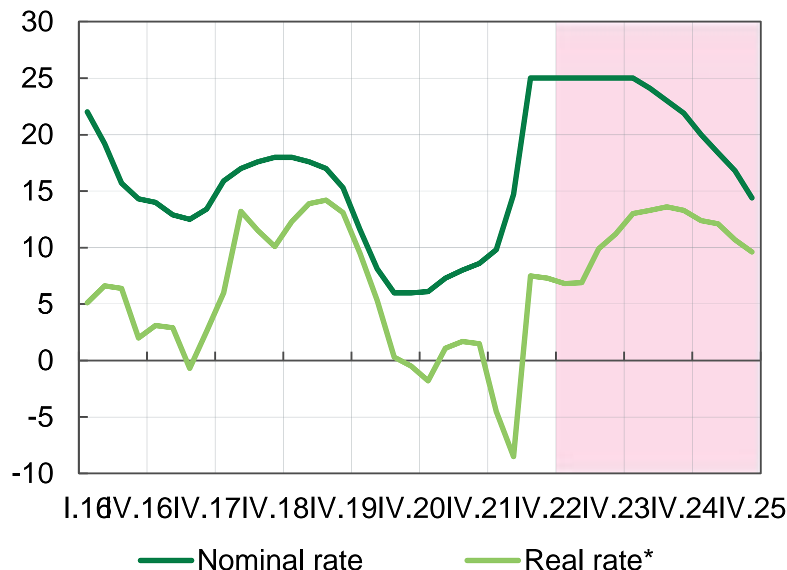



Source: IFS, NBU staff estimates.

- **The BOP dynamics will be reflected in the foreign exchange market.** Interventions rose to $3 billion both in December and January, but are more than offset by international aid inflows
- **Interventions will be significant, but almost entirely covered by official financing**. So the reserves will remain at the level of 4-5 months of imports
- **The foreign exchange market proved to be resistant to terrorist attacks**, in particular thanks to a balanced combination of measures applied by the NBU
- **NEER and REER are currently weaker than before the invasion**, but REER is above the equilibrium level due to interventions and restrictions, which is important for reducing inflation. The risks of ER fixation for foreign trade and economic activity are currently minimal

# Despite the unchanged key policy rate in 2023, it will grow in real terms. Together with a strong REER, this will reduce inflation

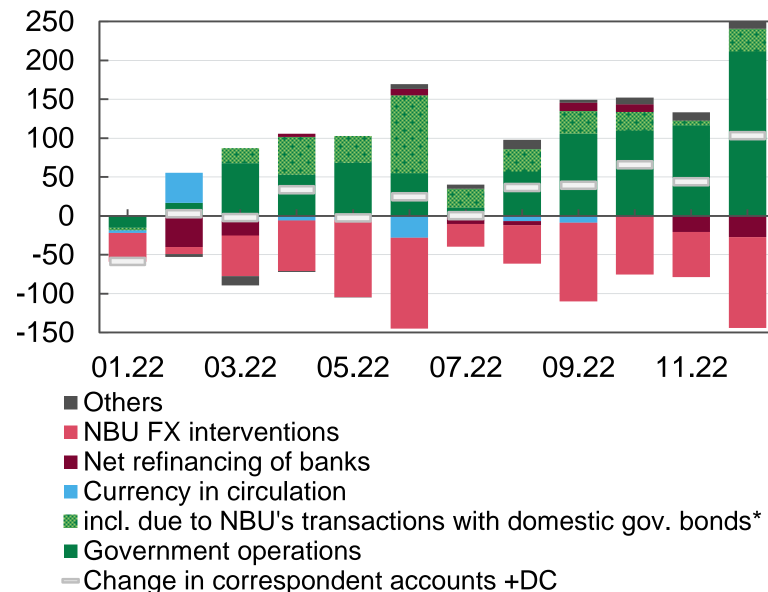
**Key policy rate, period average, %**




Deflated by model expectations (QPM).

Source: NBU.

**Factors affecting the liquidity of the banking system (correspondent accounts + CDs), UAH bn**




* The NBU's purchase of the war bonds (+) / principal and interest payments on government bonds (-) in the NBU's portfolio.

Source: NBU.

- **To maintain ER stability** (including after abandoning exchange rate fixing and returning to IT regime), **monetary conditions must remain tight.** Therefore, the rate is kept at 25%
- **There is a transmission to market rates** (both on the gov. bonds market and on deposits). Further progress in the growth of deposit rates and an increase in their maturity will be stimulated by the strengthening of reserve requirements
- **The NBU's measures will gradually reduce liquidity in the banking system.** Also, unlike in 2022, emission financing of the budget is not foreseen

# **Box**. Monetary policy in the conditions of significant structural liquidity surplus: in search of an effective recipe

The significant structural liquidity surplus, created by large-scale monetary and fiscal stimulus packages during the coronavirus crisis, **weakened the CBs' ability to restrain price pressure**

**CBs in advanced economies** in order to strengthen the effectiveness of interest rate policy, *curtail quantitative easing programs and switch to quantitative tightening* (**the Fed** – curtailed the QE, shrinks its balance sheet; **the ECB** – raised the interest rate on targeted long-term refinancing operations, announced a reduction in the asset purchase programme portfolio)

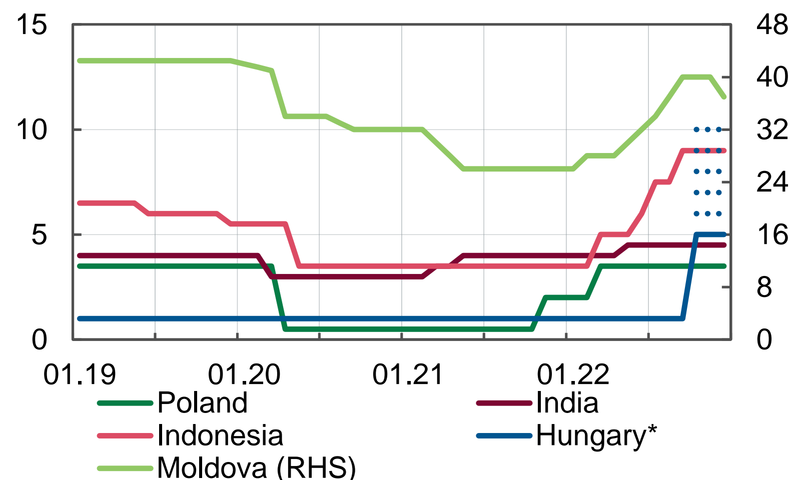
**CBs in emerging markets** in view of the high threat of currency crises and uncontrolled acceleration of inflation, **in order to strengthen the effect of the key rate increase** implemented **measures to absorb liquidity**

↑ *key rate + increase in required reserves ratios* – **CB of Poland, Moldova, Egypt, India, Ghana, Ukraine** (ease of implementation, achieving quick results, a fairly accurate forecast of the volume of absorbed liquidity)

*Unconventional combinations of monetary instruments:*

- ↑ key rate + gradual increase in required reserves ratio + selling government bonds from its portfolio + issuance of own debt instruments with a maturity from 1 to 12 months – **CB of Indonesia**;
- ↑ key rate + increase in required reserves ratio + one-month discount bills + CB's deposit up to 6 months + overnight deposit tenders – **CB of Hungary**

**Required reserve ratios in selected EM countries, %**




* Banks are given the opportunity to optionally choose a ratio from the mandatory 5% to 10% quarterly.
Source: official web pages of central banks.

# Security situation is the main risk for the forecast

| Degree of impact on the baseline scenario | Probability that a risk will materialize: Low <15% | Medium 15%–25% | High 25%–50% |
|---|---|---|---|
| Weak | | | |
| Moderate | Delays in cooperation with the IMF<br>Cessation of the grain corridor | Increased emigration<br>Growing shortage of electricity due to infrastructure damage | |
| Strong | Rapid implementation of the large-scale reconstruction plan of Ukraine "Marshall Plan" | Imbalance of state finances (freezing tariffs for utilities, reduction of international financial support, prolonged emission) | A longer period of war, escalation |