



National Bank  
of Ukraine

# Monthly Macroeconomic and Monetary Review

January 2023

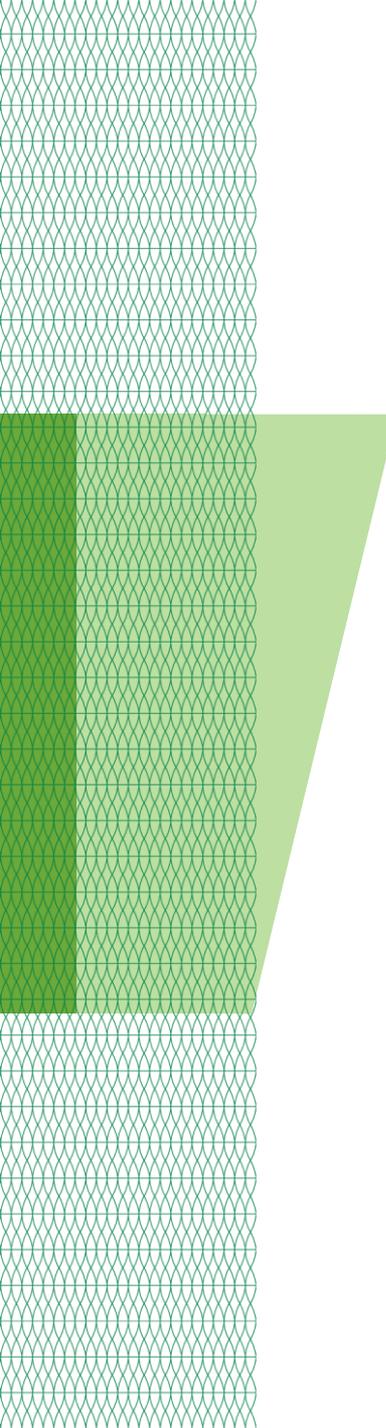
Monetary Policy and Economic Analysis  
Department



# Summary

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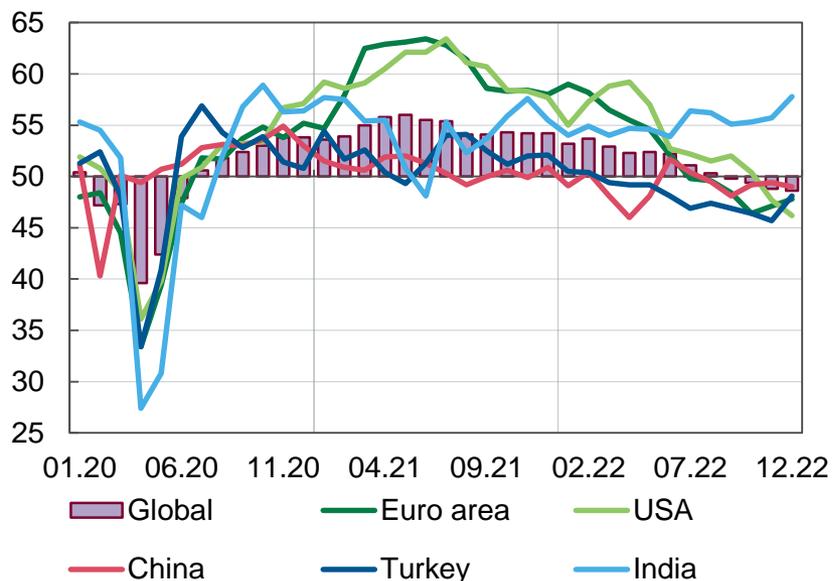
- **The decline in global economic activity deepened** and continued to put downward pressure on inflation. **Shrinking demand** contributed significantly to the **decrease in energy prices**. Meanwhile, prices for major Ukrainian export commodities fluctuated within relatively narrow ranges. Weaker inflation pressure allowed **major CBs to reduce the pace of rate hikes**, more EM CBs are completing the monetary policy tightening cycle
- **Consumer inflation in Ukraine accelerated in December**, though it probably came lower than the NBU forecast. Inflationary pressures persisted due to the effects of war, in particular electricity shortages. However, inflation was restrained by the larger food supply, strengthening of the hryvnia cash exchange rate, stabilization of inflation expectations, and fixed utility tariffs
- Electricity shortages **continued to hamper economic activity in December**. The vast majority of enterprises reduced production, although some were able to stabilize their operations using autonomous energy supply equipment, changing working hours or obtaining electricity for production needs. However, this increased their production costs. The pre-holiday demand and preferential conditions for the imports of energy supply equipment at the end of the year contributed to the revival of trade, and the warm weather – to the harvesting of corn
- Power outages and the seasonal weakening of the labor market activity led to **lower demand and supply of labor**. These factors and probably pre-holiday travels led to intensification of border crossings (both inbound and outbound) at the year-end. Employment and finances remain the main problems of internal and external migrants
- The catch-up in expenditures in December led to a wider state budget deficit (excluding grants). **The deficit reached a record this year** – UAH 1,391 bn, excluding grants. The main sources of deficit financing were international financing in the form of grants and loans, as well as the purchase of war bonds by the NBU
- **The merchandise trade deficit widened** in November as business and households were preparing for a difficult winter. However, thanks to provided international financing **the current account switched to a surplus and the capital inflows were formed under the financial account**. Thus, **reserves rose** to USD 27.95 bn as of the end of November and kept rising in December
- **The attractiveness of hryvnia assets continues to increase** in response to maintaining the key policy rate unchanged since June. However, the large surplus of banking liquidity weakened the transmission mechanism. Despite some improvement in demand and supply in the FX market at the end of December, in general, demand for foreign currency increased in December mainly backed by energy importers



# External Environment

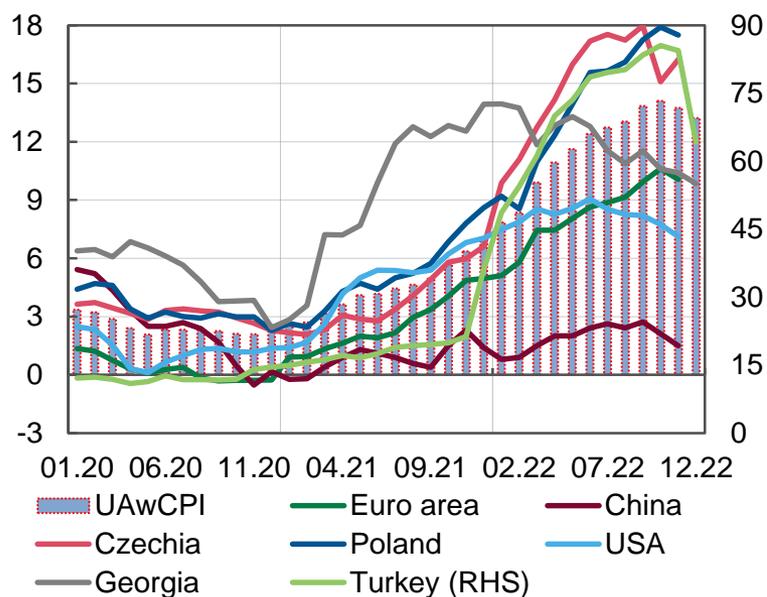
# The decline in global economic activity deepened and continued to put downward pressure on inflation

**Global manufacturing PMI and that of selected countries**



Source: S&P Global.

**CPI in selected countries and UAwCPI (price index in MTP of Ukraine), % yoy**

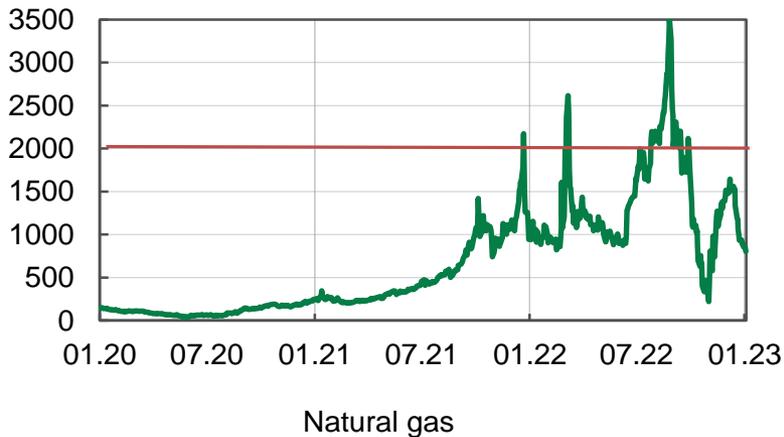
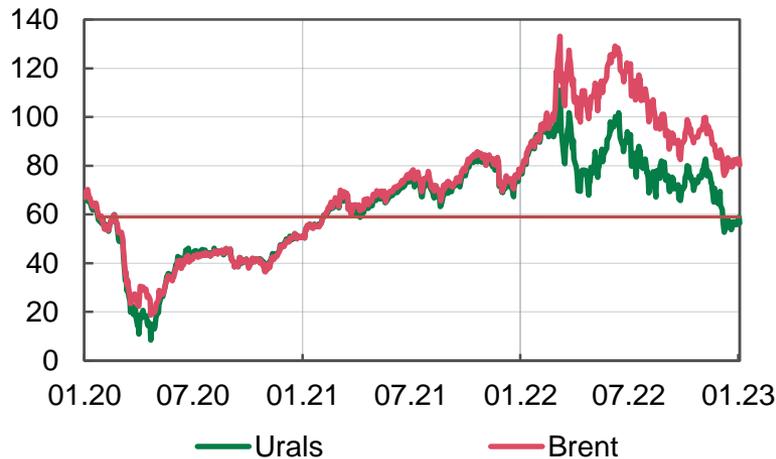


Source: National statistical offices, NBU staff estimates.

- The decline in global economic activity deepened both in the manufacturing and the service sectors. Moreover, deterioration was observed in almost all sectors of the economy, and at the fastest paces since June 2020
- Geopolitical uncertainty, primarily due to Russia's invasion of Ukraine, and tightening global financial conditions remain important factors weighing on activity
- Global inflationary pressures eased as demand weakened amid improvements in supply chains and lower fuel prices

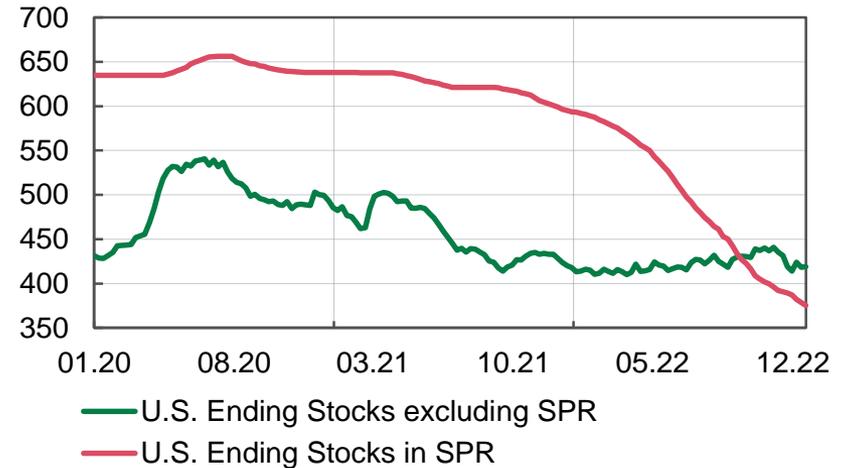
# Shrinking demand, inter alia due to warm weather, contributed significantly to lower oil and natural gas prices

World Brent and Urals oil prices (USD/bbl) and Netherlands TTF natural gas prices (USD/kcm)



Source: Refinitiv, Bloomberg.

U.S. ending stocks of crude oil, million barrels

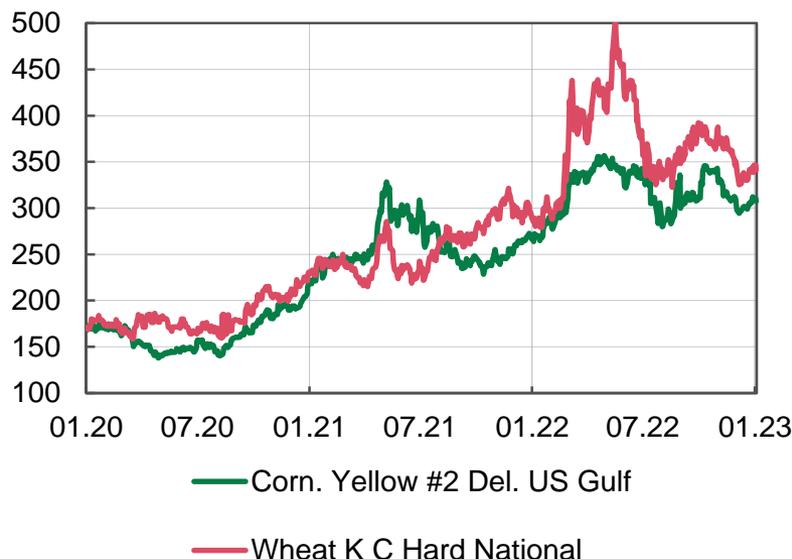


Source: U.S. Energy Information Administration, as of 23.12.2022

- In addition, oil prices declined due to: an increase in stocks of refined products in the US that reaffirmed market participants' view of weakening demand; the EU embargo on russian seaborne crude oil in the light of the price ceiling, which further redirected cheap russian oil to Asian countries
- Natural gas prices in Europe fell because of relatively warm weather, more active LNG imports to the EU, and a rather high gas storage filling levels in Europe (about 90%)

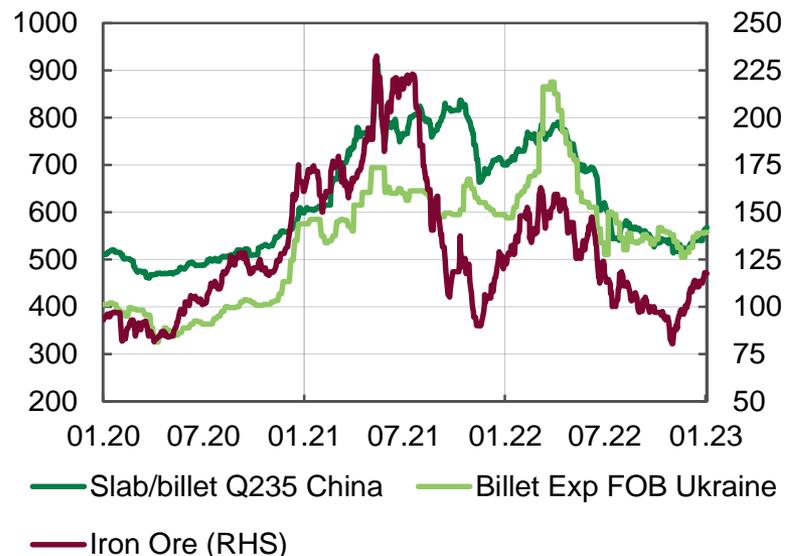
# Global prices for major Ukrainian exports commodities fluctuated within narrow ranges amid lower market imbalances

Global steel and iron ore prices, USD/MT



Source: Refinitiv.

Global grain prices, USD/MT

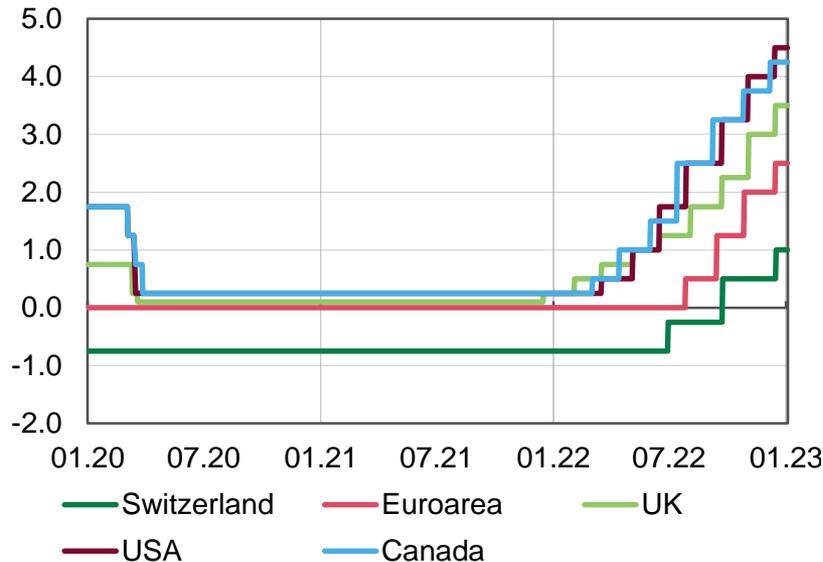


Source: Refinitiv, Delphica.

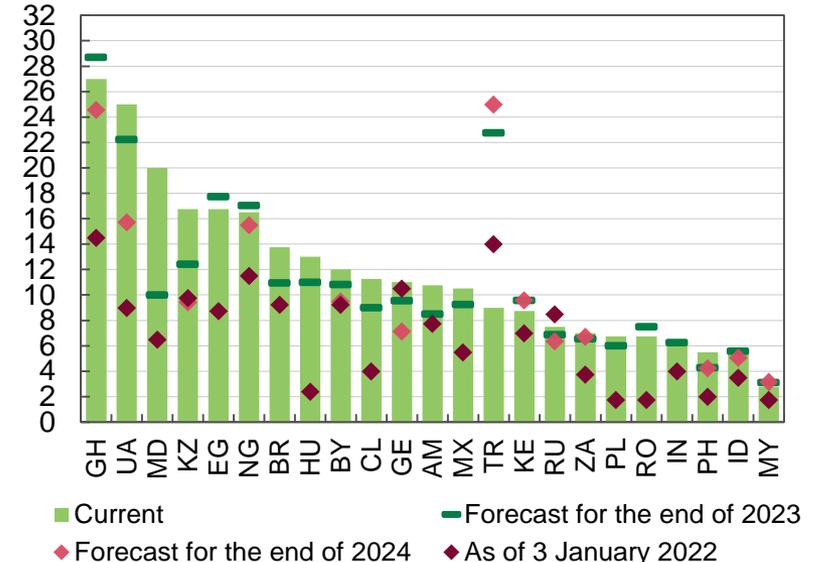
- World wheat and corn prices were influenced by optimism from the continuation of the grain corridor, the deal allowing for safe shipments from Ukraine through the Black Sea. Additionally, active exports by Australia and Brazil compensated for the expected harvest shortfall in the USA and Argentina
- World prices for steel and iron ore fluctuated in relatively narrow ranges in December: easing of quarantine restrictions in China and expected higher demand, in particular EU due to measures to support the real estate market, outweighed weak demand from the US and the EU

# Weakening inflation allowed major CBs to reduce the pace of rate hikes; increasingly more EM CBs are ending the tightening cycle

Key policy rates in selected advanced economies, %



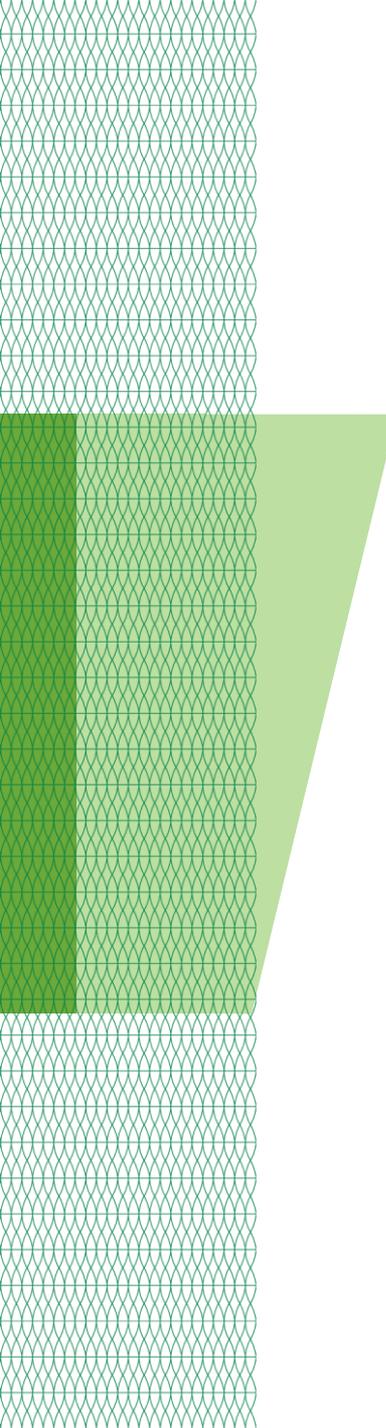
Key policy rates in selected EM countries, %



Source: official web pages of central banks.

Source: official web pages of central banks, Focus Economics, Trading Economics, as of 04.01.23.

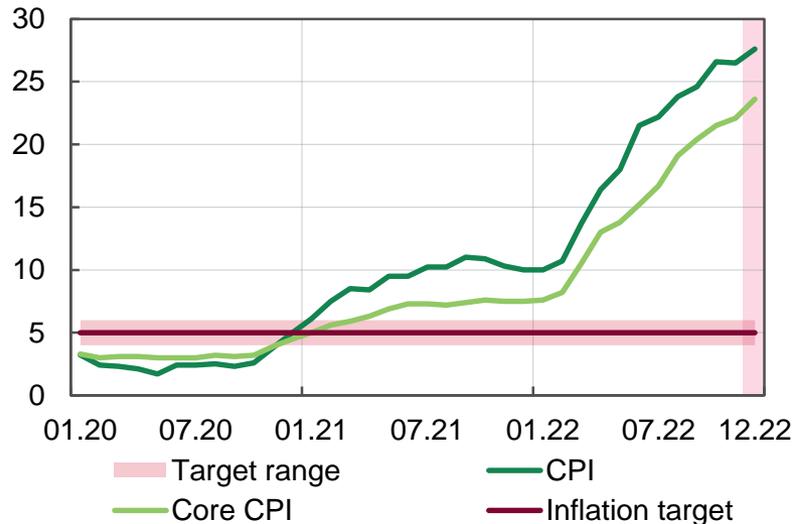
- The ECB and the Fed have slowed the pace of monetary tightening but are to continue raising rates and to maintain restrictive policies for some time. Markets expect the Fed to hike 25 bps in February (with the probability of about 70%) and to start cutting rates in the second half of 2023
- The Bank of Japan spurred expectations of an exit from the ultra-loose policy in 2023 when it unexpectedly adjusted the yield curve control (YCC) parameters
- Meanwhile, increasingly more EM CBs (namely those of Kazakhstan and Mexico) are joining a set of countries whose monetary policy tightening cycles are likely coming to an end; the CB of Moldova has cut rates. Many EM CBs are expected to start cutting rates in mid-2023



# Ukraine: Inflation

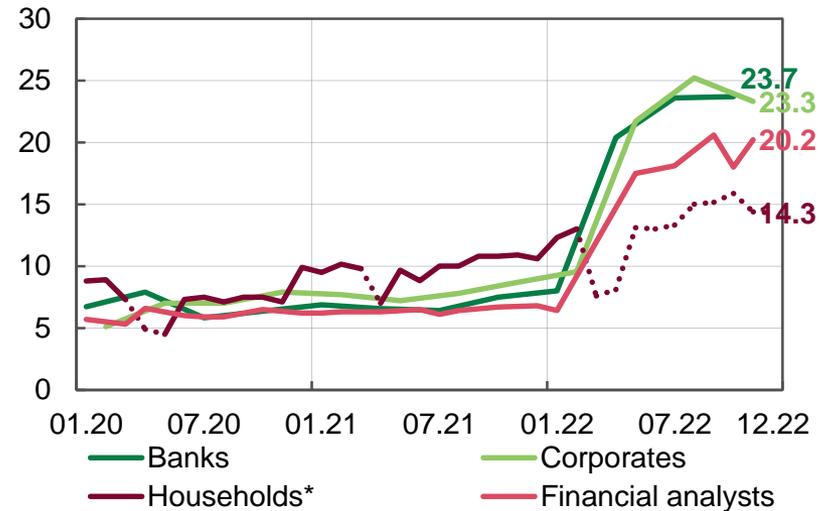
# Consumer inflation accelerated, though it remained moderate despite the challenges of war

Inflation and inflation target, % yoy



\* Data for December reflects nowcast.  
Source: SSSU, NBU staff estimates.

Inflation expectations for the next 12 months, %

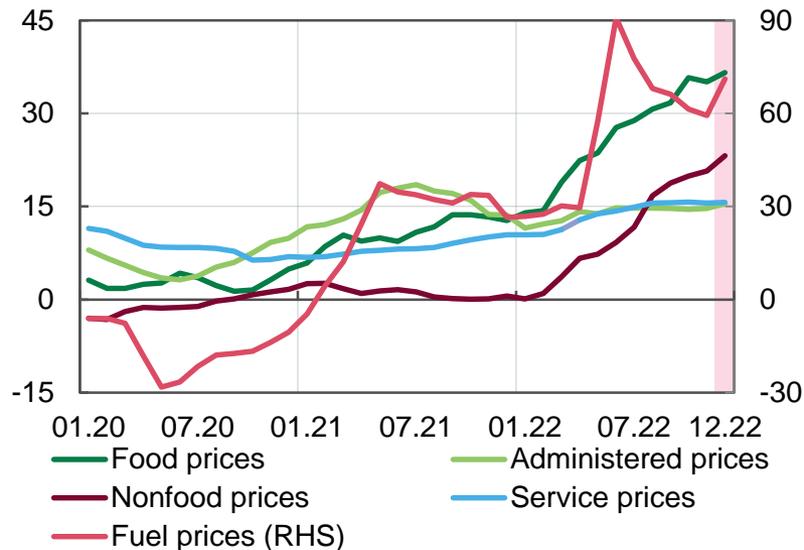


\* The dotted line indicates a change in the method of survey for a telephone interview.  
Source: NBU, GfK Ukraine, Info Sapiens.

- Consumer inflation accelerated, further reflecting the consequences of Russia's full-scale war against Ukraine, including disruption of supply chains, destruction of production facilities, lower supply of goods and services, the increase in business costs, and electricity shortage
- At the same time, inflation grew slower than forecasted by the NBU (October 2022 Inflation Report) due to larger food supply, de-occupation of the territories, weak consumer demand, strengthening of the hryvnia cash exchange rate, and stabilization of inflation expectations

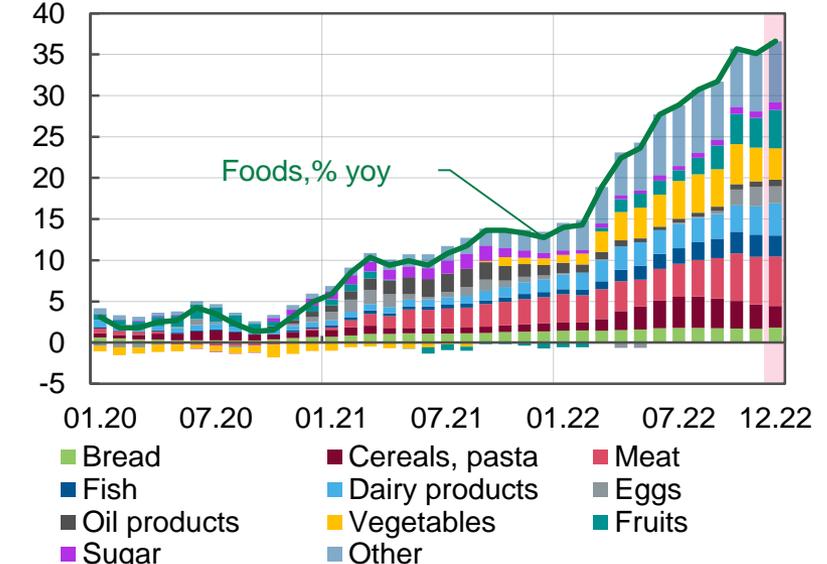
# High production costs, particularly of energy and logistics, remain the main drivers of inflation

Selected CPI components, % yoy



\* Data for December reflects nowcast.  
Source: SSSU, NBU staff estimates.

Contributions to the annual change in food prices, pp

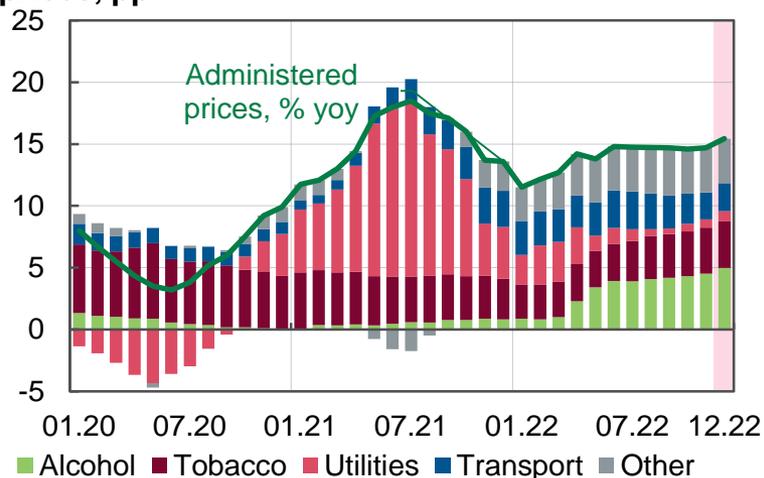


\* Data for December reflects nowcast.  
Source: SSSU, NBU staff estimates.

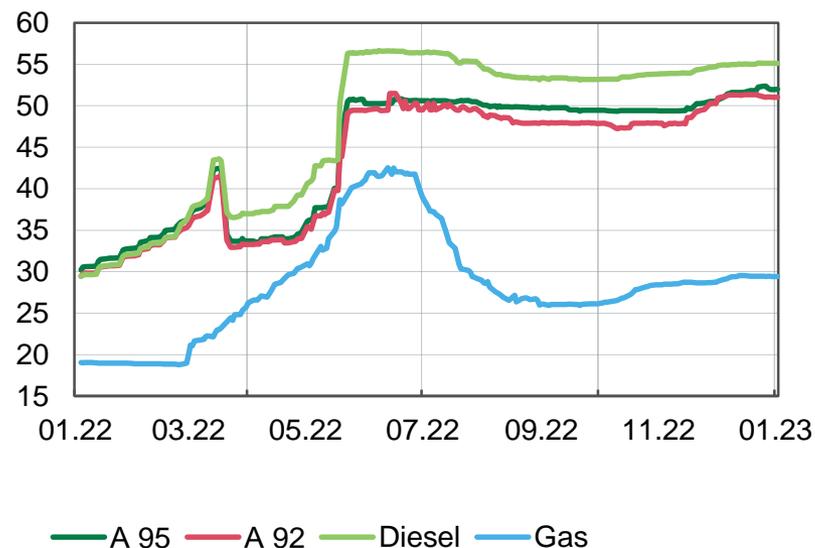
- Components of the core CPI grew at a higher pace, reflecting high production costs, primarily of energy and logistics
- Growth in food prices, on the other hand, slowed down under the influence of a larger supply of borschch vegetables, meat, cereals, and sugar
- Weak consumer demand, including due to power outages, stabilization of the hryvnia cash exchange rate and inflation expectations, as well as further de-occupation of the territories, in particular Kherson region, also had an additional effect

# The growth in fuel prices and administratively regulated prices accelerated

Contributions to the annual change in administered prices, pp



Fuel prices, UAH / L

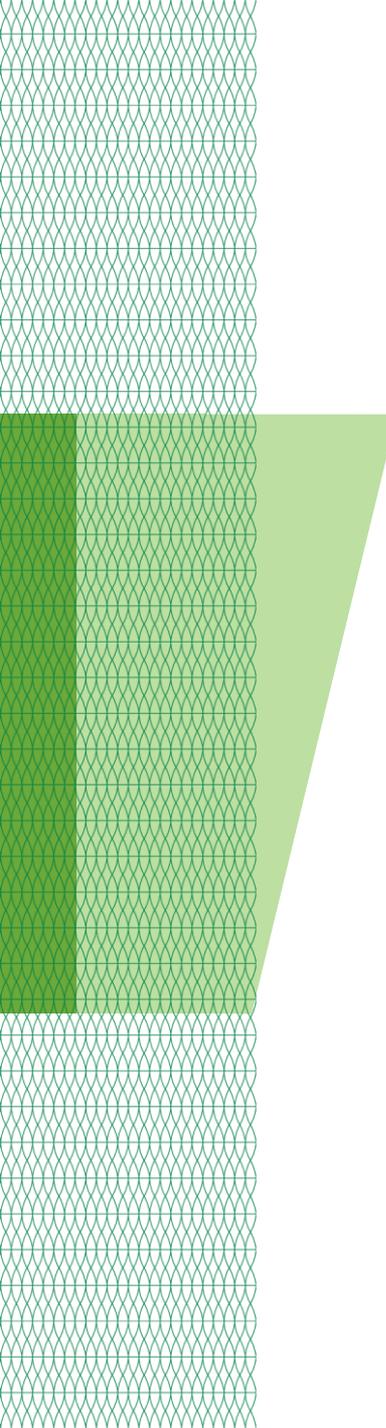


\* Data for December reflects nowcast.

Source: SSSU, NBU staff estimates.

Source: minfin.com.ua, NBU staff calculations.

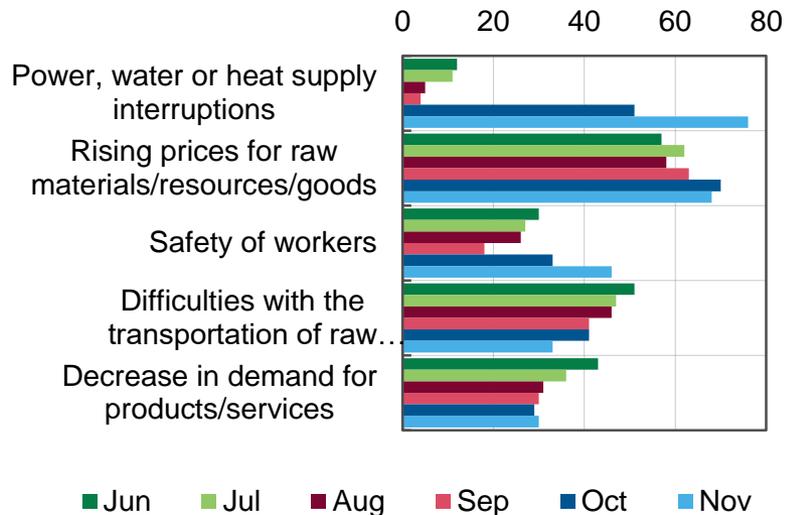
- Fuel prices accelerated due to higher demand (for generators) and difficulties with supplies
- Administered inflation is supported by accelerated growth of prices for alcoholic beverages (due to increased production costs for energy, raw materials, and packaging)
- Instead, administrative inflation was restrained by a moratorium on raising utility tariffs, as well as increased competition with illegal products, which contained the growth in prices for tobacco products



# **Ukraine: Economic activity**

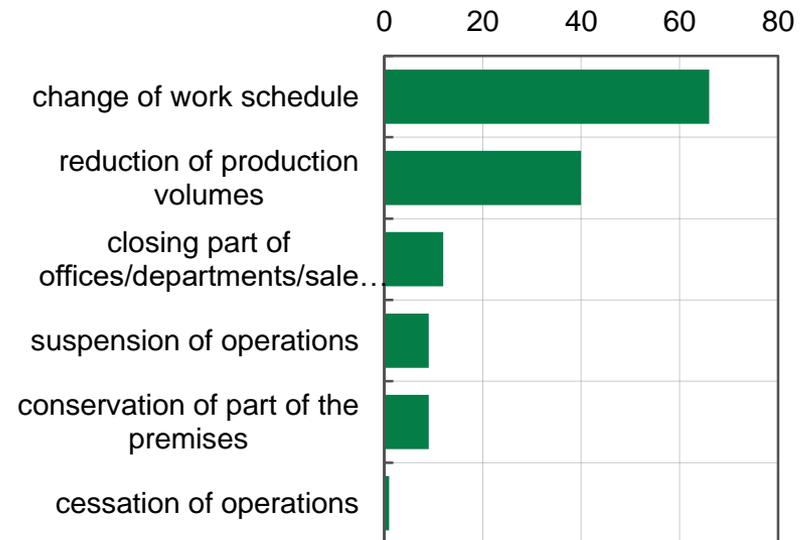
# Power outages have become the major problem for businesses

The most important problems for the surveyed business, % of responses



Source: IER.

How the instability of electricity supply has affected business, % of responses

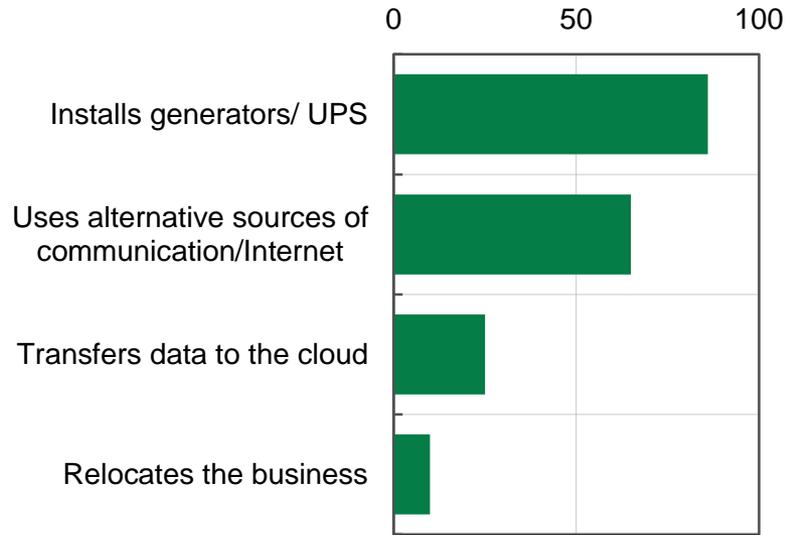


Source: EBA.

- According to the [IER survey](#), among the main problems of business in November, interruptions in the supply of electricity, water, or heat took first place, ahead of the increase in input prices. Safety of workers, likely due to the intensification of air strikes has ranked third and pushed down logistical issues
- The [AmCham](#) survey demonstrated similar results
- According to the [EBA survey](#), only 18% of enterprises noted that the blackouts had no impact or almost did not affect their operations. 40% of businesses reduced production/service provision, 9% suspended work, 1% stopped completely

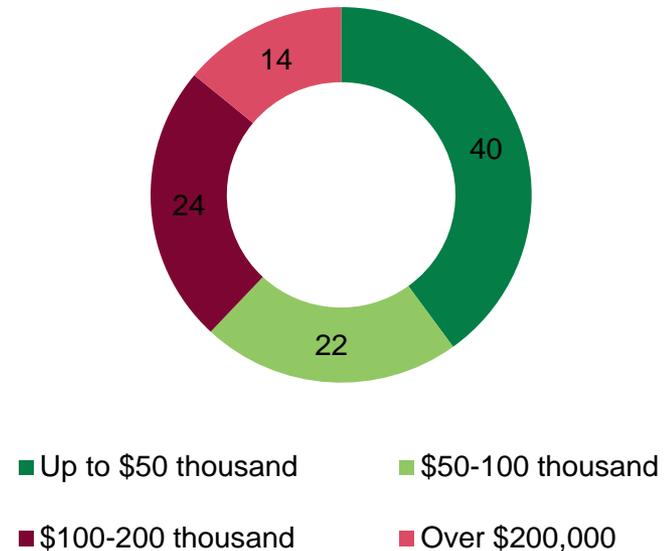
# Businesses have been adapting quickly, but their costs continued to increase

How business minimizes impact of outages, % of responses



Source: EBA.

Business expenditures to secure energy supply, % of responses

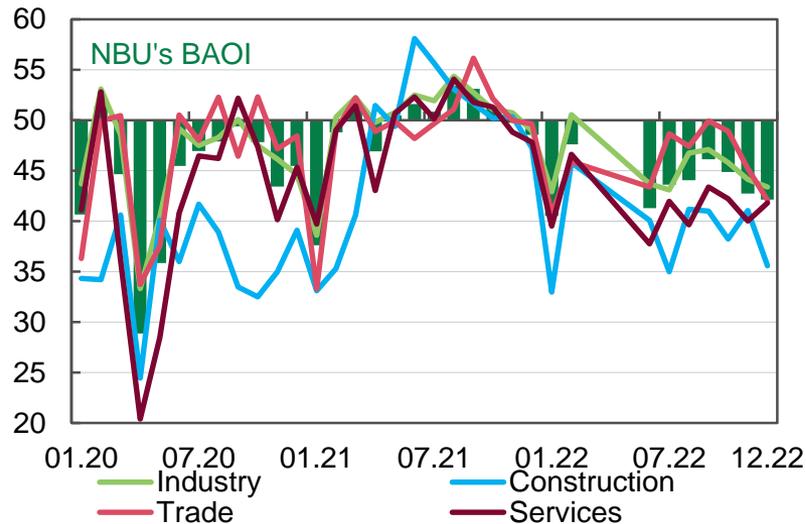


Source: EBA.

- According to the [EBA survey](#), 86% of respondents are installing generators, 66% have changed their work schedule, while 40% of respondents have reduced their production volumes
- According to the [Gradus survey](#), over half (51%) of Ukrainians have adapted to power outages, of which 13% have fully adapted and 38% have rather adapted. Only 9% of respondents have not adapted at all

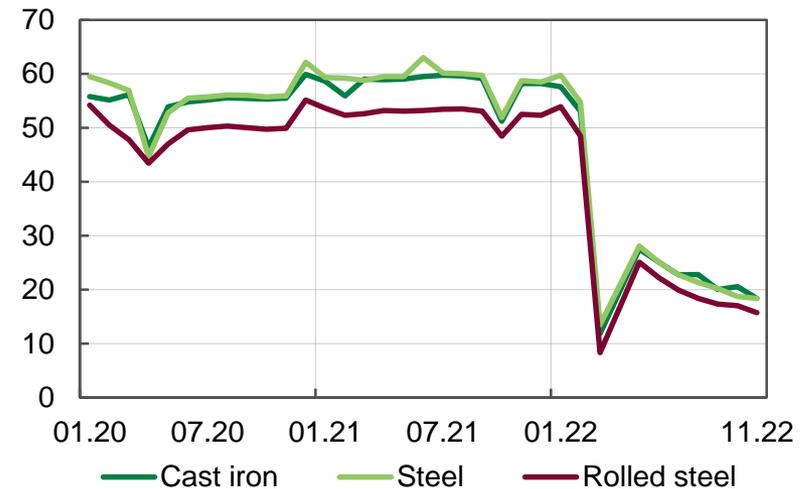
# Electricity shortages hit industrial sector hard, but some businesses have stabilized their operations, albeit at lower levels

NBU's business activity outlook index, p



\* The survey was not conducted from March to May 2022.  
Source: NBU.

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

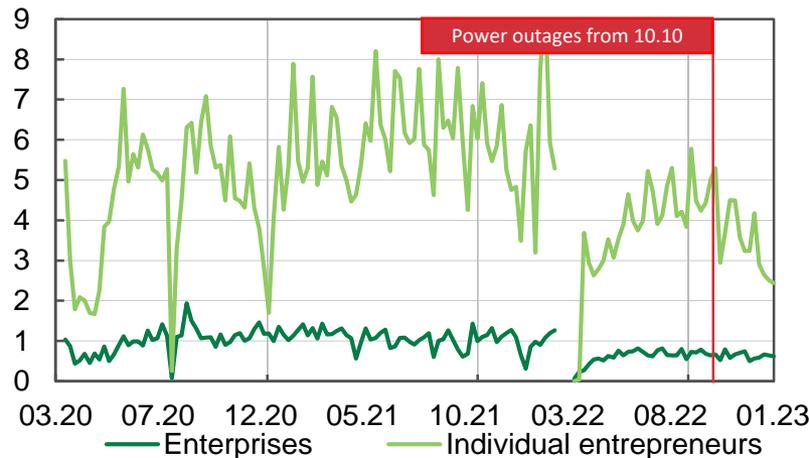


Source: Ukrmetallurgprom.

- Due to the shortage of electricity, the majority of metallurgical facilities decreased production, although in the second half of December some enterprises [partially resumed work](#) and increased the output of some types of products ([pipe enterprises](#)) thanks to the supply of electricity for production needs
- [Iron ore mines also stopped operations](#) for the same reason. Gas production companies [have reduced extraction volumes after attacks](#) on production facilities in November
- The [production of edible oil](#), [flour](#) and [dairy products](#) decreased. The [share of energy](#) in the cost of production has been increasing; [fodder](#) production was among the most affected sectors across the food industry
- Engineering was supported by [demand from the mining sector](#) and military [needs for specialized equipment](#); the need to renew the destroyed energy infrastructure and some [foreign orders](#) supported the [manufacturers of energy equipment](#)

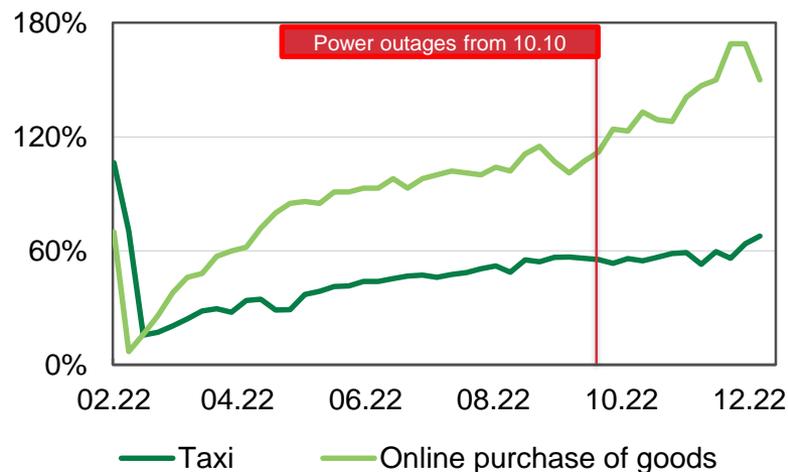
# The services sector was also suffering, although a seasonal pick-up in demand supported some activities

**New business registrations, thousands**



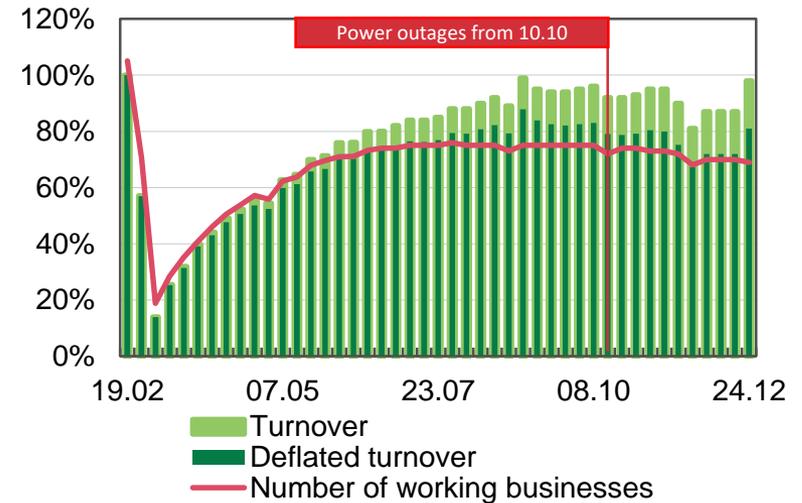
Source: opendatabot.ua.

**Indicators of taxi operation and online purchase of goods, % of pre-war level**



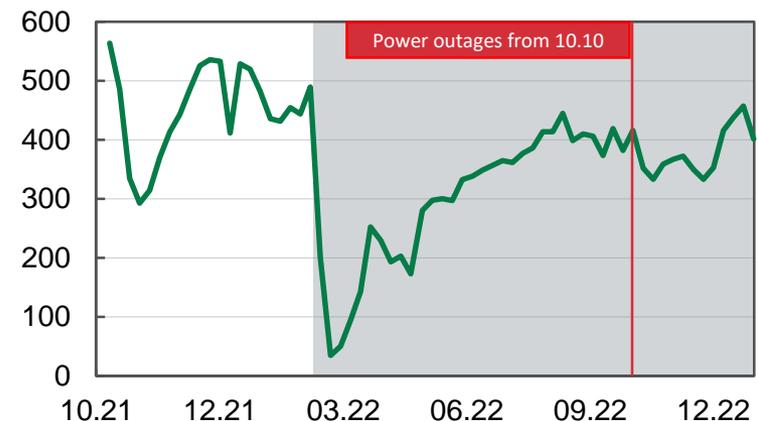
Source: Opendatabot (Bond taxi service and Khoroshop service).

**Performance indicators of the restaurant business, %**



Source: SSSU, Poster, NBU staff estimates.

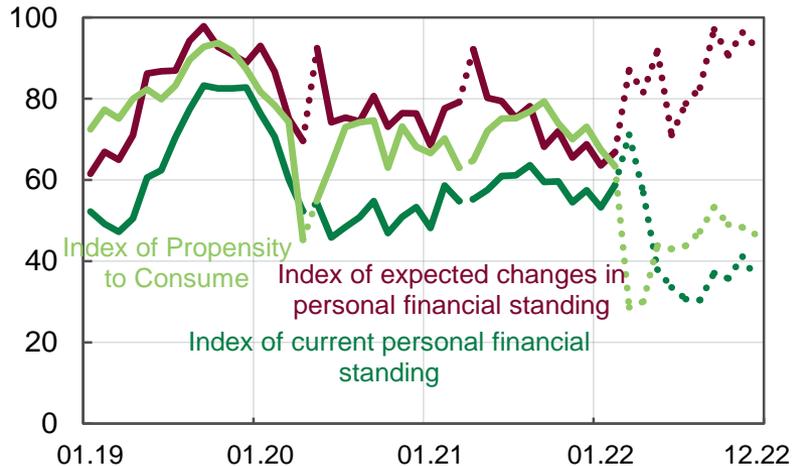
**Number of UZ tickets sold per week, thousands**



Source: UZ.

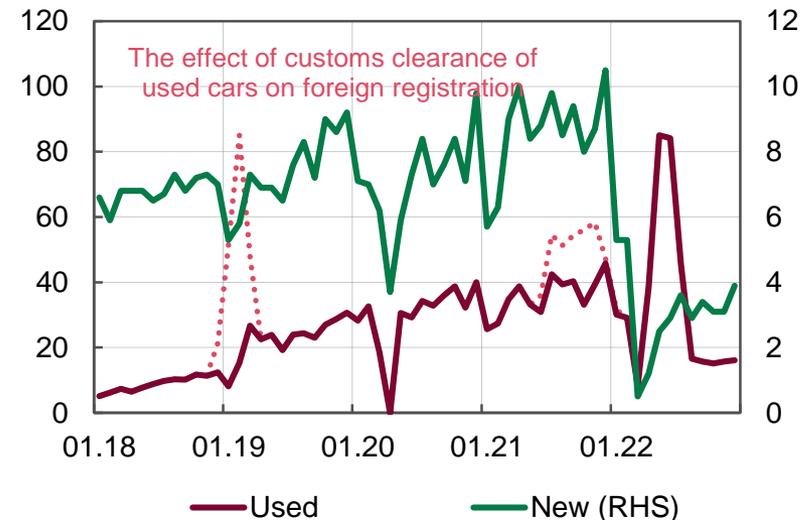
# Pre-holiday demand, preferential taxation of energy imports and higher demand for fuels supported trade

Components of the consumer sentiment index, p.



Dotted line denotes change of interview method from face-to-face to telephone interviews.  
Source: Infosapiens.

The first registration of passenger cars, thousand units

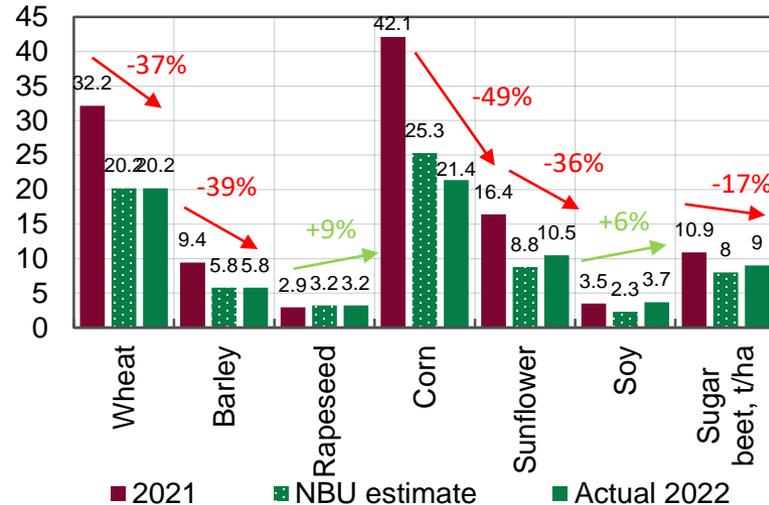


\* New and used, excluding customs clearance of cars with foreign registration, imported in violation of the customs regime.  
Source: SSSU, Ukravtoprom.

- Trade enterprises are adapting to work in conditions of electricity shortage: in December, large trade networks significantly accelerated the transition to [autonomous energy supply](#) and [communication](#); smaller facilities that do not have powerful generators [refused goods](#) that require a lot of electricity
- In December, trade was supported by increased [pre-holiday demand](#), [growth in fuel sales](#) and [preferential taxation](#) of autonomous energy supply equipment

# Warm weather spurred corn harvesting, although power outages made drying more difficult

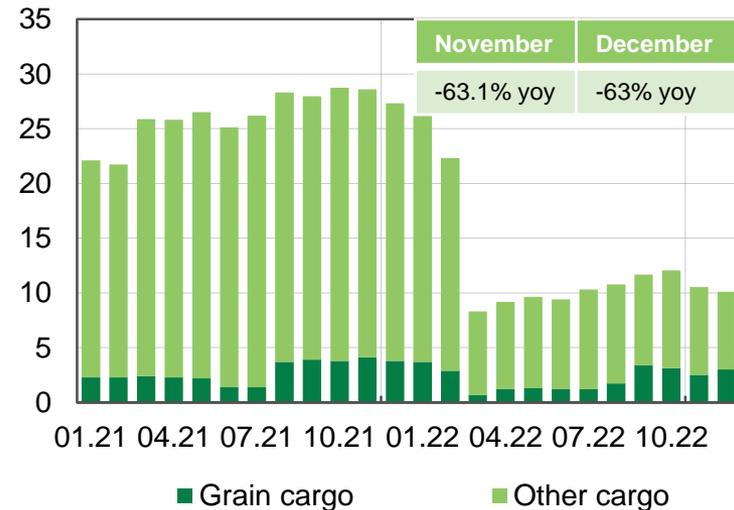
Harvest volumes as of 30 December 2022, million tons



\* October 2022 IR.

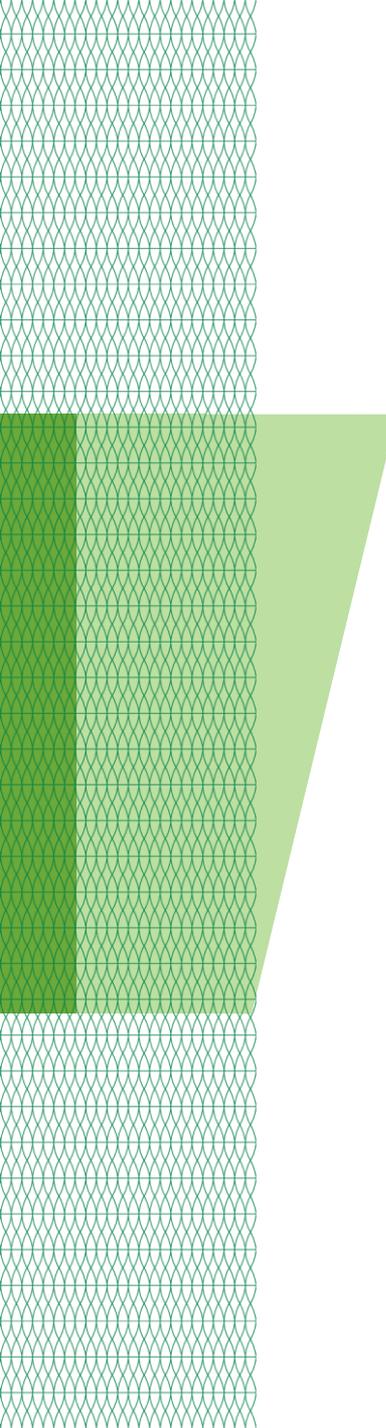
Source: MinAgro, SSSU, NBU staff estimates.

Freight transportation by railway, million tons



Source : SSSU, Rail.insider, UZ.

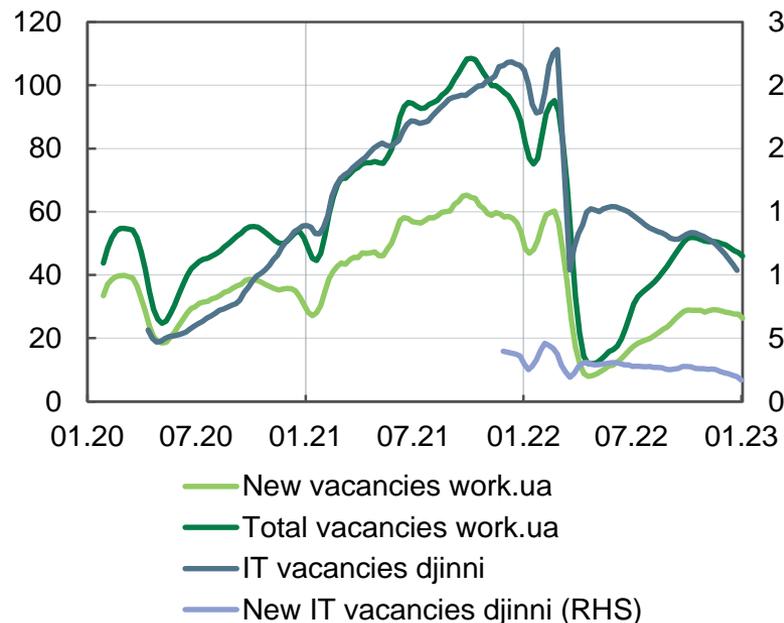
- Improved weather conditions have [helped speed up corn harvesting](#), but [power supply problems](#) are making drying difficult and forcing some of the crop to remain in the fields
- Due to the [increase in storage costs](#) this season, Ukrainian farmers [do not plan](#) to store fruit and vegetable products for a long time
- The situation in animal husbandry worsened. Pig farms [were less affected by power outages](#), while poultry farmers [cut production](#) (except for [egg market participants](#) who are expanding their flocks)
- Due to the [delay in the inspection of ships](#) by the russian federation, [worsening weather conditions, and port power outages](#), transportation along the "grain corridor" continued to stagnate, as did [rail freight transportation](#)



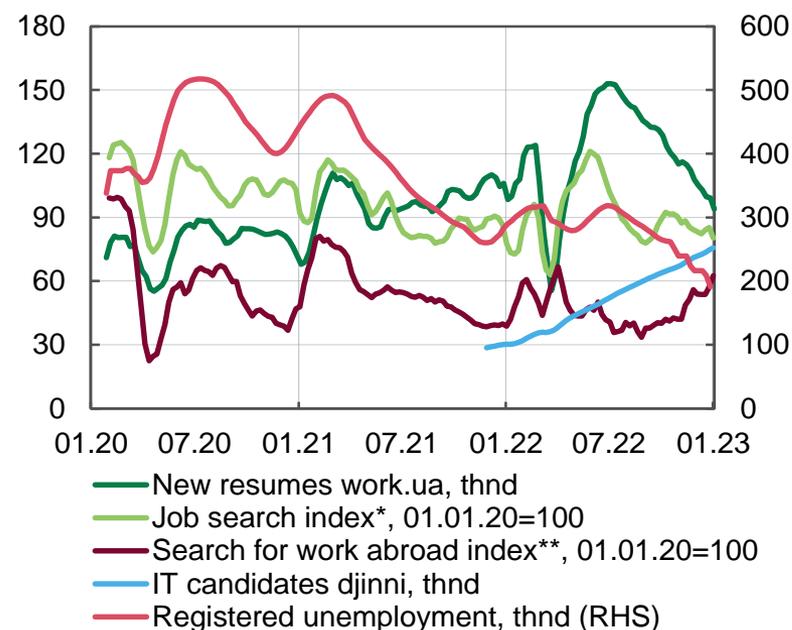
# **Ukraine:** Labor market

# The labor market activity weakened in December due to electricity shortages and seasonal factors

**Labor demand, 4-week moving average**



**Labor supply, 4-week moving average**



\* Includes job search queries in Ukrainian and Russian. \*\* Includes search requests for jobs in Poland, the Czech Republic, Russia and Germany in Ukrainian and Russian from Ukraine.

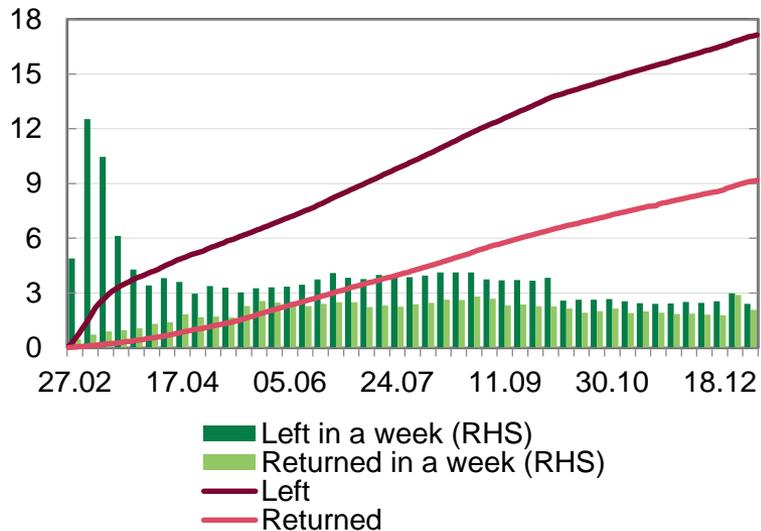
Source: work.ua, Opendatabot, Google Trends, NBU staff estimates

Source: work.ua, opendatabot, NBU staff estimates.

- The missile attacks and long power outages that caused a weakening of economic activity, led to a decrease in demand for labor. In particular, according to various indicators of job search websites, the number of vacancies was 5-23% lower than the peak value of this year, recorded in September
- The number of resumes (except for job searches in IT and abroad) also decreased, in particular due to problems with searches on the Internet due to blackouts and communication disconnects. An additional factor in the weakening of supply on the labor market likely was a seasonal decrease in job search activity in the pre-holiday period

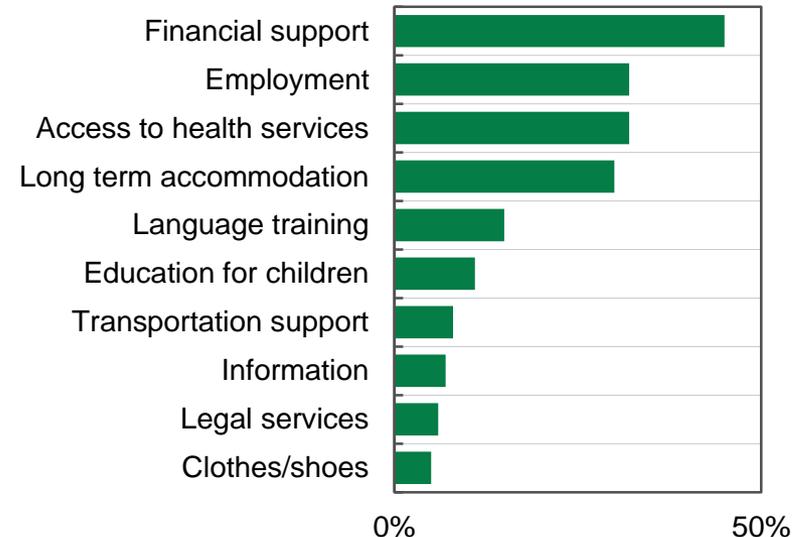
# In the last week of the year, border crossings intensified in both directions

Number of citizens who crossed the border of Ukraine and weekly changes, m



Source: [UNHCR](#).

Unmet needs of Ukrainian migrants in Poland, % of responses

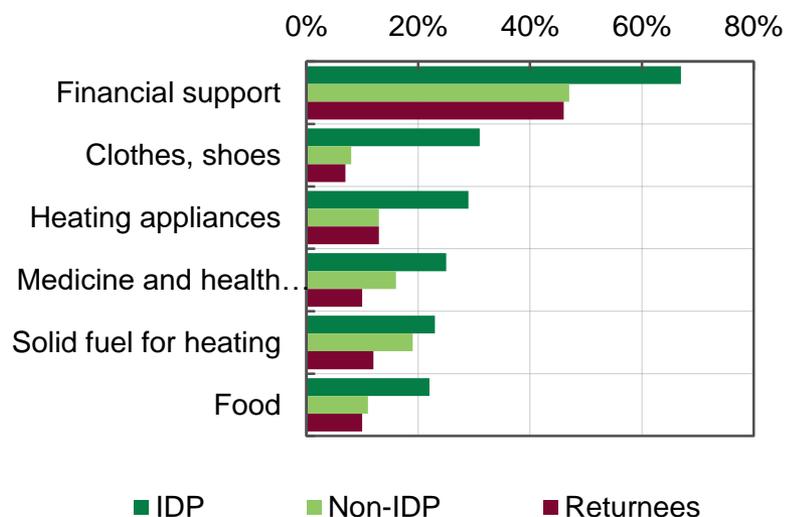


Source : [IOM](#).

- According to [UNHCR data](#), as of January 3, 2023, 17.1 million people left Ukraine, and 9.2 million returned. 7.9 million remained outside Ukraine, of which 4.9 million received Temporary protection status in the EU. In the last week of 2022, the number of entries and exits was the highest since October, which is explained both by power outages and increased travel in the run-up to and during the holidays
- According to the [IOM survey](#), Poland is the leader in employing migrants from Ukraine, but the need for employment remains one of the most urgent for migrants

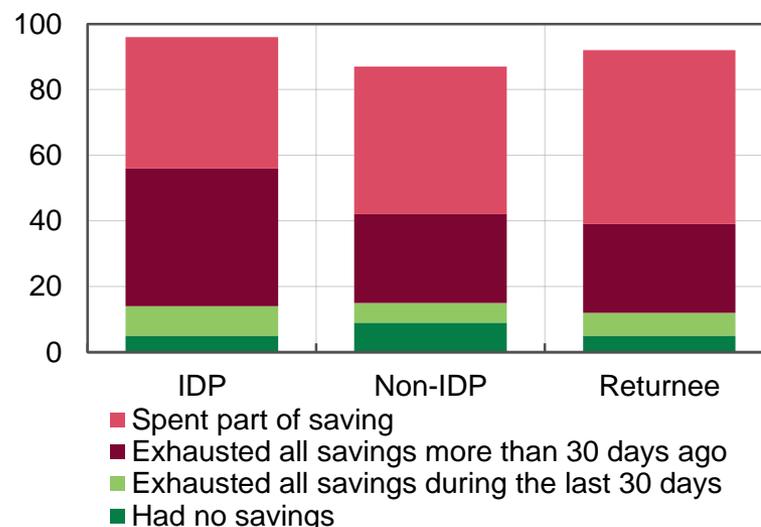
# Financial issues are the most acute problems for internally displaced persons (IDPs)

Main needs of IDPs, those who have already returned and those who have not left, % of responses



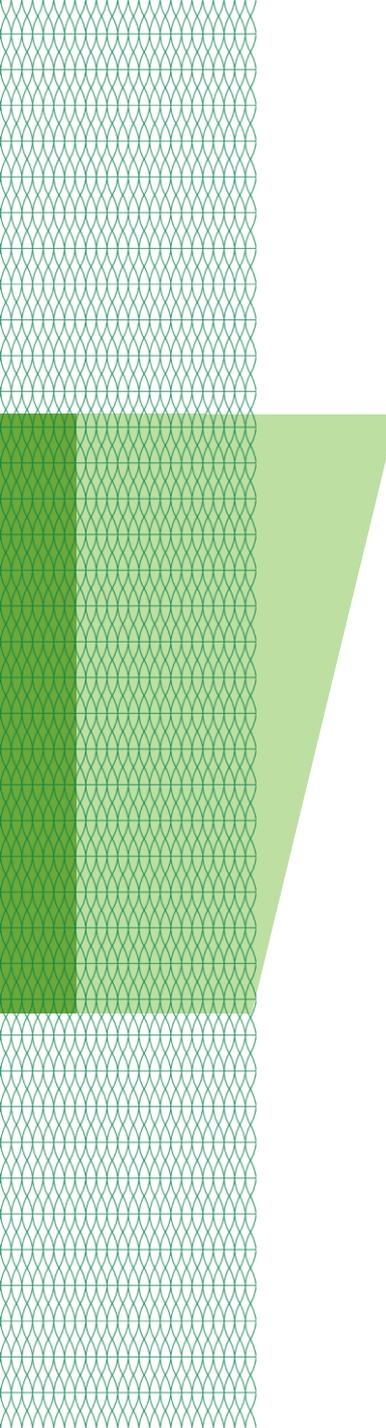
Source: IOM.

Shares of respondents by remaining savings and status of household, % responses



Source: IOM.

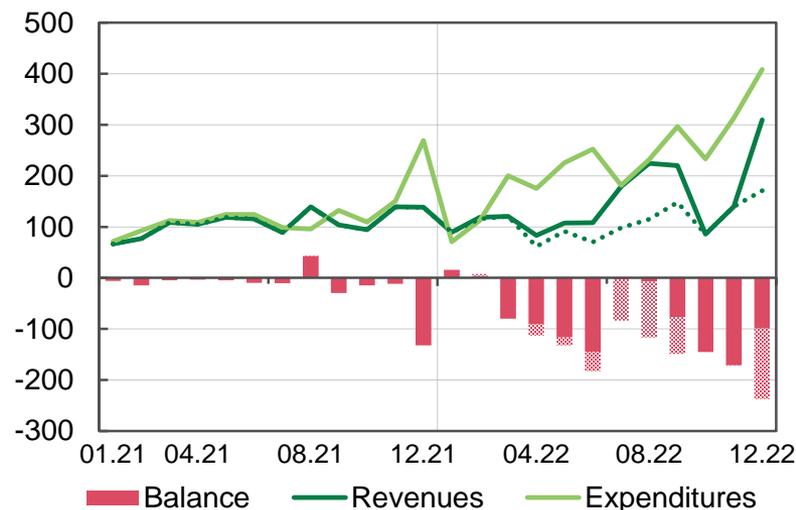
- Data from [the 11<sup>th</sup> round of the IOM survey](#) showed that lack of funds remains the most urgent problem for IDPs, and it is more significant compared to those who have not left their homes or who have already returned. Other needs of IDPs are also less covered than those of non-IDPs
- 43% of surveyed households have already fully spent their savings. Among IDPs, this share reached 56%. The IDPs from the south of Ukraine have a relatively better financial standing, the worst situation was reported for IDPs from the west
- According to [the KIIS survey](#), a large part of households also quickly adapted to interruptions in energy supply: in December, 34% indicated that they were fully prepared for problems with heating in winter (24% in September), partially prepared - 40% (47% in September), only 8% are still not ready (12% in September)



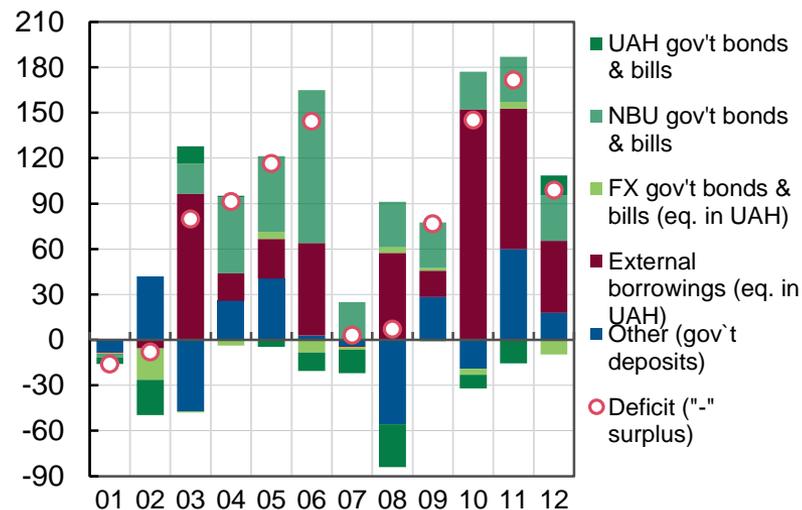
# **Ukraine:** Fiscal sector

# The state budget deficit (excluding grants) in December and for 2022 as a whole expanded significantly, reaching its record high

Main State budget indicators\*, UAH bn



State budget balance financing\*\*, UAH bn



\* Dotted and patterned fillings show relevant indicators excluding grants. \*\* Debt transactions are net borrowings.

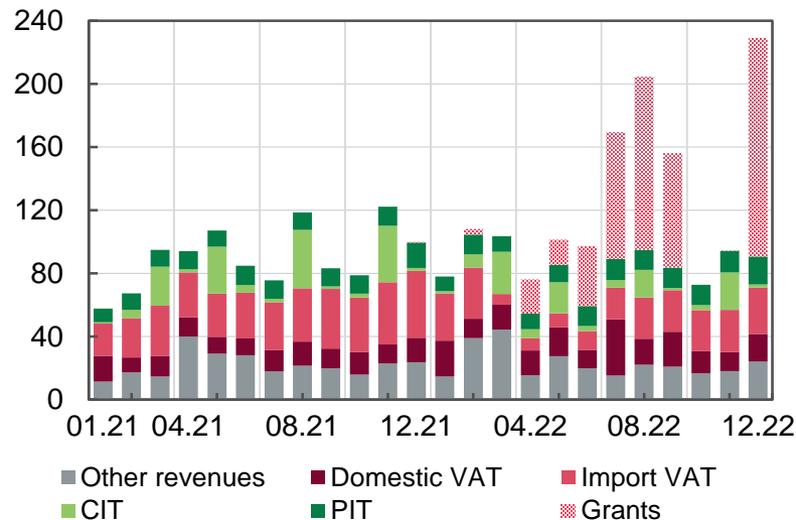
December – preliminary and high-frequency data from the MFU website. NBU calculations based on the MoF's website information.

Source: Treasury, MoF, NBU staff estimates

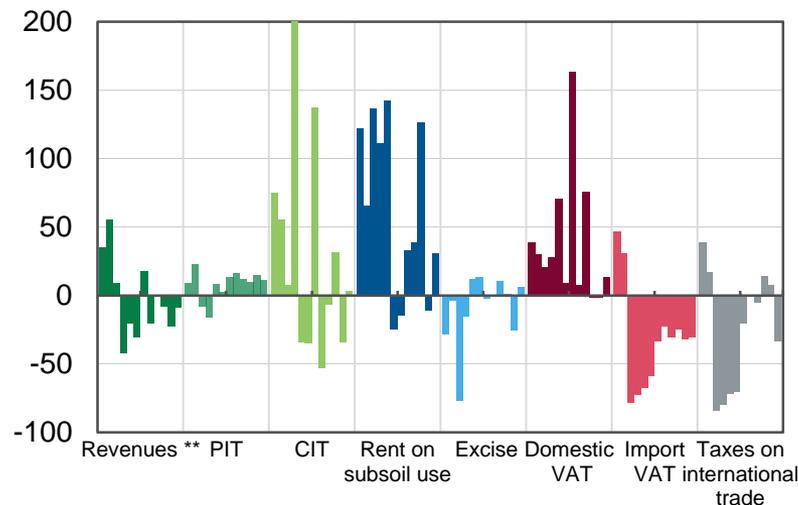
- Substantial state budget deficit (excluding grants) in December came as a result of the catch-up in expenditures given available funding. The deficit for 2022 exceeded UAH 911 bn and UAH 1,391 bn excluding grants, which, however, was below than the planned size (UAH 1,497 bn)
- Since the beginning of full-scale war, the deficit was covered by international and monetary financing:
  - international financing was received both as grants and in loans and was more rhythmical in the second half of the year. In December, USD 3.8 bn of grants and more than USD 1.6 bn in loans were received
  - the amount of war bonds purchased by the NBU stood at the agreed UAH 400 bn and from the second half of the year it was kept within the monthly limit of UAH 30 bn, as agreed with the Ministry of Finance
- Meanwhile, demand for domestic debt securities was unstable. At the end of the year, due to a certain increase in yields, the borrowings increased in both national and foreign currency, but the rollover rates as a whole for the year stood at 65% and 74%, respectively

# Revenues from domestic sources in 2022 plunged as resource base narrowed, but grants, however, compensated for this drop

Revenues of the state budget's general fund\*, UAH bn



Growth in revenues of the state budget's general fund in 2022, monthly\*, % yoy



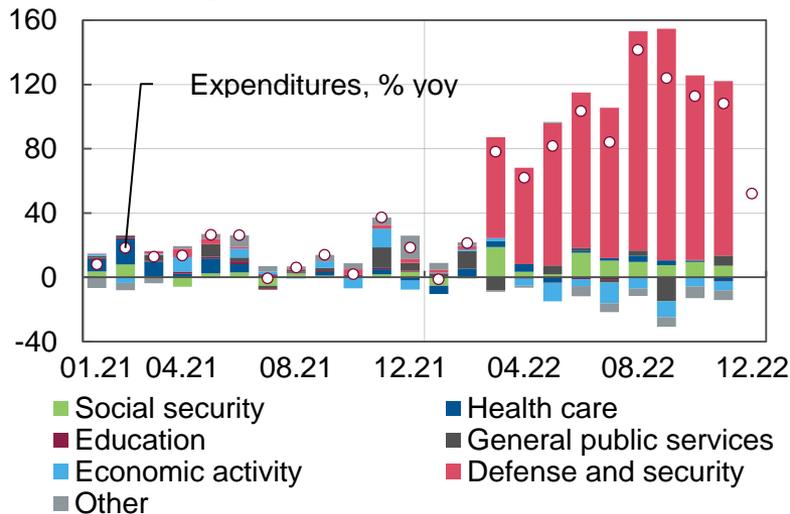
\* December – preliminary and high-frequency data from the MFU website. NBU calculations based on the MoF's website information. \*\* Excluding grants. Source: Treasury, MoF, NBU staff estimates.

- In December, the general fund revenues (excluding grants) were lower compared to the last year's ones as tax revenues declined. At the same time, the rate of decrease slowed, including due to lower volumes of VAT refunds (UAH 8.1 bn)
- Revenues, both in December and 2022 as a whole, were supported by considerable payments to military personnel (affected the proceeds from PIT and other consumption taxes). The effects from higher inflation and exchange rate factors also contributed
- Grants (a tally of UAH [480.6](#) bn) became the key source of revenues in 2022. Owing to grants the general fund revenues more than doubled in December and rose more than 37% yoy for the year as a

whole

# Expenditure growth, despite a gradual slowdown in the second half of the year, was unprecedented this year

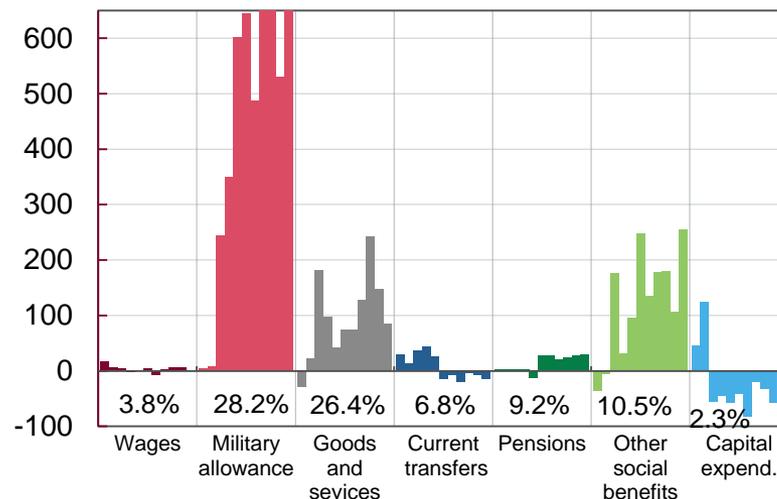
**Contributions to annual changes in expenditures of the state budget\*, pp**



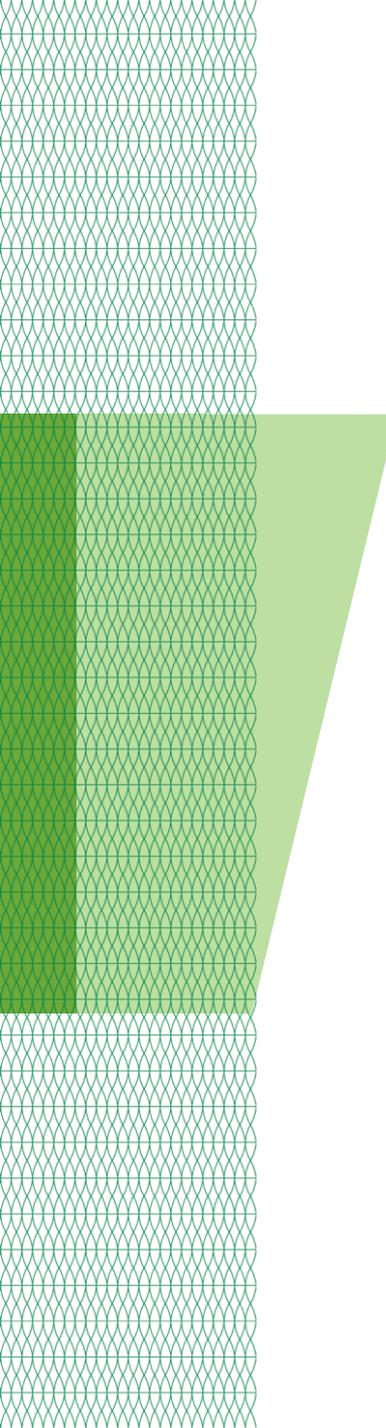
\* December – preliminary data from the MFU website. NBU calculations based on the MoF's website information.

Source: Treasury, MoF, NBU staff calculations.

**Growth in expenditures of the state budget in January – November 2022, % yoy**



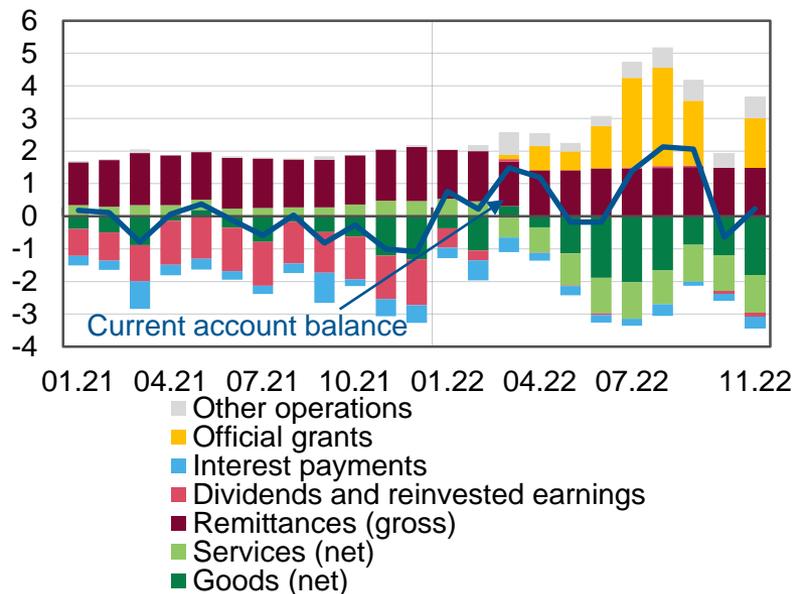
- State budget expenditures almost doubled compared to the last year's volumes, although their growth slowed down in H2 2022. Huge expenses on defense and security (primarily on military allowances), social programs and the use of goods and services were the major expenditure directions
  - social spending increased in November, in particular under the influence of the higher spending on housing and utility subsidies, also significant social payments are expected in December
- At the same time, the humanitarian and cultural programs were financed moderately, including due to the lower number of consumers of these services
- Despite a certain catch-up in capital expenditures in November and probably in December, in particular due to the need to restore damaged energy infrastructure, for the year as a whole they will be significantly lower than in the previous year



# **Ukraine:** Balance of Payments

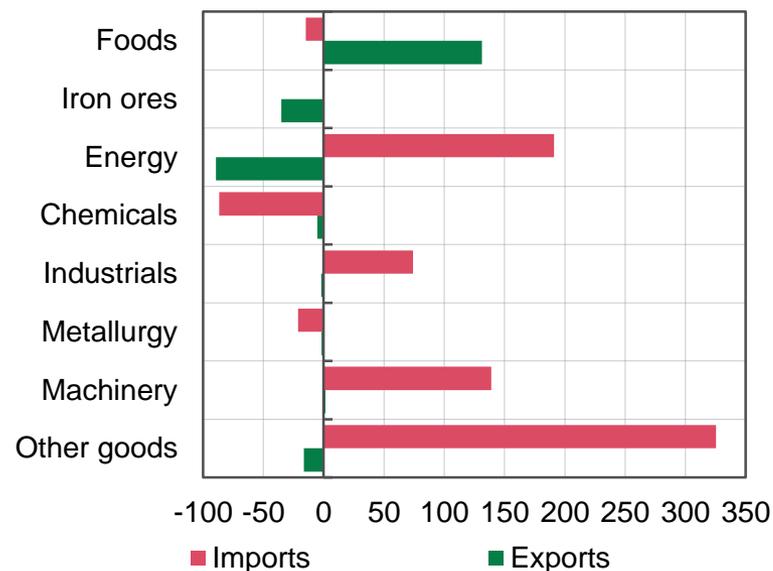
# The current account recorded a surplus as the disbursement of a grant from the USA offset a widening of the trade deficit

Current account balance, USD bn



Source: NBU staff calculations.

Absolute monthly change in exports and imports of goods in November 2022, USD m

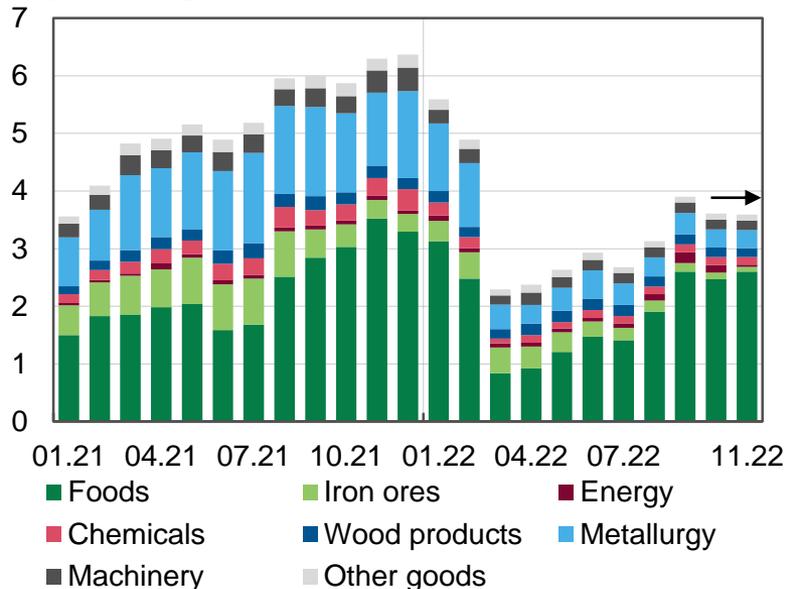


Source: NBU staff calculations.

- The current account returned to a surplus in November thanks to the disbursement of a grant from the United States (USD 1.5 bn). No grants were received in October
- The deficit in trade in goods further widened primarily due to the increase in imports of petroleum products and equipment to go through the difficult winter, as well as the humanitarian aid received. The recovery of exports of goods was held back due to the intensified Russia's blackmail over the grain initiative

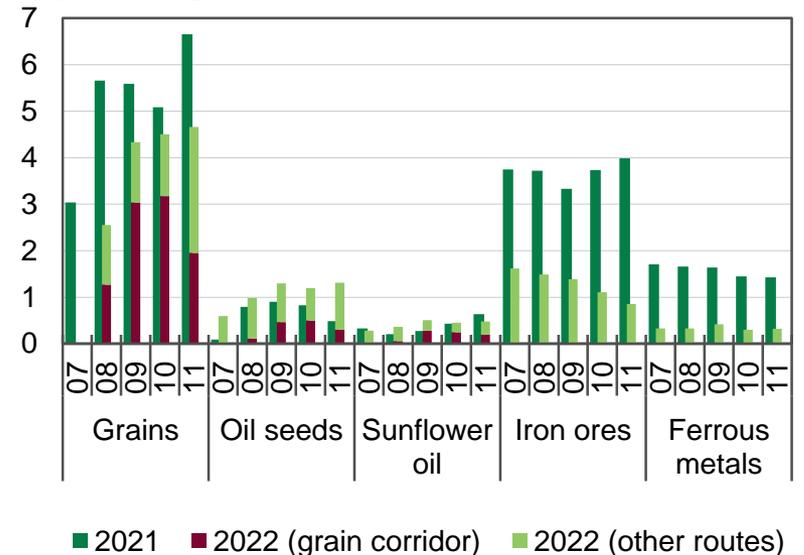
# Larger supplies through alternative routes compensated for russia's attempts to block the grain corridor shipments

Exports of goods, USD bn



Source: NBU staff calculations.

Exports of goods, m t

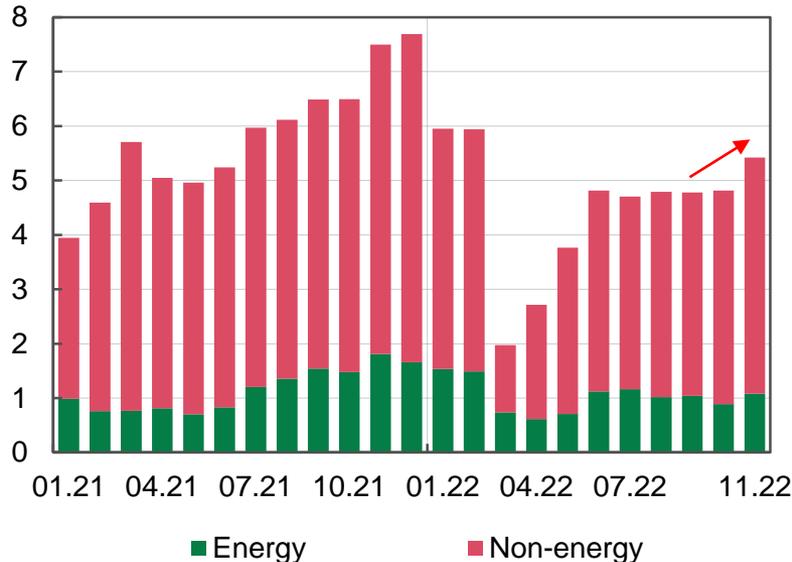


Source: SCSU.

- In November, food supplies through the grain corridor declined significantly due to russia's threats to withdraw from the grain initiative. However, the total shipments remained at the level of October as exports via alternative routes increased
- Exports of iron ores and metals continued to decrease in response to the narrowing of external demand, as well as expensive logistics and its capacities being constrained
- The shortage of electricity, which affected the production and, accordingly, the exports of certain goods (chemical, wood, and industrial products) was an additional factor restraining the recovery of exports

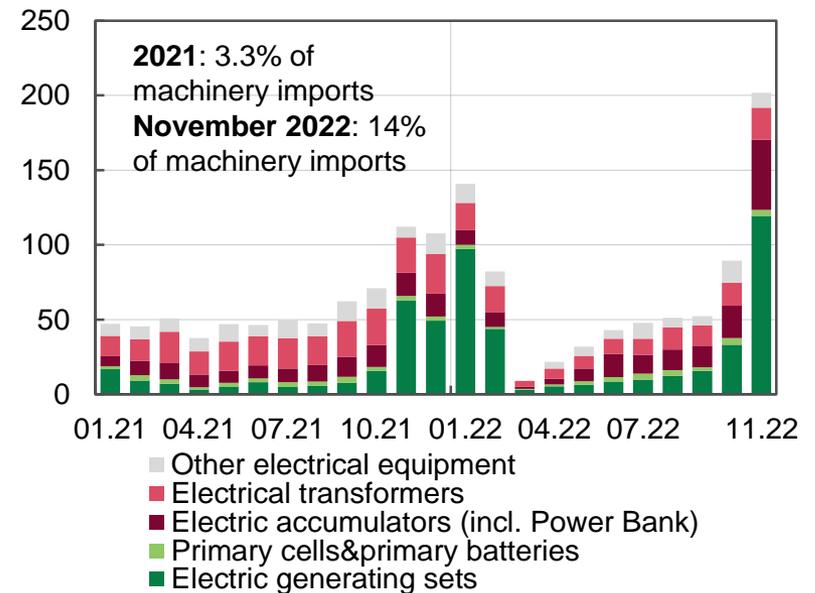
# Imports of goods increased on the back of intensive preparation for a difficult winter

Imports of goods, USD bn



Source: NBU staff calculations.

Import of equipment to ensure energy autonomy, USD m

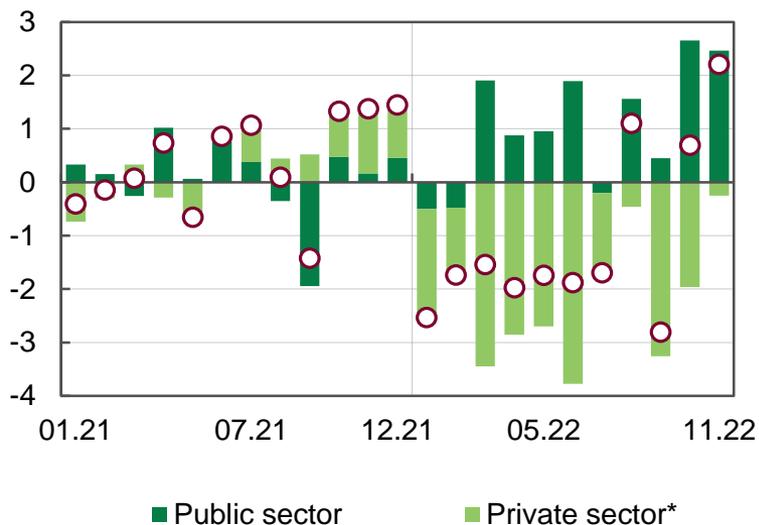


Source: SCSU.

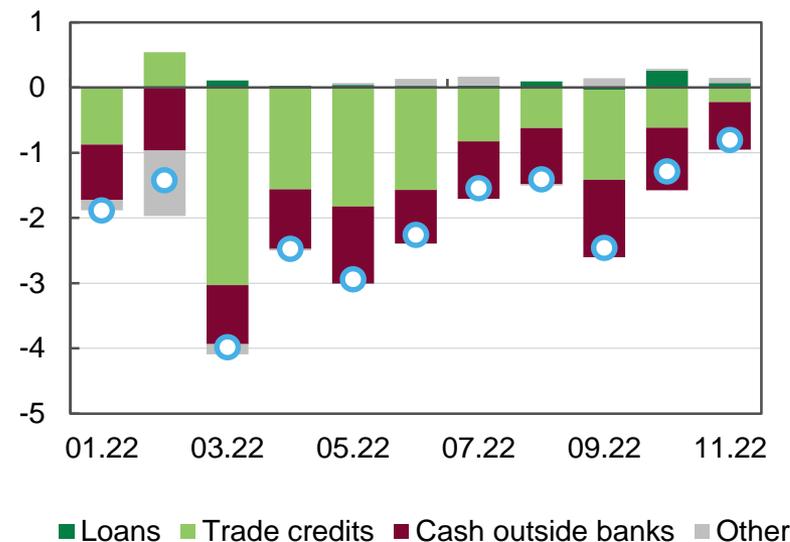
- Against the background of energy terror from the rf, the import of equipment to ensure energy autonomy increased significantly in November, in particular, thanks to the exemption of this kind of imports from customs payments
- The active use of generators, in turn, significantly increased the demand for fuels, which was reflected in increased purchases of petroleum products compared to October
- In addition, the volume of international humanitarian aid continued to increase, which inter alia included equipment to eliminate the destruction of the energy infrastructure

# Capital inflows under the financial account were generated by the public sector thanks to international financing,...

Financial account: net external liabilities, USD bn



Other sectors: net external liabilities, USD bn



\* Including net errors and omissions.

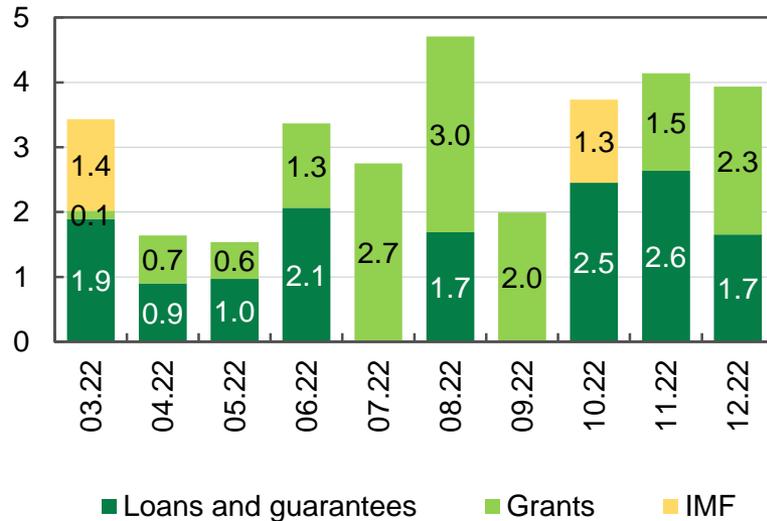
Source: NBU.

Source: NBU.

- As before, the capital inflow to the public sector resulted from significant amounts of international financing
- At the same time, the capital outflows from the real sector decreased as liabilities under trade credits grew and the growth rate of FX cash outside banks slowed down

## ...which helped reserves increase further

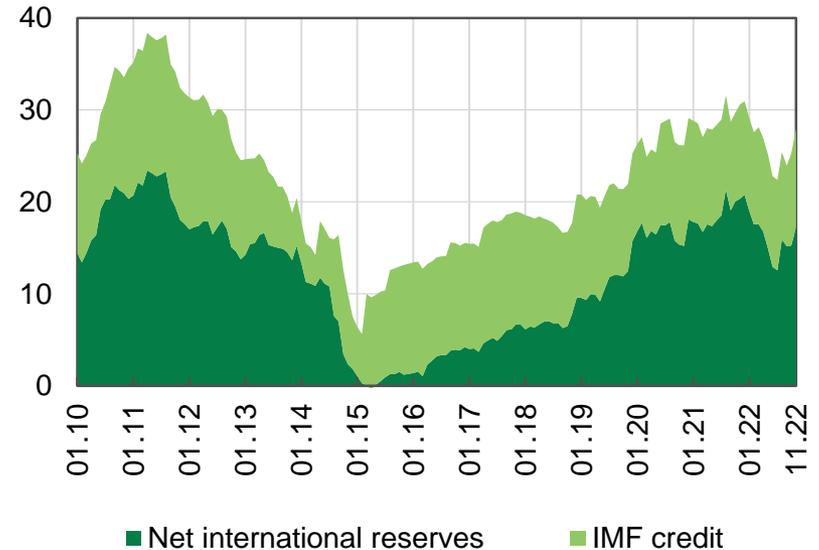
International financial assistance\* from the beginning of the full-scale war, USD bn



\* As of December 30, 2022.

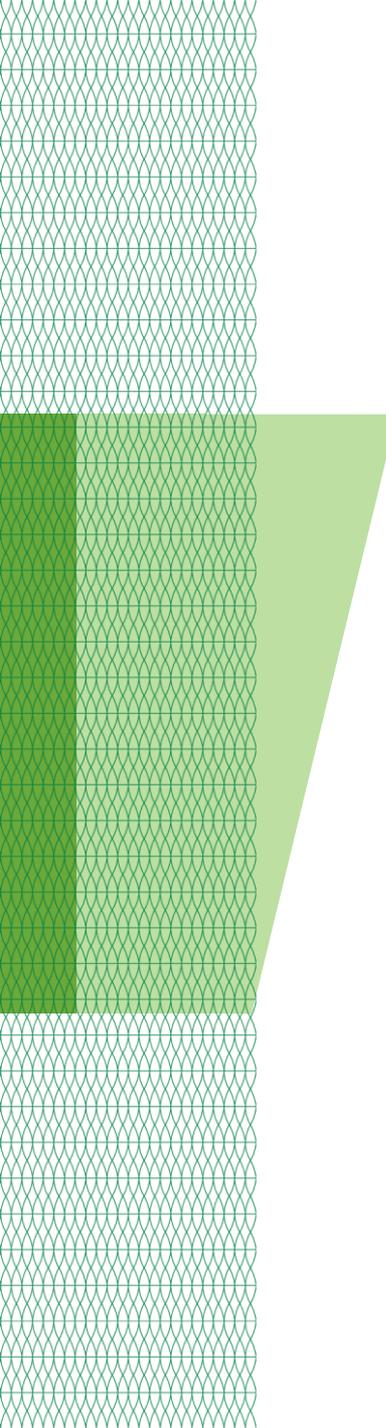
Source: open sources data, MoFU, NBU.

International reserves, USD bn



Source: NBU.

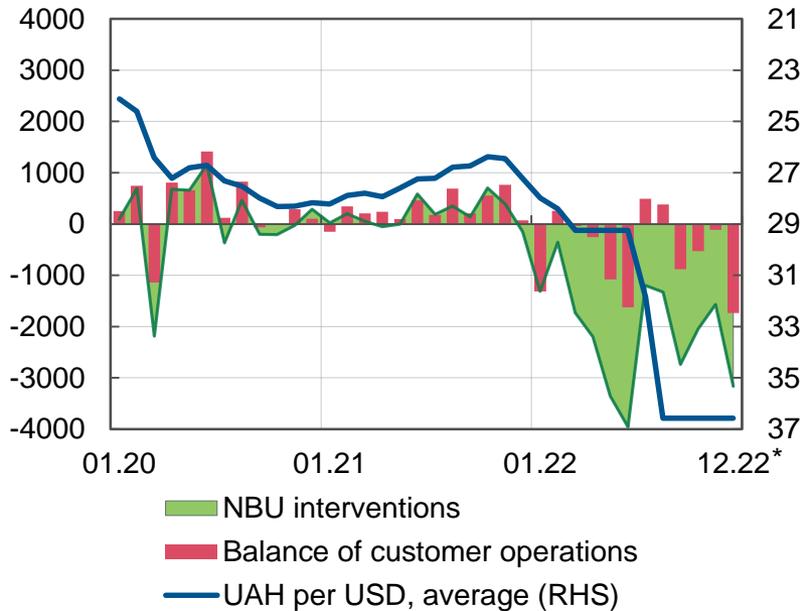
- In recent months, the amounts of international financing have increased. In November, USD 2.5 bn was received as part of a macro-financial assistance from the EU and USD 1.5 bn as a grant from the USA. Since the beginning of the full-scale invasion till the end of December 2022, the amount of official financing has exceeded USD 31 bn
- Thanks to stable inflows of foreign financing, international reserves grew to USD 27.95 bn as of the end of November and continued to increase in December



# **Ukraine: Monetary sector**

# In December, demand for foreign currency increased due to significant needs for energy and energy equipment imports

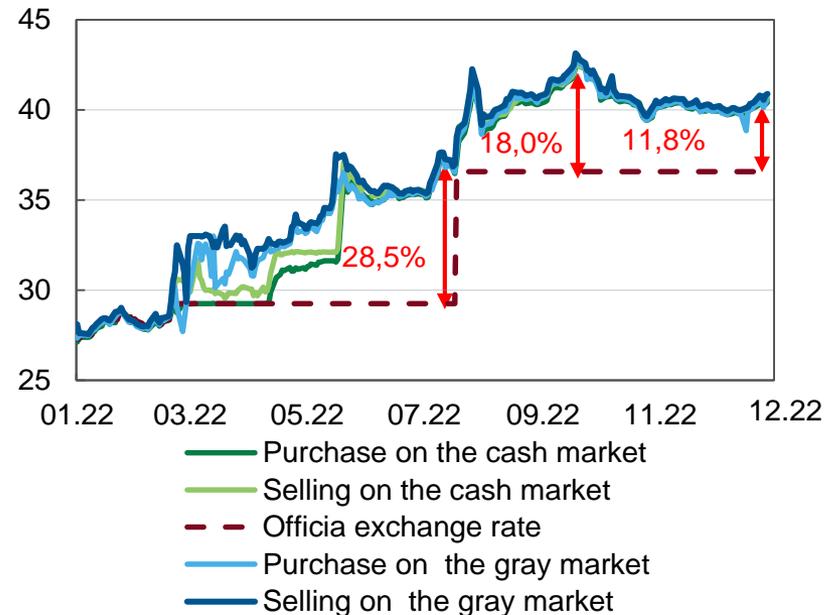
Net FX cash and non-cash\* sale by bank clients, USD m



\* Preliminary data.

Source: NBU

Exchange rates UAH/ USD

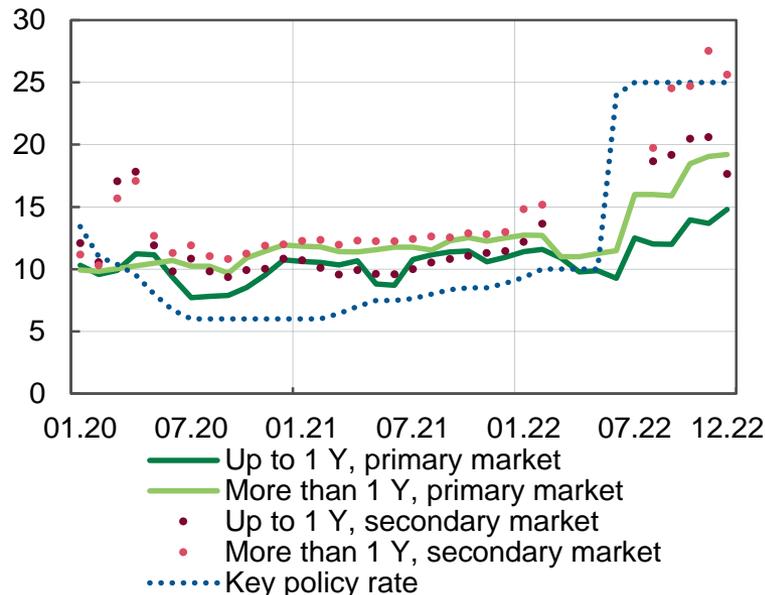


Source: NBU, open data sources.

- The enterprises of the energy sector, and banks were the largest buyers of foreign currency. The latter was associated with significant transfers to international payment systems
- Agricultural sector and IT firms represented the major sellers of foreign currency
- The deviation of the cash exchange rate from the non-cash rate remained within the range of 10-12%

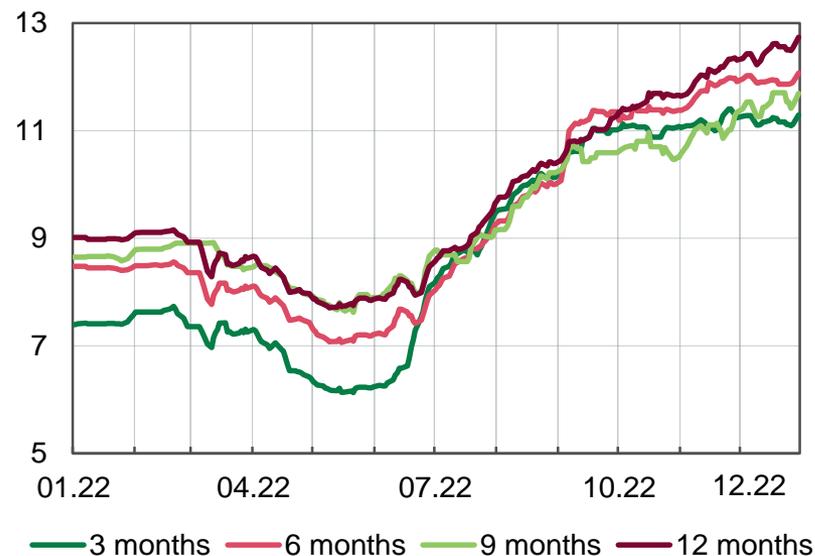
# High key policy rate, as well as the implementation of additional liquidity regulation measures helped hryvnia asset rates to increase further

The yields of hryvnia government bonds, % per annum



Source: NBU staff estimates.

Ukrainian index of retail deposit rates\*, %



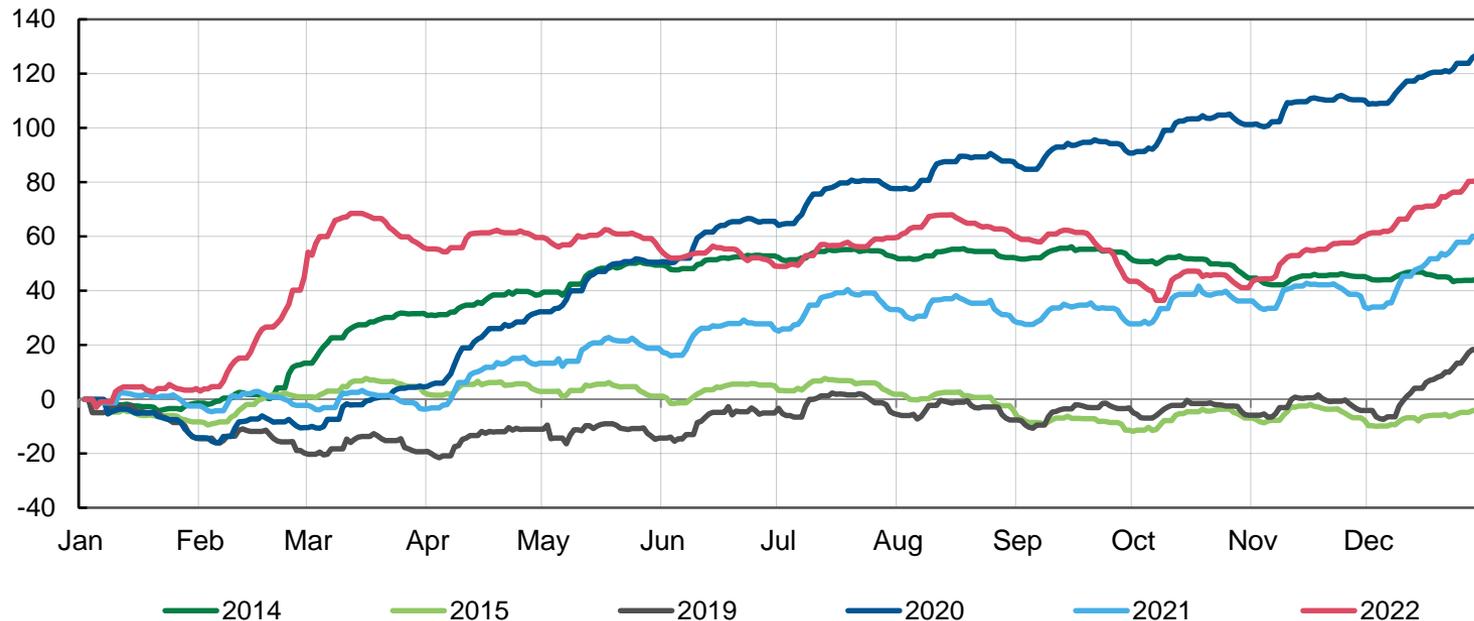
\* 5-day moving-average.

Source: Thomson Reuters.

- The announced increase in reserve requirements will reduce the structural liquidity surplus of the banking sector. This will help increase the attractiveness of hryvnia assets, support exchange rate stability, maintain control over price dynamics, and reduce inflationary pressures
- Yields on hryvnia domestic government debt securities continued to increase; however, they still do not generate significant market demand for these securities

# The growth of cash outside the banks accelerated due to situational and seasonal factors

Cash outside banks, ytd UAH bn



Source: NBU.

- Cash outside banks surged amid enduring power outages and ongoing Russia's terrorist attacks on the Ukrainian energy sector
- Additionally, traditional seasonal growth in cash outside banks at the end of the year also took place