

Latest developments in Ukraine

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Pressures remain strong, but Ukraine proceeds into 2023 in resilient mode. As of mid-January, air attacks on Ukraine's civilian and power infrastructure have become even more outrageous. After some ease during New Year period of warm weather, systemic electricity shortages are still routine across the country. We have used bank data to gauge business losses of productive time caused by electricity shortages, estimating these at over 20% at the end of 2022 (*see related story in this report*).

Due to strong external support, the financial system managed to enter 2023 in a rather good shape, despite the circumstances of war. NBU's international reserves added another USD 0.5 bln (+2% MoM) in December, ending the year close to their pre-war level. The State Budget was filled with USD 14 bln in external grants in 2022 (grants are accounted as revenue), which contained fiscal deficit at an estimated 18.6% of GDP and public debt at 86% of GDP.

The USD/UAH exchange rate has remained fixed; however, imports have become somewhat dearer due to recent euro appreciation. Consumer inflation at the end of 2022 has provided a positive surprise, being significantly lower than expected (*see related story*). GDP has also brought a surprise, resulting in improved 2022 estimates despite blackouts at the end of the year (*see related story below*).

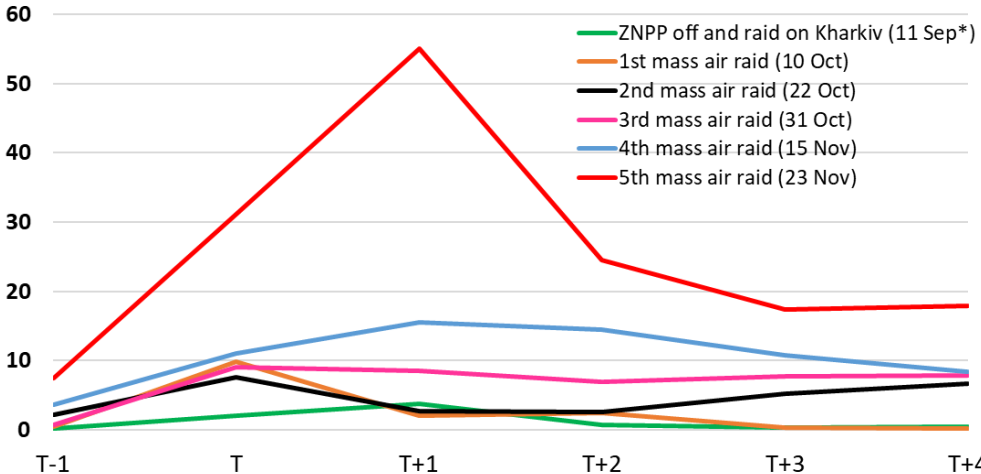
The banking sector has continued seeing accumulation of funds on client accounts. However, most of this accumulation comes to current accounts, but not to term deposits, resulting in even weaker monetary transmission and NBU's reaction in the form of increased RRRs on current accounts (*see related story at the end of report*).

Despite weak end of 2022, GDP decline estimate for the year improved. The State Statistics Service published its flash estimate for real GDP in the third quarter, stating a 30.8% YoY decline. (Detailed GDP and sectoral output data have been discontinued since the start of invasion in February 2022.) This definitely was a positive surprise for economists, who were busy downgrading fourth quarter estimates amid widespread power shortages at the time. Overall, we have improved our real GDP decline estimate for 2022 from 33% to 32%. However, the forecast for 2023 was trimmed from 6% to 5.5% growth to account for extra power shortages. The balance of risks to the 2023 forecast remains tilted to the downside.

Productive time loss caused by blackouts surpassed 20% by end-2022. We have continued our series of research on Ukraine's economy during the war by a [proxy estimate of productive time lost by business based on precise data of some 500 ATMs maintained by Sense Bank all over Ukraine](#). We came to a conclusion that such losses had been relatively small in September and October, but growing exponentially to over 23% of productive time in the last week of November, after a devastating air raid

on the power grid. In a single day of 24 November, an all-Ukrainian blackout resulted in 55% productive time lost.

Length of power outages caused by attacks in September-November (T is day of attack), % of productive time



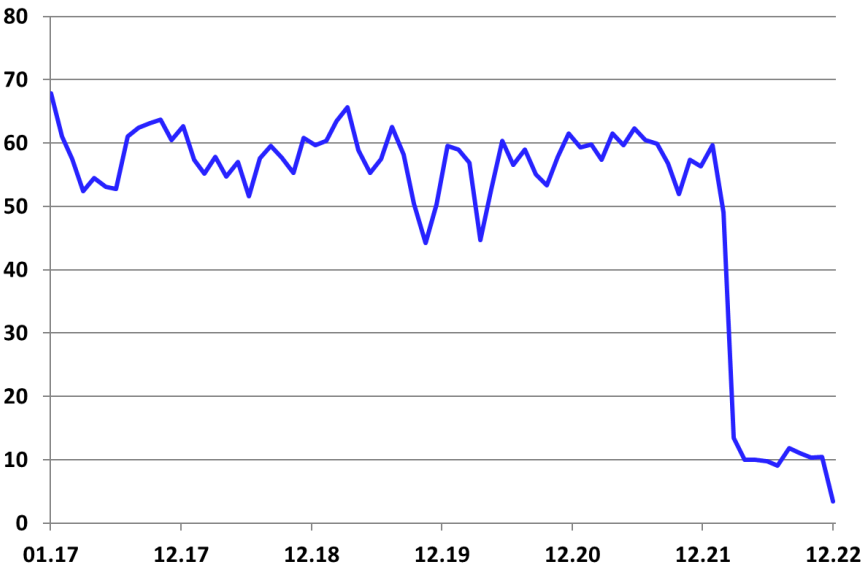
* As the raid on Kharkiv’s power grid took place in the evening, 12 September is the T date here. In all other instances, T corresponds to the date shown in the legend.

Source: authors’ calculations based on Sense Bank ATM data

Compilation of these results with high-frequency economic data suggests that the resulting impact on output was rather limited in November. However, there have been some indications that the impact worsened somewhat in December, especially in the industrial sector (see story on steel output below).

Steel output drops to all-time low in December. According to a flash estimate by UkrMetalurgProm, total average daily steel output dropped 67% MoM to just 3,400 tonnes in December (extending YoY decrease from 80-82% to 94%). This was reportedly due to a temporary halt in steel production by Ukraine’s biggest steel mill.

Daily steel output in Ukraine in 2017-2022, ‘000 tonnes



Sources: UkrMetalurgProm, Sense Bank

Inflation ends 2022 at 26.6%. The Consumer Price Index (CPI) added only 0.7% MoM in December, cementing annual CPI growth at 26.6% YoY. This was well below our and central bank's forecasts (28% and 30% respectively). As we have noted previously, prices for many items have lost acceleration steam. This expectation was only reinforced by actual data in the last months of 2022.

We maintain our view that the first quarter of 2023 would be a breaking point when CPI growth should start subsiding in annual terms. No upward revisions in regulated energy tariffs are expected, while many inflationary boosts of 2022 are expected to subside by then.

Inflation in December 2022

Goods and services	MoM price growth, %	MoM contrib. to CPI growth, p.p.	YoY price growth, %	YoY contrib. to CPI growth, p.p.	Recent trend*	Share in CPI basket, %
Foodstuffs, including:	0.7	0.3	34.4	15.3	→	43.6
bread and grain products	0.5	0.0	30.3	2.3	↓	7.6
meat and products	0.2	0.0	24.6	2.6	→	10.7
fish and products	0.9	0.0	45.8	1.3	↑	2.8
eggs	-2.3	-0.0	76.6	0.6	↑↑	0.8
sunflower oil	0.3	0.0	14.5	0.2	↑	1.1
fruit	1.9	0.1	73.8	2.3	↑↑	3.1
vegetables	1.5	0.1	51.8	1.8	↓↓	3.5
sugar	-1.4	-0.0	31.0	0.2	→	0.7
Tobacco and alcohol	0.7	0.1	22.7	1.9	→	8.2
Clothes and footwear	-2.6	-0.1	2.4	0.1	↑	5.0
Utilities, including:	0.1	0.0	6.0	0.5	→	8.4
electricity	0.0	0.0	0.0	0.0	↑	1.6
natural gas	0.0	0.0	-0.3	-0.0	↓	2.3
Household items	-0.2	-0.0	26.5	1.2	→	4.5
Healthcare	0.9	0.1	19.9	1.4	→	7.2
Transportation, incl.:	1.6	0.1	42.9	4.0	→	9.3
gasoline	3.1	0.1	69.4	1.9	→	2.8
Other	—	0.2	—	2.2	—	13.8
CPI	0.7	0.7	26.6	26.6	→	100.0
Core CPI	0.8	—	22.6	—	→	—

* arrow up means acceleration in YoY terms over the last 3 months,
arrow down means deceleration

Sources: State Statistics Service, Sense Bank

Ukraine's grain harvest continues into 2023. While previously Ukraine's crop harvesting culminated in December, this winter has become different. Since the start of 2023, Ukrainian farmers have already collected over 2 mln tonnes of corn and are proceeding with this crop further. Another 3 mln tonnes are estimated to remain in the fields. If official statistics addresses this new reality in a proper way (which we assume in our macroeconomic model), this would mean a transit of some agricultural output from the fourth quarter of 2022 into the first quarter of 2023.

Overall, Ukraine's grain harvest in 2022/23 is now expected to amount to 53.9 mln tonnes, which corresponds to a 37% decrease vs. 2021/22 bumper harvest of 86 mln tonnes. That is not far from our initial 56 mln tonnes forecast back in April 2022 (*see our report of 30 April 2022*). And redirection of some fields into oilseeds delivered strong crops of soya (6% above 2021/22) and rapeseed (9% up). The resulting 24% decrease in oilseed harvest proved to be much softer than a decline of almost 40% we had initially anticipated back then at the outset of the current season.

Harvest of major crops in Ukraine in 2016-2022*, mln tonnes

	2016	2017	2018	2019	2020	2021	2022e	% chg.
Wheat	26.0	26.2	24.6	28.3	24.9	32.2	20.2	-37%
Barley	9.4	8.3	7.3	8.9	7.6	9.4	5.8	-39%
Corn*	28.1	24.7	35.8	35.9	30.3	42.1	26.5	-37%
GRAINS	66.1	61.9	70.1	75.1	64.9	86.0	53.9	-37%
Sunflower	13.6	12.2	14.2	15.3	13.1	16.4	10.5	-36%
Rape	1.2	2.2	2.8	3.3	2.6	2.9	3.2	+9%
Soya	4.3	3.9	4.5	3.7	2.8	3.5	3.7	+6%
OILSEEDS	19.1	18.3	21.4	22.2	18.5	22.8	17.4	-24%
Sugar beet	14.0	14.9	14.0	10.2	9.2	10.9	9.0	-17%

* including around 5 mln tonnes expected to be harvested in early 2023

Sources: State Statistics Service, Ministry for Food and Agriculture, Sense Bank

NBU adjusts monetary policy mechanisms, reacting to strong UAH accumulation on bank client accounts. According to preliminary data by the NBU, households increased their national currency holdings in banks by UAH 139 bln in 2022 (+30% YoY). Corporate clients added yet another UAH 55 bln (+10%). This liability inflow has resulted in excessive liquidity, with the sector stashing as much as UAH 477.5 bln in central bank overnight as of the outset of 2023 (more than doubled over 12 months).

One of the major issues with this excess liquidity overflow is that the lion's share of the increase in liabilities comes not in the form of term deposits, but as idle cash stockpiled on current accounts. The share of term deposits in total household bank holdings has dropped to meagre 30%. Moreover, much of the gargantuan current account inflow has been concentrated in a few state-owned banks. (Sense Bank, for instance, has an absolutely other deposit structure, with most liabilities being term deposits.) This has created serious shortcomings for monetary transmission: with strong market concentration and easy cash flowing to current accounts, leading banks have had little incentives to follow NBU's interest rate.

To address this issue, the central bank has increased reserve requirement ratios (RRRs) for current accounts by 5 percentage points, signaling further hikes might follow. At the same time, the NBU has allowed banks to stash up to half of all required reserves (currently over UAH 70 bln) in designated T-bills. This allows killing two birds with one stone: (1) to improve monetary transmission and (2) to replace the NBU with banks as the key local source for fiscal financing in the upcoming months. The first auctioning of such T-bills on 10 January has already resulted in a full sellout of securities with UAH 19 bln par value proposed by MinFin (*see debt table overleaf*).

Recent sovereign debt operations and upcoming payments schedule

	New debt	Payments	
		Amortization	Interest
28 November	—	—	UAH 246 mln*
29 November	UAH 3,987 mln + EUR 459 mln	—	—
30 November	—	—	UAH 1,245 mln
01 December	—	EUR 495 mln	EUR 6.2 mln
06 December	UAH 1,072 mln + EUR 54.2 mln	—	—
07 December	—	—	UAH 1,065 mln
09 December	UAH 15,000 mln**	—	—
13 December	UAH 15,003 mln + EUR 100 mln	—	—
14 December	EUR 500 mln	UAH 14,383 mln	UAH 2,041 mln
15 December	—	—	EUR 1.4 mln
16 December	UAH 15,000 mln**	—	—
19 December	CAD 500 mln	—	—
20 December	UAH 6,258 mln + USD 208 mln EUR 200 mln	SDR 125 mln***	—
21 December	—	—	UAH 1,864 mln
22 December	—	USD 351 mln	EUR 9.7 mln
27 December	UAH 2,757 mln + USD 276 mln	—	—
28 December	—	—	UAH 377 mln
29 December	—	USD 353 mln	—
03 January	UAH 1,001 mln	—	—
04 January	—	—	UAH 394 mln
10 January	UAH 19,383 mln + USD 41.1 mln EUR 29.4 mln	—	—
11 January	—	UAH 6,800 mln	UAH 47.5 mln*
12 January	—	—	EUR 3.1 mln
17 January	UAH 5,750 mln + EUR 3,000 mln	—	—
18 January		UAH 2,358 mln	UAH 422 mln
24 January	<i>placement</i>	—	—
25 January		UAH 2,500 mln*	UAH 466 mln
26 January		—	USD 1.6 mln
31 January	<i>placement</i>	—	—
01 February		UAH 2,500 mln*	UAH 733 mln + SDR 103 mln
02 February		USD 347 mln	USD 6.8 mln
03 February		SDR 98.5 mln***	—
07 February	<i>placement</i>	—	—
08 February		—	UAH 2,373 mln

* paid fully to the NBU

** NBU purchase of war bonds

*** debt to the IMF, paid fully by the NBU

Sources: Ministry of Finance, IMF, Sense Bank

Economy-related legislation voted in Verkhovna Rada over last 7 weeks

Draft Law No.	Content	Status
0161	Framework Agreement between Ukraine and Turkey on Cooperation in the Field of High Technologies, Aerospace Industry	Ratified
0162	Ukraine's exit from CIS Treaty on Resolution of Commercial Disputes	Ratified
0176	Framework Agreement between Ukraine and Austria on Economic Cooperation in Development of Projects (healthcare infrastructure)	Ratified
0177	Agreement on amendments to the Political, Free Trade and Strategic Partnership Agreement between Ukraine and the UK	Ratified
4187	Vast amendments to legislation on natural resources development	Approved
4366	Amendments to the Tax Code (related to the new law on payment services)	Approved
5552-1	Amendments to legislation on copyright and related rights	Approved
5655	Overhaul of legislation on permits for construction	Approved
5819	On credit rating agencies	1st reading passed
6013	Amendments to legislation on companies (including termination of Commercial Code)	1st reading passed
6085	Amendments to tax legislation regarding implementing laws on e-identification	1st reading passed
6086		1st reading passed
6101	Amendments to legislation on corporate management of state-owned companies (after President's veto)	Approved
6173	Expands legislation on e-identification	Approved
6447	Acknowledges virtual and digital assets as objects of civil rights	1st reading passed
6480	On unique geographical names for spirits and wines	Approved
6576	On digital content and digital services	1st reading passed
7441-1	Allows borrowers of consumer loans to apply for standstill or cancellation of loans if collateral on them is destroyed due to Russian aggression or has remained on occupied territories	Approved
8037	On safety of handling chemicals (implementation of REACH rules)	Approved
8079	Bans gambling business from simplified taxation regime	Approved
8158	On certification of underground gas storages and prevention of Chornomornaftogaz insolvency	Approved
8166-d	Increased control over return of exports revenue from grain, oilseeds, sunflower oil and oilseed meal (including VAT deposit)	Approved
8172	Sets requirements for municipal electric transportation development	1st reading passed
8196	Lift VAT and customs duties for power generators and other electrical equipment	Approved
8197		Approved
8274	Allows the Cabinet of Ministers to set minimal commodity prices for exports (during martial law and 1 year after its cancellation)	1st reading passed
8286	Introduction of electronic excise stamps for tobacco and alcohol	1st reading passed
8287		1st reading passed
8298	Tax and customs breaks for businesses during martial law (lift VAT and duties on imports for industry, eases rent regime for iron ore, lift certain other taxes, etc.)	1st reading passed
8299		1st reading passed
8300	Amendments to legislation on compulsory auto insurance (increases insured damage, bans franchise setting, decreases claim review time, etc.)	1st reading passed

Sources: Verkhovna Rada, Sense Bank

Ukraine: key macroeconomic indicators

	2020	2021	2022e	2023f
GDP, UAH bln	4,222	5,451	4,744	6,207
GDP, USD bln	155.8	200.9	146.7	152.7
GDP, % real change	-3.8	3.4	-32.0	5.5
Industrial output, % real change	-4.5	1.9	-37.0	7.0
CPI, % average annual change	2.7	9.4	20.2	17.8
CPI, % change Dec/Dec	5.0	10.0	26.6	16.5
Average wage, USD	430	514	448	420
Average wage, % real change	7.4	10.5	-13.9	0.0
Consolidated Budget balance, % of GDP	-5.3	-3.4	-18.6	-14.0
Public debt (incl. guarantees), % of GDP	60.4	49.0	86.0	85.5
Net FDI inflow, USD bln	-0.1	6.9	0.5	3.0
Current account balance, % of GDP	3.4	-1.6	6.0	1.0
FX reserves, USD bln at year-end	29.1	30.9	28.5	25.0
USD/UAH rate, annual average	26.96	27.29	32.34	40.65
NBU key policy rate, % (annual average)	7.9	7.5	18.7	23.2

Sources: State Statistics Service, National Bank of Ukraine, Ministry of Finance, forecast by Sense Bank

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