National Bank of Ukraine

Inflation report (January 2021)

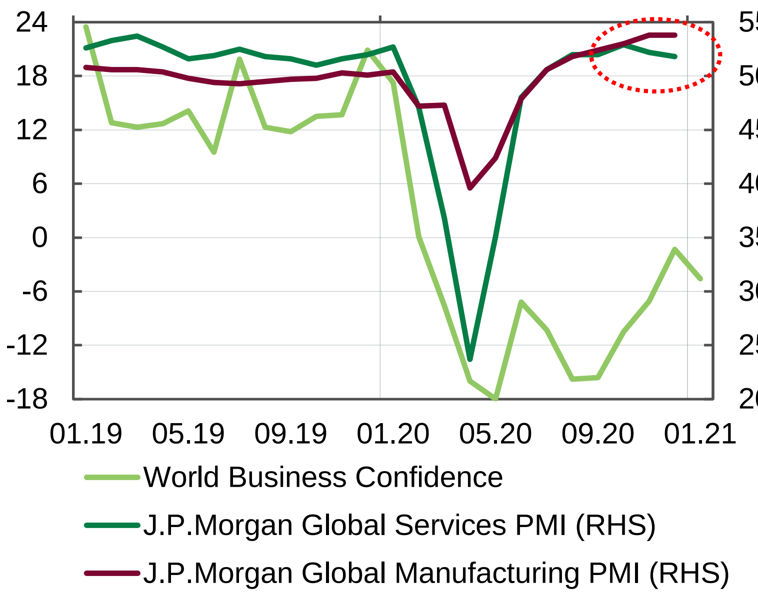
February 2
2021

Summary

- **In 2020, inflation accelerated to 5%, reaching the midpoint of the target range**. Already in January 2021, the CPI is expected to go beyond the target range
- **However, the drivers of the current surge in inflation are mostly temporary**. Inflation will return to the target range of 5% ± 1 p.p. in the first half of 2022
- **Inflationary expectations of households and businesses continued to deteriorate**. At the same time, inflation expectations of analysts remain stable. There are currently no signs of deteriorating expectations in the dynamics of market rates and the exchange rate
- **The risks to the inflation forecast are broadly balanced**. Inflationary pressures may increase due to further growth in consumer demand, unbalanced inflation expectations, rising world prices for food and energy. At the same time, the inflow of portfolio investment and/or the deterioration of the epidemic situation may curb inflation
- **The Board of the National Bank of Ukraine has decided to keep its key policy rate at 6%** per annum given the existing balance of risks, mostly temporary nature of inflation drivers, as well as weak investment activity and depressed business sentiment in the context of stricter quarantine
- **The NBU takes into account the worsening of inflation expectations that occurred in late 2020, as well as stronger underlying pressures on prices arising from consumer demand. If the impact of these factors continues to increase and is not offset by other factors, such as a large capital inflow, the NBU will raise its key policy rate.**

The global economy continues to recover despite the spread of COVID-19 and lockdowns

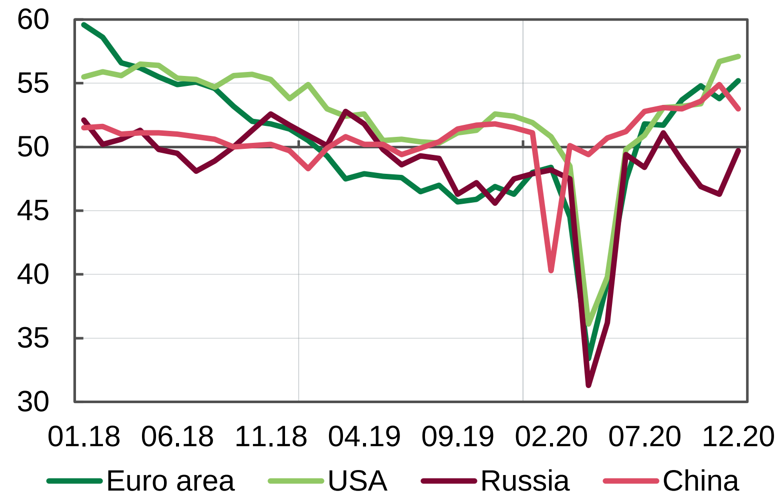
Global PMI and World business confidence index



Source: IHS Markit, Moody's.

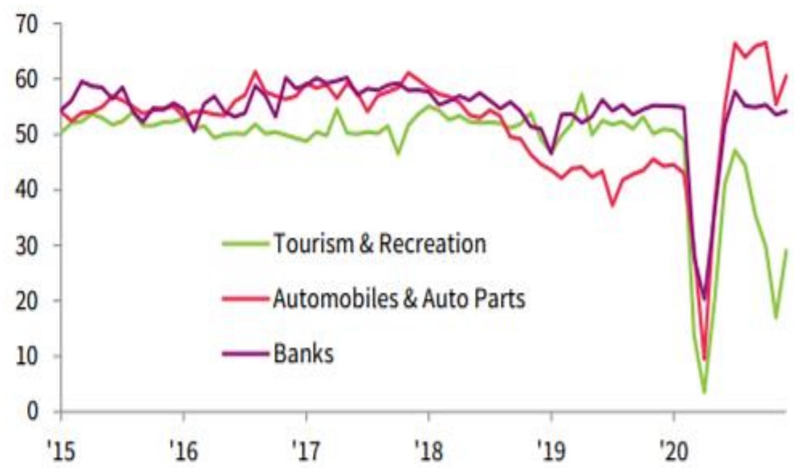
- First of all, there is a further increase in manufacturing PMI as industrial activity is supported by various governments' support programs and reviving world trade
- Recovery in the service sector, which is more sensitive to social distancing measures, remains weak and volatile

Manufacturing PMI of selected countries



Source: IHS Markit.

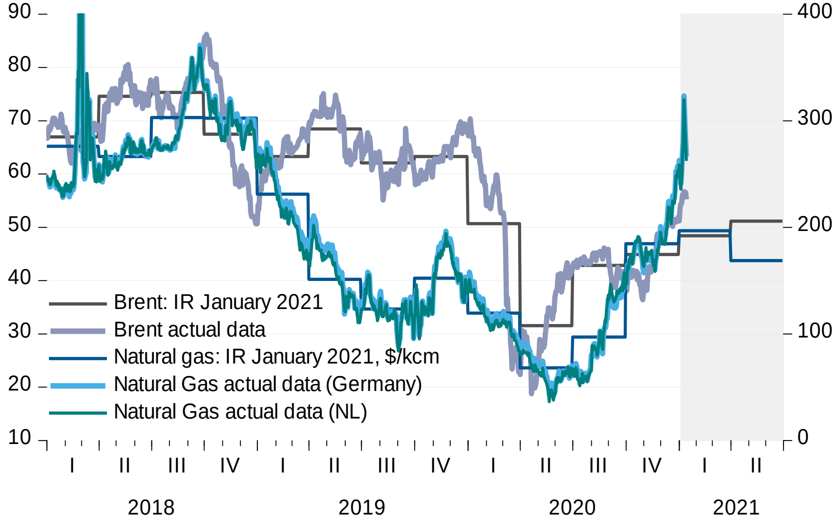
Europe output index



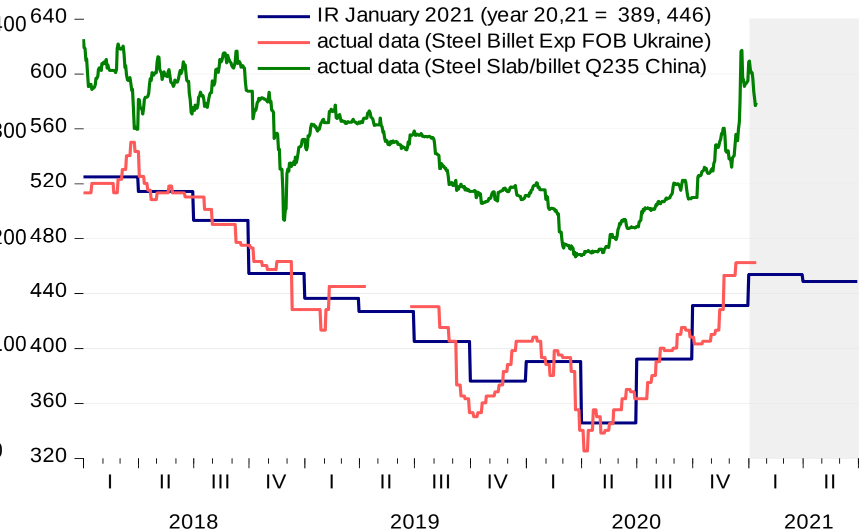
Source: IHS Markit.

Rising business activity amid limited supply keeps global commodity prices high

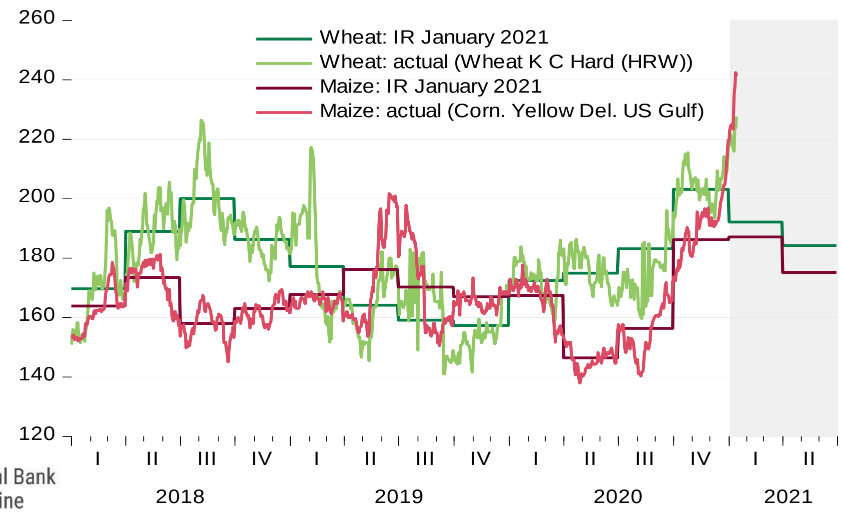
Brent and Natural Gas World Price



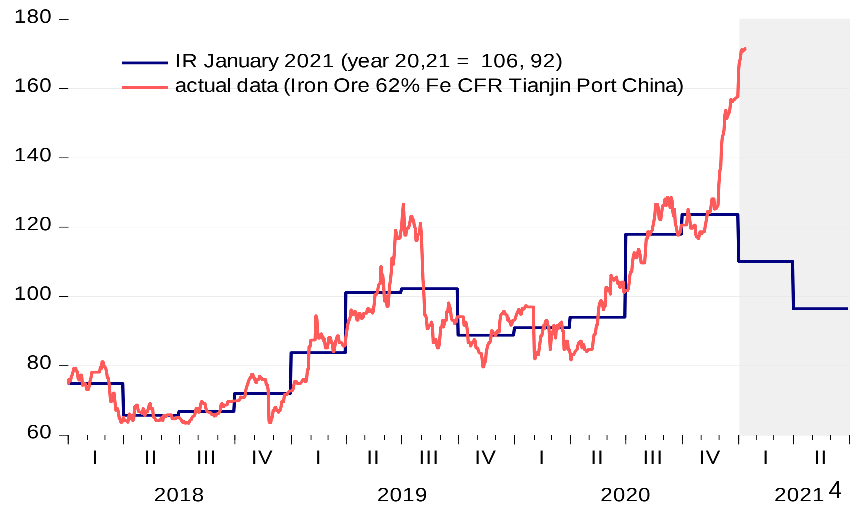
Steel World Price, USD/MT



Wheat and Maize World Prices, USD/MT



Iron Ore World Price, USD/MT

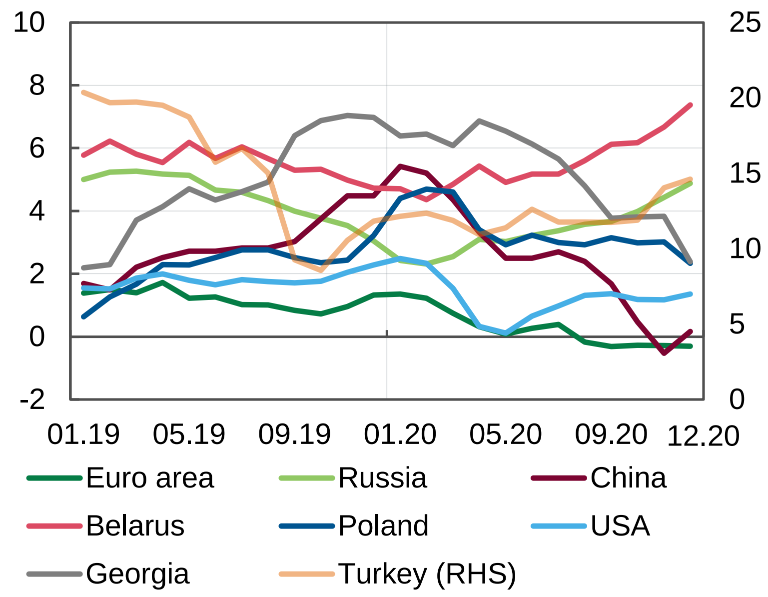


National Bank of Ukraine

Source: Refinitiv, NBU estimates.

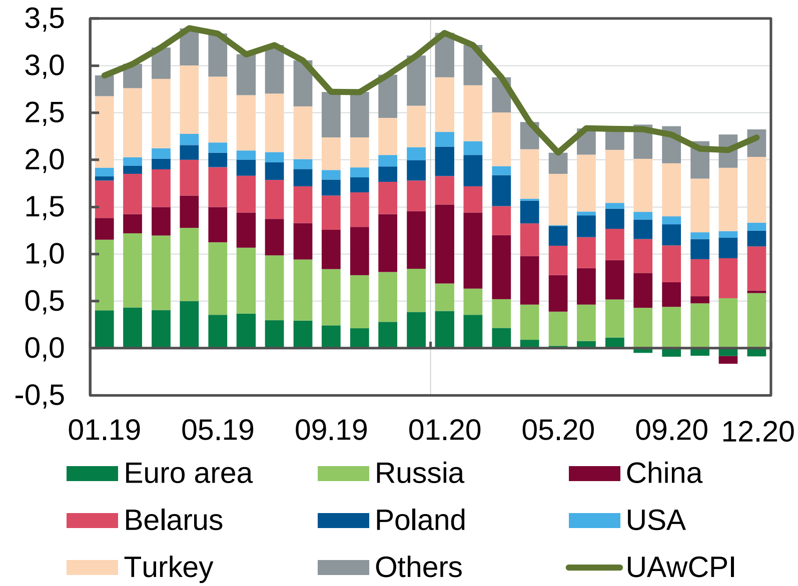
Inflationary pressures from MTP's have bee rising somewhat due to economic recovery and depreciation effects in some countries

CPI in selected countries, % yoy



Source: national statistical agencies.

Imported inflation: contributions to the annual change UAwCPI, p.

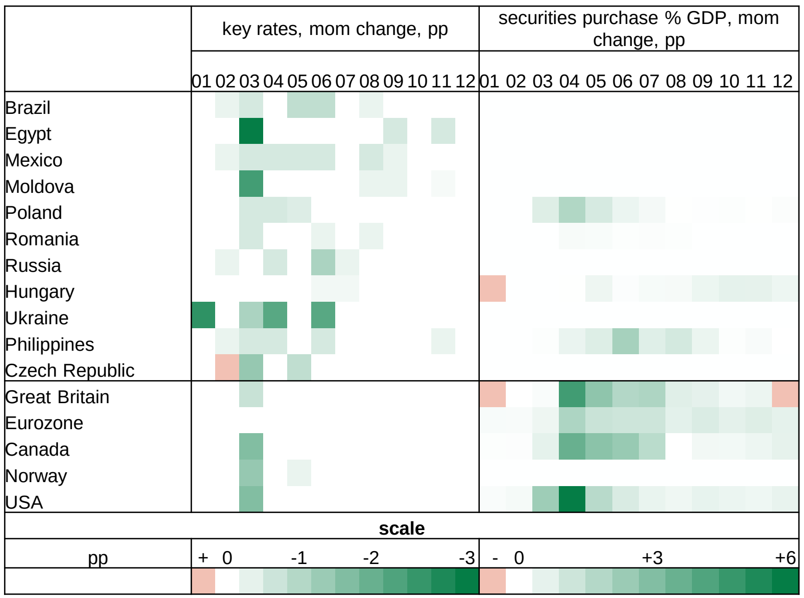


Source: IFS IMF, NBU estimates.

- The resumption of economic activity has led to a rise in global commodity prices and, consequently, was reflected in domestic prices
- The ongoing pass-through of past depreciation of national currencies in selected countries (Russia, Turkey, Belarus) was an additional factor

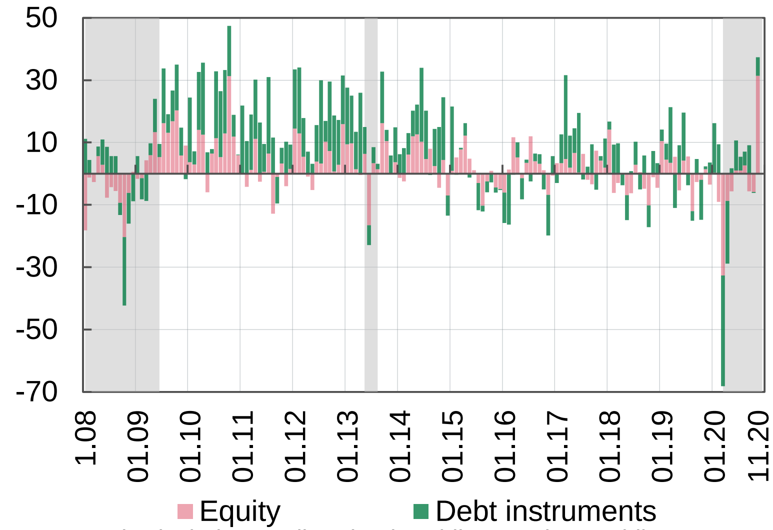
Box. Global financial market optimism and positive news about Ukraine's deal with the IMF spurred capital inflows in late 2020

Monetary policy measures of selected countries in 2020



Source: official web-pages of central banks.

EM*: portfolio investment flows, USD bn



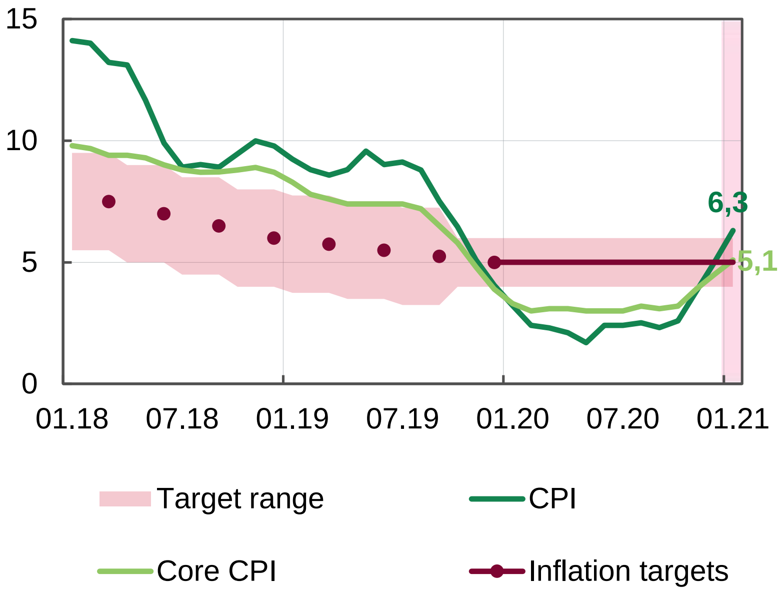
EM countries include: Brazil, Bulgaria, Chile, Czech Republic, Hungary, India, Korea, Lithuania, Lebanon, Mexico, Pakistan, Philippines, Poland, Romania, South Africa, Thailand, Turkey, Ukraine.

Source: NBU, official web-pages of central banks.

- Strict quarantine measures and uncertainty about the pandemic duration resulted in a global shock to both supply and demand, which was reflected, among others, in sharp capital outflows from EMs
- Positive news at the end of the year against the background of exceptionally loose monetary conditions resulted in renewed investor interest in the EMs, including Ukraine. In December alone, Ukraine raised more than USD 2 bn
- Investor confidence in Ukraine was supported by continued cooperation with the IMF, including news about reaching an agreement on budget parameters for 2021, and certain macro-financial resilience during the crisis period

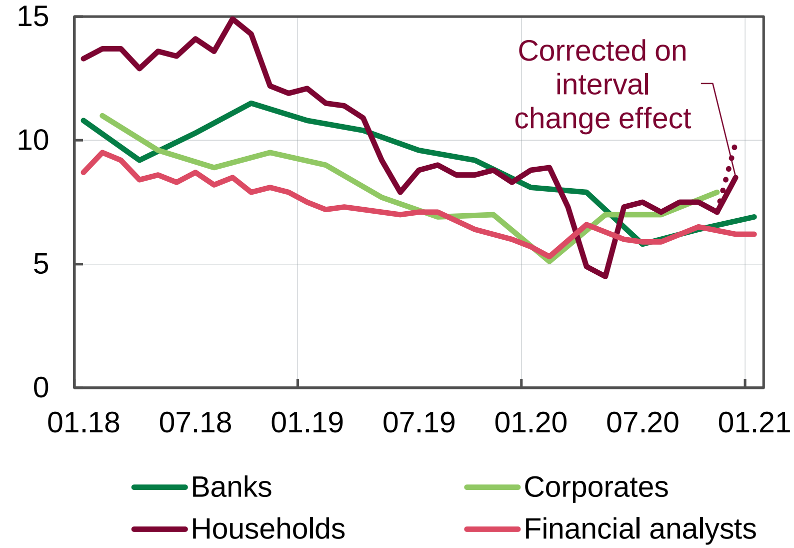
Inflation accelerated in December and reached the central point of the target range - 5%

Headline and core CPI*, % yoy



* January data reflect NBU nowcast.
Source: SSSU, NBU.

Inflation expectations for the next 12 months, %

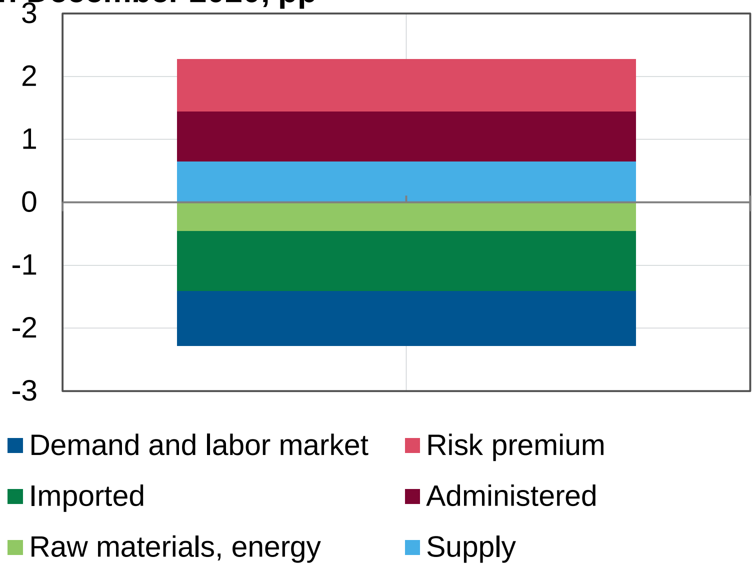


Source: NBU, GfK Ukraine, Info Sapiens surveys.

- Consumer inflation in annual terms accelerated in December 2020 (to 5.0% yoy) and thus reached the central point of the target range of 5% ± 1 pp.
- Inflation is expected to accelerate further and to exceed the target range already in January
- HH inflation expectations have deteriorated significantly despite low current inflation. This is probably due to the increase in prices for staple goods (oil, sugar, flour) and utility tariffs (especially gas), as well as the announcement of the abolition of the preferential tariff for electricity

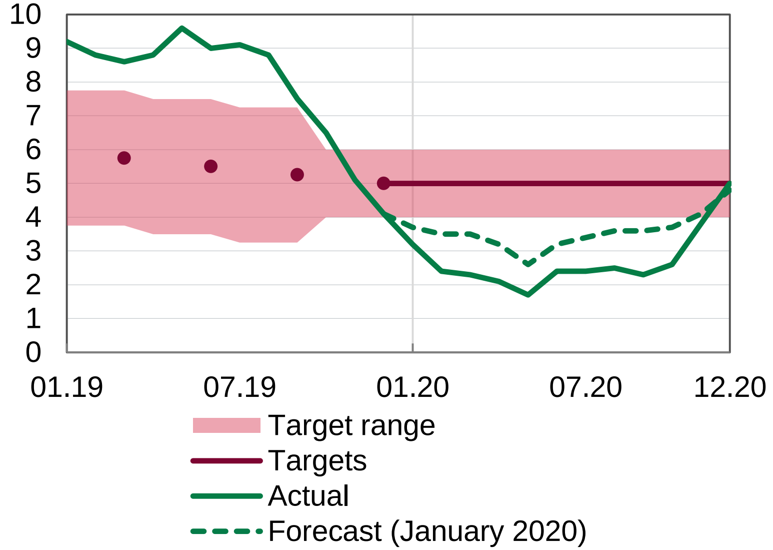
Box. Fulfilment of inflation target. Achieving the target is the result of balancing between different risks that affect inflation

Decomposition of inflation deviation from the target in December 2020, pp



Source: NBU staff estimates.

Inflation trajectory according to the NBU forecast for January 2020 and actual dynamics of inflation, % yoy

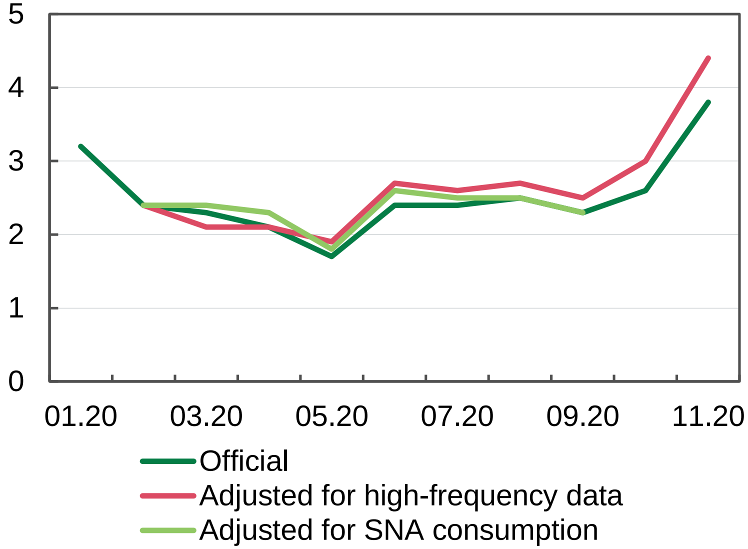


Source: SSSU, NBU staff estimates.

- In December 2020, consumer inflation reached the central point of the target range of 5% ± 1pp.
- Achieving the target is the result of balancing between different risks that affect inflation
- The downward pressure from the slumping global and Ukrainian economies, lower commodity and energy prices were offset by pro-inflationary factors related to rising administered prices, declining supply of certain goods and hryvnia depreciation

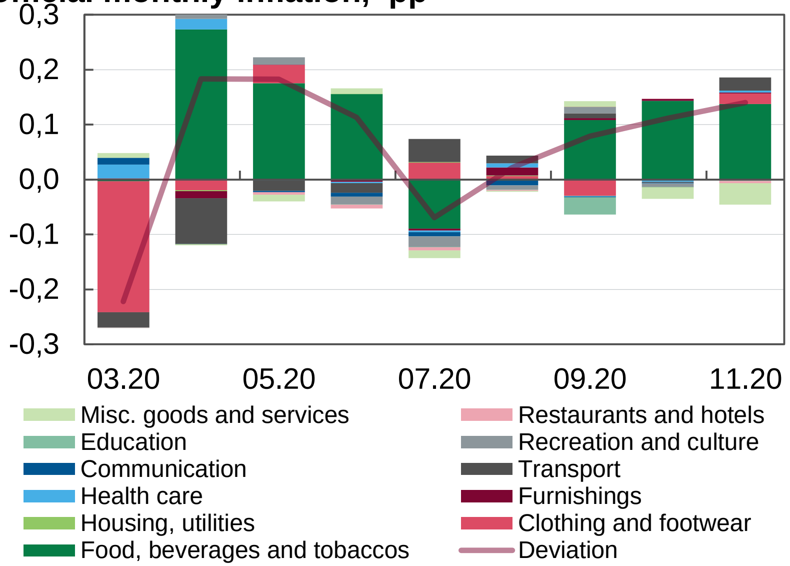
Box. "Covid" inflation in Ukraine

Official and adjusted on consumption change consumer price indexes, % yoy



Source: STSU, Eurocontrol, SSSU, Ministry of justice, NBU staff estimates.

Contributions to deviations of inflation calculated using high-frequency consumption indicators from official monthly inflation, pp

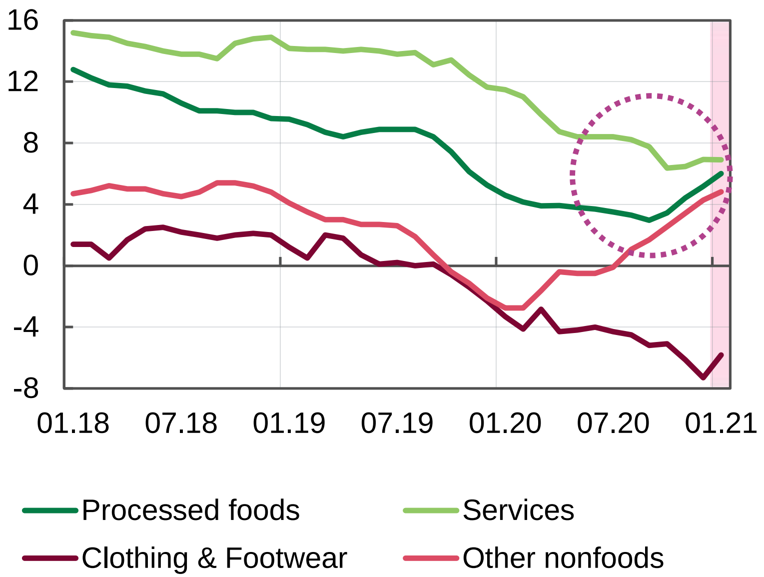


Source: NBU staff estimates based on STSU, Eurocontrol, SSSU, Ministry of justice.

- The structure of consumer spending was affected by the corona crisis and the introduction of quarantine restrictions. As a result, it could affect the cost of consumer basket
- "Covid" inflation, taking into account changes in consumption, exceeded the official one, but by 0.2-0.6 pp only, which corresponds to similar estimates in other countries.
- This indicator is only an analytical tool that may provide useful additional information on consumer behavior, price perceptions and inflation expectations

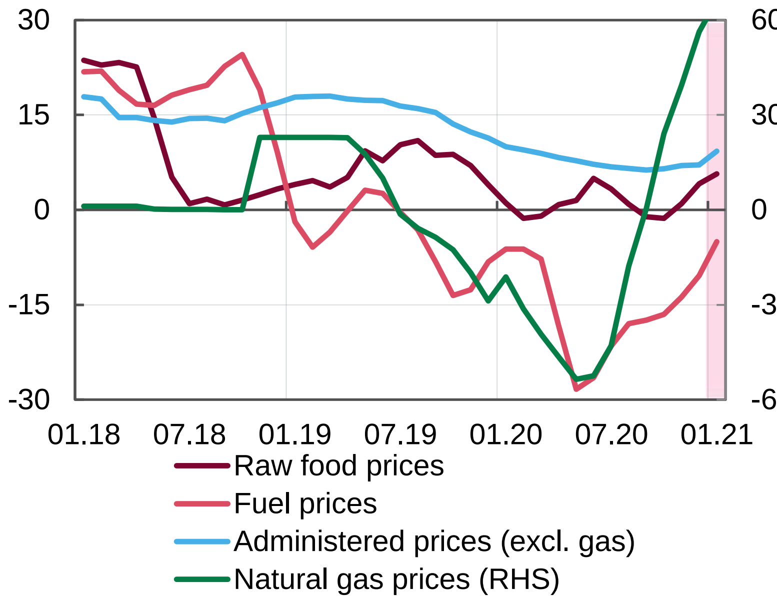
Inflation has been fueled by rising consumption, increase in tariffs, lower crop yields and the effects of the weakening hryvnia

Main components of core CPI,% yoy



Source: SSSU, NBU staff estimates.

Main components of non-core CPI,% yoy

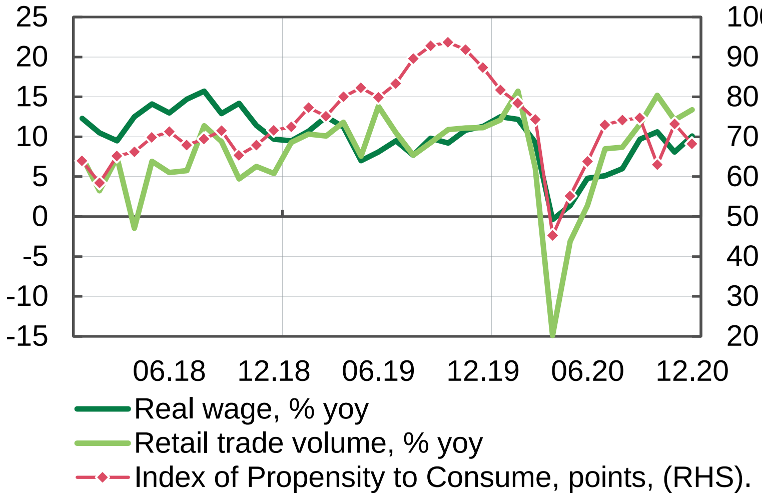


Source: SSSU, NBU staff estimates.

- Inflation accelerated in December primarily due to rising food prices, slower pace of decline of fuel prices, rising gas prices, rebounding consumer demand and the pass-through effects of the hryvnia weakening in previous months
- The same factors will "heat up" inflation in January

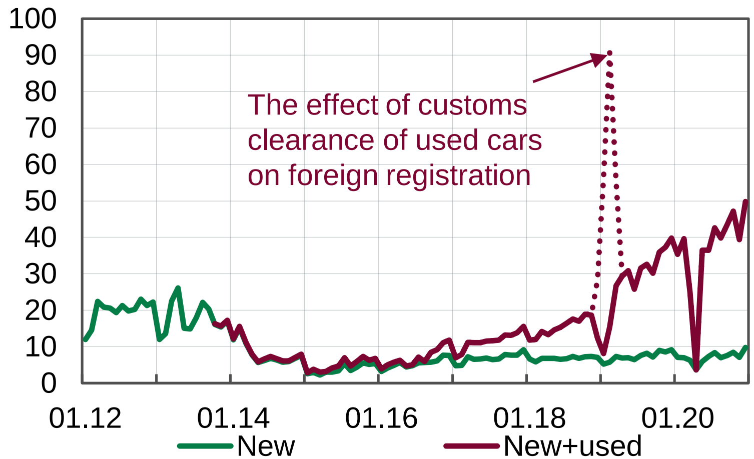
Consumer demand has been recovering rapidly. Household consumption has been rising, supported by…

Consumer demand indicators



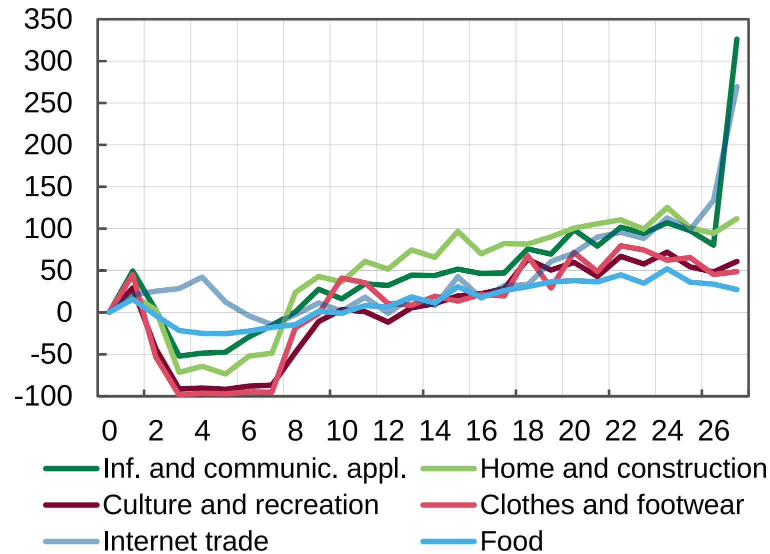
Source : SSSU, Info Sapience.

Number of first registration of cars, ths.



Source: Ukrautoprom, MIR, SFS, NBU estimates.

Retail trade index for various categories of goods, 29.02.2020=0*, %

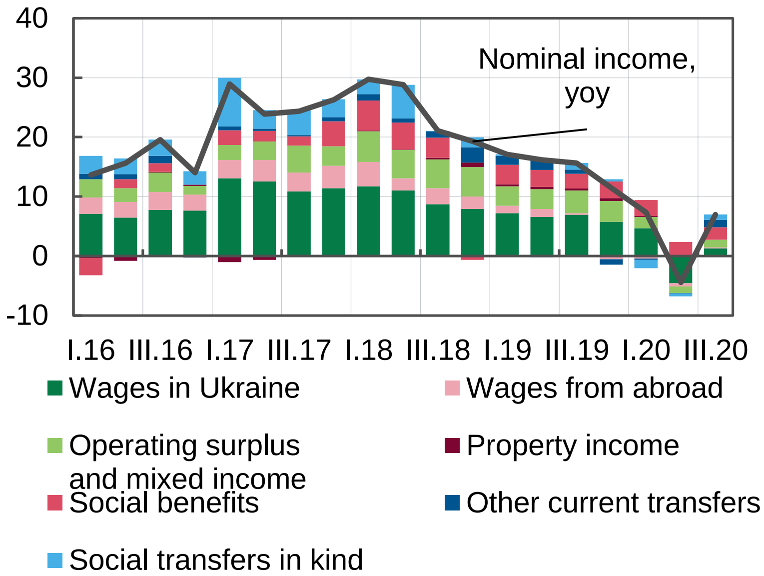


* 0 – 29.02-10.03.20, 27 – 20-30.11.20.
Source: https://q.rating.zone/#market .

- Record car purchases
- OLX: in 2020 most often, Ukrainians were buying game consoles, home appliances and audio equipment
- GFK Ukraine: Black Friday and Cyber Monday sales increased by 28% yoy; Marketplace Prom.ua: + 19% yoy

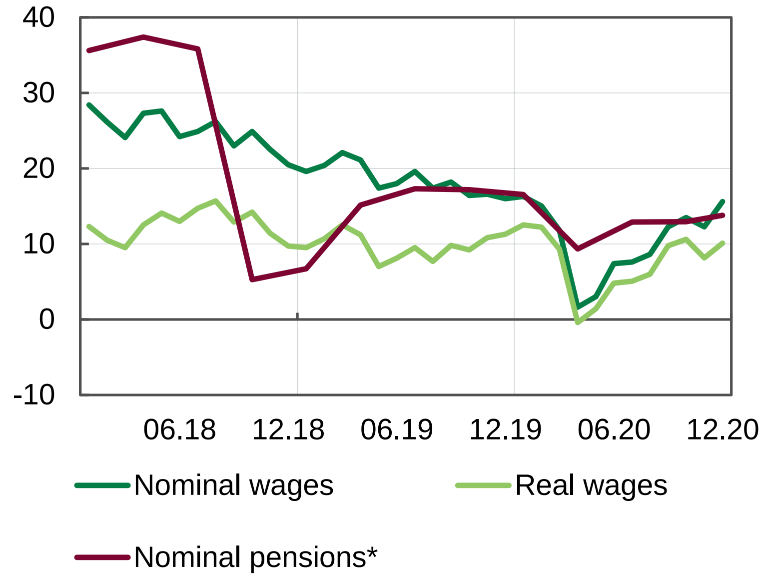
…rapid recovery of household income, despite…

Contributions to annual change in nominal household income, pp



Source: SSSU, NBU staff estimates.

Nominal and real wages and pensions, % yoy



* On 01.01.2021.
Source: SSSU, PFU.
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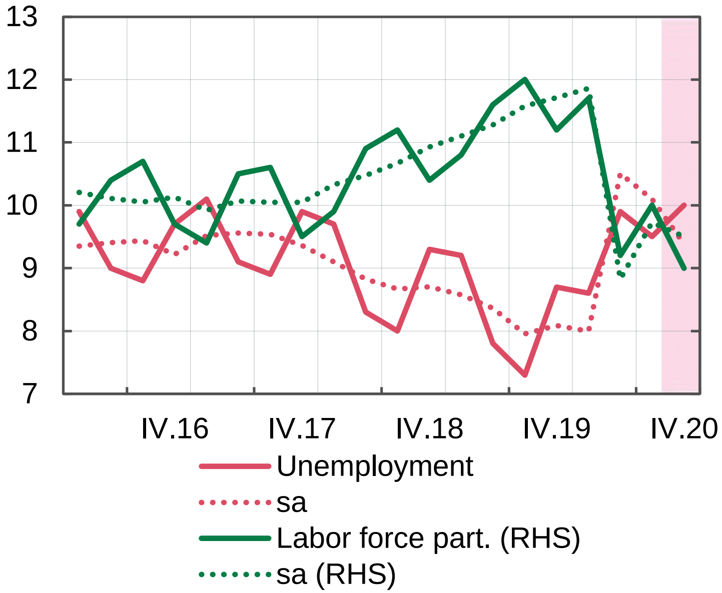
- The main drivers of income growth in Q3 2020 are wages paid in Ukraine, social benefits and profit and mixed income. The latter indicates an improvement in the financial situation of self-employed
- Official data on income may underestimate actual incomes due to signs of shadow sector expansion
- Pensions and social benefits are growing owing to various government support programs (indexation of pensions, additional payments to pensioners, payments to self-employed persons, etc.)

…the labor market weaknesses

ILO unemployment* and labor force participation rate, %**

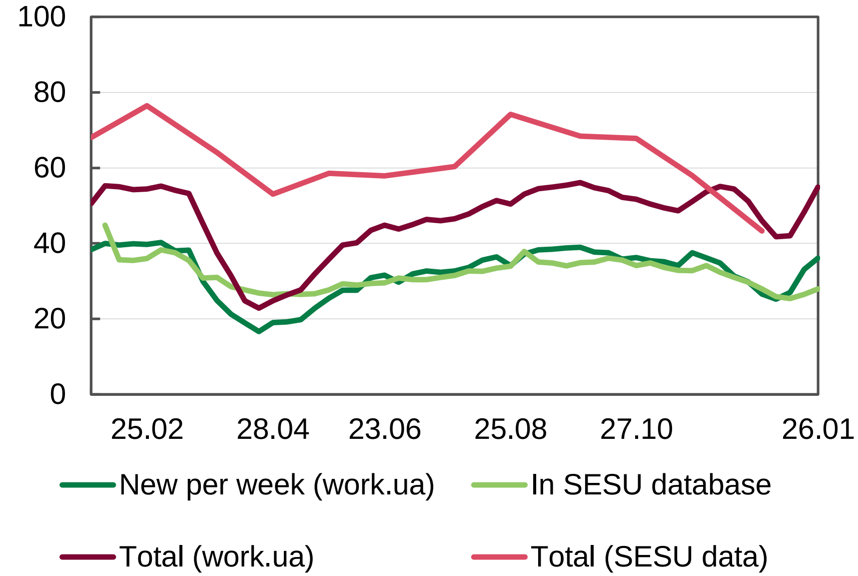


* As a % of population aged 15–70 in the labor force.*

** As a % of total population aged 15–70.

Source: SSSU, NBU staff estimates.

Labor demand indicators: number of vacancies, thousand

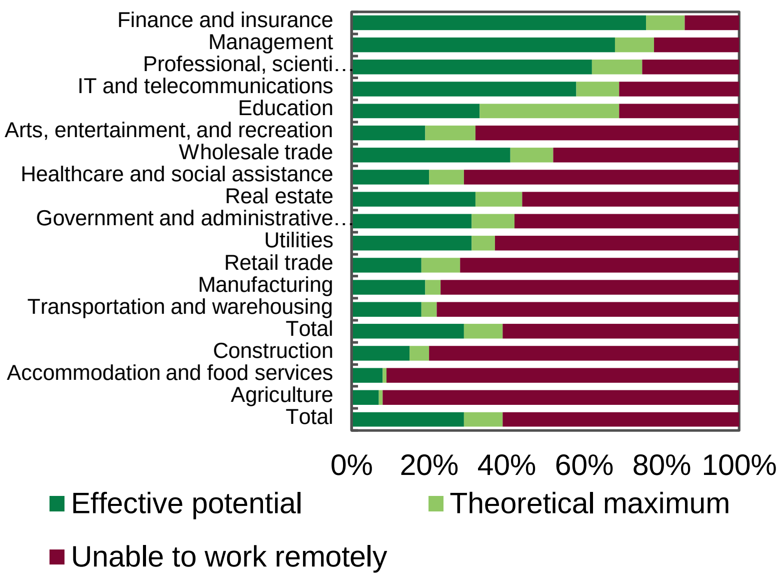


Source: SESU, work.ua.

- The unemployment rate has been declining, but slowly (to sa 10.3% in Q3 and estimated sa 9.4% in Q4). Employment has been improving, but firms are reluctant to create new vacancies and expand staff due to the uncertainty over the pandemic and the risks of new quarantine restrictions
- For the same reasons, labor force participation rate remains low
- The weakness of the labor market is largely offset by increased social support by the government

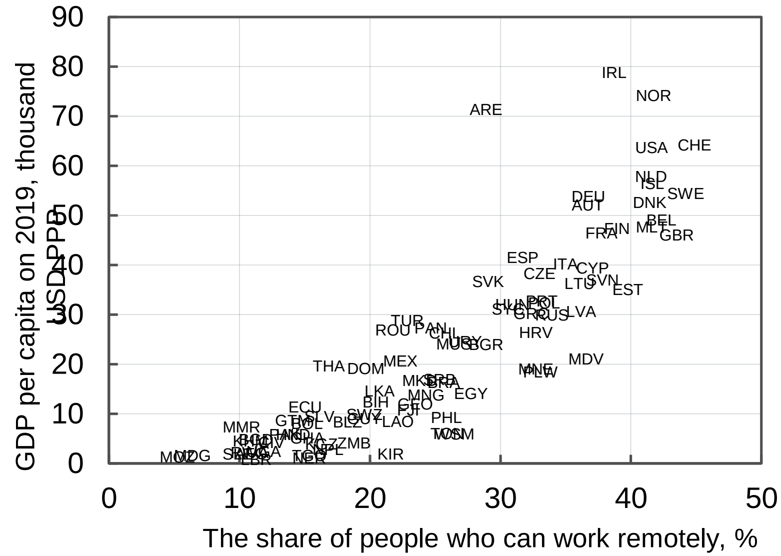
Box. Changes in labor market due to the pandemic

Potential share of time spent working remotely by sector in the United States, %



Source: McKinsey Global Institute

Dependence between the share of people who can work remotely and country GDP per capita PPP

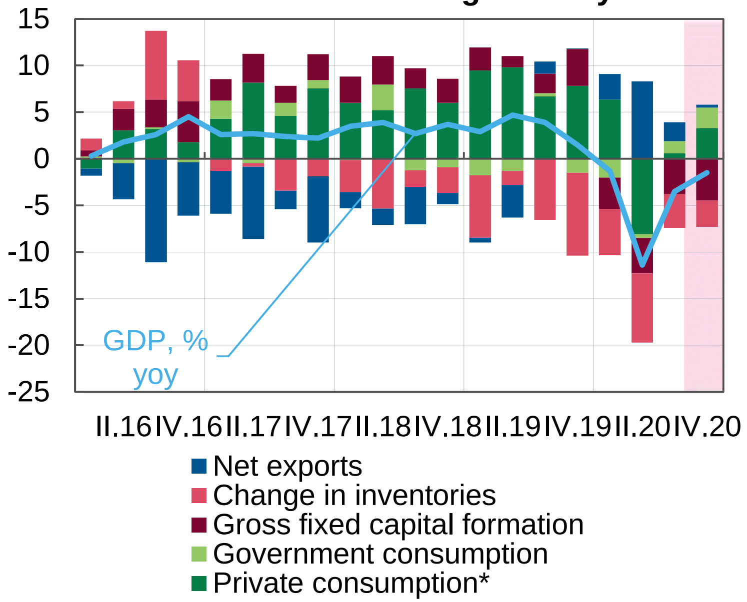


Source: Dingel and Neiman How Many Jobs Can be Done at Home?

- The share of people working remotely grew even before the pandemic. Studies have shown the benefits of remote work from increased productivity and reduced costs. However, in reality the benefits turned out to be not evident
- In all the economies surveyed, at least half of the jobs cannot currently be replaced by full or partial remote work. In developing economies, there are much less opportunities for remote work than in developed ones. For Ukraine, the theoretical maximum of those who can work remotely is estimated at 20%

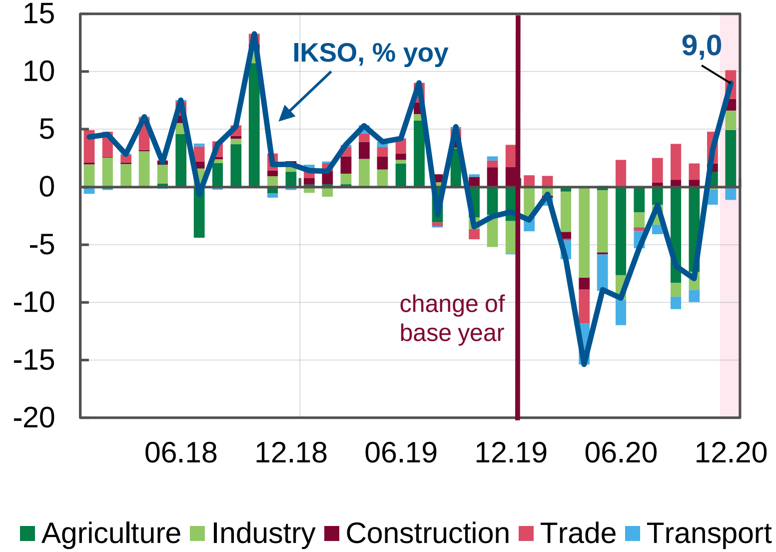
Overall, the economy has continued to recover faster than expected, despite quarantine restrictions

Contributions to annual GDP growth by final use, pp



*Including non-profit institutions serving households.
Source: SSSU, NBU staff estimates.

Contributions to annual IKSO growth*, p.p.

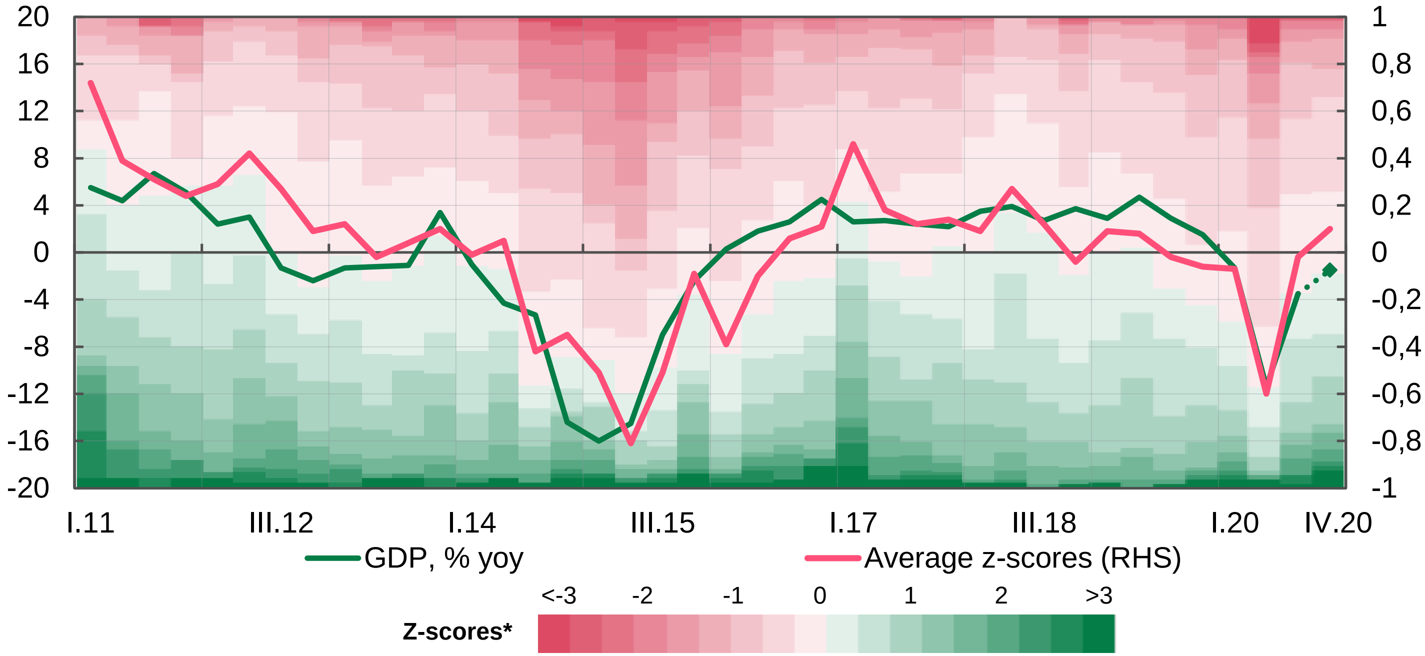


* SSSU has published Dec 2020 data after IR publication.
Source: SSSU, NBU staff estimates.

- The fall in real GDP in Q3 was smaller than expected by the NBU (-3.5% yoy vs. -6.2% yoy), primarily due to a faster recovery in consumption (both private and public)
- Q4 GDP estimates was improved : consumption has been recovering rapidly, including government consumption, which supports trade and transport, and the service sectors; budget expenditures on road infrastructure and health care impact in particular the performance of construction and industry. Catching up with the harvesting of late and industrial crops supported agriculture
- Quarantine restrictions in Nov and Jan did not have a significant impact (≈0.2 pp of GDP)

Box. Heatmap of economic activity of Ukraine

Heatmap of Ukraine's economic activity



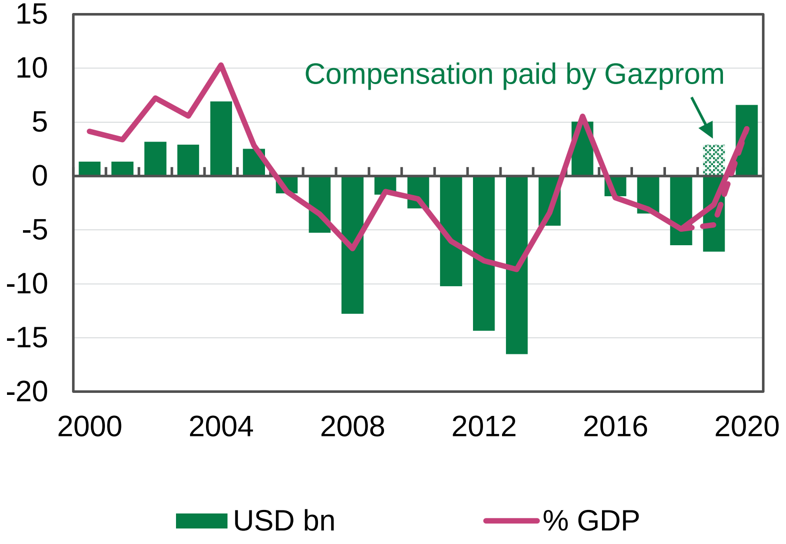
* Z-score - a dimensionless statistical indicator equal to the number of standard deviations, by which the value of the indicator differs from its average. The colors on the map provide information on whether economic activity is in the phase of reduction (red) or growth (green), color saturation indicates the degree of such an event, and the size of the cells - the distribution of values between indicators

Source: NBU staff estimates based on 119 indicators, SSSU.

- The average value of z-scores is close to the real GDP change
- The results of the heatmap signal further recovery of Ukraine's economy in Q4 2020

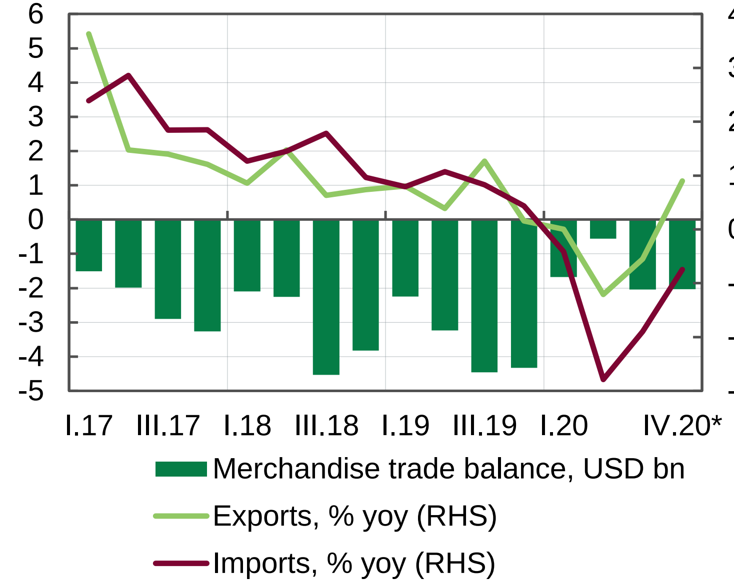
In 2020, the current account surplus reached one of the highest levels on record

Current account balance*



* Dotted line – without compensation paid by Gazprom.
Source: NBU.

Merchandise trade

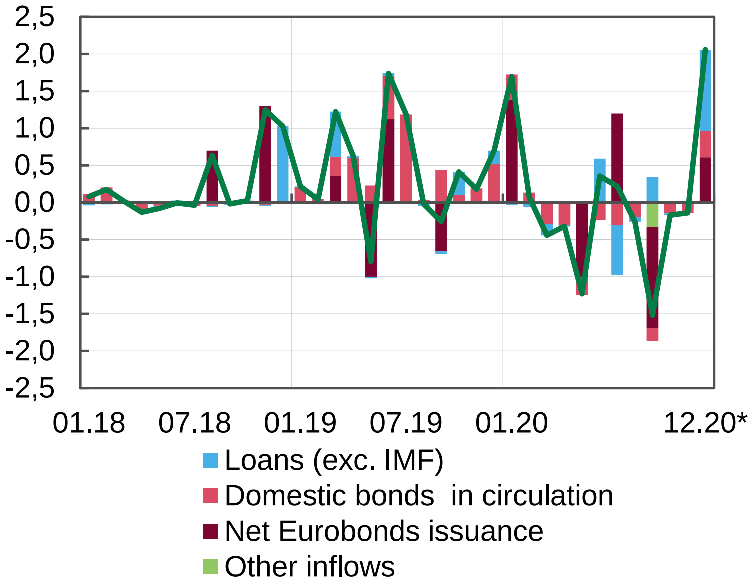


* Estimated data for December.
Source: NBU staff estimates.

- The merchandise trade deficit narrowed significantly due to a sharp reduction in imports of goods, while the favorable price environment ensured the resilience of exports
- The halt in tourism led to a significant drop in imports of travel services, which, amid a further growth in IT-services exports, led to a widening of services trade surplus
- In addition, primary income surplus hit a record high: remittances increased despite the introduction of lockdowns, while losses of foreign-invested companies led to negative reinvested earnings

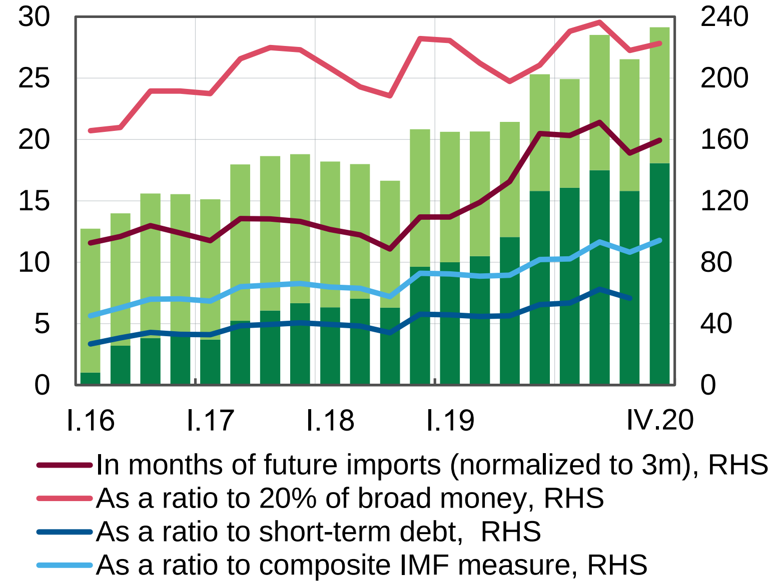
Public sector saw significant capital inflows by the end of the year. Reserves reached 8-year maximum

Public sector: net financial liabilities, USD bn



Source: NBU.

International reserves and their adequacy criteria, USD bn

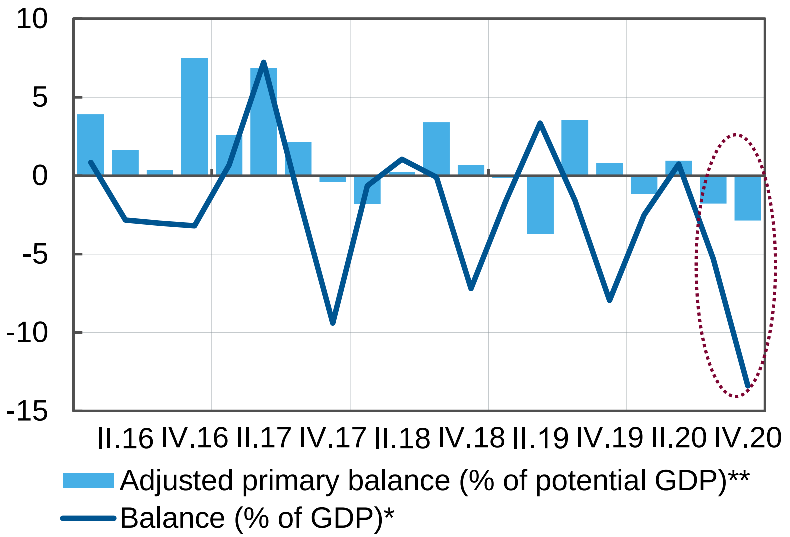


Source: NBU.

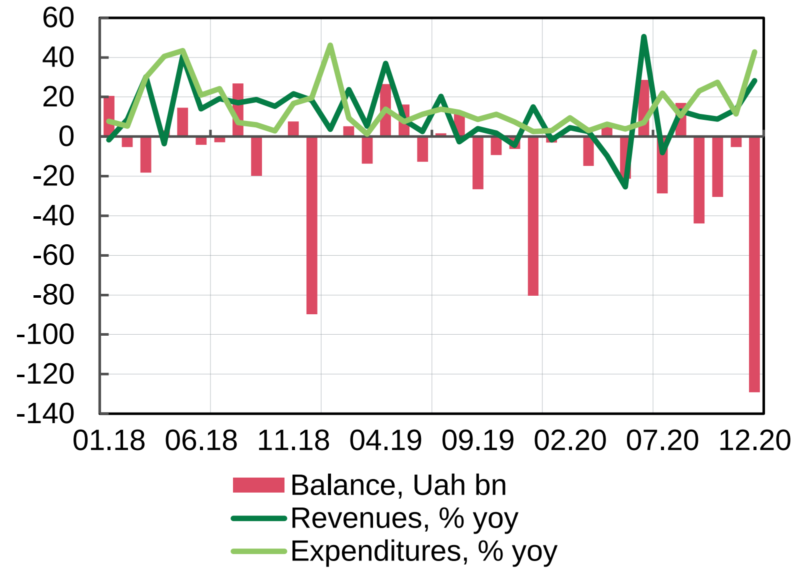
- After significant capital outflows in the previous periods, the public sector was able to attract financing in December primarily thanks to cooperation with IFIs and the placement of additional Eurobonds (USD 0.6 bn)
- At the same time, non-residents showed renewed interest in hryvnia domestic government debt securities (USD 0.35 bn in inflows)
- According to preliminary estimates, the overall balance of payments recorded a significant surplus in December, and international reserves increased to an 8-year high (to USD 29.1 bn), covering 4.8 months of future imports

Fiscal policy eased further in Q4, especially at the end of the year, driven by sizable expenditures

Fiscal balance indicators



Main Consolidated budget figures



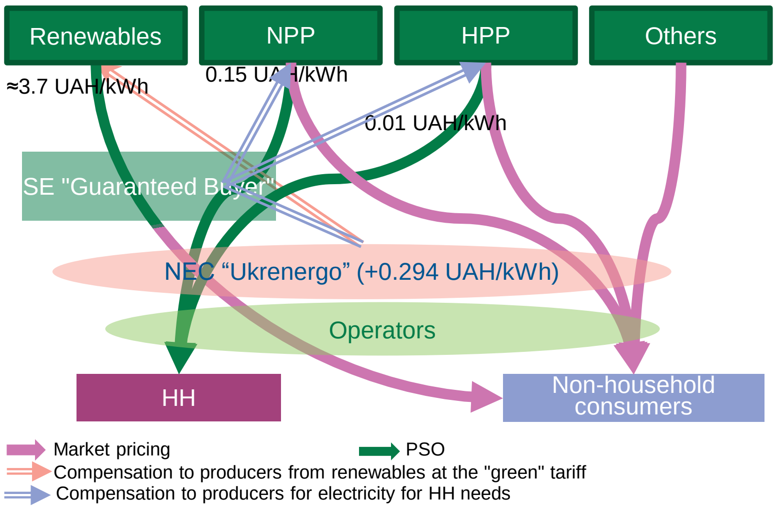
*Overall balance (% of GDP) is the consolidated budget balance, taking into account loans to the Pension Fund from the STA. ** Cyclically adjusted primary fiscal balance (CAPB) of the general government (% of potential GDP). CAPB is the difference between seasonally adjusted revenues, in the structure of which tax revenues are adjusted for cyclical changes in GDP, and seasonally adjusted primary expenditures.

Source: Treasury, NBU staff estimates.

- In Q4, the consolidated budget deficit reached almost UAH 165 bn and the negative cyclically-adjusted primary balance widened (indicating a loose policy)
- The catch-up in expenditures was seen in both priority and other areas, supporting economic recovery

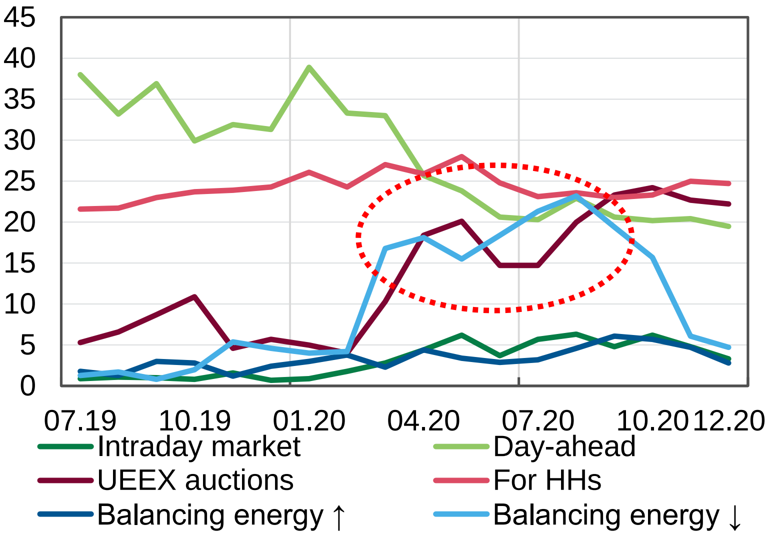
Box. Debts in the electricity market

Electricity market scheme (January 2021)



Source: Law "On the electricity market", Law "On alternative energy sources", resolutions of the Cabinet of Ministers, the National Energy Regulation Commission, NBU staff estimates.

Volumes of electricity sales ,% of production *



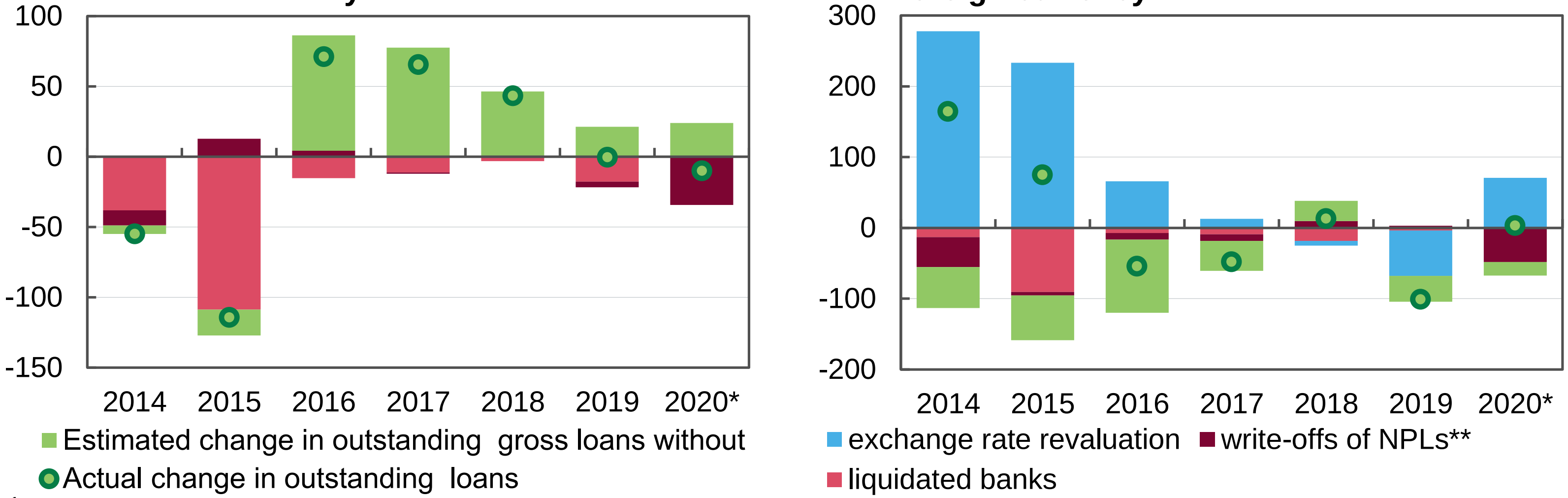
* The amount of sold electricity may exceed 100% of production.
Source: Ukrenergo, UEEX, Market Operator, Minenergo, NBU staff estimates.

- With the introduction of a new model of the electricity market, selected participants were given special obligations to serve the general public interest (PSO)
- However, due to the imperfection of the mechanism for compensation on the back of deteriorating economic conditions in early 2020, a significant debt has accumulated between market participants. Debt may increase further in 2021
- Debt may be potentially covered with government guarantees or government bonds. However this could lead to increase in the guaranteed or direct public debt
- Therefore, resolving the situation requires systemic solutions

Box. Loan balances: last years` development

Impact of statistical effects on outstanding loans (excluding other deposit corporations)[1], UAH bn

Domestic currency **Foreign currency**



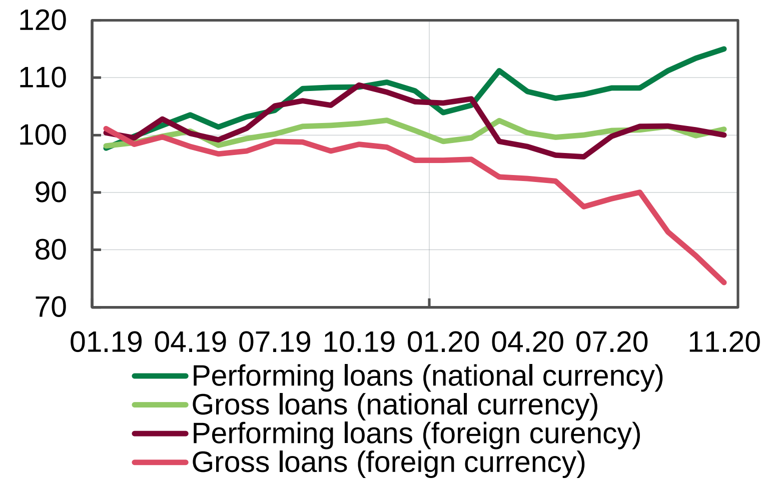
[1] Based on monetary statistics.

* Last data for November

** "+"return to balance/ "-"write-off from balance.

Source: NBU staff estimates.

Loans (excluding other deposit corporations) in national and foreign (in US dollar equivalent) currencies, 12.2018=100



- In 2020, at once for the first time during the crisis, banks supported the economy by increasing hryvnia lending
- However, monetary statistics point to a decline in loans for the second year in a row
- The reduction in gross loans resulted mainly from statistical effect: clean up the banking system and actively work out nonperforming loans

Macroeconomic forecast: summary

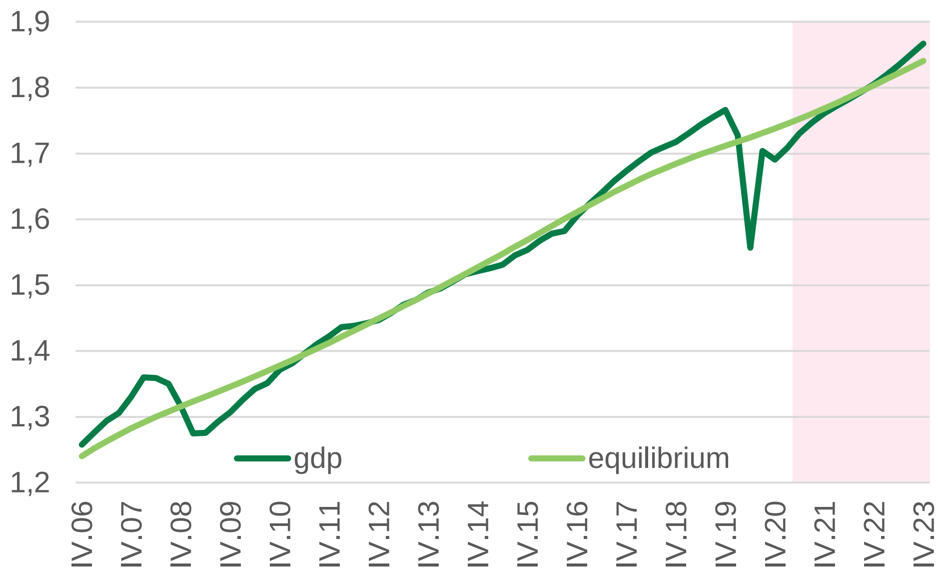
- **The world economy will recover** on the back of softer quarantine restrictions and monetary and fiscal stimuli
- **The recovery of the world economy will keep export prices high**
- **The economy will grow rapidly but** will remain below its equilibrium level
- **In 2021 CA will turn the to deficit** due to recovery of economic activity
- **Inflation will temporarily accelerate** on the back of food supply shock and demand recovery. From 2022 it will return to 5%
- **The rapid acceleration of inflation determines the faster response**, but its temporary nature determines a moderate response

	2019	2020	2021	2022	2023
Real GDP, change, %	3.2	-4.4 (-6.0)	4.2 (4.2)	3.8 (3.8)	4.0
CPI, y-o-y, % (eop)**	4.1	5.0 (4.1)	7.0 (6.5)	5.0 (5.0)	5.0
Core CPI, y-o-y, % (eop)**	3.9	4.5 (4.2)	5.9 (5.4)	3.8 (3.8)	3.8
Current account balance, *% GDP*	-2.7	4.4 (2.9)	-2.0 (-2.3)	-4.2 (-5.1)	-4.9
Gross reserves, USD bn	25.3	29.1 (29.1)	30.7 (29.5)	29.7 (28.8)	29.1

* in brackets – previous forecast (Inflation report, October 2020) ** end of period

The economies of OTP countries are recovering and reaching their potential on the back of QE

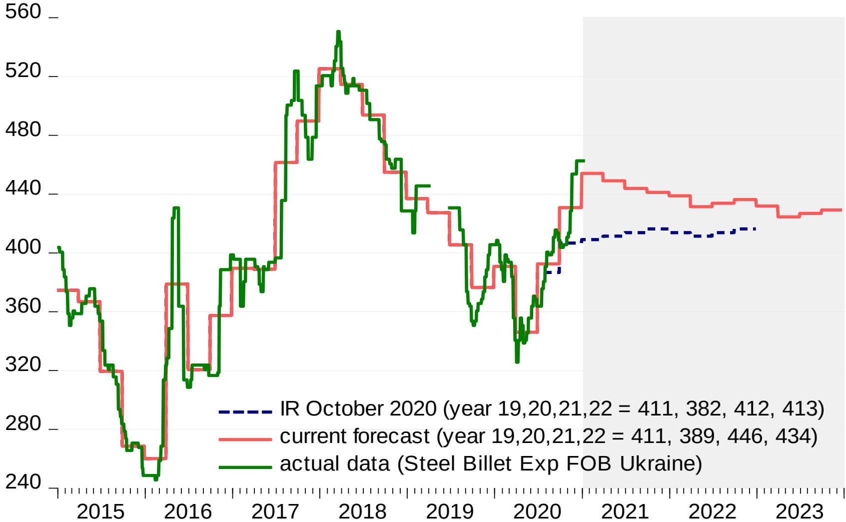
Real GDP of main trading partners, index



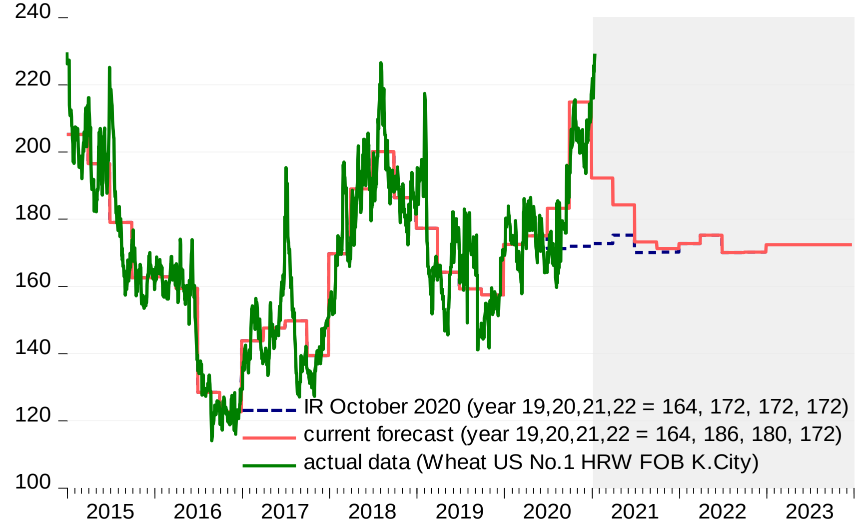
- The economy of many trading partners is rapidly recovering in the 3rd quarter of 2020
- Expectations of global growth in 2021 have improved given the positive business sentiment due to creation of vaccine
- The Fed and the ECB will continue a loose monetary policy
- World inflation will rise due to world economy recovery and QE programs

The recovery of the world economy will keep export prices high

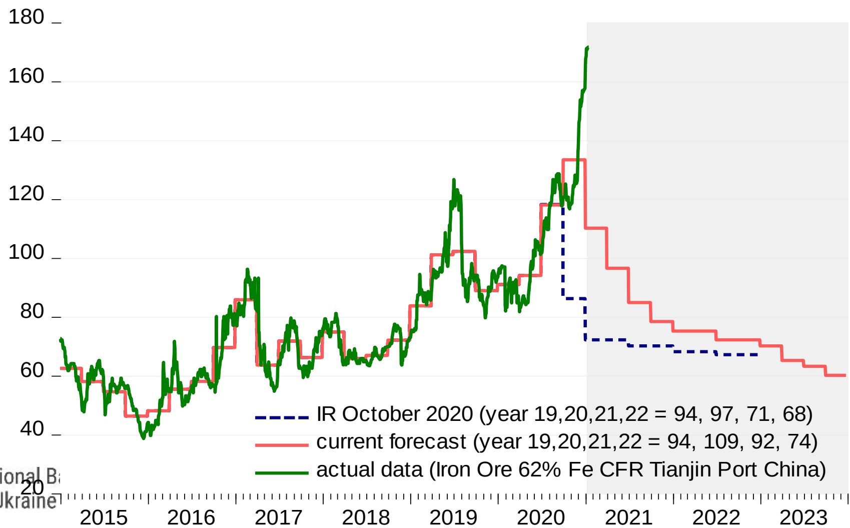
Steel World Price, USD/MT



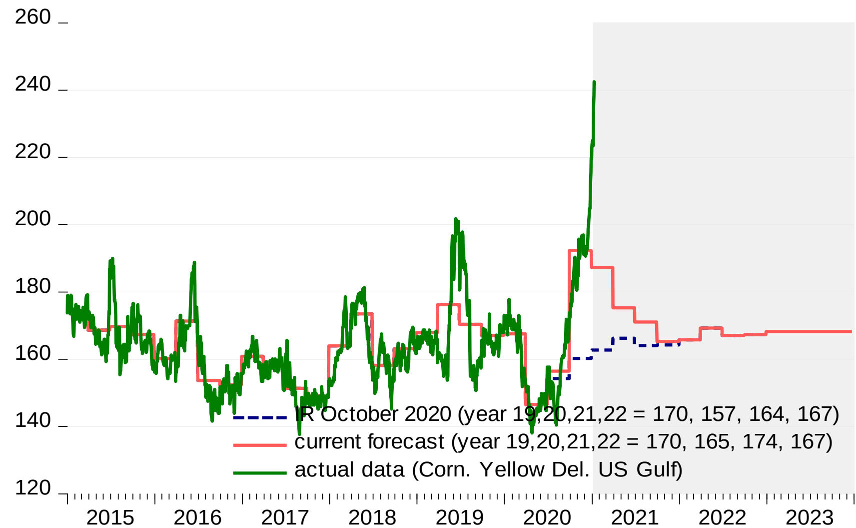
Wheat World Price, USD/MT



Iron Ore World Price, USD/MT

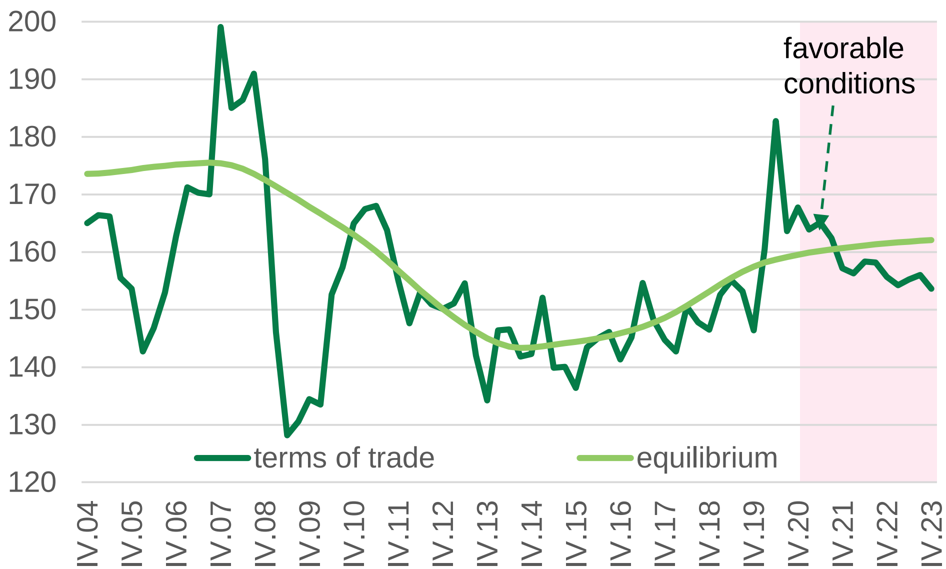


Maize World Price, USD/MT



High demand for Ukrainian exports leads to favorable trade conditions in 2021, which will gradually deteriorate afterwards

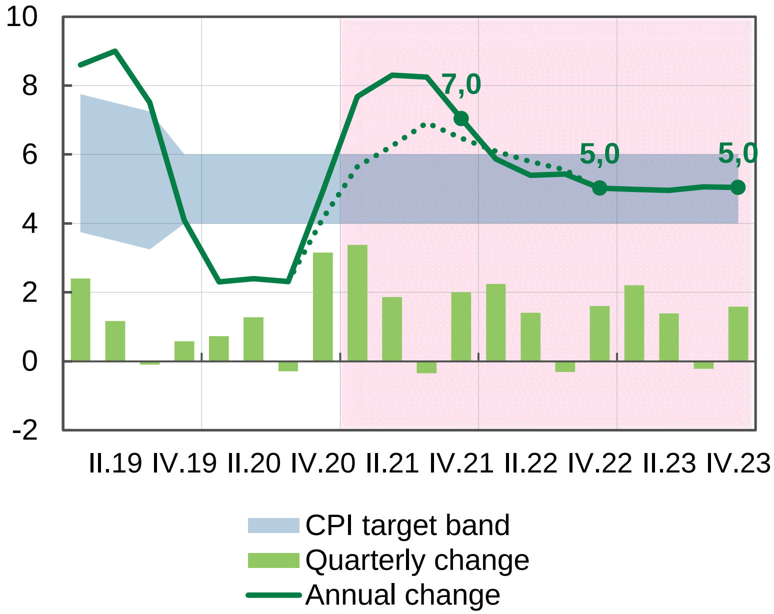
Terms of trade, index



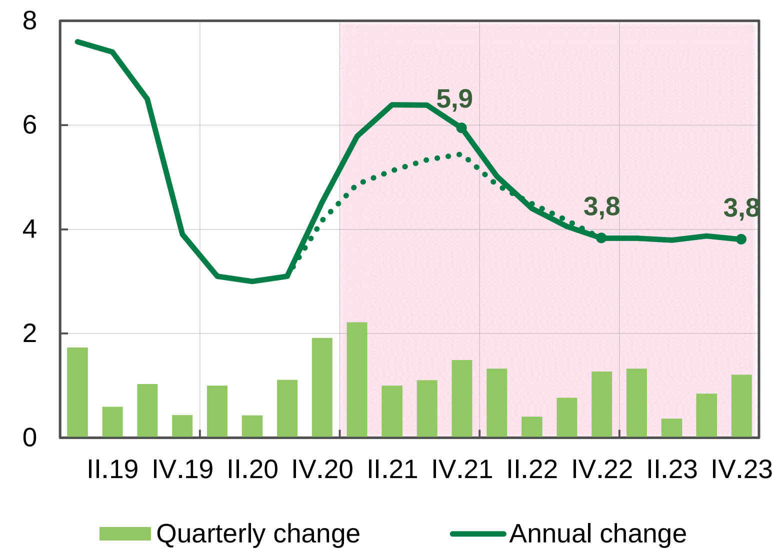
- Export prices are rising amid high demand
- Accelerated supply growth will gradually stabilize prices even on the back of high demand
- Energy prices will gradually rise, leading to deteriorating terms of trade

Inflation will temporarily accelerate on the back of supply shock, demand recovery, weaker ER and minimum wage hike

Headline inflation, %



Core inflation, %

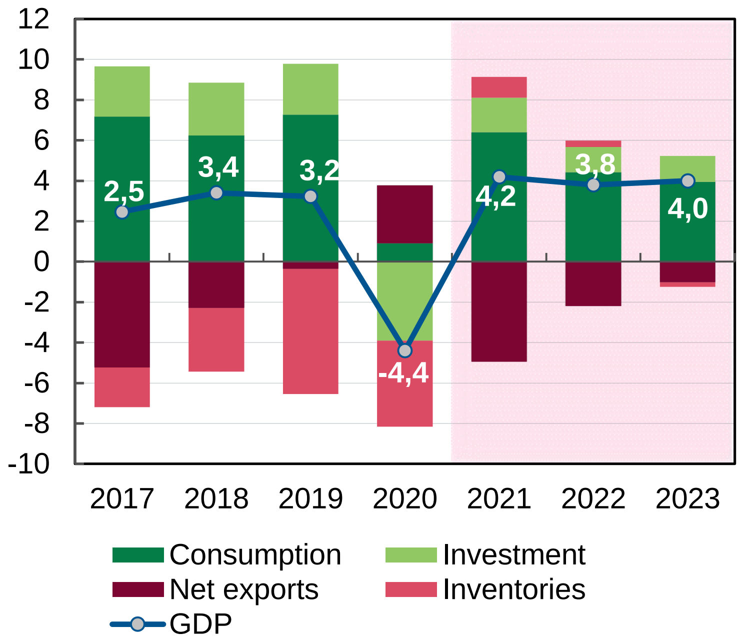


change, %	*weight, %*	2020		2021		2022		2023
CPI	***100.0***	**5.0**	***4.1***	**7.0**	***6.5***	**5.0**	***5.0***	**5.0**
Core CPI	*59.4*	4.5	*4.2*	5.9	*5.4*	3.8	*3.8*	3.8
Raw food	*19.4*	4.1	*2.6*	6.0	*5.3*	3.4	*3.3*	3.4
Admin	*18.0*	9.9	*7.9*	10.5	*10.1*	9.4	*9.0*	9.1
Fuel	*3.2*	-10.5	*-13.5*	13.2	*9.8*	6.7	*11.0*	6.0

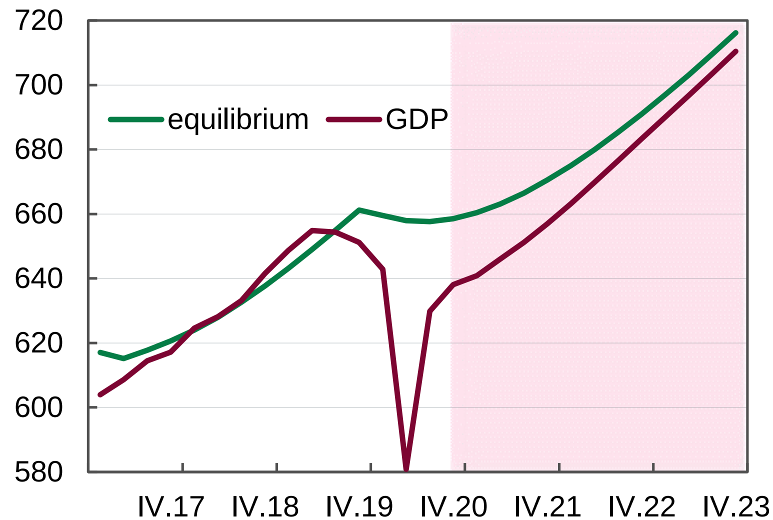
Food inflation will accelerate due to declining stocks of quality products (before the new harvest) and expensive animal feed

The economy will grow rapidly. GDP will still be below its equilibrium level, which will constrain the inflationary pressure

Real GDP and contributions, pp



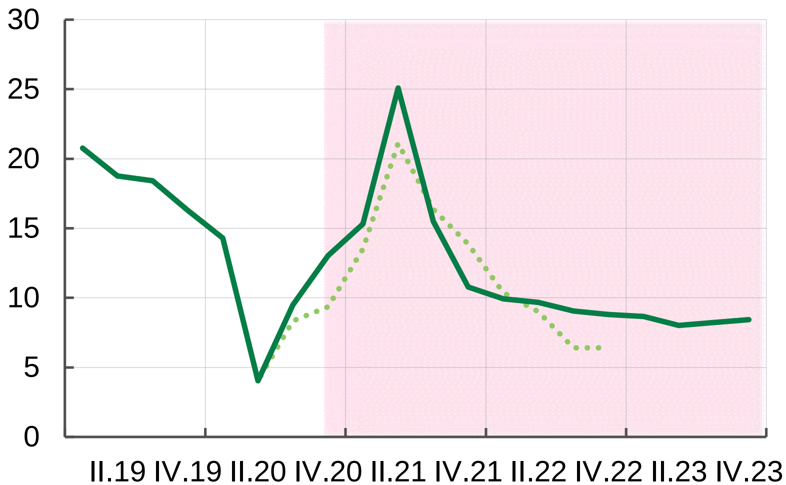
Real GDP and equilibrium, level (in 2016 prices)



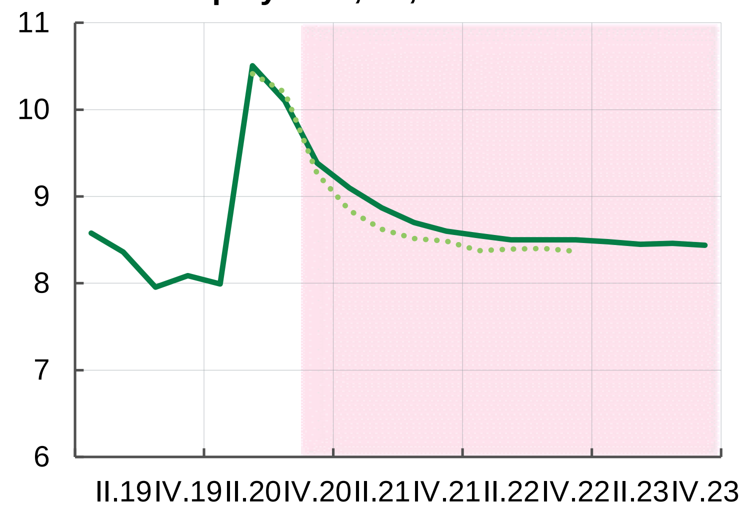
	share,%	2020	2021	2022	2023
GDP	100	**-4.4** (-6.0)	**4.2** (4.2)	**3.8** (3.8)	**4.0**
Consumption	87	1.0 (-1.0)	6.7 (6.1)	4.7 (3.8)	4.1
Private consumption	66	0.7 (-1.1)	7.7 (7.0)	5.3 (4.5)	4.5
Gross fixed capital formation	16	-21.7 (-16.4)	12.1 (14.0)	8.0 (7.7)	8.1
Exports of G&S	48	-5.7 (-3.1)	2.7 (2.7)	2.2 (2.0)	3.0
Imports of G&S	56	-10.6 (-10.4)	14.8 (14.6)	6.5 (6.5)	4.6

Wages and unemployment will be buoyed by minimum wage hike

Nominal wages, annual change, %



ILO unemployment, sa, %

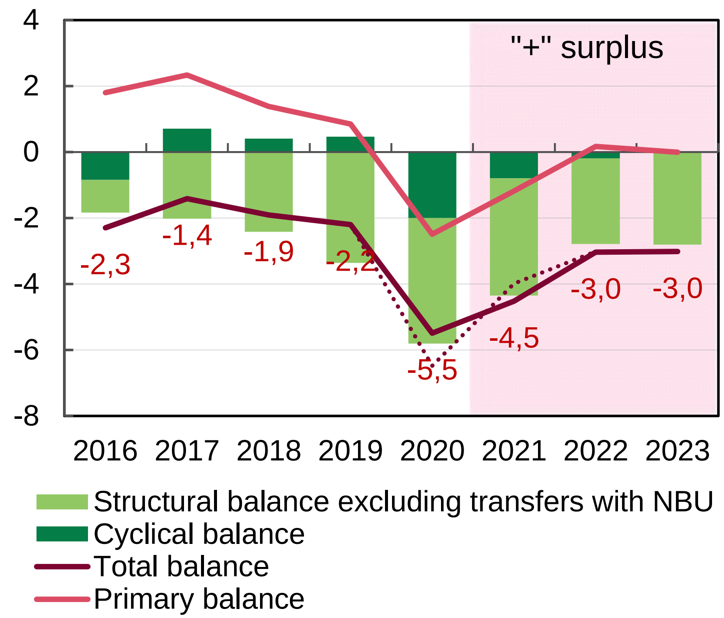


change, %	2020	2021	2022	2023
Real wages	**7.2**	**8.3**	**3.6**	**3.2**
- previous forecast	*6.2*	*9.5*	*2.1*	
Nominal wages	**10.2**	**16.6**	**9.3**	**8.3**
- previous forecast	*8.9*	*16.1*	*8.0*	

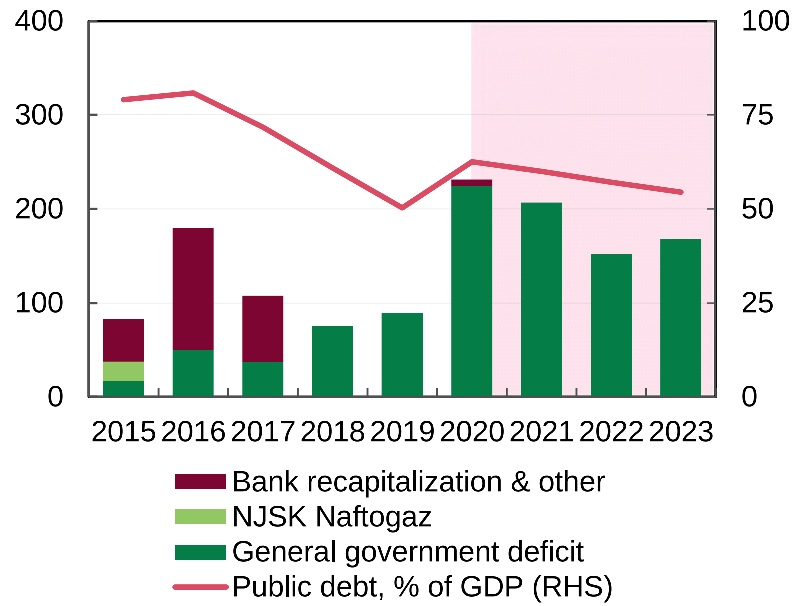
aop	2020	2021	2022	2023
Minimum wage, UAH	**4815**	**6042**	**6625**	**7200**
- previous forecast	*4815*	*6250*	*6700*	
change, %	***15.4***	***25.5***	***9.7***	***8.7***
- previous forecast	*15.4*	*29.8*	*7.2*	

Fiscal policy will be more restrained as the economy emerges from the crisis

Consolidated Budget Balance, % of GDP



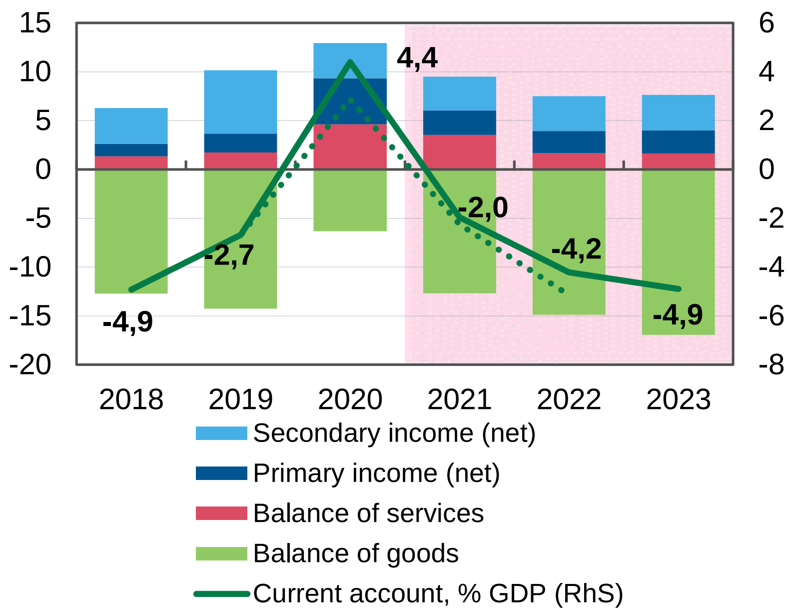
Public sector deficit, UAH bn, and public debt-to-GDP ratio, %



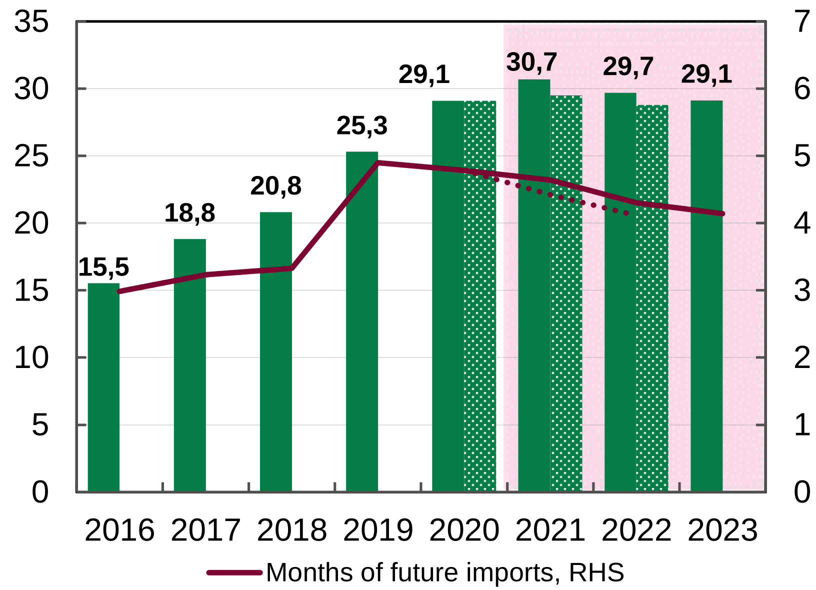
Public debt-to-GDP ratio will gradually decrease due to economic growth and prudent fiscal policy

The CA will turn to the deficit due to recovery of the economic activity. International reserves will hover at the level $29-$31 bn

Current Account Balance, USD bn



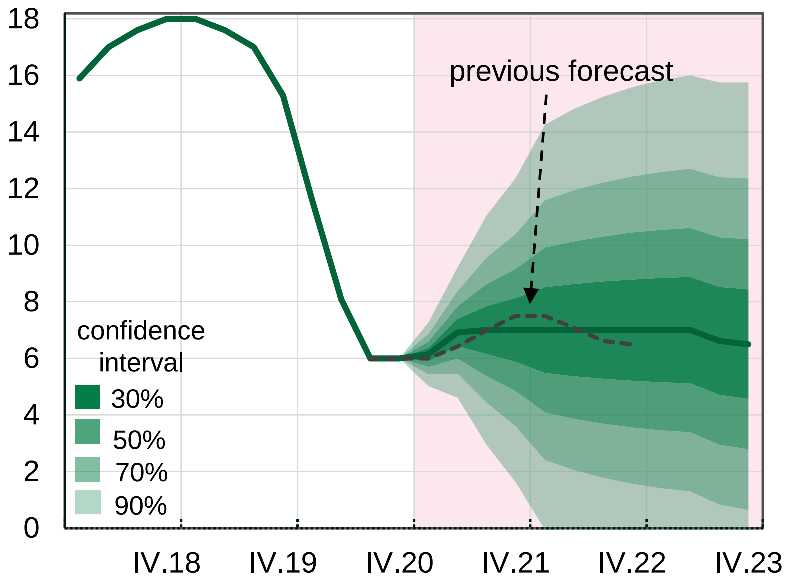
International Reserves, USD bn



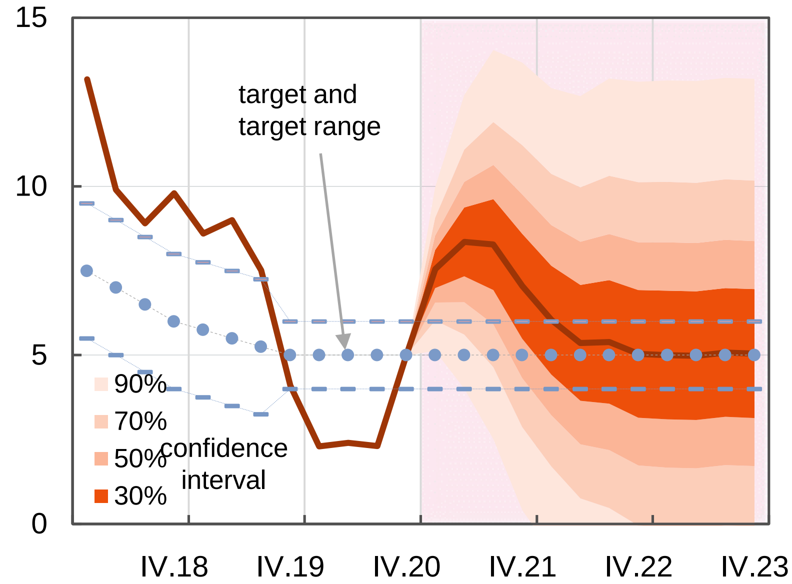
Main changes in CAB forecast in 2021-2022 compared with IR October	
Trade in goods	Terms of Trade: ↑ (2021)
	Volumes of exports: ↓agro (2021), ↑agro (2022), ↑metals Volumes of gas imports ↑(2021), agricultural imports ↑
Exports of services	↑ Gas transit (2021)

Despite raising the key rate, the policy will remain loose

Key rate, %



CPI, annual change, %



- An earlier increase in the key rate is due to the realization of pro-inflationary risks and faster recovery of consumer demand
- Higher export prices will curb inflationary pressures through the exchange rate channel, and therefore the rate increase in 2021 will be more moderate than previously expected. However, the rate will remain at 7% longer due to the effects of higher world inflation.

Risks

Influence on baseline	Risk probability: Low <15%	Middle 15%–25%	High 25%–50%
Weak	Higher volatility of global food prices		
Moderate	Lower harvest	Fiscal and quasi-fiscal risks	
Strong	Escalation of the military conflict in eastern Ukraine	Suspension of the cooperation with IMF The faster recovery of the world economy High capital inflow	Longer-lasting coronavirus pandemic