



National Bank  
of Ukraine

# Inflation report (April 2020)

Kyiv

5 May 2020



# Monetary policy decision: summary

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## **In April, the NBU Board decided to cut the key policy rate to 8%**

- The continued monetary easing aims to support the economy during the period of pandemic and quarantine
- Inflation will accelerate moderately in the coming months, to reach 6% at the end of 2020, thus remaining within the target range. Inflation will reach 5% target in 2021

## **The NBU expects that the key policy rate to be reduced further, to 7%**

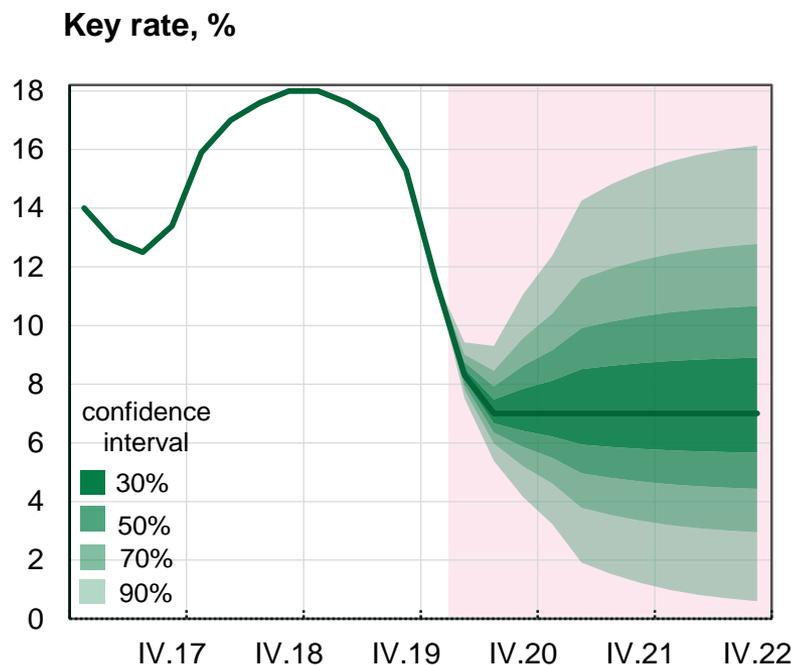
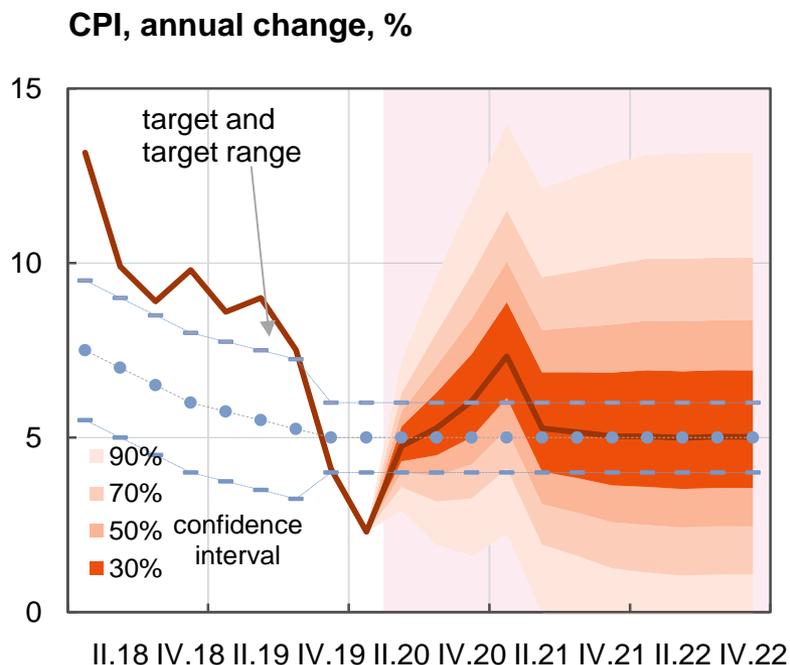
The NBU leaves open the possibility of a greater easing in monetary policy if a fall in consumer demand due to quarantine measures and weaker business activity put stronger downward pressure on inflation than is currently expected

## **Further cooperation with the IMF remains the main assumption of macroeconomic forecast**

### **Key risks:**

- a delay in entering into a new agreement with the IMF, and threats to macrofinancial stability
- longer-lasting novel coronavirus pandemic and, consequently, longer-lasting quarantine measures being required to overcome the outbreak
- escalation of the military conflict in eastern Ukraine
- a drop in the harvest of grain, fruit and vegetable crops in the wake of unfavorable weather
- the higher volatility of global food prices, driven by global climate change and the risk of stronger protectionist measures

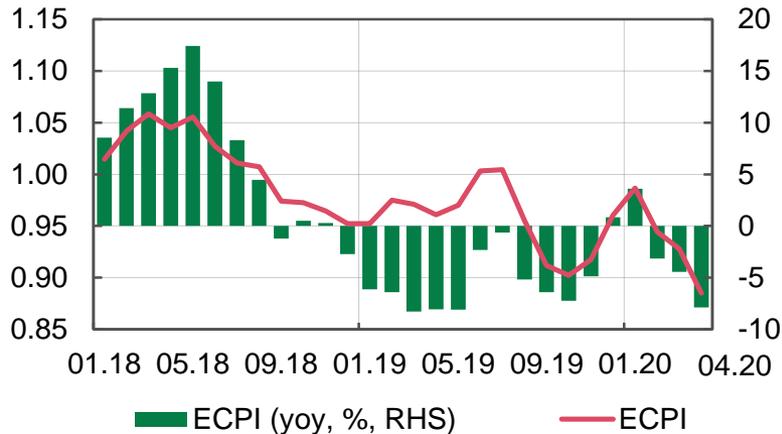
# MP easing to support economy. Inflation will be contained: ER weakening will be offset by fall in demand and cheaper energy



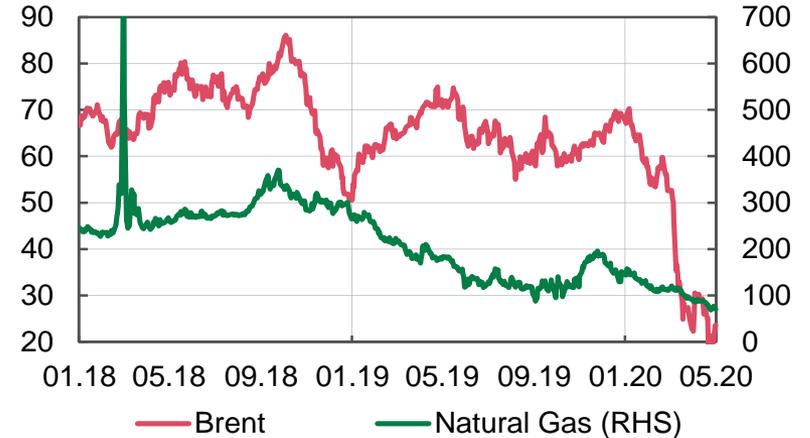
The forecast is given in a fan chart. This chart type is used to illustrate uncertainty with regard to predicted future values. For instance, the probability that the indicator will be in the range of the darkest shaded area in the chart (around the central line) is 30%. The same applies to other chart areas, implying the 90% probability that the indicator will be in the range of the lightest shaded area.

# Weak global demand pressured commodity prices to decrease despite recovering China and some supply side support

External Commodity Price Index (ECPI), Dec 2004=1



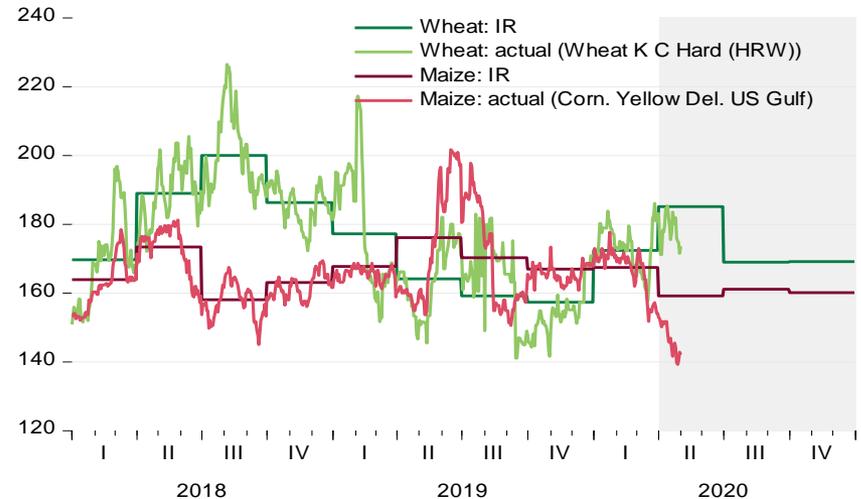
World crude oil prices (USD/bbl) and German Hub natural gas prices (USD/kcm)



Steel World Price, USD/MT

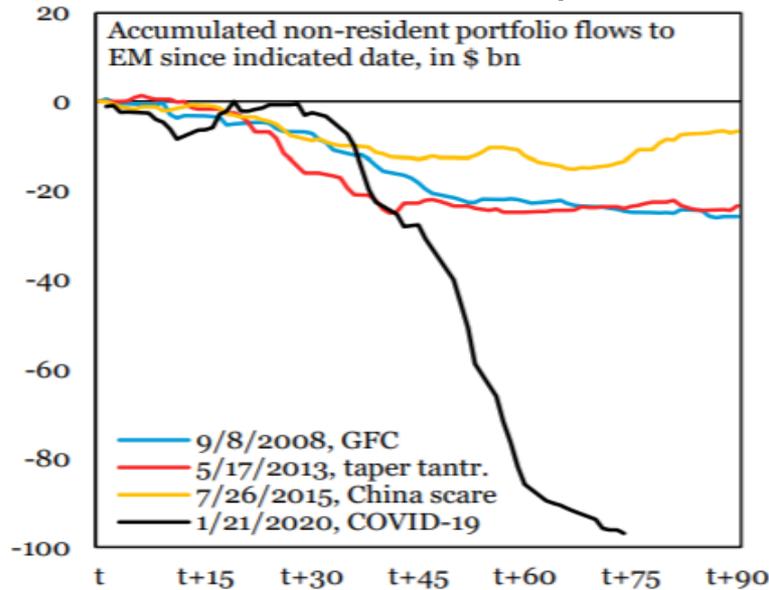


Wheat and Maize World Prices, USD/MT



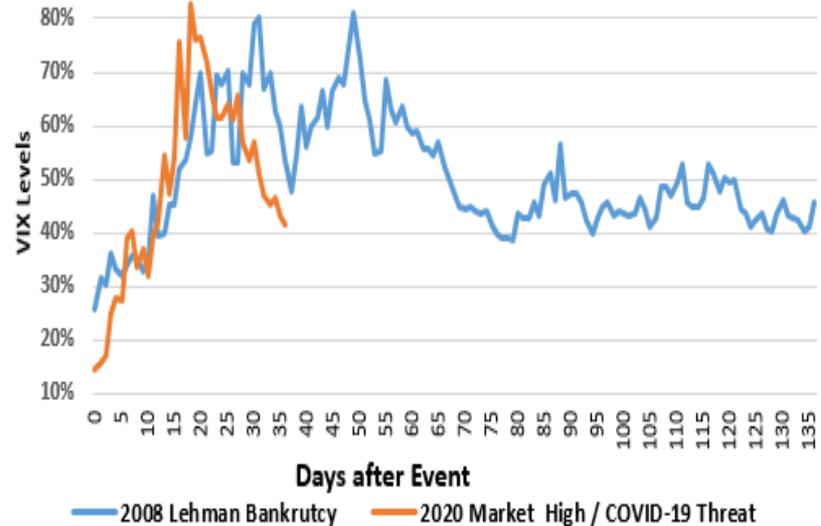
# Foreign capital flows to EM are forecast to decline 53% in 2020 due to Covid-19 and lower commodity prices (IIF)

Portfolio outflows in selected crisis episodes



Source: IIF daily portfolio flows tracker

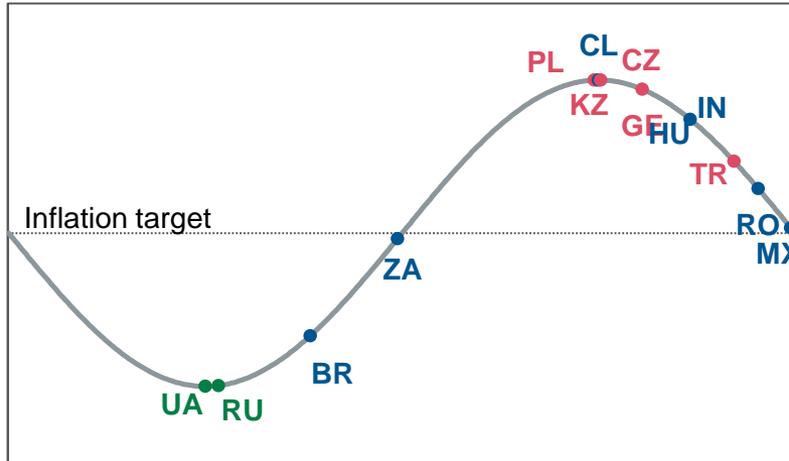
2008 vs 2020 Crisis by S&P Volatility (VIX)



Source: Bloomberg

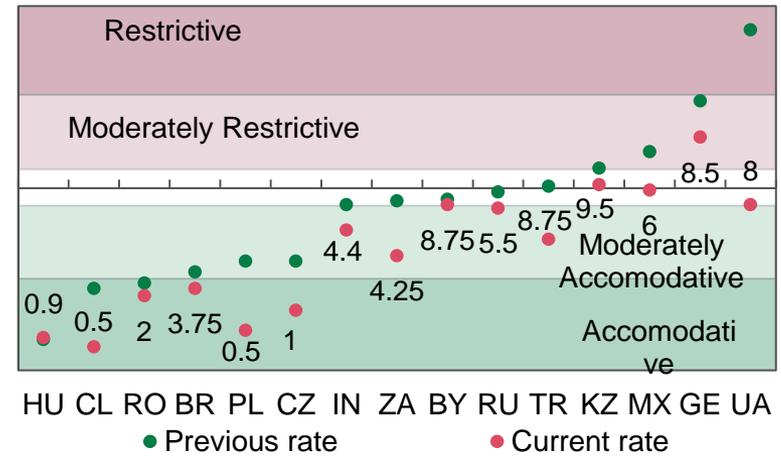
# Increasingly alike leading CBs? EM central banks are easing MP using conventional and unconventional measures as well

Position of Monthly Year-over-Year Inflation Given Forecasted Dynamics over Next 12 Months Relatively to Central Bank's Inflation Target in EM Countries



\* Countries with inflation below CB's target range are in green, within target range – in blue, above target range – in pink. Source: national statistical agencies, official web-pages of central banks, NBU staff estimates.

Key Policy Rates in Selected EM Countries, % as of end-April



\* Year-to-date change. NBU estimates based on studies of respective central banks and other researchers on estimates of the neutral rate. Source: official web-pages of central banks, Consensus Economics, NBU staff estimates.

- The majority of EM central banks eased monetary policy in March to support economic growth in spite of rapid depreciation of domestic currencies
- The central banks of Poland, South Africa, Hungary, and Turkey have started buying bonds on secondary markets, like most leading central banks, while the central banks of Brazil and the Czech Republic have asked for new laws to allow them to do so

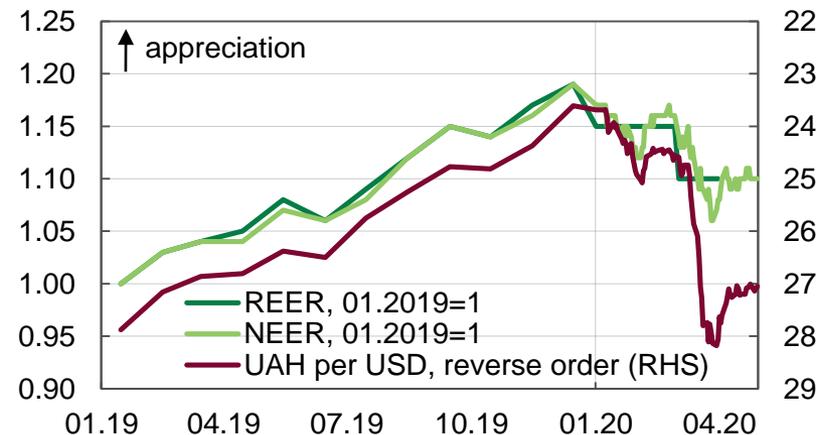
# In April, some improvement in market sentiments caused currencies of Ukraine's main trading partners to appreciate

Global equity benchmarks, 01 Jan 2019 = 100



Source: Refinitiv, Investing.

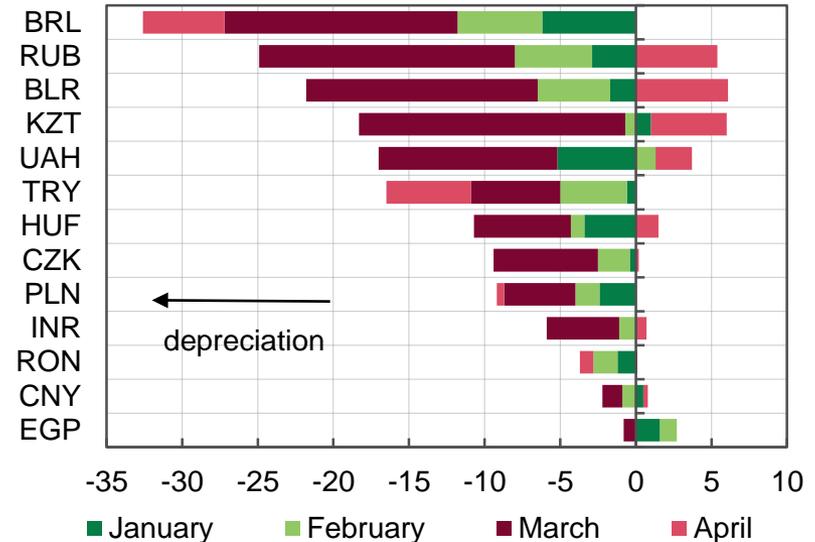
Hryvnia official rate against USD, REER and NEER indices, average\*



\* Monthly in 2019, daily NEER and UAH per USD since 2020, as of 29.04.2020.

Source: NBU's estimates.

Selected EM currencies vs USD, % change, eop

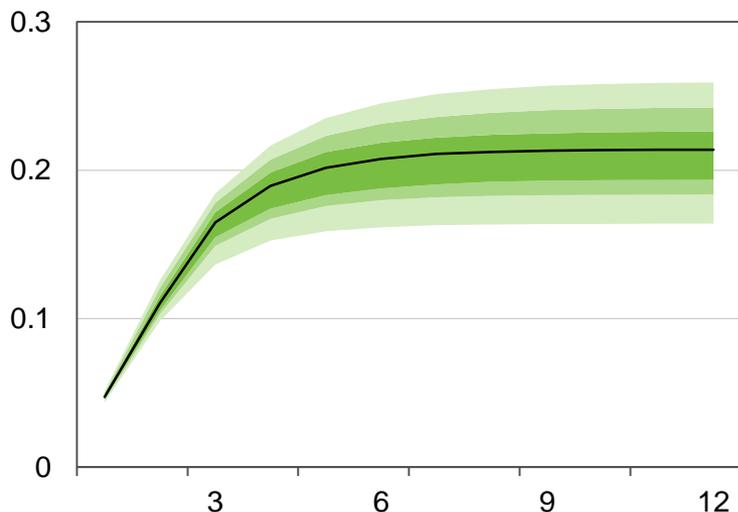


Source: Refinitiv Datastream, Bloomberg.

- Markets positively reacted to the first signs of coronavirus pandemic nearing its peak in Europe and the U.S., as well as plans of several countries (Austria, Denmark) to open up gradually after the Easter holidays
- As a result, the appreciation of the hryvnia NEER has slowed down

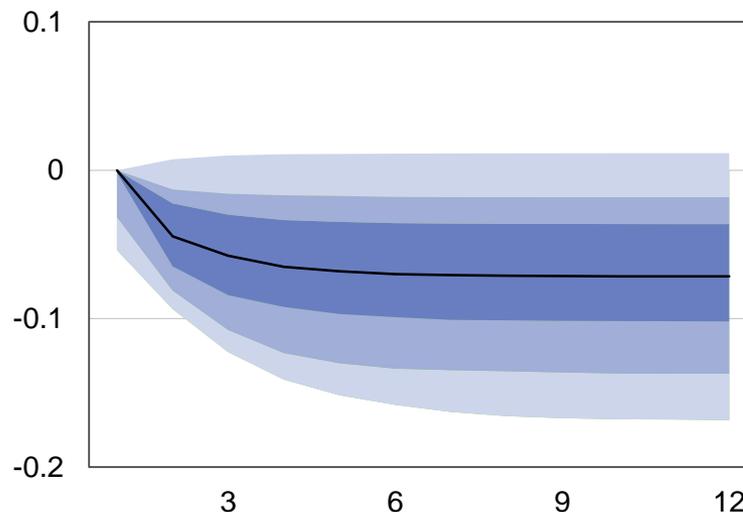
## Box. ER pass-through is asymmetric, fast and nonlinear

Response of inflation to 1% depreciation, %



Source: NBU staff estimates.

Response of inflation to 1% appreciation, %

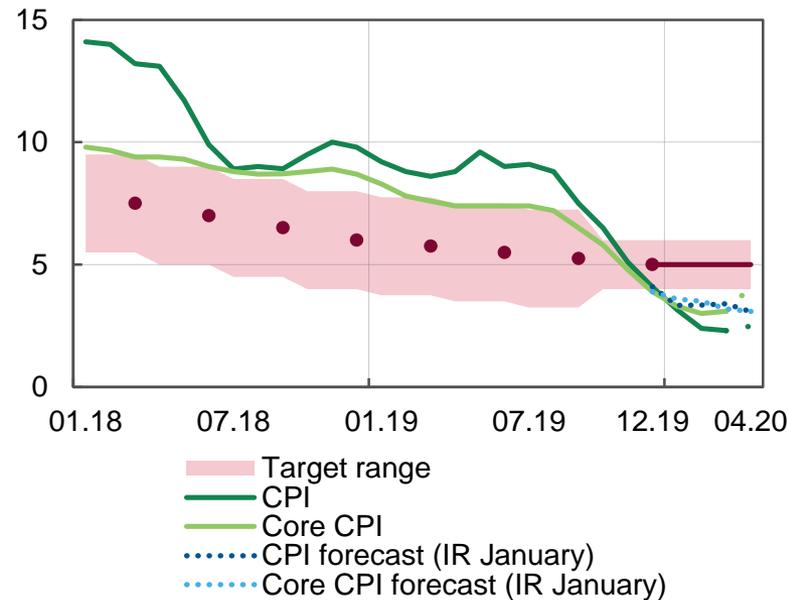


Source: NBU staff estimates.

- Pass-through is:
  - **asymmetric:** 0.22% during depreciation, 0.08% during appreciation
  - **quite fast:** most effects occur in 2 quarters
  - **nonlinear:** in case of strong depreciation pass-through rises to 0.45-0.5%
- Appreciation confidence bands are wider due to short experience of appreciation

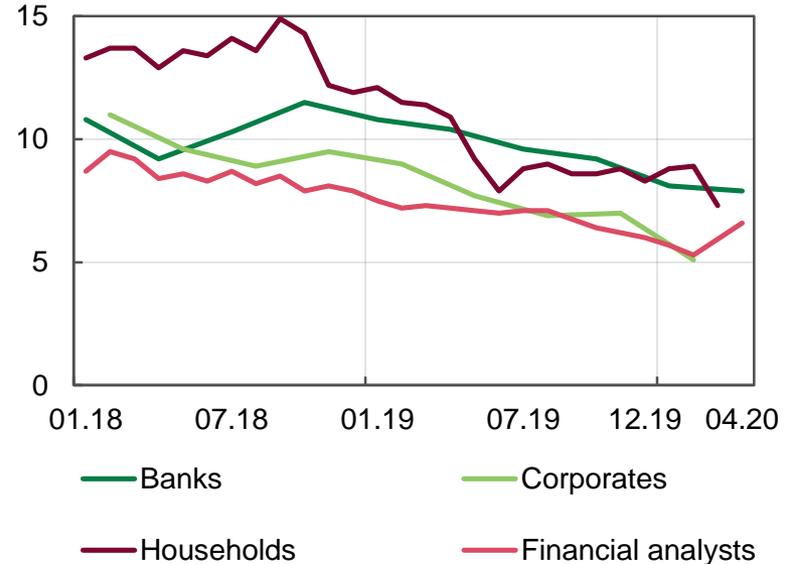
# Consumer inflation has bottomed out in March. In April, however, it will remain much below the 5% ± 1 pp target range

Headline and Core Inflation, % yoy



Dotted lines reflect April 2020 nowcast.  
Source: SSSU, NBU.

Inflation Expectations for the Next 12 Months, %

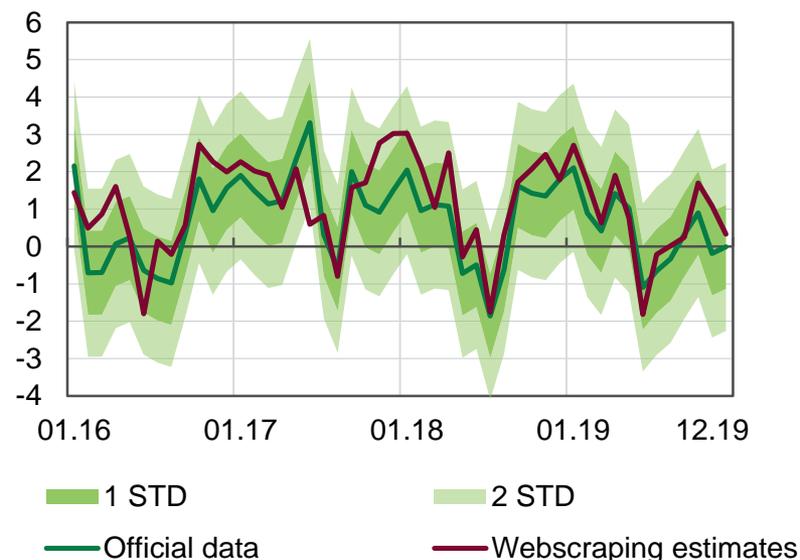


Source: NBU, GfK Ukraine, Info Sapiens surveys.

- Disinflation in Q1 was driven by lower energy prices, a greater supply of raw foods amid warm weather, and the continued pass-through of last year's appreciation of the hryvnia. These factors outweighed the upward pressure on prices from rush in demand due to coronavirus pandemic
- Inflation expectations showed mixed performance, reflecting different survey periods
- According to nowcast, inflation sped up slightly but will remain below 3% yoy in April. Moderate inflation acceleration can be attributed to faded out rush in demand and strengthening hryvnia since end-March

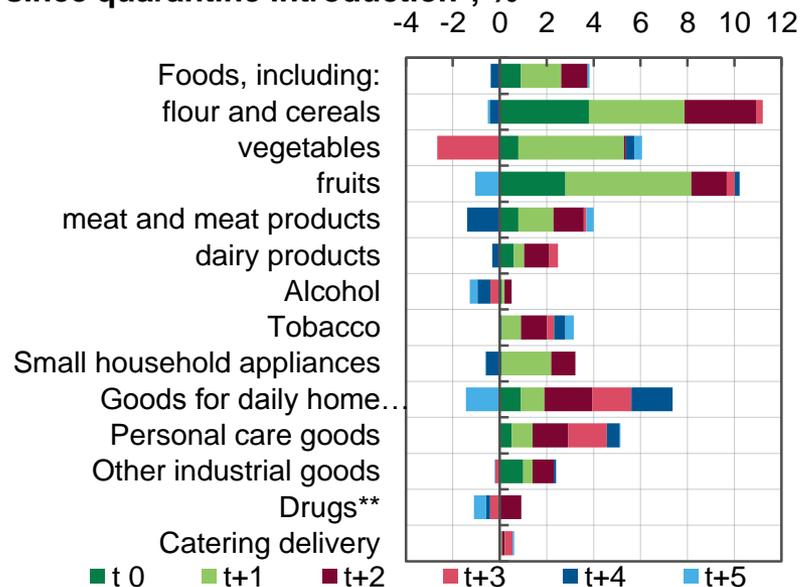
## Box. Quarantine restrictions spurred a rush in demand, pressuring prices upwards; the shock, however, was transitory

Changes in food prices,% mom



Source: online supermarkets, SSSU, NBU staff estimates.

Weekly dynamics (w/w) of prices for selected goods since quarantine introduction\*, %



\* Week t 0 - period from March 13 to 19, t + 1 - from March 20 to 26, t + 2 - from March 27 to April 2, t + 3 - from April 3 to 9, t + 4 - from April 10 to 16, t + 5 - from April 17 to 23.

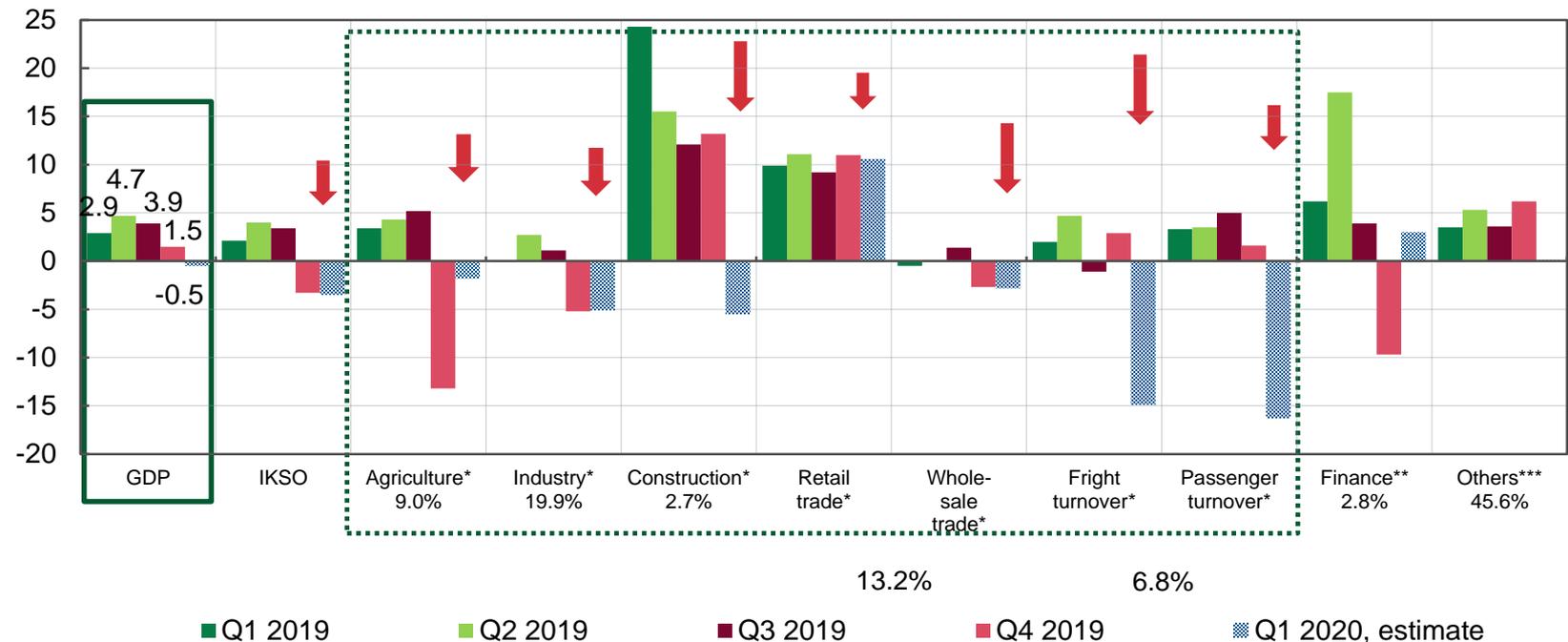
\*\* Data is only available from March 26.

Source: online supermarkets, delivery services, NBU staff estimates.

- Weekly price dynamics were analyzed using webscraping, which has been used by the NBU as an additional method of inflation analysis and nowcast of inflation for several years
- Amid a rush in demand after quarantine was introduced prices for some food and individual personal care goods rose sharply. Yet by the end of March, the shock started to fade
- Inflation for April was estimated at below 3% yoy

# In Q1 2020, real GDP growth is forecast to decline due to lower gas transit, weak industrial activity and quarantine effects on services

Output and NBU's expectations in different types of activities (share in GDP in 2019, %) in 2020, % yoy, at the 2016 constant prices



\* Cumulative over the period January-March 2020.

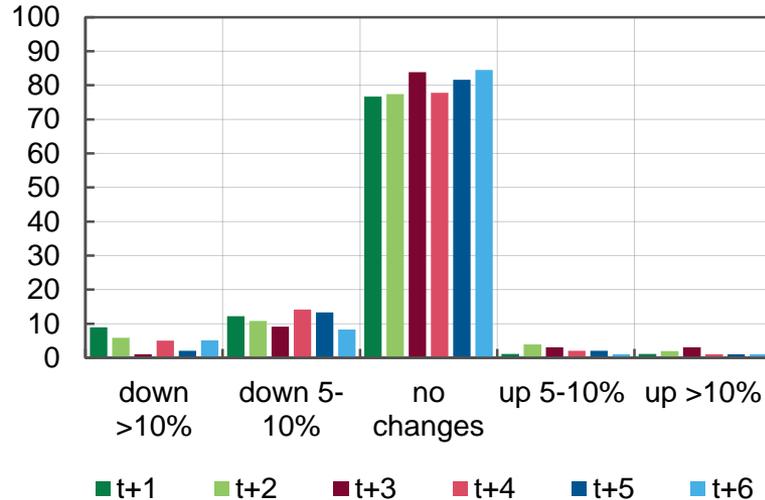
\*\* GVA for finance, Q1 2020 – NBU staff estimates.

\*\*\* GVA for others types of activities (accommodation and food service activities; information and communication; real estate activities; professional, scientific and technical activities; administrative and support service activities; public administration and defense; education; human health and social work activities; arts, entertainment and recreation; other service activities; taxes on products; subsidies on products).

Source: SSSU, NBU staff estimates.

## Box. NBU expects unemployment to reach 12% sa amid weakening economic activity in Q2 2019

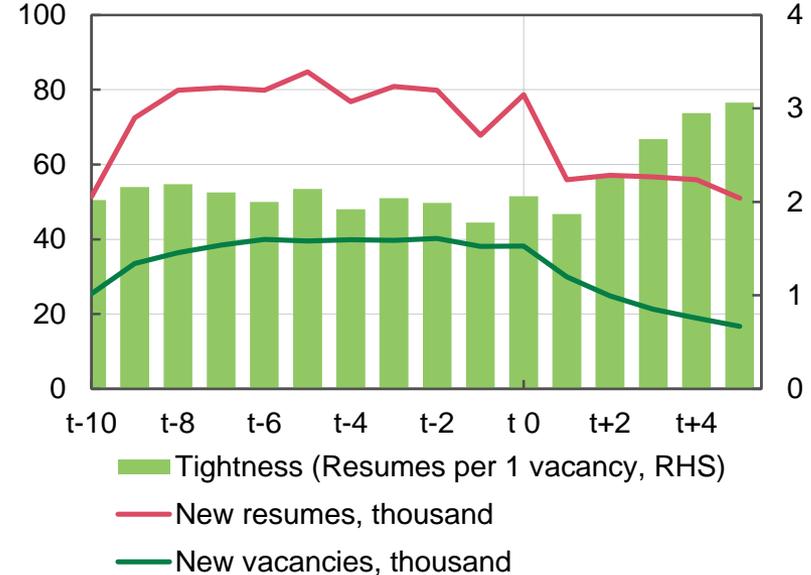
Expectations for changes in the number of staff in the next 4 weeks, % of answers\*



\* t 0 stands for the start of quarantine (11.03-17.03). t+1, t+2, etc. stand for the weeks that follow.

Source: Express business survey of Ukraine (NBU).

Work.ua new vacancies and resumes and labor market tightness

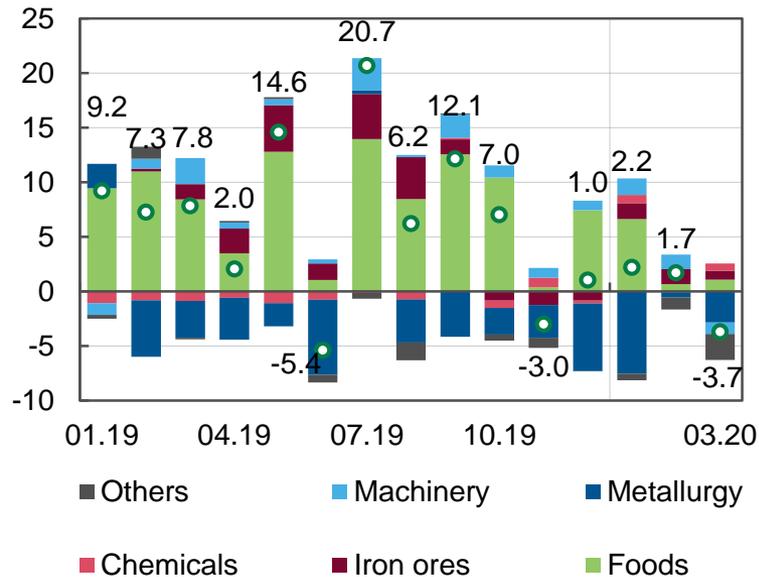


Source: work.ua, NBU staff estimates.

- Amid quarantine, enterprises mostly intended to keep current employees (80% of enterprises) while updating their hiring plans. The number of vacancies has halved over the last 5 weeks. The number of resumes has gone down, too, due to self-quarantine measures
- According to poll results, conducted at the end of March, 4% to 10% of employees lost their jobs. Some of them will become unemployed; others will be able to find new jobs in the sectors facing increased demand or will leave the labor force
- Accordingly, NBU expects unemployment to rise in Q2 2020 to 12%, sa, amid weakening economic activity

# According to March data, COVID-19 had a relatively limited impact on exports...

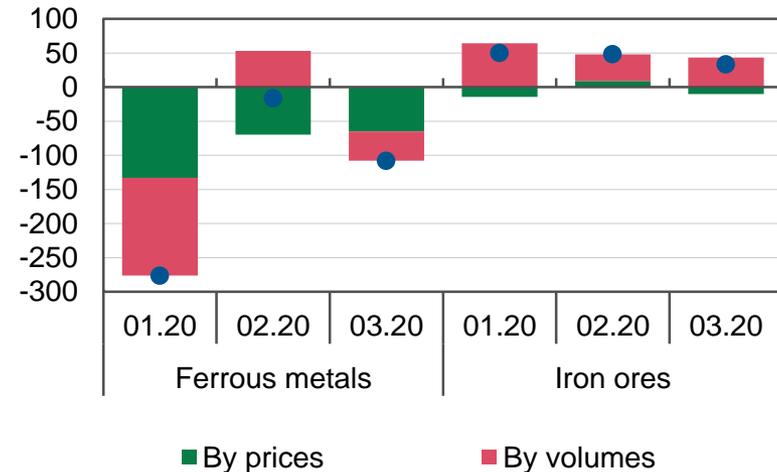
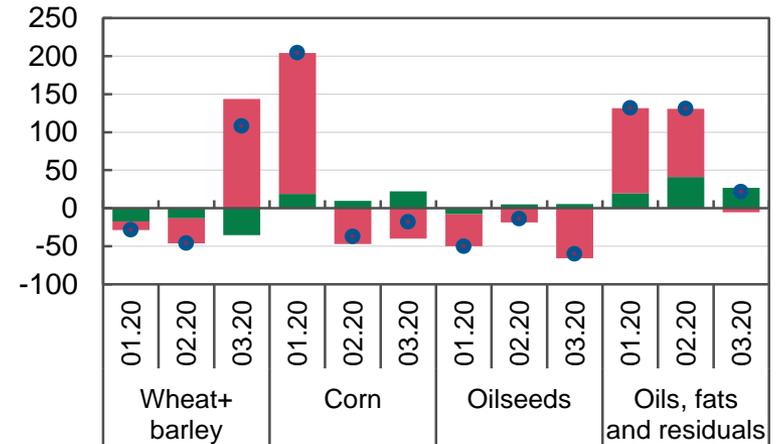
Contributions to annual change in exports, pp



Source: NBU.

- Exports fell (4% yoy) in March but mainly due to high comparison base for machinery (-30% yoy amid one-time shipments of engines in March-19)
- A rush in food demand by select countries due to fears of trade restrictions amid COVID-19 outbreak drove wheat exports, offsetting a decrease in oilseeds exports
- Metallurgy exports continued to decrease amid low prices and a decline in global demand

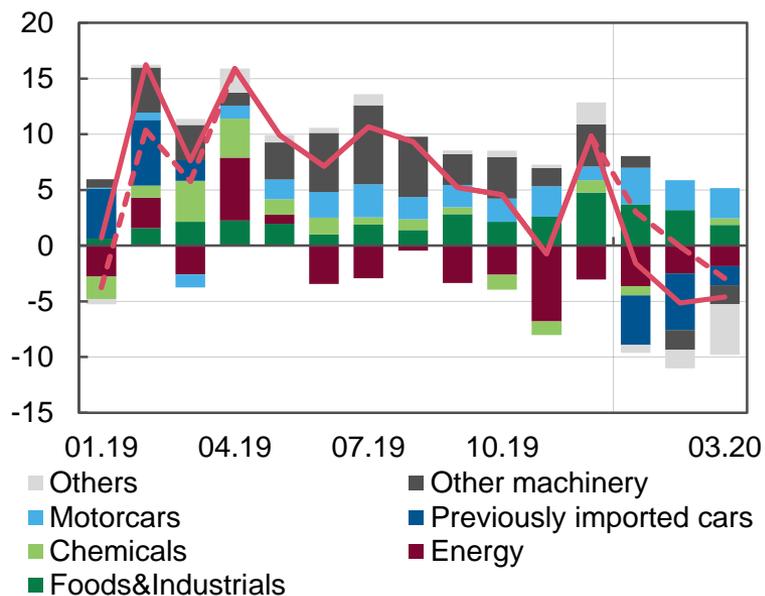
Annual change in export volumes and prices of selected goods, USD bn



Source: SCSU, NBU staff estimates.

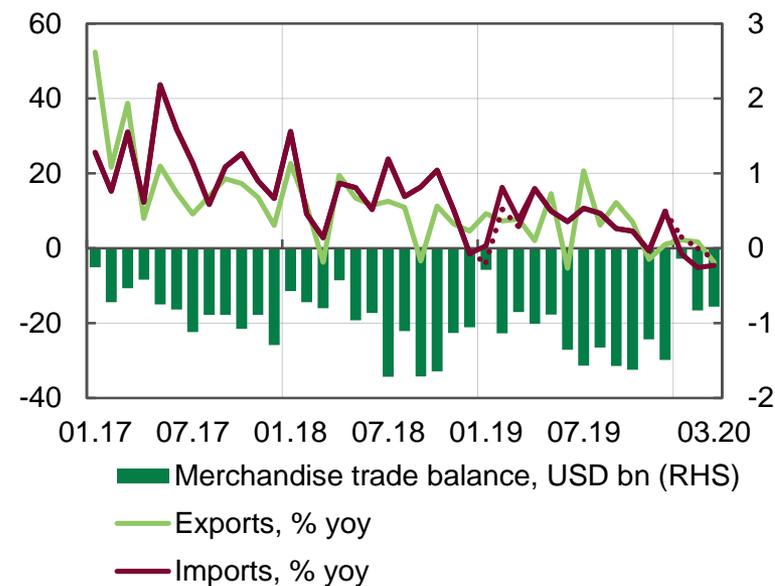
# ... but pushed down imports of goods and services

Contributions to annual change in imports, pp



\* Dotted line – w/o customs clearance of prev. imported cars  
Source: NBU.

Merchandise exports and imports\*

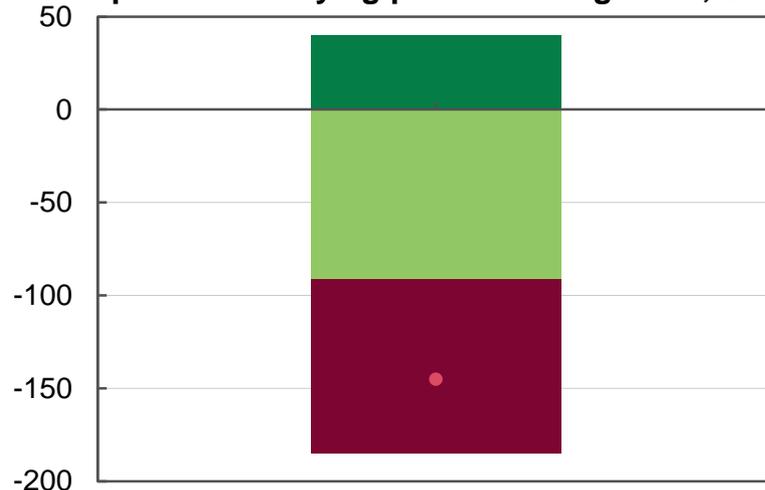


\* Dotted line – w/o customs clearance of prev. imported cars  
Source: NBU.

- In Q1, imports growth stalled (excluding ex-used cars imported last year) due to energy imports decline and low industrials and machinery purchases amid COVID-19
- In Q1, the merchandise trade deficit narrowed compared to last year's level

## Box. The widening of the fiscal deficit will provide necessary support to economy, not hampering macrofinancial stability

Tax revenue losses/savings due to new macro vs assumptions underlying previous budget law, UAH bn

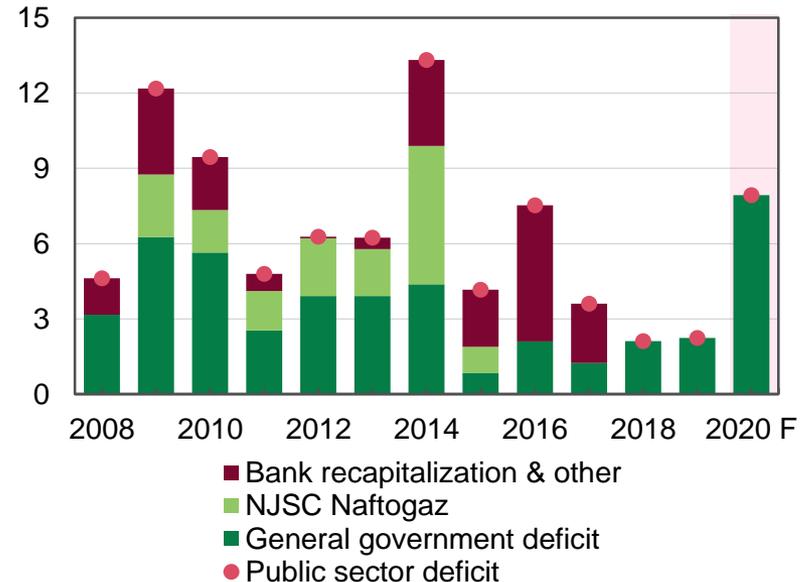


■ ER UAH/USD ■ Import volume ■ Other\* ● Total

\* Other – nominal GDP, wages, natural gas prices

Source: VRU, NBU staff estimates.

Broad public sector deficit, % GDP



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

- New budget reflected new macroeconomic reality – a decrease in GDP and increased expenditures due to Covid-19 disease
- Thanks to budget consolidation in the previous years, a sharp widening in the fiscal deficit – to 7.5% from 2.1% of GDP – will not undermine macrofinancial stability assuming a return to prudent fiscal policy in the following years
- Risks: likely somewhat larger losses for revenues if macro assumptions are not materialize, quite challenging financing if cooperation with the IMF is delayed

## Forecast summary

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- **Global demand will drop sharply** due to quarantine measures in Q2. We assume fast V-shape recovery afterwards
- Shrinking global demand and greater competition in commodity markets will keep **commodity prices low**
- **REER depreciation would be temporary** (on the back of high risk premium)
- **GDP drop by 5% (2020)** due to quarantine (Q2) and **global demand squeeze**. Fast V-shape rebound in H2 2020 is expected
- **Inflation hike will be contained** (6% in 2020): currency weakening will be offset by sharp contraction in demand and lower energy prices
- **CA deficit will be low in 2020** due to improved terms of trade, decline in imports and travel services (in 2021-2022 it widens due to stronger REER)
- **Key policy cut** to support economic activity during its recovery

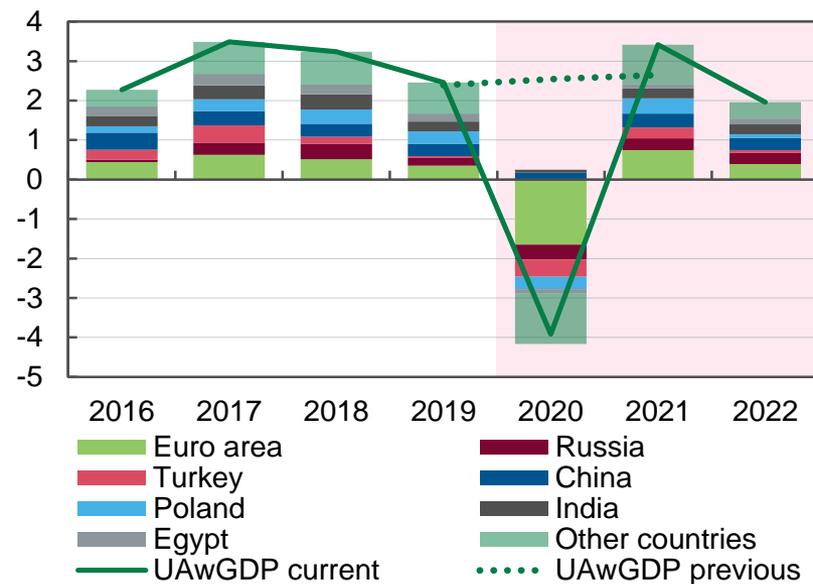
# Summary

	2019	2020 forecast	2021 forecast	2022 forecast
Real GDP, change, %	3.2 (3.3)	-5.0 (3.5)	4.3 (4.0)	4.0 (4.0)
Nominal GDP, UAH bn	3 975 (3 975)	3 970 (4 290)	4 360 (4 682)	4 760 (5 113)
CPI, y-o-y, %	4.1	6.0 (4.8)	5.0 (5.0)	5.0 (5.0)
Core CPI, y-o-y, %	3.9	6.8 (3.5)	3.8 (3.8)	3.8 (3.8)
Current account balance, USD bn	-1.3 [-4.2*]	-2.5 (-5.7)	-5.3 (-7.9)	-7.3 (-8.0)
<i>% GDP</i>	-0.9 [-2.8*]	-1.7 (-3.2)	-3.1 (-4.1)	-4.0 (-4.0)
BOP (overall), USD bn	6.0	-1.1 (3.2)	0.6 (1.6)	1.3 (0.4)
Gross reserves, USD bn	25.3	27.2 (29.3)	28.6 (31.6)	28.0 (32.3)

in ( ) – previous forecast (IR, January 2020)

# Global demand drops sharply due to quarantine measures in Q2 2020. However, we assume V-shape recovery afterwards

Contributions of Countries - Main Trading Partners of Ukraine to the Annual Change of UAwGDP, %



Source: NBU staff estimates.

	2020	2021
<b>UAwGDP</b>	<b>-3.9 (-6.5)*</b>	<b>3.4 (+0.8)</b>
Euro area	-5.5 (-6.8)	2.5 (+1.0)
USA	-3.5 (-5.2)	3.5 (+1.5)
China	3.5 (-2.7)	7.0 (+0.7)
Russia	-2.5 (-4.2)	2.0 (+0.3)
Turkey	-8.0 (-10.6)	5.0 (+2.0)
Poland	-4.0 (-7.0)	5.0 (+2.2)
Hungary	-5.5 (-8.4)	5.0 (+2.6)
Czech Republ	-6.0 (-8.5)	5.0 (+2.5)

\* change to the previous forecast in brackets

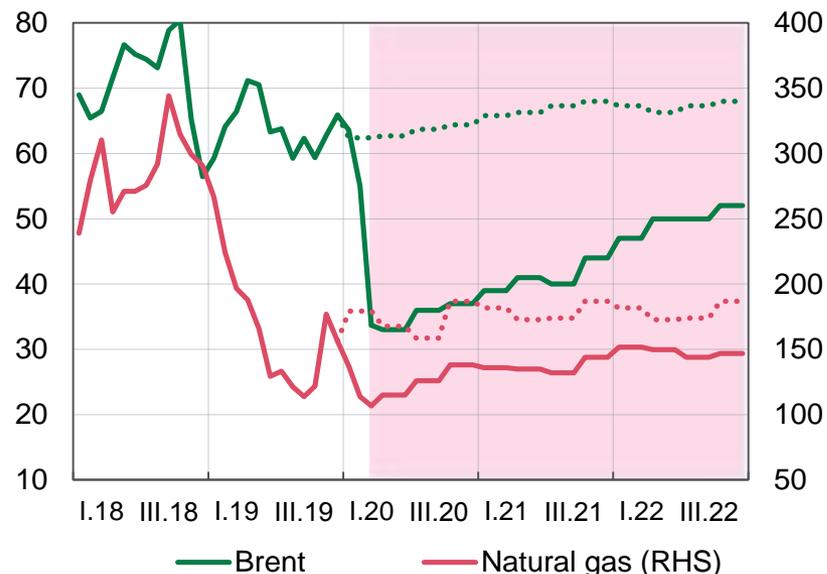
# Shrinking global demand and greater competition on commodity markets will keep prices low

External Commodities Price Index, Dec 2004=1



Source: NBU staff estimates.

World crude oil prices (USD/bbl) and European natural gas prices (USD/kcm)

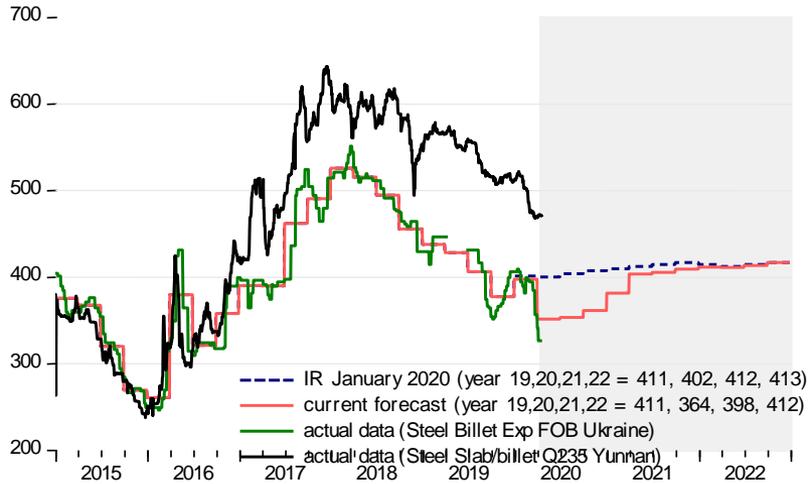


Source: Refinitiv Datastream, NBU staff estimates.

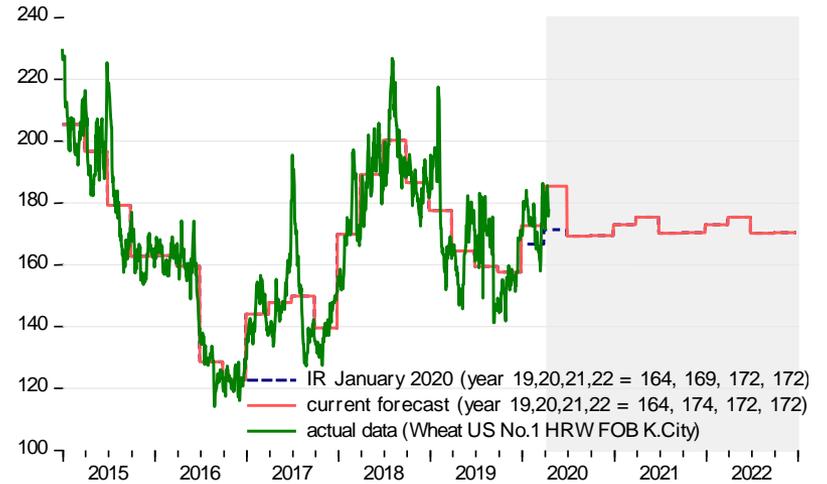
- The depth of decline in world prices for most product groups will be determined by the level of production costs, which in the future may lead to a limitation of supply
- Only a recovery in demand from individual countries in Asia, primarily China, will prevent even deeper fall in prices for some goods, in particular steel. An additional factor will be the limitation of the supply of iron ore due to weather conditions in the largest world producers
- Competitive wars on global energy market will put pressure on prices, primarily crude oil

# World prices

### Steel World Price, USD/MT



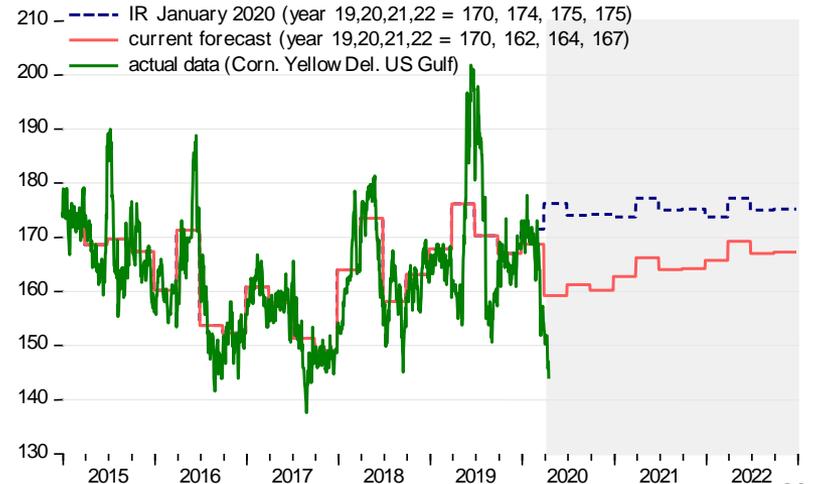
### Wheat World Price, USD/MT



### Iron Ore World Price, USD/MT

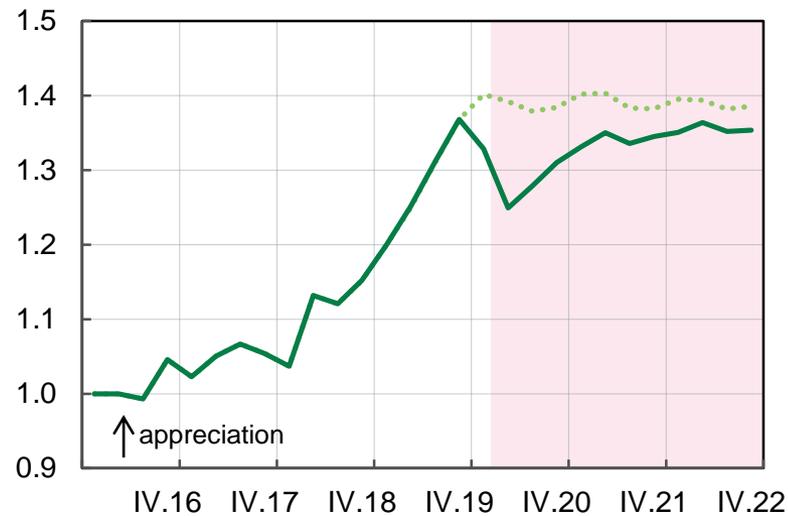


### Maize World Price, USD/MT



# Reversal to appreciation REER trend after quarantine completion

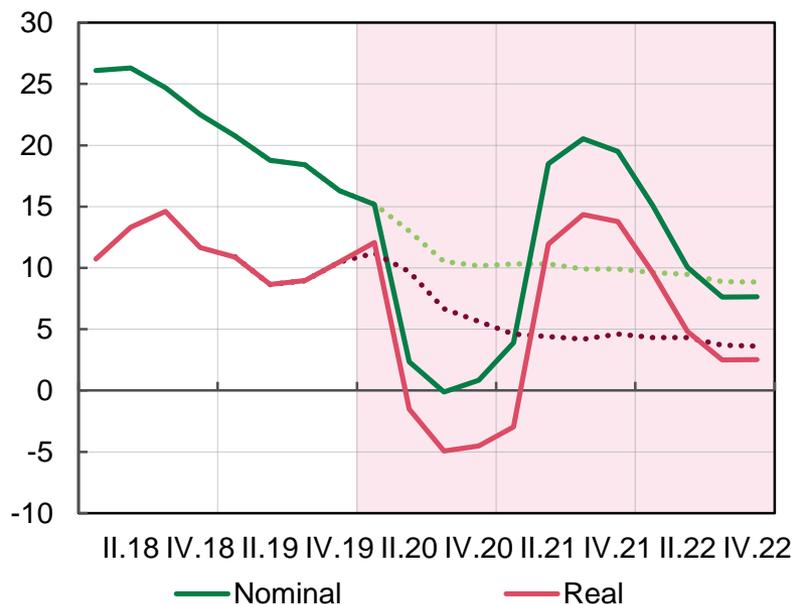
REER, index (I.2016=1)



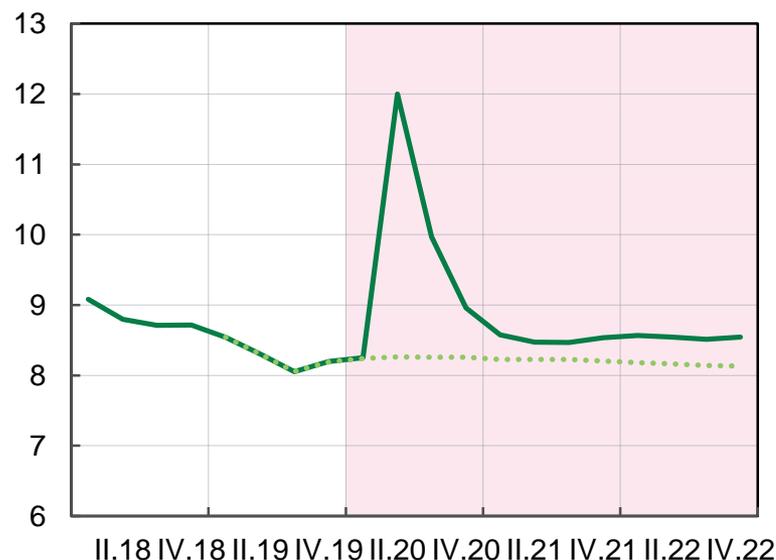
average	2019	2020	2021	2022
REER, % change	15.5	0.7 (8.4)	3.8 (0.3)	1.1 (-0.3)

# Sharp fall in wages growth in 2020 and high unemployment due to quarantine measures and recession

Nominal & Real wages, annual change, %



ILO unemployment, sa, %

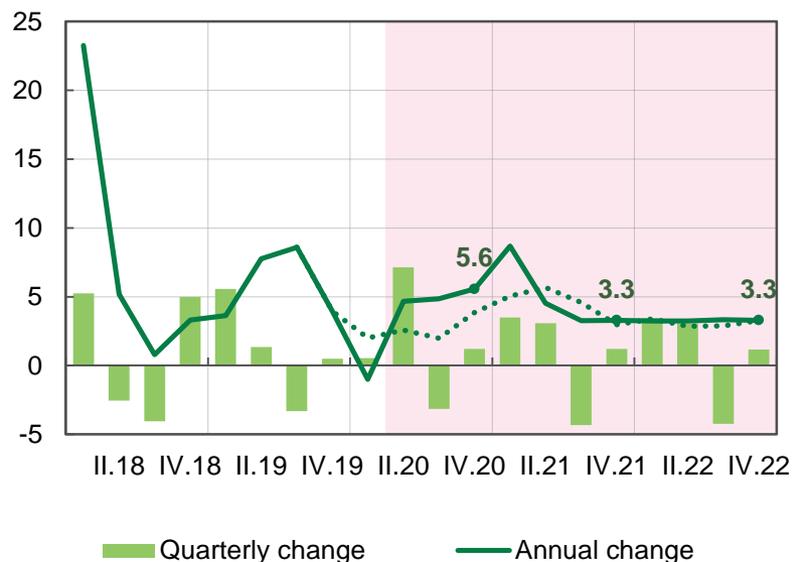


change, %	2019	2020	2021	2022
<b>Real wages</b>	<b>9.8</b>	<b>0.0</b>	<b>9.1</b>	<b>4.7</b>
- previous forecast	9.8	8.3	4.5	4.0
<b>Nominal wages</b>	<b>18.5</b>	<b>4.9</b>	<b>15.6</b>	<b>9.9</b>
- previous forecast	18.6	12.0	10.1	9.2

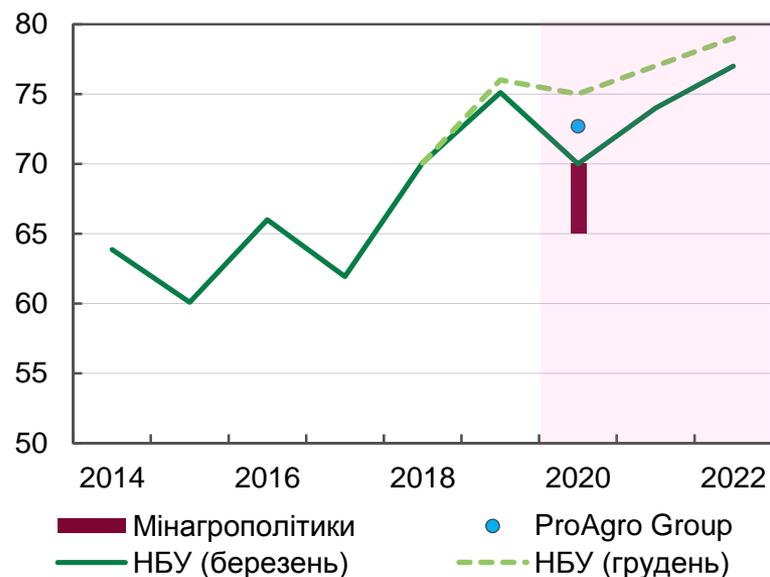
	2019	2020	2021	2022
<b>Minimum wage, UAH</b>	<b>4173</b>	<b>4723</b>	<b>5003</b>	<b>5290</b>
- previous forecast	4173	4723	5003	5290
<b>change, %</b>	<b>12.1</b>	<b>13.2</b>	<b>5.9</b>	<b>5.7</b>

# Raw food inflation hikes in Q2 due to excessive demand, complicated logistics and weaker currency

Raw food inflation, %



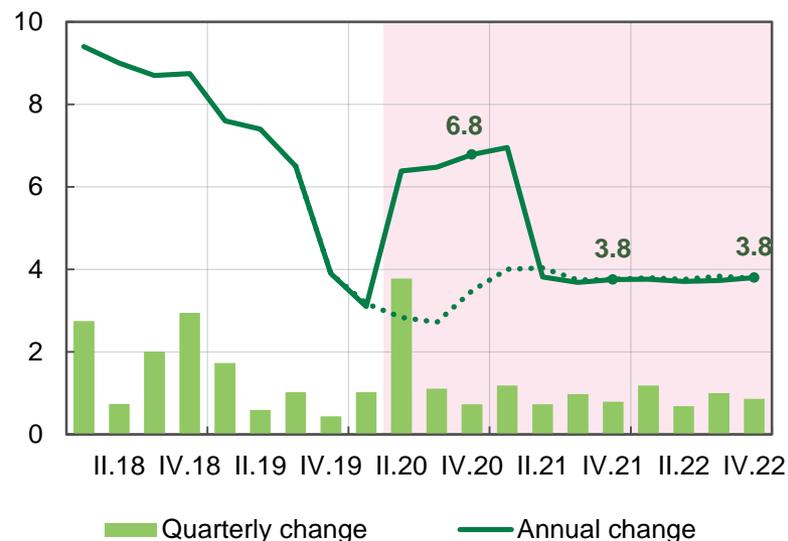
Grains harvest, m t



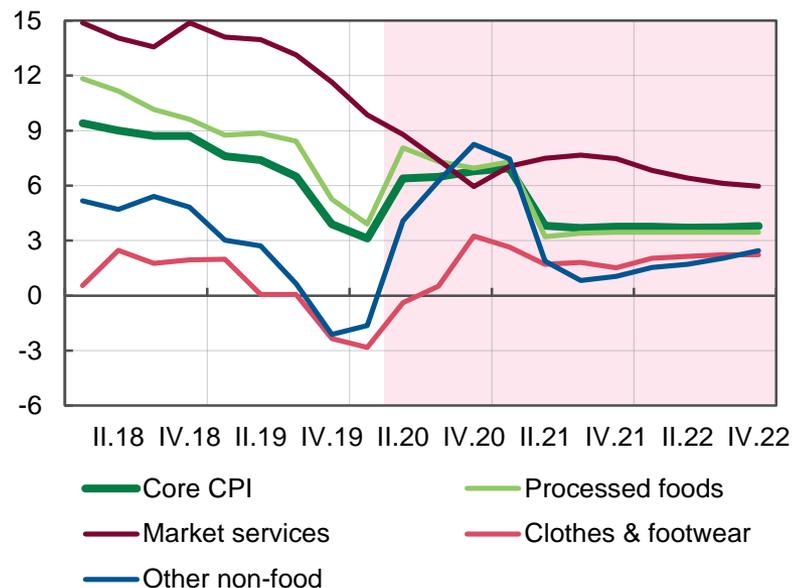
	2019	2020	2021	2022
Grain harvest, mn. t.	75.1 (76)	70 (75)	74 (77)	77 (79)

# Core CPI: sharp temporary hike due to ER depreciation

Core Inflation, %

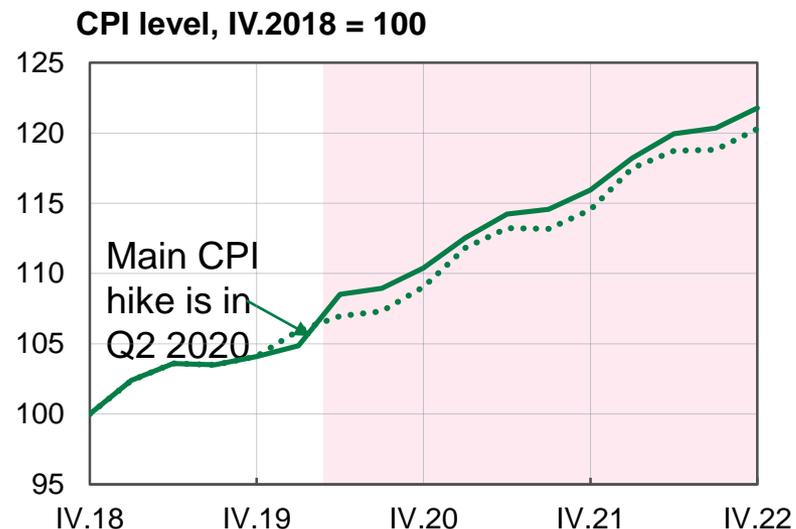
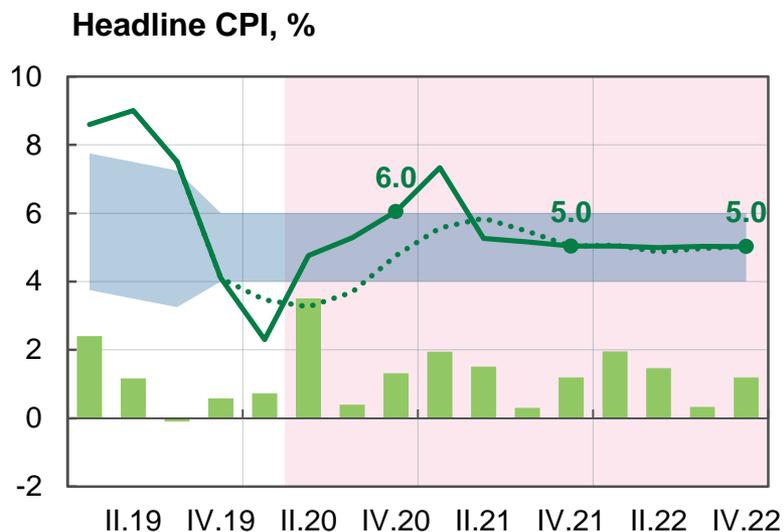


Core CPI and its components, y-o-y change, %



	2019	2020		2021		2022	
	<i>actual</i>	<i>new</i>	<i>prev.</i>	<i>new</i>	<i>prev.</i>	<i>new</i>	<i>prev.</i>
<b>Core CPI</b>	<b>3.9</b>	<b>6.8</b>	<b>3.5</b>	<b>3.8</b>	<b>3.8</b>	<b>3.8</b>	<b>3.8</b>
Processed foods	5.3	7.0	4.0	3.5	3.8	3.5	3.8
Market services	11.6	6.0	7.7	7.5	6.0	6.0	5.0
Clothes & footwear	-2.3	3.3	-0.9	1.5	1.4	2.2	2.6
Other non-foods	-2.1	8.3	-0.3	1.1	1.7	2.5	2.5

# Inflation hike will be moderate (6% in 2020): currency weakening will be offset by sharp fall of demand and lower energy prices



change, %	weight, %	2019	2020	2021	2022			
<b>CPI</b>	<b>100.0</b>	<b>4.1</b>	<b>6.0</b>	4.8	<b>5.0</b>	5.0	5.0	5.0
Core CPI	59.4	3.9	6.8	3.5	3.8	3.8	3.8	3.8
Raw food	19.4	3.9	5.6	3.8	3.3	3.0	3.3	3.3
Admin	18.0	8.6	7.5	9.3	9.8	9.8	9.2	9.1
Fuel	3.2	-8.2	-16.6	3.9	12.5	6.5	14.0	5.0

# Quarantine measures will have a significant negative impact on the economy of Ukraine

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Impact on annual GDP (direct quarantine effect) : **-2.5 pp**  
2020 GDP forecast: **-5.0%**

## Baseline:

Step 1. Easing of the quarantine **since mid-May:**

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**Permitted** public + intercity transport, trading non-food commodities, selected personal care services, cafes  
**Prohibited** public gatherings (sport events, entertainment, cinemas), travelling abroad, and air transport

Step 2. Full removal of restrictions (**end of June**)

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Mar

Apr

May

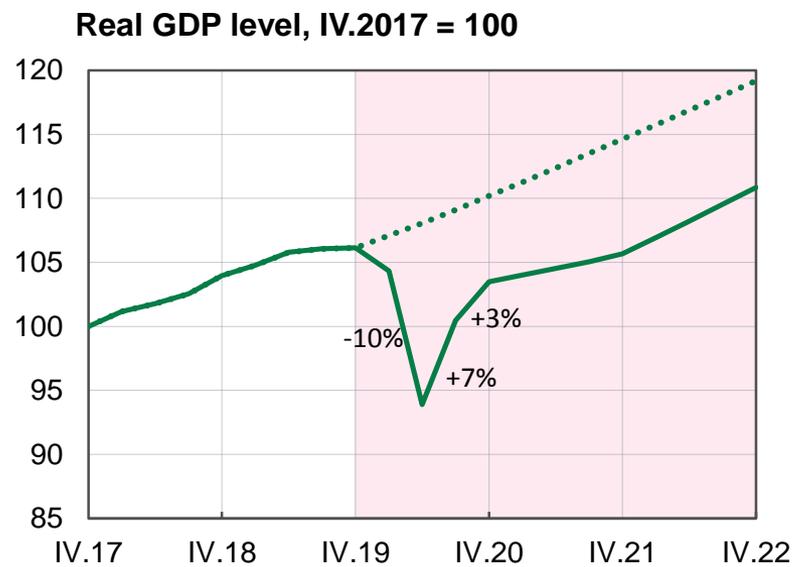
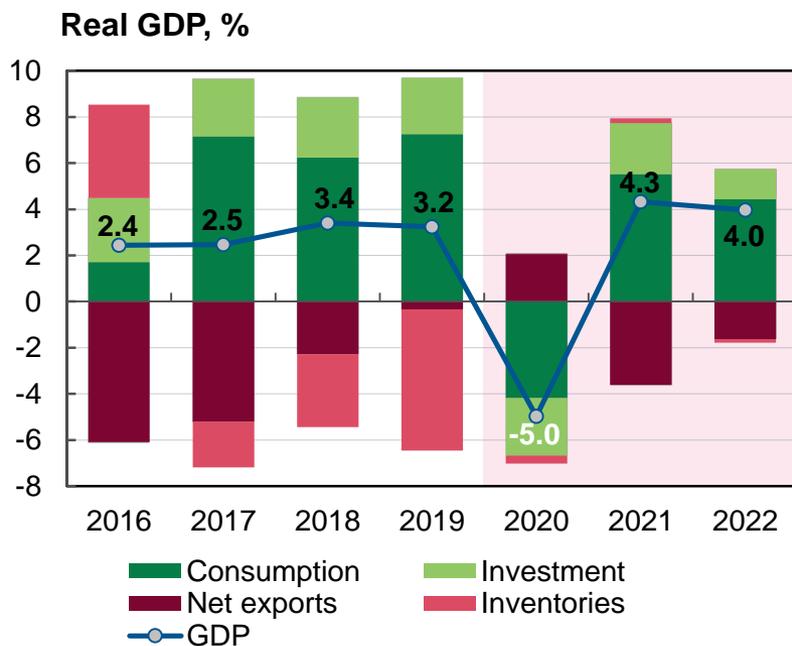
Jun

Jul

Aug

Sep

# GDP drop by 5% due to quarantine (until end-June) and shrinking global demand. Fast V-shape rebound in H2 2020 is expected

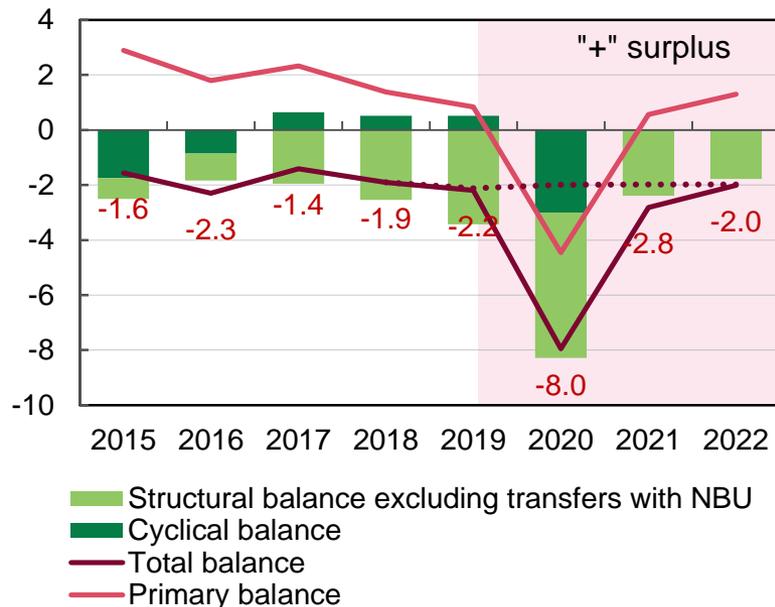


	W,%	2019	2020	2021	2022
<b>GDP</b>	100	3.2	-5.0 (3.5)	4.3 (4.0)	4.0 (4.0)
Consumption	87	8.1	-4.4 (5.7)	5.7 (4.8)	4.6 (4.1)
<i>Private consumption</i>	66	11.3	-4.9 (7.0)	6.5 (5.7)	5.3 (4.7)
Gross fixed capital formation	16	14.2	-13.9 (7.3)	15.0 (7.3)	8.1 (6.0)
Exports of G&S	48	6.7	-9.3 (3.3)	7.4 (1.9)	4.4 (2.5)
Imports of G&S	56	6.3	-12.1 (7.2)	14.4 (5.6)	7.3 (3.4)

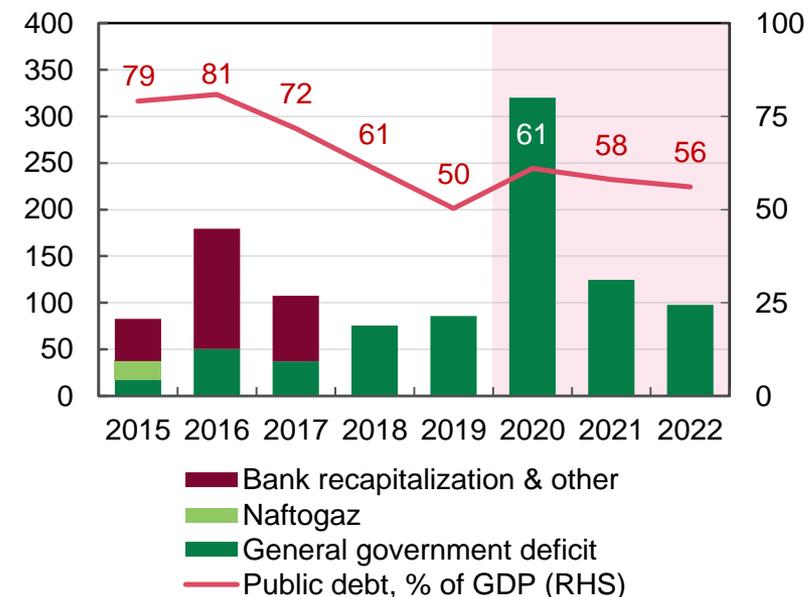
in ( ) – previous forecast (IR, January 2020)

# Sharp loosening of fiscal policy is expected to minimize loss in economic growth, budget deficit extends to 8% of GDP in 2020

Consolidated Budget Balance, % of GDP



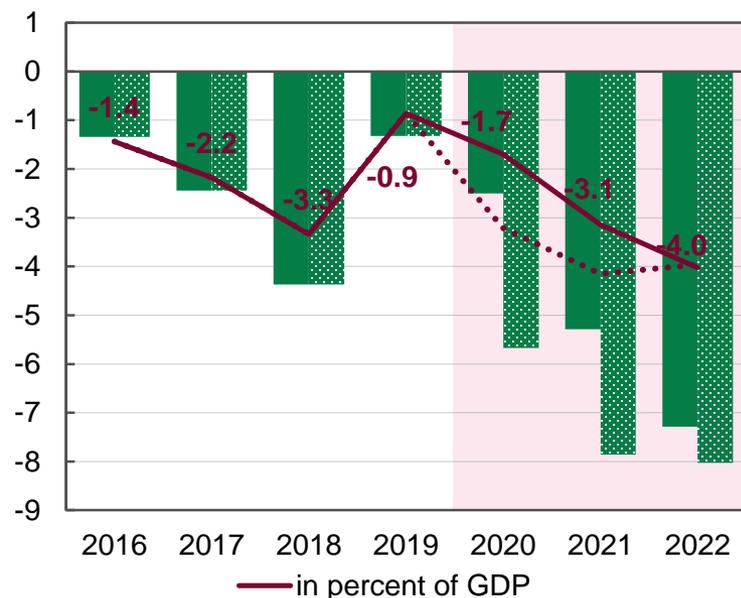
Public sector deficit, UAH bn, and public debt-to-GDP ratio, %



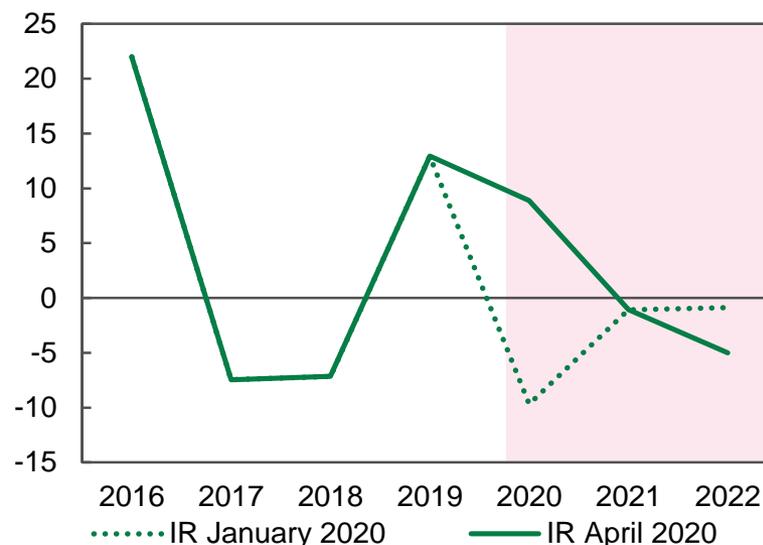
- The public debt-to-GDP hikes up to 61% in 2020 due to widening of budget deficit but will decrease afterwards

# In 2020 CA deficit will be low due to improved terms of trade and decline in imports, in 2021-2022 it widens due to stronger REER

Current Account Balance, USD bn



Terms of trade, %

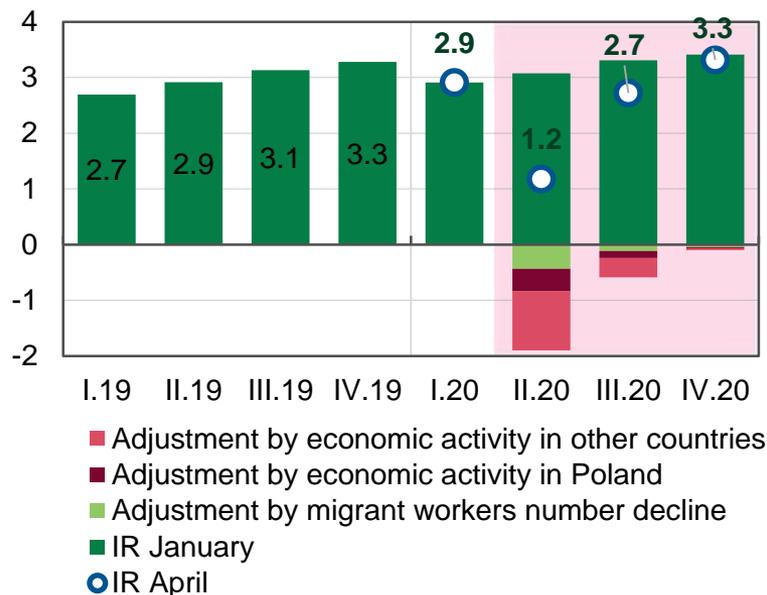


## Main changes in CAB forecast in 2020-2022 compared with IR January

Trade in goods	Terms of Trade (↑): ↓↓oil, ↓↓gas, ↓iron ore, ↓metals
	↓ Volumes of exports: ↓agro, ↓iron ore, ↓metals
	↓ Volumes of imports: ↓↓machinery, ↓agro, ↓oilproducts
Trade in services	↓↓ Travel services
Income	↓ Remittances

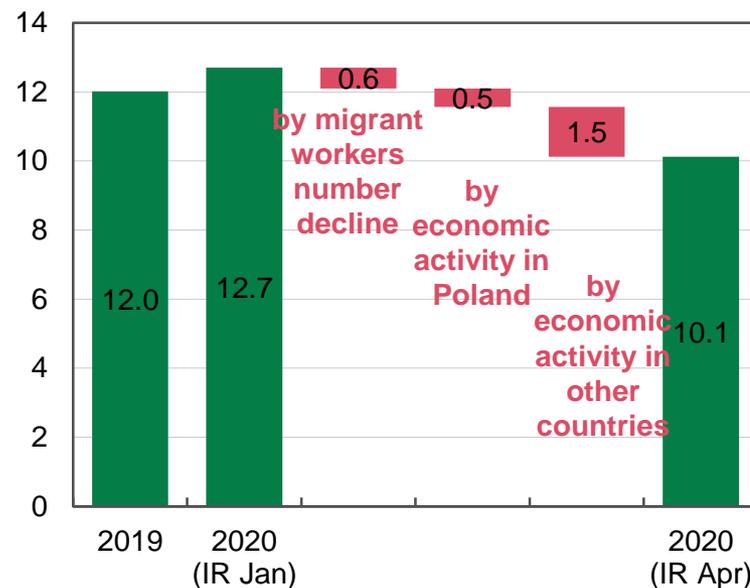
## Box. In 2020, remittances will decline due to economic downturn and reduction in the number of migrant workers

Remittances, USD bn



Source: NBU, NBU staff estimates.

Remittances, USD bn

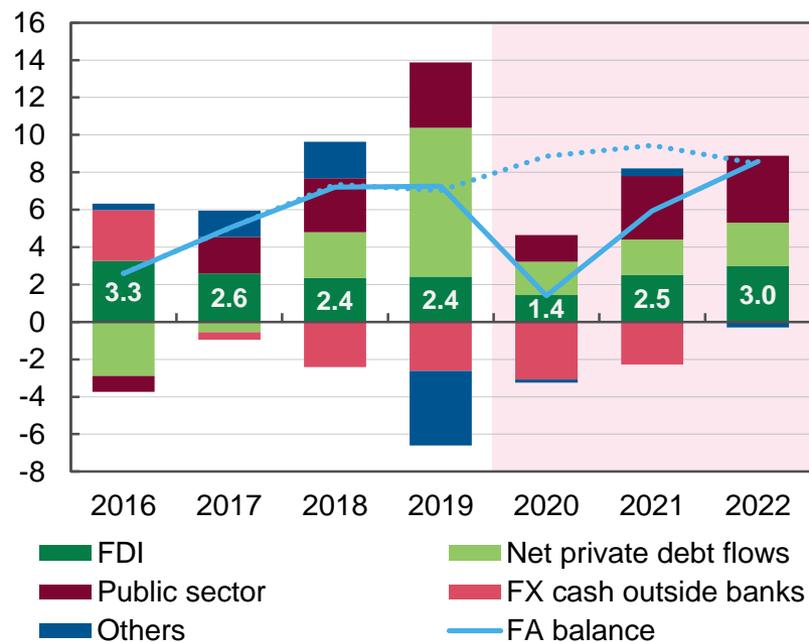


Source: NBU, NBU staff estimates.

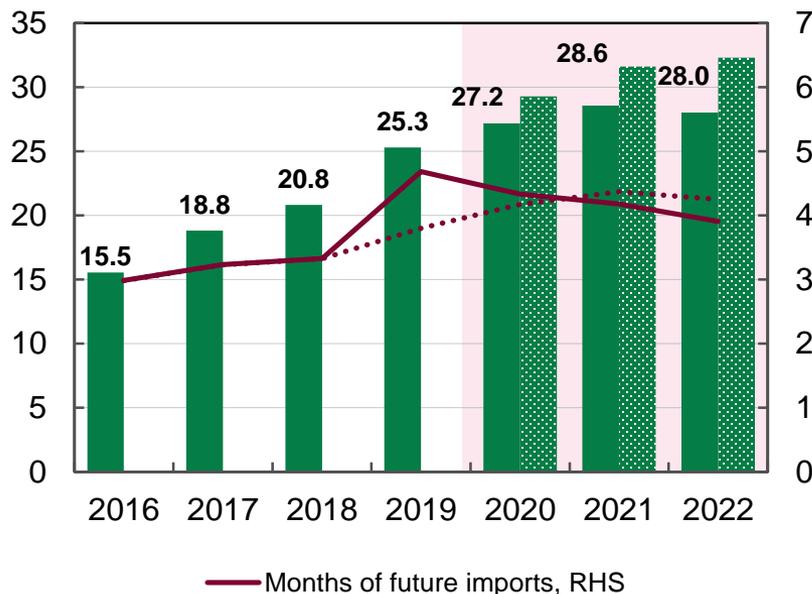
- According to economic literature and past experience, remittances service as a cushion for migrants' home countries. This time, however, remittances will be hit hard due to specific nature of the crisis with many countries adopting lockdowns
- Forecast for remittances to Ukraine in 2020 has been revised downwards by USD 2.6 bn, or 20% due to:
  - lower number of migrants – by USD 0.6 bn
  - economic downturn in the host countries – by USD 2.0 bn

# In 2021-2022, debt and investment capital inflows to private sector will renew after the sudden stop in 1H2020

Financial account: net inflows, USD bn



International Reserves, USD bn

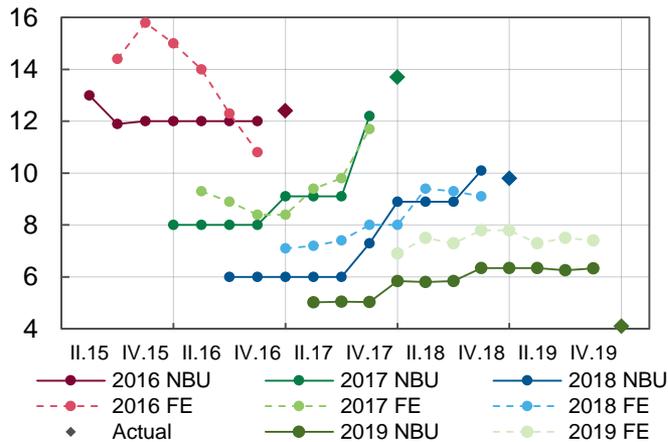


# Risks

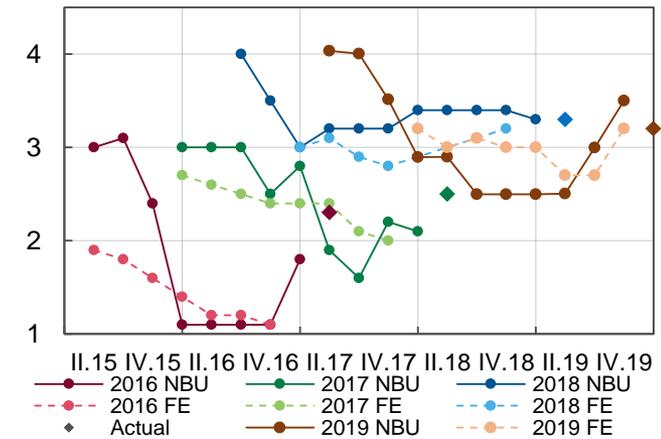
		Risk probability		
		Low <15%	Middle 15%–25%	High 25%–50%
Influence on baseline	Weak	Higher volatility of global food prices		
	Moderate		Lower harvest due to weather conditions. Deeper recession of the world economy.	
	Strong	Escalation of the military conflict in eastern Ukraine	Suspension of the cooperation with IMF	Longer-lasting coronavirus pandemic

# Box. NBU forecasts are as precise as consensus forecasts which are in general more precise than individual ones

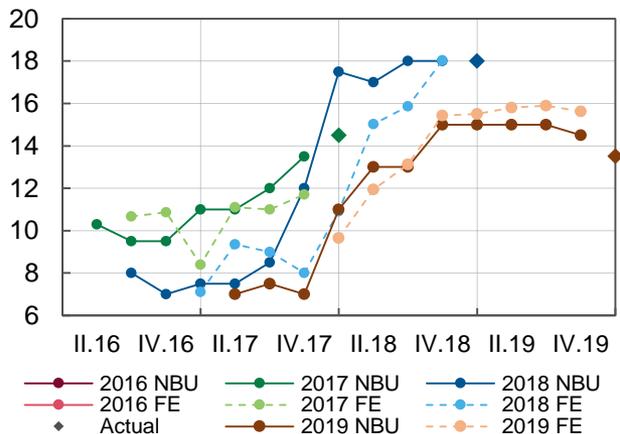
Forecast history: CPI (2016-2019), eoy, %



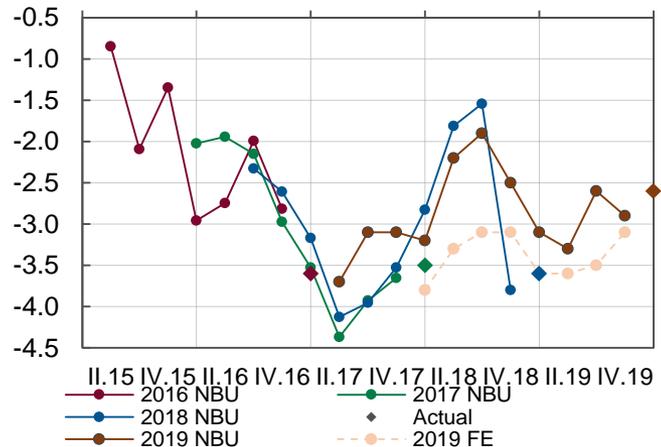
Forecast history: GDP (2016-2019), %\*



Forecast history: Interest rate (2016-2019), eoy, %\*



Forecast history: CAB (2016-2019), % GDP



\*FE – Focus Economics forecast based on survey of more than 30 organizations which provide individual forecasts