National Bank of Ukraine

Inflation Report (July 2019)

Kyiv

July 30, 2019

Monetary policy decision: summary

In July, the NBU Board decided to cut the key policy rate to 17%

- The NBU continues the cycle of monetary policy easing as inflation is declining towards the target of 5%
- Inflation forecast for year-end 2019 (6.3%) and 2020 (5.0%) is unchanged

The NBU's baseline scenario envisages the key policy rate to decrease further, to 8% over the coming years

- The NBU starts the publication of nominal interest rate projection

Further cooperation with the IMF remains the main assumption underlying the macroeconomic forecast

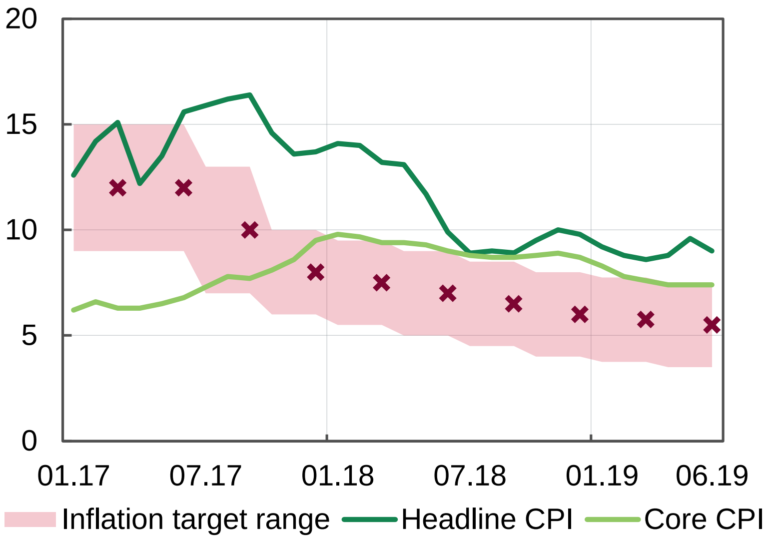
Key risks:

- a delay in implementing key reforms or steps offsetting previous achievements, a permanent suspension of Russian gas transit through Ukraine starting in 2020
- an escalation of trade wars and rising geopolitical tensions
- an escalation of the military conflict / new trade restrictions by Russia

If existing inflation risks materialize, the path of the key policy rate towards 8% may be longer. At the same time, stronger demand for hryvnia government bonds from nonresidents and the subsequent strengthening of the hryvnia would allow the NBU to cut the key policy rate at a faster pace than currently built into the baseline scenario

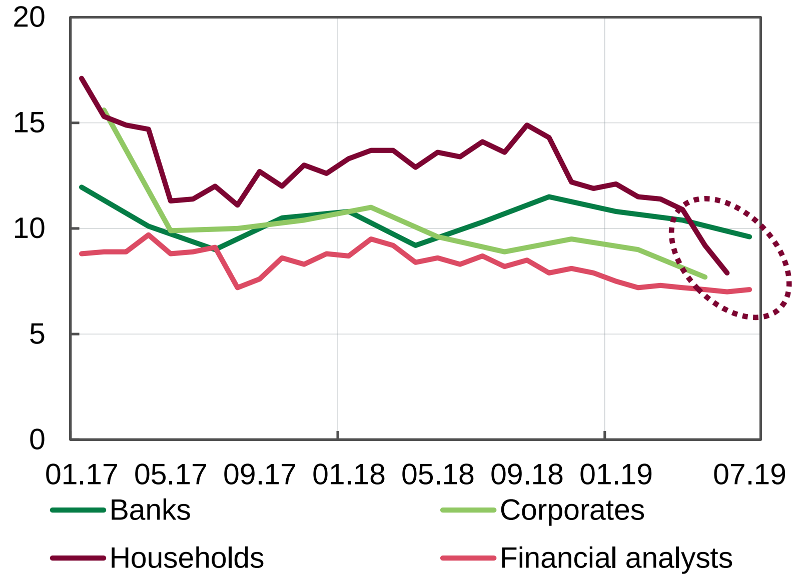
Headline inflation in Ukraine returned to descent. Core inflation slows moderately thanks to tight monetary policy

Headline and core inflation, % yoy



Source: SSSU, NBU.

Inflation expectations for the next 12 months, %

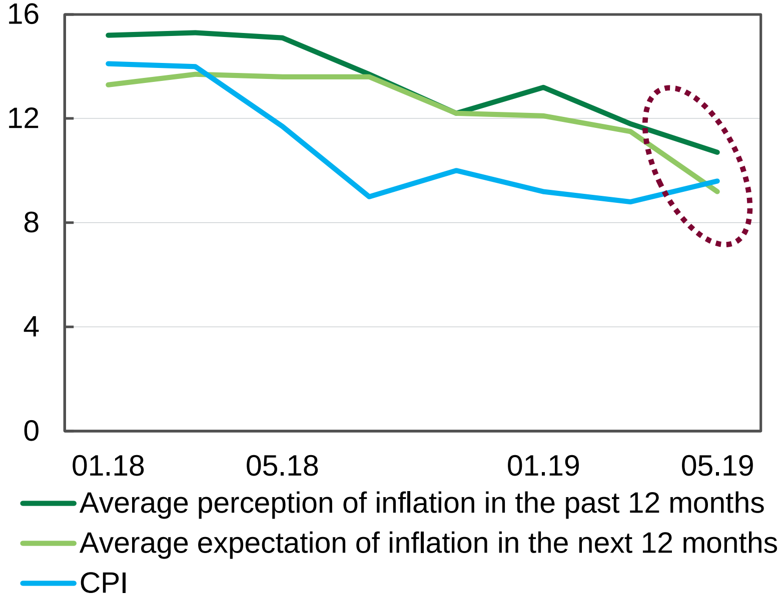


Source: NBU, GfK Ukraine surveys.

- Temporary shocks (related to supply of selected vegetables and fossil fuels) that had been driving inflation above the forecast path in the past few months, started to fade out in June
- Core inflation slowed slightly faster than forecast, as the impact of stronger hryvnia, including due to tight monetary policy, and improving inflation expectations, offset stronger pressure from domestic demand and rising labor costs
- Expectations of households and corporates reached their 5-year lows

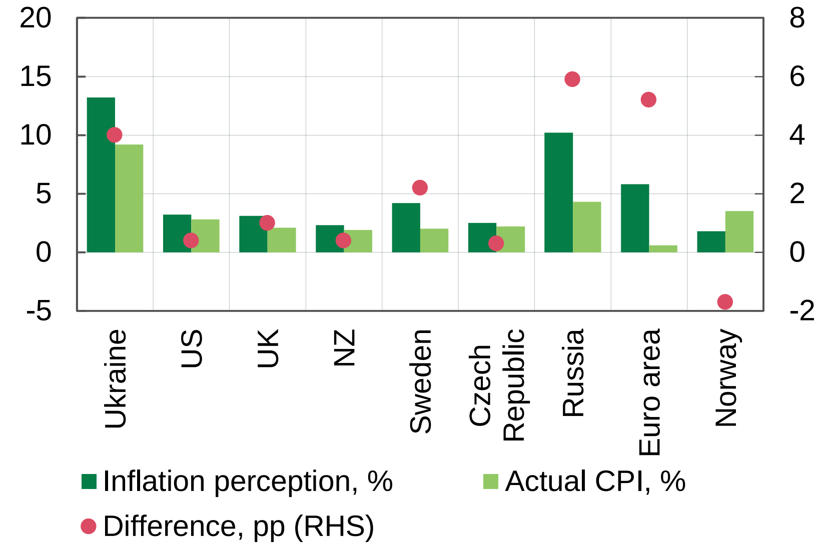
Box. Until recently, HH inflation expectations diverged the most from the NBU targets. Partly, it is due to high perceptions

Household inflation perceptions, inflation expectations, and CPI, % yoy (as of survey date)



Source: GfK Ukraine, NBU staff estimates.

Inflation perceptions and actual CPI in Ukraine and other countries*

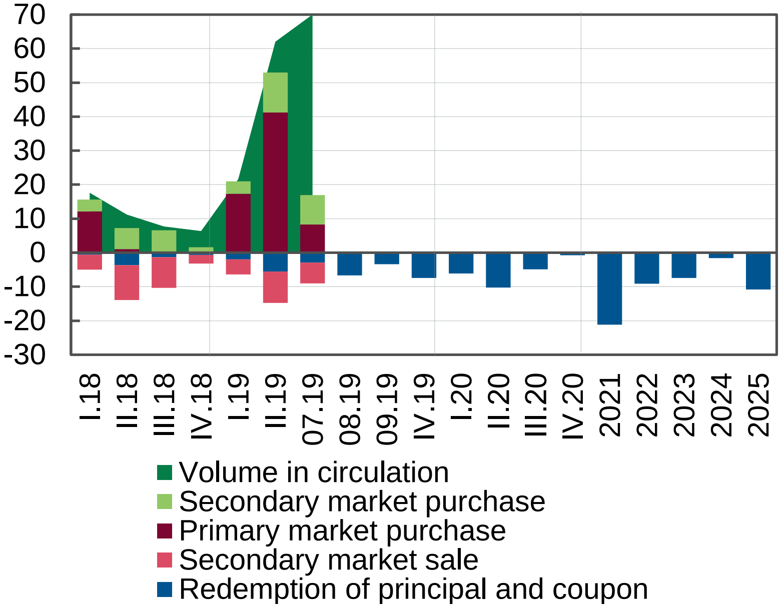


*Latest available data is December (for Sweden, Norway, New Zealand, and Russia), November (for UK), May 2018 (for U.S. and Czech Republic); January 2019 (for Ukraine); for the euro area – average for April 2013-July 2015.
Source: central banks and statistical agencies of selected countries.

- Households usually tend to overestimate actual inflation as:
  - consumers have different individual baskets
  - people tend to have asymmetric perceptions over rising and decreasing prices
  - people remember/pay greater attention to price changes for frequently purchased items or items whose prices are more volatile (e.g., fuel)
  - there exist demographic and social characteristics bias

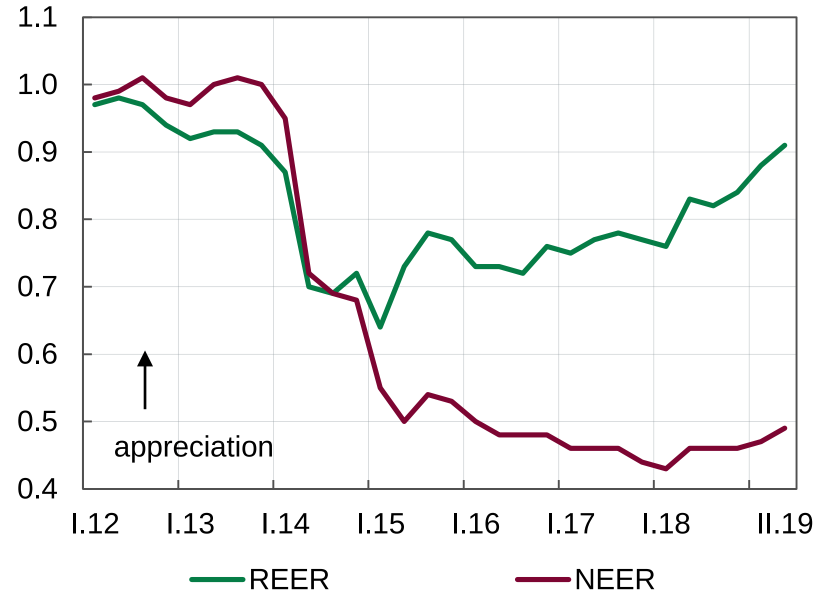
High real interest rates and improved global financial conditions for EMs contributed to a further inflow of portfolio investments

Non-resident transactions with hryvnia government bonds and their scheduled redemptions*, UAH bn



* As of 12 July 2019.
Source: NBU staff estimates.

Hryvnia REER and NEER indices, quarterly average, 12.2011=1

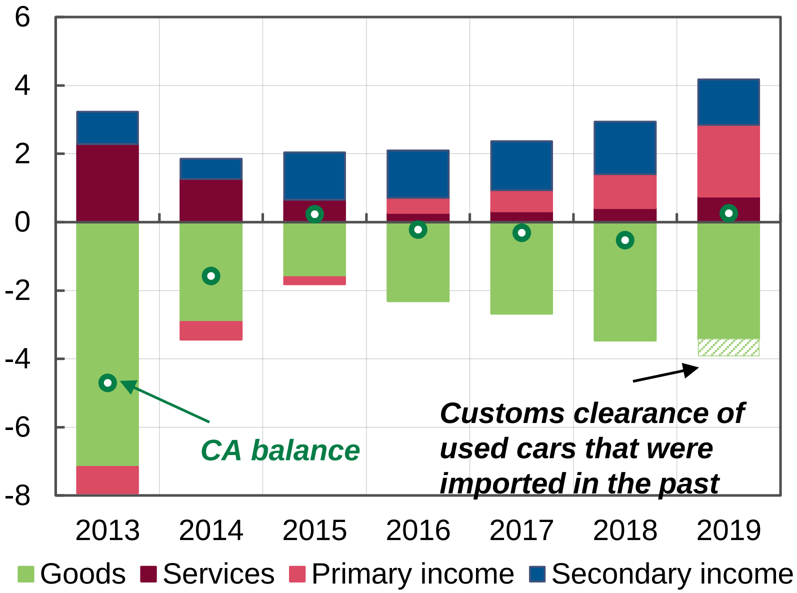


Source: NBU`s estimates.

- Foreign investments in hryvnia domestic bonds increased by more than USD 2.0 bn (as of 12 July 2019) since the beginning of 2019, and their term structure has widened up to 6 years
- Non-residents' interest in hryvnia bonds helped soften depreciation of NEER/REER in June, caused by appreciation of most currencies of Ukraine's trade partners
- Despite mom depreciation in June, NEER/REER remained stronger than last year (3.3% and 8.5% respectively) and past NBU forecast

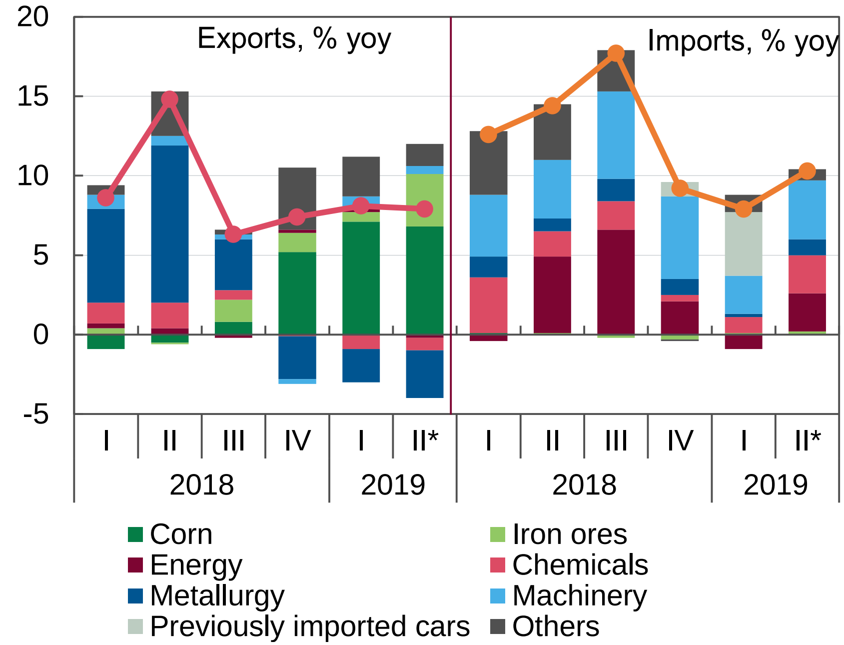
In Jan-May 2019, the CA balance recorded a surplus due to subdued imports growth and higher primary income surplus

Current account balance in Jan-May, USD bn



Source: NBU.

Contributions to annual change in exports and imports, pp

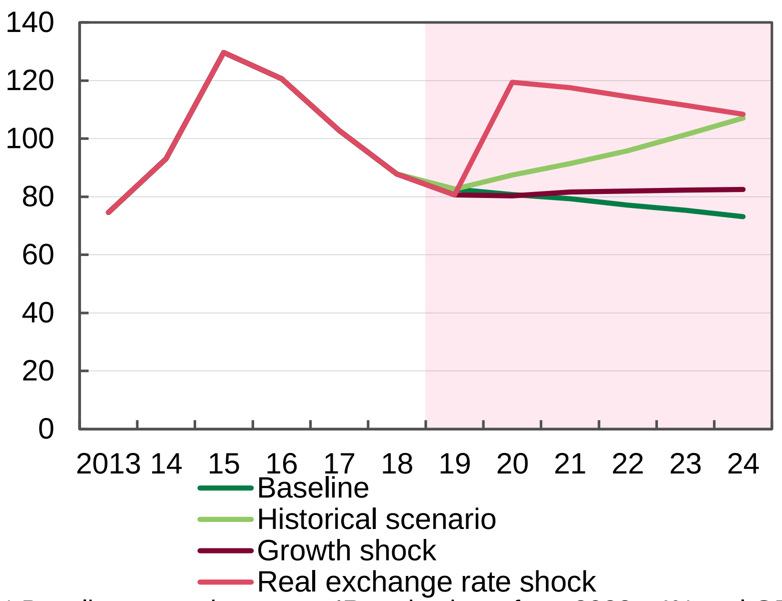


* April-May 2019.
Source: NBU.

- The growth of merchandise exports remained solid, supported by high stocks from previous year harvest
- Imports grew at a moderate pace, particularly excluding the impact of customs clearance of used cars that were imported in the past. Excluding this effect, the widening of external trade deficit has virtually stalled in 2019
- At the same time, a further increase in compensation of employees amid a drop in dividends repayments as well as widening in services trade surplus contributed to the CA surplus

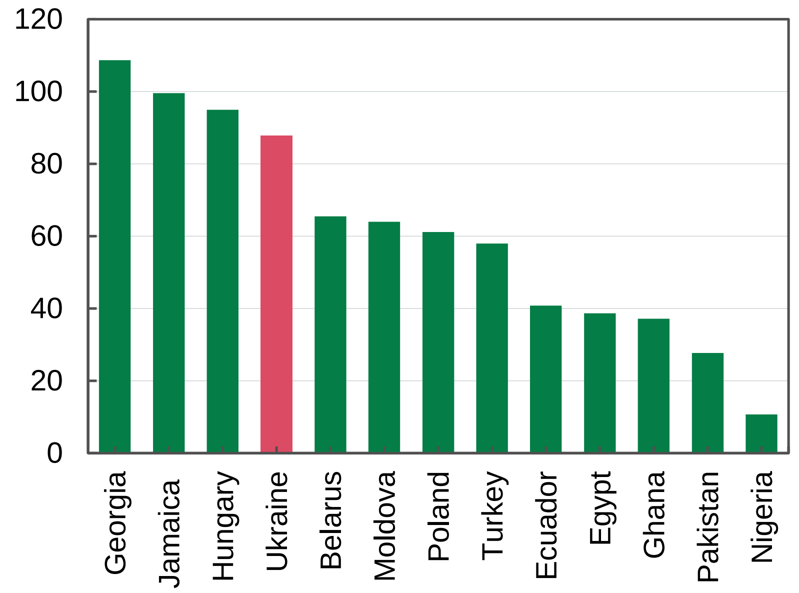
Box. External debt indicators have improved over past years, but external position remains fragile

Gross external debt under different scenarios,* % GDP



* Baseline scenario: current IR projections, from 2022 - 4% real GDP growth, 5% GDP deflator, 1% nominal exchange rate depreciation. The historical averages are calculated over the ten-year period; growth shock (minus one-half standard deviations in 2009-2018 from baseline); real exchange rate shock (one time 30% real depreciation in 2020).
Source: NBU calculations.

External debt to GDP ratio in selected countries*, %

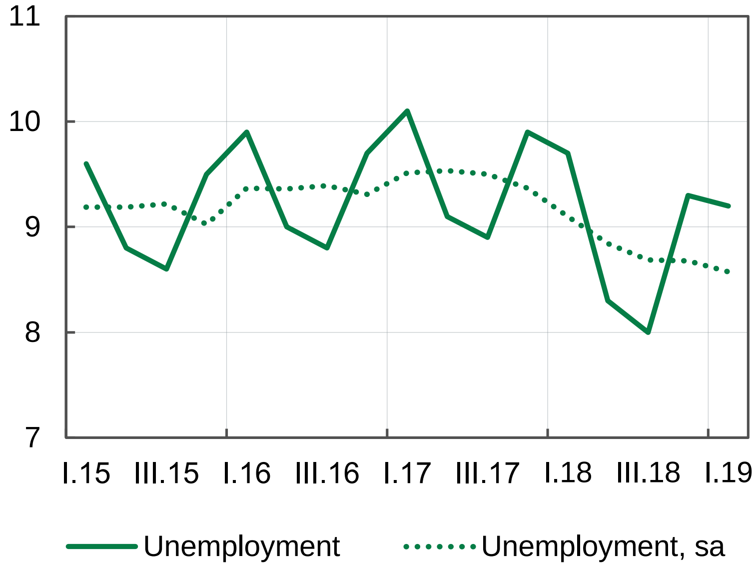


* Data on Ecuador, Ghana, Jamaica and Pakistan refers to 2017, others - 2018.
Source: NBU staff estimates.

- External debt remained almost unchanged over past years, although its ratio to GDP decreased due to sustained economic growth
- Moreover, external debt would be **lower excluding arrears with low probability of repayments (~USD 10 bn) and round-tripping transactions (some intercompany lending, trade credits)**
- However, Ukraine's external position remains fragile, requiring further prudent fiscal and monetary policy, cooperation with the IMF and other international financial institutions, and development of the domestic financial market

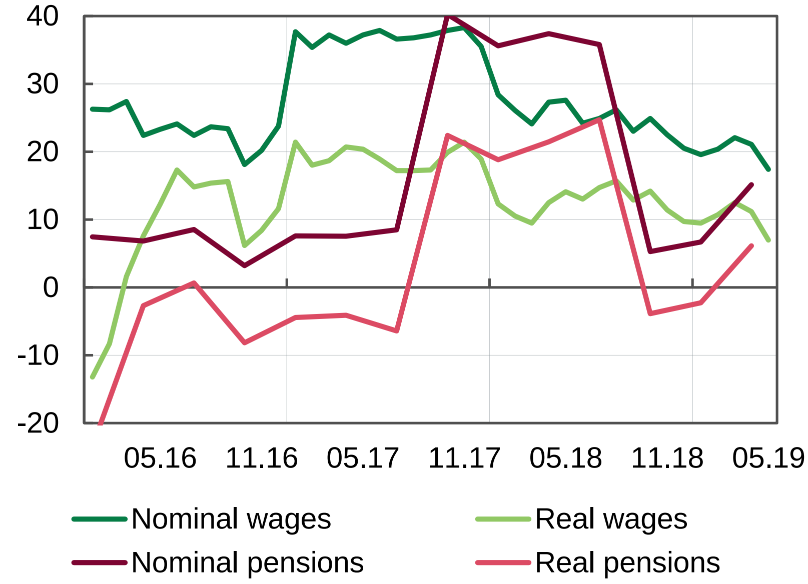
Acceleration in private consumption was supported by robust wage growth and improving employment

ILO unemployment rate, %*



* in % to labor force aged 15-70.
Source: SSSU, NBU staff estimates.

Nominal and real wages and pensions*, % yoy

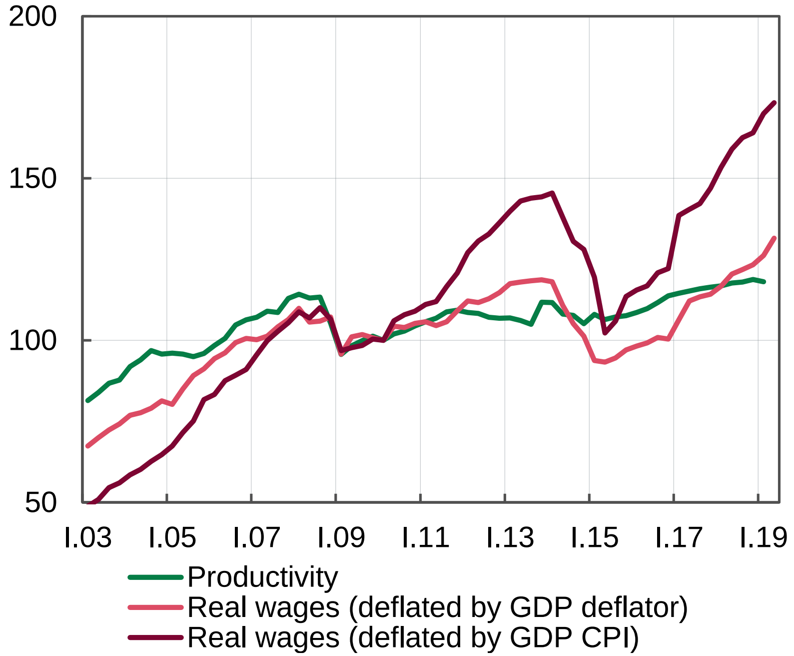


* as of the beginning of the month.
Source: SSSU, PFU, NBU staff estimates.

- Changes to pension-setting rules, approved in Q4 2017, and robust wage growth over the last couple of years stimulated some people (mainly those aged 30-59) to enter labor force
- Solid labor demand helped reduce unemployment rate to 9.2% (8.6% sa) and coupled with persistent labor market mismatches caused wages to grow faster than expected
- The growth in pensions picked up, reflecting planned adjustment of wage base in the pension benefit formula and a rise in benefits and one-off payments for selected groups

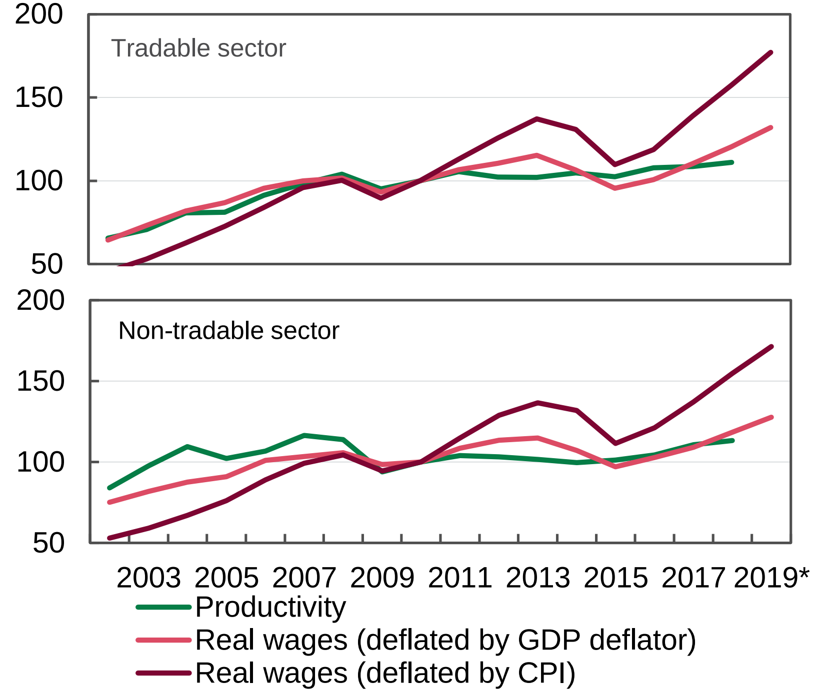
Box. Wage growth that exceeds productivity growth contributes to inflation pressures

Productivity and staff real wages, sa, Q1 2010=100



Source: SSSU, NBU staff estimates.

Productivity and staff real wages by selected sectors, 2010=100

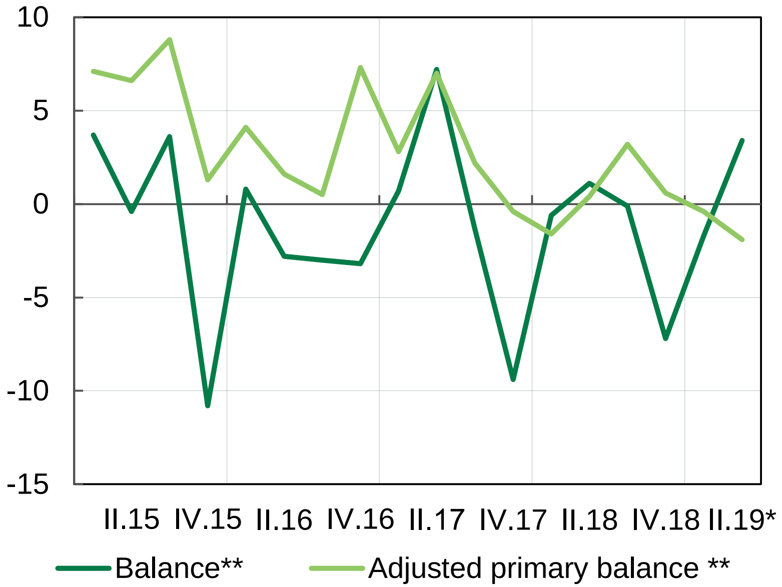


* Jan – May 2019.
Source: SSSU, NBU staff estimates.

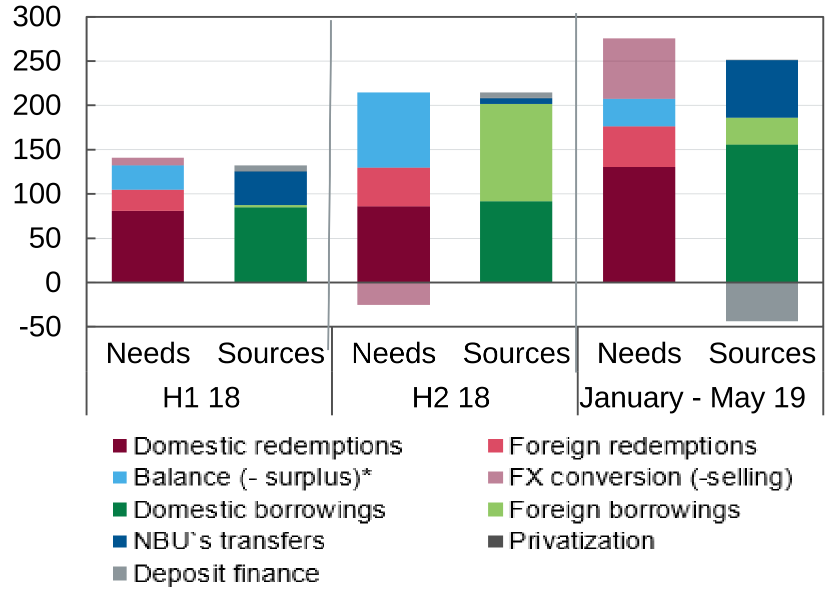
- Over the last few years, real wages in Ukraine have been growing fast, with paces notably exceeding productivity growth
- The accelerated growth in real wages reflected a catch-up from deep 2014–2015 crisis, a sharp increase in minimum wages in 2017, migration pressure and labor demand/supply mismatches
- Currently real wage growth contributes to inflation pressures through both consumer demand and production cost channels

Despite significant consolidated budget surplus, fiscal policy in H1 is estimated as loose due to poor tax revenue performance

Selected fiscal indicators**



Consolidate budget financing needs and sources of financing, UAH bn



* Deposit finance, among others, includes changes of balances held in the STA. The balance excludes the NBU's transfers.

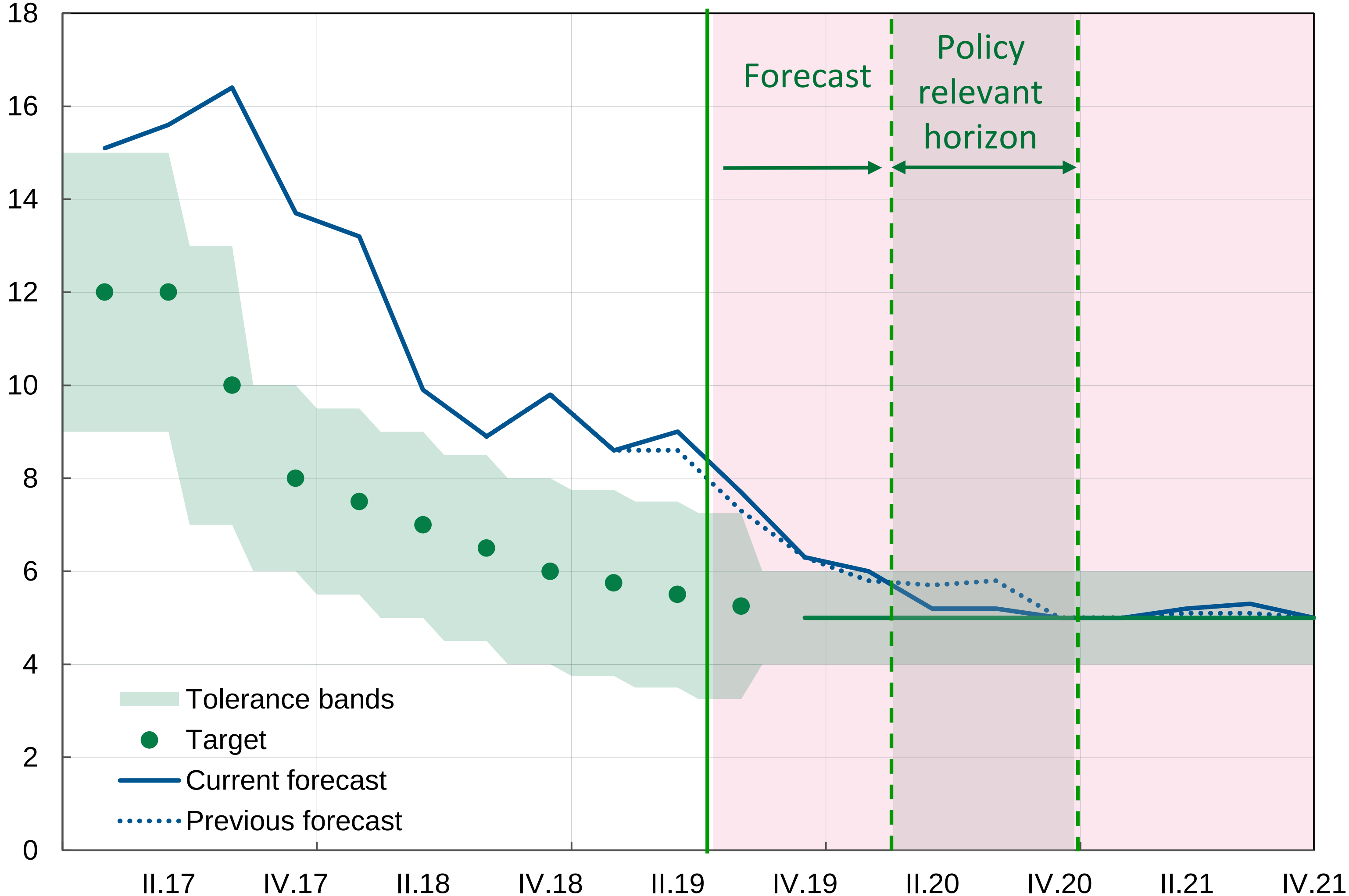
* Preliminary data.

** Balance – consolidated budget balance, taking into account loans to the Pension Fund from STA. Adjusted primary fiscal balance (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). Additionally, one-off proceeds (such as unplanned funds from special confiscation and effects from the Stockholm Arbitration) are subtracted from revenues. Positive value means tight fiscal policy, negative – expansionary fiscal policy.

Source: Treasury, NBU staff estimates.

- For Jan - Jun 2019, the consolidated budget reported a sizable surplus (about UAH 25 bn) thanks to NBU profit transfers
- The NBU's transfers offset underperformance of tax revenues (by a tally UAH 34.5 bn for H1) caused by both temporary and general economic factors
- Budget expenditures rose moderately due to high government debt financing needs

Baseline scenario is consistent with previous commitment: inflation will enter the target range at the beginning of 2020



Forecast Summary

- **Slowdown in global economy has shifted expectations to looser monetary policy in AEs** (↓Fed, ↓ECB, ↓BoE rates)
- **Supply shocks on global commodity markets and domestic weather conditions are beneficial for Ukraine**
  (↑iron ore price, ↑maize price, ↓gas price, ↑grain harvest)
- **Monetary easing cycle determines REER stabilization in 2020-2021 after strong appreciation in 2016-2019** (stronger REER: ↑ToT, ↑harvest, ↑interest of non-residents in G-bonds)
- **In 2019, GDP growth slows marginally to 3.0% and accelerates further**
  (↑outlook: ↑harvest (+0.3 pp),↑ToT, ↑domestic demand)
- **CPI declines to 6.3% this year and enters the target band in Q1 2020** (outlook is unchanged: stronger ER and lower gas prices offset demand and wages pressure)
- **In 2019, the CA deficit shrinks to 2.6% of GDP; but in 2020-2021, deficit widens due to lower gas transit and high domestic demand** (↑harvest, ↑ToT)
- **Assuming new IMF program starts in 4Q 2019, reserves hover around $22-23 bn in 2019-2021** (↑harvest, ↑ToT, ↑portfolio inflows, ↓official financing)

in ( ) – comparison with previous forecast (IR, April 2019)

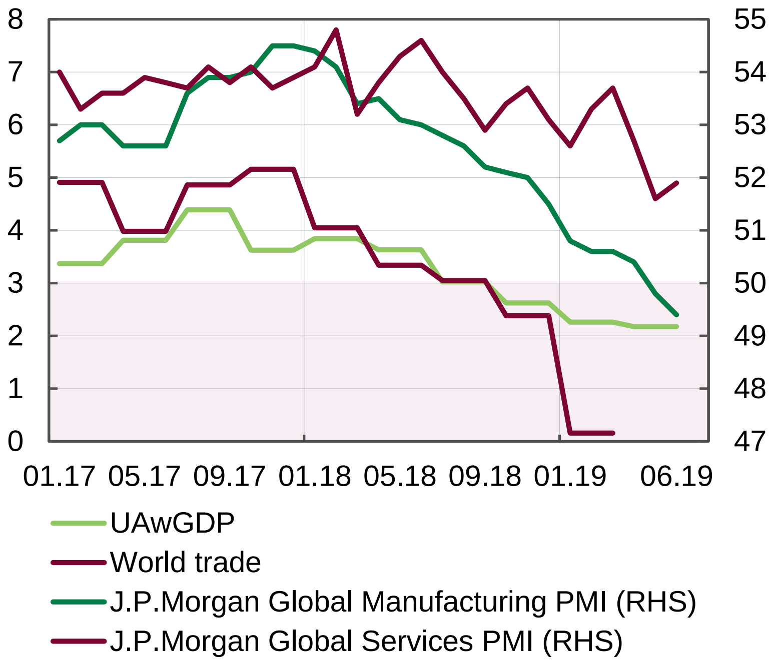
Key macroeconomic indicators

	2017	2018	2019	2020	2021
Real GDP, % yoy	2.5	3.3	3.0 (2.5)	3.2 (2.9)	3.7 (3.7)
Nominal GDP, UAH bn	2984	3 559	4 003 (3 970)	4 390 (4 342)	4 803 (4 750)
CPI, % yoy	13.7	9.8	6.3 (6.3)	5.0 (5.0)	5.0 (5.0)
Core CPI, % yoy	9.5	8.7	5.5 (5.0)	3.8 (3.7)	3.8 (3.7)
Current account balance, USD bn	-2.4	-4.3 (-4.5)	-3.8 (-4.9)	-4.6 (-5.8)	-6.3 (-6.7)
% GDP	*-2.2*	-3.3 (*-3.4*)	-2.6 (*-3.3*)	-2.9 (*-3.6*)	-3.7 (-4.0)
BOP (overall), USD bn	2.6	2.9	0.6 (-0.3)	0.2 (-0.1)	-0.4 (-0.7)
Gross reserves, USD bn	18.8	20.8	21.7 (21.2)	22.8 (21.9)	23.0 (21.8)

in ( ) – previous forecast (IR, April 2019)

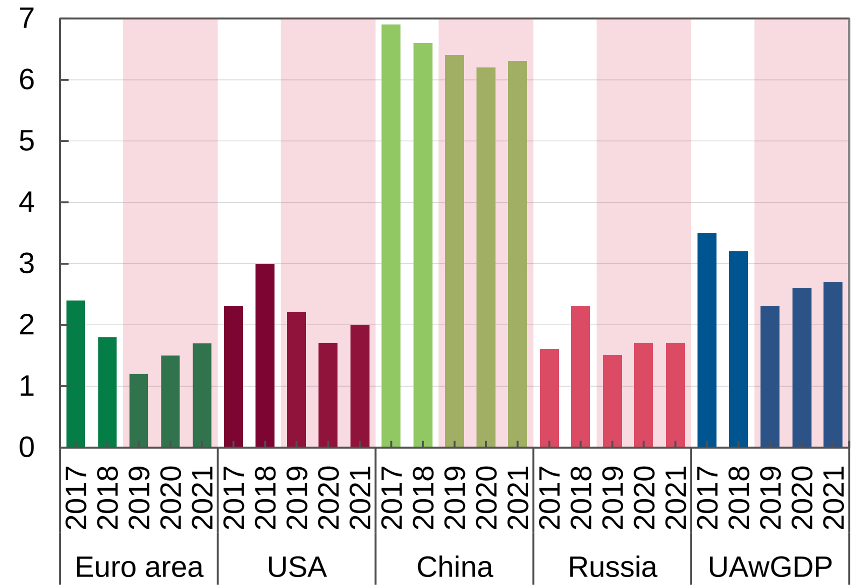
Global economy slows down rapidly in 2019 and growth recovers slowly next year

Global PMI, UAwGDP and world trade in goods*



* Volumes (average sum of exports&imports)
Source: IHS Markit, WTO, NBU.

Real GDP of selected countries and UAwGDP, % yoy



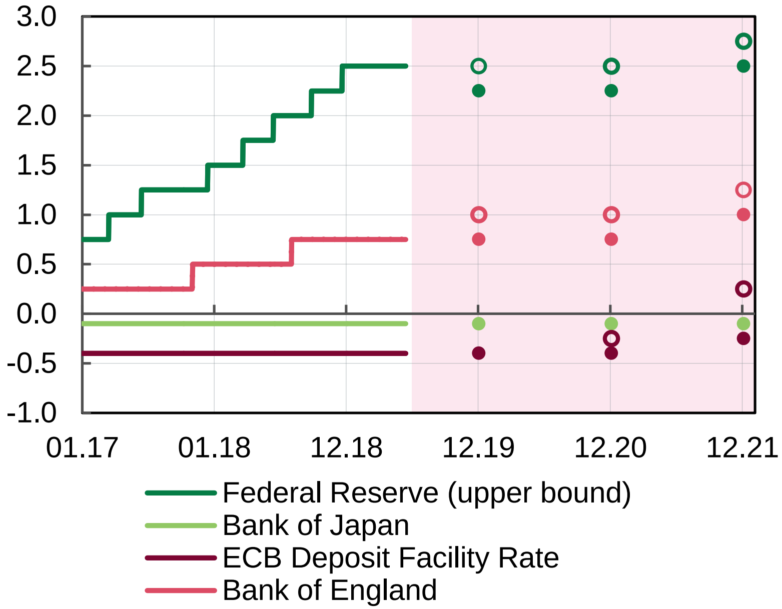
Source: National Statistical Offices, NBU staff estimates.

The growth of global economy and trade slowed, as expected, due to geopolitical conflicts and protectionist measures

(Turkey's GDP growth revised from 0.5% to -0.9% in 2019)

Slowdown in global economy has shifted expectations for the monetary policy

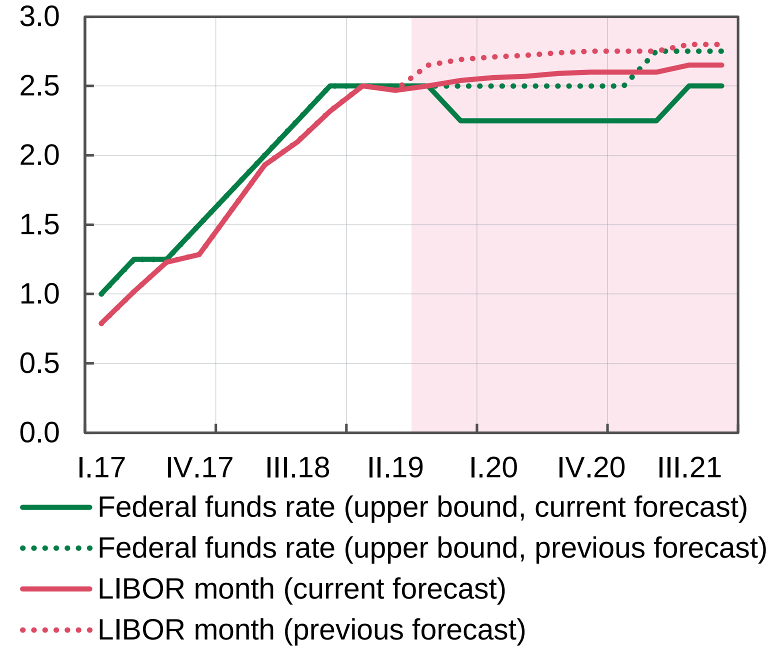
Key policy rates of major central banks, % eop



* Unfilled dots indicate previous forecast.

Source: official web-pages of central banks, NBU staff estimates based on Bloomberg.

Federal funds rate and LIBOR, % eop



Source: NBU staff estimates.

ECB:

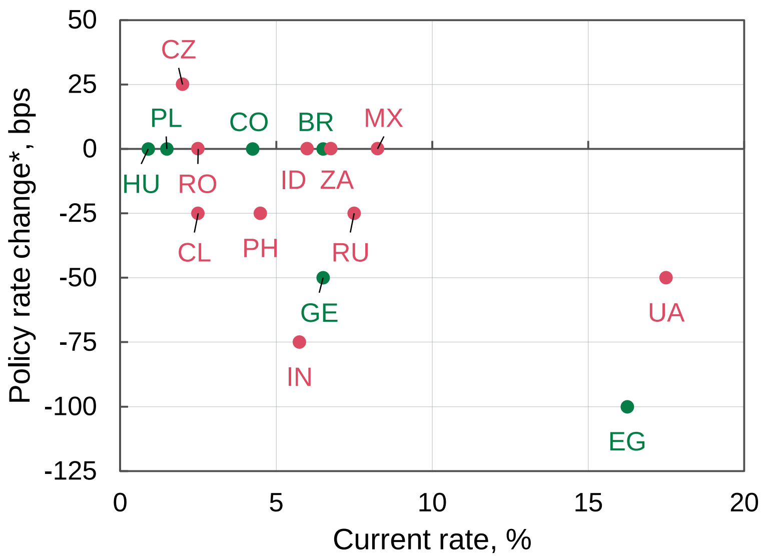
- the key interest rates to remain unchanged at least through the first half of 2020
- reinvesting, in full, the principal payments from maturing securities under the QE
- TLTRO-III a bit less generous than TLTRO-II
- in the absence of improvement, additional stimulus will be required (cuts or APP)

Fed:

- no longer “patient” – will act as appropriate to sustain the expansion
- FOMC almost half-split between those, who penciled 2 rate cuts by the end of 2019 and those who didn't
- Chair Powell does not think the risk of waiting too long is prominent right now.

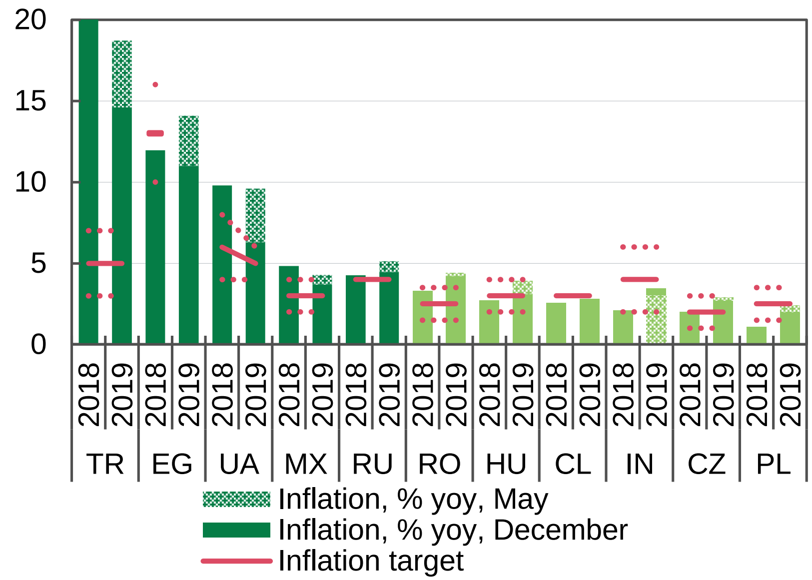
Box. EM monetary policy reaction depends on countries' external vulnerability, inflation evolution and tolerance to missing targets

Key policy rates in selected EM countries, %



Pink color used for those CBs that raised key policy rate at least once during 2018.
* Since the beginning of 2019 as of 17 July 2019.
Source: Official CB web-pages.

Inflation in selected EM countries, %



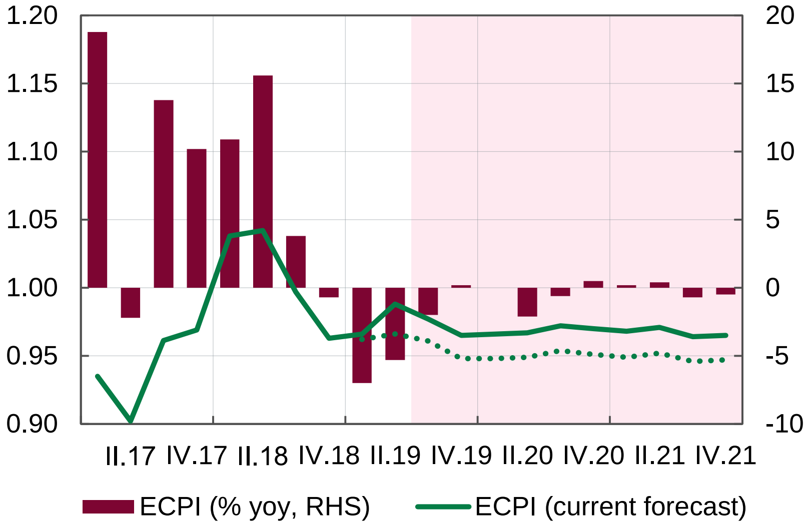
* Countries marked by dark color display those with tighter monetary conditions, in light – easier (according to CB's communications). Dotted lines indicate upper and lower bounds of tolerance bands around inflation target. In Egypt, previous target was set for 2018Q4, next – for 2020Q4; in Ukraine – for the end of 2018 and 2019.

Source: National statistical agencies, official CB web-pages.

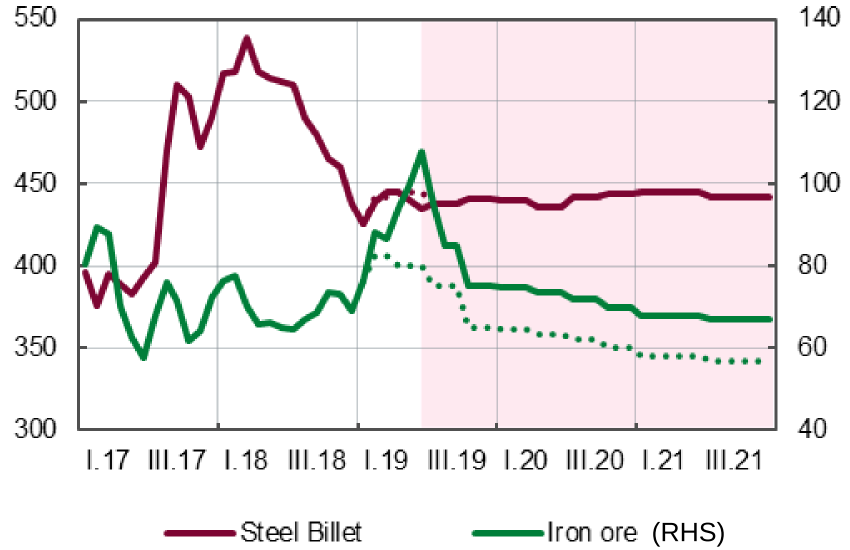
- Inflation in many EM countries with IT has reached CB's targets in 2018 and is expected to hover around the target during 2019
- CBs of those countries, where shrinking external demand has a significant impact primarily on economic activity, will conduct easier policy to stimulate domestic demand (CEE and Chile)
- CBs of those countries that depend on external financing and commodity prices will keep policy tight to contain inflationary pressure from depreciation of national currencies (Russia, Mexico)

Weaker global demand and trade weighed on commodity prices, but impact of supply factors dominated on selected markets

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

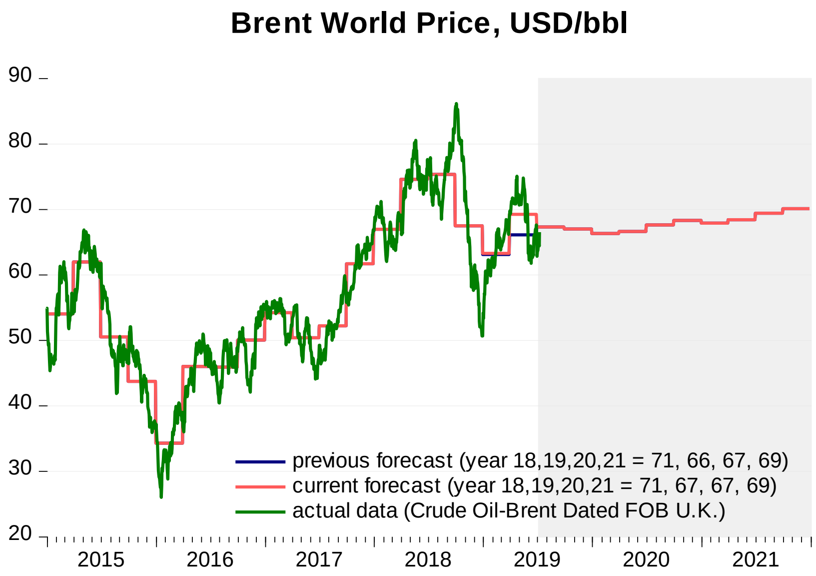


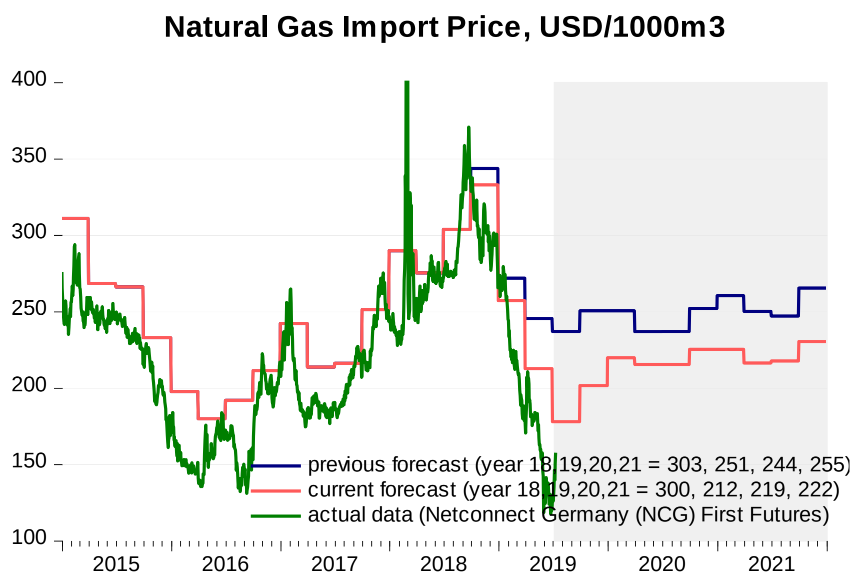
World prices for ferrous metals and iron ore*, USD/MT



- External Commodity Price Index (aggregates world price developments on commodities that prevail in Ukraine's exports) evolved better than expected in the previous forecast thanks to ongoing rise in iron ore prices and relatively high grain prices

Crude oil prices will fluctuate in a slight range (gas price revised downwards significantly due to lower demand and higher supply)





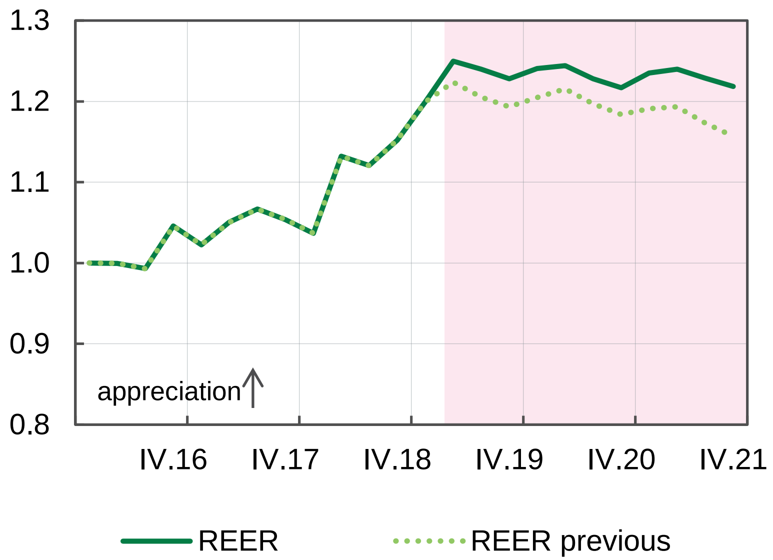
- Geopolitical tensions and adherence to OPEC+ agreement pressured crude oil prices upwards, but global demand weaknesses offset these pressures

Natural gas prices revised down due to:

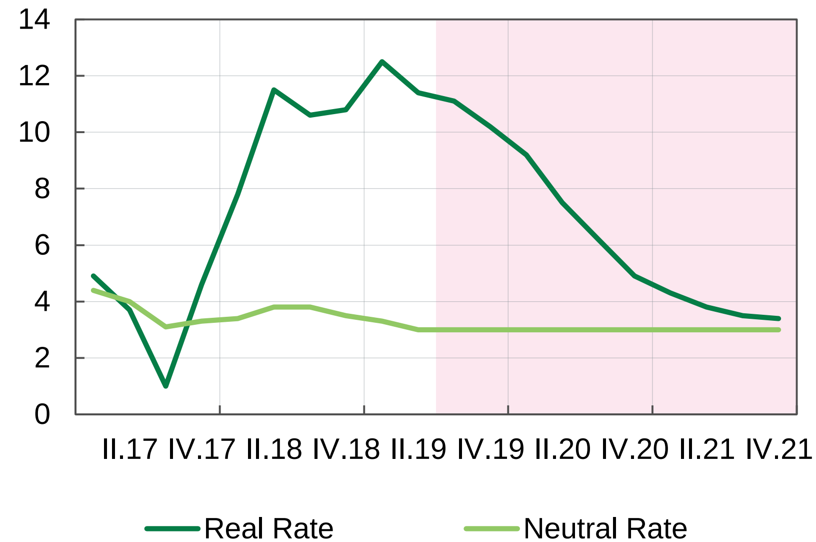
- global economy slowdown
- high stocks in gas storages at the end of the heating season
- robust increase in production by the US and Russia

REER stabilizes in 2020-2021 after strong appreciation in 2016-2019. Monetary conditions are tight enough for disinflation

REER index (1.2016=1)



Real interest rate*, %



average	2018	2019	2020	2021
REER, % change	5.9	10.7 (8.6)	0.3 (-0.4)	-0.2 (-1.8)

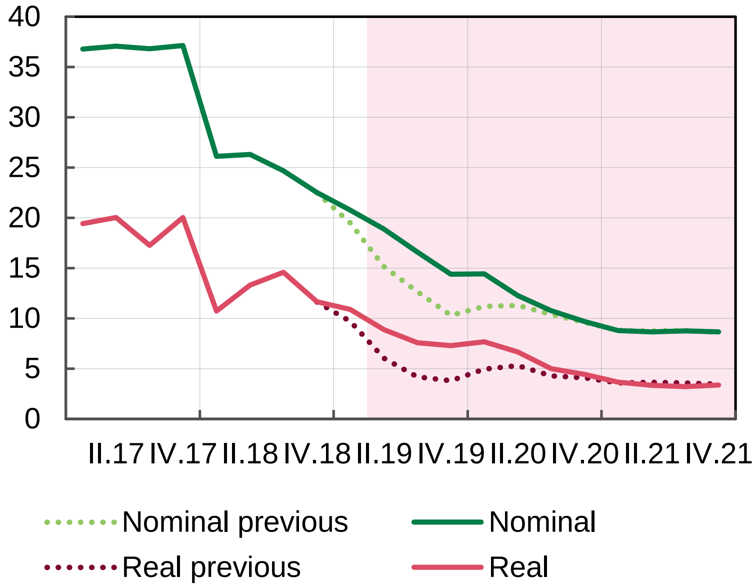
in ( ) – previous forecast (IR, April 2019)

* Deflated by inflation expectations that are based on the quarterly forecast model.

(stronger REER: ↑ToT, ↑harvest, ↑portfolio investments)

Wages growth slowdown reflects weakening effect of labor migration on local market

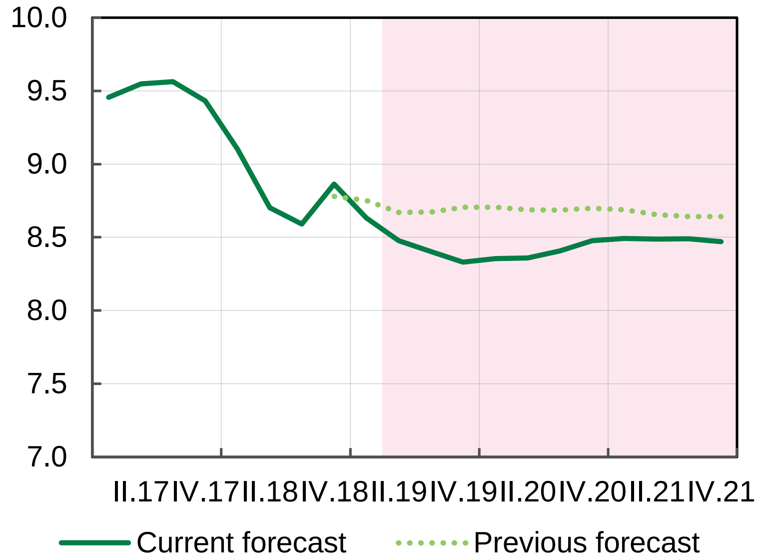
Nominal & real wages, annual change, %



change, %	2019	2020	2021
Real wages	**8.6**	**5.9**	**3.4**
- previous forecast	*5.7*	*4.7*	*3.5*
Nominal wages	**17.5**	**11.7**	**8.7**
- previous forecast	*14.2*	*10.5*	*8.7*

(wages growth rates are revised up due to strong domestic demand)

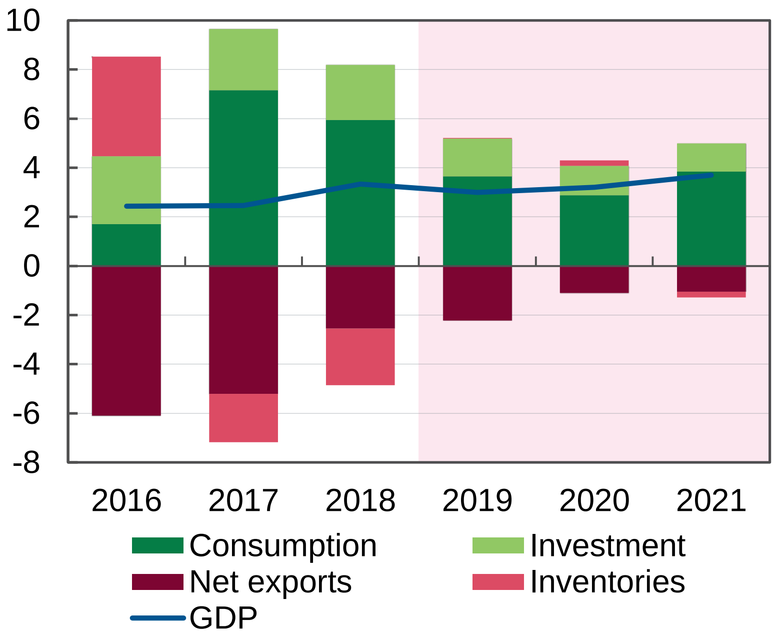
ILO unemployment, sa, %



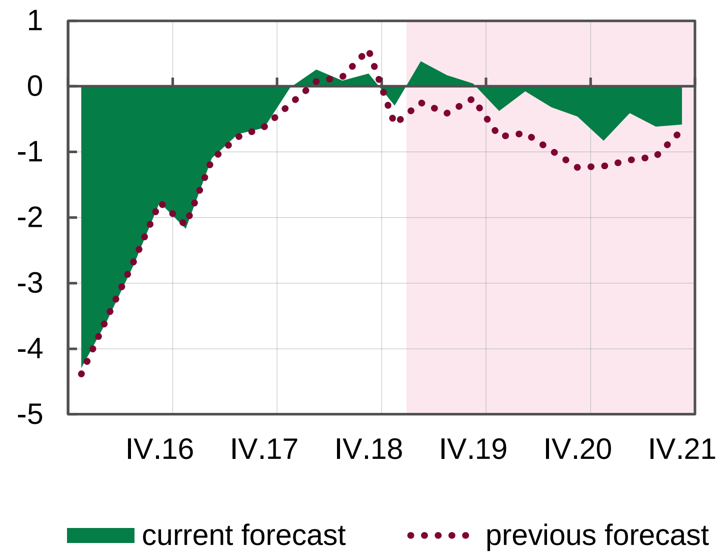
	2019	2020	2021
Minimum wage, UAH	**4173**	**4723**	**5003**
- previous forecast	*4173*	*4407*	*4627*
change, %	***12.1***	***13.2***	***5.9***

In 2019, GDP growth slows down marginally to 3.0% and accelerates further (↑outlook: ↑harvest,↑ToT, ↑domestic demand)

Contributions to real GDP growth, pp



Output gap, % of potential GDP



	W,%	2018	2019	2020	2021
GDP	100	**3.3**	**3.0** (2.5)	**3.2** (2.9)	**3.7** (3.7)
Consumption	87	6.8	4.1 (3.7)	3.1 (2.5)	4.2 (3.9)
Private consumption	66	8.7	5.2 (4.7)	3.6 (3.0)	5.0 (4.7)
Gross fixed capital formation	16	14.3	9.0 (5.7)	7.1 (6.7)	6.6 (6.0)
Exports of G&S	48	-1.6	2.7 (1.1)	1.4 (1.2)	1.6 (2.0)
Imports of G&S	56	3.2	6.4 (4.8)	3.4 (2.9)	3.5 (3.5)

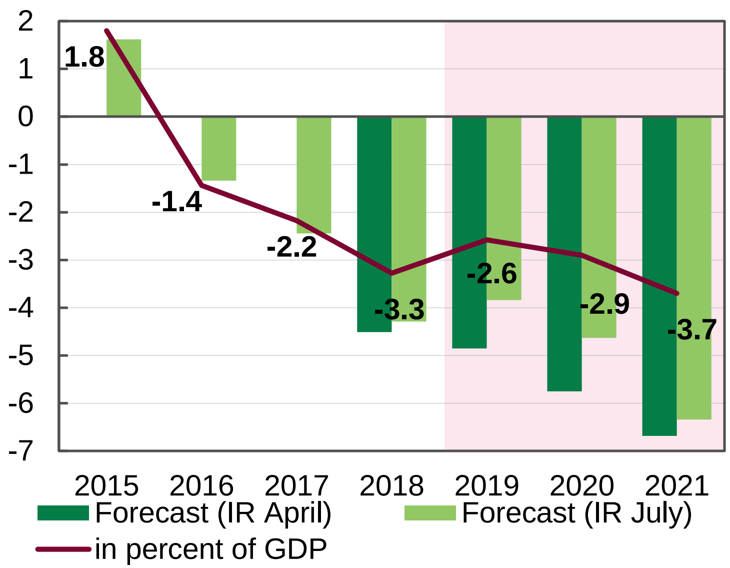
in ( ) – previous forecast (IR, Apr 2019)

Growth slowdown in 2019:
- global economy deceleration
- tight monetary and fiscal policy
- lower positive contribution from agricultural sector

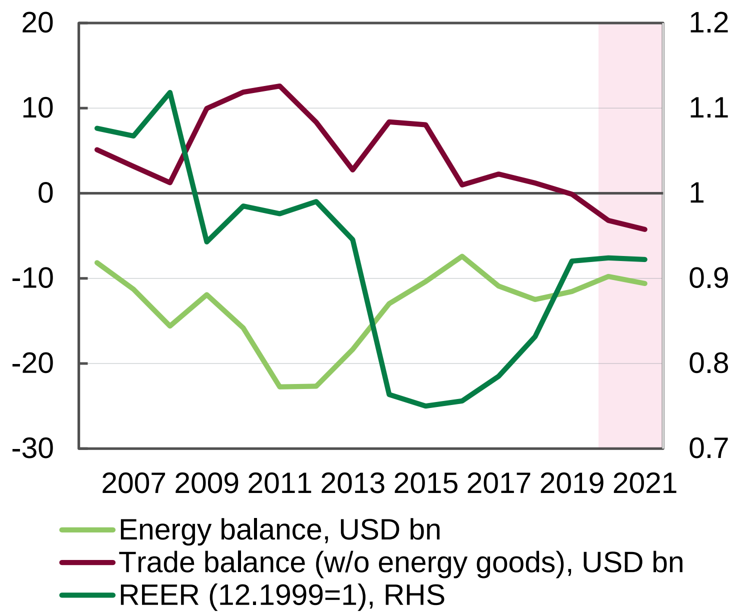
Growth acceleration in 2020-2021:
- global economy acceleration
- monetary policy loosening

In 2019, CA deficit shrinks to 2.6% of GDP; but in 2020-2021, deficit widens due to lower gas transit and high domestic demand

Current account balance, USD bn

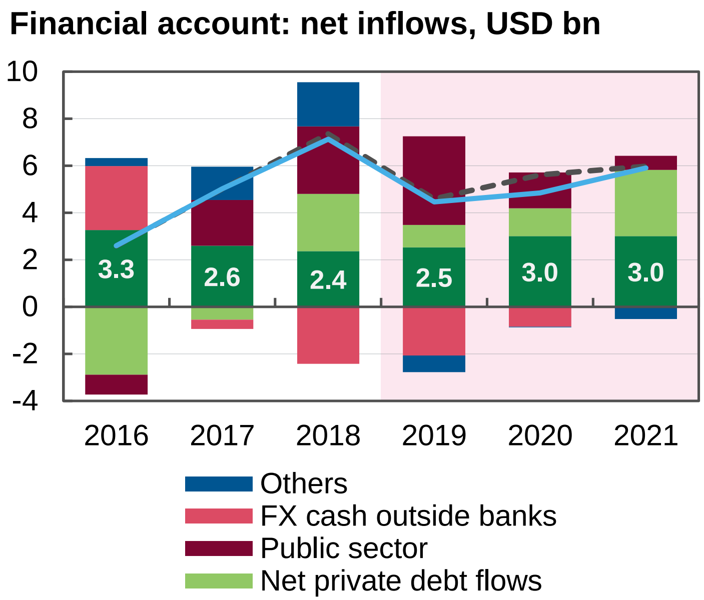


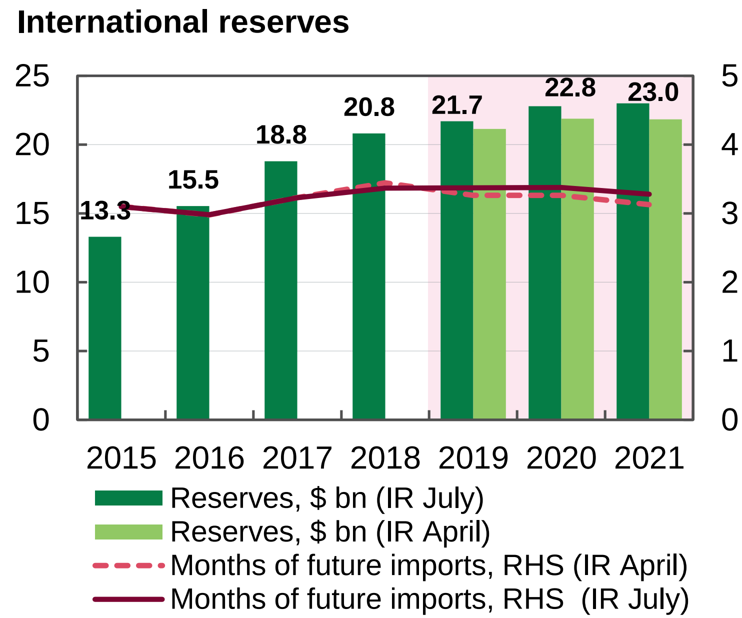
REER and trade balance



Main changes in CAB forecast in 2019-2021 compared with IR April	
↑ Trade in goods	↑Terms of trade: ↓gas, ↑grains, ↑iron ore
	↑Volumes of exports: ↑agro (grains& others), ↑iron ore, ↓metals ↑Volumes of imports: ↑agro, ↑machinery, ↑chemicals
↑ Remittances	↑ Revised amount of migrants to Germany and higher GDP of Poland
↓ Dividends	↓ Weak actual data

In 2019-2021, debt flows to private sector and investment capital will remain the major source of financing the CA deficit





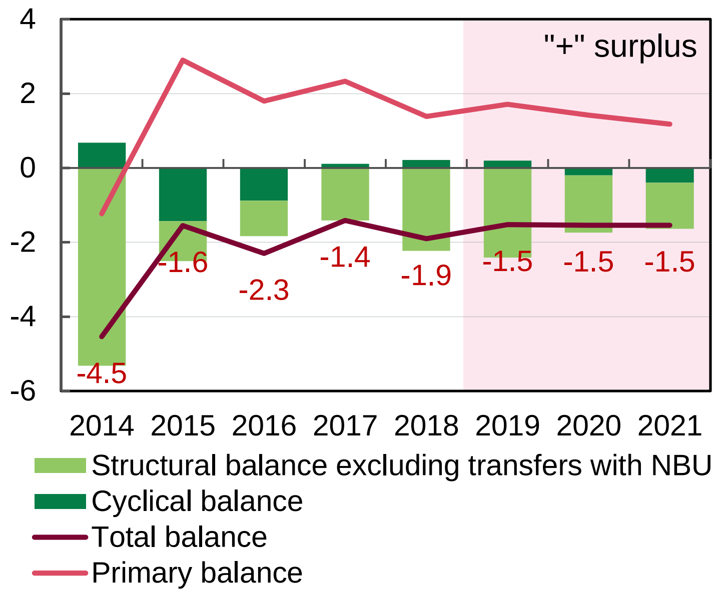
(outlook for 2019: ↑ demand for domestic bonds from non-residents)

Memo items, $ bn

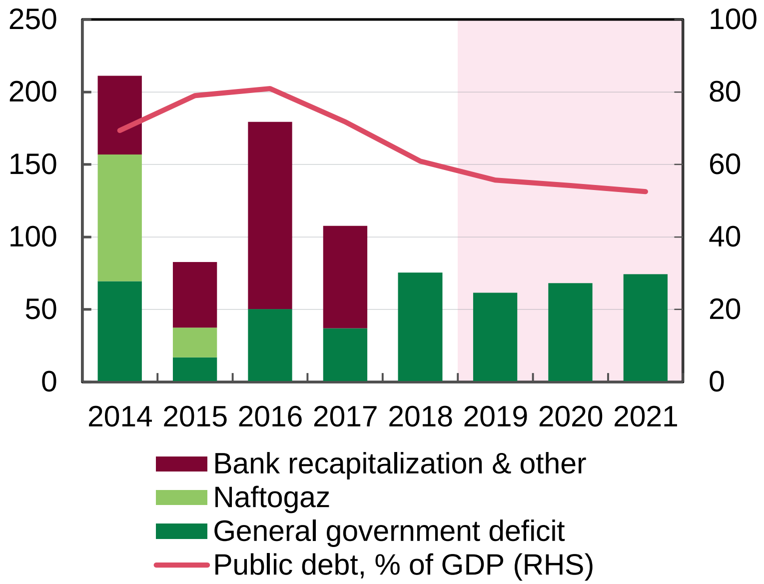
	2018	2019	2020	2021
IMF	1.4	2.0	2.0	2.0
Other financing	1.0 (EU + WB)	0.6 (WB)	1.1	1.0
Eurobonds placement	2.0	2.5	3.0	3.5

Fiscal policy will be tight, budget deficit to keep at 1.5% GDP in 2019-2021, which leads to decrease in debt to GDP ratio

Consolidated budget balance, % GDP



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

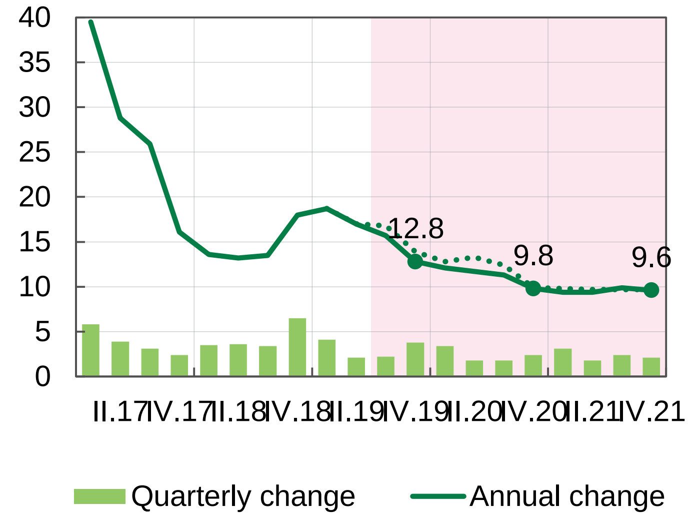


Administered price inflation decelerates but continues to contribute strongly into headline inflation

	weight %	2019		2020		2021	
		new	prev.	new	prev.	new	prev.
Admin CPI	*16.8*	**12.8**	***13.9***	**9.8**	***9.9***	**9.9**	***9.7***
Natural gas	*1.2*	2.0	*15.0*	11.0	*7.0*	7.0	*7.0*
Heating	*0.8*	14.0	*30.0*	11.0	*7.0*	7.0	*7.0*
Hot water	*0.2*	14.0	*30.0*	11.0	*7.0*	7.0	*7.0*
Cold water	*0.2*	13.0	*13.0*	9.0	*9.0*	9.0	*9.0*
Electricity	*0.9*	0.0	*25.0*	0.0	*20.0*	25.0	*20.0*
Alcohol	*4.7*	10.0	*6.0*	9.0	*9.0*	9.0	*9.0*
Tobacco	*3.6*	20.0	*19.0*	12.0	*12.0*	12.0	*12.0*
Transport	*2.5*	14.0	*13.0*	9.0	*9.0*	8.0	*8.0*

prev. – previous forecast (IR, Apr 2019)

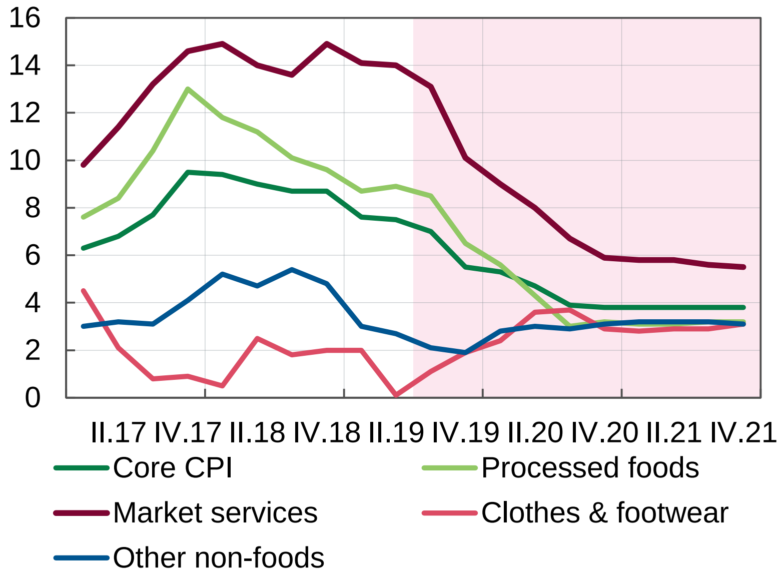
Administered price inflation, %



Gas price for households follows import parity (lower prices for gas and delay in electricity market reform decelerate admin inflation)

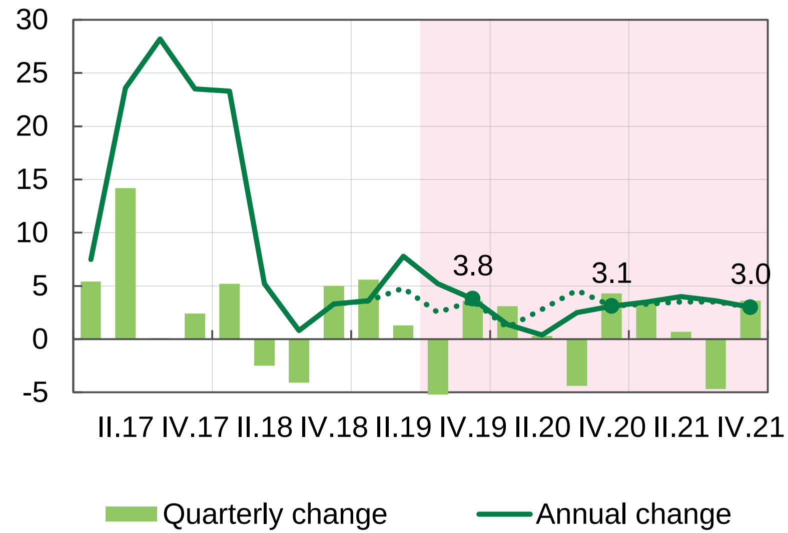
Core inflation slows down as cost-push and demand-pull factors weaken. Raw food inflation remains subdued

Main components of core CPI, %



Source: SSSU, NBU staff estimates.

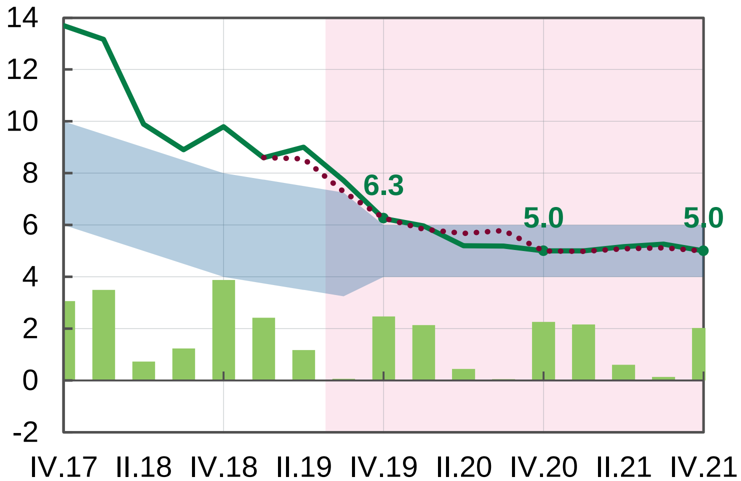
Raw food inflation, %



Source: SSSU, NBU staff estimates.

CPI growth declines to 6.3% this year and gets within the target band in Q1 2020

Headline inflation, %



Source: SSSU, NBU staff estimates.

change, %	*weight, %*	2019		2020		2021	
CPI	***100.0***	**6.3**	*6.3*	**5.0**	*5.0*	**5.0**	*5.0*
Core CPI	*58.9*	5.5	*5.0*	3.8	*3.7*	3.8	*3.7*
Raw food	*18.6*	3.8	*3.6*	3.1	*3.1*	3.0	*3.0*
Admin	*18.5*	12.8	*13.9*	9.8	*9.9*	9.7	*9.7*
Fuel	*4.0*	2.9	*3.4*	5.2	*5.2*	5.2	*5.0*

(gray color) – previous forecast (IR, Apr 2019)

Factors behind the further decline in inflation:

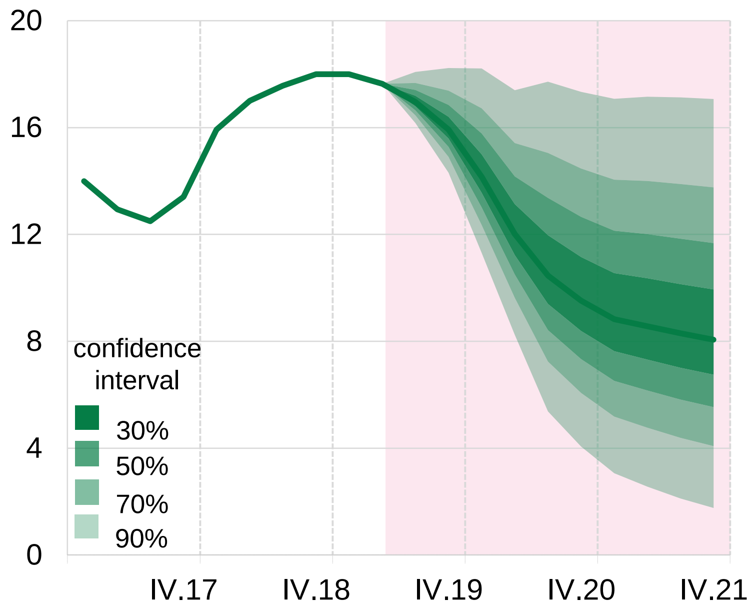
- tight monetary conditions
- a prudent fiscal policy
- the slowdown in wage growth
- relatively low energy prices in the global markets
- ample supply of domestic and foreign food products.

(outlook is unchanged but fundamental pressure increased)

The NBU continues the cycle of monetary policy easing (to 8% in 2021) as inflation is declining towards the target of 5%

Key rate forecast is an integral part of macroeconomic forecast and consistent with other forecast indicators.

Key rate (%) and uncertainty



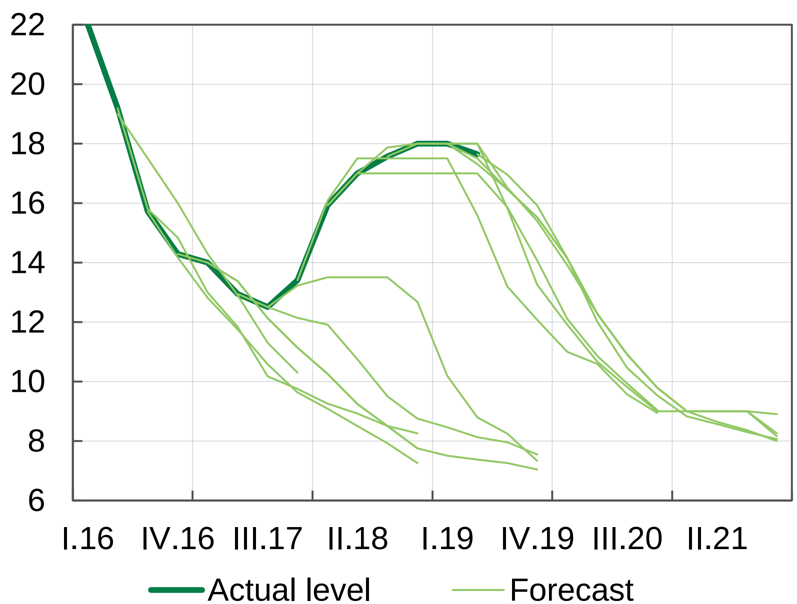
Key rate forecast will be updated systematically together with other macro indicators

Box. Key rate forecast publication (since July 2019)

Key rate publication benefits:

- Better understanding of future monetary policy
- Transmission channel strengthening due to wider information coverage
- Lower risk premium due to policy predictability
- Higher quality of decision making process

Key rate, % (actual vs forecasts)



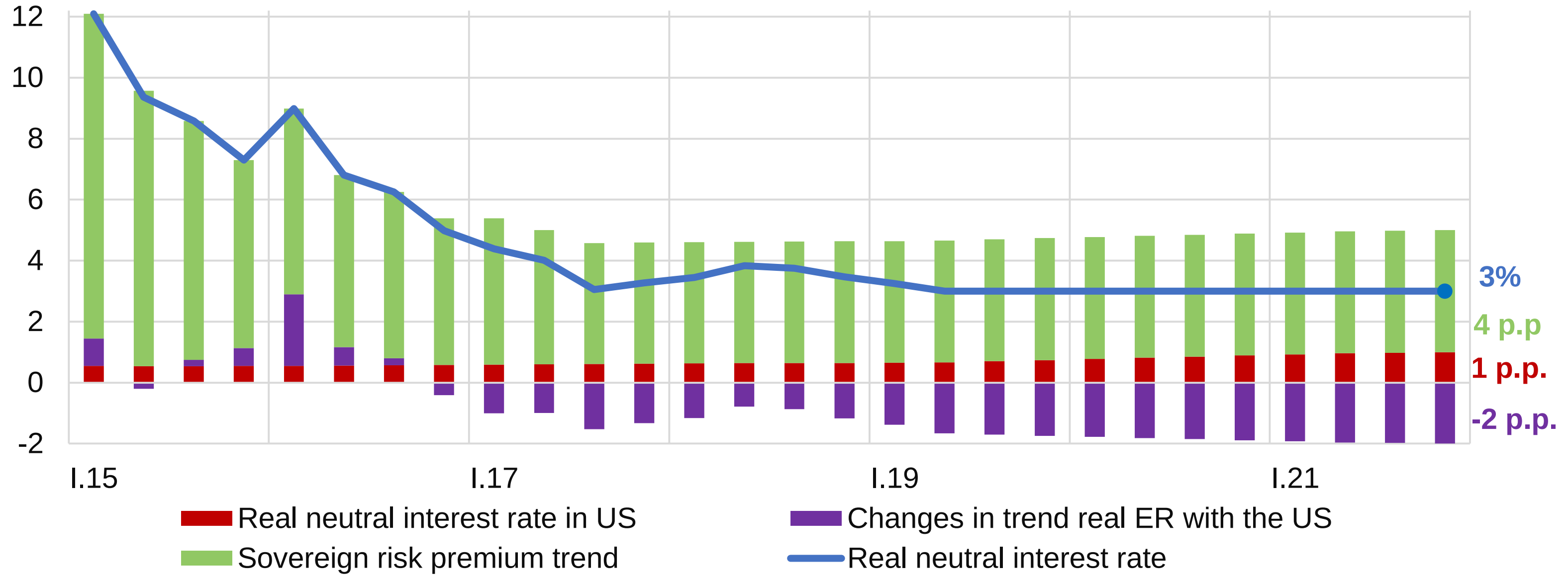
Actual key rate may deviate from the forecast due to shift in:

- Inflation forecast
- Inflation expectations
- Balance of risks

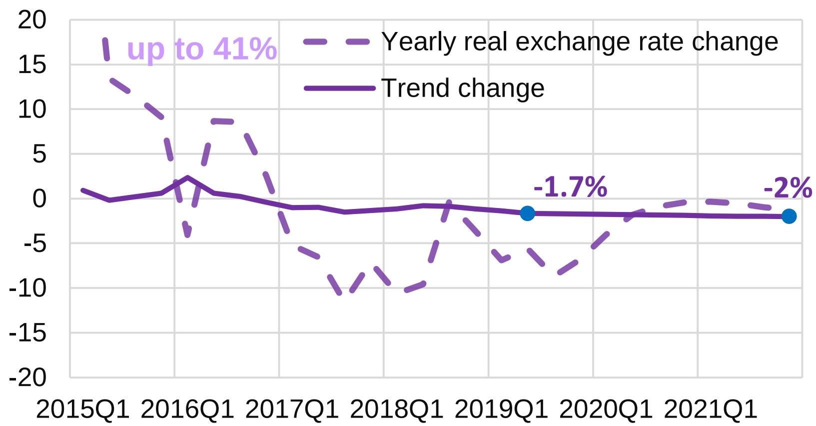
Also published by: Czech Republic, Georgia, New Zealand, Island, Israel, Norway, Sweden

Components of neutral rate

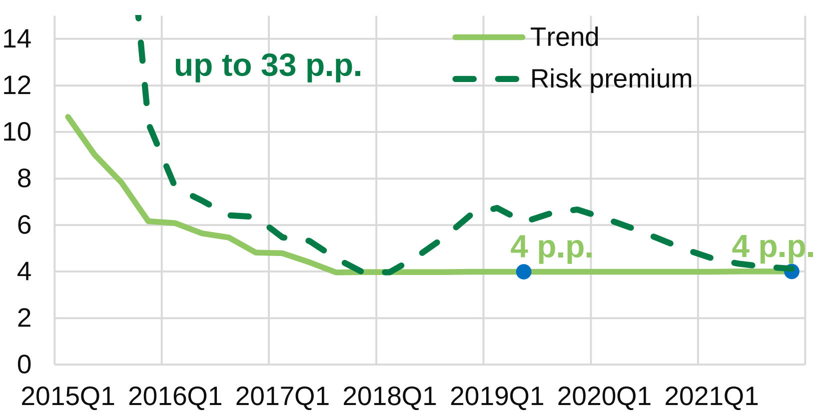
Real neutral interest rate decomposition



Real exchange rate change and its trend, %



Sovereign risk premium



Source: NBU based on Grui et al (2018) methodology

Main risks

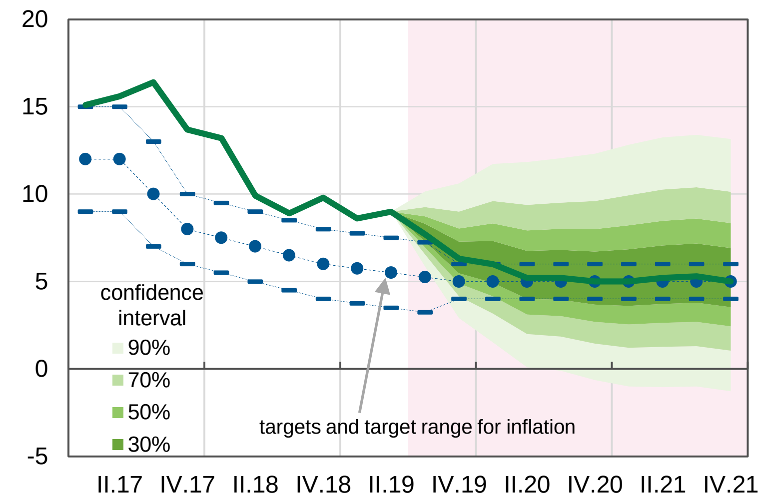
The main domestic risk to the baseline forecast scenario is further **strengthening of threats to macrofinancial stability**

The following risks also remain valid:

- a suspension of Russian gas transit through Ukraine starting in 2020
- an escalation of the military conflict and the introduction of new trade restrictions by Russia
- an escalation of trade wars and rising geopolitical tensions

- At the same time, stronger demand for hryvnia government bonds from nonresidents and the subsequent strengthening of the hryvnia would **allow the NBU to cut the key policy rate at a faster pace** than currently built into the baseline scenario

CPI, % yoy



GDP, % yoy