National Bank of Ukraine

Inflation Report (October 2019)

Kyiv

November 5, 2019

Monetary policy decision: summary

In October, the NBU Board decided to cut the key policy rate to 15.5%

- A more rapid decline in underlying inflationary pressures than anticipated, coupled with no change in the balance of risks, have made it possible to ease monetary policy somewhat more quickly than envisaged in the previous macroeconomic forecast
- Inflation forecast for year-end 2019 (6.3%) and 2020 (5.0%) is unchanged. More favorable FX market will neutralize the pressure domestic demand has on prices, which will be somewhat higher according to the new forecast

The NBU's baseline scenario envisages the key policy rate to decrease further, to 8% over the coming years. However, the projected path of the key policy rate for the coming quarters has shifted somewhat downward compared to the July's forecast, given a more significant cut in October

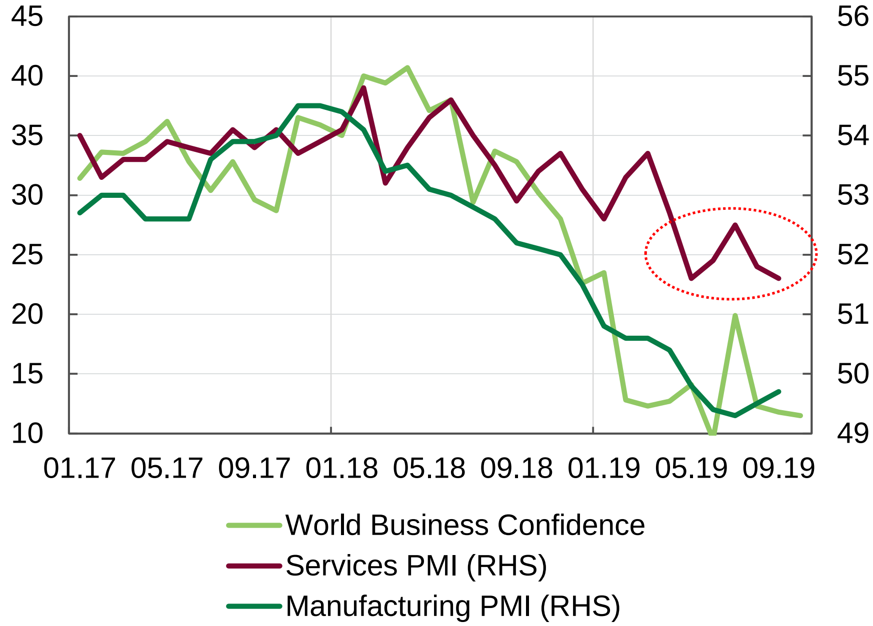
Risks to the forecast:

- a delay in entering into a new cooperation agreement with the IMF, and increased threats to macrofinancial stability pose the key risks
- the complete halt of the transit of Russian gas through Ukraine
- intensified trade tensions and more turbulent global financial markets
- an escalation of the military conflict and new trade restrictions introduced by Russia

If existing inflation risks materialize, the path of the key policy rate towards 8% may be longer. The key policy rate could be cut, to 8%, much more quickly. These cuts will greatly depend on whether or not key internal reforms are sped up

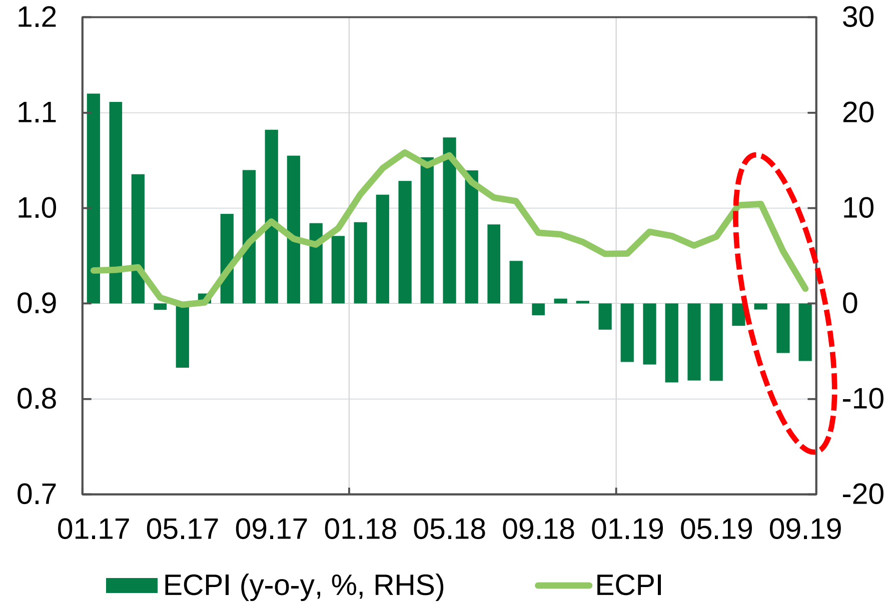
Trade and geopolitical tensions keep weighing on world economic activity, trade and commodity prices

J.P. Morgan Global Manufacturing and Services PMIs, points, and Moody's Business Confidence



Source: IHS Markit, Moody's Analytics Survey.

External Commodity Price Index (ECPI)

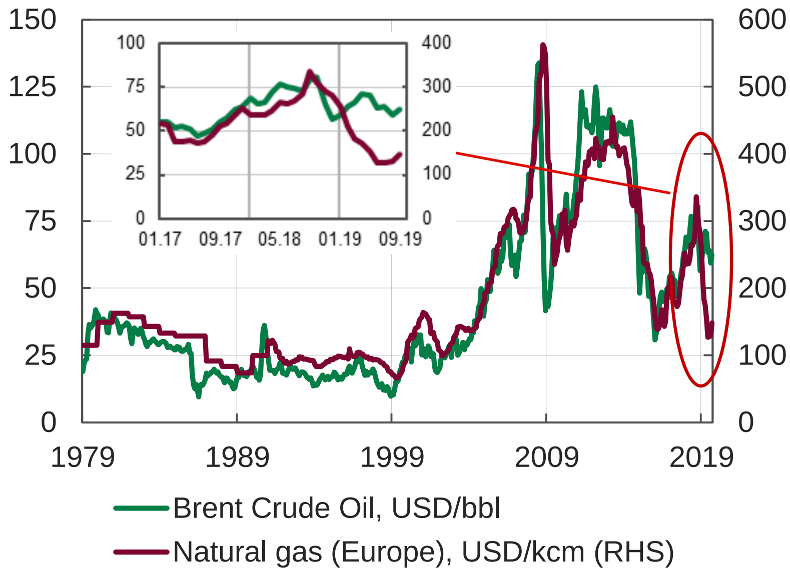


Source: NBU.

- Global manufacturing and trade were hit the most. New orders contracted at paces not seen over the last seven years. Business confidence fell to series-record lows
- Commodity prices continued weakening, driven by both subdued global demand and ample supply

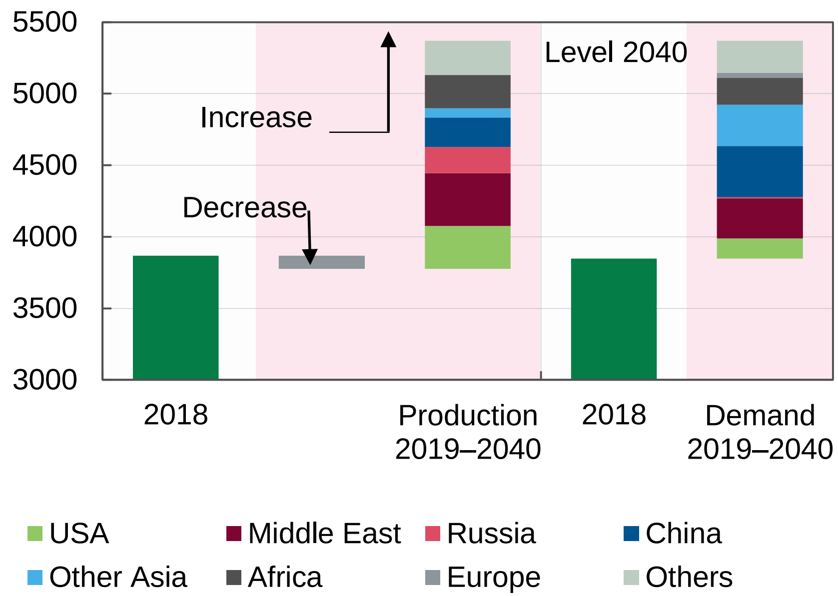
Box: In recent years, natural gas and crude oil price movements became less synchronized

Brent crude oil and European natural gas prices



Source: World Bank, NBU calculations.

Natural gas demand and production forecast, bcm

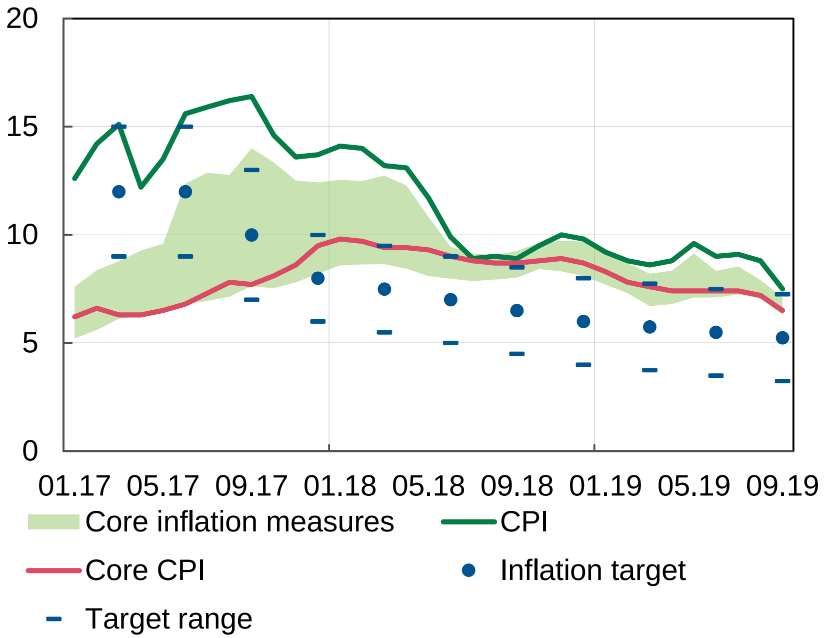


Source: British Petroleum, NBU calculations.

- Over some periods, the correlation between the prices was even negative
- The major reasons for this were the increase in gas supply due to shale gas revolution and EU regulatory changes that contributed to the revision of the price mechanism
- In addition to rising supply, a demand shift towards more environmentally friendly source of energy compared to oil will be an important contributor to the further weakening of the correlation between natural gas and oil prices

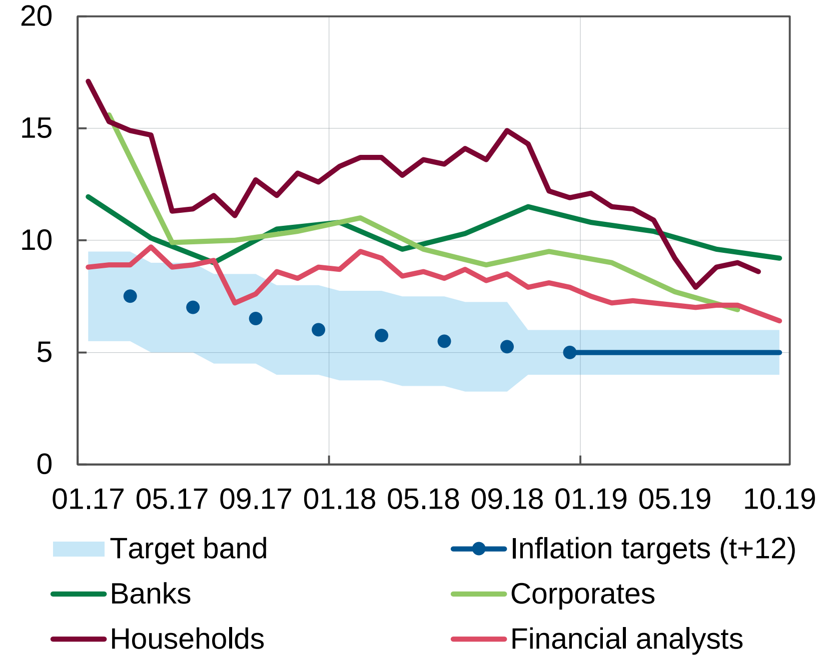
Inflation pressures continued to subside thanks to a tight monetary policy

Headline and Core Inflation, % yoy



Source: SSSU, NBU staff estimates.

Inflation Expectations for the Next 12 Months, %

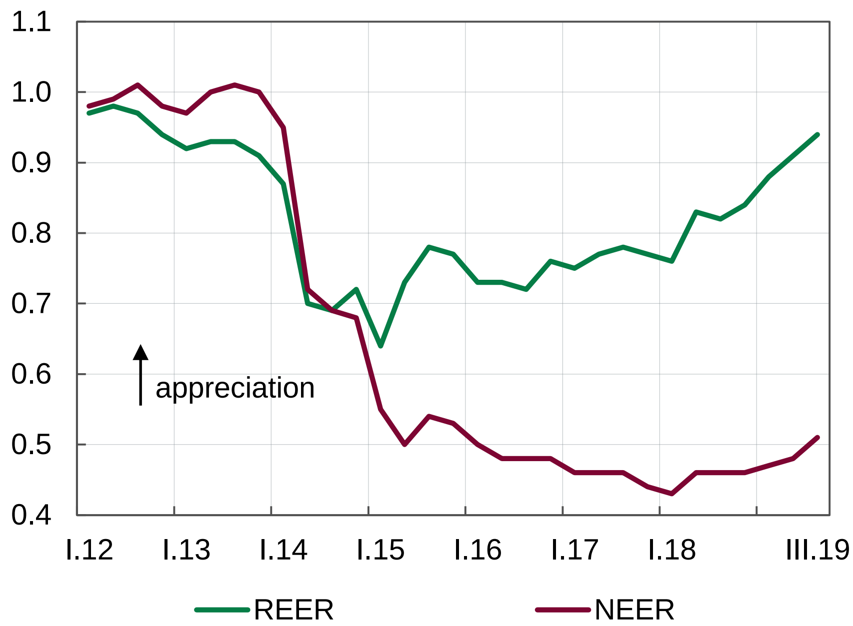


Source: NBU, GfK Ukraine surveys.

- Core inflation, administered prices and fuel prices grew slower than expected, mainly thanks to the continued appreciation of the hryvnia and falling world energy prices
- That outweighed the impact of stronger consumer demand growth and selected food supply pressures
- Favorable FX situation helped to bring inflation expectations closer to inflation target

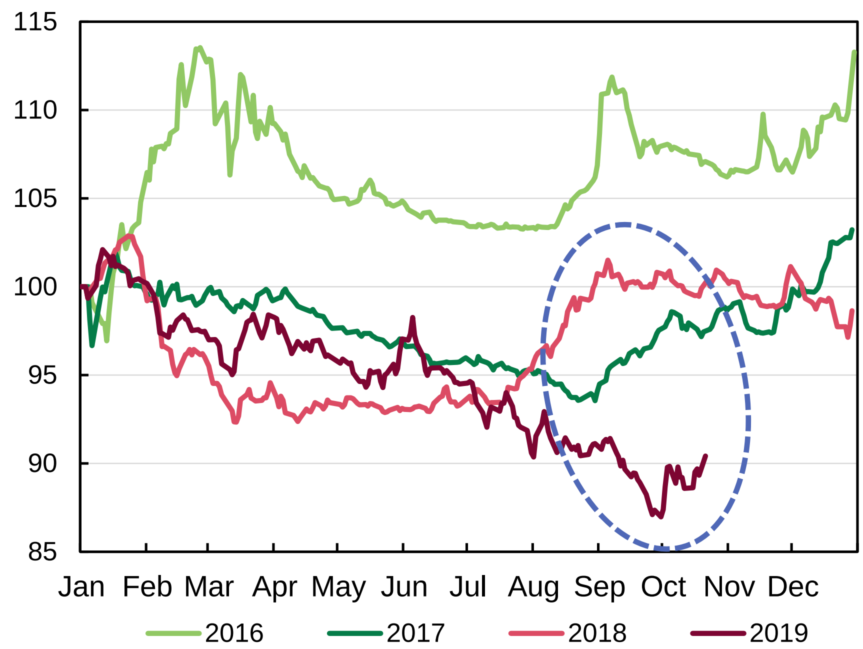
Favorable situation on FX market was driven by fundamental factors

Hryvnia REER and NEER indices, average, 12.2011=1



Source: NBU estimates.

Hryvnia vs US dollar official rate, Jan = 100

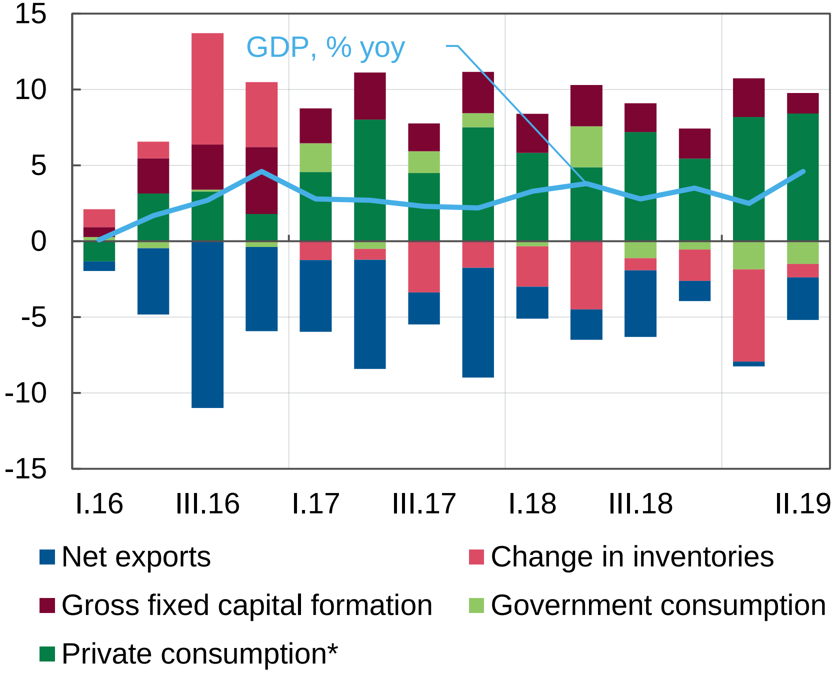


Source: NBU estimates.

- Foreign investors purchases of hryvnia domestic bonds coupled with solid agricultural exports proceeds and subdued imports led to a deeper hryvnia appreciation
- As appreciation pressure on UAH dominates, the NBU continued to use balanced mix of UAH appreciation and FX accumulation

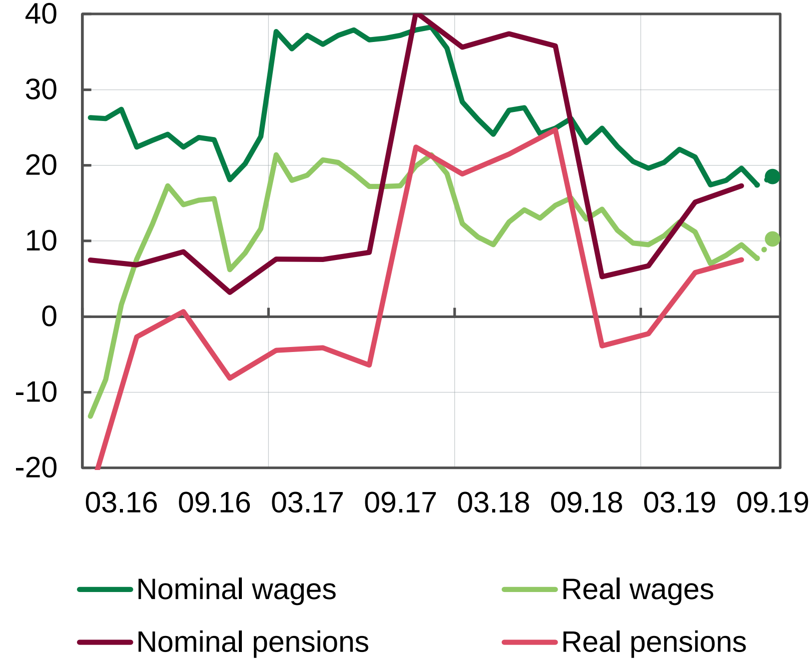
GDP growth continued to be driven by solid rise in private consumption

Contributions to annual GDP growth by expenditure approach, pp



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

Wages and pensions, % yoy

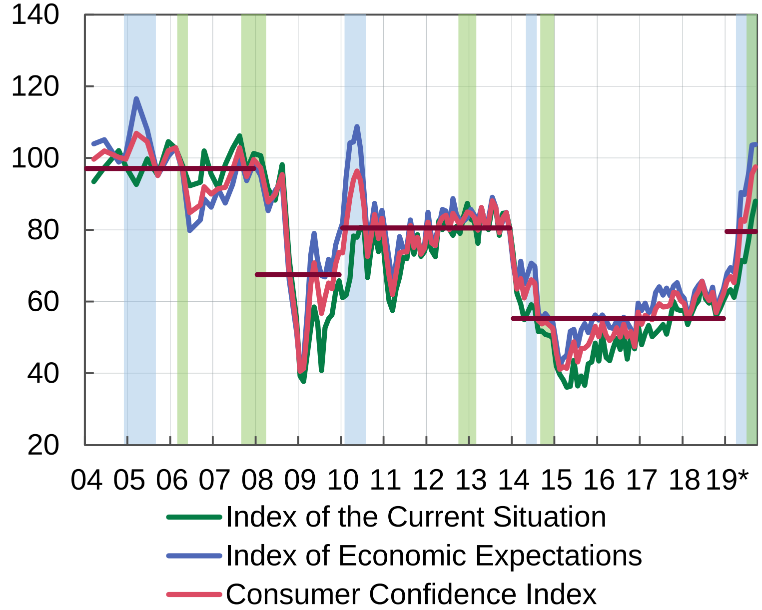


* Dotted lines illustrate nowcast.
Source: SSSU, NBU staff estimates.

- Private consumption is underpinned by improving employment, robust wage growth, rising pension benefits and high consumer sentiments
- Despite better labor market performance, wages kept growing fast, pressured by persistent qualification mismatches between labor demand and supply and changing labor migration structure

Box: Improving consumer confidence is an important driver of consumption growth

Monthly Consumer Confidence Index and its components, points

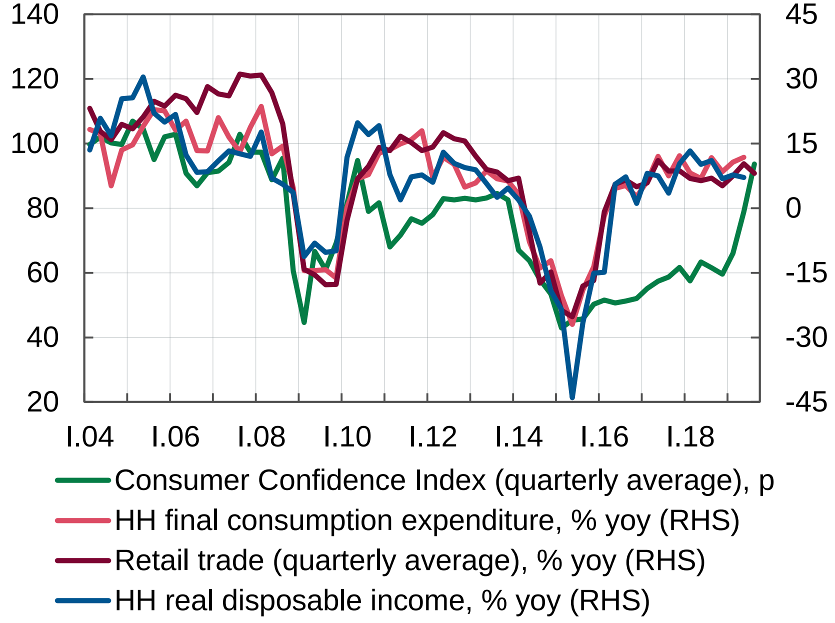


Blue area represents presidential elections, green – parliamentary elections, dark red line – period average for Consumer Confidence Index

* The latest observation is for September 2019

Source: GfK Ukraine, Info Sapiens, NBU staff estimates.

Consumer Confidence Index, household real disposable income and consumption expenditures, and retail trade



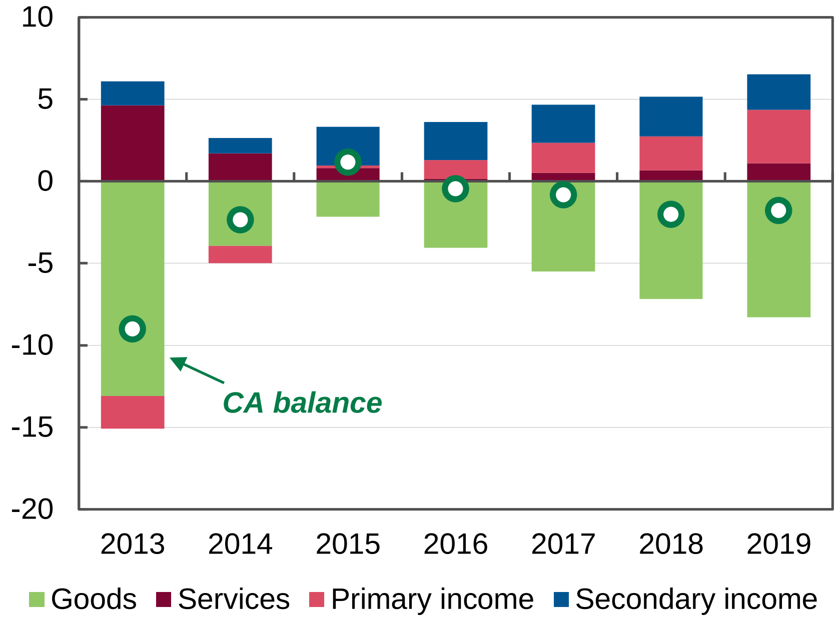
* Q3 2019 – NBU staff estimates.

Source: GfK Ukraine, Info Sapiens, NBU staff estimates.

- Households tend to underestimate their current economic standing. Their expectations for the future improve during the periods of presidential and/or parliamentary elections
- Due to prolonged and deep crisis, household sentiments remained subdued during 2015-2018 and but recently (in September) reached a 12-year highs

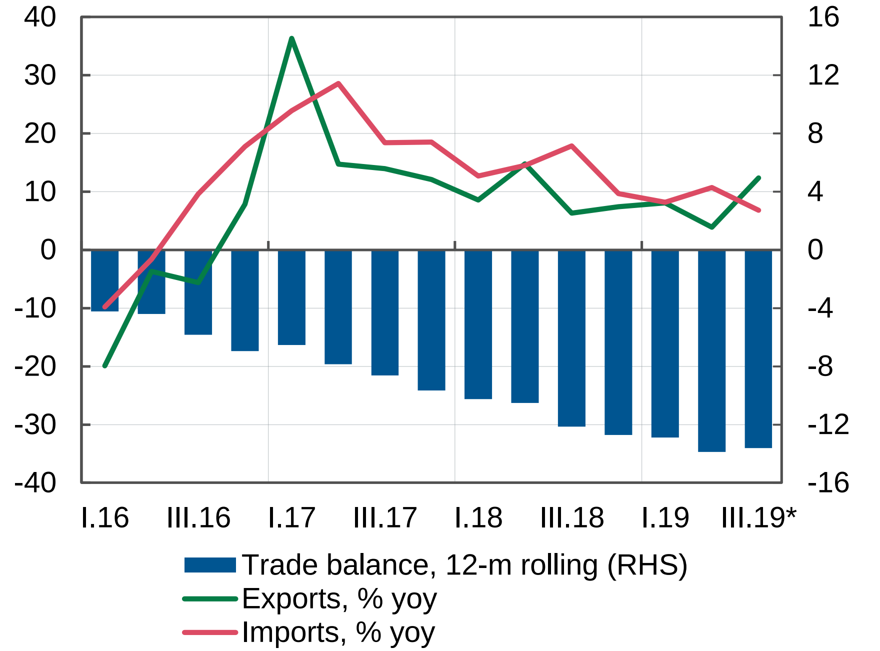
In spite of stronger REER, the CA deficit narrowed

Current Account Balance in Jan-Aug, USD bn



Source: NBU.

Trade Balance, USD bn, 12-m rolling



**Estimated data for September*.

Source: NBU estimations.

- This resulted, among other things, from more rapid growth in exports of goods due to the bumper harvest of early grain crops, which offset the adverse impact of unfavorable external conditions
- Although speeding up gradually, the growth in imports of consumer and investment goods remained moderate on balance, on the back of a drop in energy prices
- The continued growth in wage receipts from abroad and lower dividend payments were additional factors

Summary

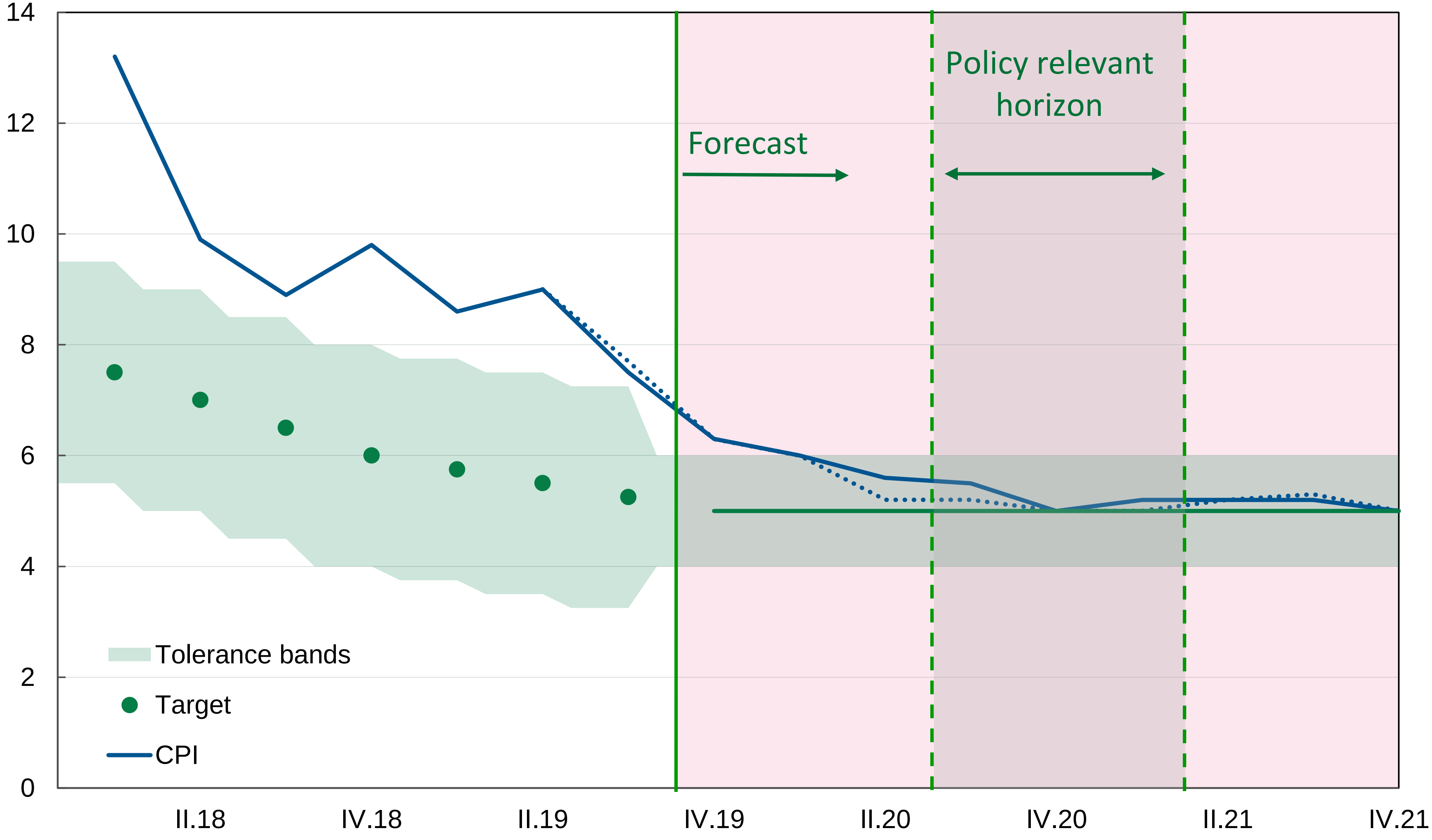
- Commodity prices fall due to global economy slowdown
- Improved financial conditions for EM due to looser monetary policy by major central banks
- GDP growth accelerates to 3.5-4.0% (high harvest and domestic demand)
- Inflation decelerates to 6.3% by end-2019 and 5.0% in 2020 (food supply shocks and higher demand offsets ER appreciation effects)
- CA deficit shrinks (grains&ore) in 2019 but widens in 2020-2021 (lower gas transit and deterioration of ToT)
- Slightly looser monetary policy by NBU due to appreciation pressure

Key macroeconomic indicators

	2017 actual	2018 actual	2019 estimation	2020 forecast	2021 forecast
Real GDP, change, %	2.5	3.3	3.5 (3.0)	3.5 (3.2)	4.0 (3.7)
Nominal GDP, UAH bn	2984	3 559	4020 (4 003)	4420 (4 390)	4850 (4 803)
CPI, y-o-y, %	13.7	9.8	6.3 (6.3)	5.0 (5.0)	5.0 (5.0)
Core CPI, y-o-y, %	9.5	8.7	5.3 (5.5)	3.7 (3.8)	3.8 (3.8)
Current account balance, USD bn	-2.4	-4.4	-4.5 (-3.8)	-5.7 (-4.6)	-7.5 (-6.3)
% GDP	*-2.2*	-3.3	-2.9 (-2.6)	-3.3 (-2.9)	-4.0 (-3.7)
BOP (overall), USD bn	2.6	2.9	2.6 (0.6)	0.6 (0.2)	-1.1 (-0.4)
Gross reserves, USD bn	18.8	20.8	23.0 (21.7)	24.0 (22.8)	23.1 (23.0)

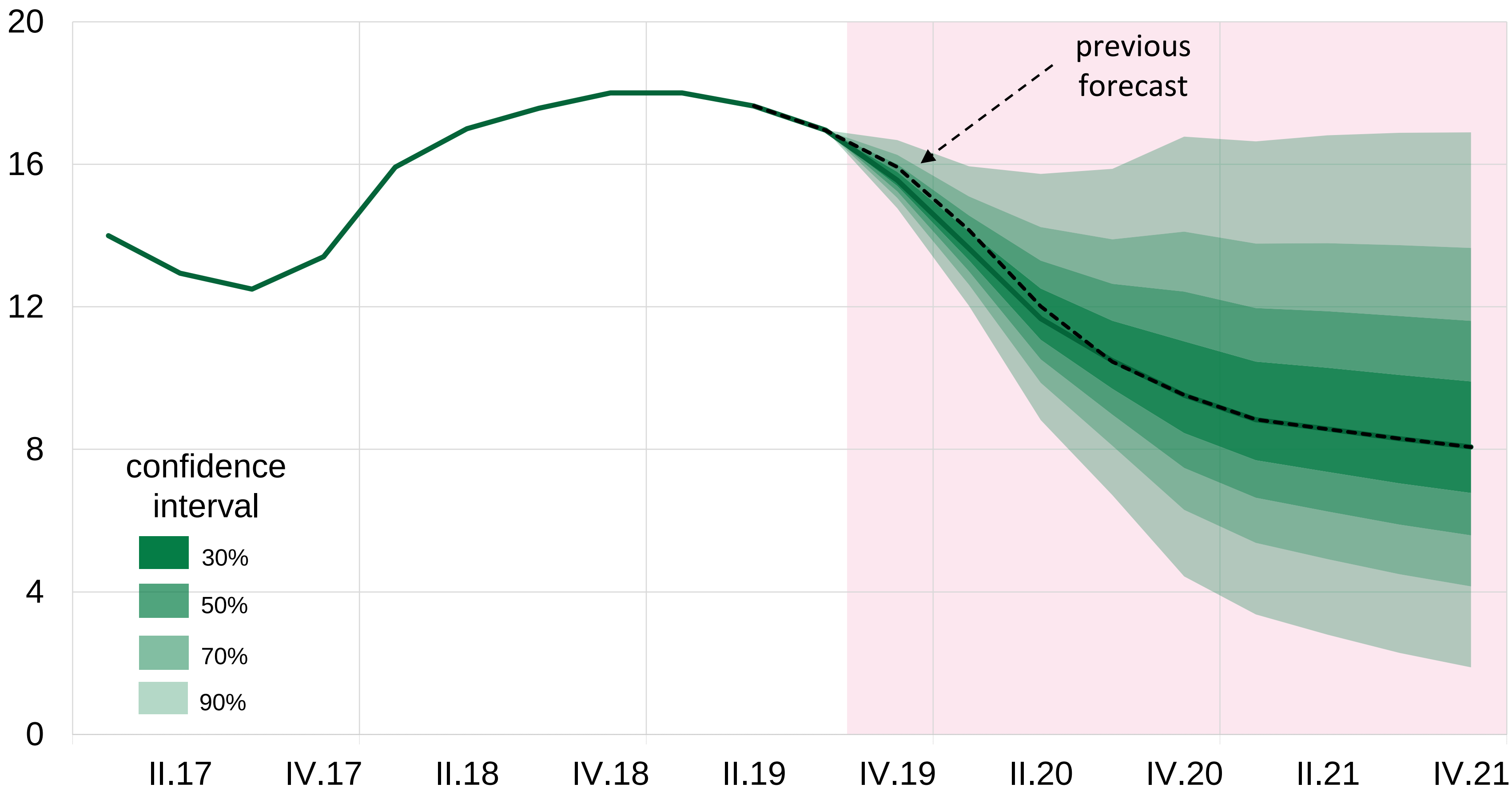
in ( ) – previous forecast (IR, July 2019)

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



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

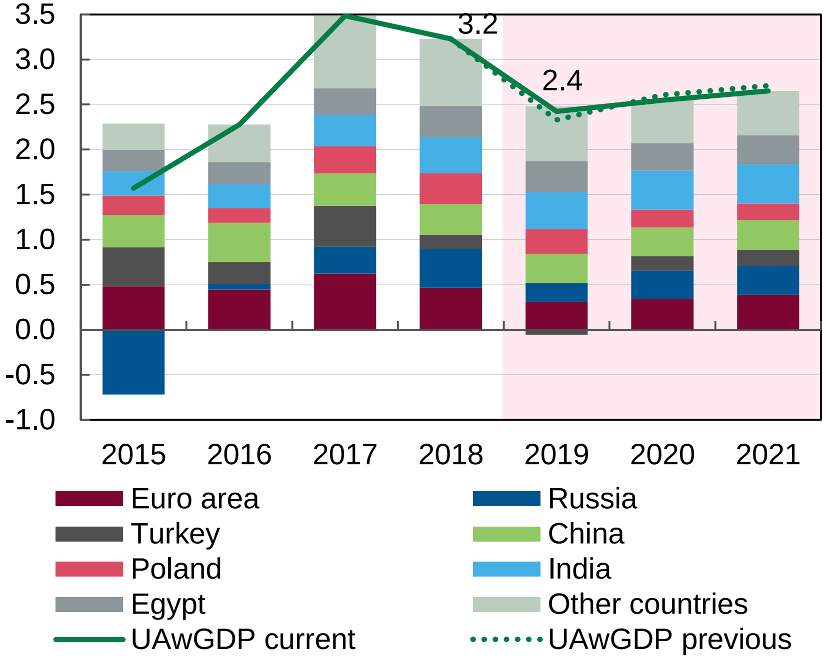
Key rate (%) and uncertainty



The projected path of the key policy rate for the coming quarters has shifted somewhat downward compared to the July's forecast, given a more significant cut in October

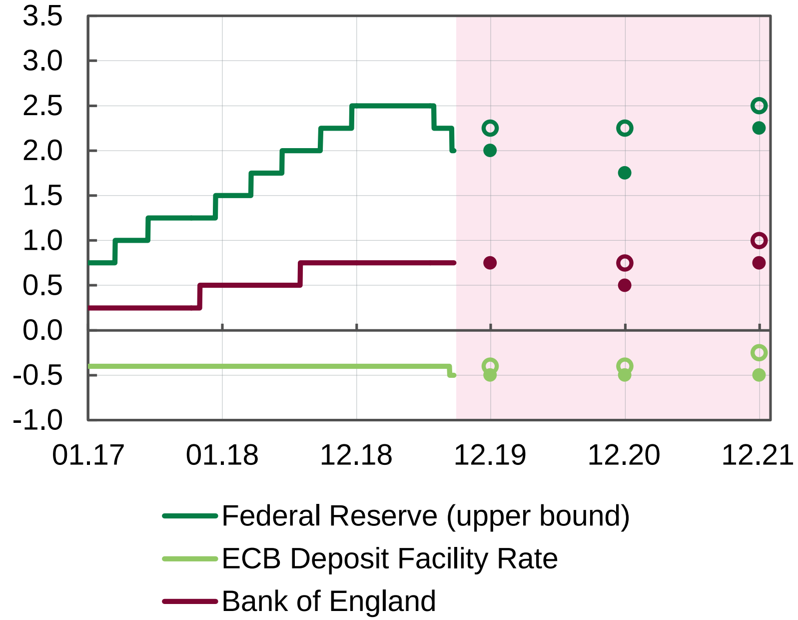
Global economy slows down as expected and major central banks loosen monetary policy. Stronger capital flows to EM

Contributions of countries to UAwGDP, % y-o-y



Source: NBU estimate (preliminary data).

Key policy rates of major central banks, % eop

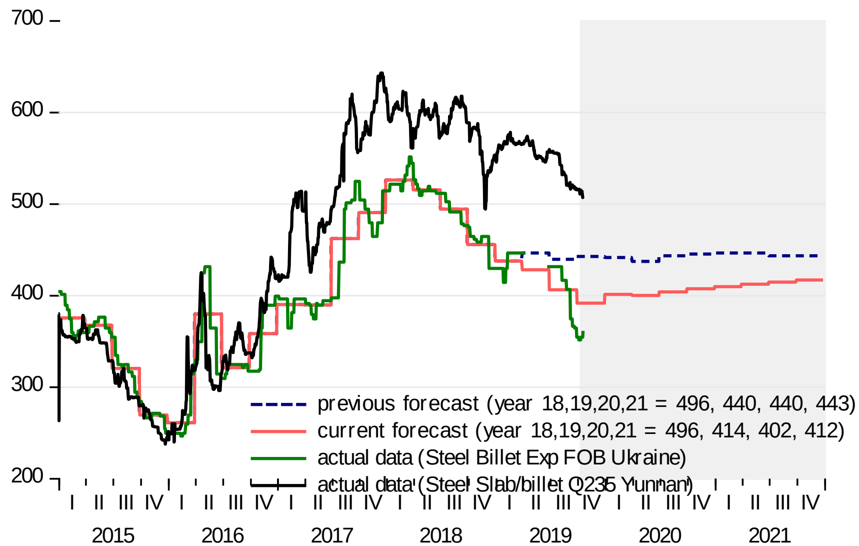


** Unfilled dots indicate previous forecast.*

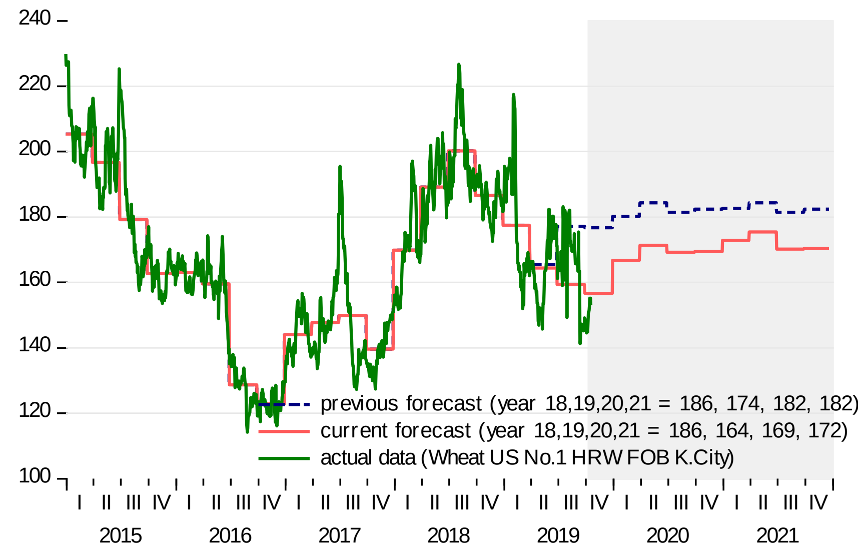
Source: official web-pages of central banks, NBU staff estimates.

Steel prices are falling amid global economy slowdown. High world harvest leads to decrease in wheat prices

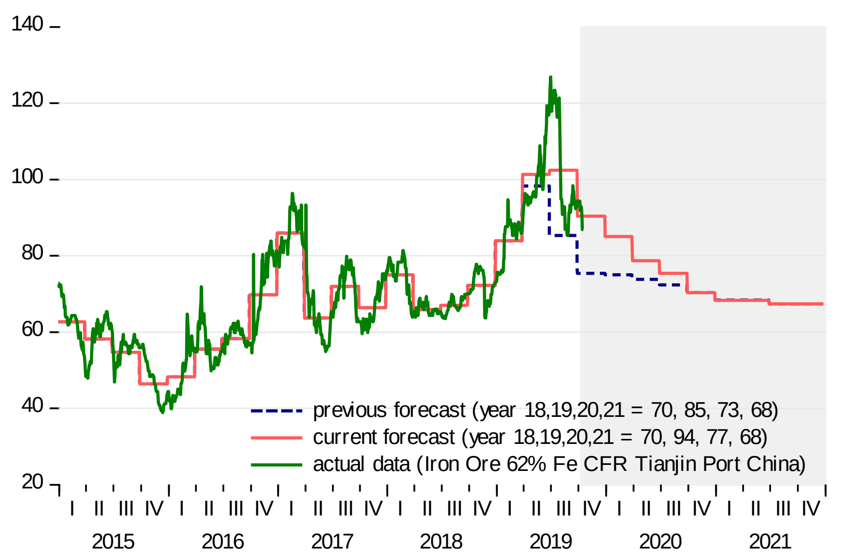
Steel World Price, USD/MT



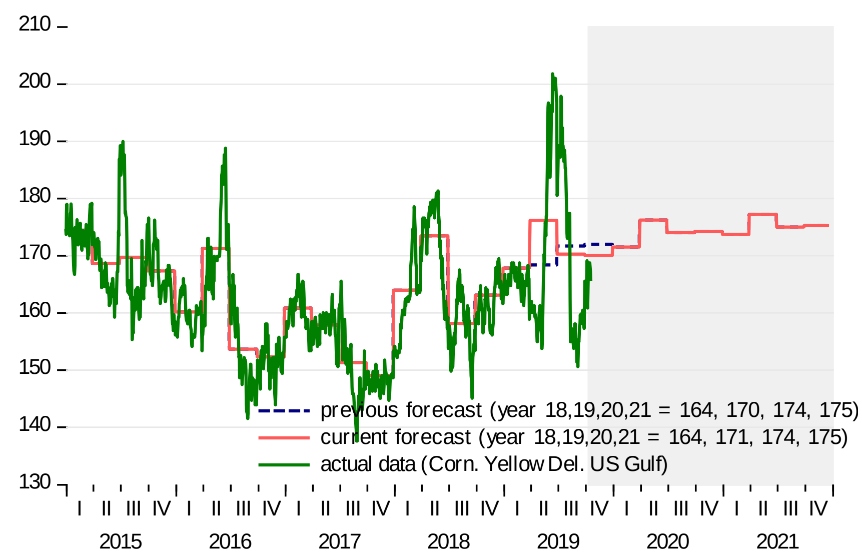
Wheat World Price, USD/MT



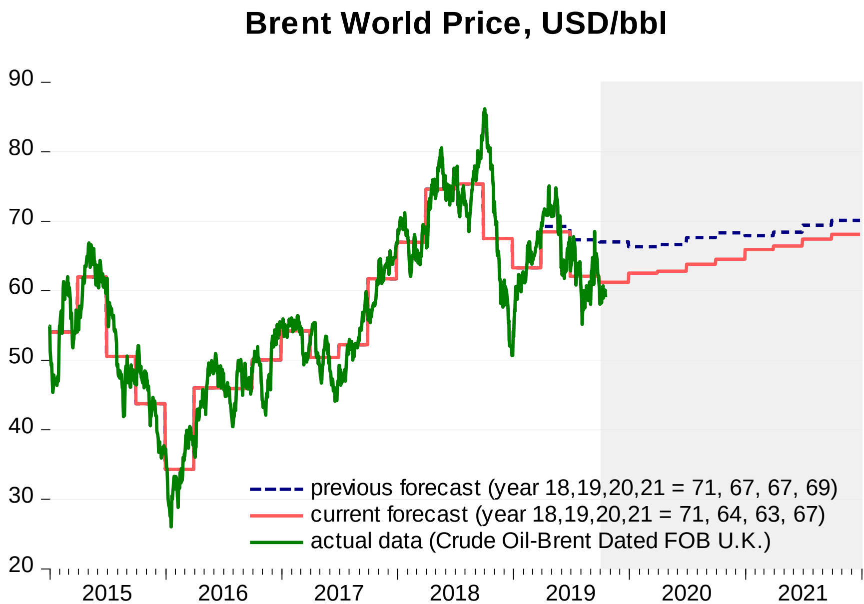
Iron Ore World Price, USD/MT

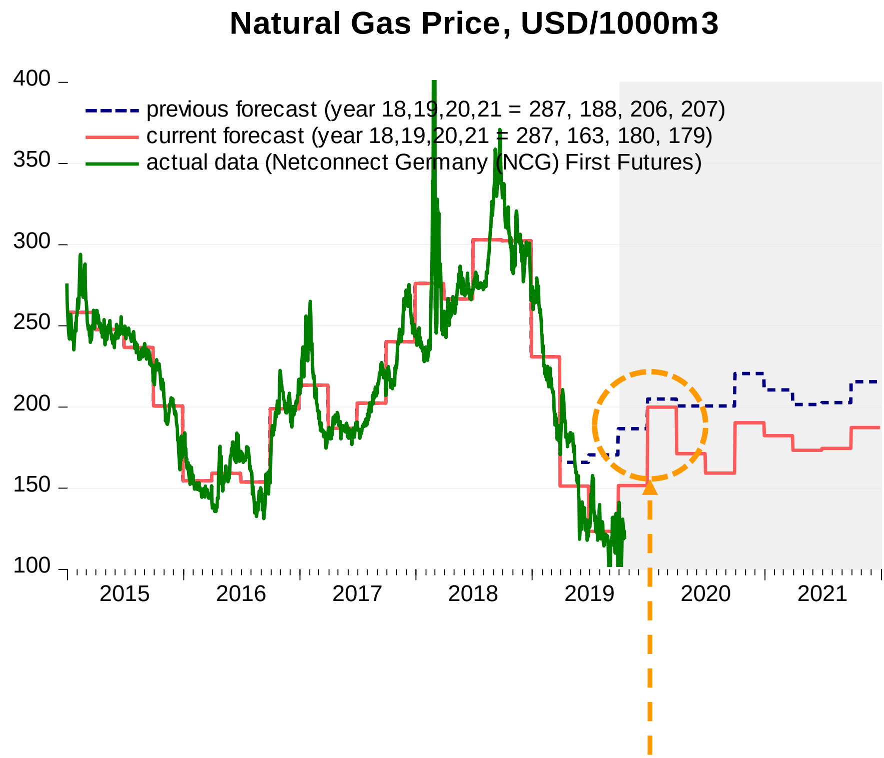


Maize World Price, USD/MT



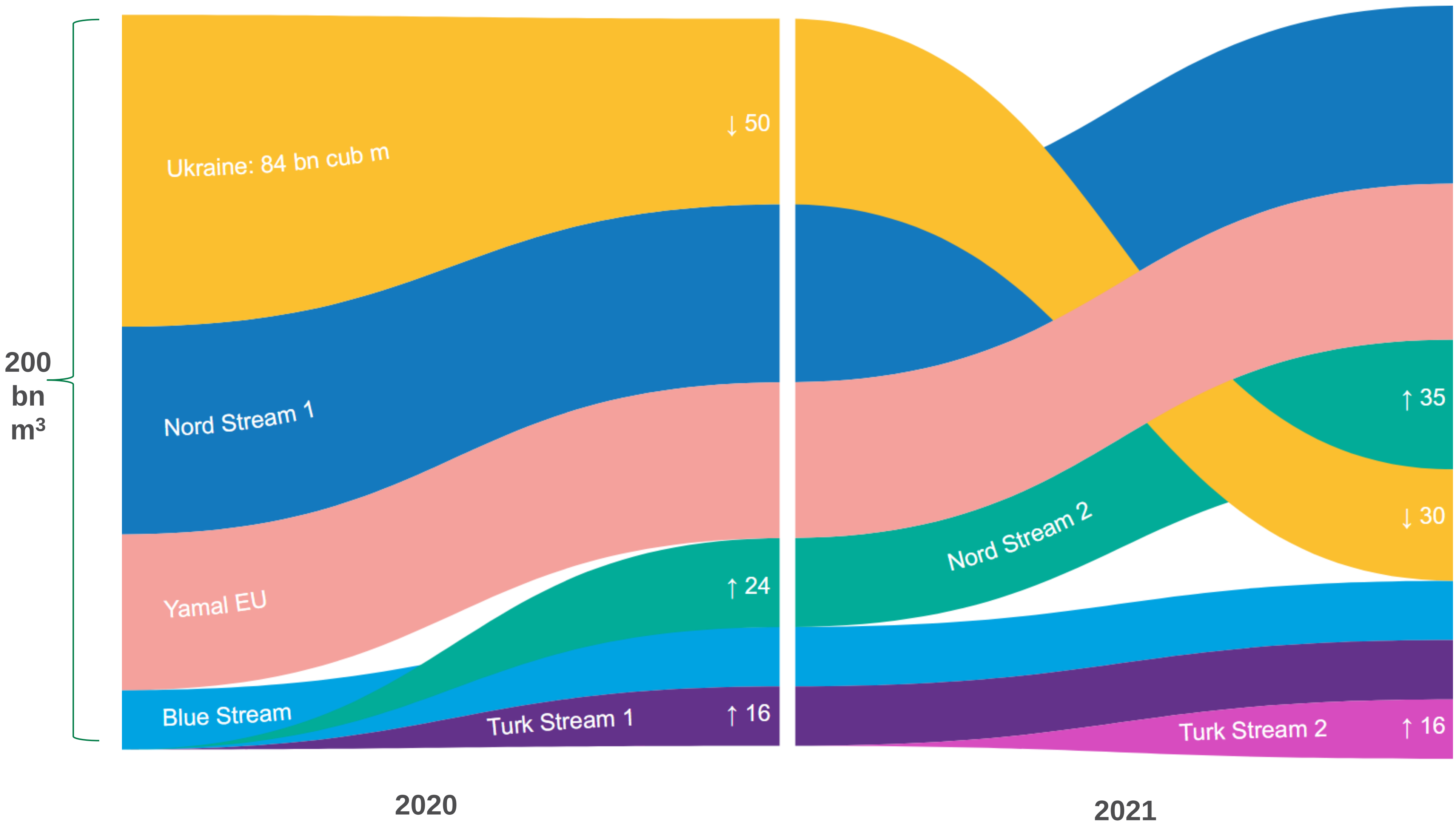
Energy prices will recover slowly as demand remains subdued and production increases





Temporary hike due to pause in gas transit.
No impact on BOP due to suspended imports

Box. Gas transit through Ukraine shrinks to 30 bcm volume due to Nord Stream 2 and Turk Streams become operational



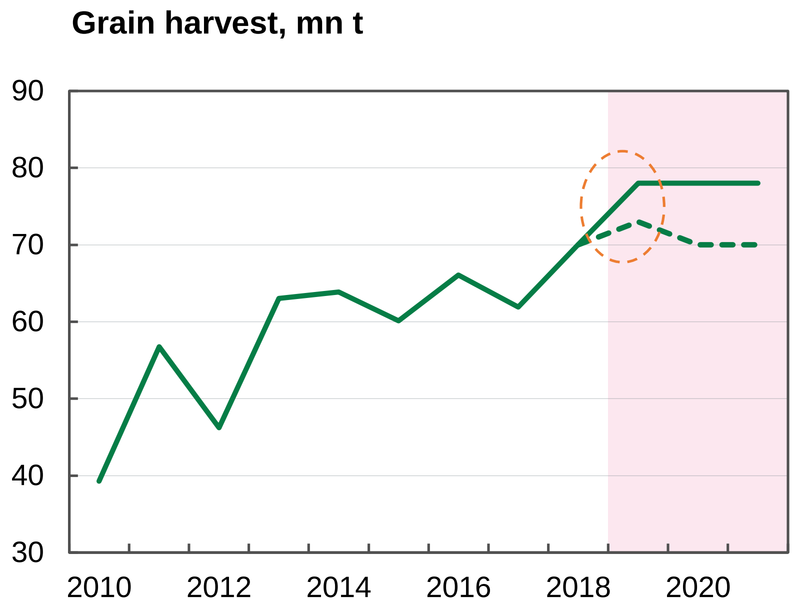
Utility prices growth outpacing headline inflation. Gas price for households follows import parity (↓gas price, ↓admin inflation)

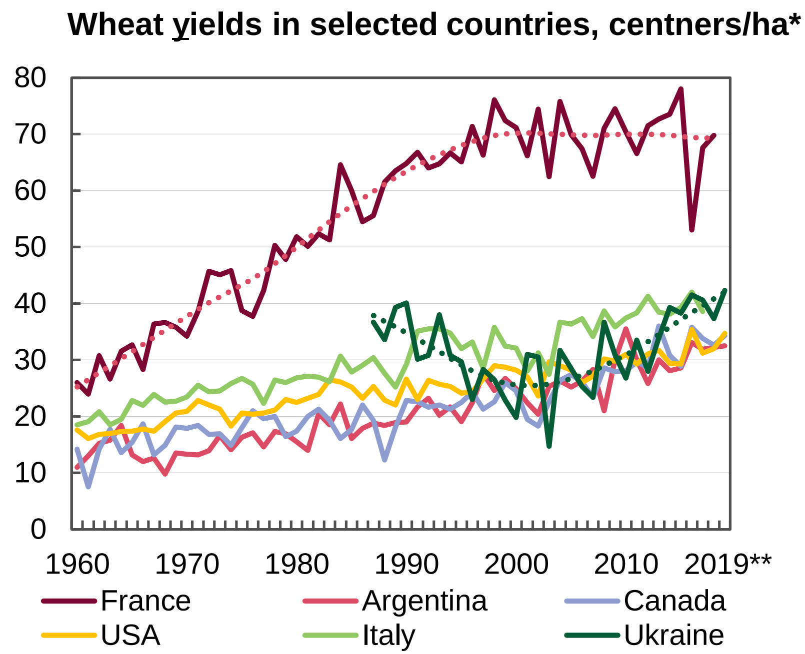
Utilities inflation, yoy, %

	w, %	2019	2020	2021
Admin CPI	*16.8*	**11.7** **(12.8)**	**10.0** **9.8**	**9.8** **(9.6)**
Change of contribution to CPI	**-**	**-0.2 pp**	**-**	**-**
• *Natural gas*	*1.2*	-16 (2)	13 (11)	4
• *Heating and hot water*	*1.0*	14	11	4
• *Cold water*	*0.2*	13	9	9
• *Electricity*	*0.9*	0	0	25
• *Alcohol*	*4.7*	9 (10)	9	9
• *Tobacco*	*3.6*	22 (20)	13 (12)	13 (12)
• *Transport*	*2.5*	13.5	9	8

Record high level of grain harvest to remain in 2020 and onwards

(In 2019 revised upwards from 73 to 78 mn t)



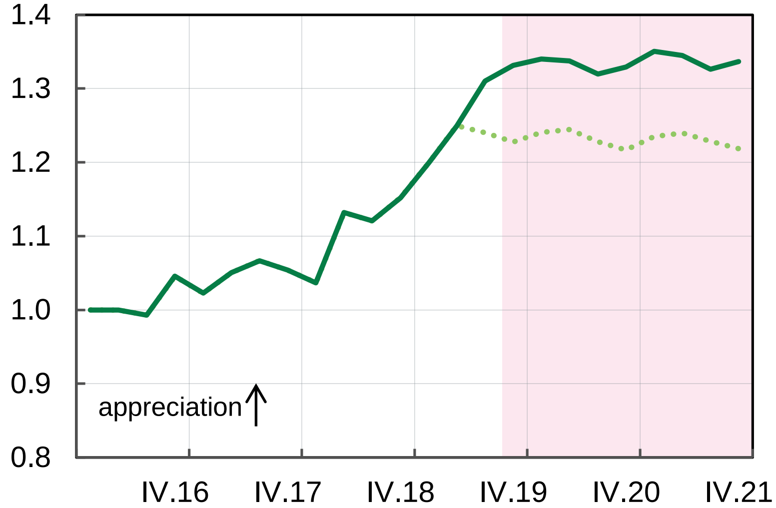


High grains harvest influence GDP and exports but not local food prices

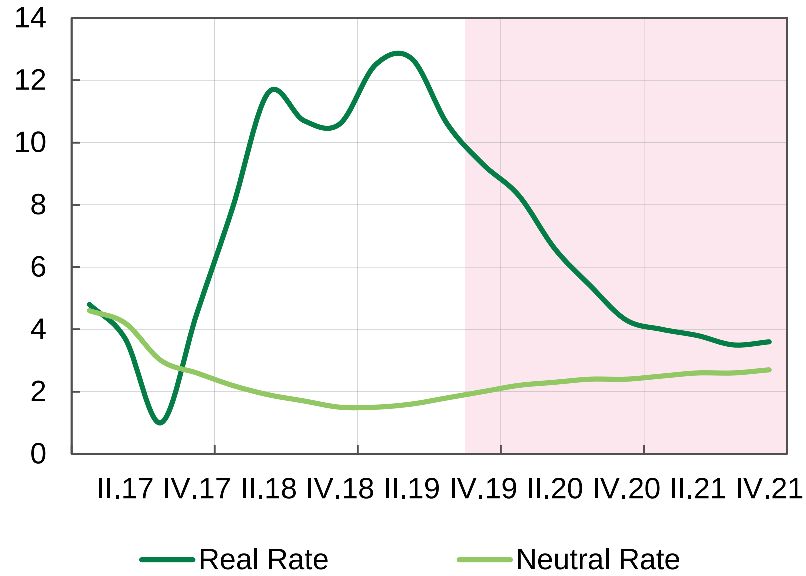
(depends mostly on vegetable and fruits harvest)

ER level adjusts due to participation of non-residents in G-bonds market. Monetary conditions are tight enough for further disinflation

REER index (1.2016=1)



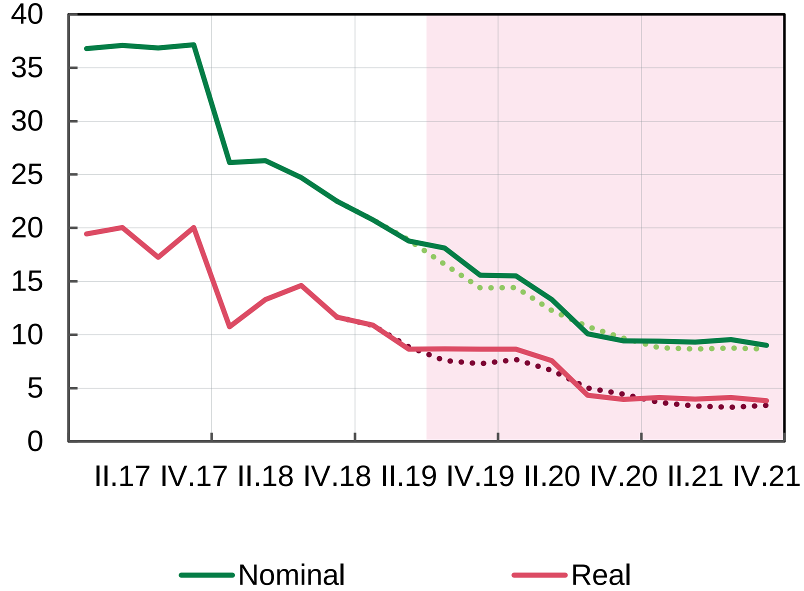
Real interest rate, %



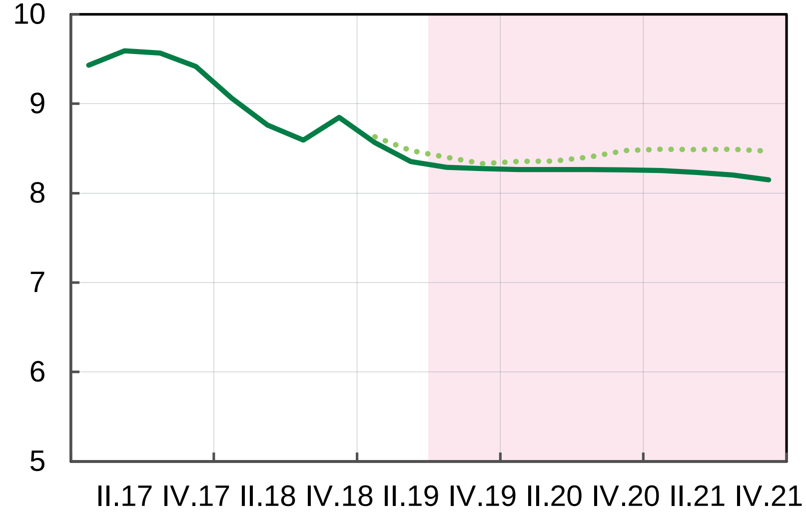
average	2018	2019	2020	2021
REER, % change	5.9	14.6 (10.7)	4.6 (0.3)	0.6 (-0.2)

Wages growth slowdown reflects weakening effect of labor migration on local market (wages↑ due to strong demand for labor)

Nominal & Real wages, annual change, %



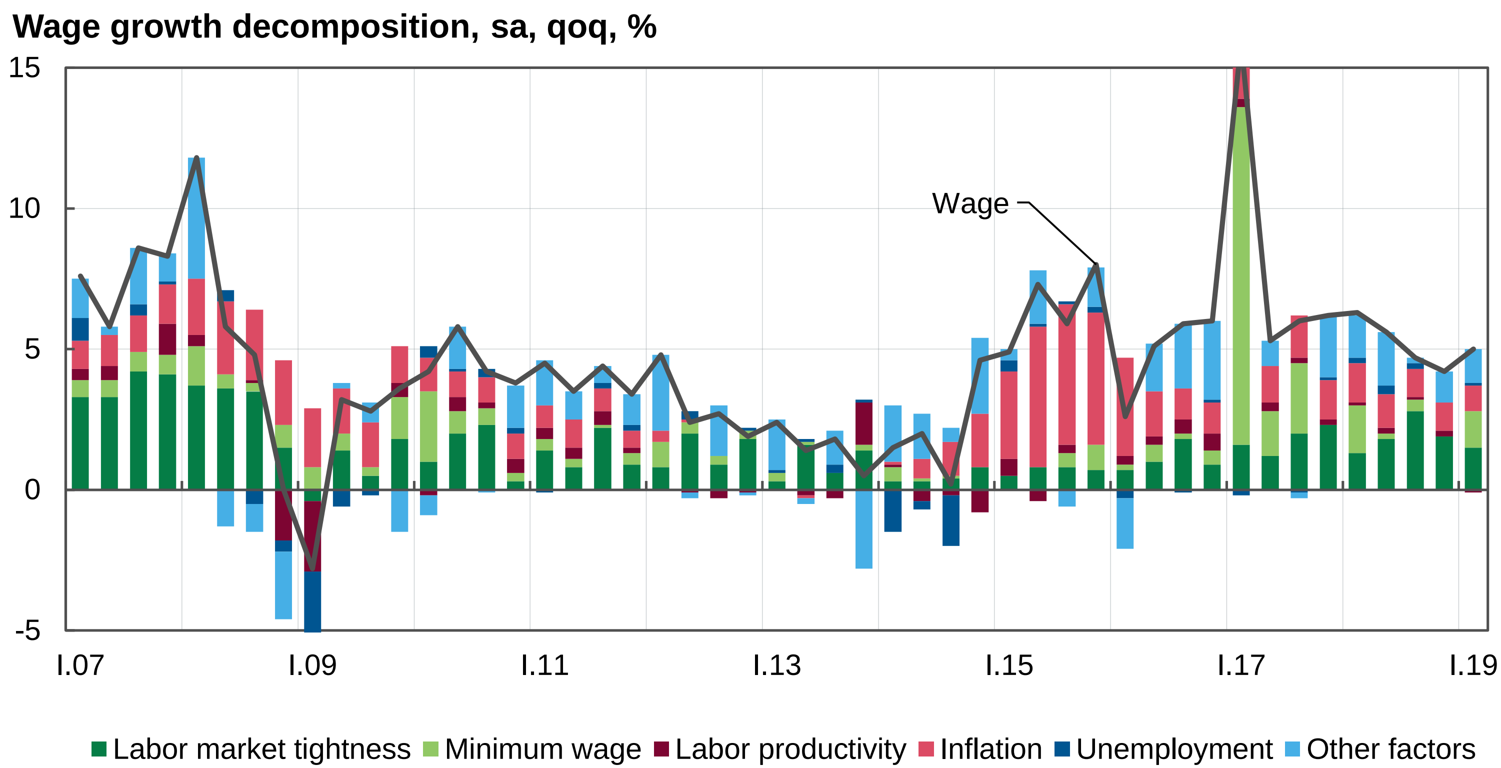
ILO unemployment, sa, %



change, %	2019	2020	2021
Real wages	**9.2**	**6.0**	**4.0**
- previous forecast	*8.6*	*5.9*	*3.4*
Nominal wages	**18.2**	**12.0**	**9.3**
- previous forecast	*17.5*	*11.7*	*8.7*

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

Box: Minimum wage and labor market tightness are the main drivers of wage growth

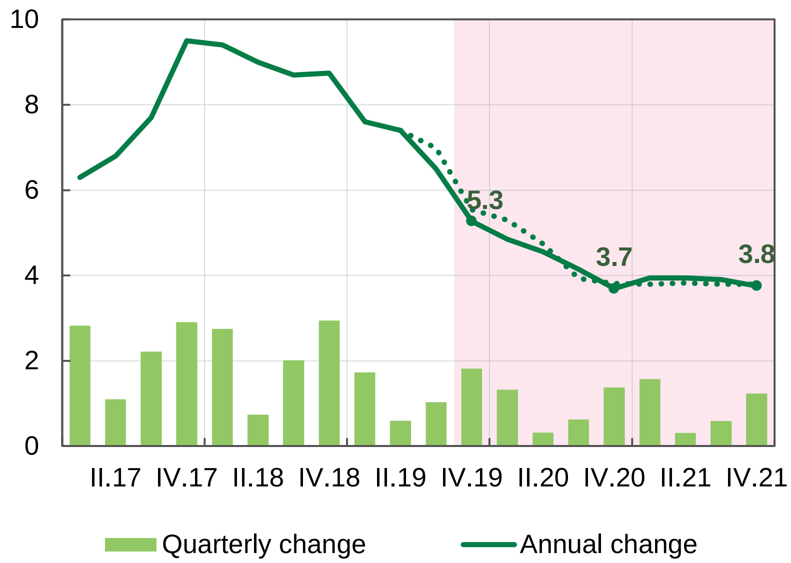


Source: SSSU, SESU, NBU Business outlook survey of Ukraine, NBU staff estimates.

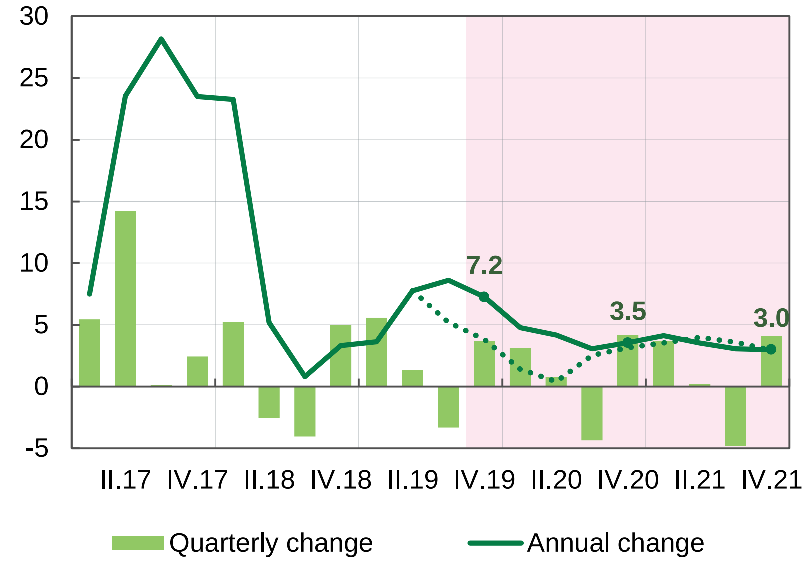
- Minimum wage is the main driver of average wage growth, according to model estimates. It directly affects wages of the least remunerated workers and has a spillover effect on other wages
- The impact of inflation as a driver of wage growth has weakened substantially over the recent years as disinflation proceeds, including due to tight monetary policy
- Instead, labor market tightness has gained strength reflecting past intensification of migration and mismatches between labor demand and supply

Core CPI falls due to strong UAH (effects of recent UAH appreciation are partially offset by higher wage growth). **Raw food CPI↑ due to supply shock**

Core CPI, %



Raw food inflation, %

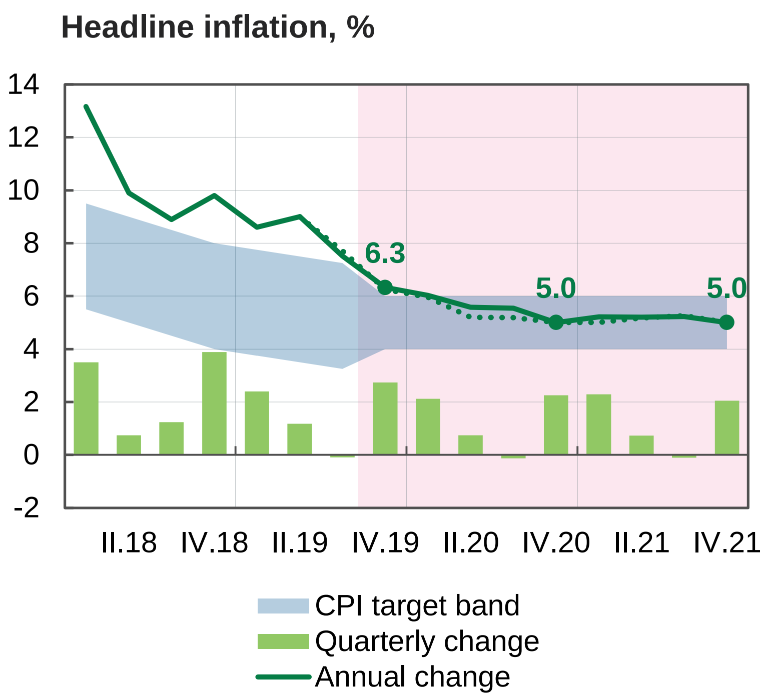


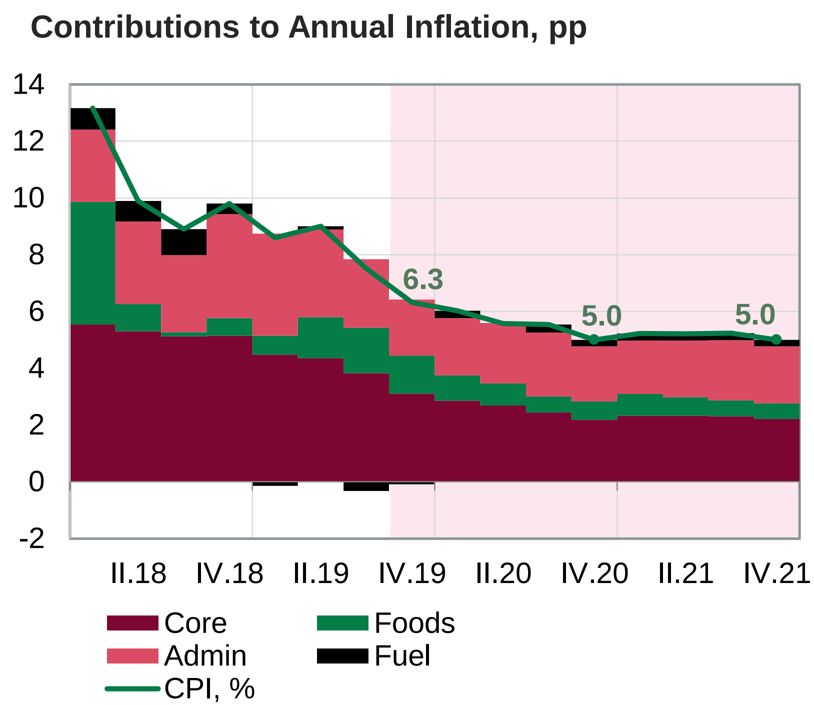
Depreciation episodes are characterized by about **38%** pass-through after 12 months compared to less than **10%** for **appreciation** episodes

Non-Linear Exchange Rate Pass-Through in Emerging Markets
(IMF Working Paper, 2016)

Inflation declines to 6.3% this year and reaches target band in Q1 2020

(food shocks and higher demand offsets stronger ER)



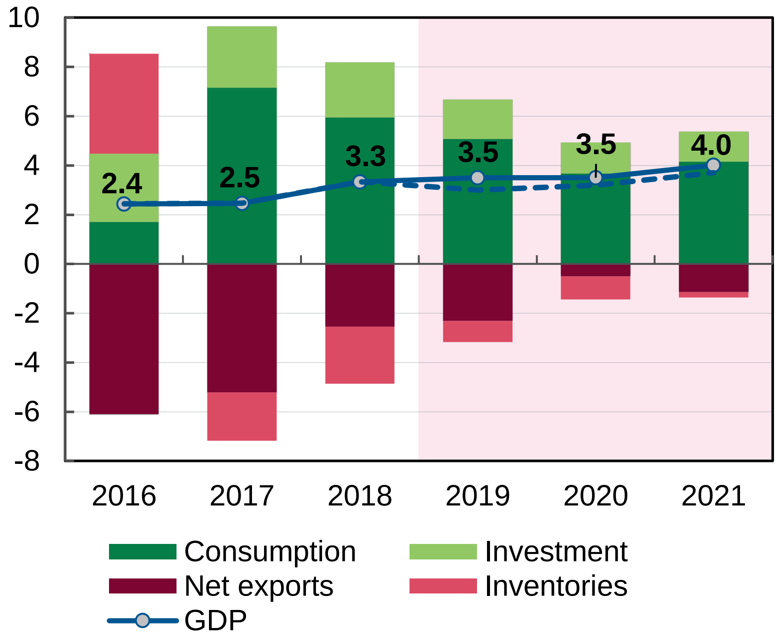


change, %	*weight, %*	2019		2020		2021	
CPI	***100.0***	**6.3**	*6.3*	**5.0**	*5.0*	**5.0**	*5.0*
Core CPI	*58.9*	5.3	*5.5*	3.7	*3.8*	3.8	*3.8*
Raw food	*18.6*	7.2	*3.8*	3.5	*3.1*	3.0	*3.0*
Admin	*18.5*	11.7	*12.8*	10.0	*9.8*	9.8	*9.6*
Fuel	*4.0*	-2.3	*2.9*	5.8	*5.2*	5.7	*5.2*

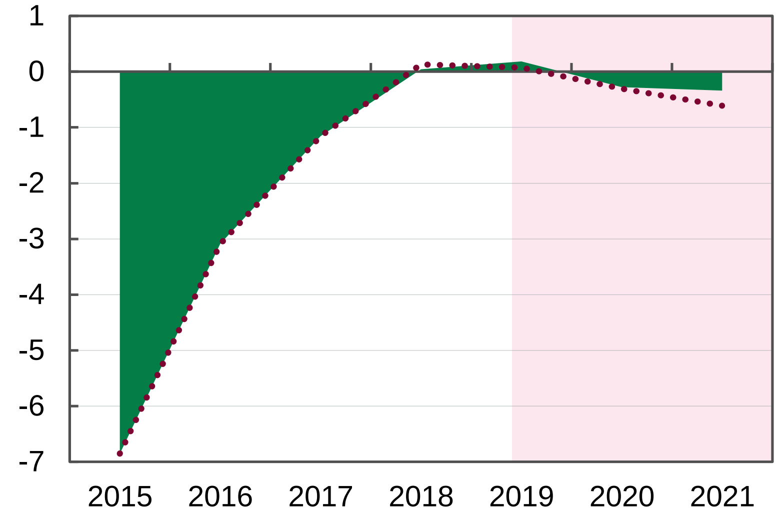
(gray color) – previous forecast (IR, July 2019)

GDP growth accelerates to 3.5-4.0% (high harvest, positive sentiments, looser monetary and fiscal policy despite stronger REER)

Contributions to Real GDP Growth, pp



Output gap, % of potential GDP



	W,%	2018	2019	2020	2021
GDP	100	**3.3**	**3.5** (3.0)	**3.5** (3.2)	**4.0** (3.7)
Consumption	87	6.8	5.7 (4.1)	3.9 (3.1)	4.5 (4.2)
Private consumption	66	8.7	8.5 (5.2)	4.5 (3.6)	5.2 (5.0)
Gross fixed capital formation	16	14.3	9.3 (9.0)	7.3 (7.1)	6.9 (6.6)
Exports of G&S	48	-1.6	3.4 (2.7)	3.6 (1.4)	1.9 (1.6)
Imports of G&S	56	3.2	7.1 (6.4)	4.1 (3.4)	4.7 (3.5)

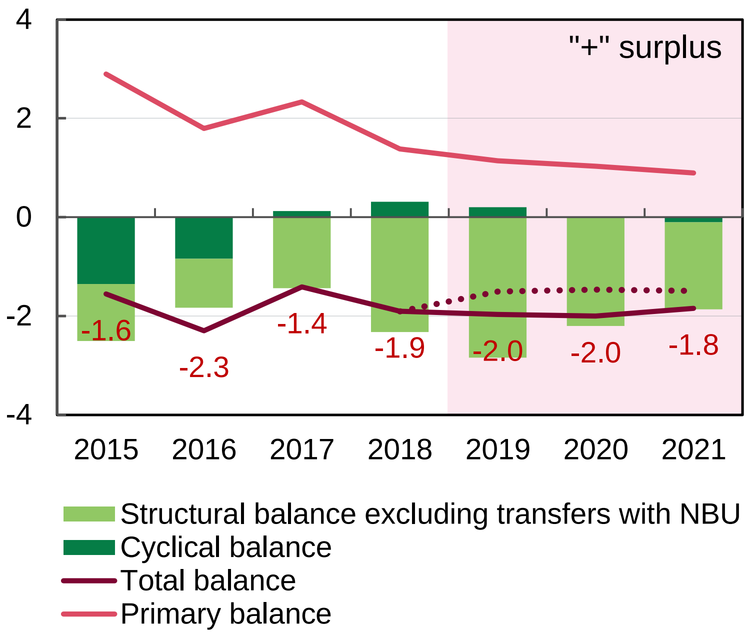
in ( ) – previous forecast (IR, July 2019)

GDP revision factors

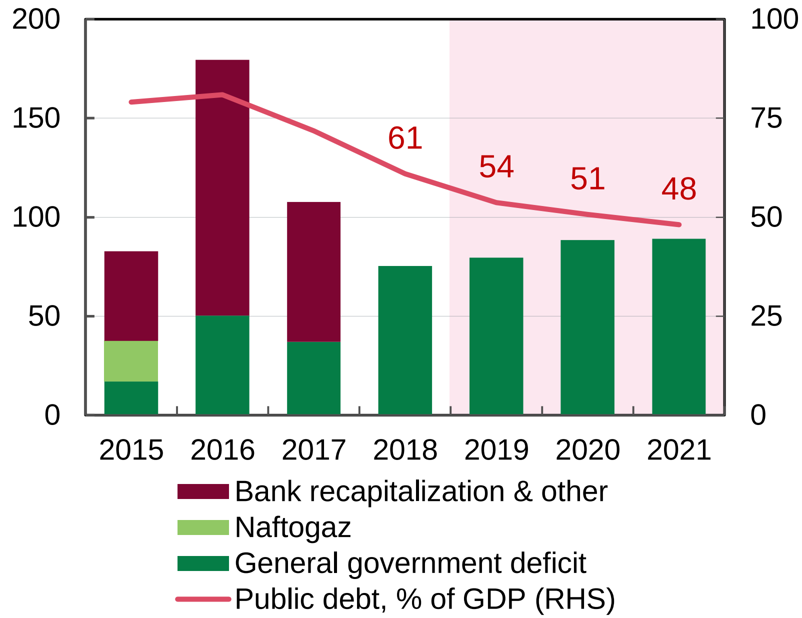
2019: higher harvest, consumer demand
2020: looser monetary and fiscal policy, positive sentiments, worse terms of trade, stronger REER
2021: effects of land reform

Fiscal policy remains tight (however, more fiscal space will be available due to easier access to financing)

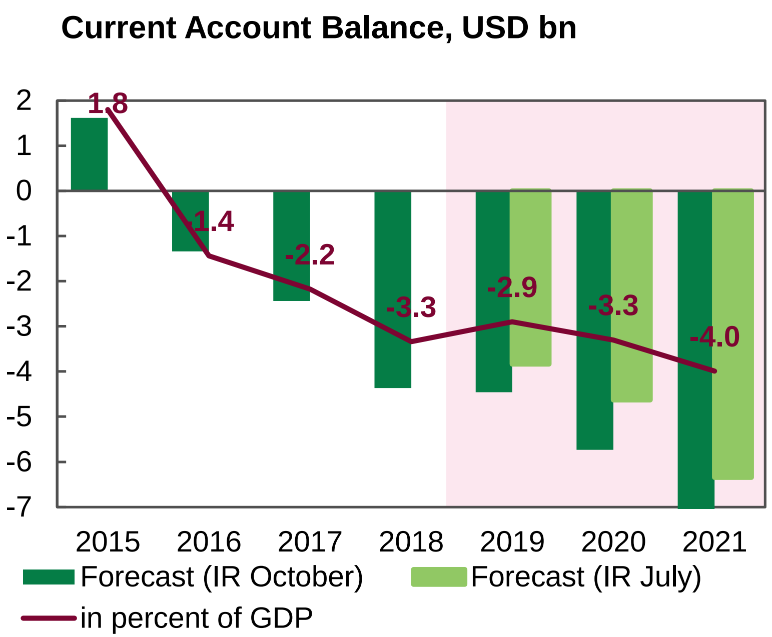
Consolidated Budget Balance, % GDP

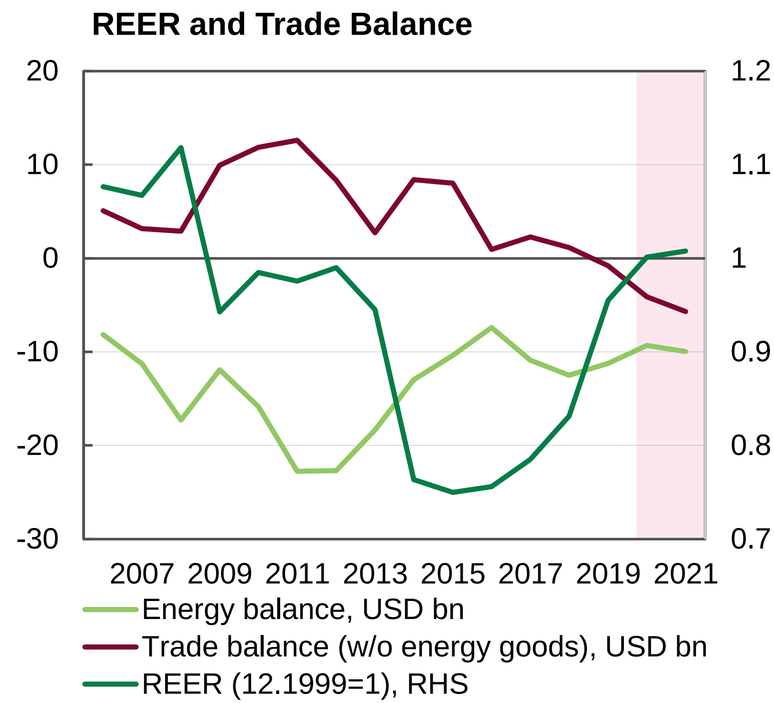


Public Sector Deficit, UAH bn, and Public Debt-to GDP Ratio, %



In 2019, CA deficit shrinks, but in 2020-2021 widens primarily due to lower gas transit and deterioration of ToT

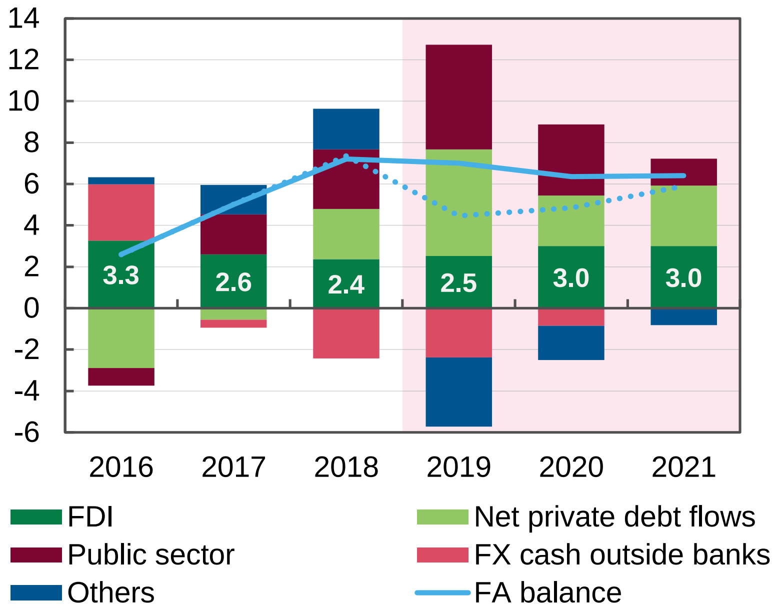




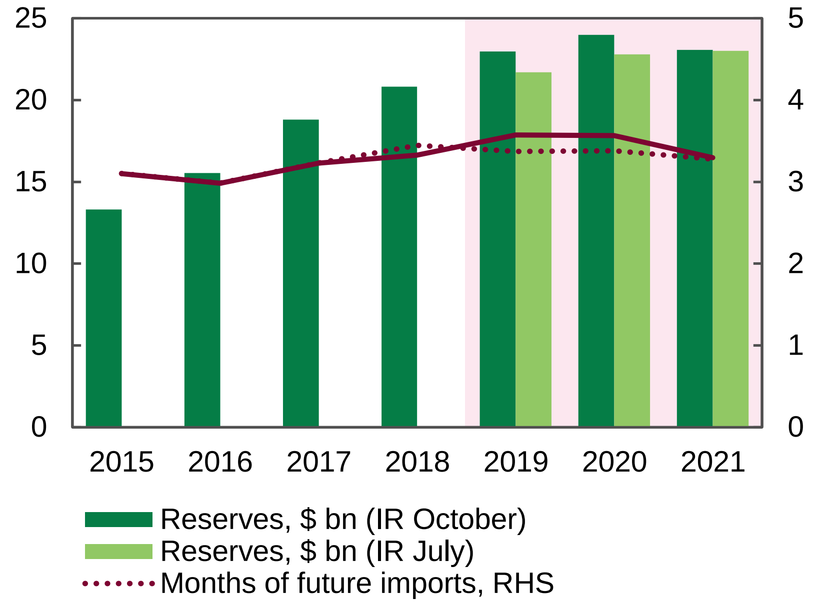
Main changes in CAB forecast in 2019-2021 compared with IR July	
Trade in goods	Terms of Trade (↑2019, ↓2020-2021): ↓gas, ↑iron ore, ↓grains, ↓metals
	↑Volumes of exports: ↑agro (grains&others), ↑iron ore, ↑machinery ↑Volumes of imports: ↑↑machinery
Trade in services	↓ Volumes of gas transit in 2021

In 2020-2021, debt and investment capital inflows to private sector will remain the major source of financing the CA deficit

Financial account: net inflow, USD bn



International Reserves, USD bn



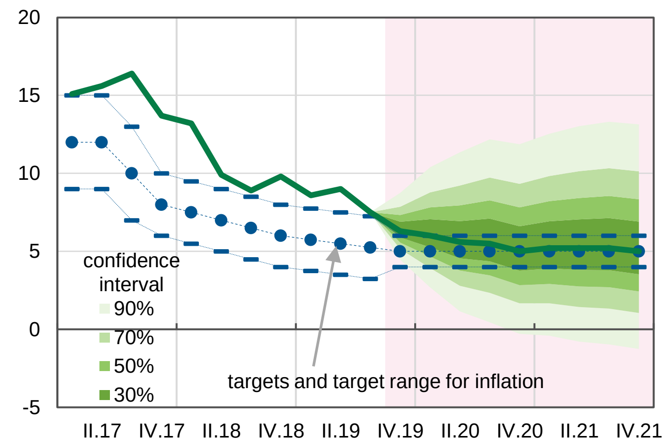
Main risks

A delay in entering into a new cooperation agreement with the IMF and increased threats to macrofinancial stability – mainly due to Ukrainian court rulings – pose the key risks to the forecast

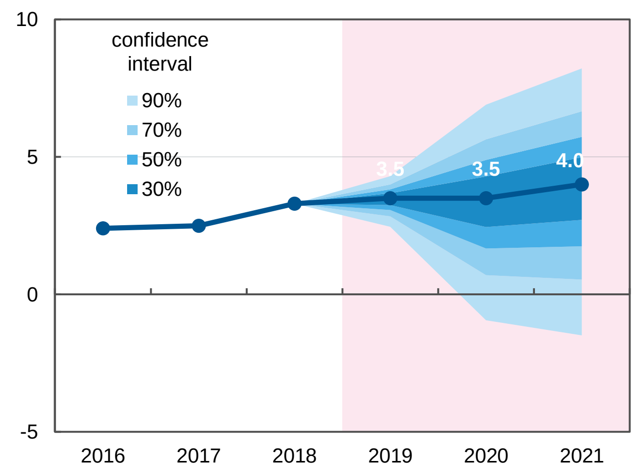
The following risks also remain important:

- a complete halt of the transit of Russian gas through Ukraine
- intensified trade tensions and more turbulent global commodity and financial markets
- an escalation of the military conflict and new trade restrictions introduced by Russia.

CPI forecast and inflation targets, % yoy



Real GDP forecast, % yoy

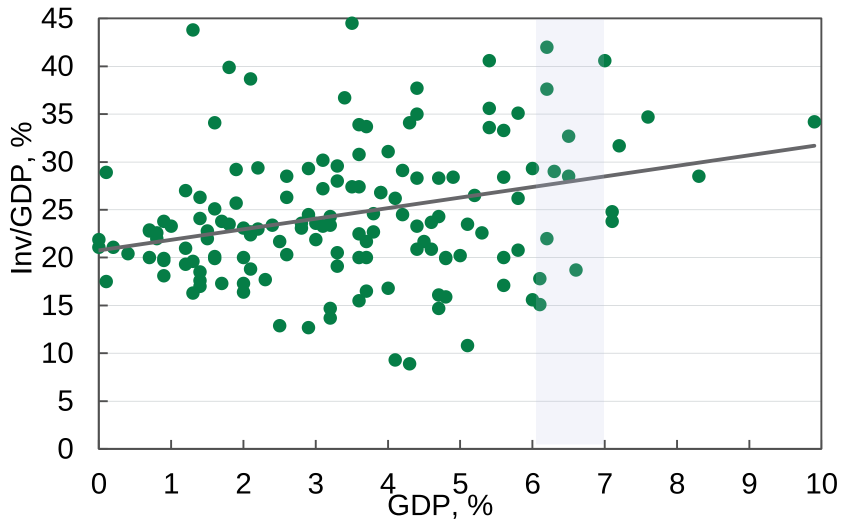


Box. Scenario “Boost in reforms”: assumptions and risks. High GDP growth (6-7%) is consistent with 25-30% share of investment in GDP

Main assumption:

- improvement in sentiment, large capital inflows and boost to domestic demand go before increase in productivity
- Inflationary pressure is eliminated due to nominal UAH appreciation
- Such developments have several implications: Inflationary pressure from overheating demand, Increase in demand for labor, CAD widening, strong ER, High dependence on capital flows

GDP and investment share by countries (2009-2017), %



National Bank of Ukraine