



NATIONAL BANK OF UKRAINE

Inflation Report (January 2018)

National Bank of Ukraine
Kyiv, February 06, 2018



NATIONAL
BANK OF
UKRAINE

Monetary policy decision: Summary

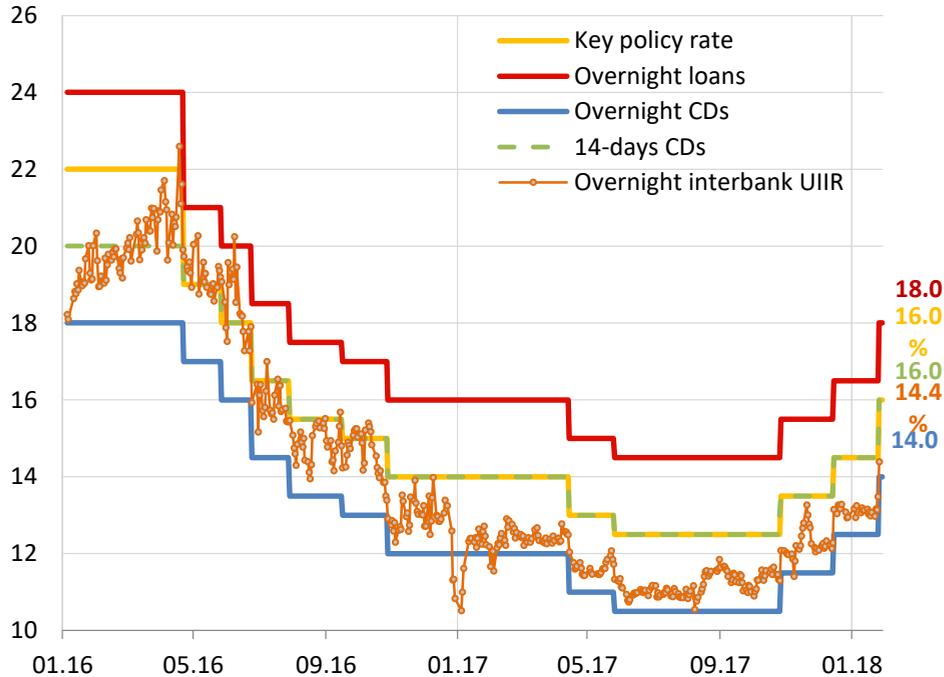
- ❖ At its meeting on 25 Jan 2018, the NBU Board raised the key policy rate by 150 bp to 16% (*after two hikes by 100 bp each at two previous meetings on monetary policy*)
- ❖ During the preceding discussion at the MPC meeting, six members of the MPC supported such hike, and one member argued in favor for raising the key policy rate by 100 bp
- ❖ According the current forecast, while many factors determine high inflation this year, the tighter monetary policy will help lower the inflation and bring it back to the target range in the middle of 2019
- ❖ The NBU may further raise the key policy rate to return inflation to its medium-term target in the absence of indications of the lowering inflationary pressure. Further, the NBU will need to pursue a reasonably tight monetary policy to bring inflation back to the target level over the forecast horizon
- ❖ Among the main risks to the baseline scenario are premature termination of the IMF program amid tough external public debt servicing in the next years and additional fiscal loosening



NATIONAL
BANK OF
UKRAINE

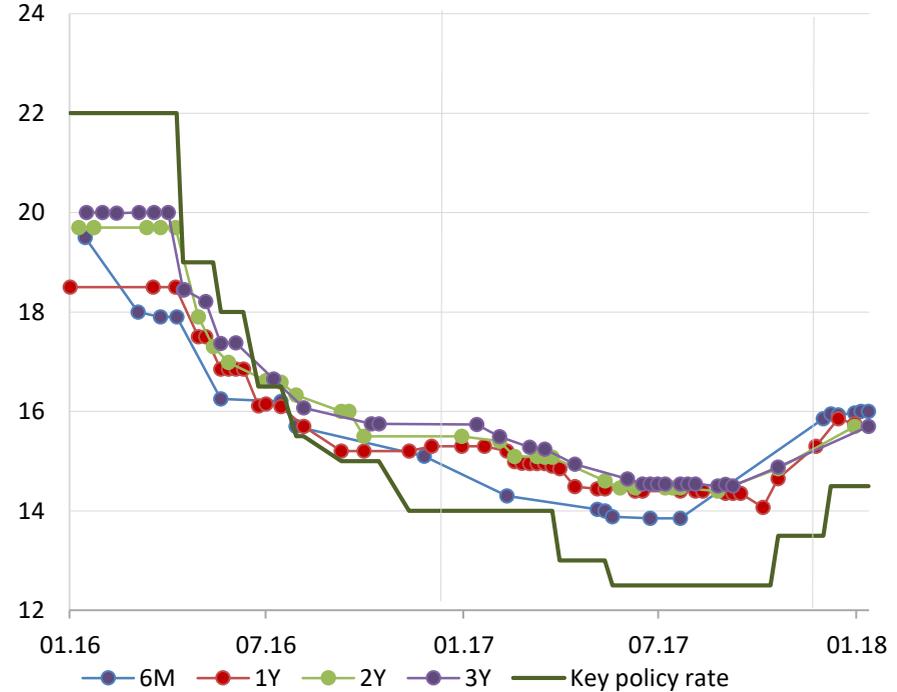
The NBU tightened its monetary policy. Key policy rate changes effectively transmit into market interest rates

NBU Policy Rates and Ukrainian Index of Interbank Rates (as of 26.01.2018), % pa



Source: NBU

Term Structure of Hryvnia Yields on Primary Market (as of 23.01.2018), % pa



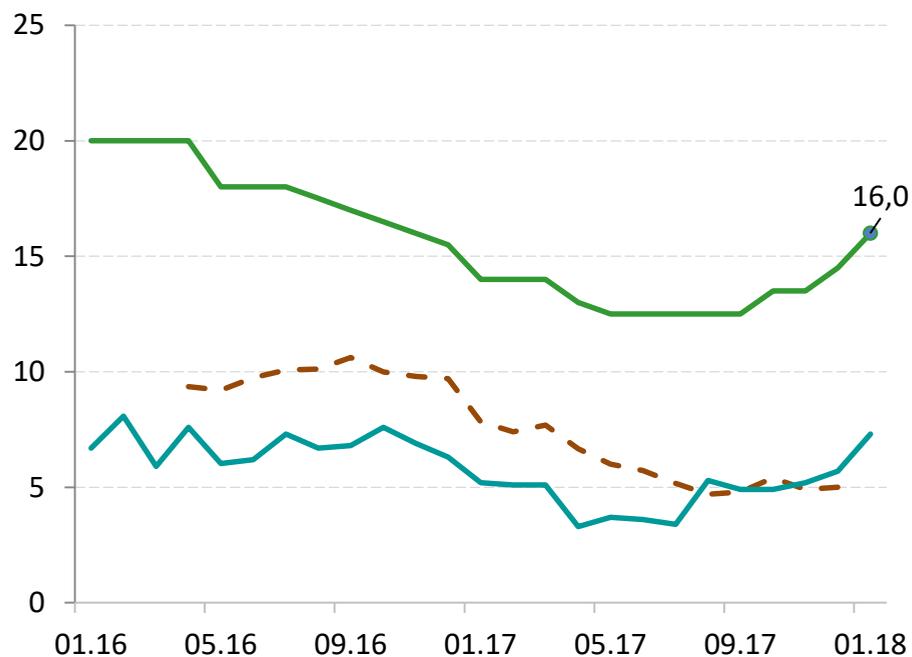
Source: NBU



NATIONAL
BANK OF
UKRAINE

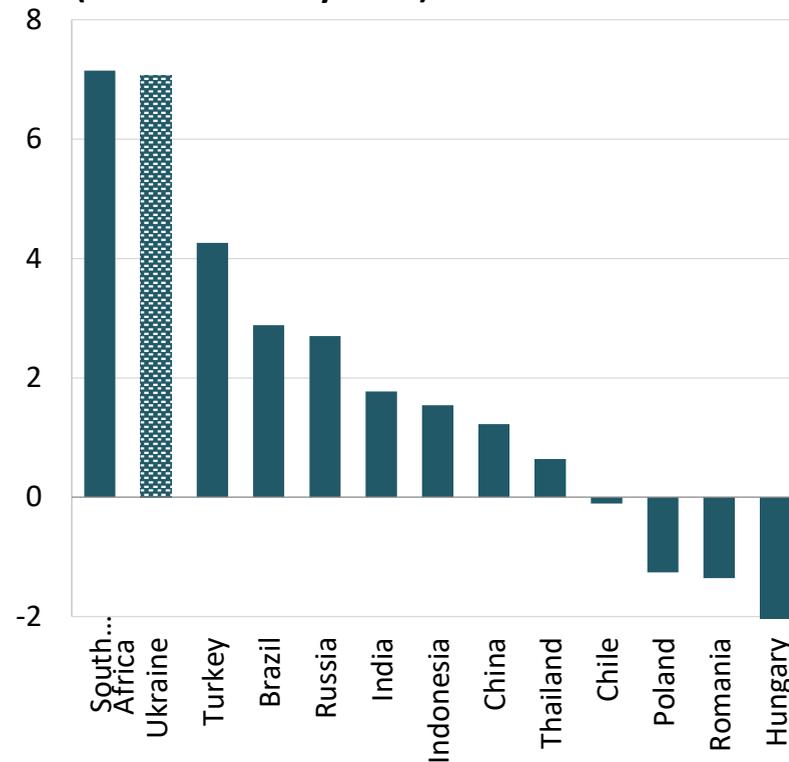
Tighter monetary stance is the response to deterioration in the inflation outlook

Key Policy Rate (end of month), %



- key rate (end of month), %
- - - real key rate (deflated by actual Core inflation)
- real key rate (deflated by expectations of financial analysts)

1-Year Real Interest Rates for EM countries, % (as of 10 January 2018)



Real interest rate is calculated as a difference between 1-year bond yield (eop) and the 12-month ahead inflation forecast from the IMF's WEO

Source: Thomson Reuters Datastream, IMF WEO, NBU calculations



NATIONAL
BANK OF
UKRAINE

The main factors contributing to the last decisions

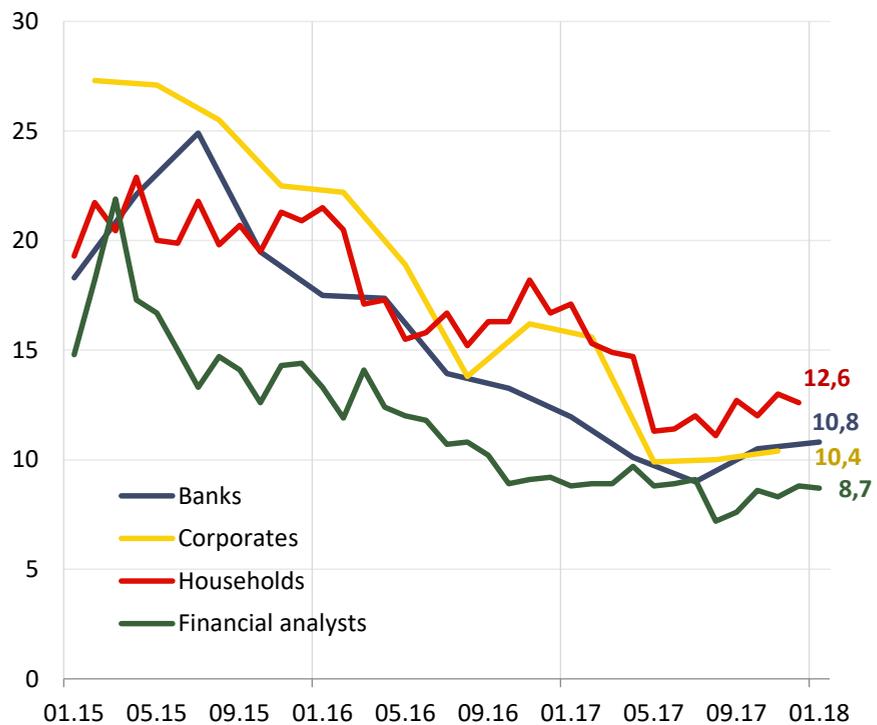
- ❖ Further postponement of the next tranche under the EFF program with the IMF causing negative effects on expectations and increasing pressure on the hryvnia exchange rate
- ❖ A substantial increase in social standards, particularly pensions and minimum wages, that will precondition further revival in consumer demand
- ❖ Worsening inflation expectations that will hinder the future decline in inflation
- ❖ A prospective rise in prices of processed foods considering the hike in prices of raw products in the previous period
- ❖ An oil price hike on international markets with the respective gasoline price growth in Ukraine that will also affect prices for other goods
- ❖ A spike in the exchange rates of euro and currencies of Central and Eastern European countries against US dollar on world markets will result in rising prices of imported European goods
- ❖ High growth of wages fueled by labor migration amid strong recovery of global economy and domestic demand for labor



NATIONAL
BANK OF
UKRAINE

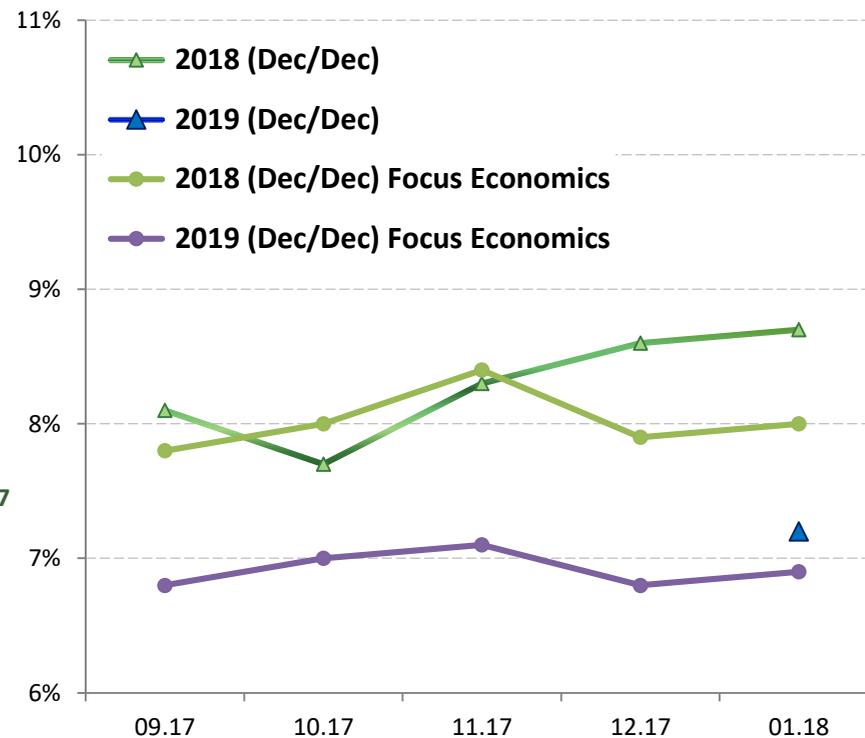
Inflation expectations remain elevated

Inflation expectations over the next 12 months, %



Source: NBU, GfK Ukraine surveys, NBU calculations

Inflation expectations of financial analysts for the end-2018 and end-2019



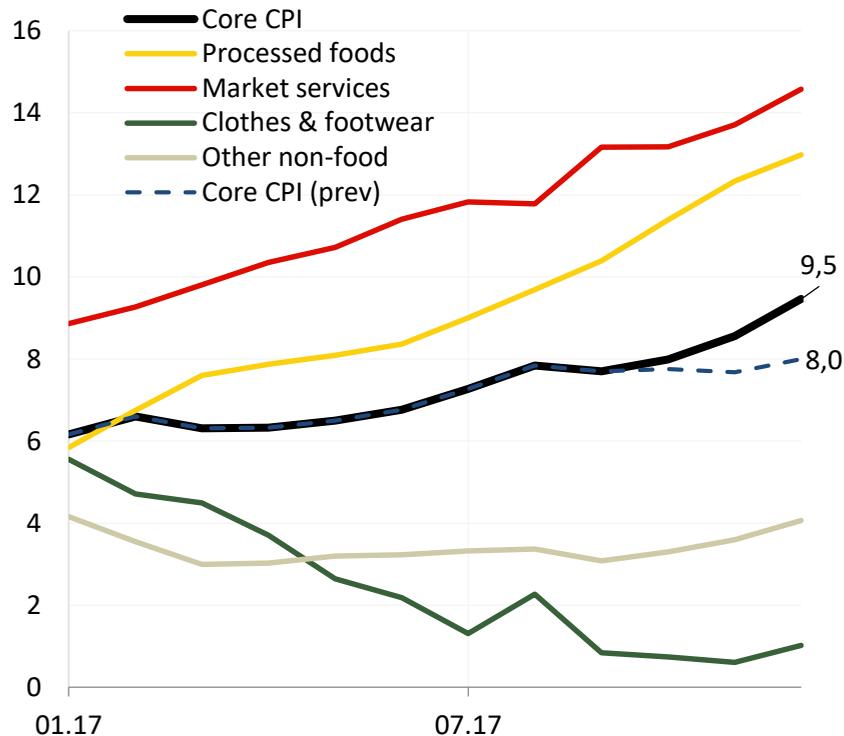
Source: NBU, Focus Economics



NATIONAL
BANK OF
UKRAINE

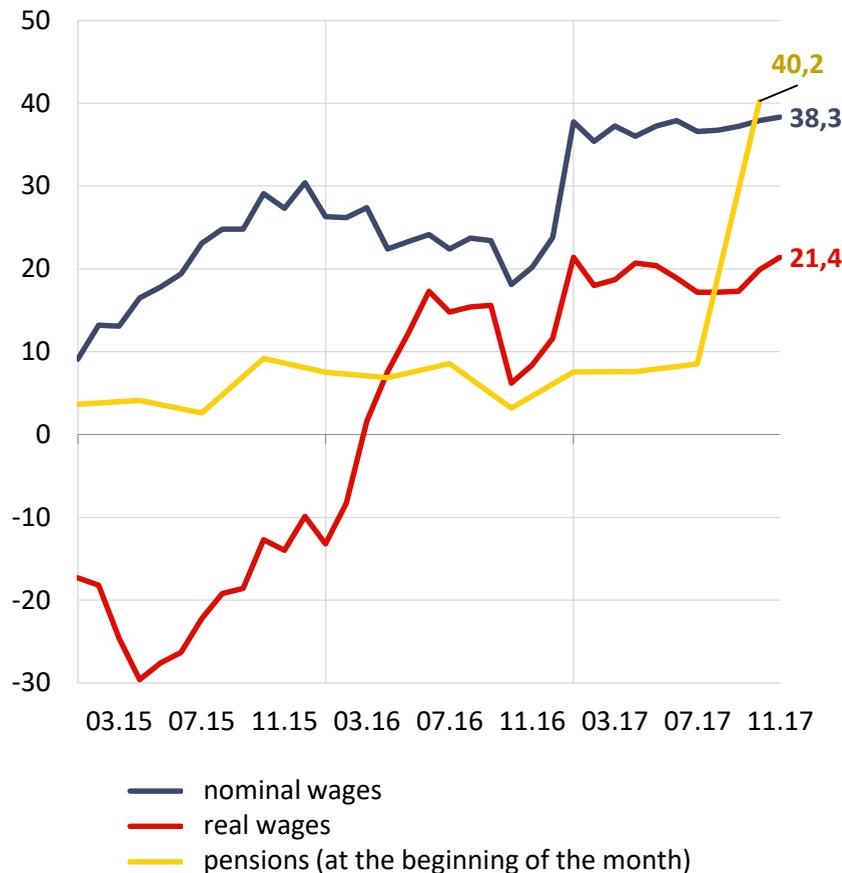
An increase in core inflation indicates raising underlying inflationary pressure, partially fuelled by labor costs and demand

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



Source: SSSU, NBU calculations

Average wages and pensions, y-o-y change, %



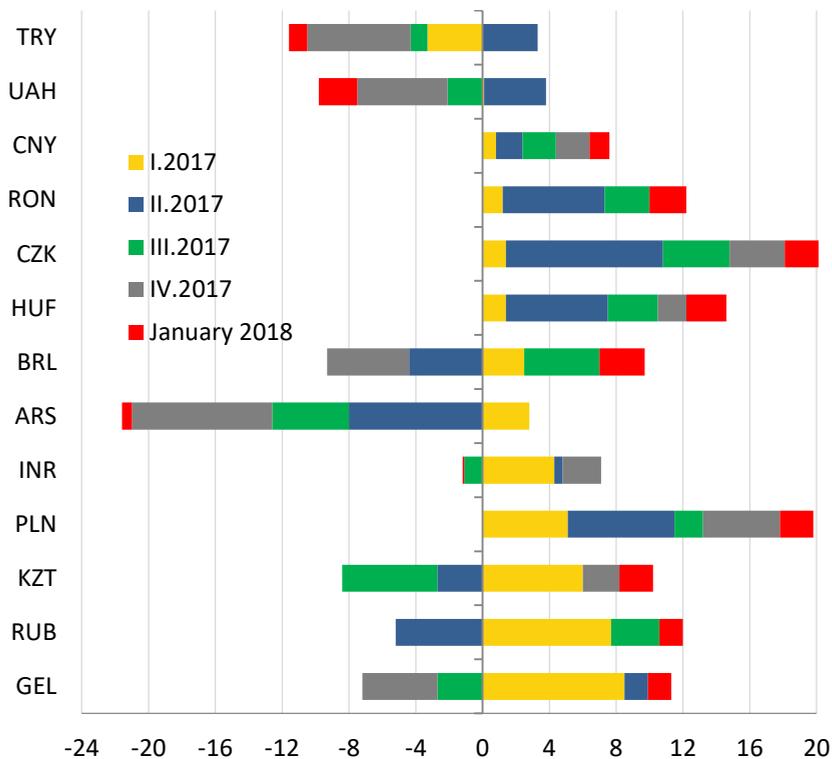
Source: SSSU



NATIONAL
BANK OF
UKRAINE

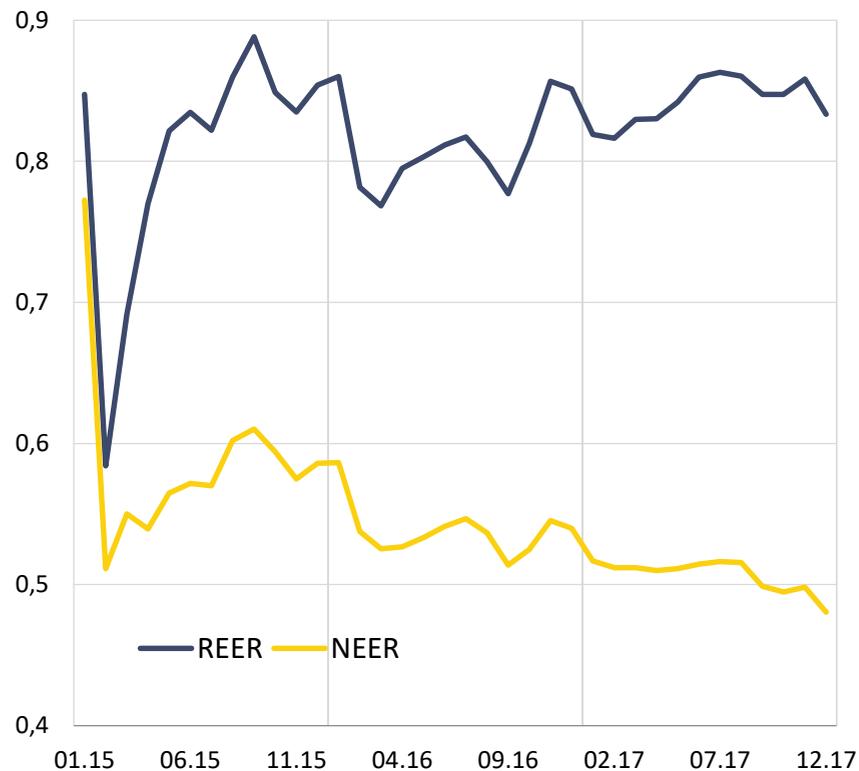
UAH depreciated against USD amid favorable external environment and weak USD globally

Exchange Rates of EM Currencies to US Dollar, % change, eop, as of 24.01.2018



Source: Thomson Reuters Datastream

Hryvnia NEER and CPI-deflated REER, based on interbank exchange rate, Indices: Dec-2014=1



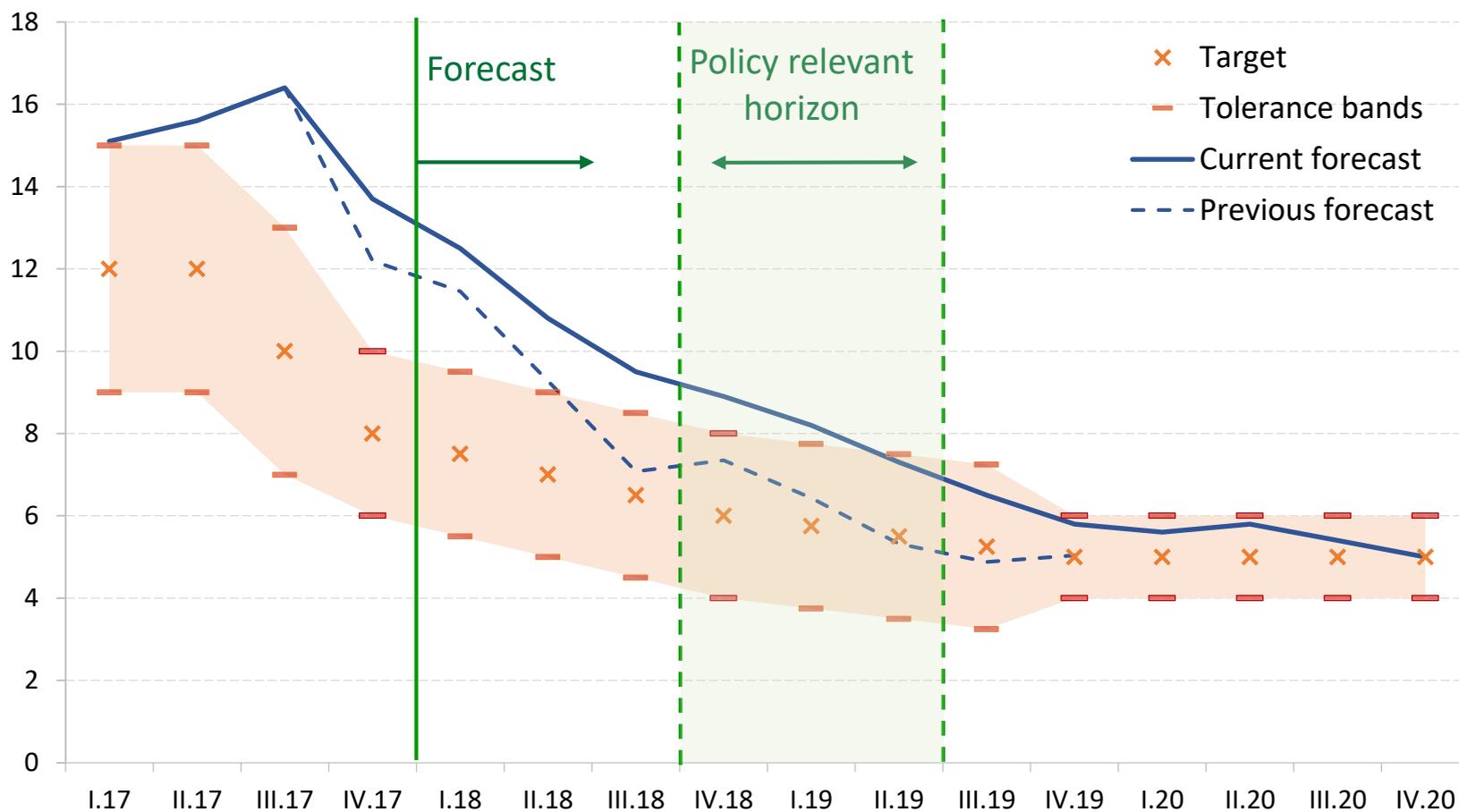
Source: IFS; NBU staff estimates (preliminary data)



NATIONAL
BANK OF
UKRAINE

Despite tighter monetary policy, inflation returns to the target band later than expected before

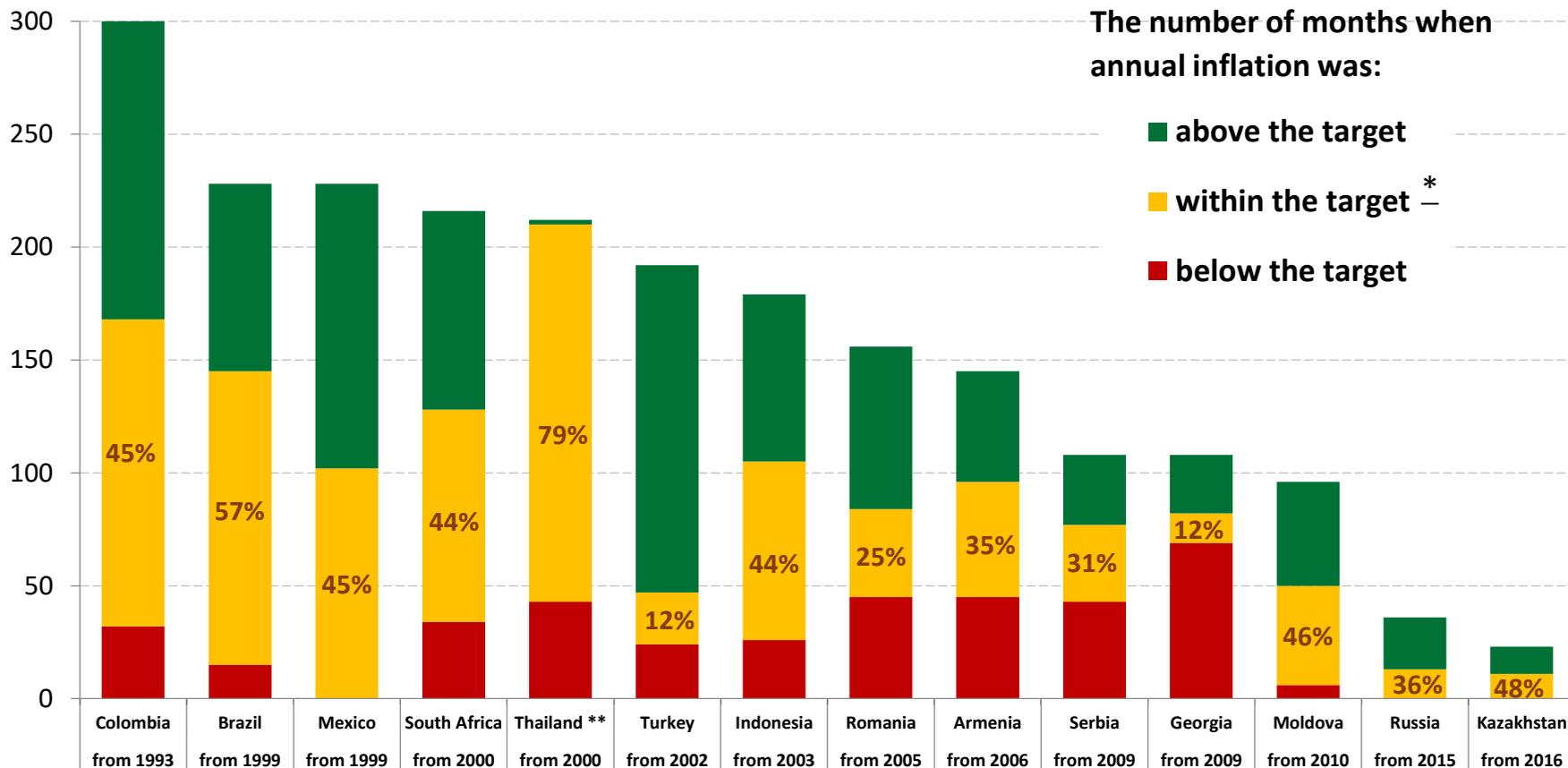
Headline CPI, annual change, %





NATIONAL
BANK OF
UKRAINE

BOX. Inflation targeting is about missing targets as much as about fulfilling them



* - in case of point target for calculation of episodes when the CB missed the target the range of $\pm 1\%$ was used

** - the CB is targeting the core inflation

- In low and middle income countries the inflation mainly deviates upwards due to the high sensitivity to commodity prices fluctuations, structural imbalances, political instability etc.
- CB's communications on the strategy and plans for bringing inflation back anchors the inflation expectations and fosters the confidence in the IT regime



NATIONAL
BANK OF
UKRAINE

Macroeconomic forecast: Summary

- ❖ External environment remains favorable: strong growth of global economy, almost unchanged terms of trade, benign financial conditions
- ❖ Local environment becomes more challenging even amid quite optimistic assumptions on IMF and reforms' progress as elections approach. Fiscal policy provides strong impulse in 2018 on the back of pensions and wages hike; however, it is expected to be more neutral in 2019-2020
- ❖ Fiscal impulse and favorable external factors boost GDP in 2018 (3.4%), but later as the effects of the fiscal easing wear off and tight monetary conditions gain full strength, economic growth slows down (to 2.9% in 2019-2020)
- ❖ Growing domestic demand and further growth in real wages impose additional upward pressure on inflation which even amid tight monetary policy will be above the target in 2018 (8.9%) with further deceleration to 5.8% in 2019 and 5% in 2020
- ❖ In 2018-2020, CA deficit will remain close to 3% of GDP. Growing trade deficit (w/o energy goods) amid worse price competitiveness is partly offset by increase in remittances. In addition, only modest improvement of investment climate determines very gradual increase in FDI inflows contributing to downward revision of international reserves projection



NATIONAL
BANK OF
UKRAINE

Key macroeconomic indicators

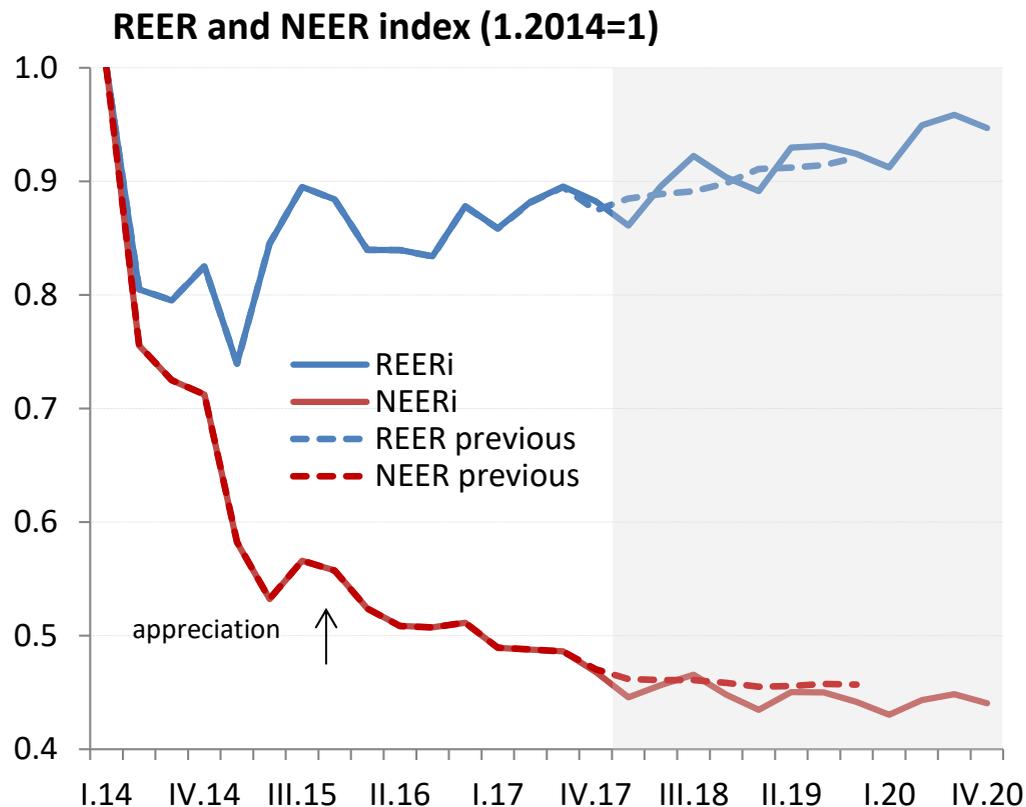
	2016	2017	2018	2019	2020
Real GDP, change, %	2.3	2.1 (2.2)	3.4 (3.2)	2.9 (3.5)	2.9
Nominal GDP, UAH bn	2 383	2930 (2880)	3394 (3270)	3779 (3628)	4117
CPI, y-o-y, %	12.4	13.7 (12.2)	8.9 (7.3)	5.8 (5.0)	5.0
Core CPI, y-o-y, %	5.8	9.4 (8.0)	8.2 (5.5)	4.8 (2.9)	3.2
Current account balance, USD bn	-3.5	-3.8 (-4.0)	-3.5 (-4.2)	-4.2 (-4.2)	-4.7
BOP (overall), USD bn	1.3	2.6 (2.2)	1.8 (2.2)	-1.1 (0.6)	-0.1
Gross reserves, USD bn	15.5	18.8 (18.6)	20.5 (22.2)	17.8(21.2)	18.6

in () – previous forecast (IR, October 2017)



NATIONAL
BANK OF
UKRAINE

Additional nominal depreciation offsets higher inflation



average	2016	2017	2018	2019	2020
REER, % change	+0.8	+3.8 (+3.5)	+1.8 (+1.5)	+2.6 (+2.7)	+2.5
NEER, % change	-8.4	-5.9 (-5.7)	-6.0 (-4.7)	-2.2 (-0.9)	-0.8

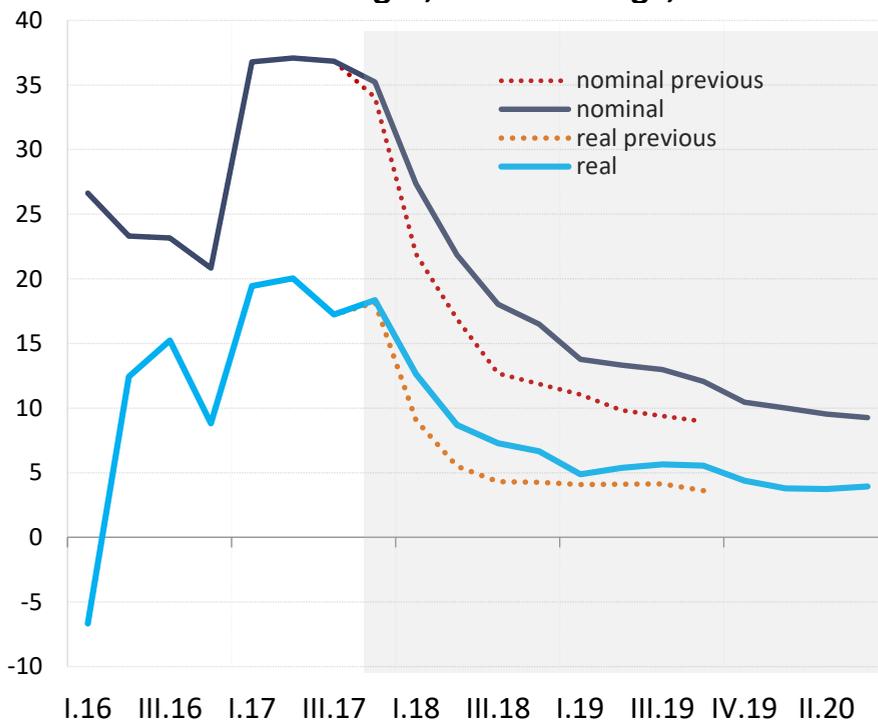
in () – previous forecast (IR, October 2017)



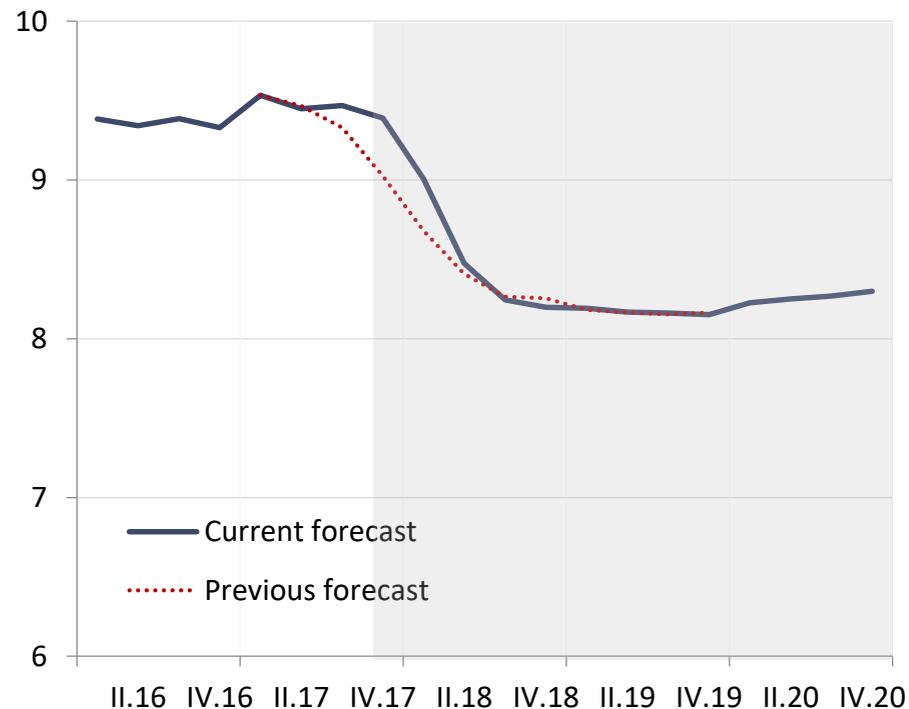
NATIONAL
BANK OF
UKRAINE

Wages growth decelerates but remains solid as fueled by raising domestic and foreign demand for labor

Nominal and real wages, annual change, %



ILO unemployment, sa, %



Year average, %	2017	2018	2019	2020
Nominal wages, hrn	7 080 (7 010)	8 540 (8 050)	9 650 (8 870)	10 580
Real wages, %	18.7 (18.5)	8.7 (5.5)	5.4 (4.3)	4.0
Unemployment, %	9.5 (9.3)	8.5 (8.4)	8.2 (8.2)	8.3

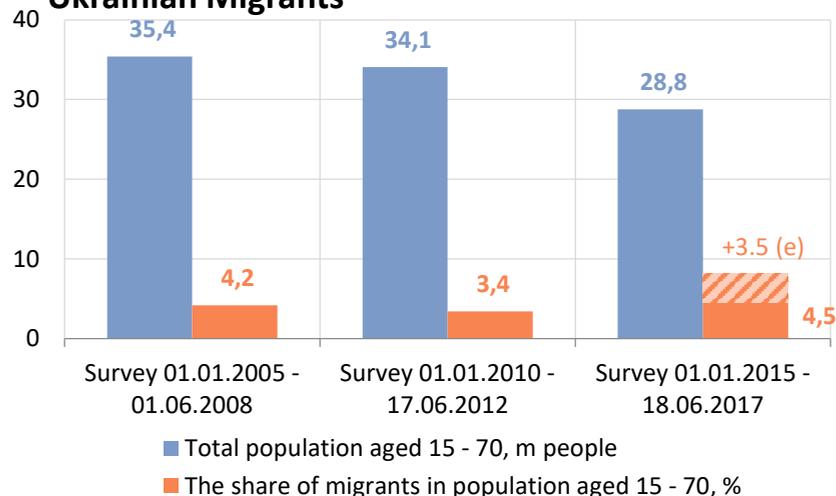
- The forecast is based on the assumption that minimum wage will be increased to UAH 4200 in 3Q 2018



NATIONAL
BANK OF
UKRAINE

BOX. Intensified labor migration contributed to labor market tightness in recent years

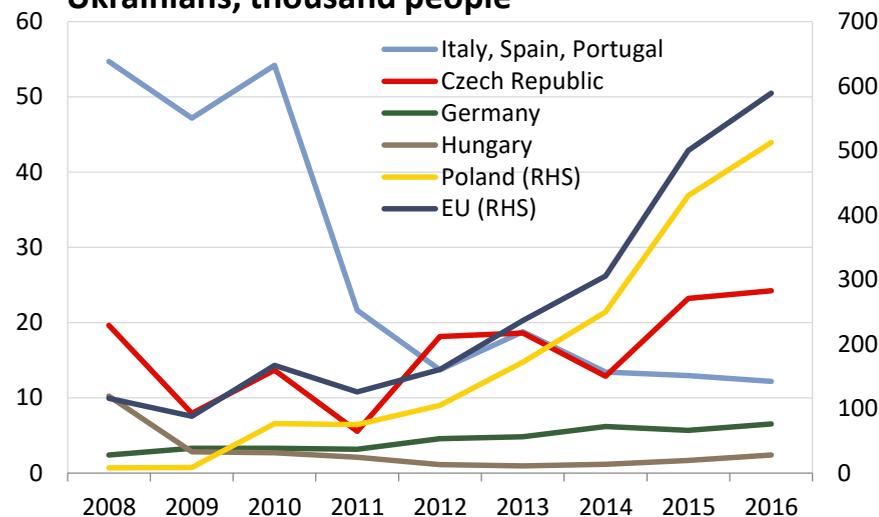
Total population aged 15 - 70 and the share of Ukrainian Migrants



* Excluding Crimea and Sevastopol since 2014 and ATO areas since 2015
 ** Dashed area for 2015-17 is an estimate based on Institute of Demography and Social Studies of the NASU information

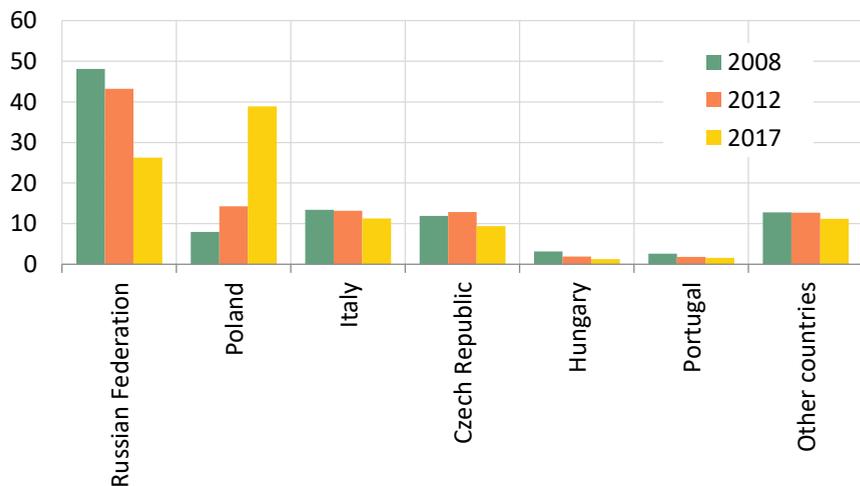
Source: SSSU, Institute for Demography and Social Studies of the NASU

Number of residence permits issued in the EU to Ukrainians, thousand people



Source: Eurostat

Ukrainian migrant workers by countries of migration, %



Source: SSSU

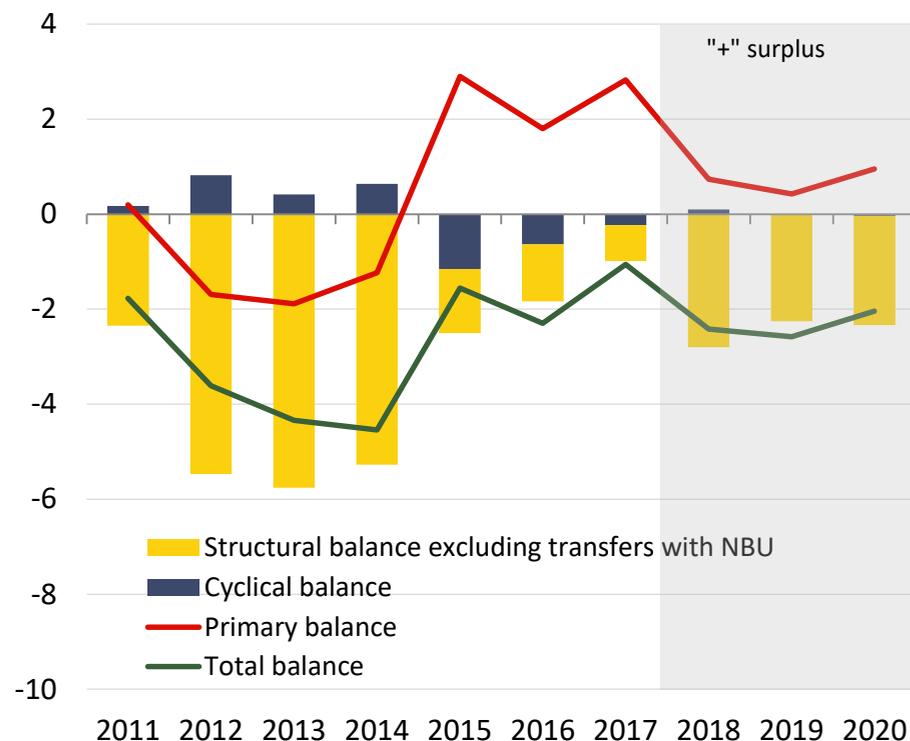
- The number of migrants noticeably increased in recent years (to ~1.3-2.3 million)
- In 2016, citizens of Ukraine received the highest number of EU residence permits, mainly for employment reasons (82.7%)
- According to Polish Ministry of family, labor and social policy, in 1H 2017 the number of Ukrainian applicants registered with the employment services of Poland grew further to 905 thousand



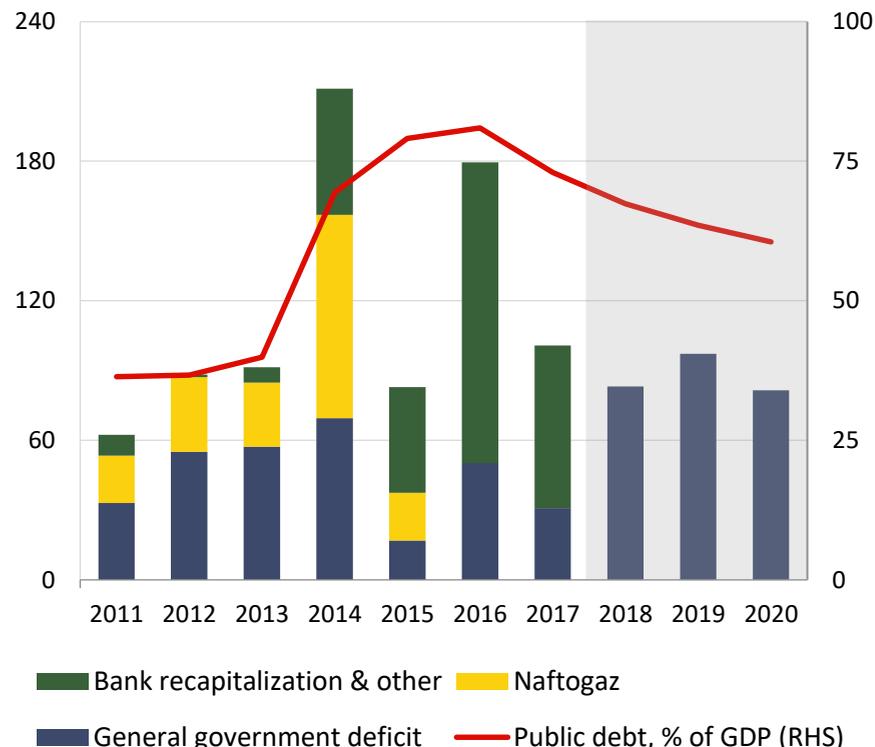
NATIONAL
BANK OF
UKRAINE

Fiscal policy provides strong positive impulse in 2018. Public debt decreases due to lower official borrowings

Consolidated Budget Balance, % GDP



Public Sector Debt factors

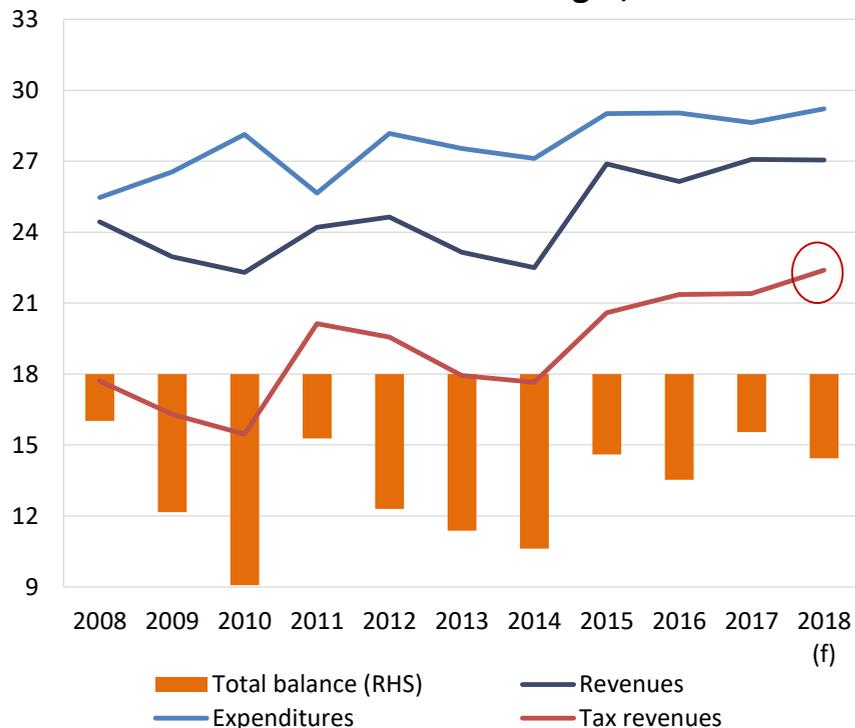




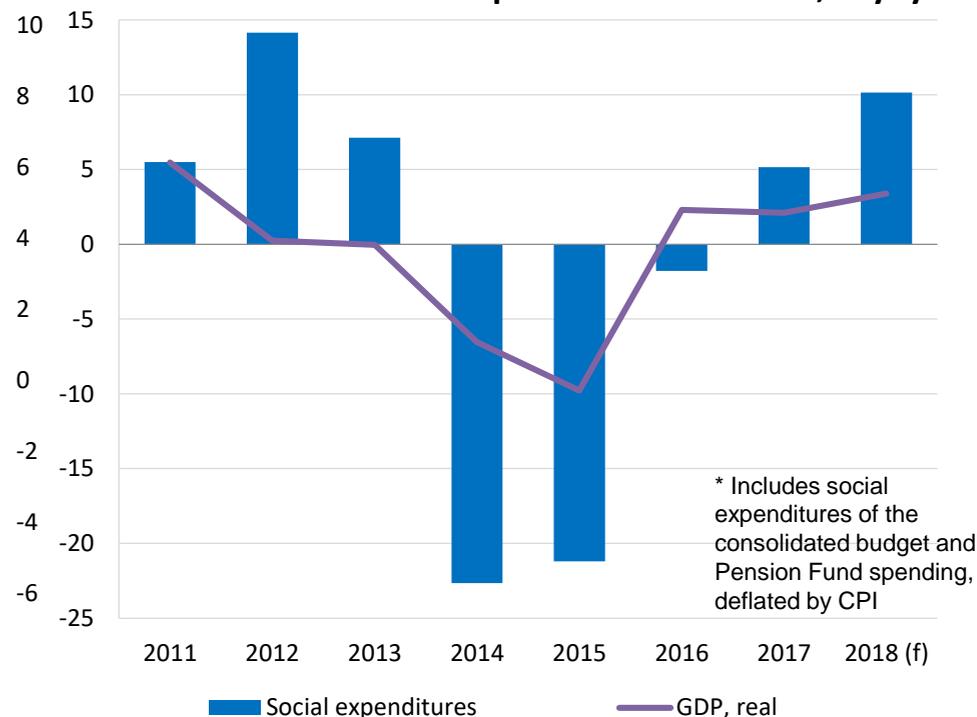
NATIONAL
BANK OF
UKRAINE

BOX. 2018 state budget has risks in all three major sides (revenues, expenditures and financing)

Main Indicators of the State Budget, % of GDP



Real Growth of Social Expenditures* and GDP, % yoy



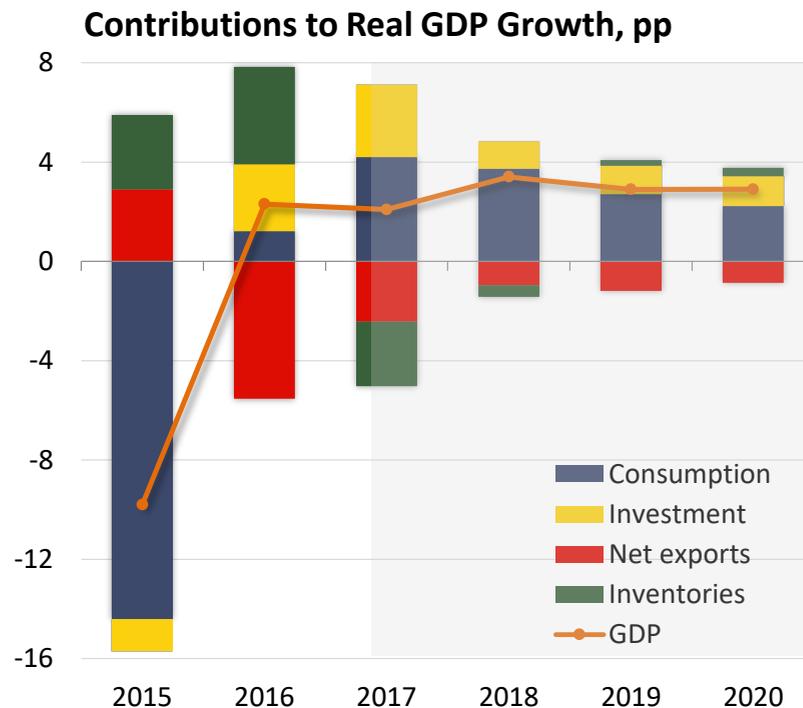
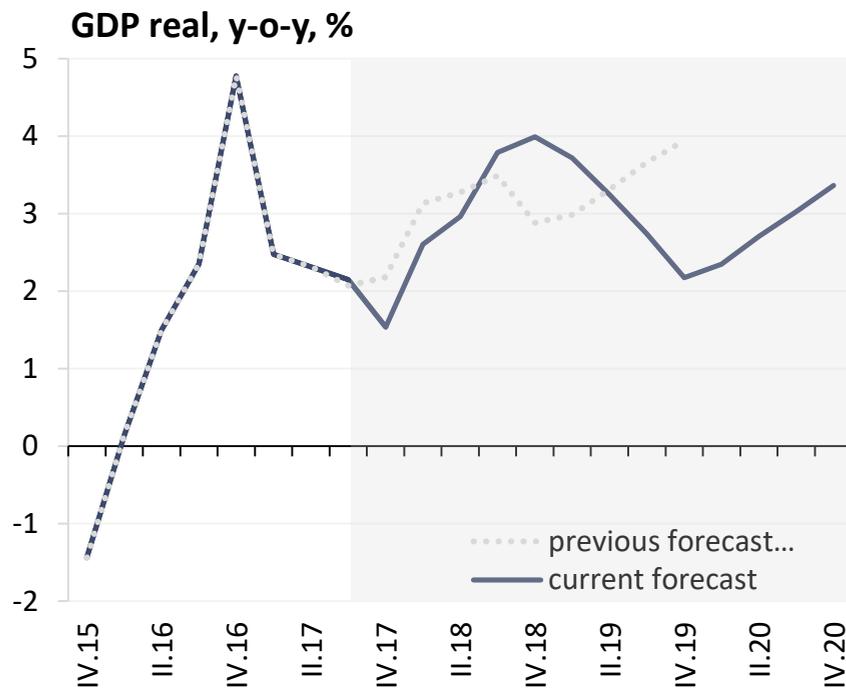
Source: SSSU; SSTU; Budget Law; PFU; NBU staff estimates.

- Macroeconomic assumptions underlying the state budget indicators overall are in line with the NBU forecast
- A deficit (2.4% of GDP) is in line with the IMF target, but there are differences in the treatment of confiscated funds 2018
- There are risks for:
 - Revenues (in 2017 tax proceeds were underperformed by 0.5%), reliance on one-off/volatile revenues (confiscated funds, NBU profits, etc.)
 - Expenditures (further minimum wage increase, higher Pension Fund and HH subsidy and privileges needs, increase in military pensions)
 - Financing (risks for privatization proceeds remain high, despite the recent Rada's approval of privatization law)



NATIONAL
BANK OF
UKRAINE

Fiscal impulse and favorable external factors boost GDP in 2018, but tight monetary conditions put drag on growth



Source: State Statistic Service of Ukraine; NBU

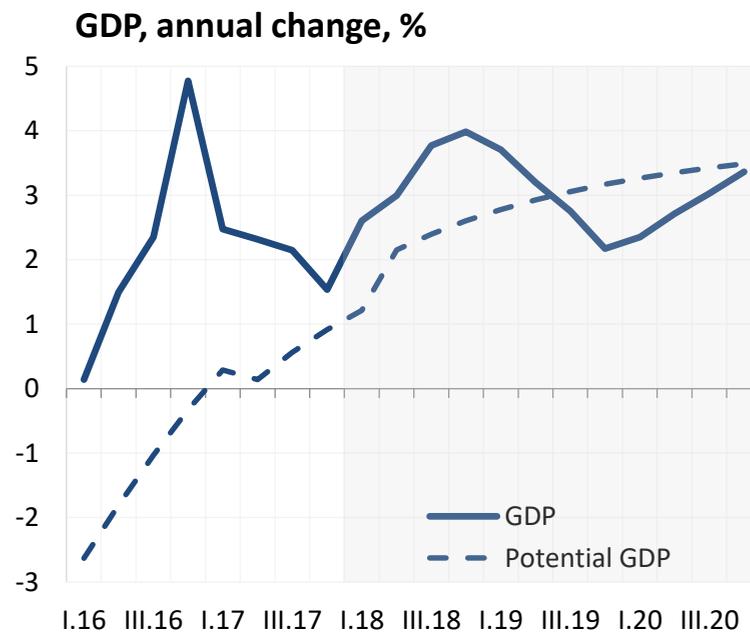
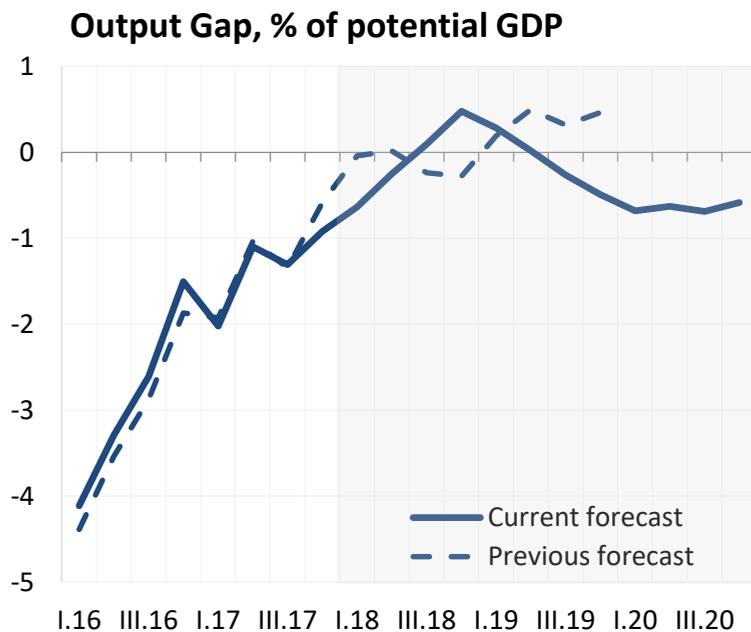
change, % (in real terms)	2016	2017	2018	2019	2020
GDP	2.3	2.1 (2.2)	3.4 (3.2)	2.9 (3.5)	2.9
Consumption	1.4	4.9 (4.6)	4.3 (3.3)	3.0 (3.3)	2.5
<i>Private consumption</i>	1.8	6.5 (6.0)	5.0 (4.0)	3.5 (4.0)	3.0
Gross fixed capital formation	20.1	19.7 (16.0)	6.8 (7.1)	6.9 (6.9)	7.3
Exports of G&S	-1.6	5.5 (5.1)	3.3 (3.3)	3.6 (3.2)	3.7
Imports of G&S	8.4	9.2 (9.8)	4.7 (4.7)	5.5 (3.2)	5.0

Factors:

- ↑ Wages growth and fiscal impulse
- ↑ Better external demand
- ↓ Tighter monetary policy
- ↓ REER appreciation

in () – previous forecast (IR, October 2017)

Negative output gap closes in 2018 reflecting strong fiscal impulse, but opens again in 2019 due to tight monetary policy

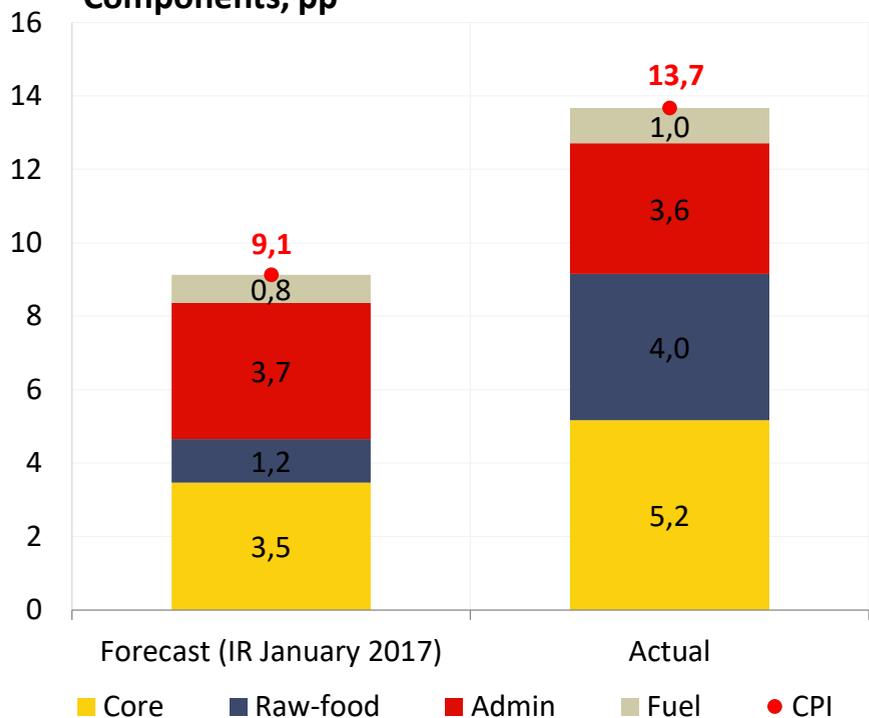




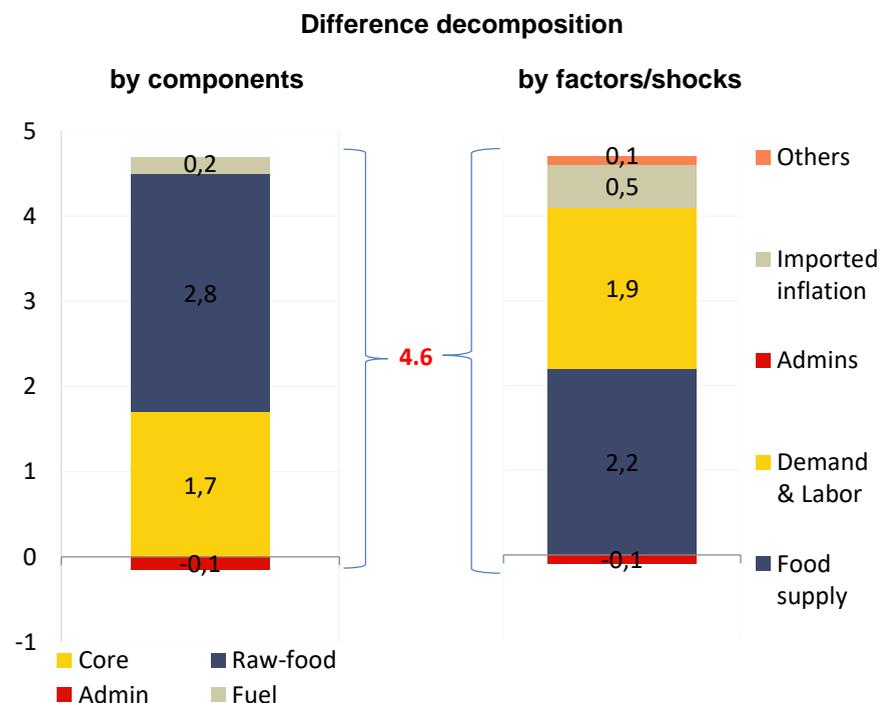
NATIONAL
BANK OF
UKRAINE

Inflation in 2017 grew faster than expected due to domestic food supply shocks and stronger impact of domestic demand and labor

Forecast and Actual Annual CPI Growth by Main Components, pp



Annual CPI Growth Forecast Error by Main Components and Factors, pp



Source: State Statistics Service of Ukraine; NBU staff estimates

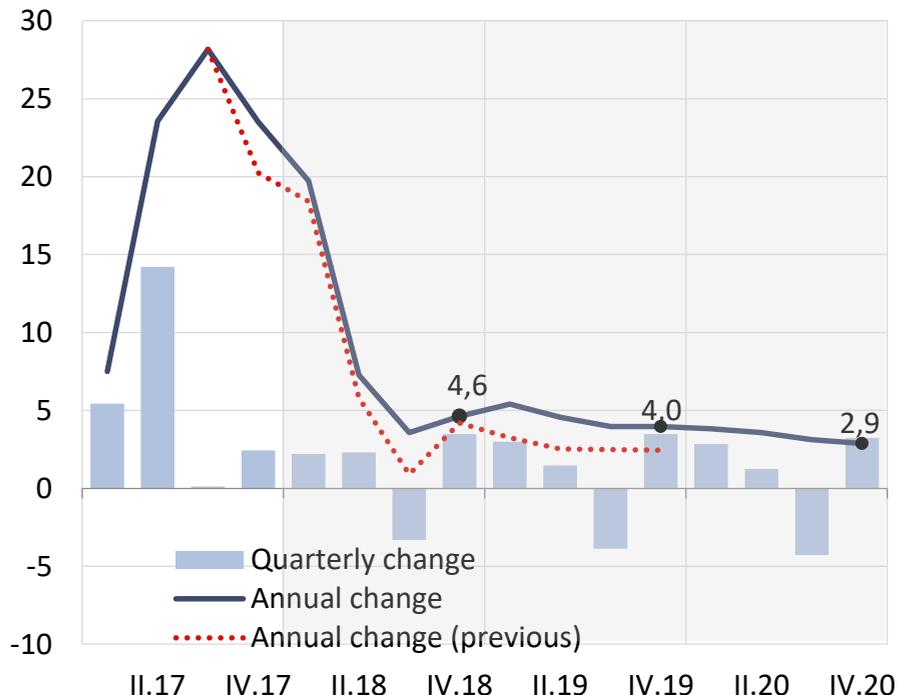
- The deviation of actual consumer inflation from the forecast is almost equally explained by domestic food supply shocks (unfavorable weather, unstable situation in animal breeding, robust exports of meat and dairy products) and stronger impact of domestic demand and labor
- Higher imported inflation (world food and energy prices) also contributed to the deviation
- Administrative prices changes were close to the forecast (16.1% vs 16.9%) due to mutually offsetting factors (no gas tariff increase vs higher tobacco price growth)



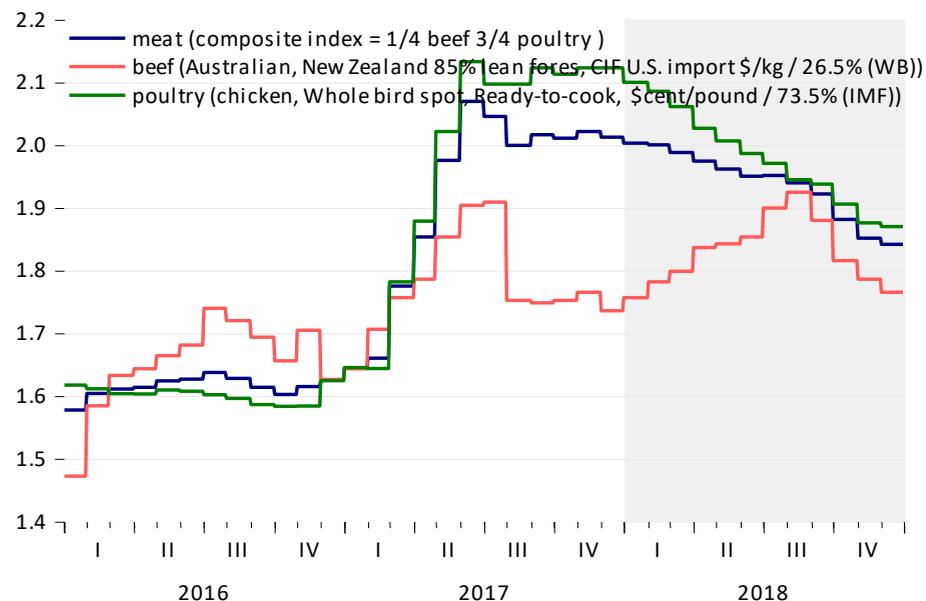
NATIONAL
BANK OF
UKRAINE

Raw food inflation will decelerate due to run out of supply shocks

Raw food prices, %



Assumptions Used in Forecast Meat Price Index, 01.2004=1



Price change, %	weight, %	2017	2018
Cereals	1.8	7.4	7.2
Meat	7.4	29.4	3.8
Milk	2.2	23.1	7.4
Eggs	1.2	21.2	5.8
Fruit	2.7	34.5	4.1
Vegetables	2.3	24.7	0.0
Sugar	1.5	-7.4	5.4

FAO milk prices, 2010=100

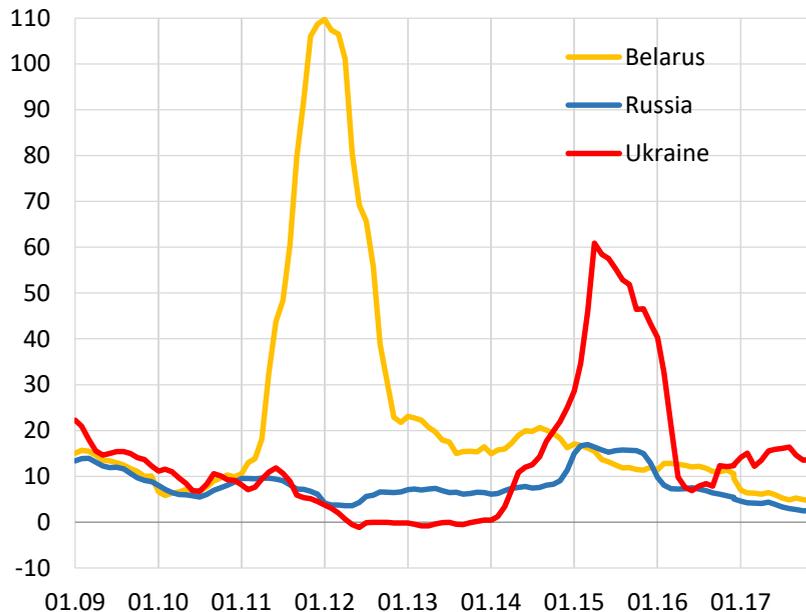




NATIONAL
BANK OF
UKRAINE

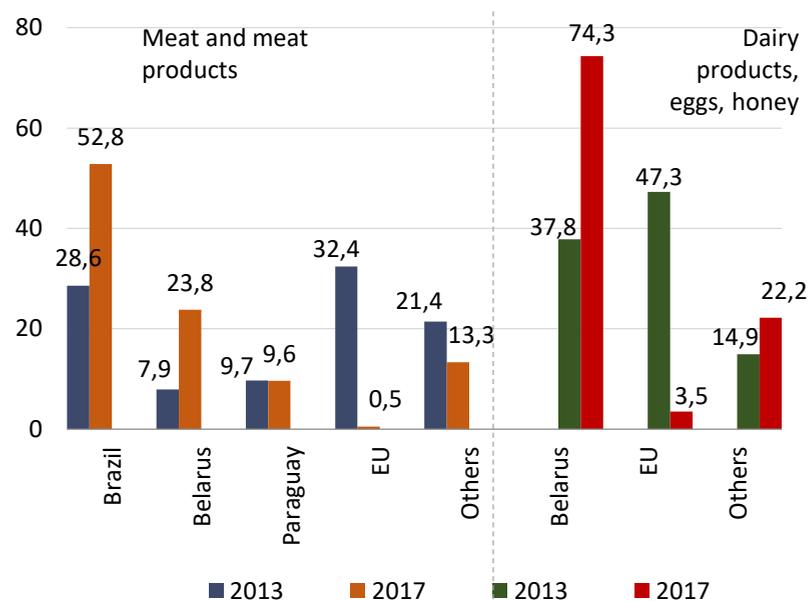
BOX. Recent divergence between raw food price dynamics in Russia and Belarus and those in Ukraine

Consumer Price Indices in Ukraine, Russia and Belarus, % yoy



Source: National Statistical Offices

Structure of Russian imports on certain food products in 2013 (prior to the embargo on EU food products) and in 2017*, %



Source: International Trade Centre, 9 months 2018

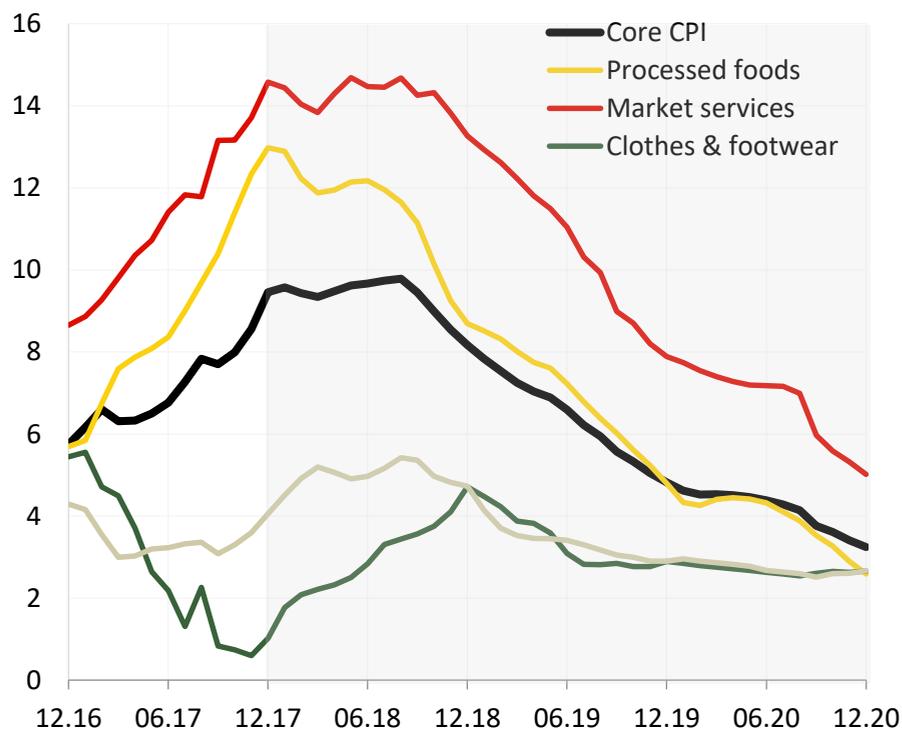
- After Russia's embargo in mid-2014 on food products from some countries, including the EU, Russia and Belarus saw a noticeable increase in food prices in 2014-2015
- However, thereafter food price growth was moderate thanks to bilateral trade gains and growing animal production in Belarus
- In Ukraine, animal production continued to decline. In 2016, a number of supply shocks (incl., Russia's embargo on Ukrainian foods, increased supply of Turkish products, etc.) suppressed food price growth. In 2017, food prices surged up, inter alia due to fading out 2016 effects and a strong increase in world food prices driving Ukraine's exports of meat and dairy products
- Differences in wage policies and exchange rate developments were another contributing factor



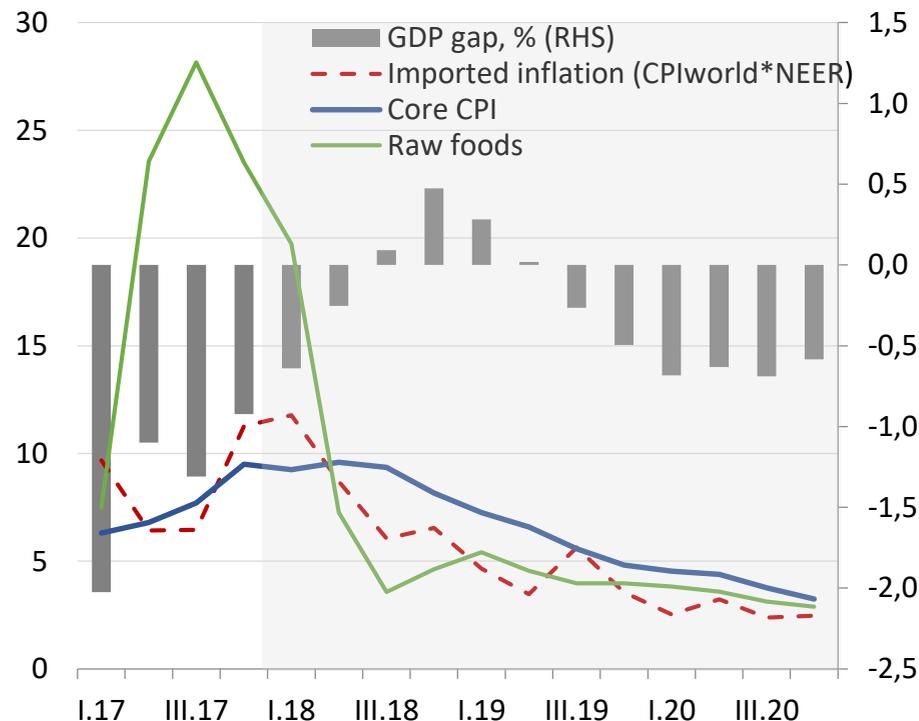
NATIONAL
BANK OF
UKRAINE

Core inflation is higher due to inflation persistence, pass-through from food supply shocks and real marginal costs contribution

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



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



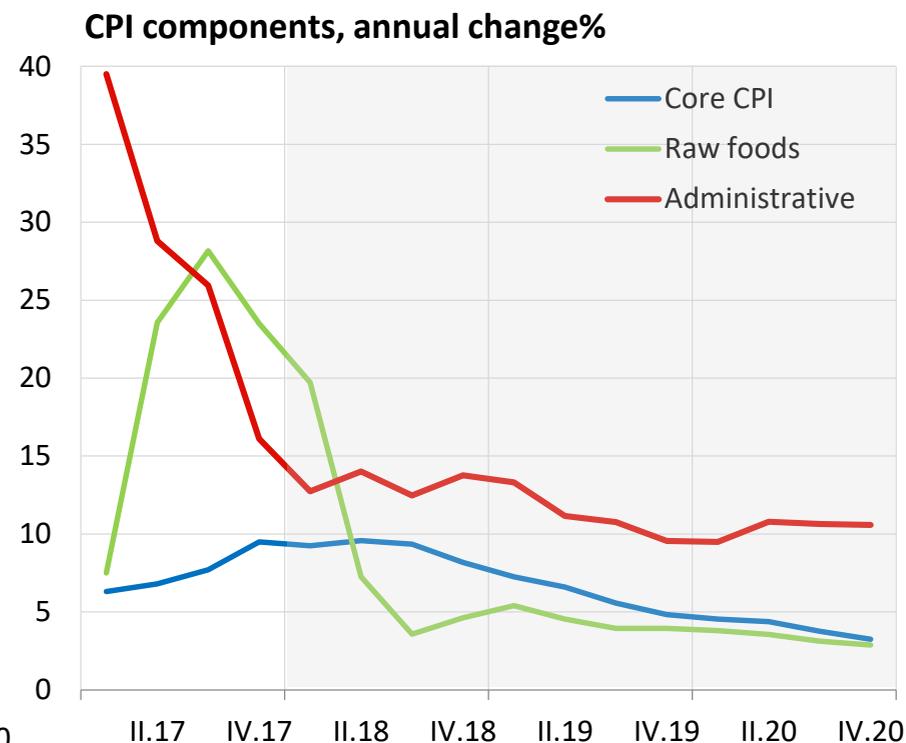
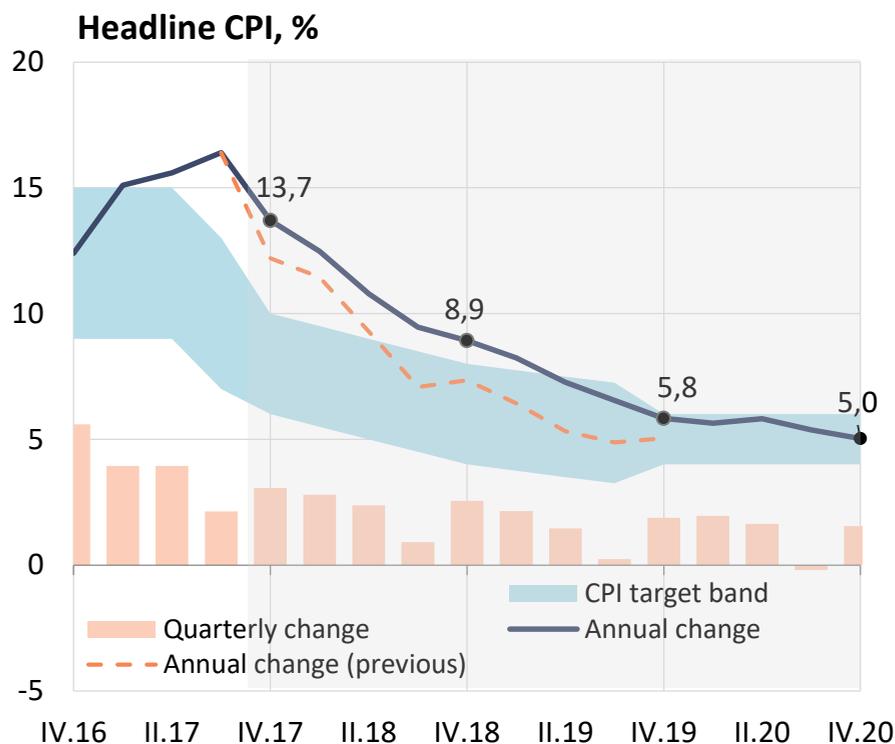
change, %	weight, %	2017	2018	2019	2020			
Core CPI	57.4	9.5	(8.0)	8.2	(5.5)	4.8	(2.9)	3.2
Processed foods	20.9	13.0	(10.2)	8.7	(5.2)	4.8	(2.3)	2.6
Market services	11.8	14.6	(12.4)	13.3	(7.5)	7.9	(4.5)	5.0
Clothes & footwear	5.3	1.0	(1.6)	4.7	(4.4)	2.9	(2.0)	2.7
Other non-foods	19.4	4.1	(4.3)	4.7	(4.7)	2.9	(2.5)	2.7

In () – previous forecast
(IR, October 2017)



NATIONAL
BANK OF
UKRAINE

Growing domestic demand and further growth in real wages impose additional upward pressure on inflation



change, %	weight, %	2018		2019		2020
CPI	100.0	8.9	(7.3)	5.8	(5.0)	5.0
Core CPI	57.4	8.2	(5.5)	4.8	(2.9)	3.2
Raw food	19.0	4.6	(4.2)	4.0	(2.5)	2.9
Admin	18.6	13.8	(13.8)	9.6	(11.6)	10.6
Fuel	5.0	10.8	(9.0)	5.5	(5.0)	5.0

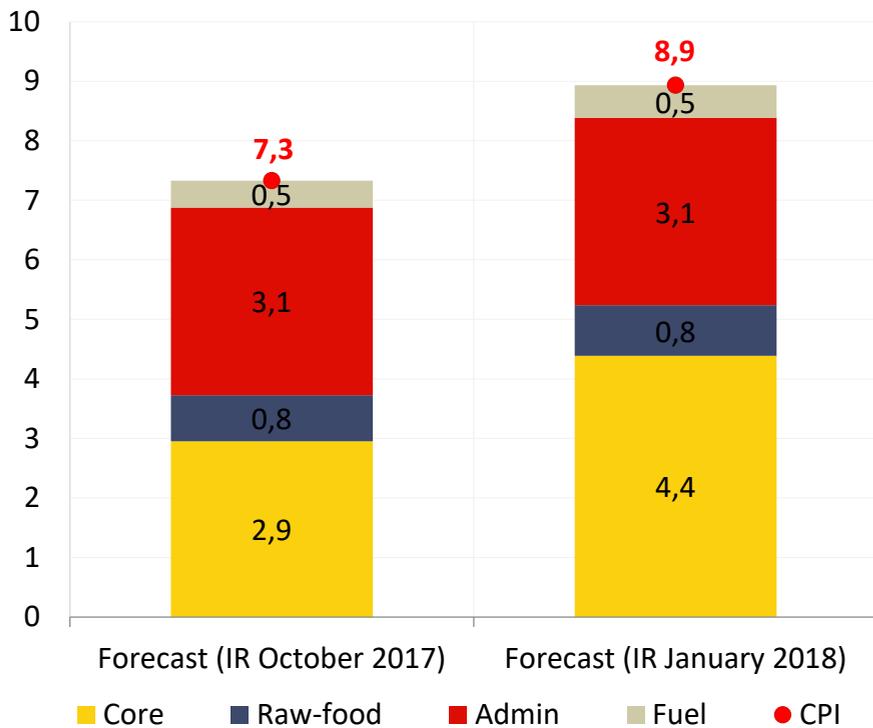
(gray color) – previous forecast (IR, October 2017)



NATIONAL
BANK OF
UKRAINE

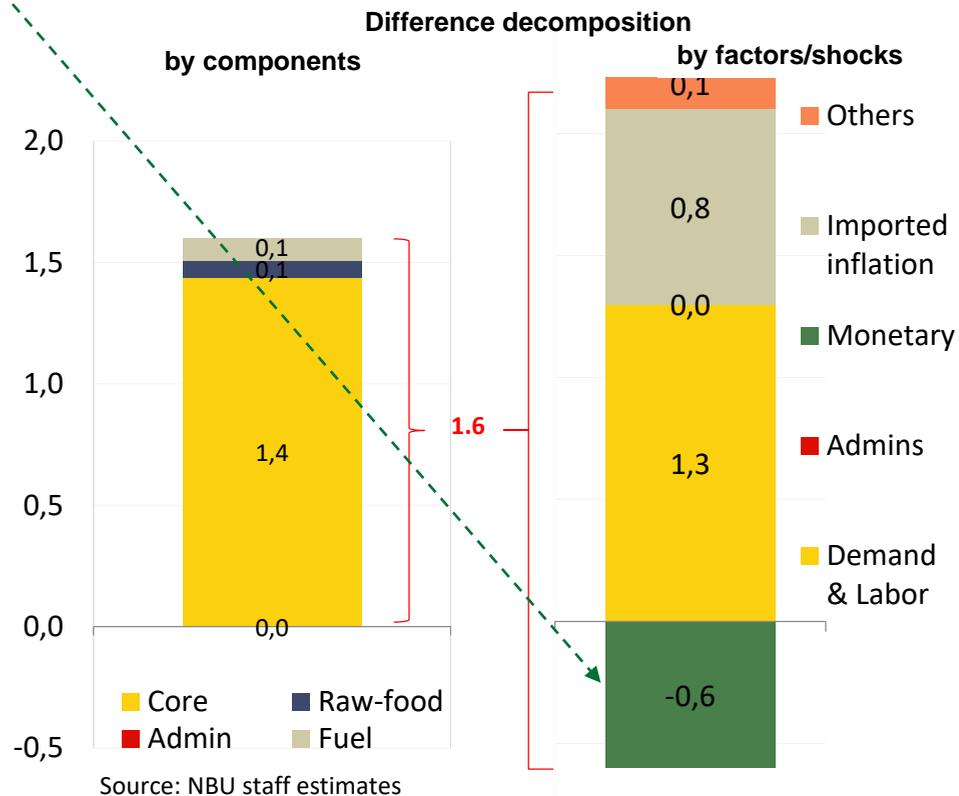
Decomposition of changes in CPI forecast for 2018 shows effects of tighter monetary policy in response to new demand shocks

Annual CPI Growth Contribution by Components, ppts



Source: NBU staff estimates

Annual CPI Growth Forecast change for 2018 by Main Components and Factors, ppts

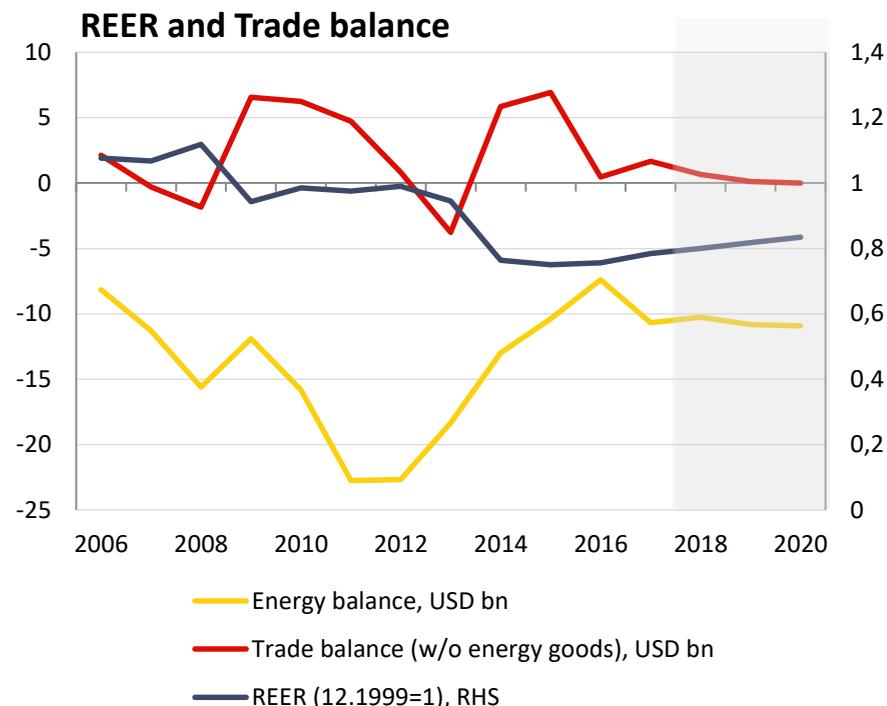
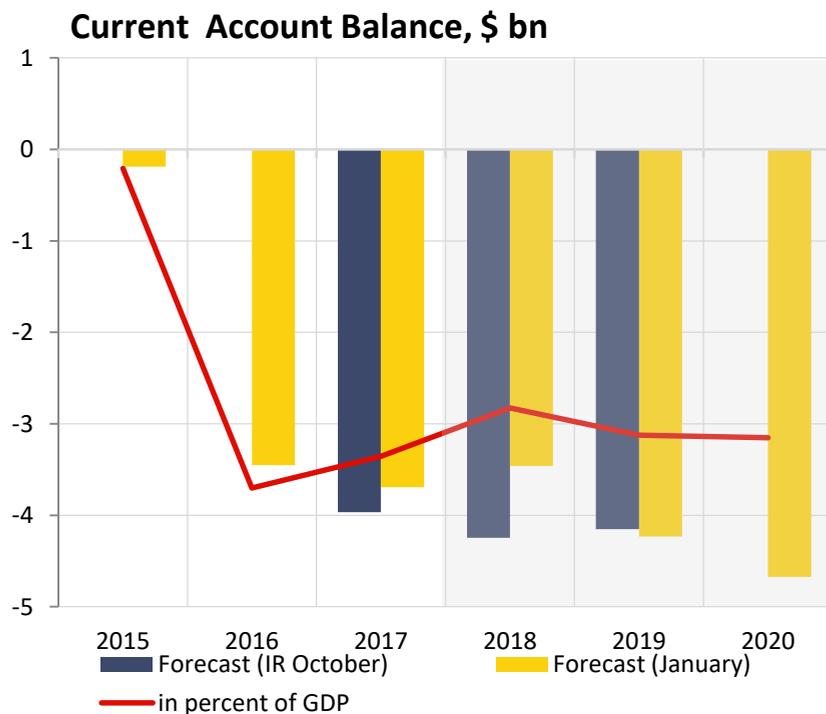


Source: NBU staff estimates



NATIONAL
BANK OF
UKRAINE

In 2018-2020, CA deficit will remain close to 3% of GDP



Main factors of BoP changes in 2018-2019 compared with IR (October)

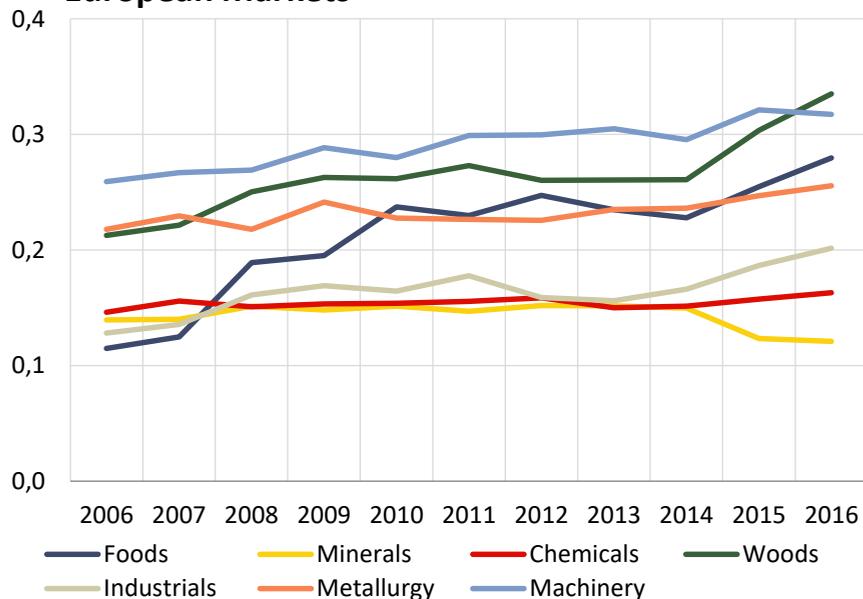
Trade in goods and services balance (↓)	↓ Maize prices, ↓ Exports of sunflower oil (volumes&prices), ↑↑ Machinery imports, ↑ Chemicals imports ↑ Metal and iron ore prices in 1H2018, ↑ Volumes of gas transit (services)
Remittances (↑↑)	↑↑ Revised number of migrant workers
Dividend payments ↑	↑ Repatriation of dividends accrued before 2013



NATIONAL
BANK OF
UKRAINE

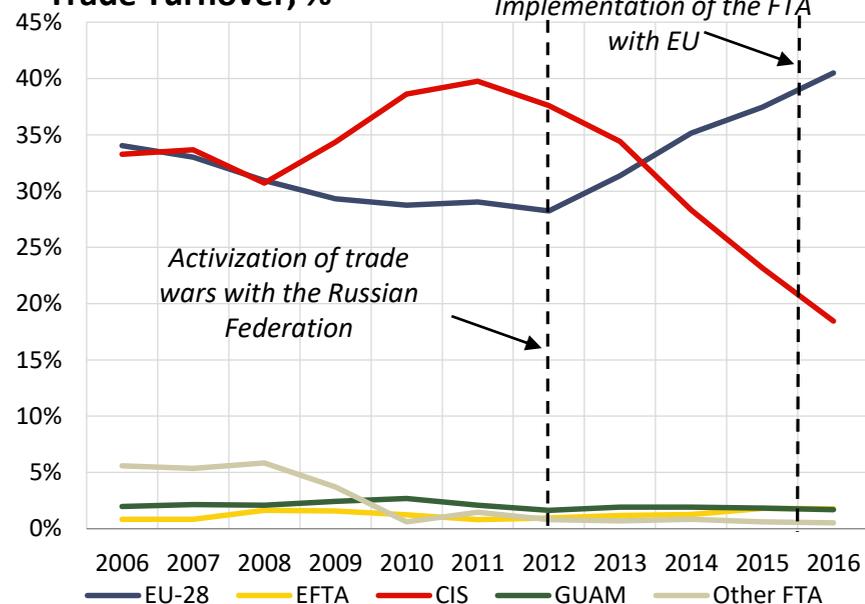
BOX. Economic effects of trade liberalization: international experience and lessons for Ukraine

Index of Ukrainian Export Penetration into European Markets



Source: WITS; NBU estimates at the level of HS headings.

The Share of FTA-countries in Ukraine's External Trade Turnover, %



Source: SSSU; NBU estimates.

Advantages

- Higher economic growth
- Higher living standards
- Productivity growth
- Larger FDI inflows
- Gains to quality of goods

Risks

- Labor market vulnerability, particularly for skilled and less educated people
- Adjustment costs to higher competition, etc.

Ukraine's experience

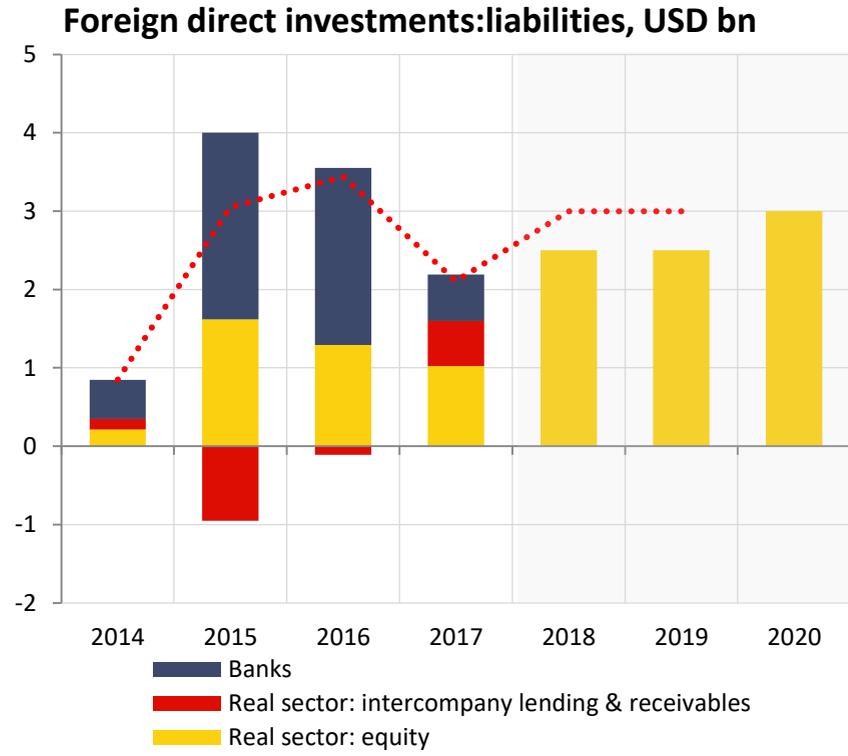
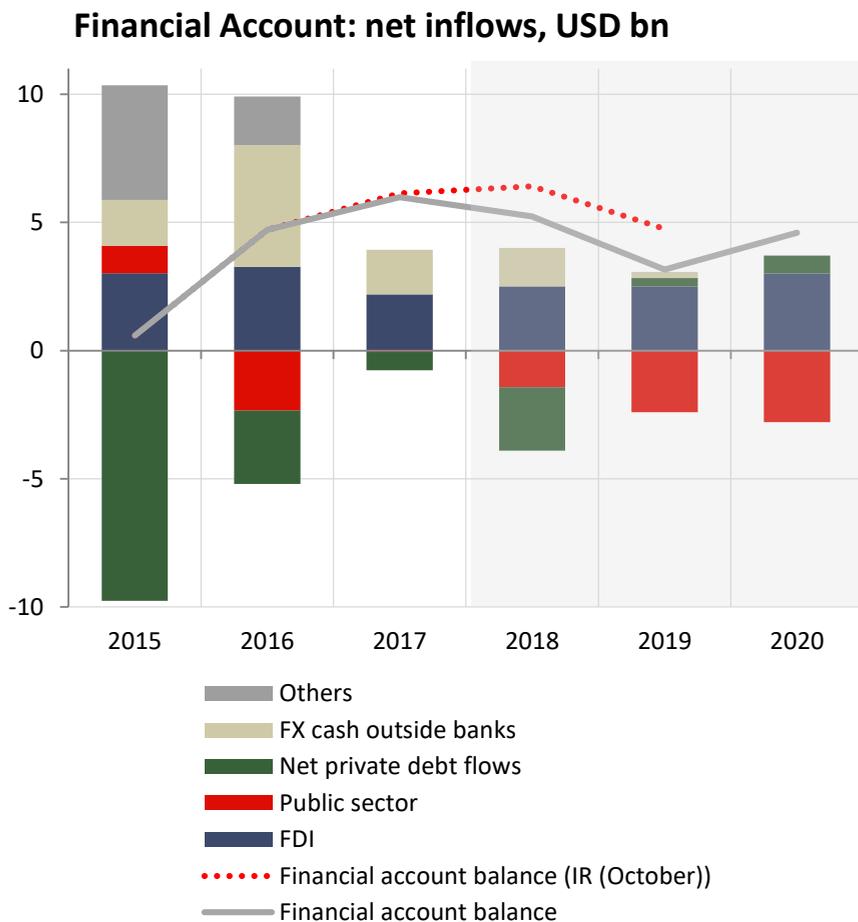
- Geographic and commodity diversification of exports to Europe has increased since 2014
- The share of EU countries in Ukraine's foreign trade turnover rose to 36.5% in 2017 (28.5% in 2013)
- Ukraine's exports of goods to EU countries showed resilience during 2014-2015 crisis, and rose by 2.6% in 2016 and 32.7% yoy in 11M 2017

Trade openness has its costs, but they are mostly related to institutional weaknesses and can be mitigated by structural reforms, particularly on the labor market



NATIONAL
BANK OF
UKRAINE

Only modest improvement of investment climate determines very gradual increase in FDI inflows and mild FA inflows

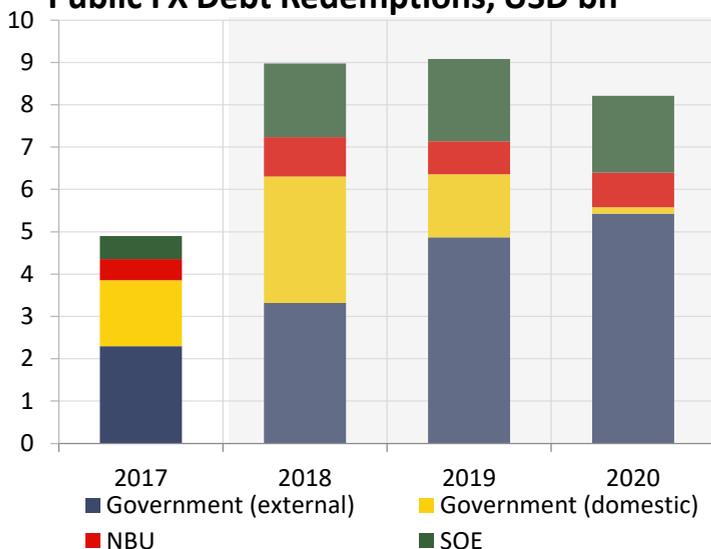




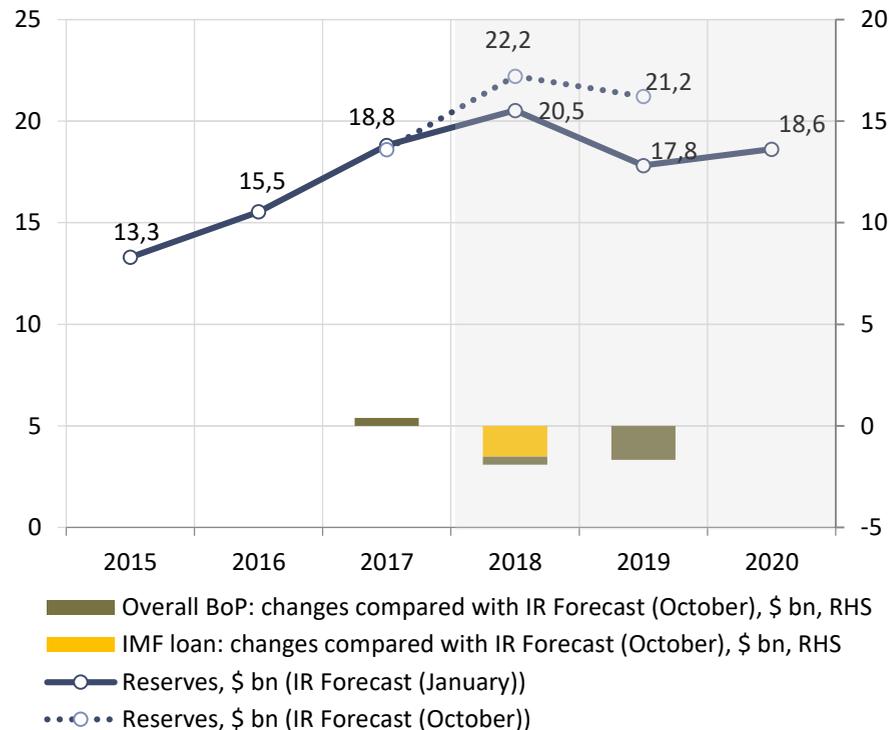
NATIONAL
BANK OF
UKRAINE

The peak payments of external public debt will limit international reserves build-up

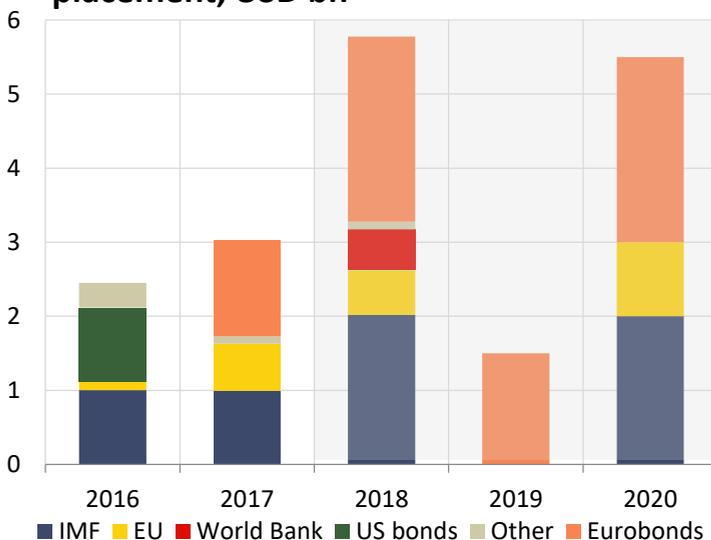
Public FX Debt Redemptions, USD bn



Gross International Reserves



Official Financing and Eurobonds' placement, USD bn





NATIONAL
BANK OF
UKRAINE

NBU policy under different scenarios

- “The NBU will continue to focus on price growth deceleration and meeting the inflation targets”
- “In the absence of indications of the lowering inflationary pressure the NBU may further increase the key policy rate to return inflation to its medium-term target”
- “The probability of the monetary policy easing by the end of 2018 is low”
- “If risks of early termination of the EFF program with the IMF materialize and the fiscal policy continues to loosen, the monetary policy tightening will need to be intensified”

Scenario	Results (2018-2019)	NBU policy
Baseline <ul style="list-style-type: none"> - IMF program (current and new) - structural reforms - responsible fiscal policy - favorable external environment 	GDP +3.4% +2.9% CPI 8.9% 5.8%	Admin. restrictions ↓ Interest rate (high in short-run and ↓ in medium-run)
Optimistic <ul style="list-style-type: none"> - higher export prices - lower energy prices (oil, gas, coal) - foreign capital inflows 	GDP ↑ UAH/USD ↓ CPI ↓	Admin. restrictions ↓↓ Interest rate ↓ (earlier)
Pessimistic <ul style="list-style-type: none"> - further delays in IMF tranches - expansionary fiscal policy - negative terms of trade shocks - tighter labor market 	GDP ↓ UAH/USD ↑ CPI ↑	Admin. restrictions = Interest rate ↑



NATIONAL
BANK OF
UKRAINE

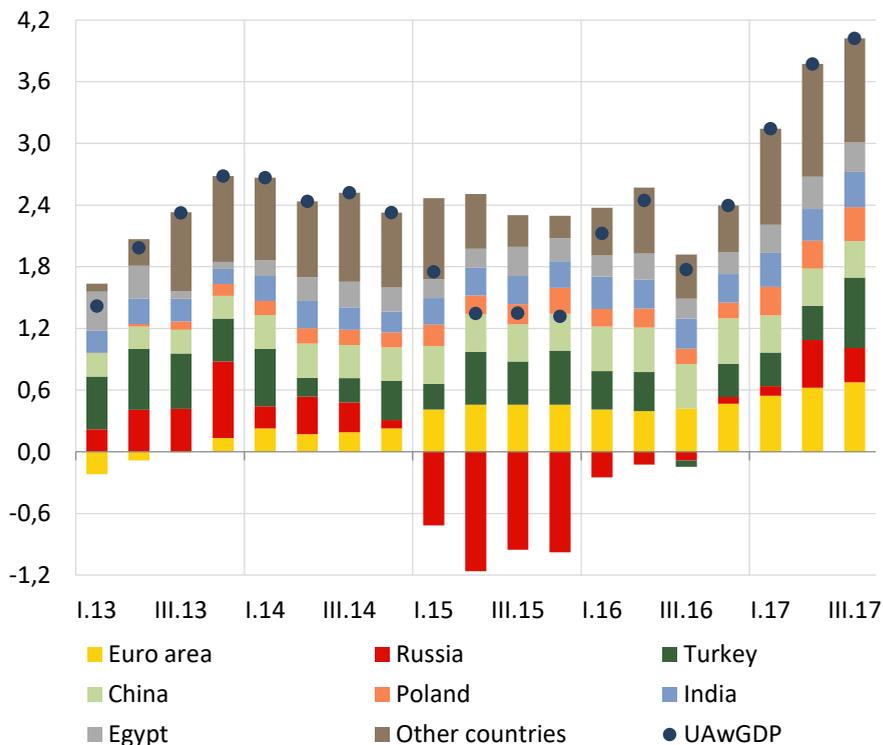
Annexes



NATIONAL
BANK OF
UKRAINE

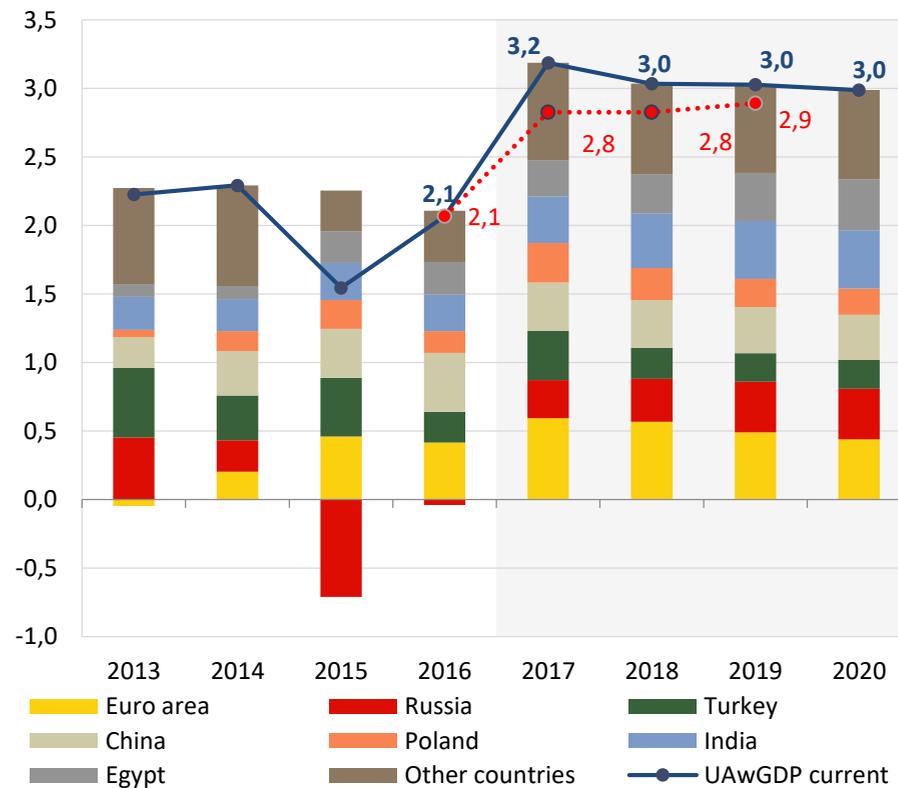
Economic activity in Ukraine's MTPs accelerates

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



Source: NBU estimate (preliminary data)

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



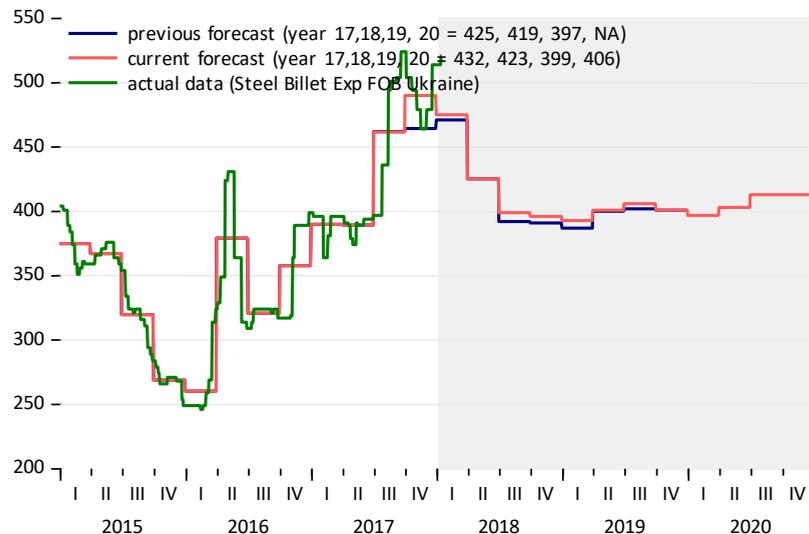
Source: NBU estimate (preliminary data)



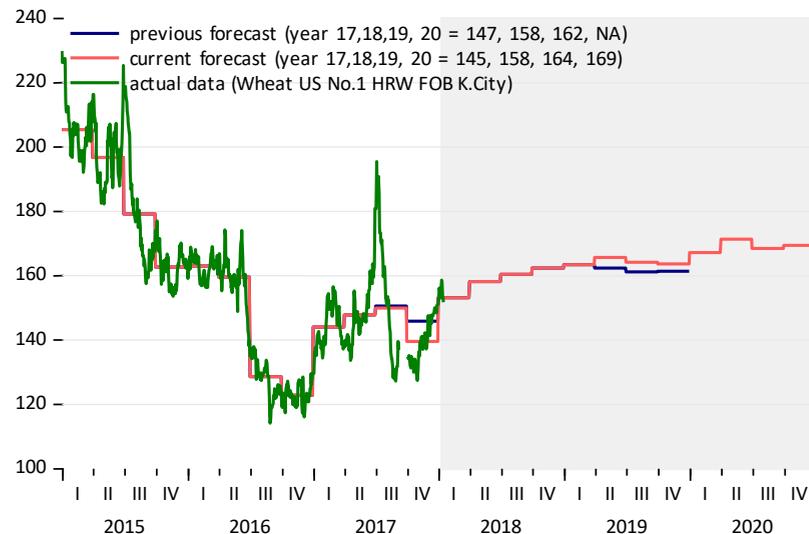
NATIONAL
BANK OF
UKRAINE

Downward correction of metal prices to \$400 per ton is expected while maize prices will rise during 2018-2019

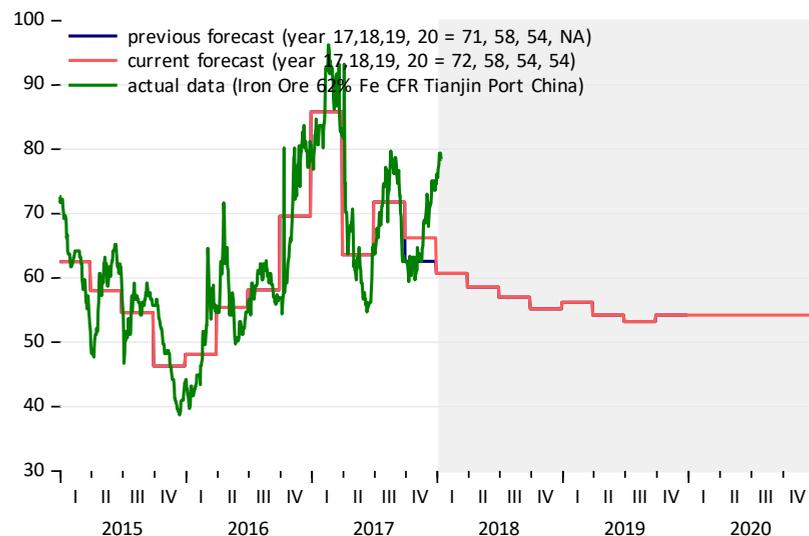
Steel World Price, USD/MT



Wheat World Price, USD/MT



Iron Ore World Price, USD/MT



Maize World Price, USD/MT

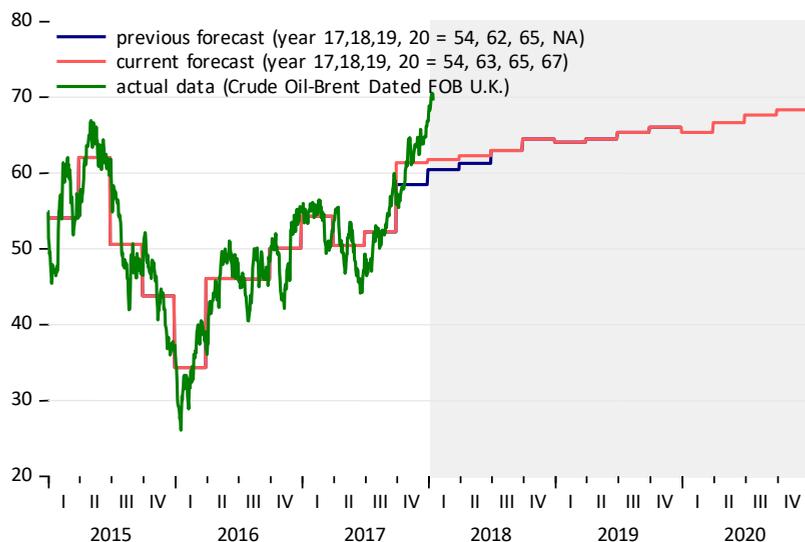




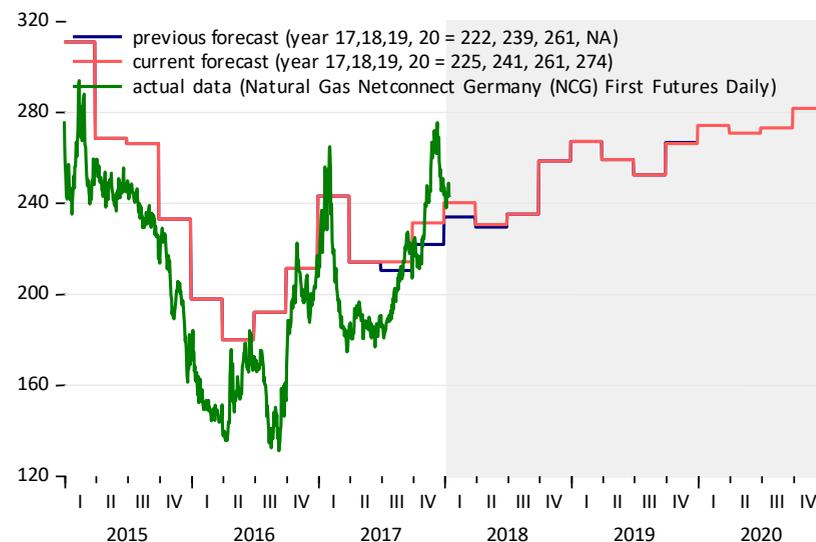
NATIONAL
BANK OF
UKRAINE

Global energy prices will grow further but volumes of energy import will decrease gradually

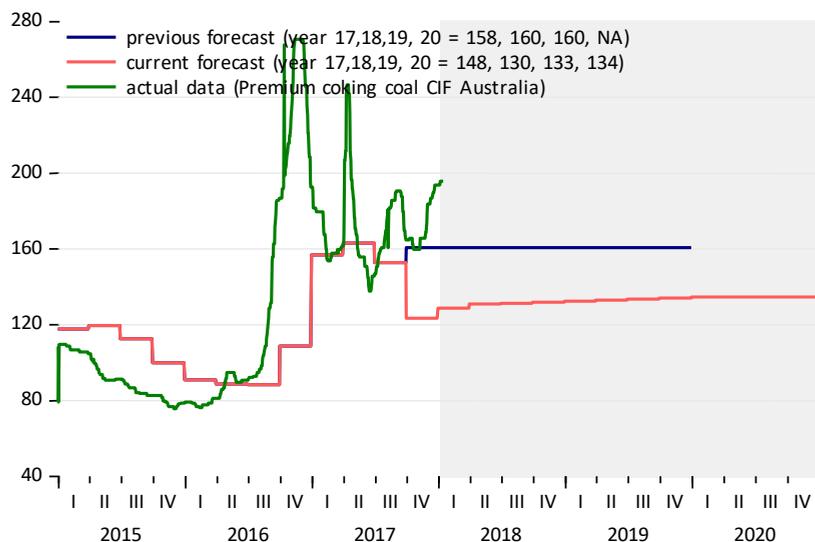
Brent World Price, USD/bbl



Natural Gas Import Price, USD/1000m3



Coal Import Price, USD/MT

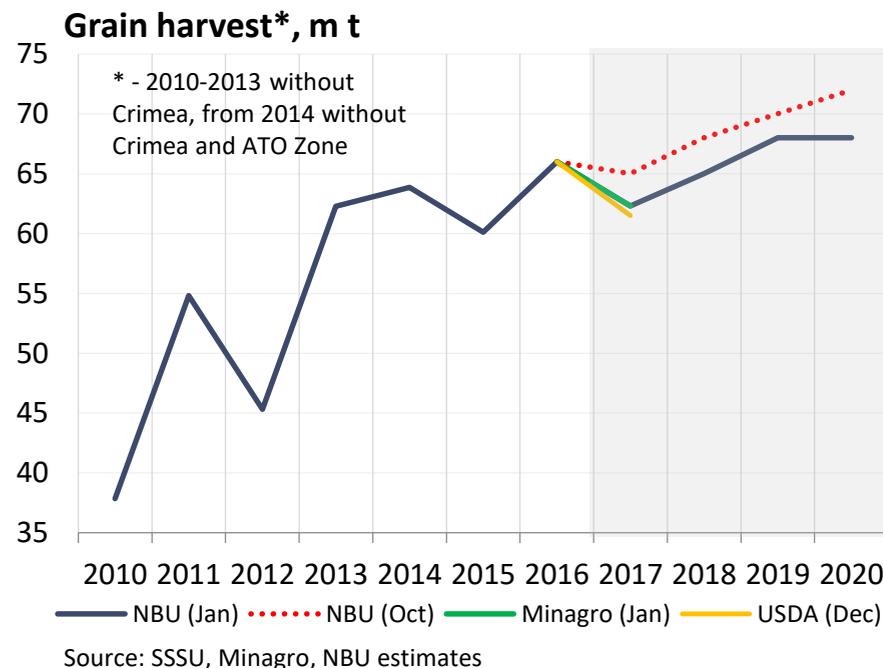
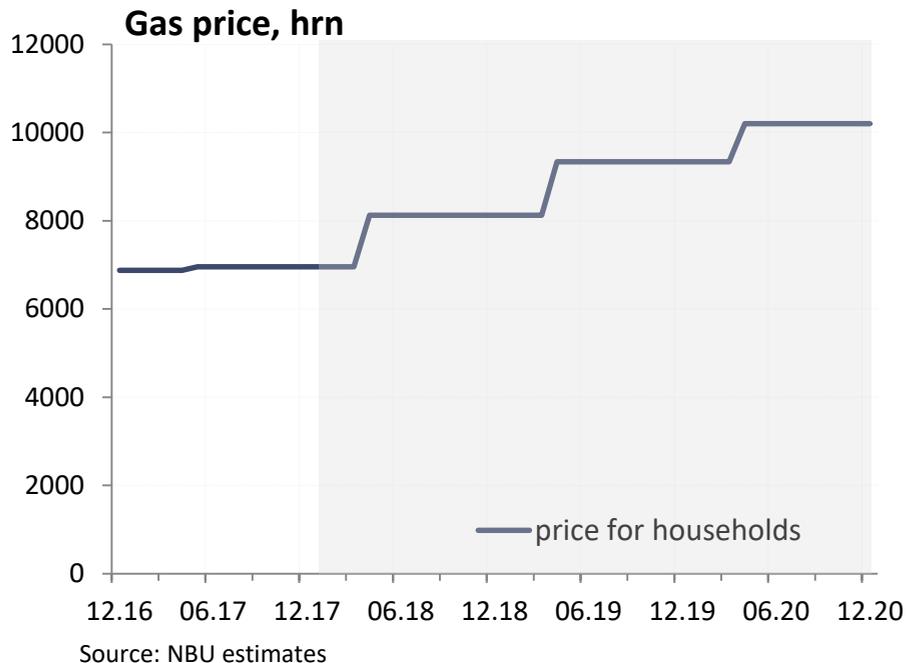


	Volumes of imports	
	Gas, bn m ³	Coal, m tones
2015	16.5	14.6
2016	10.9	15.6
2017	14.1 (11.5)	19.8 (17.9)
2018	10.0 (11.5)	19.0 (17.1)
2019	10.5 (10.5)	19.0 (17.1)
2020	9.5	19.0



NATIONAL
BANK OF
UKRAINE

Internal assumptions: adjustments in administered prices, worse harvest



Adjustment of administered prices, yoy changes, %

	share, %	2018		2019		2020
		new	prev.	new	prev.	new
Admin CPI	18.6	13.8	(13.8)	9.6	(11.6)	10.6
Natural gas	2.0	16.7	(21.0)	15.0	(20.0)	11.0
Heating	1.2	16.0	(16.8)	10.5	(15.0)	10.5
Electricity	1.0	18.0	(18.0)	0.0	(20.0)	20.0

Harvest, m t

	2017	2018	2019	2020
Grains	62.3 (65)	65 (68)	68 (70)	68 (72)
Sunflower seeds	12.0 (12.5)	12 (13)	12 (13)	12 (13)