

## NATIONAL BANK OF UKRAINE

### **Inflation Report (October 2017)**

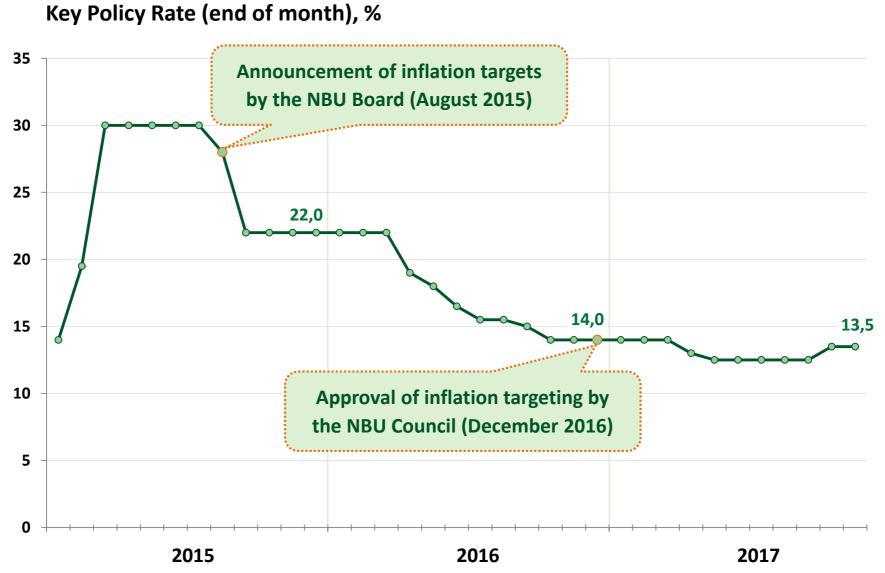
National Bank of Ukraine Kyiv, November 7, 2017



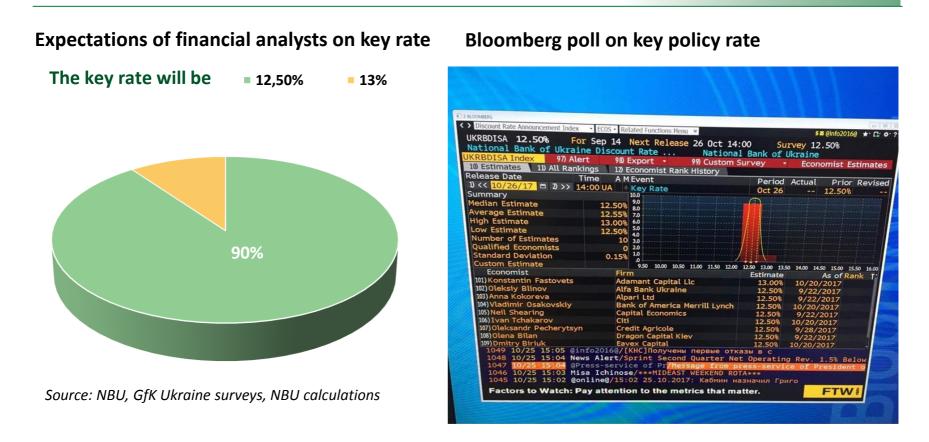
## Motivation behind the NBU's monetary decision



## The NBU hiked the key policy rate for the first time since the adoption of inflation targeting





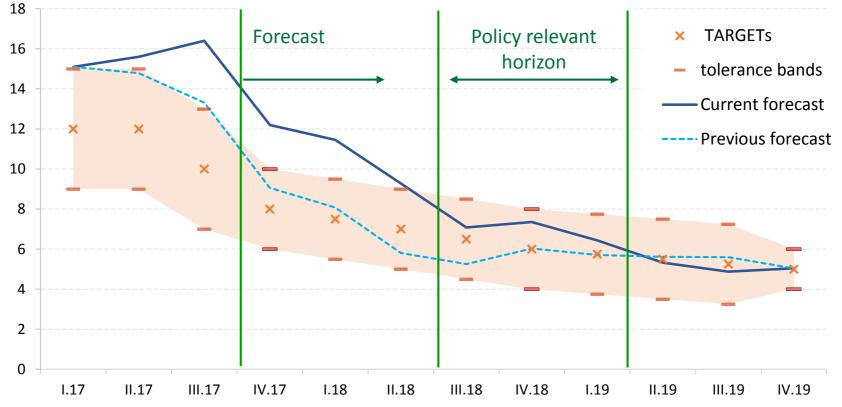


- The market participants from the NBU poll excepted one suggest no changes in policy rate
- But some analysts did not rule out the possibility of key rate hike after publication of surprising inflation figures
- Meanwhile, 2 more analysts suggested monetary tightening by other monetary tools than interest rate hike



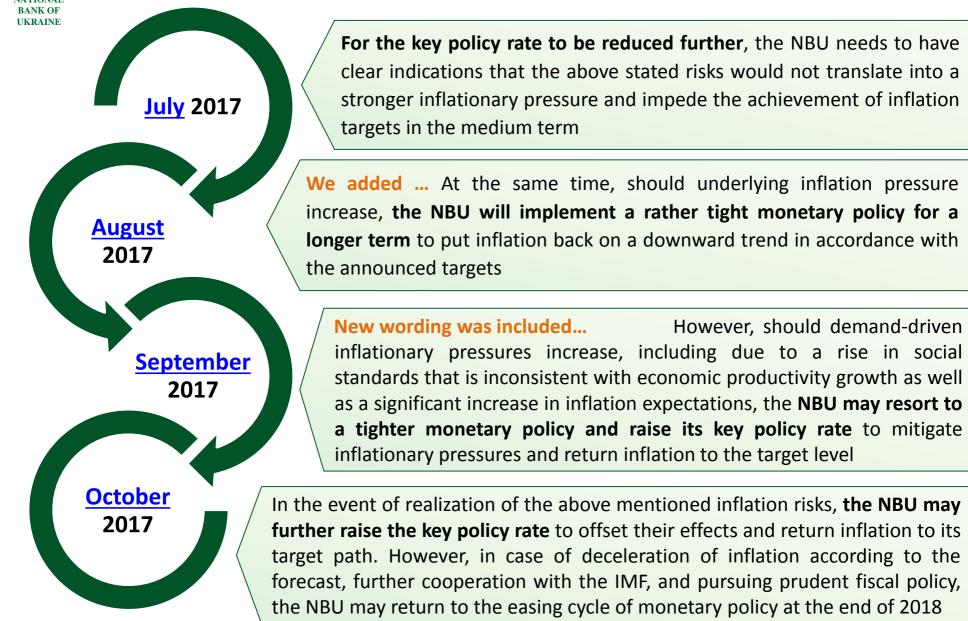
### Motivation behind the key rate hike

- Reversing inflation trend and bringing inflation down to the target
- Regaining control over inflation expectations and anchoring them firmly to the target before return to the easing cycle
- Counteracting growing demand and labor market pressure
- Balancing upward risks for inflation outlook (IMF program delay, increase in social benefits, etc.)



### Headline CPI, annual change, %







### Selected 'myths' around monetary policy and 'reality'

### 'Myths'

Tight monetary policy is directed against inflation speed up caused by food supply factor (surge in meat, milk and vegetables prices)

It was not logical to cut the key rate in spring and raise it now. In spring, inflation started to accelerate and it will decelerate since October

Monetary policy tightening will be realized through other instruments, e.g. 3 months CDs

Key policy rate affects nothing

NBU revised its targets for inflation

### 'Reality'

Monetary policy is forward-looking and focuses on inflation expectations and transmission of current and expected shocks into future inflation development

 NBU expected high inflation outcomes up to September.
 The need to tighten had been growing up gradually and strengthened in October (worsening inflation expectations, delays with IMF tranches, parameters of pension reform, wage growth in private sector, consumption growth, higher tobacco excises, etc.)

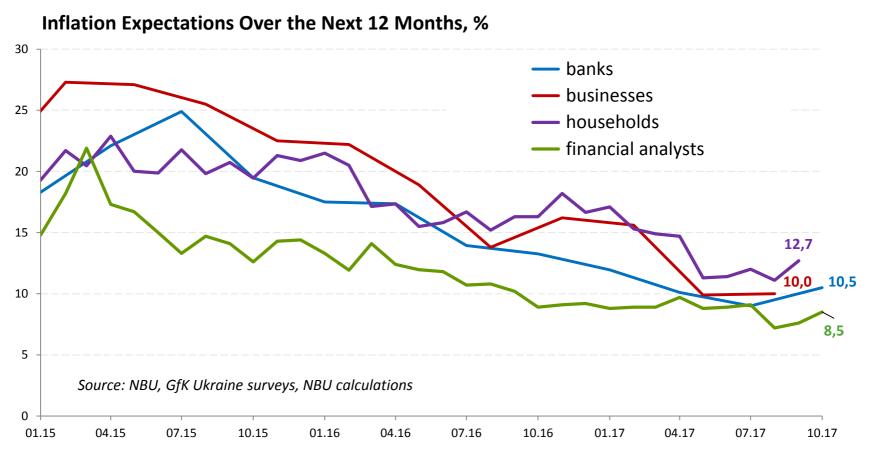
The discount rate is the key policy instrument, other instruments have either supplementary role, or directed to other goals rather than changing monetary stance

It was true 3 year ago. Nowadays, transmission to other interest rates on financial market is rather strong

NBU does not change the targets. NBU changes the policy in order to hit the targets on policy horizon



## Inflation expectations worsened recently as a consequence of high actual inflation and other factors



- Inflationary shocks have already translated into short-term forecasts; however, 12-months inflation expectations are much more persistent
- Meanwhile, professional analysts forecast inflation at the end-2018 close to upper border of NBU's target tolerance band
- Risks of self-fulfilling inflation expectations and higher inflation persistency are building up



### **NBU** monetary policy toolkit

### Key policy rate

### The main policy instrument

- The NBU fulfills its inflation targets, primarily, by adjusting its key interest rate (the interest rate) under liquidity regulation operations that affect the money market in the most significant way)
- The key policy rate is set by the NBU Board and reflect the state of monetary policy, functioning as the operational target for short-term interest rates on the interbank credit market

### Interest rate corridor

Interest rate corridor under overnight lending and deposit operations to manage short-term interest rates on the interbank market by limiting their fluctuations around the key policy rate

### **Other liquidity** instruments

### refinancing tenders and CD placement tenders with maturities different from those under main liquidity regulation operations etc.

- These operations will be used as complementary monetary policy instruments to ... contribute to a balanced development of money and securities markets.
- These additional instruments will be mostly provided in a price taking manner, as their objective will not be to influence the level of rates, but smooth out the functioning of the markets by assisting with liquidity management by market participants

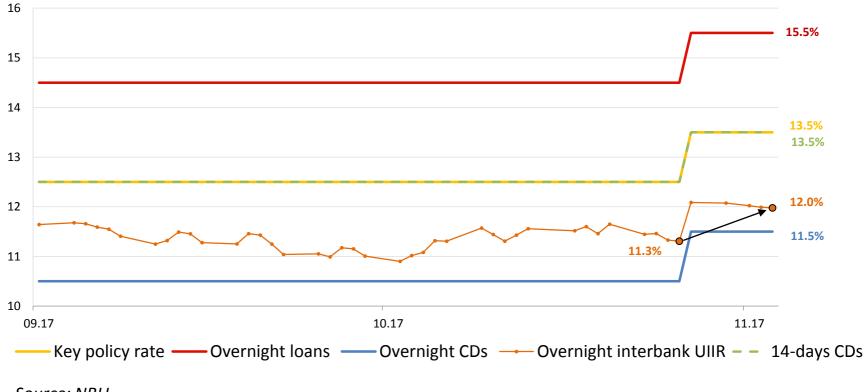
### **FX** interventions

The NBU will use FX interventions with the aim of: accumulating international reserves; smoothing out the functioning of the foreign exchange market; and supporting the transmission of the key policy rate as the main monetary policy instrument



### NBU key rate hike transmitted into interbank market

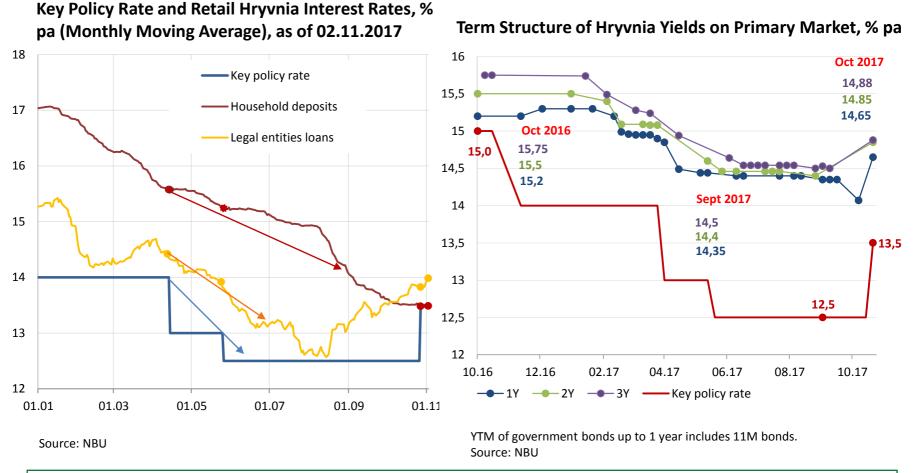
### NBU Policy Rates and Ukrainian Index of Interbank Rates (as of 02.11.2017), % pa



Source: NBU



## NBU key rate hike is expected to transmit into financial sector. Then it will affect inflation developments



- In the past, the NBU's policy rate played a virtual signaling role. Nowadays, financial market reacts to key rate changes. The transmission mechanism is actively developing
- That's too early to assess the transmission of the last decision on banking rates. But there is anecdotal evidence that some banks have already increased their deposit rates



### New macroeconomic forecast



## Summary

- Assumptions for global economic growth were revised upwards on forecast horizon, terms of trade are also favorable for Ukraine
- GDP growth forecast in 2017 is revised up to 2.2% (from 1.6%) due to higher than expected acceleration of investment and private consumption. Real GDP growth is projected to accelerate to 3.2% in 2018 and 3.5% in 2019
- NEER and BoP projections remain almost unchanged (CA deficit is flat in nominal terms around \$4bn, but decreases from 3.7% of GDP in 2017 to 3.1% of GDP in 2019). However, both exports & imports forecasts were revised upwards. International reserves are expected to rise at a slower pace than projected before due to lower official borrowings (only 2 IMF tranches are expected in 2018)
- Large budget deficit is expected in Q4 2017 on the back of a hike in pensions and capital expenditures; however, fiscal policy remains fairly tight in 2018-19 despite a further increase in social standards
- Consumer inflation will slow down by the end of 2017 (to 12.2% yoy) but will exceed the target band mainly on account of strong supply shocks. Further slowdown of inflation will be constrained by growing internal demand, including due to minimum wage increase and pension bill hike, higher excises, second-round effects from supply shocks. Tight monetary policy will be able to bring inflation closer to target level only in Q3 2018



## **Key macroeconomic indicators**

	2016	2017	2018	2019
Real GDP, change, %	2.3	2.2 (1.6)	3.2 (3.2)	3.5 (4.0)
Nominal GDP, UAH bn	2 383	2 880 (2 850)	<b>3 270</b> (3 220)	3 628 (3 585)
СРІ, уоу, %	12.4	12.2 (9.1)	7.3 (6.0)	5.0 (5.0)
Core CPI, yoy, %	5.8	8.0 (6.1)	5.5 (3.9)	2.9 (2.8)
Current account balance, USD bn	-3.5	-4.0 (-4.1)	-4.2 (-4.6)	-4.2 (-3.9)
BOP (overall), USD bn	1.3	2.2 (1.8)	2.2 (2.5)	0.6 (0.1)
Gross reserves, USD bn	15.5	18.6 (20.0)	22.2 (27.1)	21.2 (25.7)
Base money, eop change, %	13.6	3.3 (6.4)	6.2 (7.8)	5.0 (6.0)
Broad money, eop change, %	10.8	6.8 (9.0)	9.1 (13.5)	9.8 (12.6)

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



## **Assumptions (external)**

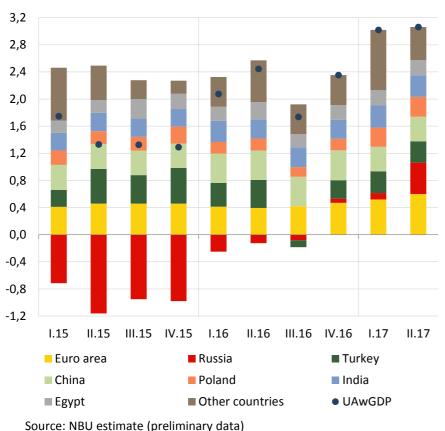
GDP growth, %	2016	2017	2018	2019
Euro area	1.7	1.9 (1.5)	<b>1.7</b> (1.4)	1.5 (1.4)
Russia	-0.2	1.5 (1.1)	<b>1.7</b> (1.3)	2.0 (1.6)
China	6.7	6.8 (6.6)	6.7 (6.5)	<b>6.5</b> (6.3)
Commodity prices				
Oil (Brent), USD/bbl	43.9	53.7 (55.1)	62.1	64.8
Steel Billet Exp FOB Ukr, USD/MT	328.6	425.4 (379.3)	418.8 (386.5)	396.5
Wheat, USD/MT	143.1	146.7 (146.0)	158.1	161.7
Exchange rates (average)				
USD/EUR	1.11	1.13 (1.09)	1.18 (1.11)	1.18 (1.11)
RUB/USD	67.1	58.3 (58.0)	58.1	58.1

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

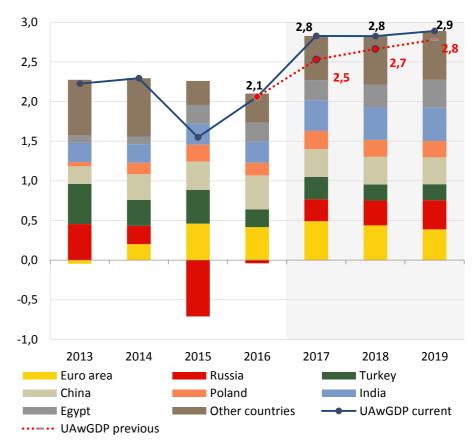


## Ukraine's MTPs grows at a faster pace than previously expected (notably owing to Russia and EU) except for the UK

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



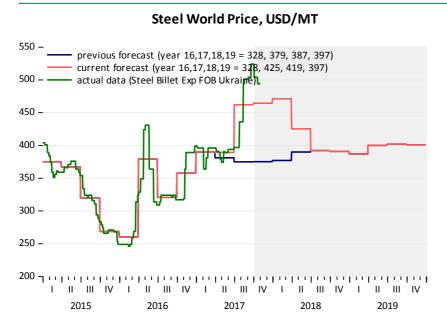
Contributions of Countries - Main Trading Partners of Ukraine to the Annual Change of UAwGDP, % y-o-y



Source: NBU estimate (preliminary data)

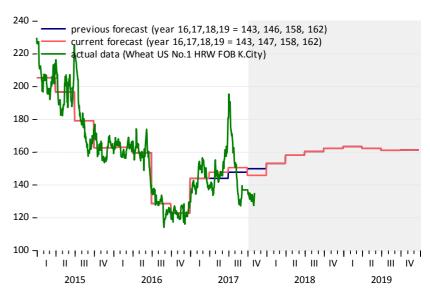


# Recovery in global demand led to temporary higher steel prices improving terms of trade in the near term

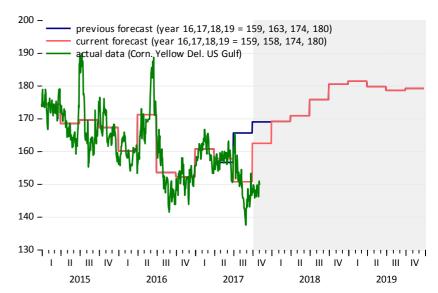


Iron Ore World Price, USD/MT





#### Maize World Price, USD/MT





# Gas prices were revised down due to stronger supply on the German gas hub

70 previous forecast (year 16,17,18,19 = 44, 55, 62, 65) current forecast (year 16,17,18,19 = 44, 54, 62, 65) ctual data (Crude Oil-Brent Dated FOB U.K.) 60 -50 -40 -30 -2015 2018 2019 2016 2017 Coal Import Price, USD/MT 280 previous forecast (year 16,17,18,19 = 93, 160, 158, 158) current forecast (year 16,17,18,19 = 93, 158, 160, 160) actual data (Premium coking coal CIF Australia) 240 -200 -160 -120 80 II III IV I II III IV II III IV

2017

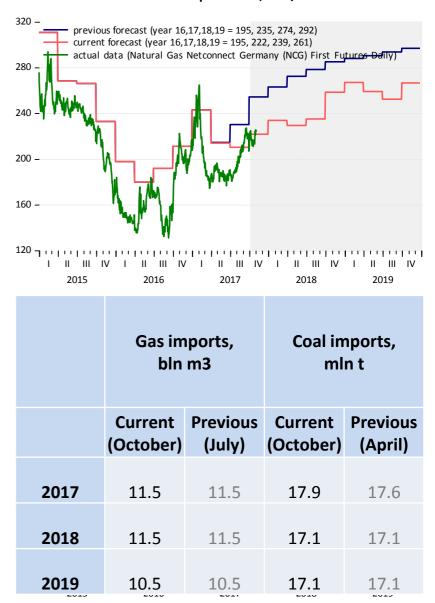
2018

2019

2015

2016

Brent World Price, USD/bbl



Natural Gas Import Price, USD/1000m3



# In 2017-2018, growth of admin prices is slightly higher mainly due to tobacco excise policy revision and distribution problems

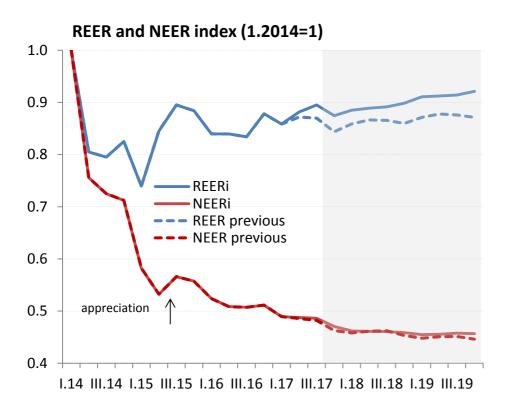
Adjustment of administered prices, % yoy

	weight, %	2017	2018	2019
Admin CPI	18.6	<b>15.8</b> (13.8)	<b>13.8</b> (12.3)	<b>11.6</b> (11.5)
Natural gas	2.0	1.0 (0.9)	21.0 (20.5)	20.0 (20.0)
Heating	1.2	<b>2.0</b> (1.0)	16.8 (16.6)	15.0 (15.0)
Hot water	0.2	3.0 (2.1)	15.8 (15.8)	<b>14.0</b> (14.0)
Cold water	0.3	21.5 (22.0)	<b>12.5</b> (11.0)	<b>9.0</b> (8.0)
Electricity	1.0	28.1 (28.1)	18.0 (18.0)	20.0 (20.0)
Alcohol	4.9	<b>13.0</b> (12.0)	10.0 (10.0)	9.5 (10.0)
Торассо	3.0	<b>36.0</b> (22.0)	<b>18.0</b> (13.0)	<b>12.0</b> (12.0)

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



# NEER projections remain almost unchanged while REER appreciates faster than in previous forecast

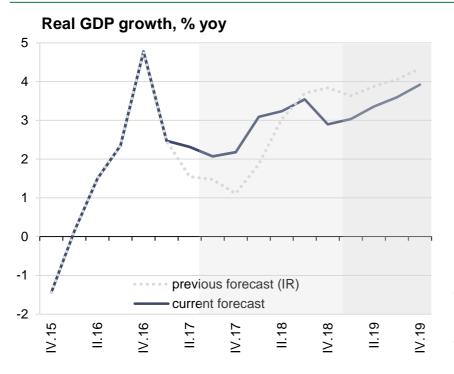


	2016	2017	2018	2019
REER, average, % change	+0.8	<b>+3.5</b> (+1.9)	<b>+1.5</b> (+0.3)	+2.7 (+1.3)
NEER, average, % change	-8.4	<b>-5.7</b> (-6.1)	- <b>4.7</b> (-4.3)	-0.9 (-2.1)

Fundamentals (better terms of trade, external environment, FDI inflows) contribute to REER appreciation only marginally. Thus, it mainly reflects the worsening price competitiveness



# Faster recovery in domestic demand drives GDP in 2017. Tighter policy and stronger REER appreciation restrain growth in 2018-19

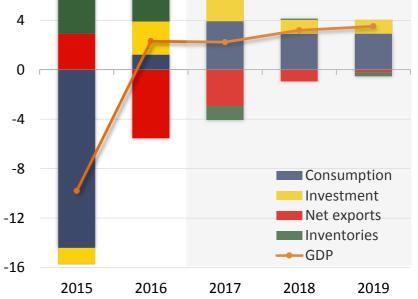


Source: State Statistic Service of Ukraine; NBU

change, % (in real terms)	2016	2017	2018	2019
GDP	2.3	2.2 (1.6)	<b>3.2</b> ( <b>3.2</b> )	3.5 (4.0)
Consumption	1.4	4.6 (3.9)	3.3 (2.9)	3.3 (2.9)
Private consumption	1.8	6.0 (4.9)	4.0 (3.6)	4.0 (3.6)
Gross fixed capital formation	20.1	16.0 (7.4)	<b>7.1</b> (5.5)	6.9 (6.7)
Export of goods and services	-1.6	5.1 (4.9)	<b>3.3</b> (5.0)	3.2 (3.7)
Import of goods and services	8.4	9.8 (8.6)	<b>4.7</b> (4.6)	<b>3.2</b> (3.1)

8

Contributions to Real GDP Growth, pp

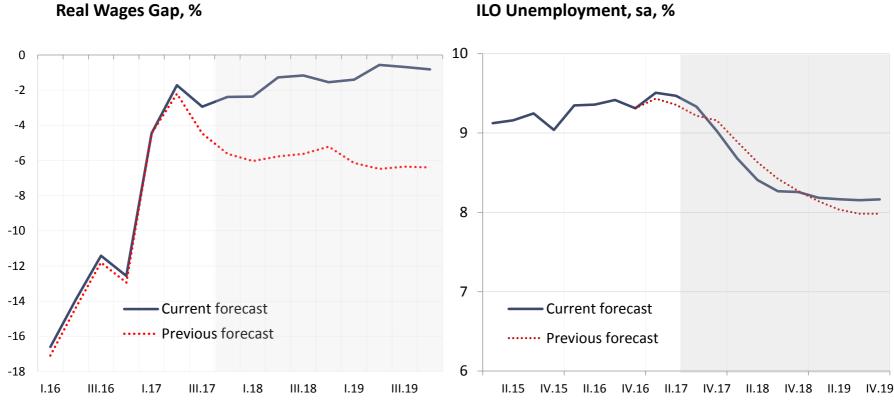


#### Downward revision in 2018-2019

- 🗸 Tighter monetary policy
- **V** REER appreciation
- Private consumption and investments recovery
- A Better terms-of-trade and external demand



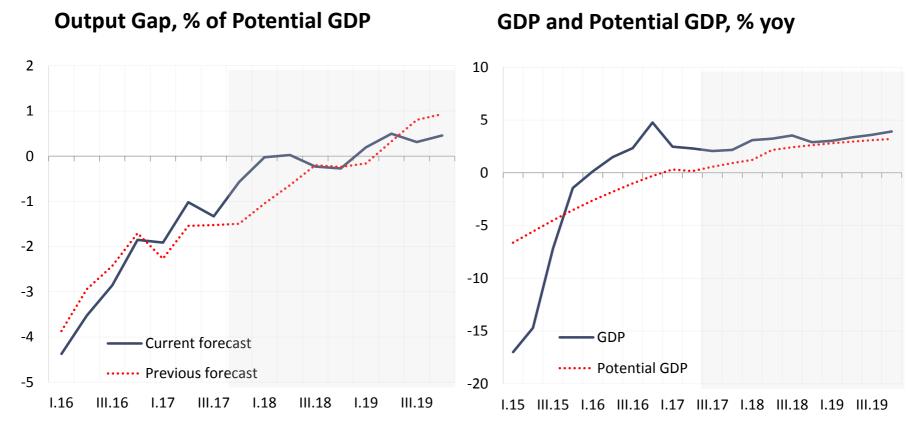
## Negative real wages gap closes faster than expected. However, in 2018-19 its paces decelerate considerably compared to 2017



Year average, %	2016	2017	2018	2019
Nominal wages, UAH	5187	<b>7 010</b> (6 770)	<b>8 050</b> (7 440)	<b>8 870</b> (8160)
Real wages, %	7.2	<b>18.5</b> (15.8)	<b>5.5</b> (3.0)	<b>4.3</b> (4.0)
Unemployment, %	9.3	<b>9.3</b> (9.3)	<b>8.4</b> (8.6)	8.2 (8.0)

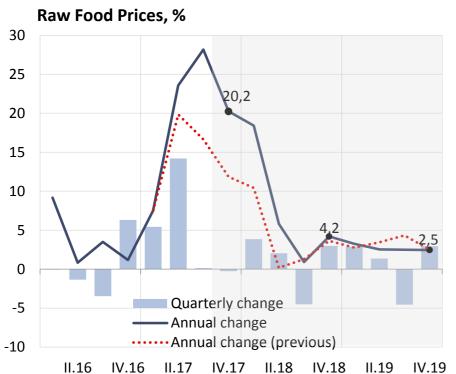


# Output gap closes in the Q1 2018 reflecting the disappearing demand drag on inflation



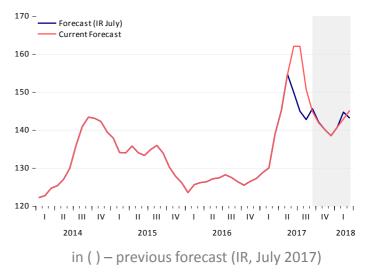


## Raw food inflation surged due to more prolonged upsurge in world meat prices; other supply shocks also contributed strongly



Assumptions, Underlying the Forecast

Meat Index (01.2004=1)

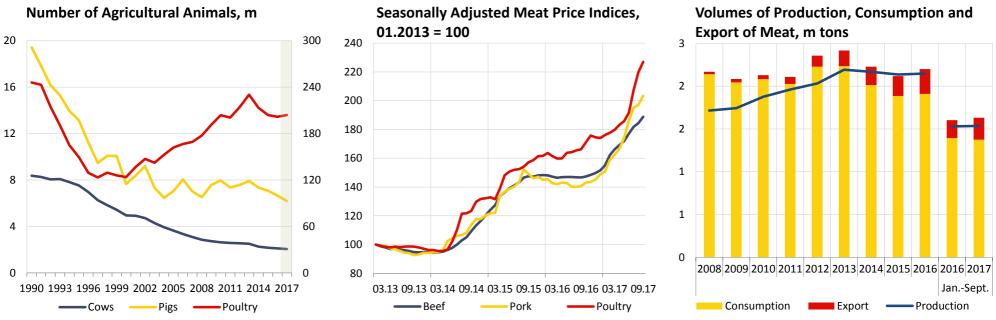


World meat prices,2010=100

Price change, %	weight , %	2016	2017		Factors of revision
Cereals	1.8	9.5	0.1	(5.2)	Lower than expected world grain prices
Meat	7.4	5.1	24.5	(12.1)	Soaring world meat prices, increase in exports, decrease in livestock
Milk	2.2	23.3	12.0	(12.0)	~
Eggs	1.2	-9.6	4.7	(4.6)	~
Fruit	2.7	-6.6	32.2	(14.2)	Poor harvest of fruit (e.g. apples in UA and PL)
Vegetables	2.3	-28.6	20.4	(13.3)	Low harvest expectations (unfulfilled) and changing the SSS methodology drove prices up in 9M2017, projected more sticky prices in future
Sugar	1.5	-1.3	4.6	(5.2)	≈ 24



## **BOX.** Meat and milk inflation was fueled by robust exports (due to a surge in external prices) amid recession in animal production



Since 2015 data excludes occupied territories. Source: State Statistics Service; meatbalance.org.ua; NBU staff estimates.

- The share of meat and milk products is large (18% of CPI basket)
- Domestic prices were first pressured upwards by a sharp increase in world prices. Given a slow response of domestic animal breeding, robust exports amid ongoing decline in herd population caused domestic market shortages since mid-2017
- A further decrease in animal breeding was the result of its lower profitability in comparison with crop
  production, taxation changes (in particular, the abolition of the special VAT regime for agricultural producers), as
  well as complicated epizootic situation (in particular, the rapid spread of ASFV in Ukraine)



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

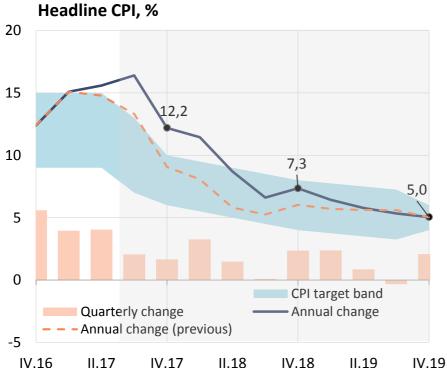
Core CPI and Its Components, % yoy 14 Core CPI 30 Processed foods 12 Market services 25 Clothes & footwear Other non-food 10 20 15 8 10 6 5 4 0 GDP gap, % 2 -5 Imported inflation (CPIworld\*NEER) Core CPI 0 -10 Raw foods 06/18 12/18 12/16 06/17 12/17 06/19 12/19 I.16 III.16 1.17 111.17 I.18 III.18 I.19 III.19

change, %	weight,%	2016	20	17	20	18		2019
Core CPI	57.4	5.8	8.0	(6.1)	5.5	(3.9)	2.9	(2.8)
Processed foods	20.1	5.7	10.2	(6.6)	5.2	(2.0)	2.3	(1.8)
Market services	12.4	8.7	12.4	(8.3)	7.5	(5.1)	4.5	(3.4)
Clothes & footwear	5.4	5.4	1.6	(2.2)	4.5	(2.3)	2.0	(1.3)
Other non-foods	19.5	4.3	4.3	(4.6)	4.7	(5.7)	2.5	(3.7)

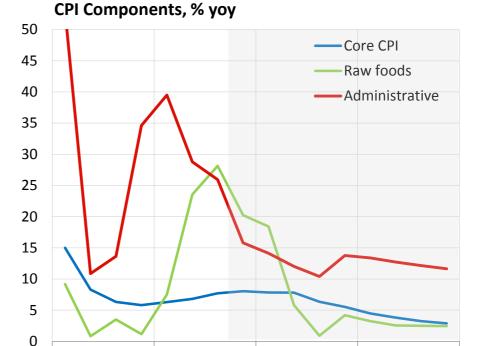
Core CPI and its Factors, % yoy



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



change, %	weight, %	2017	2018	2019	
CPI	100.0	12.2 (9.1)	7.3 (6.0)	5.0 (5.0)	
Core CPI	57.4	8.0 (6.1)	5.5 (3.9)	2.9 (2.8)	
Raw food	19.0	20.2 (11.8)	4.2 (3.6)	2.5 (2.5)	
Admin	18.6	15.8 (13.8)	13.8 (12.3)	11.6 (11.5)	
Fuel	5.0	16.0 (13.0)	9.0 (8.0)	5.0 (6.0)	



### Inflation factors:

IV.16

II.16

IV.18

II.19

IV.19

II.18

IV.17

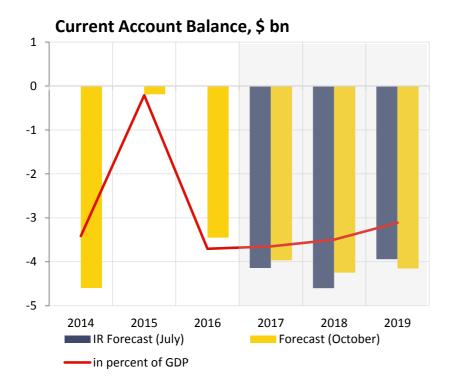
11.17

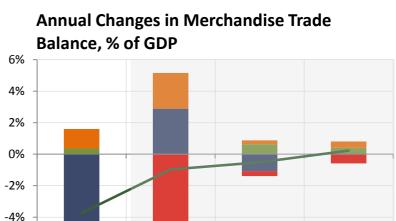
- ↑ Minimum wages growth impulse
- ↓ Stronger UAHUSD exchange rate
- ↓ Improved inflation expectations

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



# In 2017-2019, CA deficit remains almost unchanged in nominal terms, gradually decreasing to 3% GDP in 2019





2017

- Changes in merchandise trade balance

External demand

Domestic demand Terms of trade

Internal supply shocks

2018

2019

Main factors of CA forecast revision in 2017-2019				
Trade balance (🗸)	$\checkmark \checkmark$ Volumes of exported iron ore, $\checkmark$ Metallurgical imports			
	$\uparrow$ Exports of grain in 2017/2018 MY, $\uparrow$ Steel prices in 2H2017-1H2018, $\downarrow$ Gas prices, $\uparrow$ Net exports of fertilizers			
Balance of services (≈)	$\uparrow$ Import of "travel" item, $\uparrow$ Exports of transportation services			
Primary&secondary income (个)	↑ Remittances			

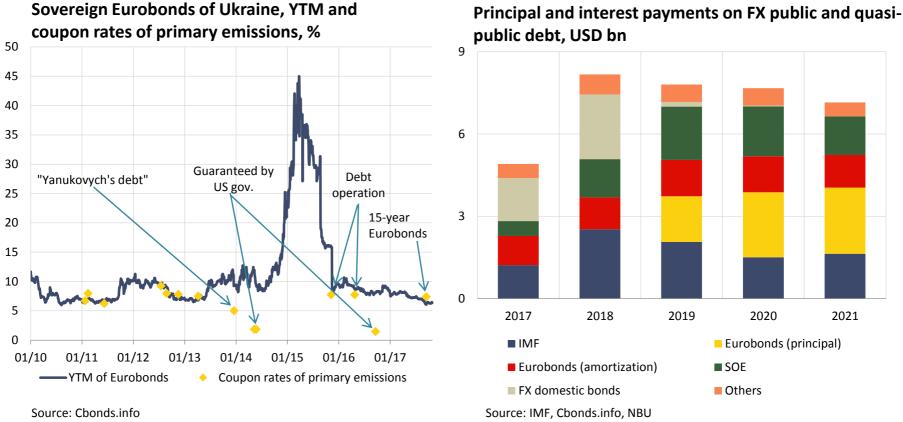
-6%

-8%

2016



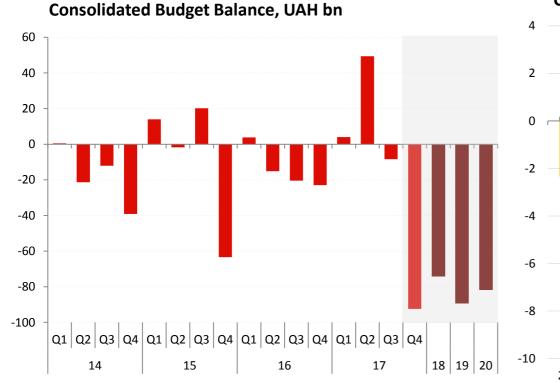
# **BOX.** Sovereign Eurobonds of Ukraine: Regaining Access to Capital Markets



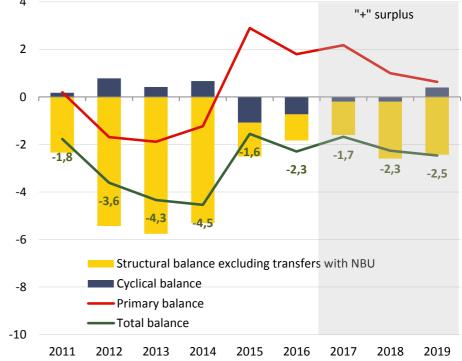
- In September 2017, after a four-year break, Ukraine issued USD 3.0 bn Eurobonds for 15 years at 7.38% pa
- The successful issuance reflected macroeconomic stabilization in Ukraine and a quite favorable situation on the international financial markets
- Although part of the attracted funds was used to buy back some of 2018-2019 Eurobonds, Ukraine still faces significant FX financing needs in 2018-2021 – more than USD 7 bn per annum
- Thus, further implementation of structural reforms remains crucial for Ukraine, both to attract official and private external financing



## Fiscal policy remains balanced with slight fiscal impulse



**Consolidated Budget Balance, % GDP** 



	2016	2017	2018	2019
Consolidated budget balance (UAH bn)	-54.8	-48.4	-74.1	-89.4



Objectives of the Reform

equality

sustainability

effectiveness

### BOX. Pension reform: key parameters (law No 2148)

**Key** Measures

#### Long-term measures

- minimum qualifying period for granting a labor pension in 60 years old was enlarged (15 years till end of 2017, 25 years in 2018, next 10 years plus 1 year up to 35 years in 2028)
- Retirement age remained at 60 years if a person has sufficient pension insurance record. Otherwise, s/he will have to become 63/65 years old to qualify for a pension, depending on years of insurance record (after 2028 a pension could be granted to a person despite his/her age, if s/he had the qualifying period of 40 years or more)
- The value of one year qualifying period was lowered (1% instead of 1.35%)
- Annual automatic indexation rule for labor pensions was modified
- A USSC tax base cap was raised to "15 minimum wages" (compared with "25 minimum subsistence levels")

### "Modernization of pensions"

- recalculated granted labor pensions with using higher salary base (for 2014-2016 or €3764.4) and lowered value of one year qualifying period (1% instead of 1.35%)
- Higher benefits due to earlier increase in minimum subsistence level and a higher rise in its level
- cancelled levying "tax" on pensions who are employed and changed some rules for privileged pensions

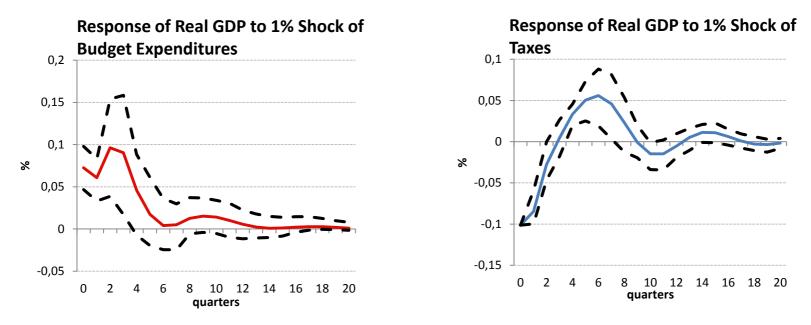
### A number of concerns

- Temporary (2018-2020) social payoffs for 60-years-old persons (till 65 years), who don't have required qualifying period. The size of this kind of aid is not specified
- Introduction of the second tier of pension system since 2019
- Higher than expected actual increase in pension expenditures
- Further initiative to raise pensions (e.g., for military persons, etc.)



# **BOX.** Fiscal multiplier as an indicator of fiscal policy impact on GDP in Ukraine

- Quarterly seasonally adjusted data for 2002-2016 in constant prices of 2010
- Structural factorization based on VAR(4), which treats budget expenditures shock as exogenous
- Endogenous variables: budget expenditures, taxes, real GDP



### **Key conclusions:**

- fiscal multipliers are higher and more persistent for budget expenditures
- on the expenditure side capital outlays have the highest multiplier
- personal income tax and social contributions have the highest negative impact on real GDP among taxes
- the budget social-oriented expenditures have minimum impact on real GDP

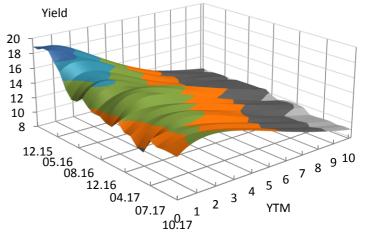
### Effect of pension hike since 4Q2017 is estimated to add 0.3-0.6 pp to inflation in 2018



## **BOX.** Analysis of Ukraine's domestic gov't bonds yield curve

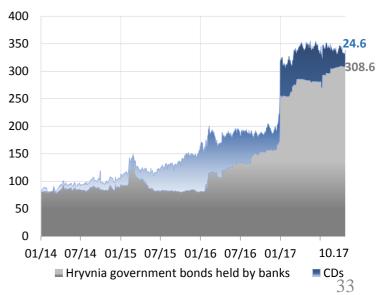
- For policymakers yield curve is important for several reasons:
  - Contains information about the expected path of future monetary policy
  - An element of monetary transmission.
- To foster the development of local capital markets the NBU during 2015-9m 2017:
  - strengthened the role of interest rate policy by defining the key policy rate, setting a symmetric and fixed band for SF
  - ceased the daily practice of holding 14-day CD placement (to twice a week) and resumed the placement of 3M CDs
- Rather quickly, the short-end of the yield curve become of normal slope. The interest towards domestic bonds has increased since mid-2015
- According to the public finance management strategy for 2017 – 2021, the key tasks for yield curve build-up include:
  - elimination of bureaucratic and other obstacles for non-residents investing in government bonds
  - a continuous dialogue of market participants and MoF
  - the development of the institution of primary dealers to improve liquidity of government bonds

Dynamics of Zero-Coupon Yield Curve for Ukrainian Hryvnia Government Bonds, % pa





The Stock of Government Bonds held by Banks and CDs, UAH bn





## NBU policy under different scenarios

"In the event of realization of the above mentioned inflation risks, **the NBU may further raise the key policy rate** to offset their effects and return inflation to its target path. However, in case of deceleration of inflation according to the forecast, further cooperation with the IMF, and pursuing prudent fiscal policy, the NBU may <u>return to the easing cycle of monetary policy at the end of</u> <u>2018</u>"

Scenario	Results (2018-2019)	NBU policy
<ul> <li>Baseline</li> <li>status-quo in the east</li> <li>structural reforms</li> <li>IMF program</li> </ul>	GDP +3.2% +3.5% CPI 7.3% 5.0%	Admin. restrictions $\downarrow$ Interest rate = $\downarrow$
<ul> <li>Optimistic</li> <li>lower global energy prices (oil, gas, coal)</li> <li>higher export prices</li> <li>foreign capital inflows</li> </ul>	GDP ↑ UAH/USD ↓ CPI ↓	Admin. restrictions $\downarrow \downarrow$ Interest rate $\downarrow$ (earlier)
<ul> <li>Pessimistic</li> <li>further delays in IMF tranches</li> <li>expansionary fiscal policy (elections)</li> <li>negative terms of trade shocks</li> </ul>	GDP ↓ UAH/USD 个 CPI 个	Admin. restrictions = Interest rate 个