



**NATIONAL BANK OF UKRAINE**

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## **Inflation Report (January 2017)**

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**National Bank of Ukraine**  
**Kyiv, February 6, 2017**



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## Summary

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- **In 2016, the NBU reached inflation target.** The rapid slowdown in headline inflation (from 43.3% in 2015) was in line with NBU forecasts published in Inflation Reports over the past year
- **In 2017, disinflation will proceed at a slower pace** (inflation forecast revised upwards to 9.1% from 8%) due to effects of a minimum wage increase and raw foods reflation
- **Fighting inflation pressure determines slower monetary policy easing** which will ensure inflation remaining in target range and reaching 6% target by the end of 2018
- **Wages growth and more favorable ToT support GDP growth acceleration** (to 2.8% in 2017 and to 3.0% in 2018). These factors are partially offset by tighter monetary conditions which especially put drag on GDP growth in 2018 when initial impulse from minimum wage increase disappears (*leading to downward revision of GDP growth from 3.5% in previous forecast*)
- **CAB remains almost unchanged** in 2017-2018 (~3.5% of GDP) as a result of counterbalancing effects (better ToT versus expanding domestic demand). Gradual acceleration of FDI and debt inflows to real sector determine FA surplus (together with more active public external borrowings) and NBU's FX purchases



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# Key macroeconomic indicators

	2015	2016	2017	2018
Real GDP, change, %	-9.8	1.8 (1.1)	2.8 (2.5)	3.0 (3.5)
Nominal GDP, UAH bn	1989	2 358 (2 290)	2 739 (2 627)	3 081 (2 964)
CPI, yoy, %	43.3	12.4 (12.0)	9.1 (8.0)	6.0 (6.0)
Core CPI, yoy, %	34.7	5.8 (5.6)	6.3 (5.5)	4.8 (4.9)
Current account balance, USD bn	-0.2	-3.4 (-2.5)	-3.5 (-2.9)	-3.4 (-2.8)
BOP (overall), USD bn	0.8	1.3 (1.7)	1.1 (1.2)	4.0 (3.8)
Gross reserves, USD bn	13.3	15.5 (17.5)	21.3 (23.1)	27.1 (27.8)
Base money, eop change, %	0.8	13.6 (9.5)	7.7 (8.4)	8.2 (8.2)
Broad money, eop change, %	3.9	10.8 (8.9)	11.5 (13.2)	13.3 (14.5)

in ( ) – previous forecast (IR, October 2016)



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# Assumptions

GDP growth, %	2016	2017	2018
Euro area	1.7 (1.6)	1.3 (1.3)	1.4 (1.4)
Russia	-0.7 (-0.8)	1.1 (1.1)	1.3 (1.3)
China	6.7 (6.6)	6.6 (6.5)	6.5 (6.5)
Commodity prices			
Oil (Brent), USD/bbl	43.9 (43.4)	54.1 (49.1)	59.1 (54.1)
Steel Billet Exp FOB Ukr, USD/MT	328.6 (318)	363.8 (330.7)	376.0 (352.1)
Wheat, USD/MT	143.1 (145.4)	134.9 (134.9)	147.6 (147.6)
Exchange rates (average)			
USD/EUR	1.11 (1.12)	1.05 (1.13)	1.05 (1.15)
RUB/USD	67.1 (67.6)	62.6 (66.7)	63.3 (67.5)
Internal assumptions			
Grain and leguminous harvest, mln.t	66 (63)	64 (63.7)	64 (64)
Natural gas import, bl. M3	11.1 (10)	11.5 (11.5)	11.5 (11.5)
Minimum wages, UAH	1 600 (1600)	3 200 (1 762)	3 400 (1 894)
Administrative prices, %	34.6 (33.0)	16.9 (15.6)	9.5 (8.9)



# Impact of Trump's policies on the United States and the global economy

## A shift in the U.S. policies from monetary to fiscal stimulus

### Monetary stimulus:

- QE1:** 2008-2009 \$1.7 trillion
- QE2:** 2010-2011 \$ 0.9 trillion
- QE3:** 2012-2014. \$1.25 trillion



### Fiscal stimulus:

- lower taxes for households and businesses, tax streamlining
- higher budget expenditures for infrastructure projects and military expenditures

### United States:

- indirect support to economic growth through lower borrowing costs (long-term rates)
- credit expansion
- US dollar depreciation
- however, consumption remained relatively weak

### Global economy (at least at the beginning):

- easier financial conditions for other countries
- higher commodity prices
- a shift in capital flows to emerging markets



### United States:

- direct impact on economic growth, also supported offset of factors restraining growth in the past 1.5 years are (lower stocks, lower investment in the energy sector, weak consumption)
- Fed may speed up its rate hikes, leading to higher bond yields, higher capital inflows and dollar appreciation

### Global economy (in the short-term):

- higher global commodity prices → economic activity to pick up in commodity-exporting economies
- tighter financial conditions, especially for EMs, relying on external financing (e.g., Turkey looks particularly vulnerable)

## More aggressive U.S. foreign trade policy

### Base scenario - 'Lite' version

Neutral impact (in the short run) on global economy and trade – China's economic slowdown and adverse impact on Mexico will be offset by accelerating growth in the U.S. and commodity-exporting economies

### Alternative scenario - 'Tough' version

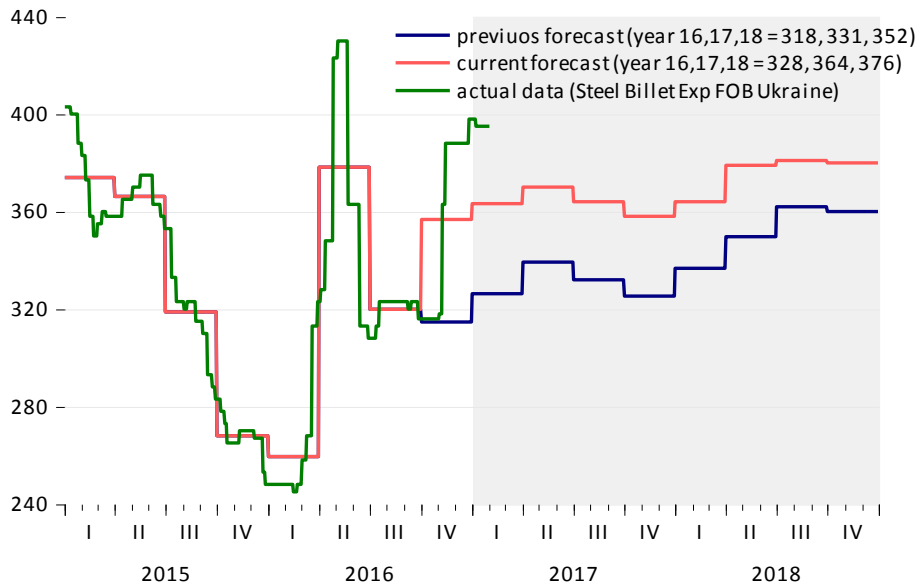
- Higher tariffs imposed by the US, a significant deterioration in trade relations with China, revision / termination of NAFTA agreement, significant migration limitations
- A rather strong depreciation of U.S. trading partners' currencies (especially, renminbi) may destabilize the global economy



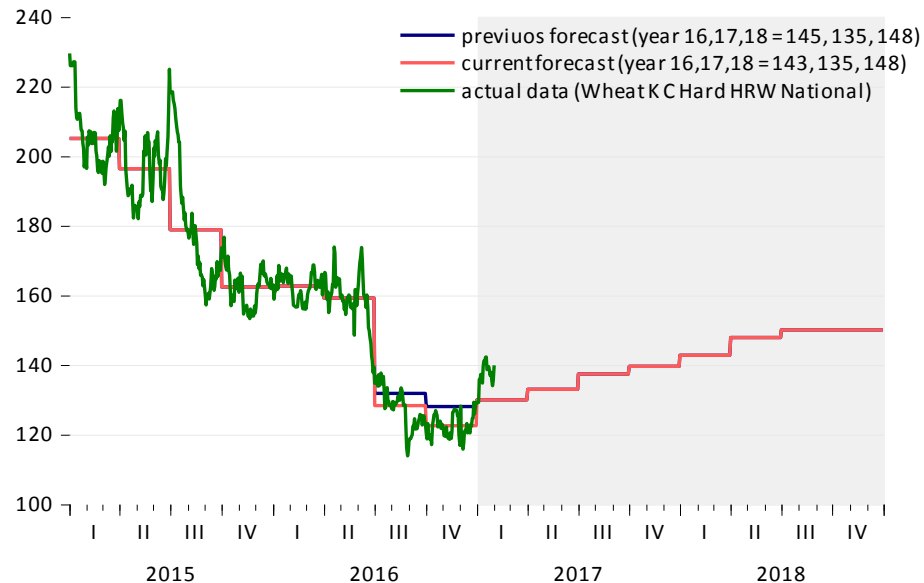
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# Higher steel and iron ore prices due to expanding demand, anti-dumping duties and China state infrastructural programs

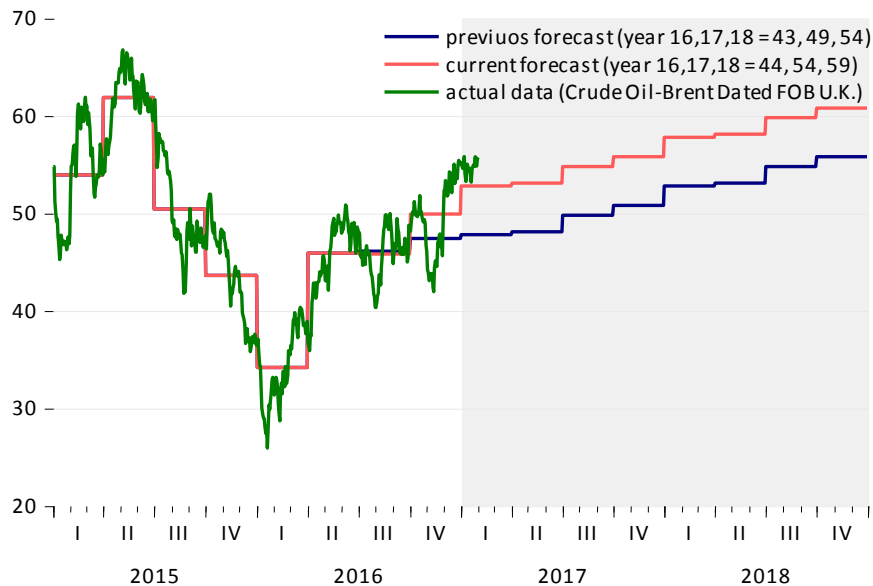
Steel World Price, USD/MT



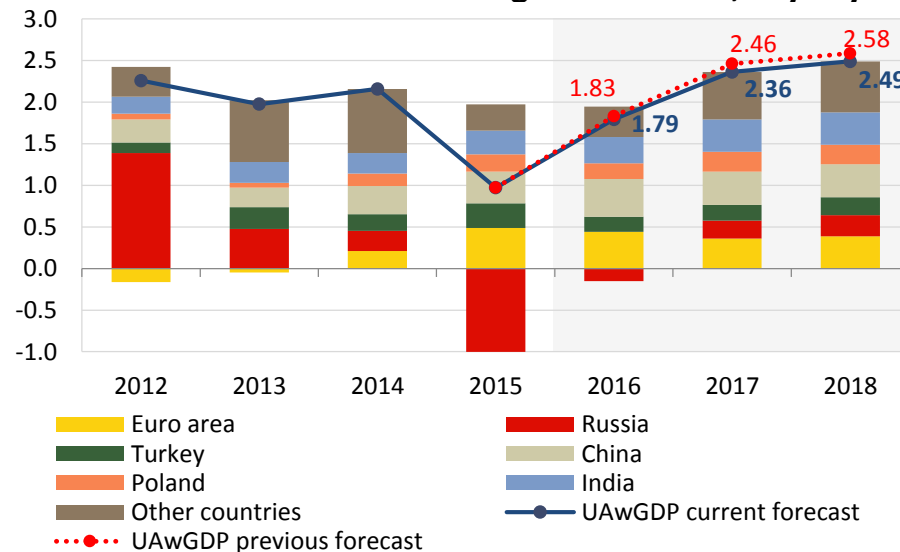
Wheat World Price, USD/MT



Brent World Price, USD/bbl



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

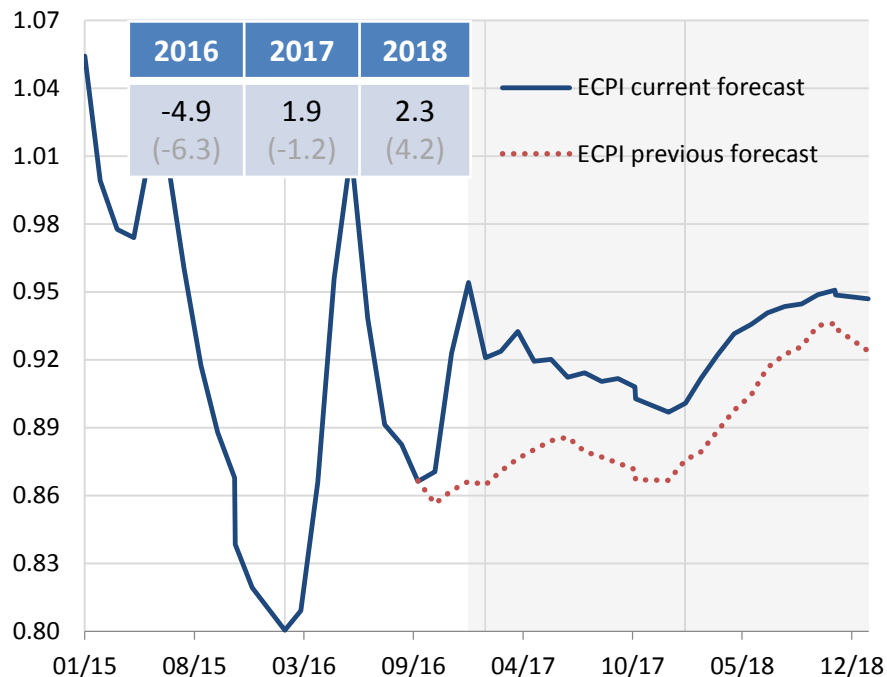




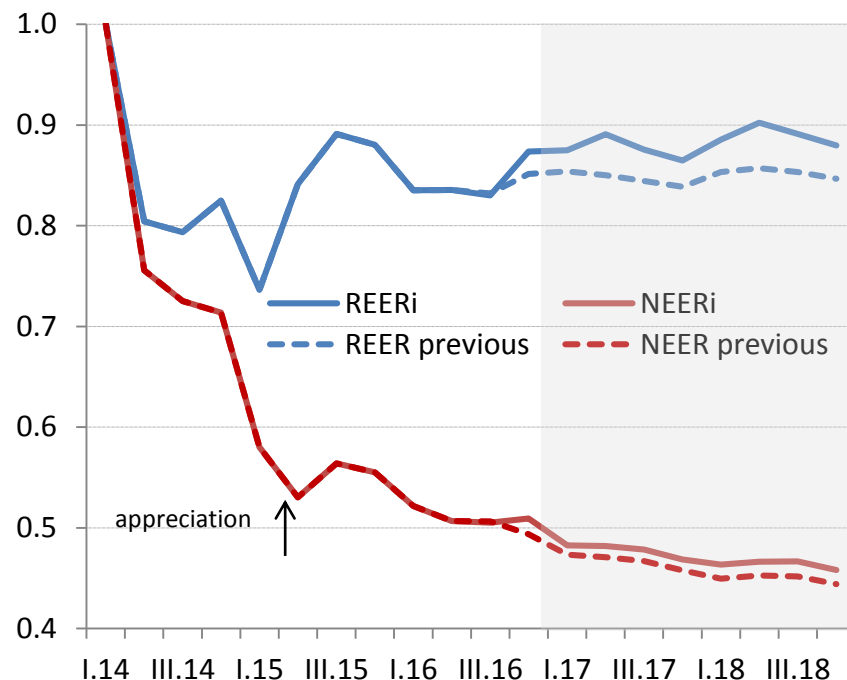
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# Nominal and real effective exchange rates are slightly stronger due to weaker currencies of emerging market economies

**Commodity Price Index for Ukrainian Exports (ECPI), 12.2004=1**



**REER and NEER index (1.2014=1)**



- ECPI is calculated basing on the basket of 14 global price indicators weighted by shares of corresponding 10 commodities groups in Ukrainian exports

Source: NBU estimate.

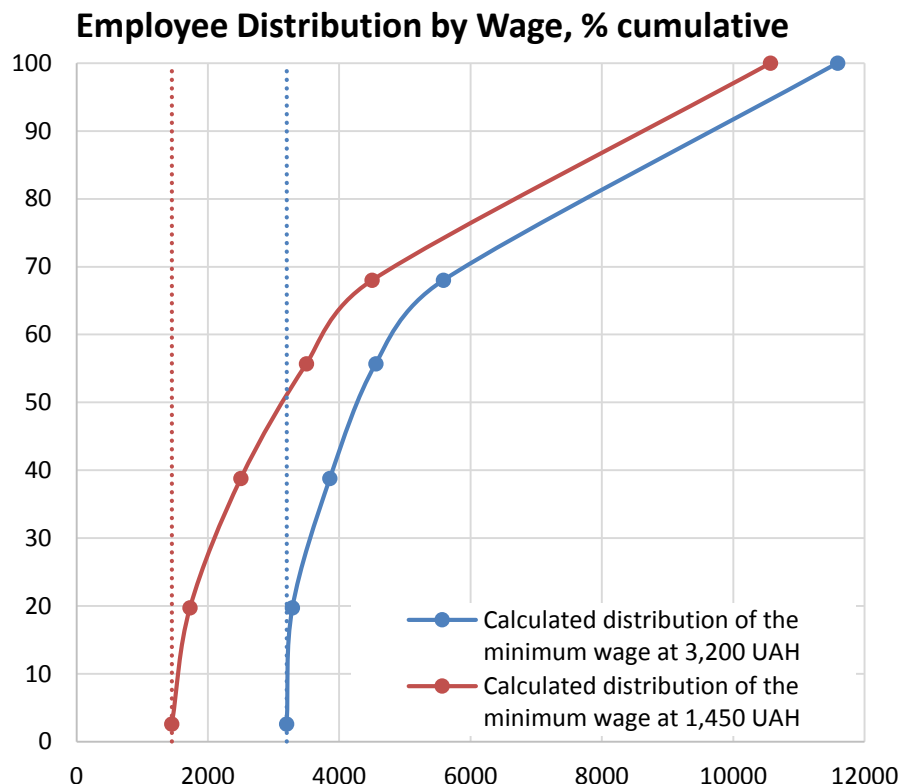
Year average, %	2016	2017	2018
REER*	0.8 (0.2)	+3.9 (1.0)	+1.5 (+0.7)
NEER*	-8.4 (-9.0)	-6.4 (-7.9)	-3.0 (-3.8)

\* +appreciation



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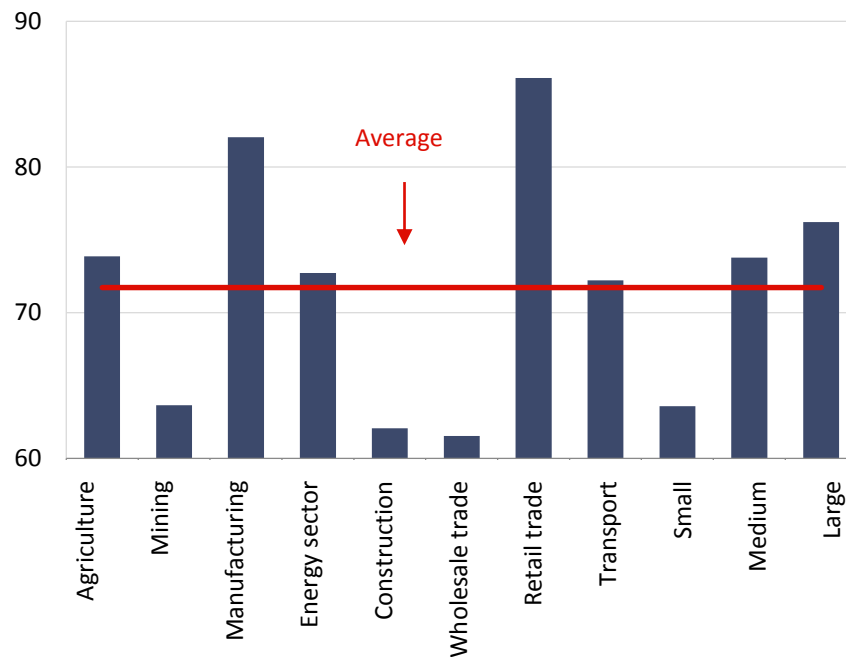
# 3200 effect\*: wages will grow faster than expected; higher official unemployment will be partially offset by informal employment



Source: SSSU, NBU staff estimates

\* Data for June 2016

### The Change in Labor Costs of Enterprises by Type of Activity, balance of answers, %



Source: NBU Business Outlook Survey

- \* 3200 effect includes the impact of accompanied tax changes (SSC payments by private entrepreneurs)
  - Average nominal wages of the least paid workers (2/3 of the total) will rise by about 45%
  - The total number of employees in the formal sector of the economy in 2017 will decrease by 9% but only partly due to increase in the minimum wage and accompanied tax changes (3.7 pp will reflect demographic changes)
  - However, informal employment will increase (mostly on account of a decline in official employment at small enterprises and closure of entrepreneurship)

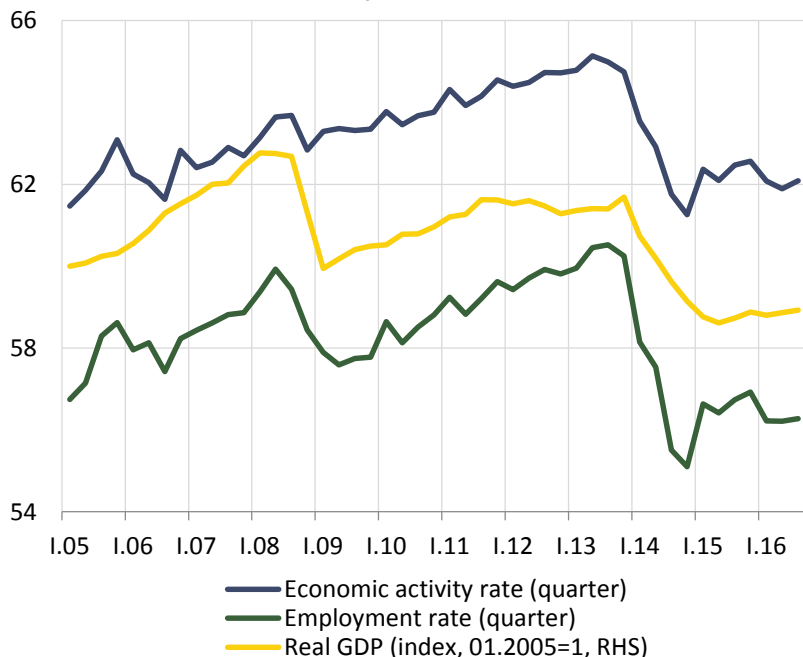




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# Overall, labor market indicators reflect macroeconomic performance, but some developments raise concerns

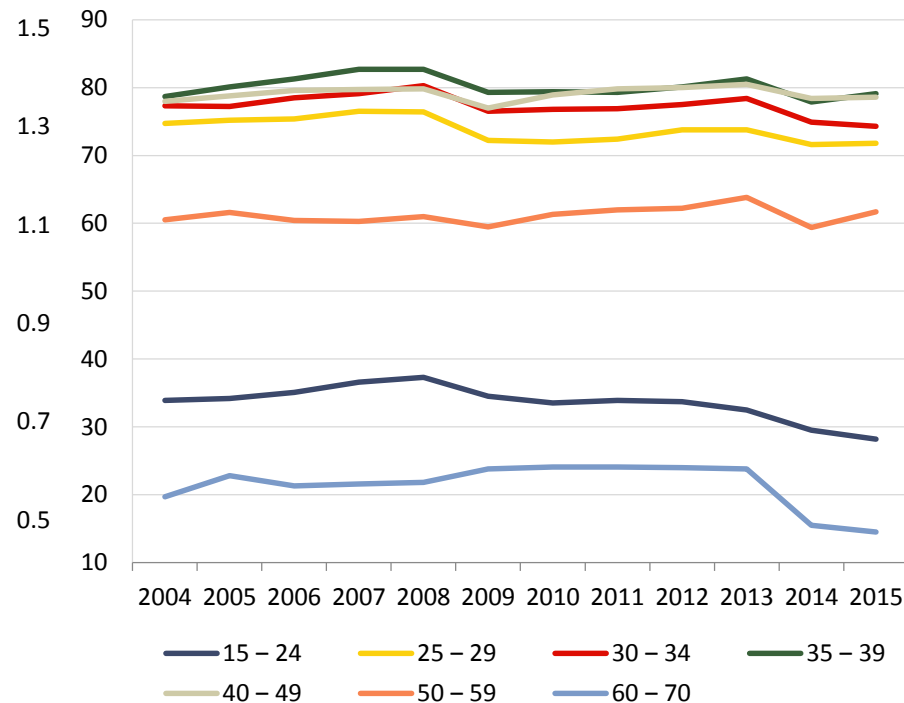
### Economic Activity and Employment Rate\*, sa, %, and Real GDP Index, sa



\* Excluding Crimea and Sevastopol since 2014 and also part of ATO zone since 2015

Source: State Statistics Service of Ukraine; NBU staff estimates

### Employment Rate by Age, %



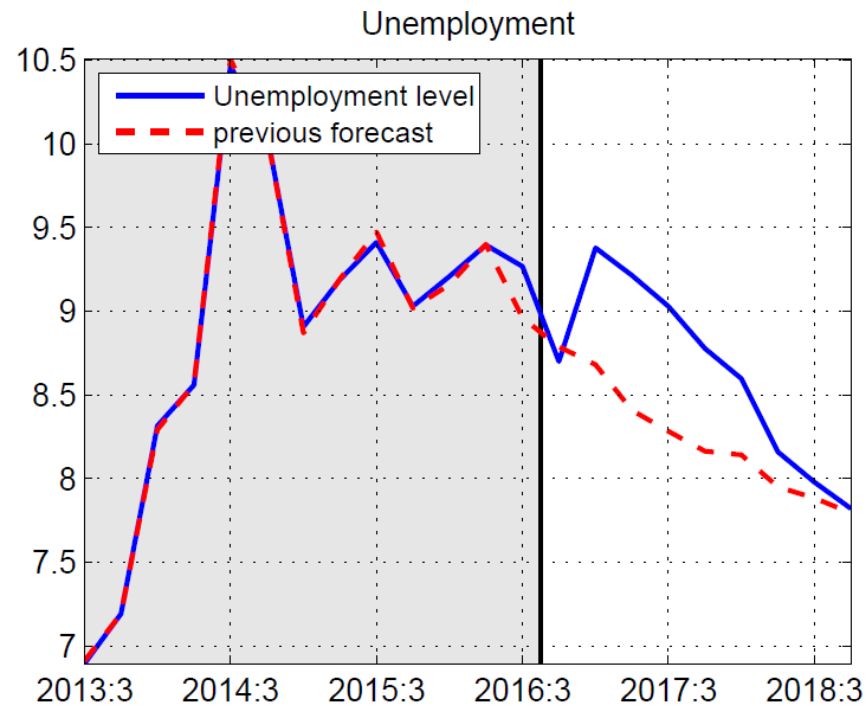
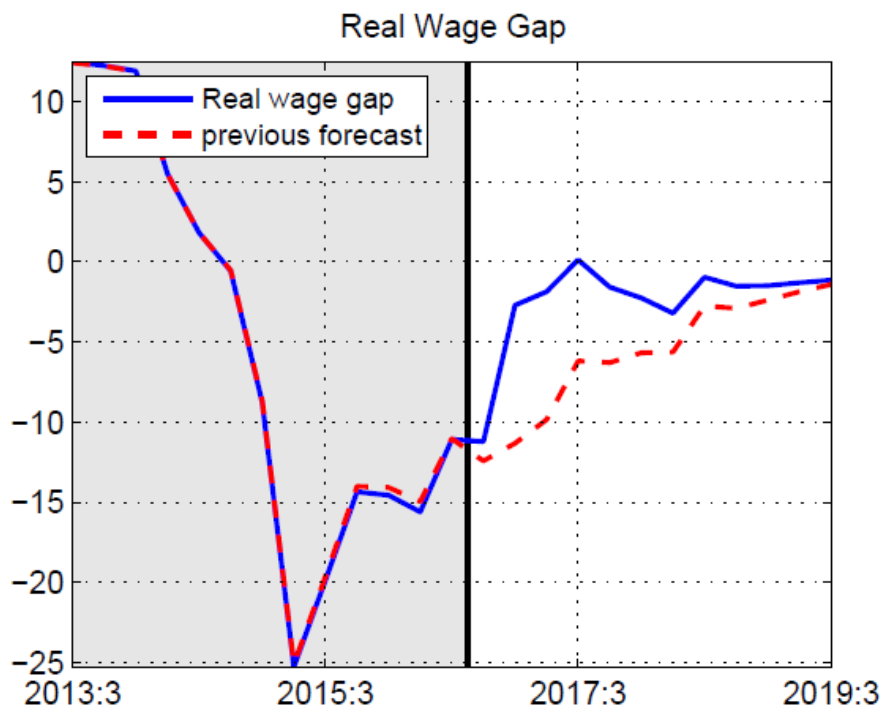
Source: State Statistics Service of Ukraine

- Due to the annexation of Crimea and fighting in eastern Ukraine, the population in 2014 decreased by 2.5 mln people, economically active population fell by 2.3 mln
- Deep economic crisis led to a sharp reduction in the number of employed persons. With the economic recovery, labor demand started to increase
- However, 25% of the employed population in Ukraine works in the informal sector
- Faster growth in employment rate among age group of 50 - 59 years in 2013 and 2015 is explained by changes in the retirement age for women. At the same time, employment rate among young population has been gradually declining, which raises concerns



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# Minimum wages hike will bring real wages to the equilibrium faster with negative effects on unemployment



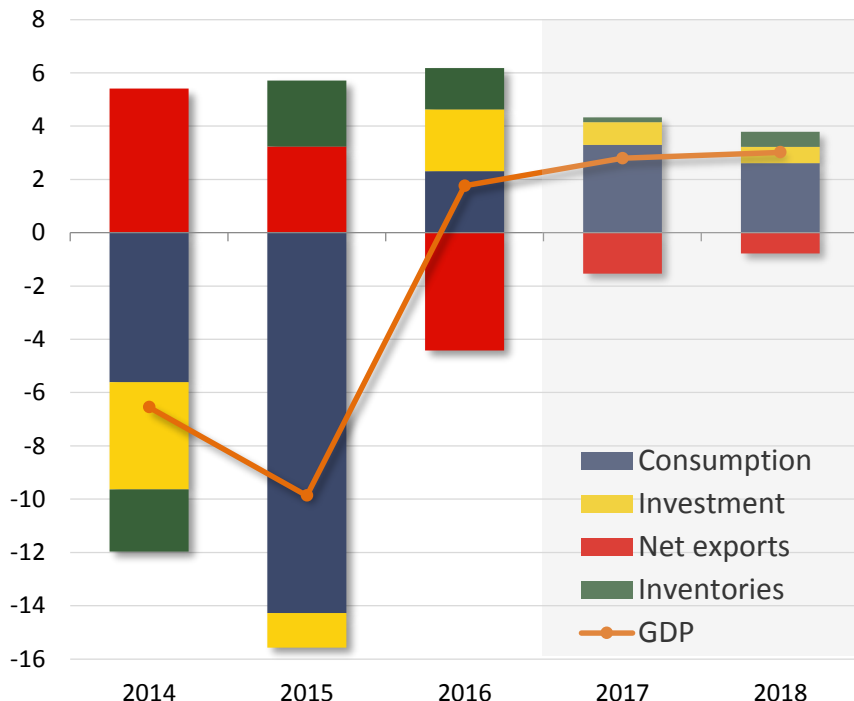
Year average, %	2016	2017	2018
Wage nominal, hrn	5187 (5154)	6357 (5850)	6938 (6378)
Wage real, %	7.9 (6.6)	10.0 (3.5)	2.0 (2.2)
Unemployment, %	9.2 (9.0)	9.1 (8.1)	8.2 (7.6)



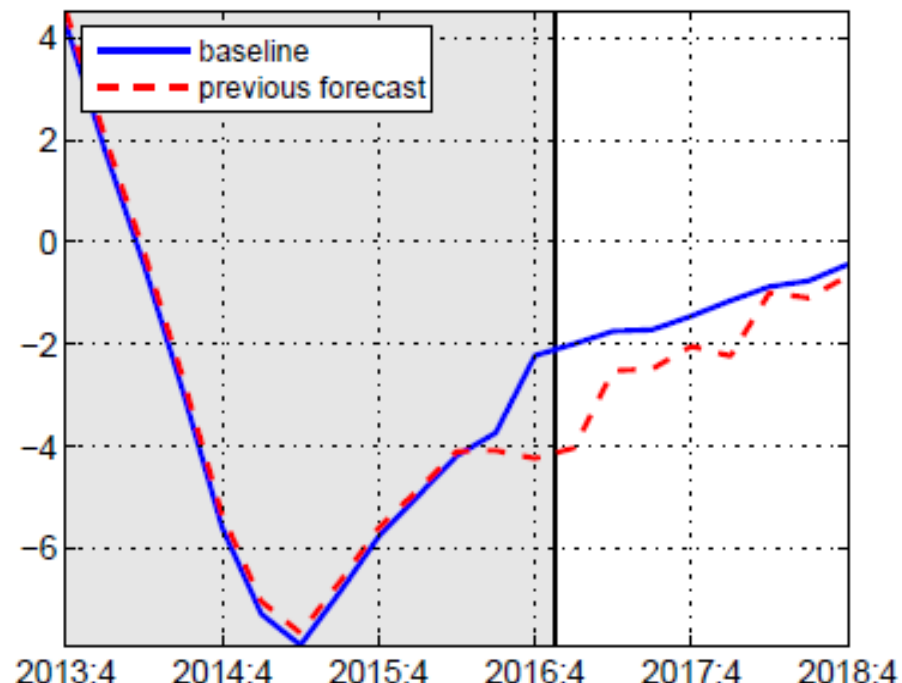
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# Wages growth and more favorable ToT (partially offset by tighter monetary conditions) support GDP growth acceleration

Contributions to Real GDP Growth, pp



Output Gap



change, %	2016	2017	2018
<b>GDP</b>	<b>1.8</b> (1.1)	<b>2.8</b> (2.5)	<b>3.0</b> (3.5)
Consumption	2.6 (1.4)	3.7 (2.5)	2.8 (2.0)
Fixed investment	17.7 (9.8)	5.7 (4.3)	4.0 (6.0)
Export of goods and services	-4.3 (-2.0)	5.4 (2.4)	3.5 (3.4)
Import of goods and services	3.7 (-1.4)	7.0 (3.9)	3.9 (3.0)

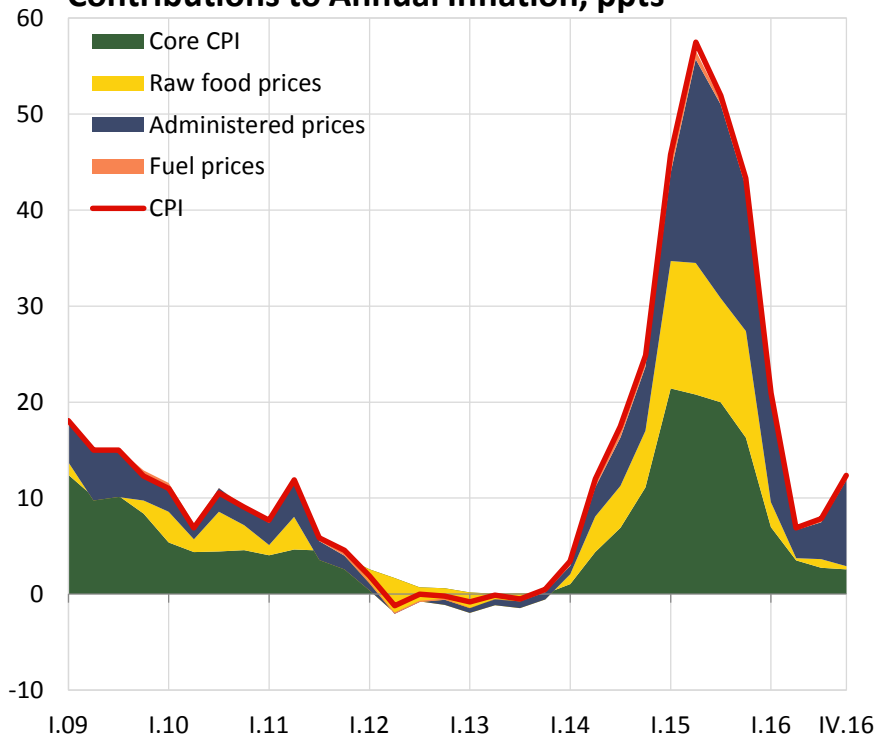
The role of consumer demand in driving GDP growth is increasing, while net exports contribution remains negative



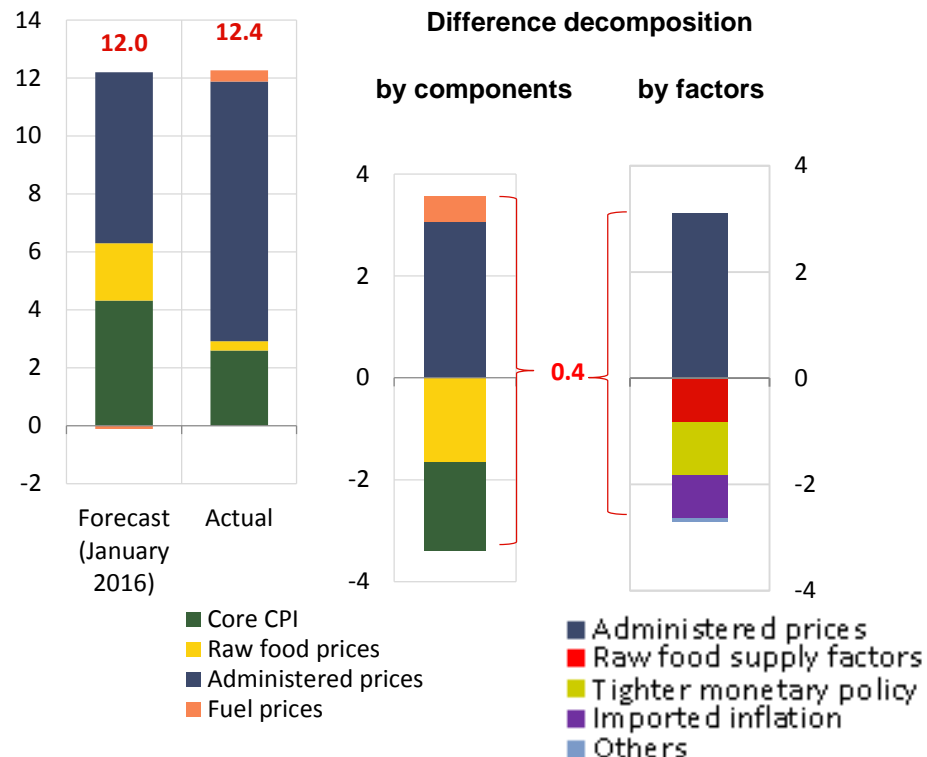
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# Inflation target within 12% ± 3 pts for 2016 was achieved close to the central point of the range

### Contributions to Annual Inflation, pts



### Annual CPI Growth Forecast Error\* by Main Components and Factors, pts



- Although inflation target was achieved close to the central point of the target range, actual CPI readings by components deviated from the forecast made at the beginning of 2016
- Administrative and fuel prices changes were larger than expected due to higher increase in selected tariffs (heating, gas, electricity) and a rebound in global crude oil prices
- Instead, core inflation and raw food prices were lower than forecasted due to tighter monetary policy, lower imported inflation and a number of powerful and prolonged raw food supply shocks



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# Different core CPI measures showed lower fundamental inflation pressure

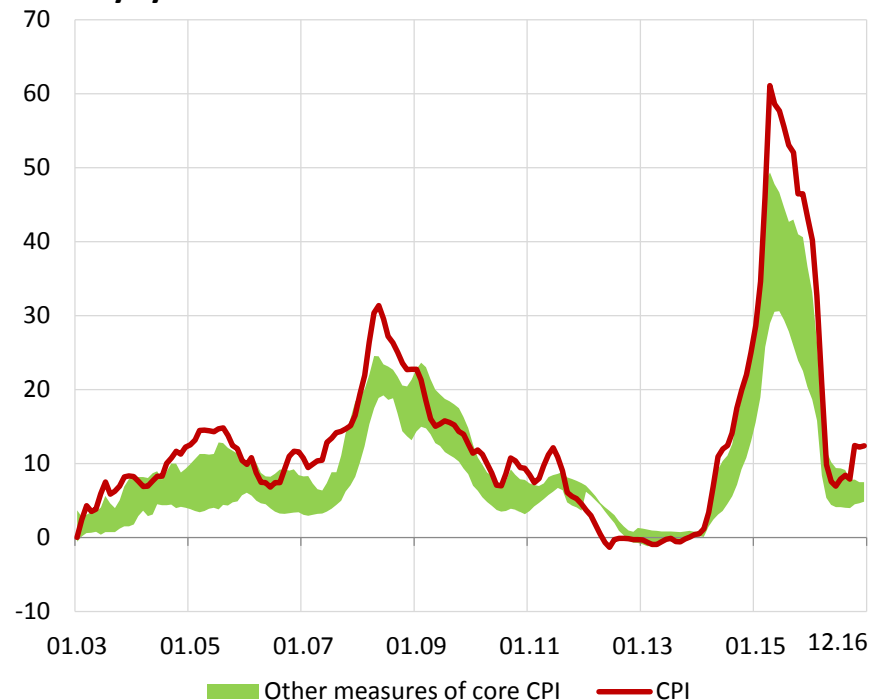
## Alternative Core Inflation Measures Used by Central Banks

Central banks	Exclusion -based	Trimmed mean	CPI volatility-weighted	Weighted median	Factor model – Principal component
USA	●	√	√		√
ECB	●				
England	√			√	
Japan	●	√			
Switzerland	√	√			
Australia	√	●	√	√	
New Zealand		√	√		●
Sweden	●	√		√	
Norway	●	√	√		
Canada	●	√	√	√	√
Poland	√	√			

● – main method, √ – additional methods

Source: Khan, M., Morel, L., Sabourin, P., 2015. A Comprehensive Evaluation of Measures of Core Inflation for Canada. Bank of Canada Discussion Paper No. 2015-12; central banks web-pages

## Headline and Core Inflation Indicators in Ukraine, % yoy

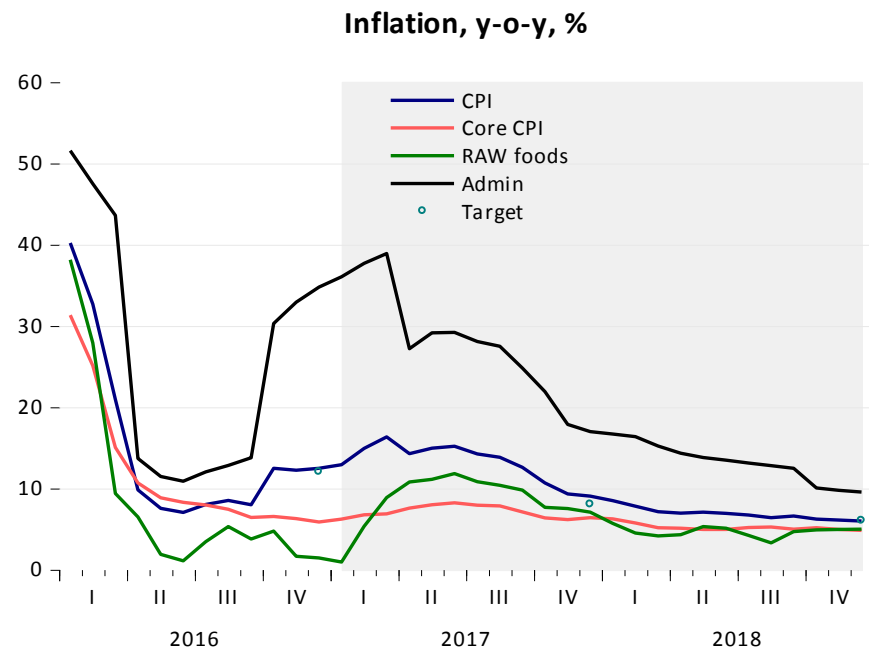
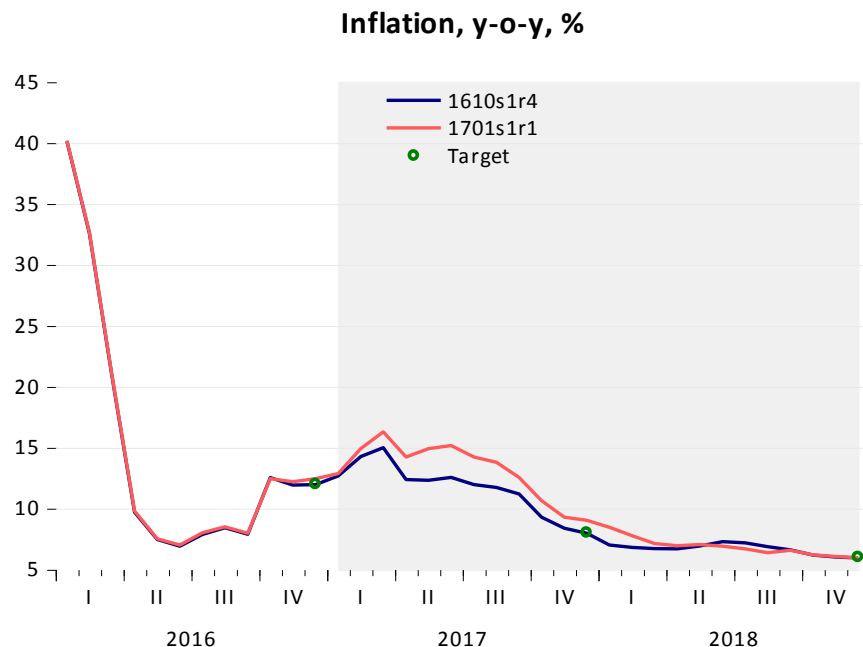


- Assessment of the underlying inflation trend is an important issue for central banks that carry out the monetary policy under inflation targeting. Indicators of core inflation are less volatile and more dependent on monetary policy, hence more suitable for this purpose
- Over the historical period, headline CPI dynamics in Ukraine revealed higher inflationary pressures than suggested by fundamental factors



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# Consumer inflation continues to decelerate despite the headwinds from minimum wage increase and raw food reflation



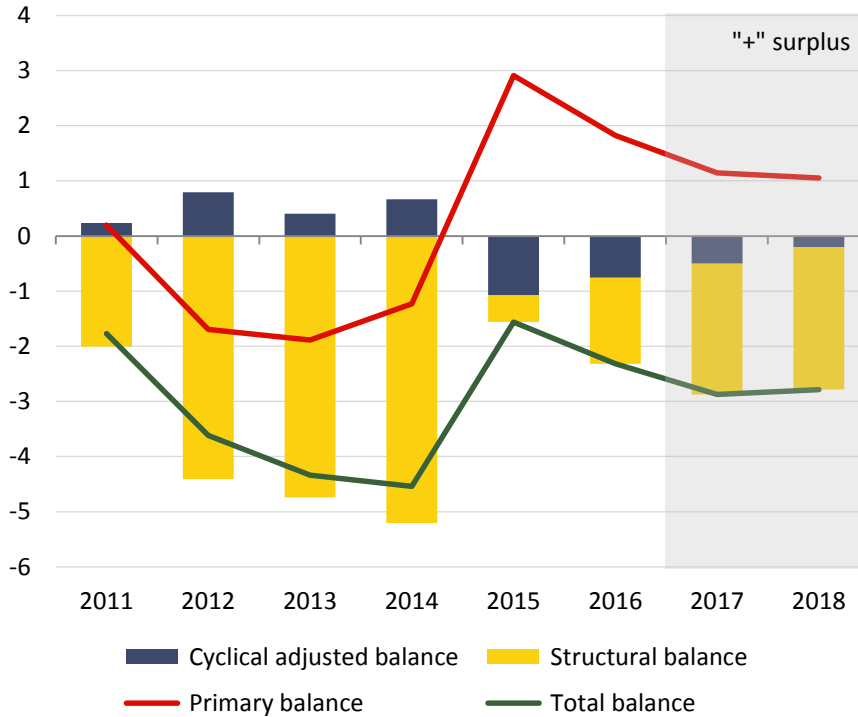
change, %	2016	2017	2018	contrib. pp	2016	2017	2018
CPI	12.4 (12.0)	9.1 (8.0)	6.0 (6.0)	CPI	12.4	9.1	6.0
Core CPI	5.8 (5.6)	6.3 (5.5)	4.8 (4.9)	Core CPI	2.8	3.0	2.3
Raw food	1.2 (2.0)	7.0 (6.2)	5.0 (5.3)	Raw food	0.3	2.0	1.4
Admin	34.6 (33.0)	16.9 (15.6)	9.5 (8.9)	Admin	8.9	3.8	2.2
Fuel	19.5 (19.0)	16.0 (9.5)	8.0 (8.0)	Fuel	0.4	0.3	0.2



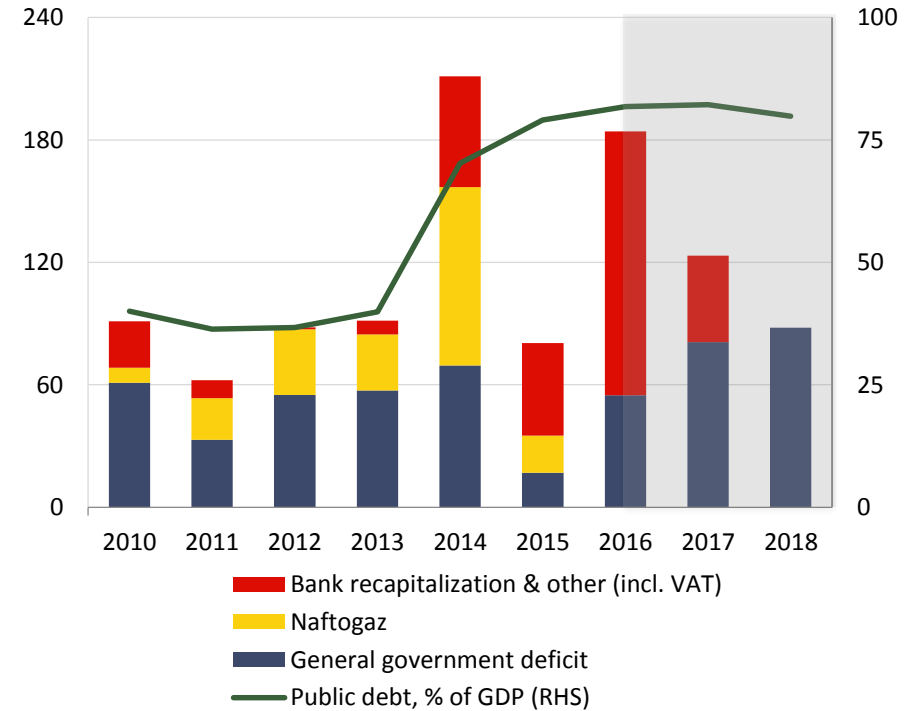
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# Fiscal policy is more stimulative on the forecast horizon

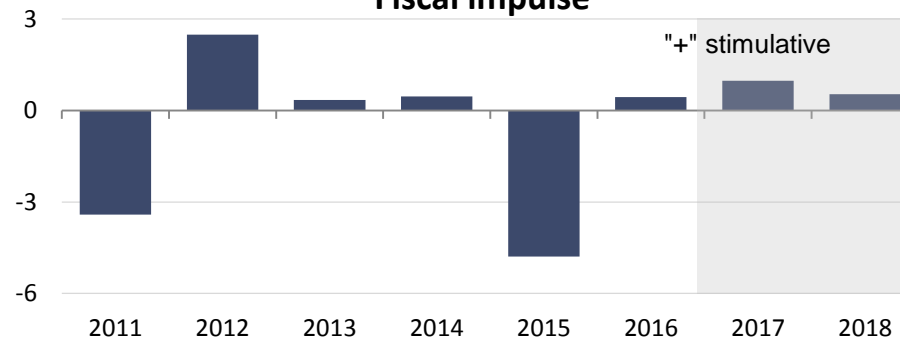
### Consolidated Budget Balance, % GDP



### Public Sector Deficit, UAH bn



### Fiscal impulse

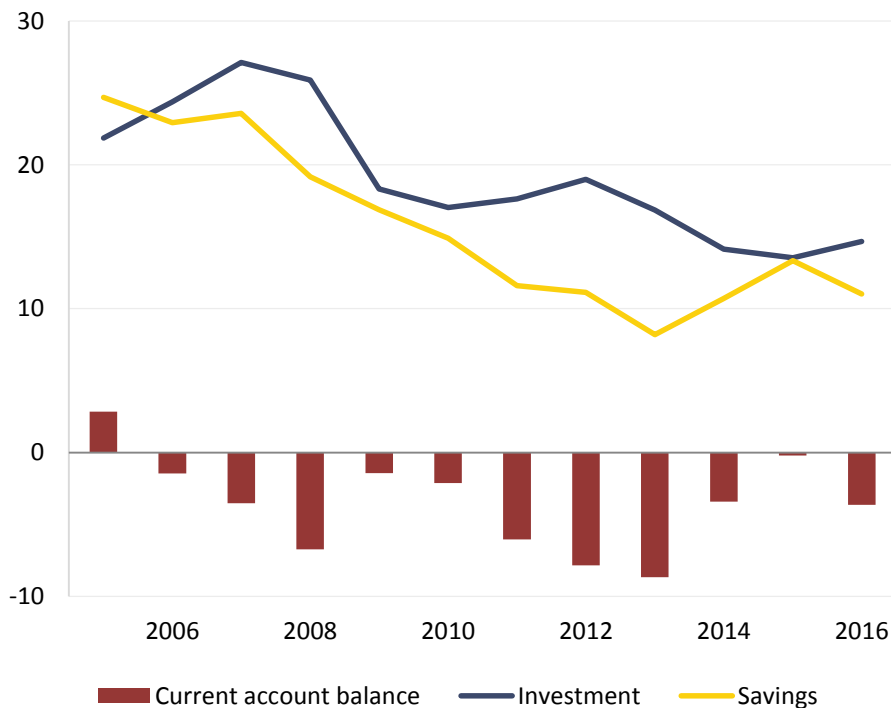




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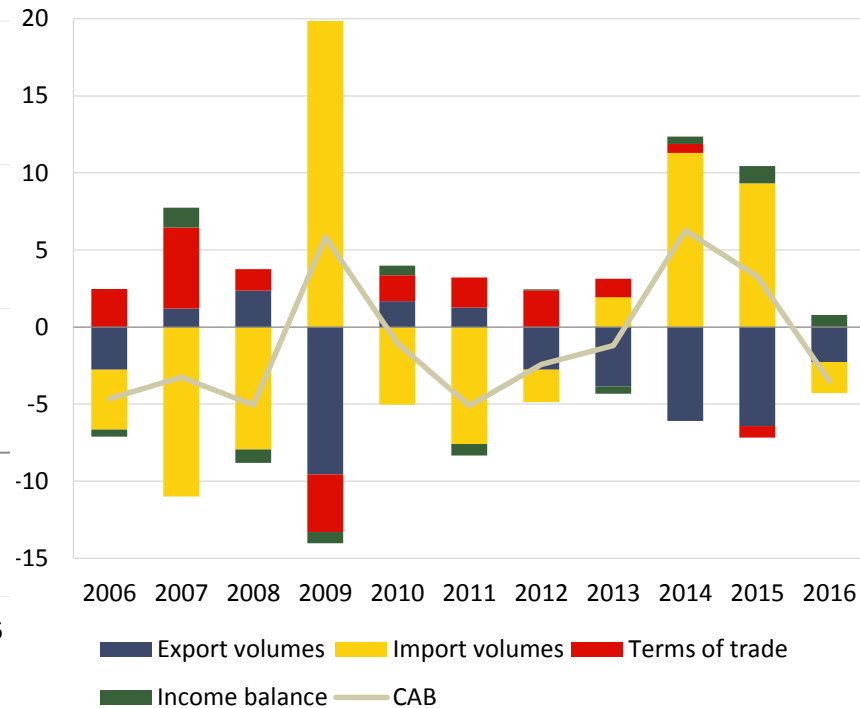
# Ukraine's external position remains vulnerable despite recent past improvements

### Savings-Investment Balance, % of GDP



Source: SSS, NBU calculations

### Breakdown of CA Changes, % of GDP\*



Source: SSS, NBU calculations

\* to previous year's GDP

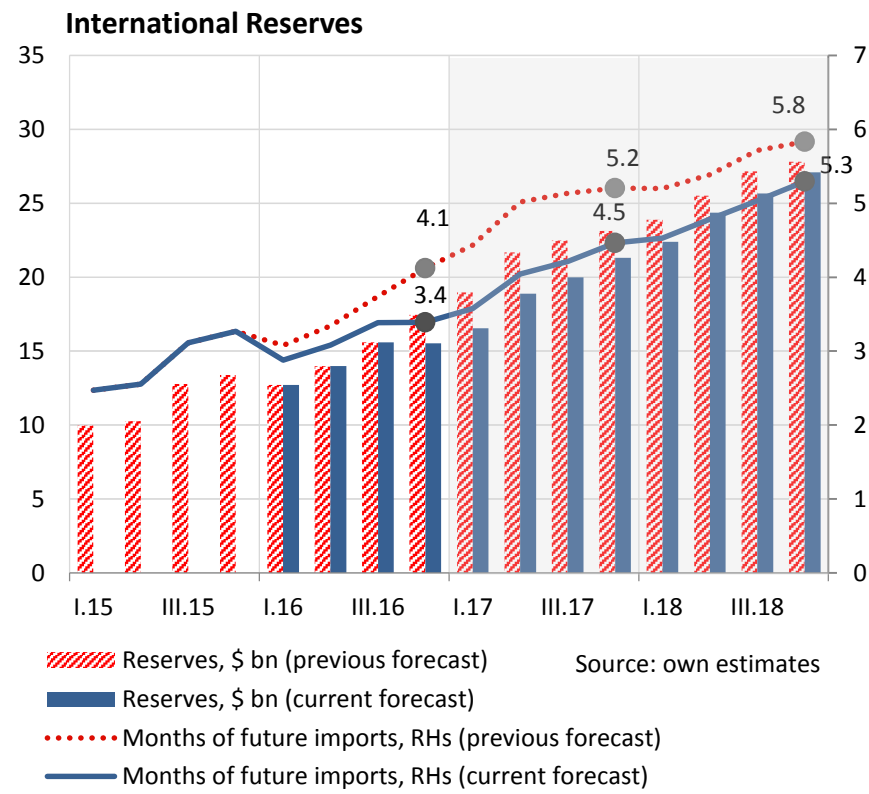
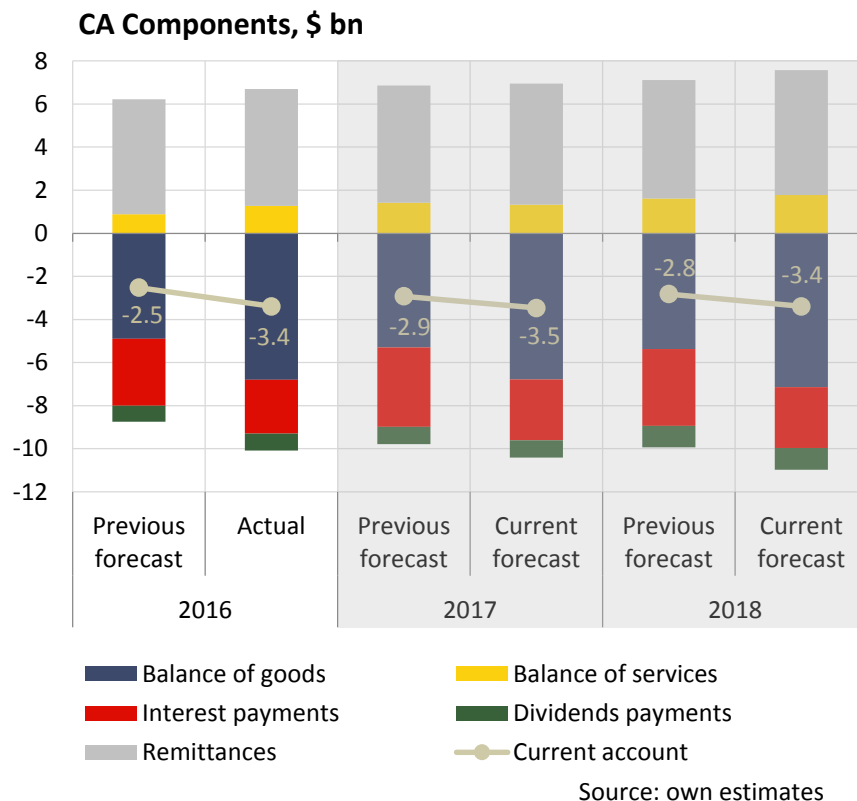
- In 2016, CA deficit widened to 3.6% of GDP due to a recovery of investment demand (especially in the agricultural sector) and an increase in consumption of imported goods (especially food)
- Although CA went through a sharp adjustment in 2014-15, exports kept declining since 2012 amid deterioration of trade with Russia and CIS countries
- To ensure sustainable economic growth and prevent excessive CA deficit widening, an increase in investment should be accompanied by savings growth





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# CA deficits are almost unchanged around 3.5% of GDP in 2017-18 and fully covered by capital inflows



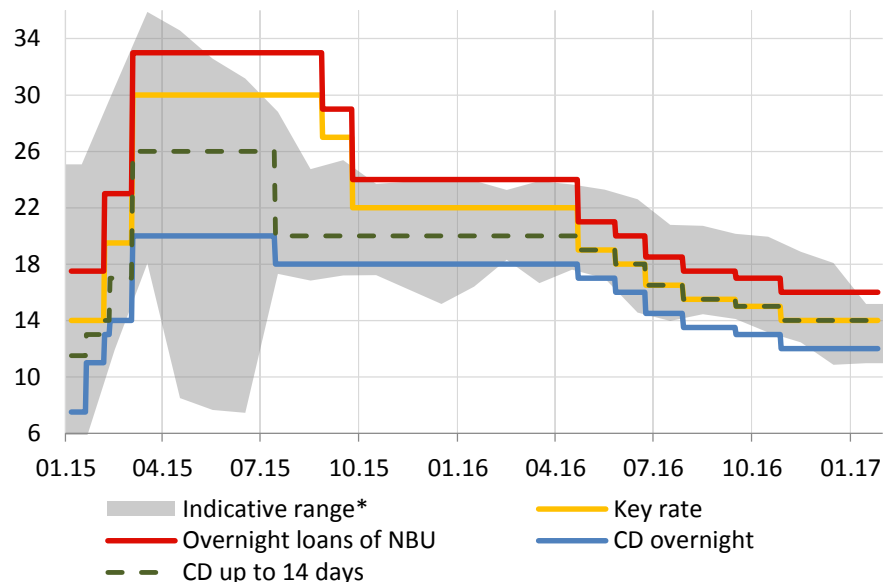
- CAB remains almost unchanged in 2017-2018 (~3.5% of GDP) as a result of counterbalancing effects (better ToT versus expanding domestic demand).
- Gradual acceleration of FDI and debt inflows to real sector determine FA surplus (together with more active public external borrowings) and NBU's FX purchases



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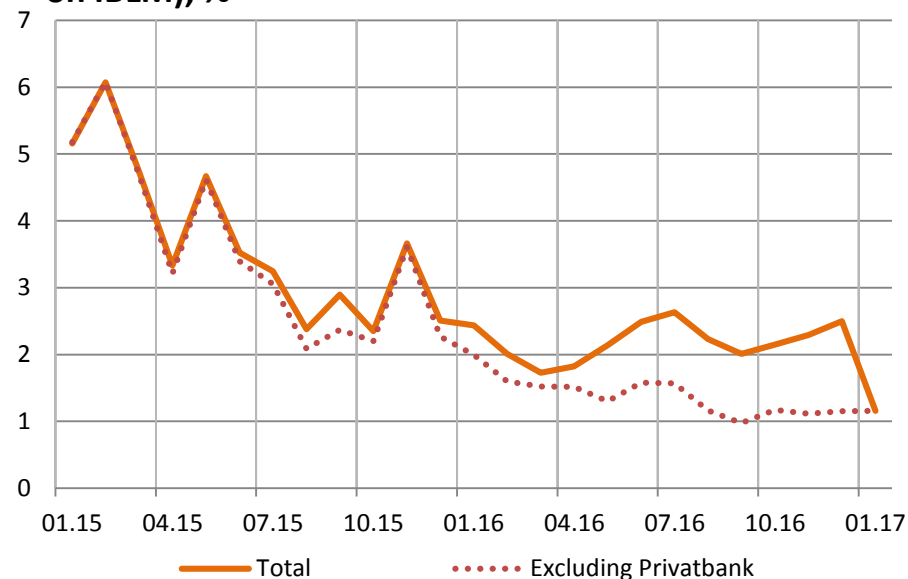
# Following banking system clean-up, interbank lending market will function as a classic market with a surplus liquidity

### Indicative Range of Borrowing Interest Rates in the IBLM and Interest Rates on NBU's Operations, %



\*Range of weighted average interest rates of selected banks on IBLM excluding highest and lowest 5%.

### Index of Interest Rate Segmentation (weighted average standard deviation of borrowing interest rates on IBLM), %



\* Weighted by value of borrowed money.

- Interbank lending market (IBLM) is an important chain in the monetary transmission mechanism
- The decline in confidence, driven by worsened economic outlook, political developments or other factors can undermine effective functioning of the market
- The strengthening of the key policy rate role alongside the banking system clean-up facilitated narrowing of interest rates dispersion on IBLM - the standard deviation of interest rates declined from 3-4% in 2015 to 1-2% in 2016
- Prompt resolution of the situation with Privatbank should also contribute to the market functioning as a classic market with surplus liquidity



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# NBU policy under different scenarios

Scenario	Results (2017-2018)	NBU policy
<b>Baseline</b> <ul style="list-style-type: none"><li>- status-quo on the east</li><li>- structural reforms</li><li>- further cooperation with international financial organizations</li></ul>	GDP +2.8% +3% CPI 9.1% 6%	Admin. restrictions ↓ Interest rate ↓
<b>Pessimistic</b> <ul style="list-style-type: none"><li>- escalation of military conflict</li><li>- lagging structural reforms or unsustainable macroeconomic policy decisions</li><li>- negative terms of trade shock</li></ul>	GDP ↓ UAH/USD ↑ CPI ↑	Admin. restrictions = Interest rate =↑
<b>Optimistic</b> <ul style="list-style-type: none"><li>- faster rebound of global economy</li><li>- positive terms of trade shock</li></ul>	GDP ↑ UAH/USD ↓ CPI ↓	Admin. restrictions ↓↓ Interest rate ↓↓