



National Bank
of Ukraine

Inflation Report (July 2018)

Kyiv

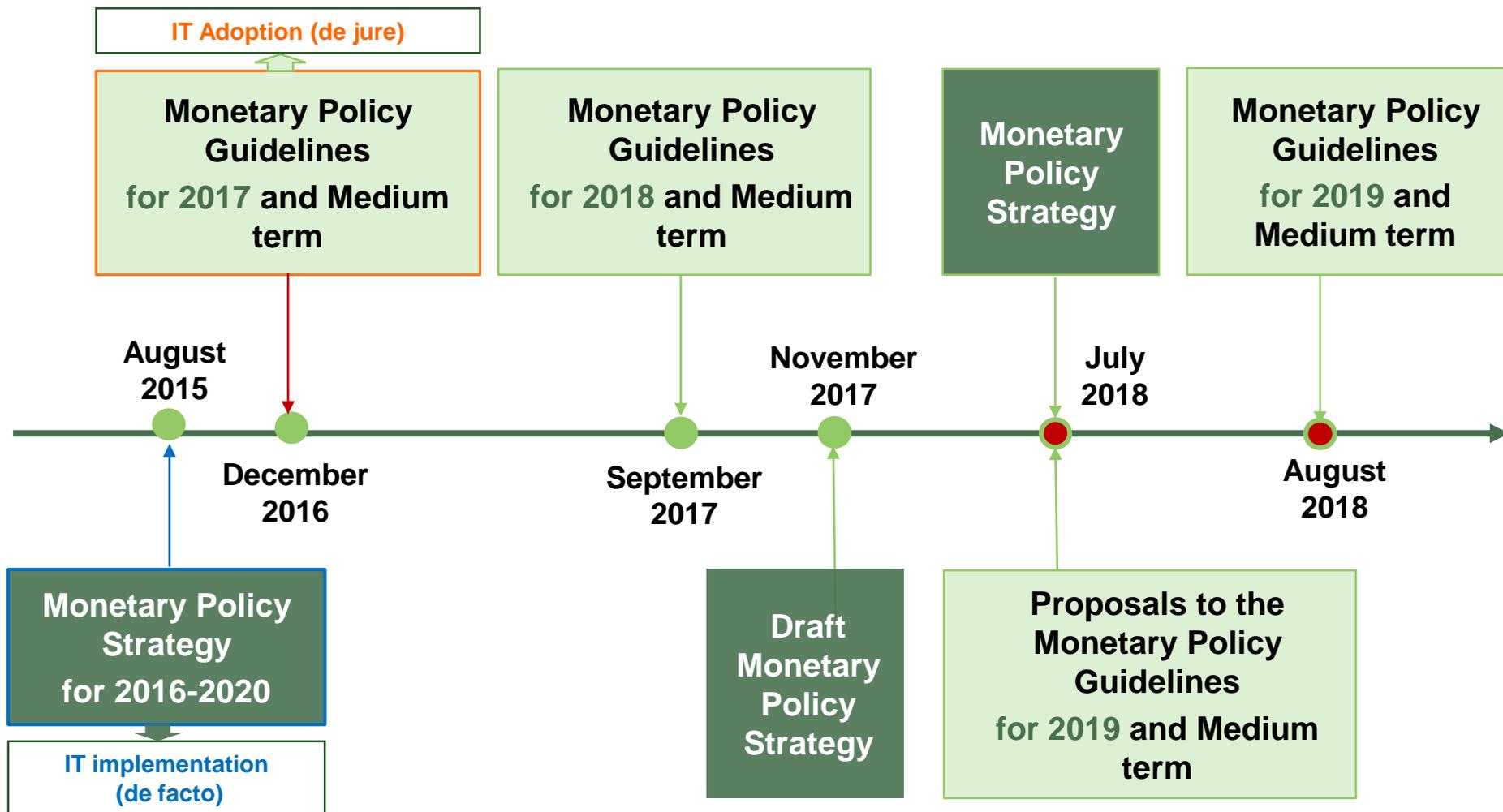
July 19, 2018



Monetary policy strategy: Summary

Strategic documents and inflation targeting framework

Approval by the NBU Council



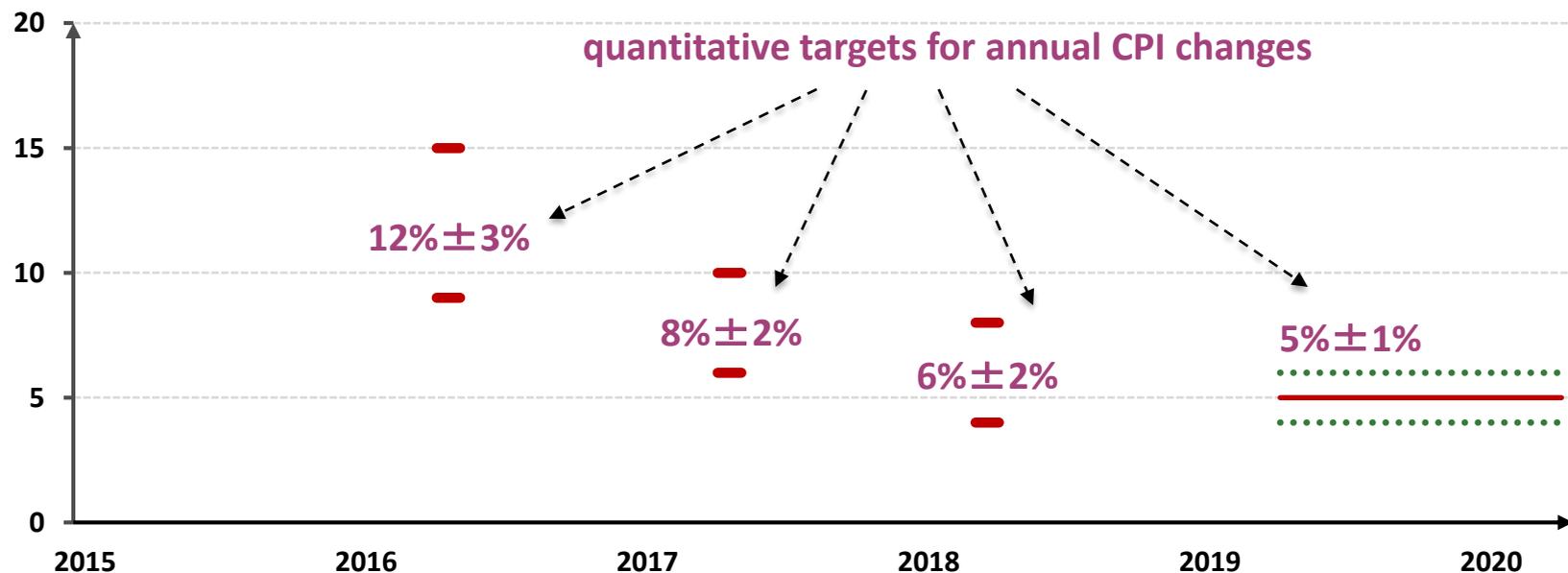
Approval by the NBU Board

Monetary policy strategy: Summary

Main principles of monetary policy and inflation targets

Main principles of monetary policy

- Priority of achieving and maintaining of price stability
- Forward-looking decision-making
- Permanent forecast tools improvement
- The interest rate is the main monetary policy tool
- Floating exchange rate
- Institutional, financial and operational independence of the NBU
- Transparency and accountability of the NBU activity

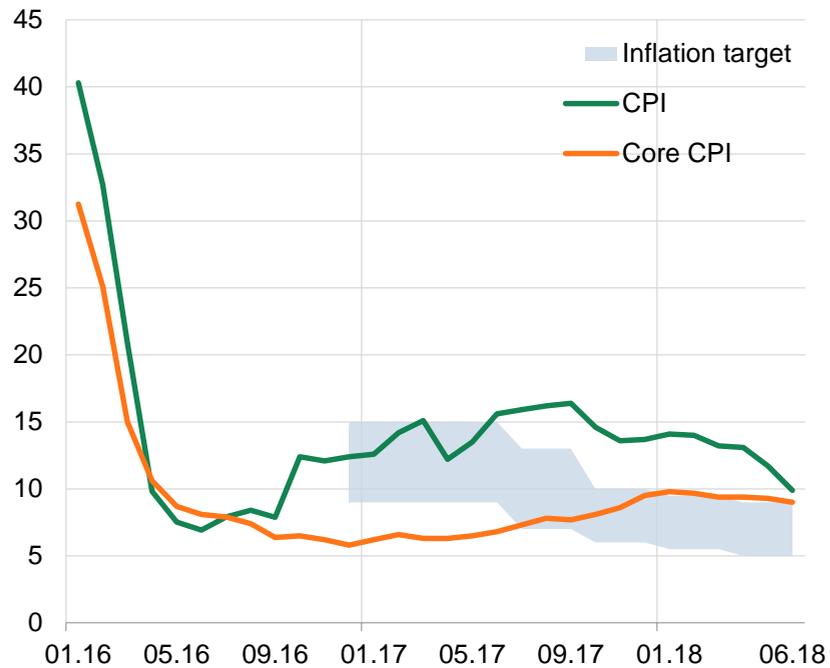


Monetary policy decision: Summary

- In July, the NBU Board decided to hike its key policy rate to 17.5%
- Despite inflation decelerated at a faster-than-expected pace in May-June 2018, inflation pressure will intensify on forecast horizon due to the following:
 - Higher-than-expected domestic demand, caused, among other things, by wage growth and greater remittances from labor migrants
 - Less interest on the side of investors in Ukrainian sovereign debt as a result of the global trend of exiting developing countries' assets and postponed financing under the IMF cooperation program
 - Inflation expectations that continue to exceed the NBU's inflation targets
- Monetary policy tightening will allow to bring inflation down to the target band in Q4 2019
 - Faster disinflation will be contained by hike in administratively-regulated prices which pushes up annual inflation in the first 3 quarters of 2019

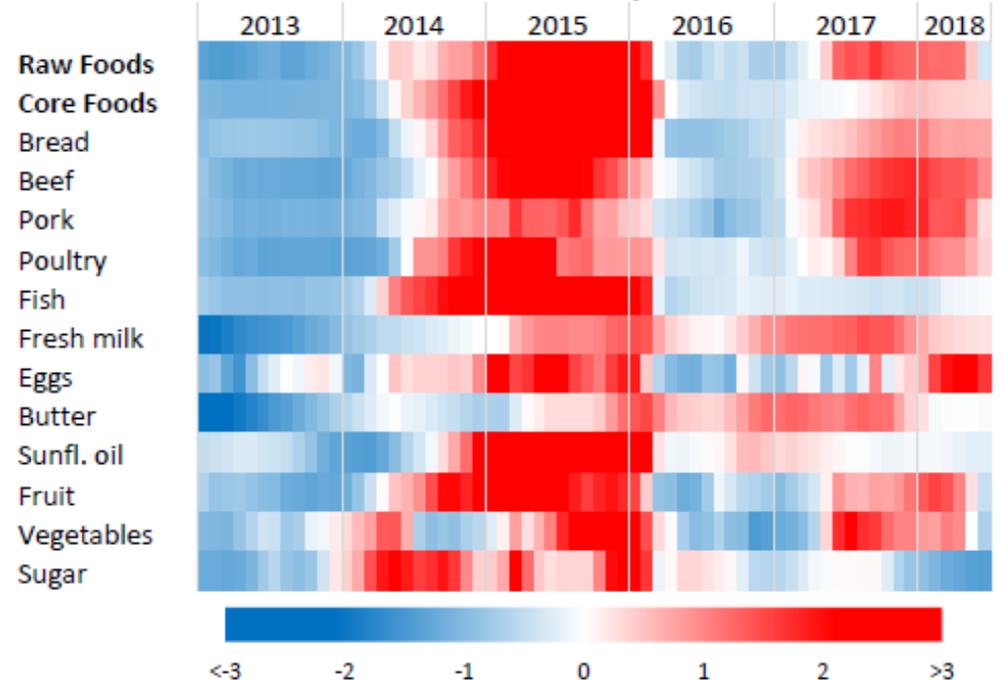
Headline inflation slowed down due to a sharp deceleration in food prices

Headline and Core Inflation, % yoy



Source: SSSU, NBU staff estimates.

Normalized Food Inflation Heat Map* in Ukraine, %

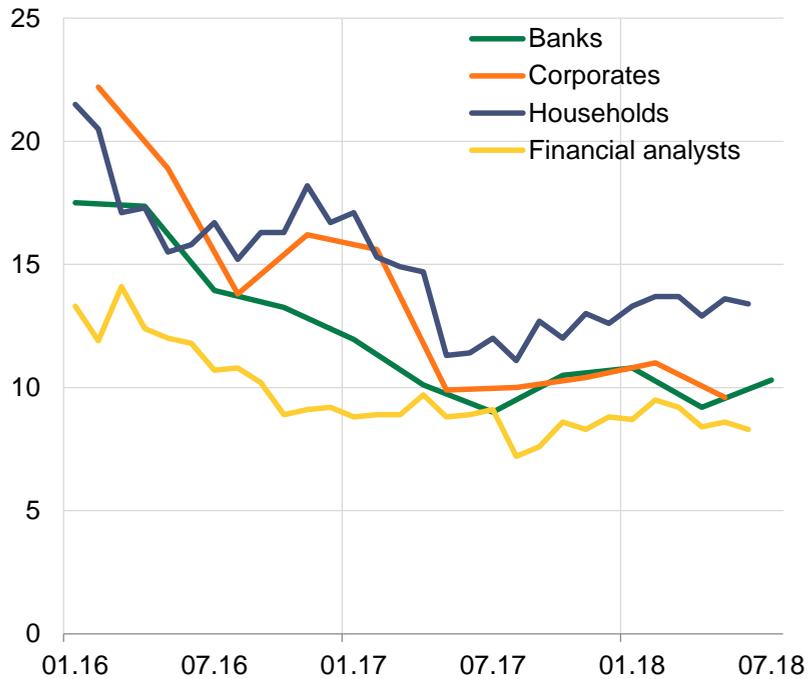


* graphical representation of data where the individual values contained in a matrix are represented as colors. Red indicates higher inflation, blue lower inflation. Data are normalized by subtracting the mean and dividing by standard deviation. Data for 2015 is excluded from mean and STD calculation
Source: NBU staff estimates, SSSU.

- Consumer inflation slowed down to 9.9% yoy in June, slightly faster than in April's forecast (10.2%)
- Descending food price growth due to subsiding past supply factors and rising imports is the main cause. Stronger hryvnia also contributed
- However, core inflation stayed elevated due to strong growth in domestic demand and rising production costs, including for labor

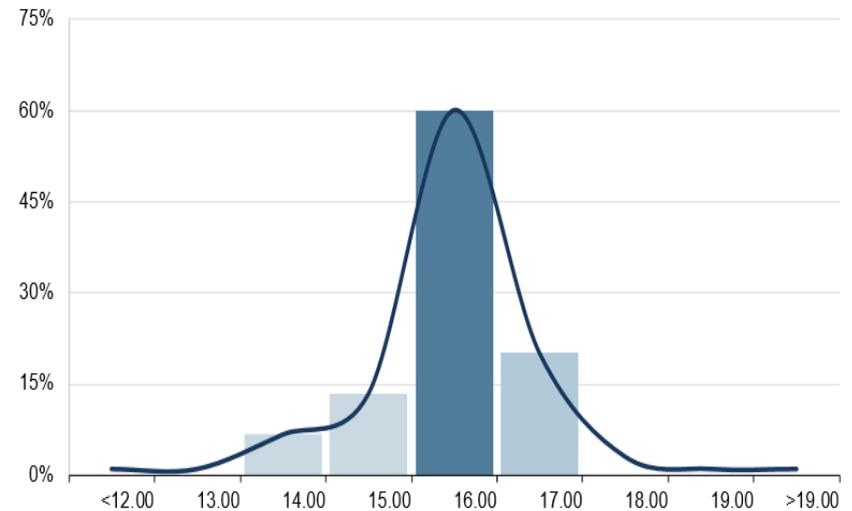
Inflation expectations are improving gradually but still depart from the target. Expectations on interest rate also deviate from NBU's view

Inflation Expectations for the Next 12 Months, %



Source: NBU, GfK Ukraine surveys.

NBU Key Policy Rate at the end of 2018



Evolution of 2018 Consensus forecasts:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul
Forecast (%)	11.1	13.2	14.3	15.0	15.5	15.57	15.87

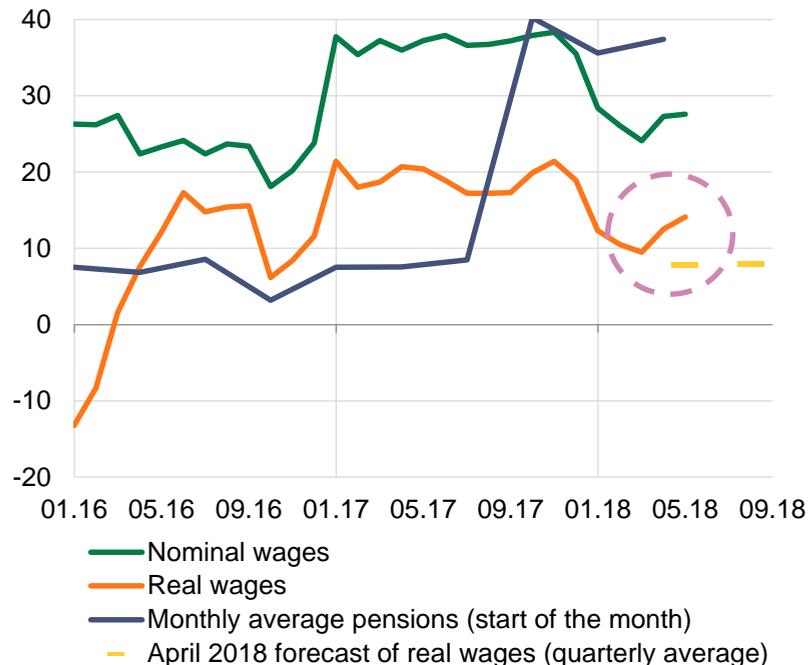
Source: Focus Economics.

Latest forecasts for inflation at the end of 2019:

NBU	5.8
IMF	6.5
Government (first scenario)	7.4
Consensus (Focus Economics)	7.3
Consensus (NBU survey)	7.2

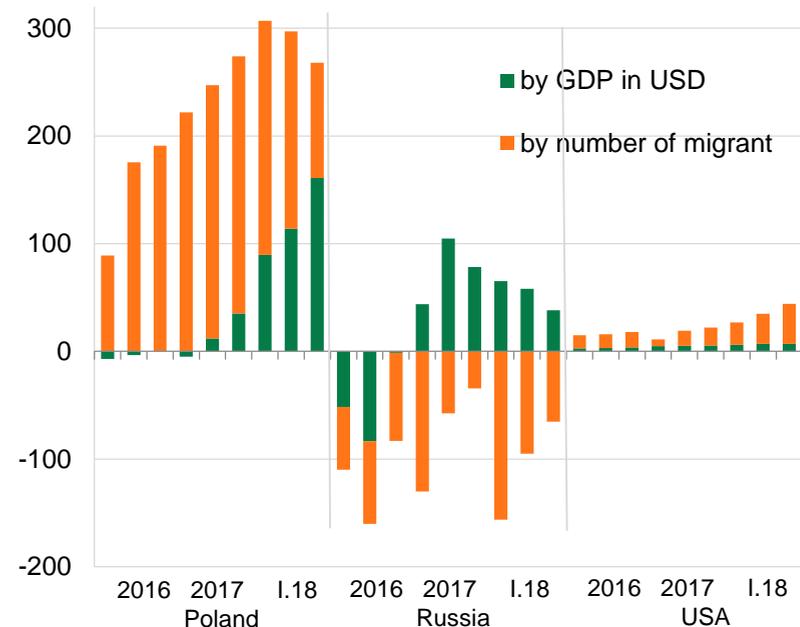
Private consumption is buoyed by higher than expected paces of increase in real wages, strong growth in pensions and remittances

Wages and Average Monthly Pensions, %



Source: SSSU, NBU staff estimates.

Absolute Annual Change of Remittances by Selected Countries, USD bn

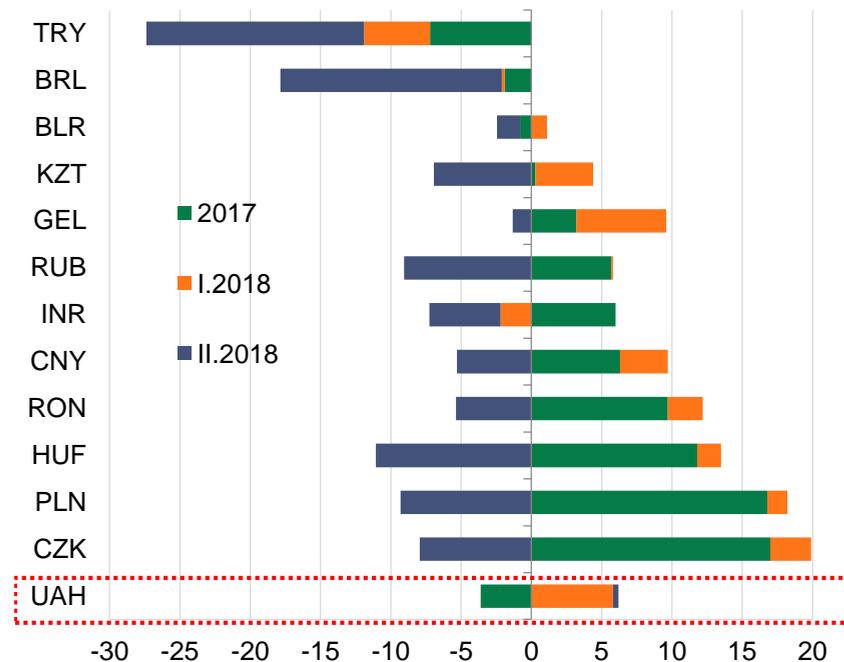


Source: NBU.

- Strong growth in pension benefits reflected wage base adjustment for old-age pensions implemented in Q4 2017 and for military pensions in Q2 2018
- The growth in real wages was driven by a combination of factors – further minimum wage increase at the start of 2018, tight labor market amid recent improvement in unemployment rate, and wage pressure from neighboring Poland

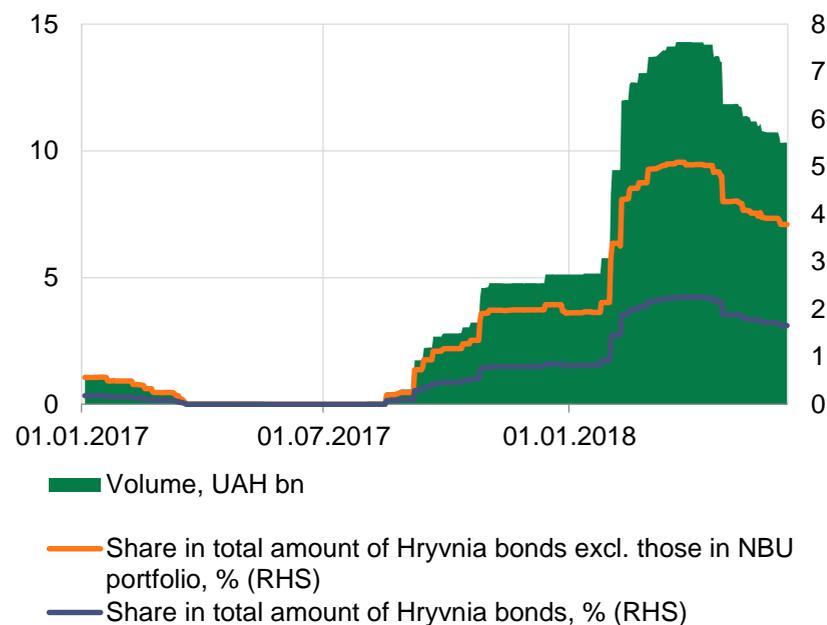
Global financial conditions for EM tighten. Postponed financing under the IMF program puts additional drag on capital flows in Ukraine

Exchange Rates of Ukraine's MTP Countries to US Dollar, % change, eop



Source: Thomson Reuters.

Volume and Share of Non-Residents in Hryvnia Bonds

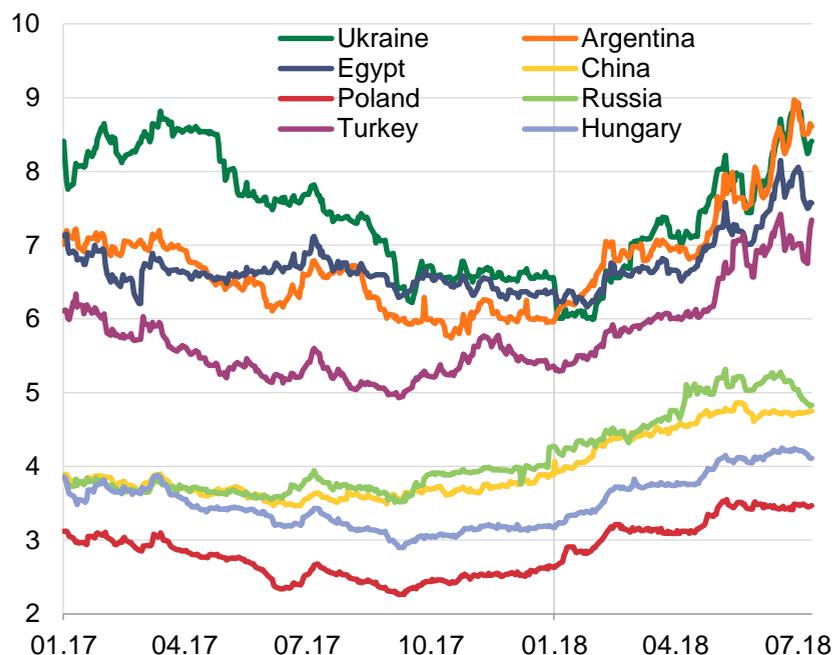


Source: NBU

- USD strengthening and tighter financial conditions amid US interest rates intensified external pressure on EM financial markets

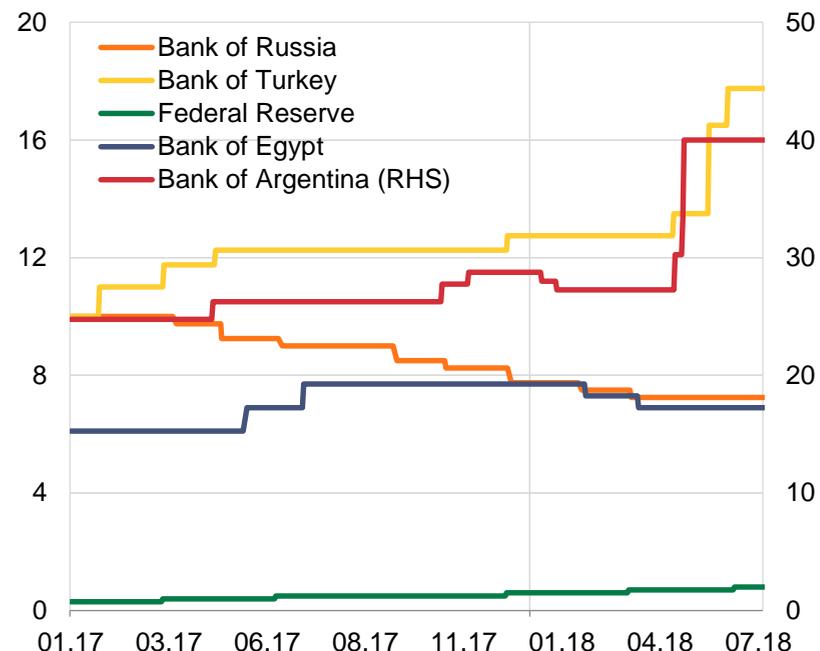
Box. The effects of the worse world financial conditions for EM. Why some countries were more vulnerable?

**J.P. Morgan Emerging Markets Bond Index
EMBI+**



Source: Bloomberg.

**Key Interest Rates of EM countries and
FRS, %**

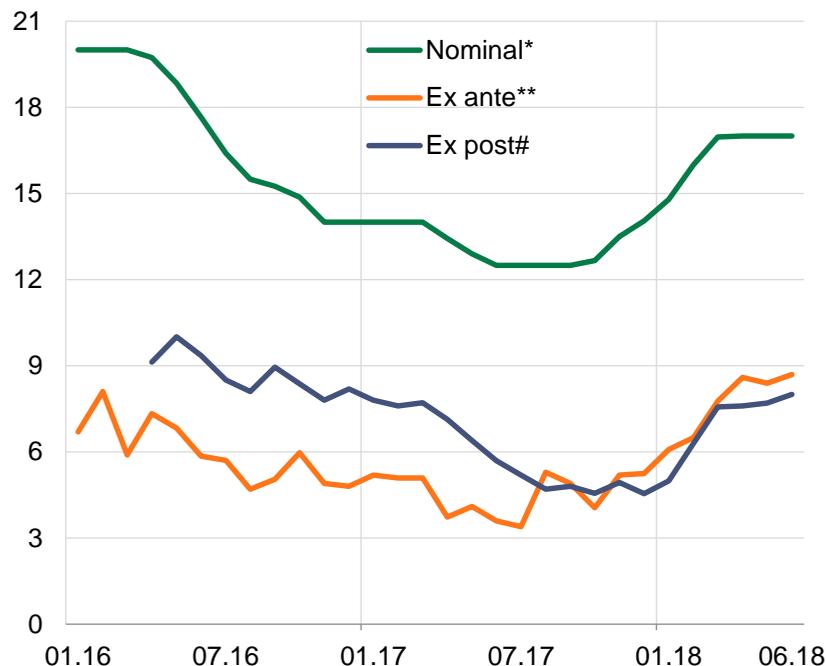


Source: Thomson Reuters.

- The most vulnerable countries to global shocks are those with high level of current account deficit, fiscal imbalances, indebtedness and reliance on (short-term) borrowing in foreign currency.
- Argentina: revision of inflation targets, key interest rate cut amid high inflation has lead to serious negative consequences for monetary policy credibility
- Turkey: lack of central bank independence (financing budget deficit, keeping low interest rate) facilitated accumulation of external and internal mismatches (current account deficit and inflation respectively) and lowered market credibility

Domestic monetary stance remains tight. However, real rate isn't record high as it used to be

Real Key Policy rates, % pa



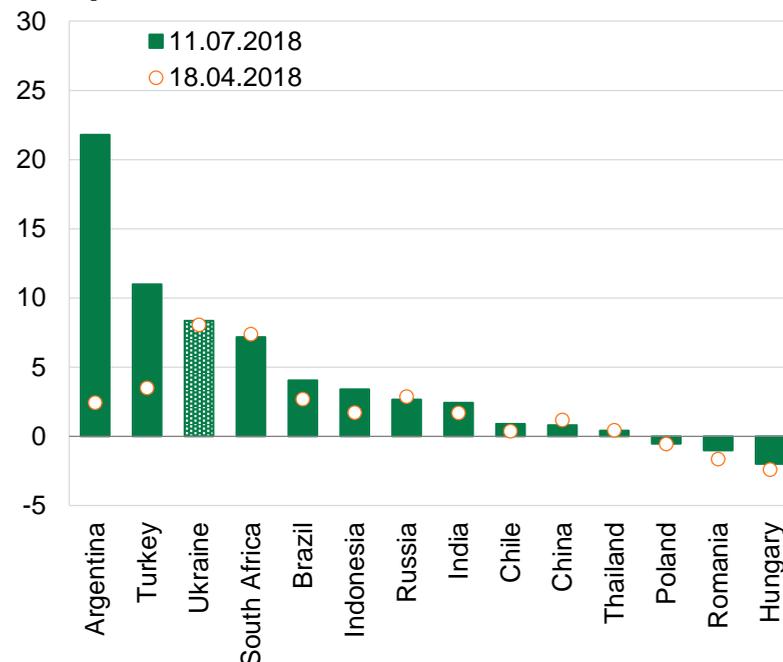
* Average monthly interest rate on 14-day CDs.

** Deflated by 12-month ahead inflation expectations of financial analysts.

Deflated by annual rate of core inflation.

Source: NBU staff estimates.

1-Year Real Interest Rates for EM countries, % pa

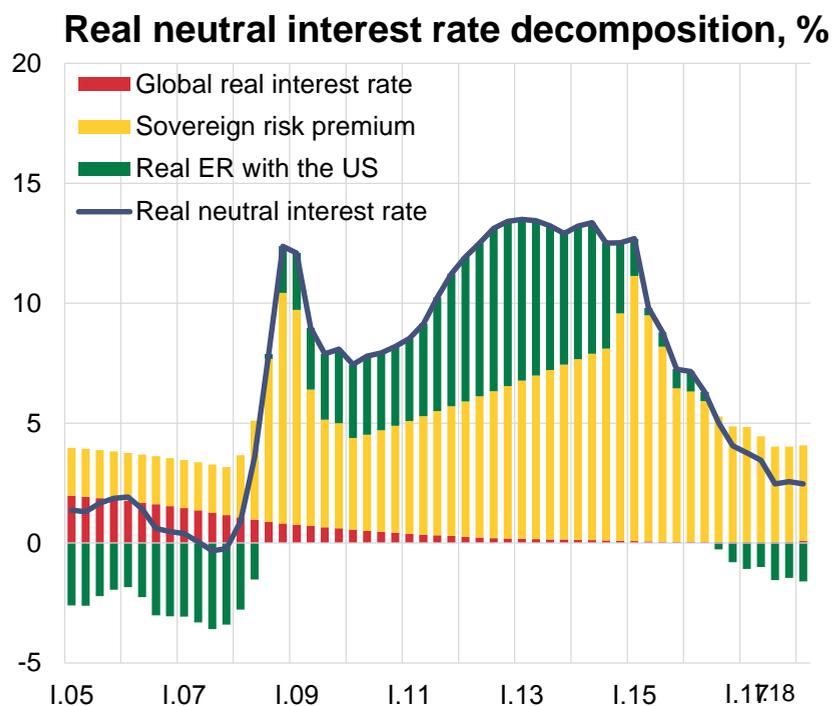


* Real interest rate is calculated as a difference between 1-year bond yield on the primary market and inflation forecast as of 2018 (eop) from the IMF, for Ukraine – based on NBU staff estimates.

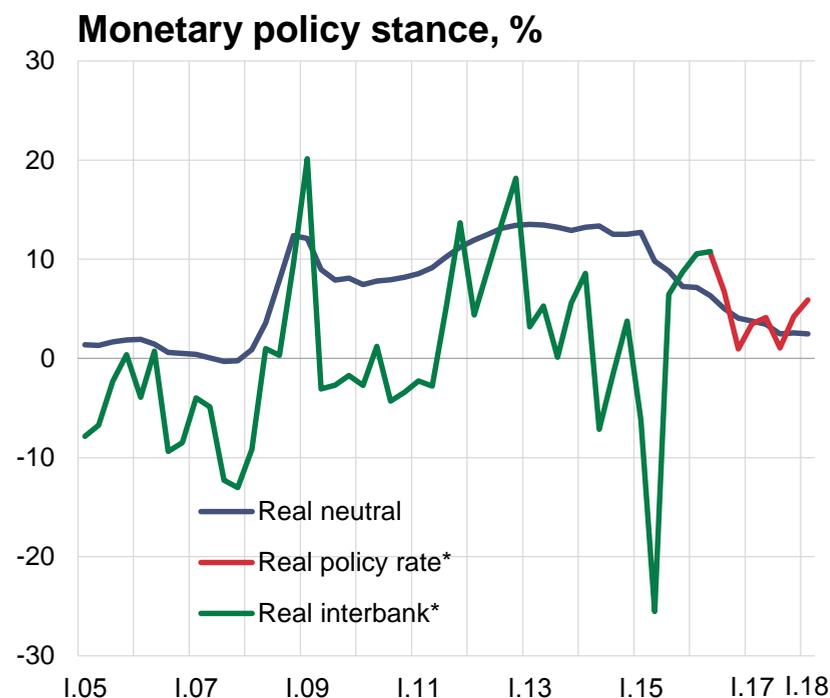
Source: DekaBank, Consensus Economics, Thomson Reuters.

- In Q2 2018, the NBU maintained the tight monetary policy stance: it kept the key policy rate on hold at 17% per annum. In real terms, the key policy rate grew from 5% per annum early in the year to 8-9% per annum in June 2018
- Real yields on government bonds were still among the highest across EM countries in 2018. Facing capital outflow, Turkey and Argentina, as one of the most vulnerable countries to US tightening, raised rates

Box. A neutral real interest rate in the case of a small open economy: Application to Ukraine



Source: Grui, Lepushynskiy, Nikolaychuk (2018).

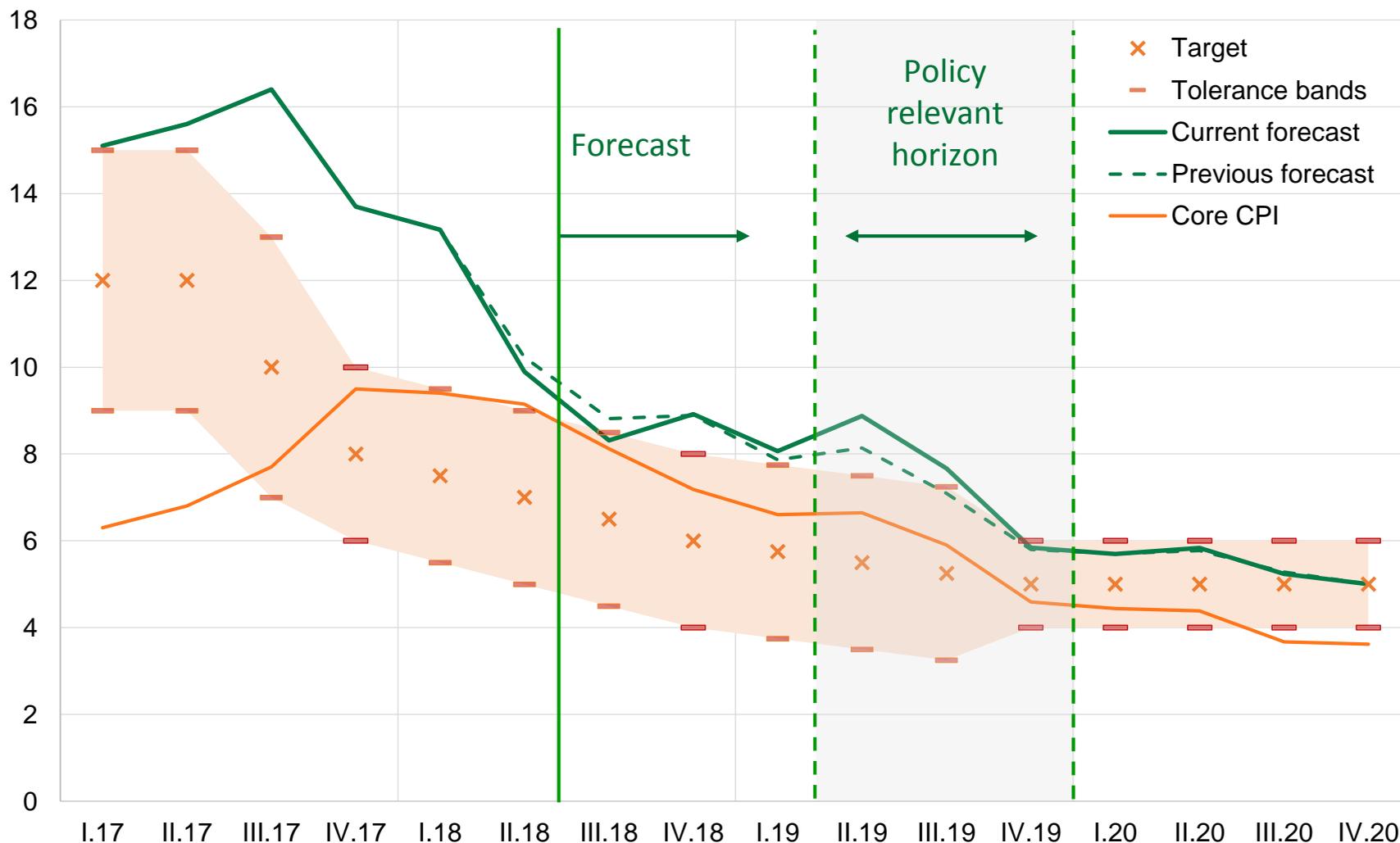


*Deflated by model-consistent inflation expectations.
Source: Grui, Lepushynskiy, Nikolaychuk (2018).

- In 2015-2017 neutral real interest rate declined to 2.5% due to:
 - lowering sovereign risk premium
 - return to real exchange rate appreciation trend due to a recovery in productivity growth
- A neutral real interest rate is projected to approach 2% over the long run (best guess) due to:
 - further decrease in the risk premium
 - acceleration of real exchange rate appreciation trend
- A neutral real interest rate is projected to fall in the range from 0 to 5% in the long run, depending on the success of economic development (uncertainty around the best guess)

The NBU will bring inflation back to the target range in Q4 2019 amid higher growth rates of administratively-regulated prices

Headline CPI, % yoy



Forecast Summary

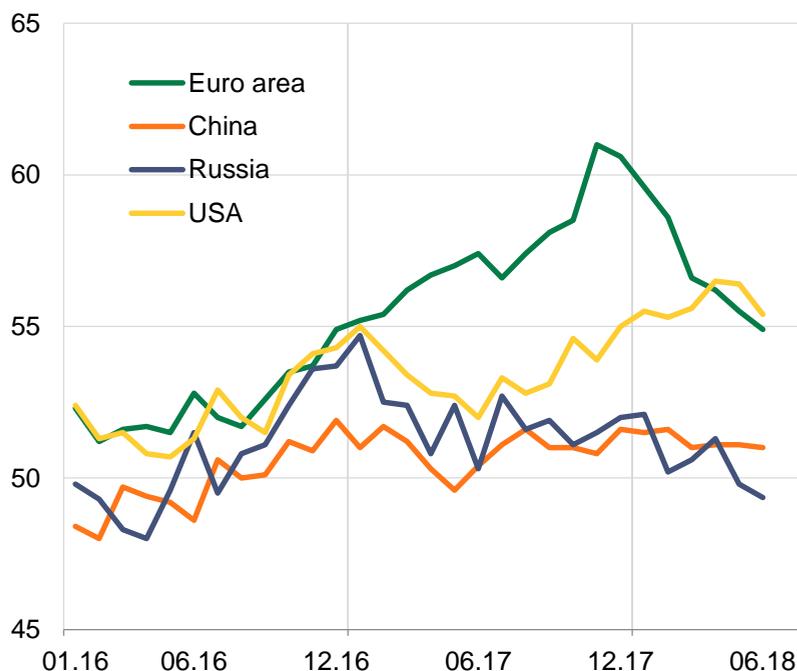
- Global economy will continue to grow fast while decelerating slightly. Stronger global outlook determines higher prices for metals and grains (than in the previous forecast), but lower harvest and growing trade tensions put drag on export volumes
- Global financial conditions deteriorate gradually. Government is able to tap international capital market on forecast horizon and get official financing (conditional on IMF program).
- Economic growth will continue to be mainly driven by private consumption, which in the current year will be fueled by the persisting high rate of growth in real wages on the back of high migration. In 2019, real GDP growth will slow to 2.5% (2.9% in the previous forecast), due to the waning effects of higher social standards, the tight monetary conditions, as well as tight fiscal policy. In 2020, the real economy is expected to grow by 2.9%.
- Inflation forecast remains unchanged – pressure from wages and worse expectations compensated by positive food supply shocks and tight fiscal policy
- Revision of reinvested earnings results in widening CA deficit to 2.2% GDP (and corresponding increase in FDI) in 2017. In 2018, CA deficit shrinks to 1.5% GDP thanks to further solid growth of remittances, and then gradually expands to 2.4% GDP in 2020 amid REER appreciation and robust domestic demand. Capital inflows allow to support international reserves (\$20 bn in 2020)

Key macroeconomic indicators

	2017	2018	2019	2020
Real GDP, change, %	2.5	3.4 (3.4)	2.5 (2.9)	2.9 (2.9)
Nominal GDP, UAH bn	2983	3 460 (3 451)	3 845 (3 842)	4 188 (4 186)
CPI, y-o-y, %	13.7	8.9 (8.9)	5.8 (5.8)	5.0 (5.0)
Core CPI, y-o-y, %	9.4	7.1 (7.7)	4.6 (4.8)	3.6 (3.3)
Current account balance, USD bn	-2.4 (-2.1)	-2.0 (-2.4)	-2.6 (-3.2)	-3.6 (-3.9)
BOP (overall), USD bn	2.6	2.0 (2.6)	-0.3 (-0.8)	-0.1 (0.0)
Gross reserves, USD bn	18.8	20.7 (21.6)	18.8 (19.1)	19.7 (20.0)

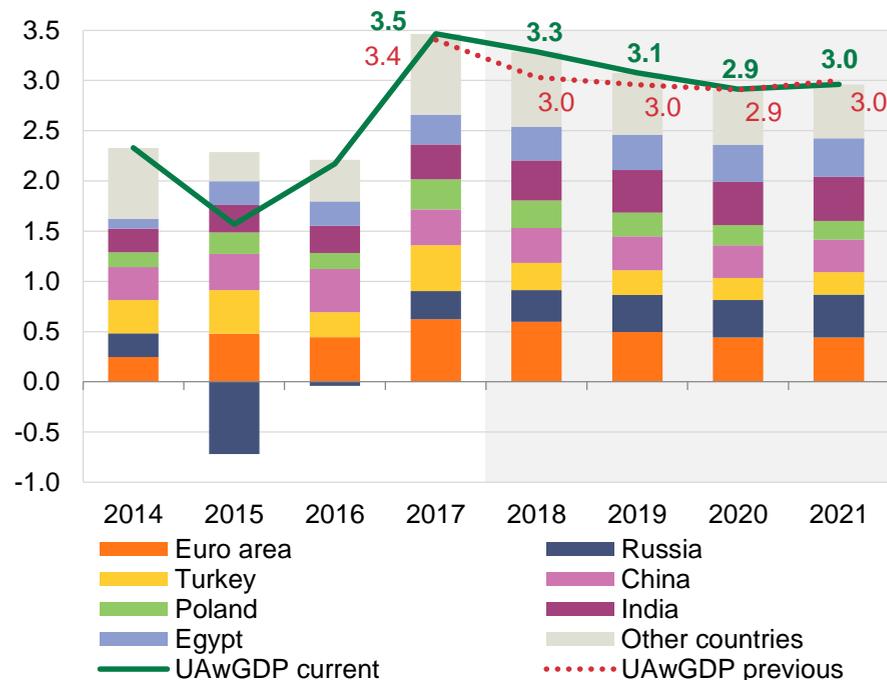
Outlook for MTP economic activity remains favorable despite a gradual slowdown. Meanwhile, downside risks to growth have risen

Manufacturing PMI in certain countries of the world



Source: HIS Markit.

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

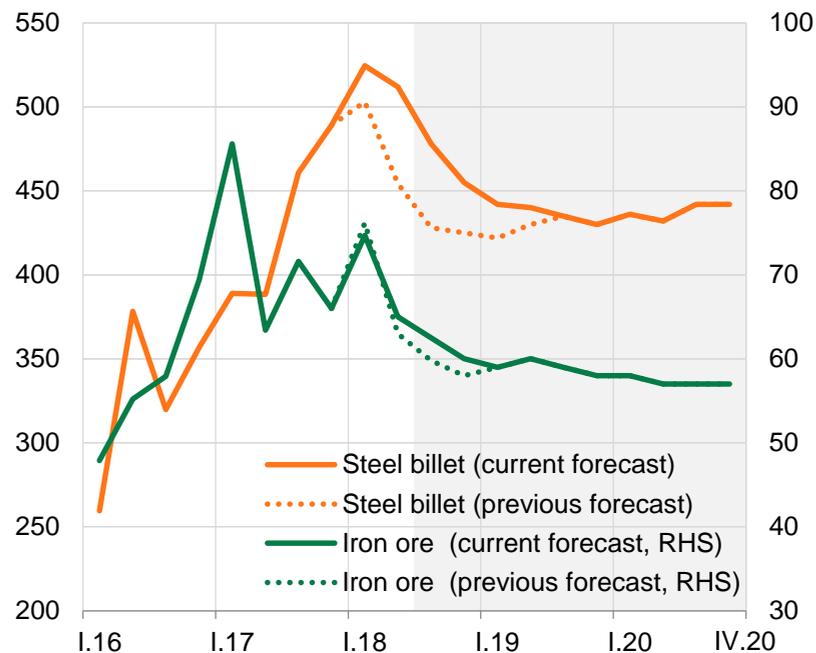


Source: NBU staff estimates.

- The growth is fueled by investment growth, cyclical recovery in global trade and relatively high commodity prices
- AE: Less synchronized expansion (led by US economy while EU decelerating)
- EM: Capital outflows restrict the availability of financing and lead to downside risks to growth, while they also create upside risks for inflation

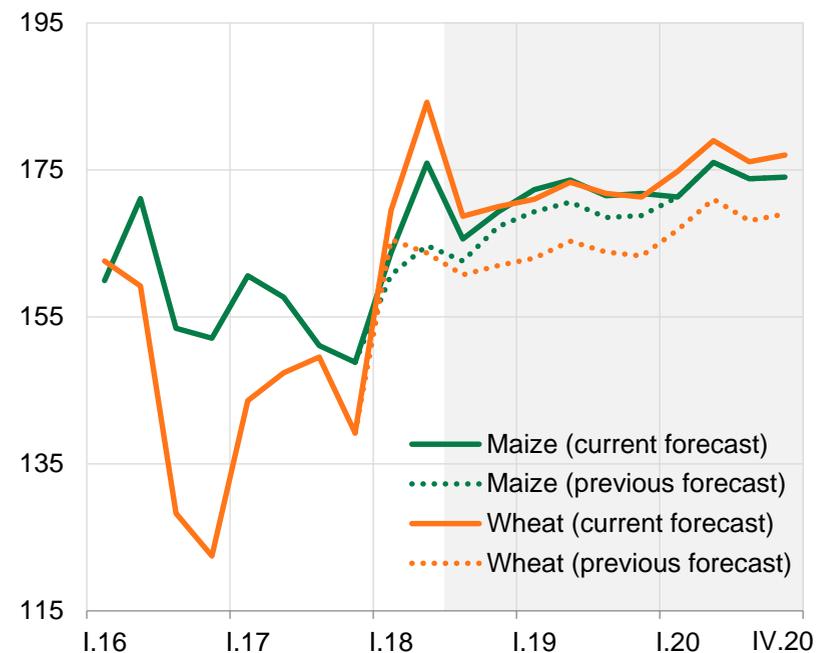
Favorable global environment dictates higher commodity prices (metals and grains)

World prices of ferrous metals and iron ore*, USD/MT, quarterly average



*Steel Billet Exp FOB Ukraine and China import Iron Ore Fines 62% FE spot (CFR Tianjin port)
Source: NBU staff estimates.

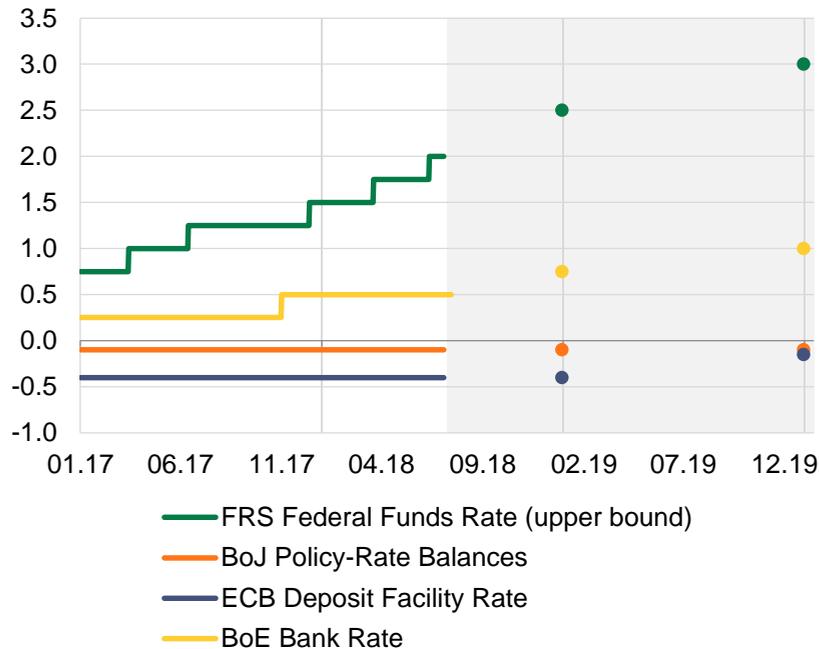
World cereal prices, USD/MT, quarterly average



Source: NBU staff estimates.

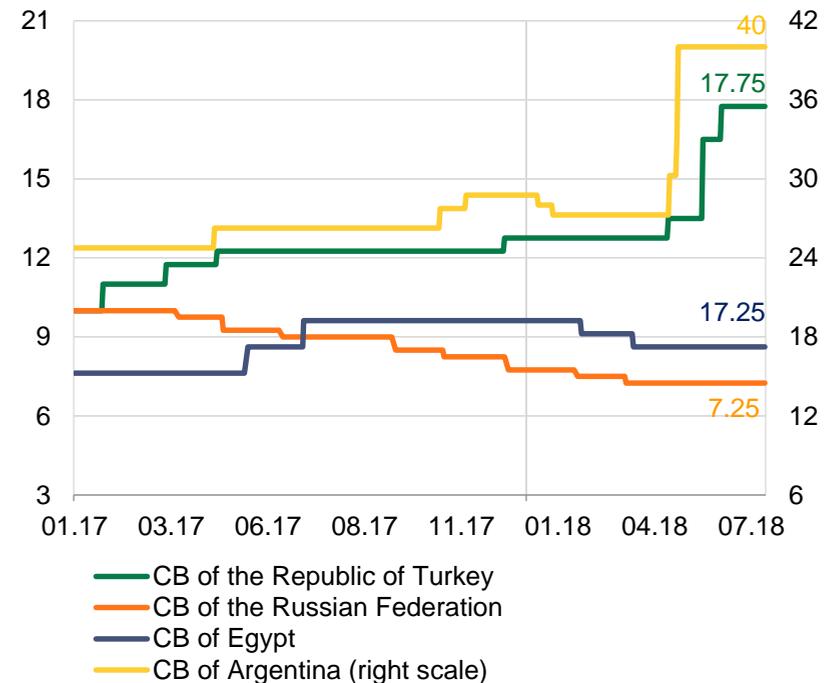
Central banks in AE proceed with policy normalization. EM either tighten or postpone cuts as their currencies depreciate

Key policy rates of major central banks, %



Source: EIU Global Forecasting Service.

Key policy rates of some central banks in emerging markets, %

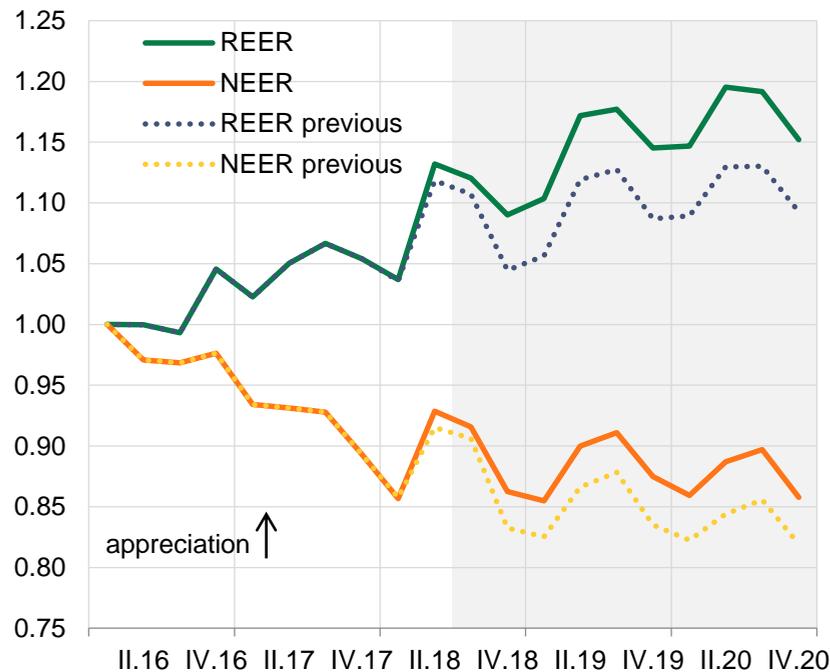


Source: official web-pages of central banks.

* On 01.06.2018, Turkey set one-week repo rate as its key policy rate. Since TCB has been using late liquidity lending rate for monetary policy tightening in response to higher inflationary pressure and currency depreciation during 2017, late liquidity lending rate is shown as the key policy rate up to 01.06.2018 while one-week repo rate – after 01.06.2018.

Real effective exchange rate continues to appreciate in 2018-20, even faster than projected earlier

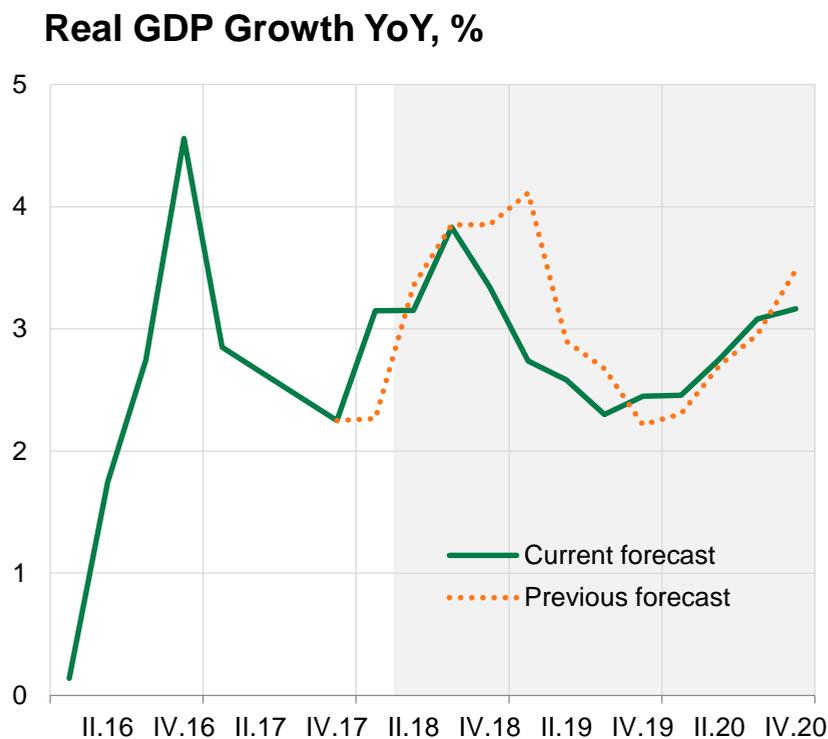
REER and NEER index (1.2016=1)



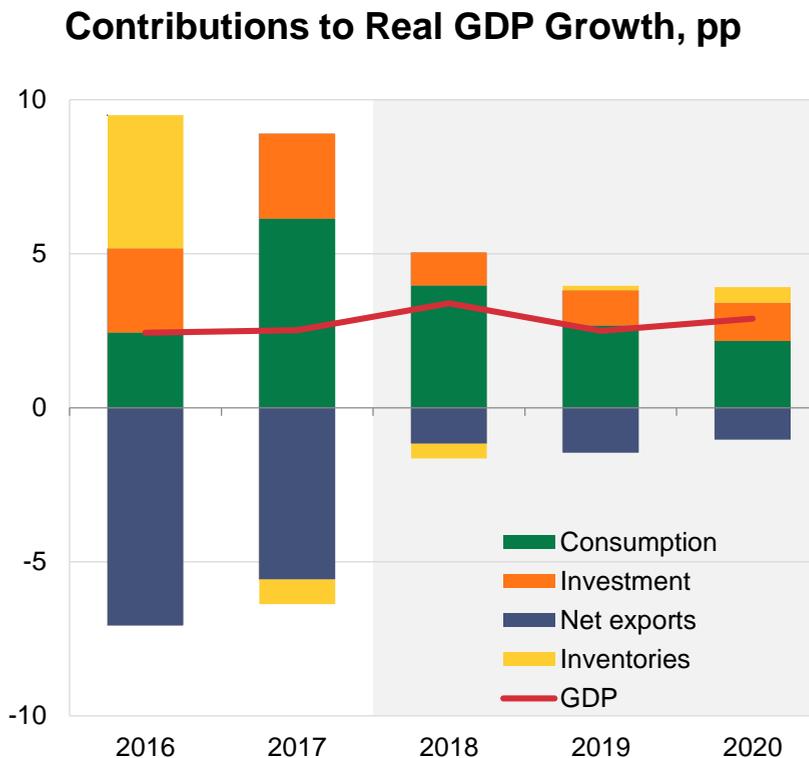
Source: NBU staff estimates.

average	2017	2018	2019	2020
REER, % change	+3.8	+4.4 (+2.7)	+5.0 (+2.0)	+1.9 (+1.2)
NEER, % change	-5.9	-3.3 (-4.8)	-0.6 (-3.0)	-1.1 (-1.9)

Tighter fiscal policy, lower export growth and higher real marginal costs (REER, wages) will restrict demand growth in 2019



Source: SSSU, NBU staff estimates.



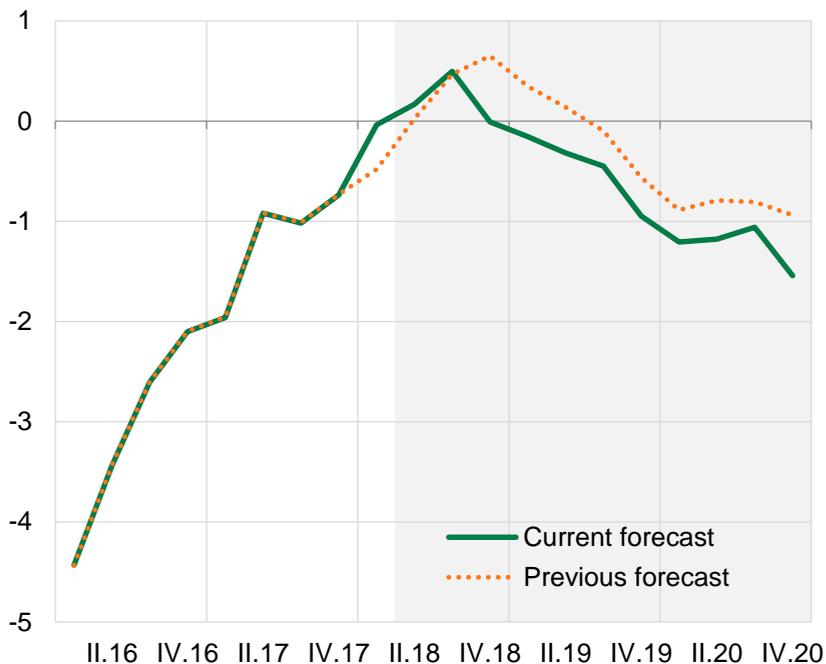
Source: SSSU, NBU staff estimates.

Forecast changes factors:

- ↑ External demand
- ↑ Remittances
- ↑ Business expectations
- ↓ Tighter monetary and fiscal policy
- ↓ REER appreciation
- ↓ Lower export volumes
- ↓ Tighter labor market

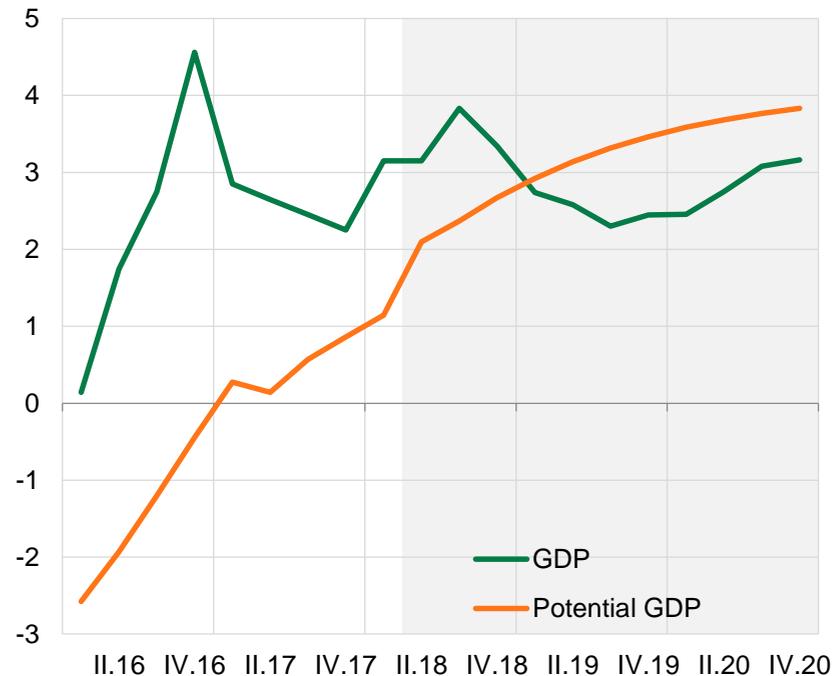
In 2018, negative output gap closes reflecting favorable ToT, but in 2019 opens again due to tight fiscal and monetary policy

Output Gap, % of Potential GDP



Source: SSSU, NBU staff estimates.

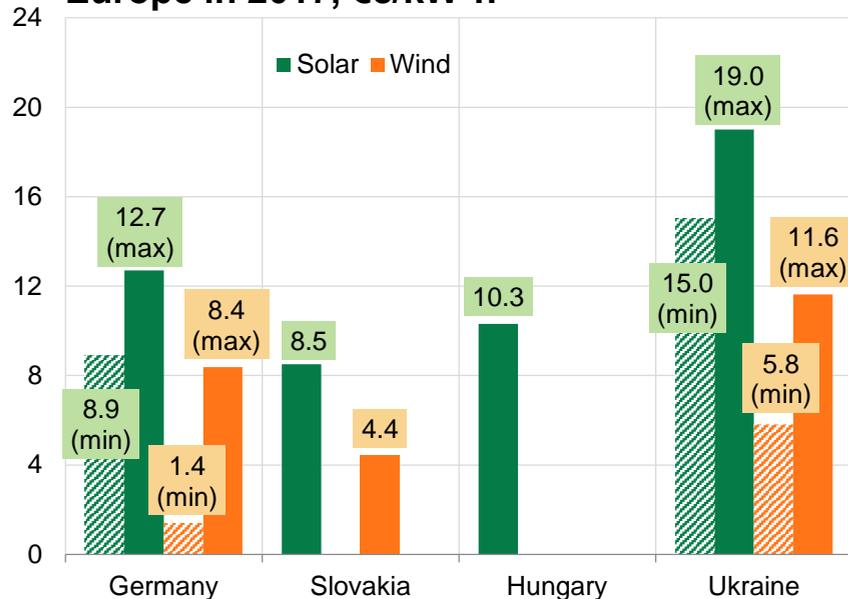
GDP & Potential GDP YoY, %



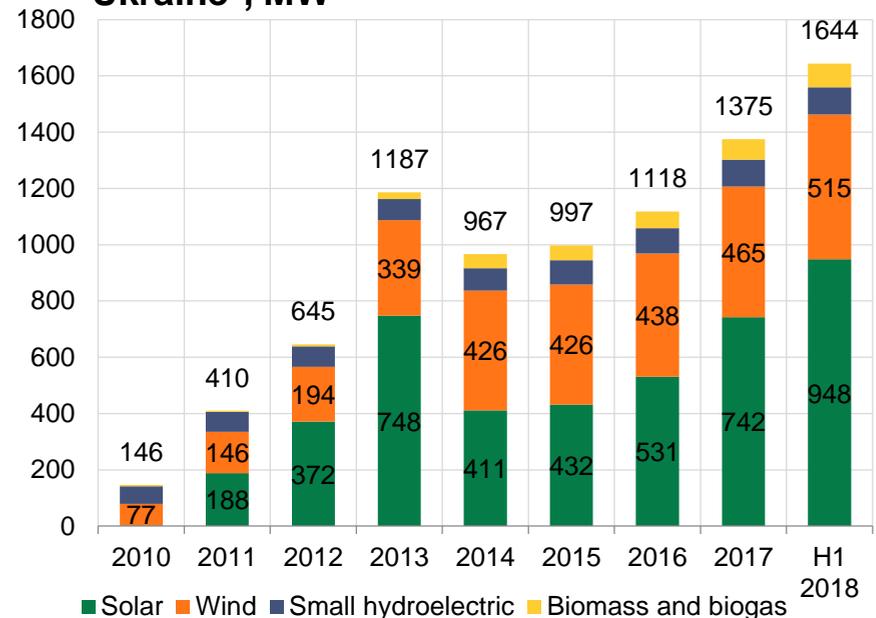
Source: SSSU, NBU staff estimates.

Box. The development of green energy in Ukraine

Green Tariff for Electricity in Ukraine and Europe in 2017, €/kW*h



Installed Renewable Energy Capacities in Ukraine*, MW



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

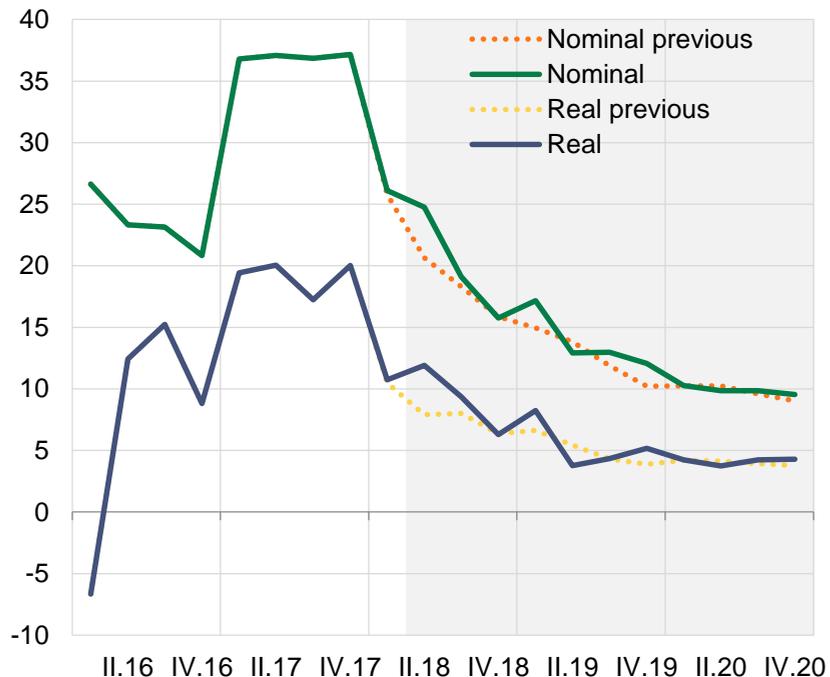
Source: www.res-legal.eu.

Source: NEURC, SAEI.

- In Ukraine, the development of renewable energy sector started in 2009 with the adoption of the law on green tariff, which set the price for such energy higher than the average market price and the respective price in selected EU countries
- Very likely, in mid-2019 the state support mechanism for the sector will change. However, projects even partly completed by the end of 2019 will continue benefitting from past high tariffs
- Hence, a strong growth of investments in the sector is expected in 2018-2019 (estimated at \$0.7-0.8 bn). The overall BoP impact will be small as these projects are typically import-reliant
- Given high green tariffs in Ukraine, the direct cost of green energy for the Ukrainian economy looks high. But one should consider the benefits, e.g. energy independence, energy safety, etc.

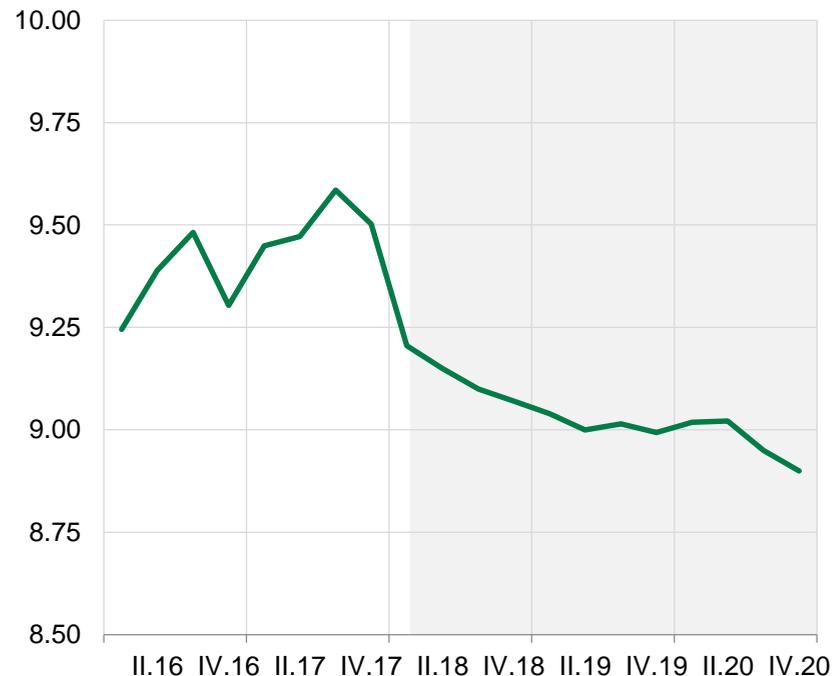
Labor market forecast reflects demand and supply mismatch: simultaneously rapid growth of wages and high unemployment

Nominal and real wages, annual change, %



Source: SSSU, NBU staff estimates.

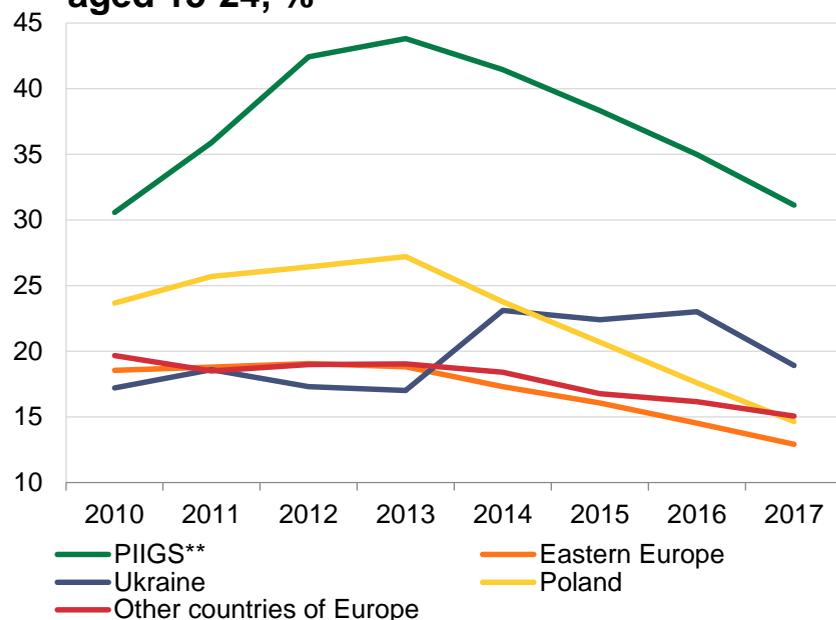
ILO unemployment, sa, %



Source: SSSU, NBU staff estimates.

Box. The Youth Unemployment in Ukraine

The Unemployment Rate* of the Population aged 15-24, %



* Calculated as a percentage to economically active population aged 15 – 24
 ** Portugal, Italy, Ireland, Greece, Spain
 Source: SSSU, World bank.

ILO Unemployment Rate* by Age Group, %

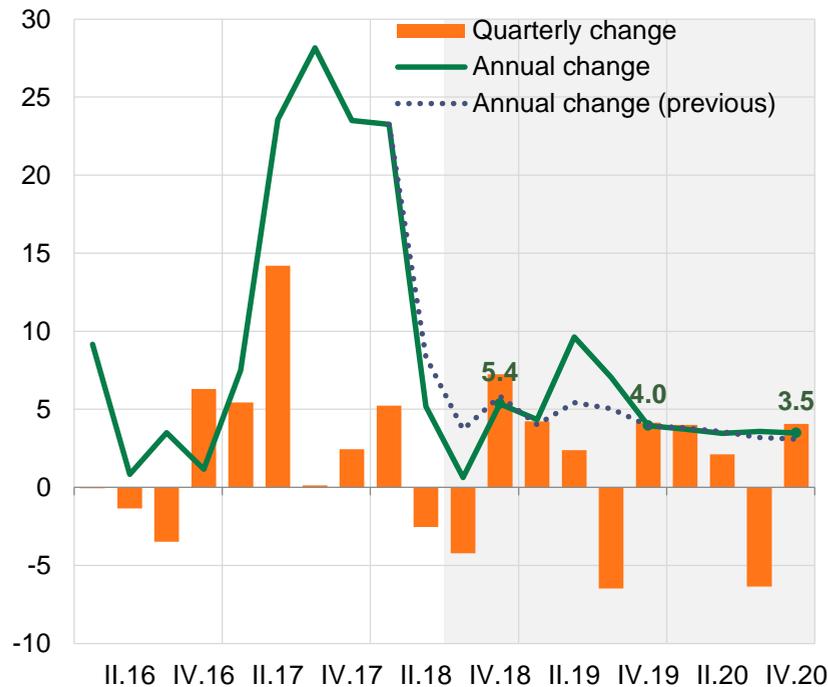
	2010	2011	2012	2013	2014	2015	2016	2017
Total population	8.2	8.0	7.6	7.3	9.3	9.1	9.3	9.5
15-24	17.2	18.6	17.5	17.0	23.1	22.4	23.0	18.9
25-29	10.0	9.4	9.8	8.9	11.1	11.2	11.7	11.3
30-34	8.1	7.4	7.0	6.8	9.3	9.7	8.9	9.8
35-39	7.9	7.3	6.5	6.2	8.1	7.2	8.0	8.4
40-49	6.8	6.4	6.2	6.3	7.3	7.6	7.7	8.7
50-59	5.5	5.2	5.3	5.2	6.0	6.3	7.3	8.1
60-70	0.0	0.1	0.1	-	0.1	0.1	0.1	0.1

* Calculated as a percentage to economically active population of the respective age
 Source: SSSU.

- Young people are hit harder than other employees during the crisis
- In addition to cyclical position of the economy, the high unemployment rate among young people reflects structural causes, e.g. a mismatch between the jobs available (demand) and the skills that workers offer, particularly by young people that lack work experience, hard and soft skills but often have excessive expectations (supply for labor)
- While recently youth unemployment started to decrease, including due to a growing number of companies relying on internship programs, it remains high. The high rate of youth unemployment for a relatively long period adversely affects potential growth and increases the risk of migration

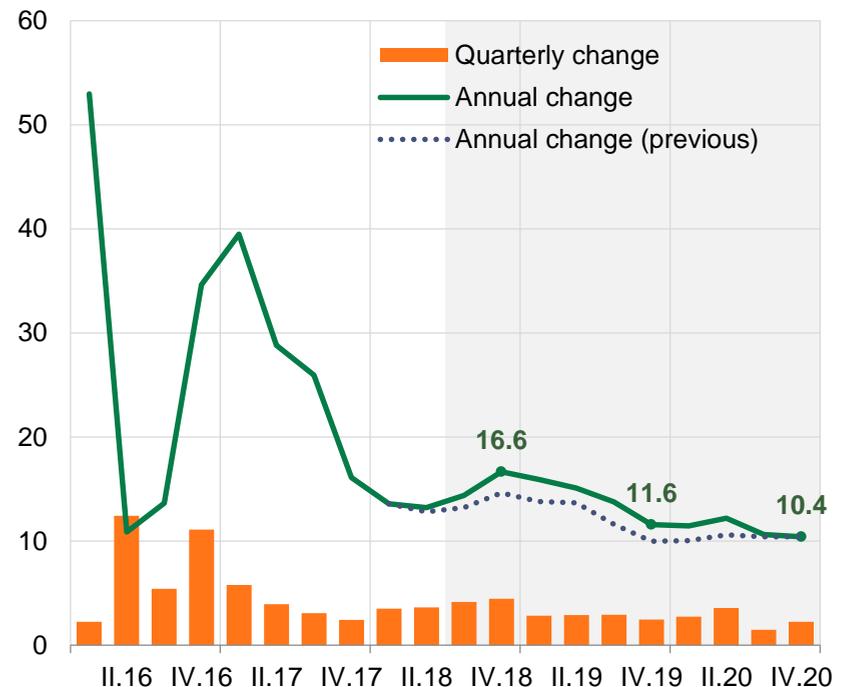
Food inflation decelerates owing to good fruits and vegetables harvest, but admin inflation revised upwards due to gas tariffs hike

Raw food inflation, %



Source: SSSU, NBU staff estimates.

Administratively controlled prices, %

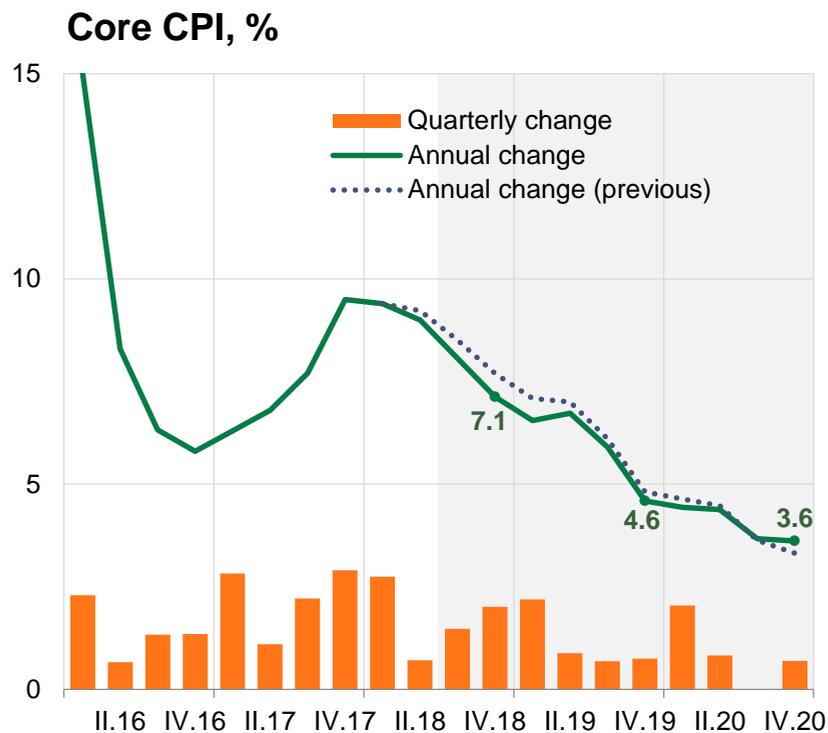


Source: SSSU, NBU staff estimates.

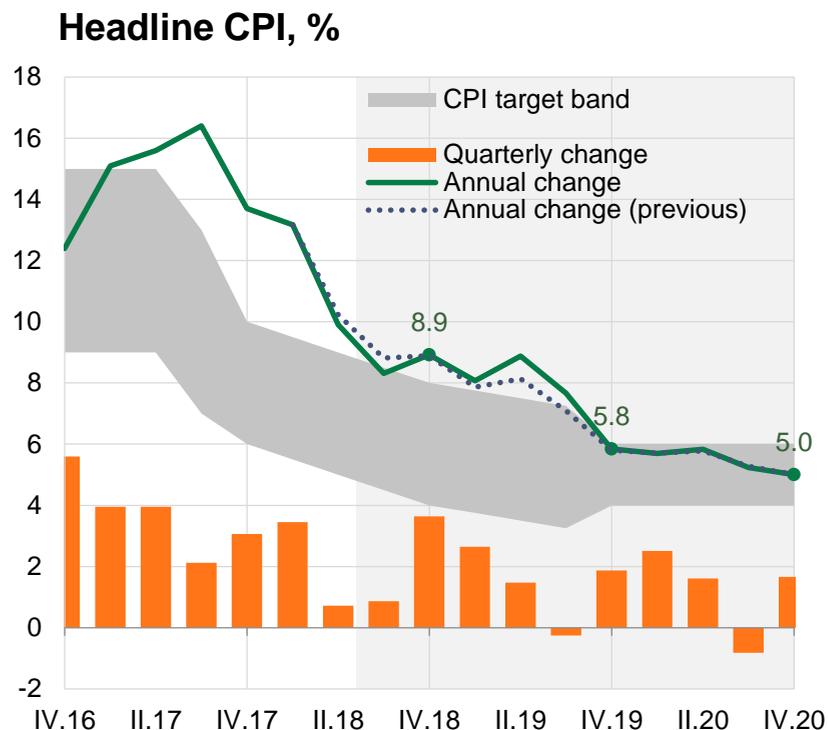
- ↑ Supply:
 - ↑ import (meat, fruits & vegetables)
 - ↑ domestic harvest (fruits & vegetables) due to favorable weather conditions
- ↑ Demand:
 - Higher milk and eggs prices are driven by export growth and world prices

- ↑ Energy prices:
 - ↑ gas tariffs (according to import parity)
 - ↑ heating & hot water tariffs (gas prices influence)
- ↑ Public transport tariffs

Inflation forecast remains unchanged – tight monetary & fiscal policies offset the pressure from high wages and inflation expectations



Source: SSSU, NBU staff estimates.

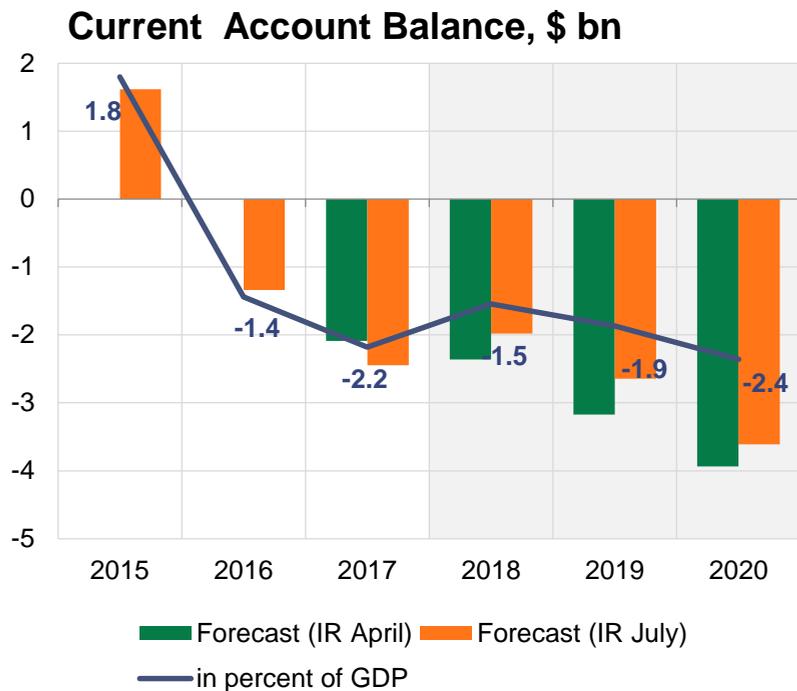


Source: SSSU, NBU staff estimates.

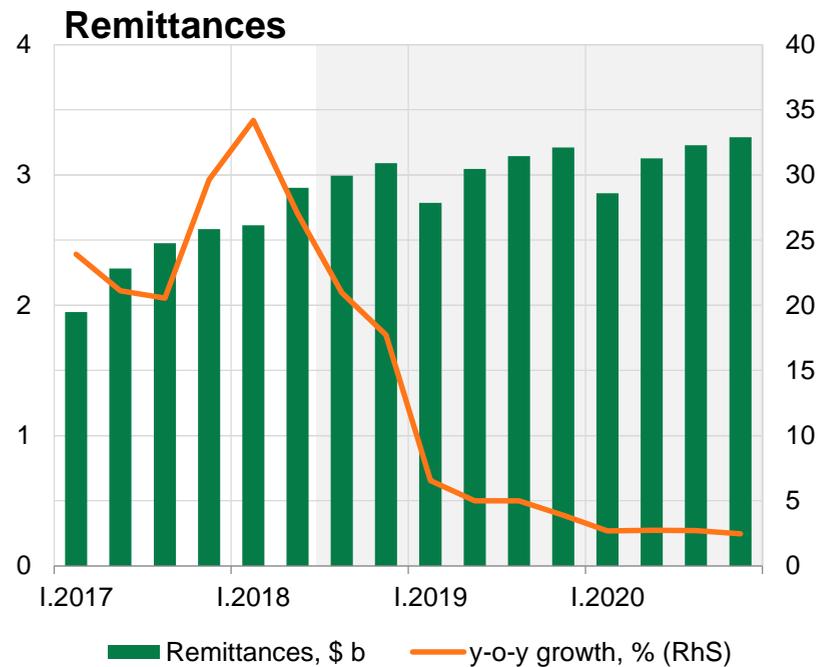
change, %	weight, %	2018		2019		2020	
CPI	100.0	8.9	8.9	5.8	5.8	5.0	5.0
Core CPI	58.9	7.1	7.7	4.6	4.8	3.6	3.3
Raw food	18.6	5.4	5.9	4.0	4.0	3.5	3.1
Admin	18.5	16.6	14.6	11.6	10.0	10.4	10.4
Fuel	4.0	10.1	9.6	4.2	5.0	4.0	5.5

(gray color) – previous forecast (IR, April 2018)

In 2018, remittances growth determines CA deficit shrinking, while later widening trade deficit takes the lead



Source: NBU staff estimates.



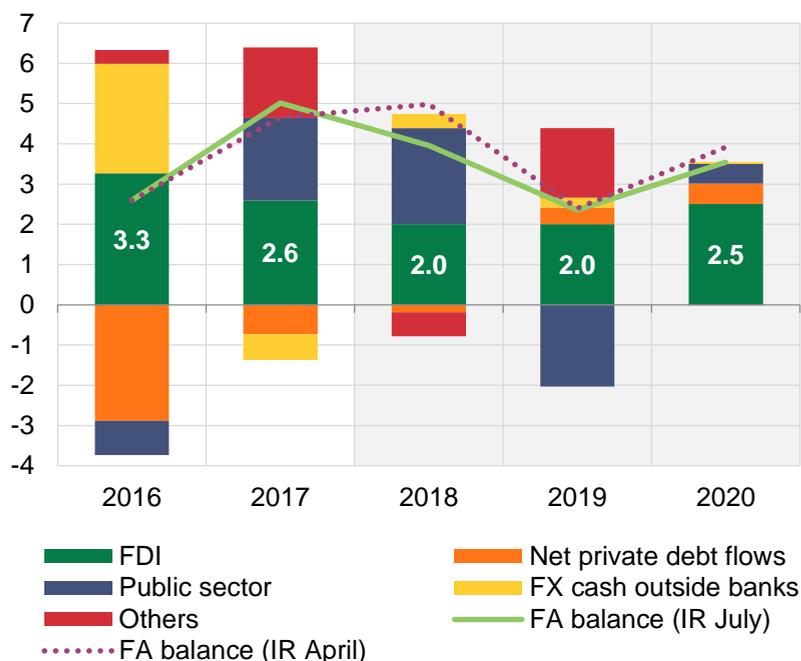
Source: NBU staff estimates.

Main trends of BoP in 2018-2020

services	
↑↑ Remittances	

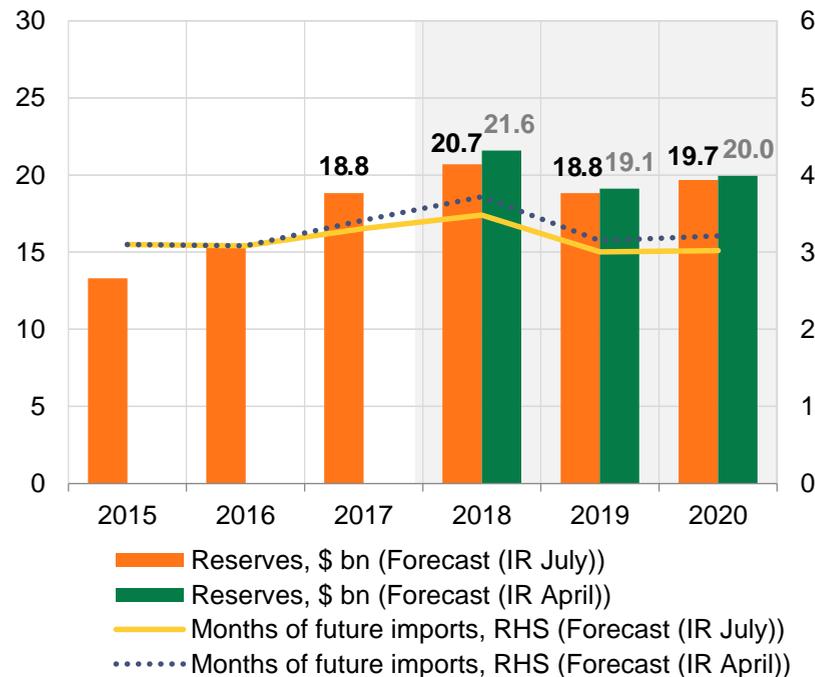
Private capital inflows increase modestly, while public sector switches from net borrowing to net repayment in 2019

Financial Account: net inflows, USD bn



Source: NBU staff estimates.

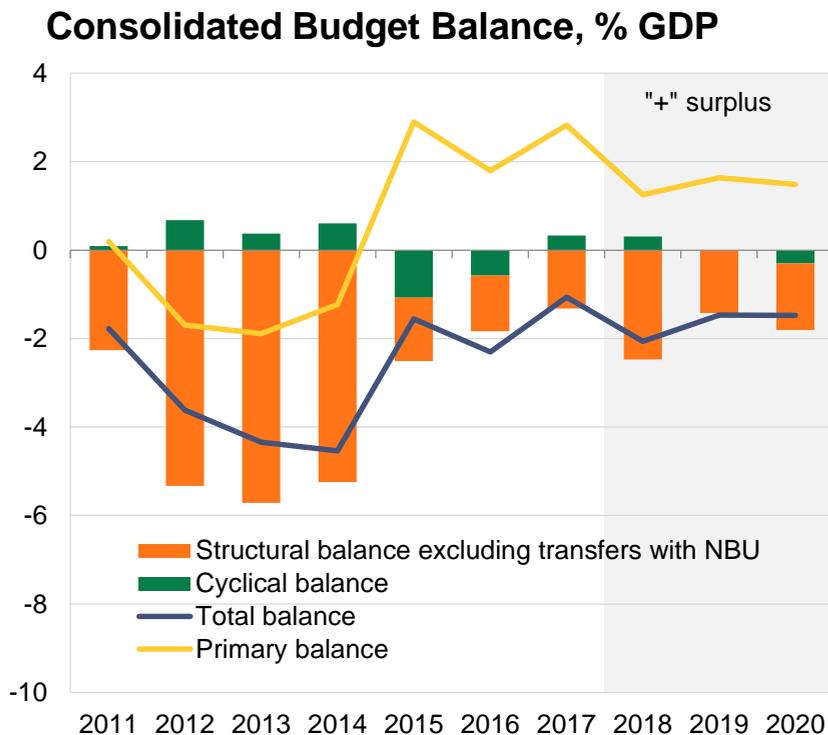
International Reserves



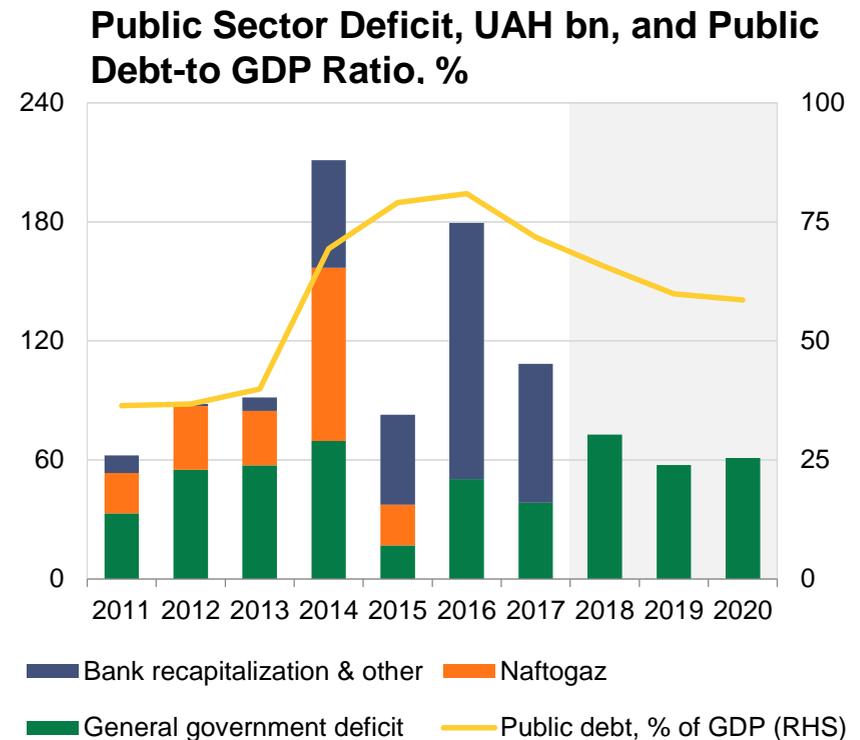
Source: NBU staff estimates.

- In 2018-2020, capital inflows will be very limited due to:
 - Worsening global and domestic financial conditions
 - Increase in cash outside the banks (owing to higher remittances)
- Prospects for international reserves accumulation are almost unchanged (\$20 bn in 2020)

Fiscal policy will be much tighter due to lack of financing. Public debt decreases due to lower official borrowings



Source: MFU, NBU staff estimates.



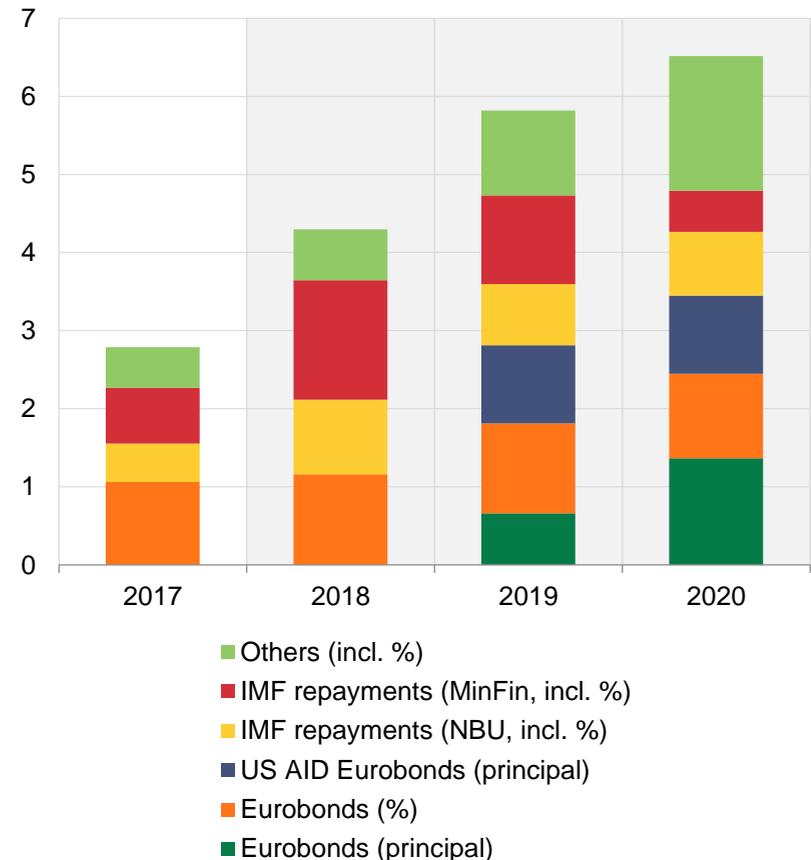
Source: MFU, NBU staff estimates.

- Government has limited sources to finance budget deficit:
 - Postponed IMF program and official financing from other donors
 - Oncoming elections in Ukraine reflecting worsening of investors' sentiments and ↑ risk premium
 - Deterioration of global financial conditions

Key risks and challenges

- **Slack in reforms:** increasingly narrows down the country's window of opportunities to secure financing from international capital markets, needed to make peak public debt repayments
- **Labor migration:** further rapid outflow of workforce from Ukraine will be accompanied by wage growth and inflation, while also reducing economic potential
- **Trade wars:** slowdown in world trade and problems in China's financial system will trigger a drop in global commodity prices, a shrinking of Ukraine's exports with an ensuing correction of the hryvnia FX rate
- **Capital outflows from EM**
- **Lower gas transit volumes after 2019**
- **Growth in gas tariffs for the population**
- **Military conflict escalation in eastern Ukraine**

Public external debt repayments, USD bn



Source: MFU, NBU.



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