



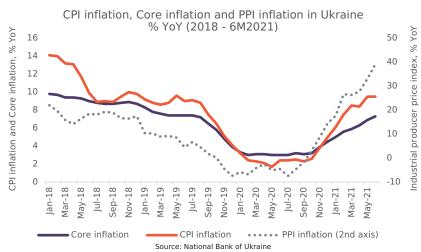
KRAINF Economic Outlook and Indicators



Research

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The COVID-19 pandemic continues to represent a major economic shock, causing considerable inflation volatility. The pandemic has been responsible for disrupted consumption, cyclical changes in commodity prices, and a considerable decline in oil prices in 2020. As a result of these developments, a substantial decline in inflation rates was noted over the course of 2020 globally. However, this trend underwent a significant reversal in the first half of 2021, partly due to the low base in the first half of 2020¹. After the record low levels of 2020, most countries are expected to return to their pre-pandemic ranges by 2022 once the transitory supply-demand mismatches work their way through prices².



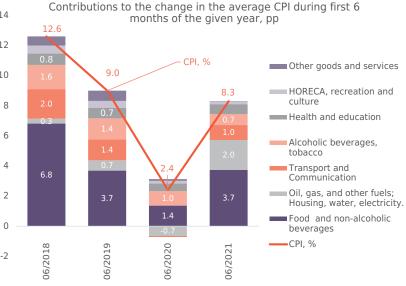
In Ukraine, the inflationary trends have been similar to global trends. The year-over-year Consumer Price Index (CPI), measuring the total value of goods and services bought by consumers, showed a significant decline of 9.1 percentage points, with slight fluctuations, from the start of 2018 to the end of 2020. In the reporting period, CPI inflation (in other words, the inflation rate) was at its lowest in May 2020 at 1.7%. Since then, CPI inflation has been increasing steadily, almost reaching the pre-pandemic level in May 2021.

Meanwhile, core inflation³ similarly showed a steady decline until 2020 before increasing at the beginning of 2021. The lack of fluctuations in the case of core CPI inflation could be explained by the fact that significant price variations tend to come from food and energy categories.

As PPI measures price changes from the perspective of costs to industry and producers, it can sometimes act as a pre-indicator of inflationary developments. In Ukraine, PPI has also moved in the same direction as CPI. In June 2021, PPI inflation amounted to 39% as opposed to just 7% in the corresponding month of 2019. This could potentially indicate increasing CPI inflation in the coming months.

Apart from changes in monthly price indices compared to corresponding months of previous years, some other interesting trends can be observed while looking at changes in the average inflation rate of the period compared to the same period of the previous year as well as when analyzing the contributions of different product groups to the inflation of the whole consumer basket. Interestingly, the changes in prices of food and non-alcoholic beverages, which have the heaviest weight⁴ (around 0.45) of all product groups, can be considered as the main driver of changes in CPI inflation during recent years.

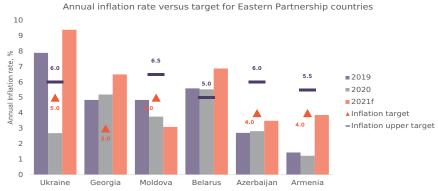
Below, we present an analysis of average inflation over the course of 2019-2021. In 2019, the average inflation rate for the first six months was 9.0%, which is 3.6 percentage points lower compared to the same period of the previous year. The appreciation of the Ukrainian Hryvnia was a key factor causing the inflation rate to slow down*. The drop in the inflation rate for foods was especially significant⁵ – going from 15.4% average CPI inflation in 2018 to 8% in 2019.



Source: National Bank of Ukraine, UKSTAT, Calculations of PMC Research

In 2020, average inflation for the first six months was 2.4%, which is 6.6 percentage points lower than in 2019. Even though the introduction of quarantine in mid-March caused so-called "panic demand"* for some product groups, mainly food, this panic faded quickly. Meanwhile, quarantine restrictions such as transport constraints and lowered expectations about future incomes, led to a fall in prices in most of the product groups in 2020. Disinflation of transport prices was especially notable – going from 7.8% average inflation for the first six months of 2019 to -3.3% in the corresponding period of 2020, as well as a drop in prices in recreation and culture - from 3.4% to -2.1%. At the same time, as global oil prices plunged in 2020, a drop in prices for natural gas also led to lower prices for heating and hot water supplies, creating a huge disinflationary effect (inflation of oil, gas, and other fuels; housing, water, and electricity went from 12.5% to -8.8%). Interestingly, price increases for some product groups were quite high in the first half of 2020: the price of alcoholic beverages and tobacco⁶ increased by 13.4%.

Following the recovery of the global and Ukrainian economy, strengthening of consumer demand has heightened inflationary pressures in 2021. As a result, the average CPI inflation from January to June 2021 was 8.3%, which is 5.9 percentage points higher compared to the average inflation rate for the first six months of 2020, and almost equal to the pre-pandemic inflation of the same period (only 0.7 percentage points lower than in 2019). In 2021, inflation was mainly driven by a surge in food prices (contributing 3.7 percentage points of the 8.3% inflation)⁸. Moreover, despite administrative restrictions (such as the cap on natural gas prices for Ukrainian households)*, a surge in global energy prices had a significant inflationary impact on Ukraine.



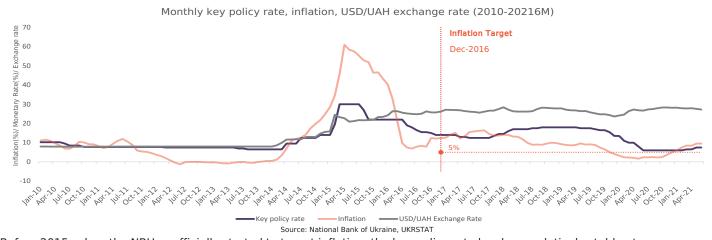
Source: IMF (World Economic Outlook Database, April 2021) and forecasts of National Banks for 2021, where available

Among Eastern Partnership countries, Ukraine stands out for having the highest CPI inflation not only in absolute terms, but also compared to its inflation target of 5% both before (2019) and after (2021 central bank forecasts) the crisis*. In 2020, while Ukraine's inflation rate fell to 2.7%, the highest inflation rates in the region were recorded in Belarus (5.5%) and Georgia (5.2%).

While those two countries together with Ukraine have struggled to meet their targets, the other three countries of the EaP region - Moldova, Azerbaijan, and Armenia - are successfully keeping the inflation rate below their targets.

Inflation Targetting Regime in Ukraine

Since the beginning of 2014, Ukraine's inflation rate has increased rapidly, peaking for the 2020-2021 period at 60.9% in April 2015. In response, to ensure price stability, the National Bank of Ukraine (NBU) started applying an inflation targeting regime, which was formalized in December of 20169. The NBU has endeavored to ensure that actual inflation does not deviate from the 5% target by more than 1 percentage point. The main tool used to influence inflation is the key policy rate, changes to which take 9 to 18 months to be reflected on inflation¹⁰. Accordingly, this transmission mechanism of monetary policy aims to respond to expected future developments.



Before 2015, when the NBU unofficially started to target inflation, the key policy rate has been relatively stable at an average of 8.4% over the course of 2010-2014. Eventually, the key policy rate as a tool against price instability became integral, reaching a high of 30% in March 2015 to alleviate increasing inflationary trends. Consequently, inflation decreased by 53 percentage points in the 18-month period between April 2015 and September 2016. However, it took several years to bring inflation within the target range, which did not happen until November (5.1%) and December (4.1%) of 2019. Since the start of the COVID-19 pandemic, the inflation rate decreased significantly throughout 2020, reaching a minimum of 1.7% in May 2020. Decreasing the key monetary rate to 6% in June 2020 played a role in stimulating the economy and subsequently increasing inflation at the beginning of 2021. However, the inflation rate still overshot the target range in 2021, which could be attributed to external price shocks and a low base effect. According to the revised forecasts of the NBU, inflation is expected to reach between 8% and 9.6% by the end of 2021. However, the tighter monetary policy conducted by the NBU, in particular through raising the key policy rate to 8% and phasing-out anti-crisis monetary measures, will also play a role in the gradual easing of inflationary pressures and, eventually, inflation is expected to return to its 5% target in the second half of 2022*.

Changes in the exchange rate represent another factor that affects domestic price changes and the exchange rate pass-through to prices depends on the pace and magnitude of exchange rate fluctuations¹¹. From the beginning of 2014 to February 2015, the USD/UAH exchange rate increased by 16.5 UAH to 1 USD and reached 24.5 UAH. The rapid depreciation of the Hryvnia caused by political instability, unfavorable terms of trade, dramatic changes to the risk premium, and other macroeconomic variations, had a significant effect on inflation and was one of the key factors in inflation peaking¹¹. Eventually, the USD/UAH exchange rate stabilized with slight fluctuations from 2016 to the end of the reporting period, with an average of 16.6 UAH to 1 USD.

- Based on NBU inflation reports
- 1. European Central Bank (ECB): Inflation dynamics during a pandemic
 2. IMF: World Economic Outlook, April 2021
 3. Core inflation is calculated using CPI excluding temporary or transitory price volatility of commodities, namely, food and energy products.

 1. The weight are products.
- 4. The weights are meant to reflect the relative importance of the goods and services as measured by their shares in the total consumption of households. The weight attached to each good or service determines the impact that its price change will
- have on the overall index. (IMF:Consumer Price Index Manual,2020)

 5. Drop in inflation rate of foods can be explained by increased agriculture productivity*, specifically higher yields of grain and oil crops. In turn, higher supply of food created downward pressure on inflation rate).
- 6. Tobacco product prices grew more rapidly as imported raw materials rose in price*. In addition, an increase in the
- excise tax on tobacco products is predicted to push up the prices of these products in the following passa as well.

 7. Tuition fees for higher education services grew at an accelerated pace, which can be explained by the <u>introduction of indicative prices</u> in some disciplines.
- 8. Apart from increased global demand, this was fueled by lower harvests and the difficulties in domestic animal farming
- 9. NBU: Inflation Targeting Regime
- 10. NBU: How does NBU influence inflation using the key policy rate?
- 11. Visnyk of the National Bank of Ukraine: Nonlinear Exchange Rate Pass-Through to Domestic Prices in Ukraine

Basic Economic Indicators	2017	2018	2019	2020	2021 Q1
Nominal GDP (bln hryvnia)	2,984	3,561	3,975	4,194	1,009
GDP per Capita (USD, PPP)	11,871	12,629	13,341	13,057	-
GDP Real Growth (%)	2.5%	3.4%	3.2%	-4.0%	-1.2%
Yearly inflation (%)	14.4%	10.9%	7.9%	2.7%	7.4%
Exchange rate (hryvnia/USD)	26.6	27.2	25.8	27.0	28.0
FDI (BOP net inflows) (bln USD)	3.7	4.5	5.9	-0.9	-
Unemployment Rate (%)	9.9%	9.1%	8.6%	9.5%	10.5%
Gross external Debt (bln USD)	115.5	114.7	121.7	125.7	123.1