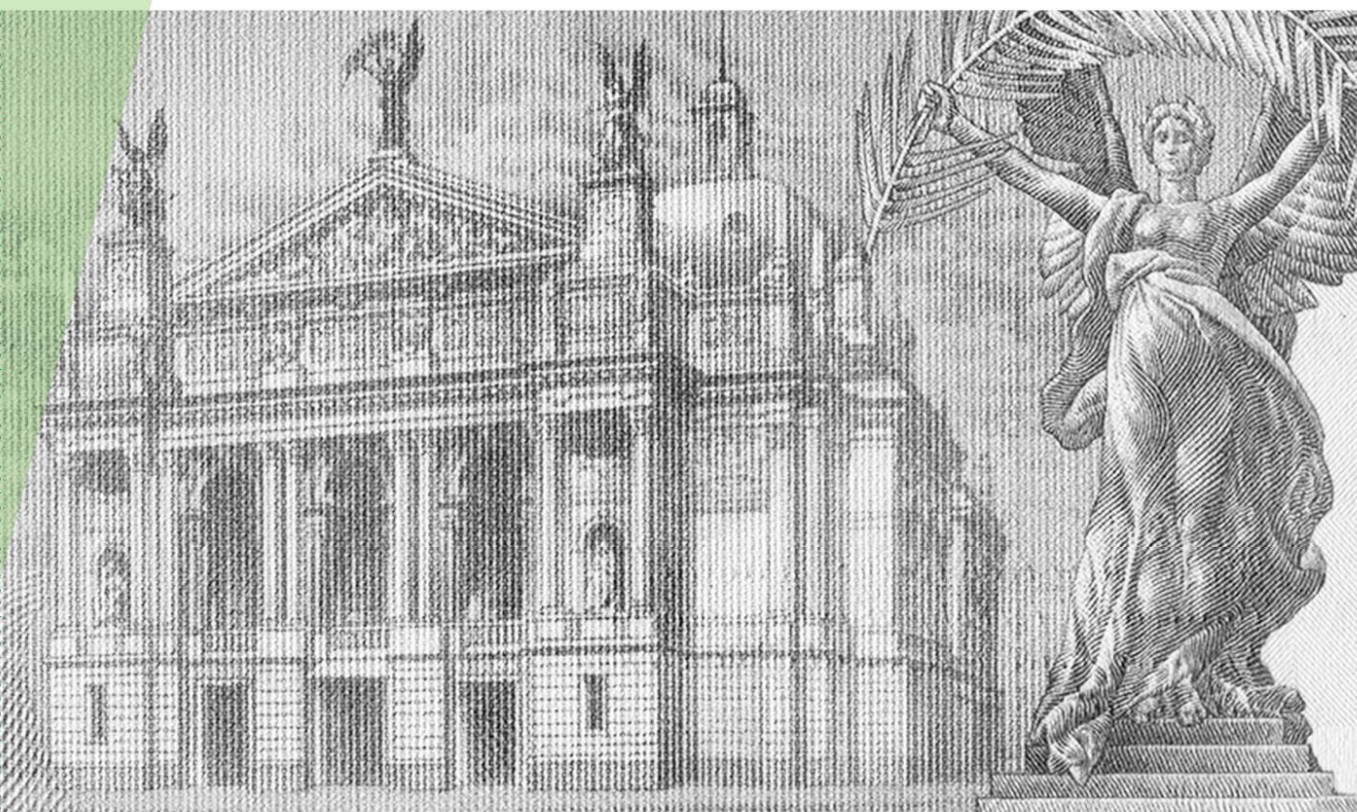




National Bank
of Ukraine

Inflation Report

July 2020



The Inflation Report reflects the opinion of the National Bank of Ukraine (NBU) regarding the current and future economic state of Ukraine with a focus on inflationary developments that form the basis for monetary policy decision-making. The NBU publishes the Inflation Report quarterly in accordance with the forecast cycle.

The primary objective of monetary policy is to achieve and maintain price stability in the country. Price stability implies a moderate increase in prices rather than their unchanged level. Low and stable inflation helps preserve the real value of income and savings of Ukrainian households, and enables entrepreneurs to make long-term investments in the domestic economy, fostering job creation. The NBU also promotes financial stability and sustainable economic growth unless it compromises the price stability objective.

To ensure price stability, the NBU applies the inflation targeting regime. This framework has the following features:

- A publicly declared inflation target and commitment to achieve it. Monetary policy aims to bring inflation to the medium-term inflation target of 5%. The NBU seeks to ensure that actual inflation does not deviate from this target by more than one percentage point in either direction. The main instrument through which the NBU influences inflation is the key policy rate.
- Reliance on the inflation forecast. In Ukraine, it takes between 9 and 18 months for a change in the NBU's key policy rate to have a major effect on inflation. Therefore, the NBU pursues a forward-looking policy that takes into account not so much the current inflation rate as the most likely future inflation developments. If inflation is projected to be higher than its target, the NBU raises the key policy rate to bring inflation down to the 5% target. And vice versa, if inflation is projected to be below its target, the NBU cuts the key policy rate.
- Open communications with the public. The transparent and predictable monetary policy of the NBU, which is achieved among other things by publishing this Inflation Report, enhances public confidence. Public confidence, in turn, is an important prerequisite for the effective management of inflation expectations and ensuring price stability.

The NBU Board decides on the key policy rate eight times a year, in line with a schedule it publishes in advance. The decisions the NBU Board makes in January, April, July, and October are based on new macroeconomic forecasts. At the remaining four meetings (taking place in March, June, September, and December), the NBU Board makes its interest rate decisions based on new economic developments in Ukraine and beyond that have emerged since the latest forecast.

The NBU Board announces its interest rate decision at a press briefing held on the same day at 2 p.m., after the NBU Board's monetary policy meeting. A week later, the NBU publishes the Inflation Report with a detailed macroeconomic analysis and outlook underlying its interest rate decisions. The Summary of the Discussion on the Key Policy Rate at the Monetary Policy Committee is published on the 11th day after the decision is made. In contrast to press releases on monetary policy decisions, which reflect the consensus position of the NBU Board, the summary shows depersonalized opinions of all MPC members on the monetary policy decision to be made and their positions. That includes not only the opinions expressed by the majority, but also dissenting views.

The analysis in the Inflation Report is based on the macroeconomic data available at the date of its preparation. Thus, for some indicators, the time horizon of the analysis may vary. The cut-off date for most data in this report is 22 July 2020, in some cases – 30 July 2020.

The forecasts of inflation and other macroeconomic variables were prepared by the Monetary Policy and Economic Analysis Department and approved by the NBU Board at its monetary policy meeting on 22 July 2020¹.

Previous issues of the Inflation Report, the presentation of the Inflation Report, the forecast of the main macroeconomic indicators, and time series and data for tables and figures in the Inflation Report are available on the NBU website at the following link: <https://bank.gov.ua/monetary/report>.

¹ NBU Board decision No. 487-D *On Approval of the Inflation Report* dated 22 July 2020.

Contents

Summary	4
Part 1. External Environment	7
Box 1. Impact of COVID-19 Pandemic on Inflation in Ukraine's Main Trading Partners	10
Part 2. Economy of Ukraine: Current Trends	12
2.1. Inflation Developments	12
Box 2. Specifics of Price Collection during Quarantine	14
2.2. Demand and Output	16
Box 3. Impact of Quarantine Restrictions on Business in Ukraine: Findings of Business Outlook Survey	18
2.3. Labor Market and Household Income	20
2.4. Fiscal Sector	22
2.5. Balance of Payments	24
Box 4. Companies' Reinvested Earnings: Impact on Balance of Payments	27
2.6. Monetary Conditions and Financial Markets	29
Box 5. Monetary Policy Measures to Support the Banking System and the Economy during the Crisis	32
Part 3. Economy of Ukraine: Forecast	34
3.1. Inflation Developments	34
3.2. Demand and Output	36
3.3. Balance of Payments	40
3.4. Monetary Conditions and Financial Markets	42
Box 6. Estimating the REER Trend for Ukraine: BEER Approach	43
3.5. Risks to the Forecast	45
Box 7. Global Climate Change: Impact on Ukraine's Economy	47
Terms and Abbreviations	50

Summary

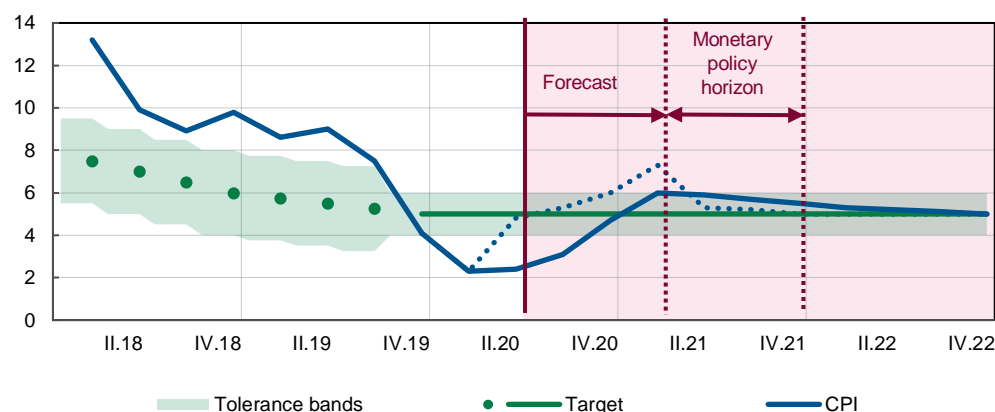
In Q2 2020, inflation stayed below the target range, although it accelerated somewhat at the end of the quarter

Annual consumer inflation sped up toward the end of Q2 2020 (to 2.4% in June). However, inflation remained below the lower bound of the 5% ± 1 pp target range. Core inflation hovered at around 3.0% yoy. The main factor accelerating inflation as the quarter drew to a close was the rise in prices of some raw foods due to adverse weather conditions. The inflation expectations of businesses and households also deteriorated. At the same time, inflation was restrained by weak domestic demand, benign FX market conditions, and relatively cheap energy.

Inflation will return to the 5% ± 1 pp target range in late 2020 and will remain within this range for the next two years

In H2 2020, inflation will accelerate, returning to the 5% ± 1 pp target range in Q4 2020, and ending the year at 4.7% yoy. First, this will be due to loose monetary and fiscal policies, which will support consumer demand and business activity. Second, inflation will reflect higher energy prices and poorer fruit crop yields.

Figure 1². CPI (eop, % yoy) and inflation targets



Source: SSSU, NBU staff estimates.

During 2021 and 2022, inflation will continue to stay within the target range due to prudent monetary policy. Increased real household incomes and the according improvement in purchasing power will be a significant pro-inflationary factor. Core inflation will also accelerate as economic activity recovers, and will stand at about 4% for the entire forecast period. The gradual transition of monetary conditions from stimulating to neutral will help contain inflation.

The growth in raw food prices will accelerate in early 2021, but the anticipated sufficient supply of fruits and vegetables will reduce food price inflation to 3%–5% in 2021–2022. Administered inflation will start to accelerate as early as this year, reaching 9%–10% in 2021–2022 due to a further increase in excise taxes on tobacco products, growth in natural gas prices as global demand gradually recovers, and other factors. A global economic recovery, accompanied by a strengthening demand for petroleum products, will increase fuel prices, as has already been observed since June 2020.

The economy bottomed out in Q2 2020

According to NBU estimates, real GDP declined by approximately 11% yoy in Q2 2020 as a result of full-scale quarantine restrictions on certain activities. An additional negative contribution came from the decline in agriculture amid later start of the harvesting campaign.

² Unless specified otherwise, the dashed line in the figures indicates the previous forecast.

The NBU's and the government's stimulus measures have supported business activity and private consumption. However, the overall fiscal stance in Q2 was restrained due to a high degree of uncertainty around budget revenues and financing during the quarter.

As quarantine measures were eased, both domestic and global economic activity began a gradual recovery as soon as May. The revival in world economic activity drove price growth in the global commodity markets. Most domestic businesses in the services sector, which bore the brunt of the fallout from the coronavirus crisis, have already returned to full operations. Labor market conditions, though still worse than before the crisis, have nevertheless been showing signs of stabilization. By late Q2, the government had accumulated significant budget resources with which to support the economy and to finance debt repayments.

The Ukrainian economy is set to decline by approximately 6.0% in 2020, but will return to growth of about 4% in the years ahead

The GDP outlook for 2020 has been revised downwards to a steeper fall of around 6%. The pace of economic recovery will be constrained by the continuation of the so-called adaptive quarantine measures in a number of areas, and still-subdued domestic demand. The slow recovery from the crisis in other countries will restrain the revival in Ukrainian exports. In 2021–2022, the Ukrainian economy will grow by about 4%, driven by monetary and fiscal stimuli and recovering external demand.

To counteract the fallout from the crisis, a positive fiscal impulse will be generated in 2020, reflecting the substantial expansion of the consolidated budget deficit in the current year. The funds will go to stimulate economic activity, and to support businesses and the population. After steady economic growth resumes, the need for significant fiscal stimuli will decline, as will the general government sector deficit.

With the budget deficit widening, nominal GDP falling, and the hryvnia weakening from the levels seen at the end of last year, public and publicly guaranteed debt will grow to 62% of GDP in 2020. Going forward, this indicator will decline by 2–3 pp annually, driven by economic growth and prudent fiscal policy.

The current account estimate for 2020 has been considerably improved towards a significant surplus, however, the current account will return to a deficit in the years ahead

In H1 2020, exports showed greater resilience to the effects of the crisis than imports, among other things due to relatively more stable external demand for foods. In contrast, imports of goods and services plunged as domestic demand narrowed, energy prices fell further, and tourism halted. As a result, the current account ran a record surplus, partly due to the revision of the methodology, which incorporated the reinvested earnings of companies. Capital outflows continued, primarily driven by significant debt repayments. However, thanks to the sizable current account surplus, coupled with the disbursement of a first tranche under the new IMF program, gross international reserves increased significantly, to USD 28.5 billion as of the end of June, covering 4.9 months of future imports.

In H2 2020, the global economy will recover at a slower pace than previously forecast as governments extend quarantine restrictions, although these restrictions will be less strict than before. Over the next two years, growth will accelerate, but it will not compensate for current losses. Despite the global economy picking up, terms of trade will gradually worsen as the growth in global energy prices accelerates compared to the prices of Ukraine's main export goods. However, with imports declining much more quickly than exports, the current account surplus is projected to remain significant in 2020 (4.4% of GDP). In addition, the volume of remittances from migrant workers to Ukraine will be higher than previously expected. In the coming years, the current account will move back into deficit (around 3%-4.5% of GDP) as deferred consumer and investment demand is realized and natural gas transit declines as anticipated.

The NBU has stepped up efforts to ease its monetary policy to further support the economy

In Q2 2020, the NBU Board accelerated the cuts to its key policy rate, bringing it to 6% as of the end of the quarter – an all-time low nominal level. The rapid easing of monetary policy was due to the high likelihood that consumer and investment demand will remain subdued longer than previously projected. The NBU's active easing of monetary policy is intended to support the economy as quarantine measures are phased out. The real key policy rate has crossed the neutral level, indicating that monetary policy has become accommodative.

The new forecast envisages that the NBU will keep the key policy rate at the current low level at least until the end of the current year. Next year, the NBU will take decisions on the key policy rate taking into account whether or not inflationary risks materialize, how social standards change, and at what pace the economy is recovering.

As before, the key assumption underlying the macroeconomic forecast is that Ukraine's cooperation with the IMF will continue

Complying with the terms of a new Stand-By Arrangement with the IMF, including those that require that Ukraine conducts consistent fiscal and monetary policies, will safeguard macroeconomic stability, which is necessary for a steady and continued economic recovery. IMF support is important in terms of financing budget expenditures to combat the fallout from the pandemic, making timely and complete repayments on public debt, preserving access to the global capital markets, and maintaining international investors' interest in Ukrainian assets. Funding from the IMF and other official international partners will help Ukraine significantly build up its international reserves, which are on track to increase to approximately USD 30 billion by the end of this year, and to USD 32–33 billion in the years that follow.

Thus, the main downside risk to the forecast is a longer-lasting coronavirus pandemic and the potential return to stricter quarantine measures

A longer-lasting coronavirus pandemic and a potential rollback towards tighter quarantine restrictions in both Ukraine and the world could lead to a more significant and prolonged cooling of both the global and Ukrainian economies. As a result, it may be necessary to further ease fiscal and monetary policies to support the economy and households.

Moreover, the scale and timing of steps to raise living standards are crucial elements of uncertainty for future monetary policy. Changes in social standards may affect economic growth, unemployment, and inflation, potentially warranting a monetary policy response.

Other risks that remain relevant:

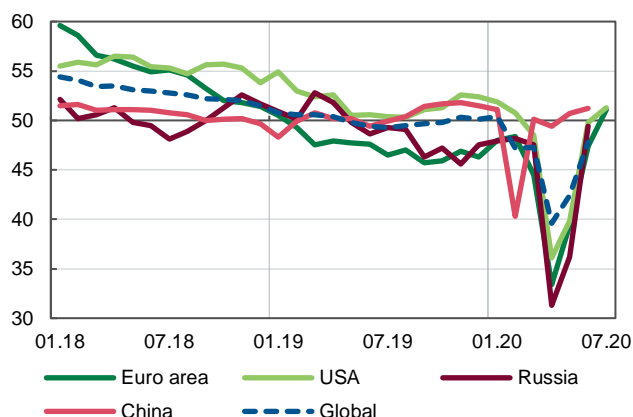
- reductions in grain, oilseed, and fruit crops in Ukraine due to adverse weather conditions
- higher volatility of world food prices due to global climate change, and the risk of elevated protectionist measures across the world
- an escalation of the military conflict in eastern Ukraine.

Taking into account the gradual increase in inflation and the outlined balance of risks, the NBU Board has kept the key policy rate at 6%. This leaves the central bank sufficient room for monetary stimulus and for giving the economy an additional boost so that it can continue to recover, should the pace of revival in consumer and investment demand flag.

Part 1. External Environment

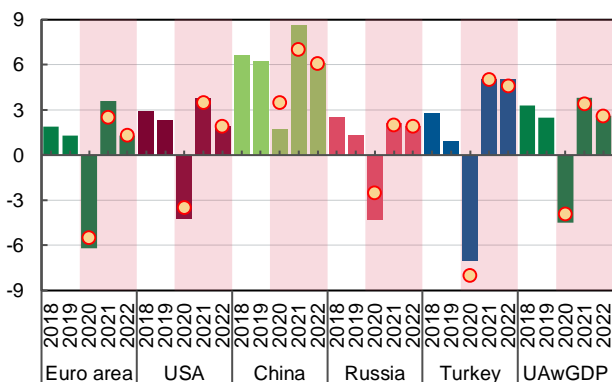
- The recovery of the global economy in H2 2020 will be slower than expected due to the extension of some quarantine restrictions. Growth will accelerate over the next two years, but it will not compensate for current losses.
- Despite a pickup in the global economy, terms of trade will gradually deteriorate due to faster growth in global energy prices compared to the prices of Ukraine's main export goods.
- Financial conditions will remain loose for emerging markets. However, access to the market for each individual country will depend on its ability to support macrofinancial stability measures and carry out structural reforms.

Figure 1.1. Global Manufacturing PMI and Manufacturing PMI of selected countries



Source: IHS Markit.

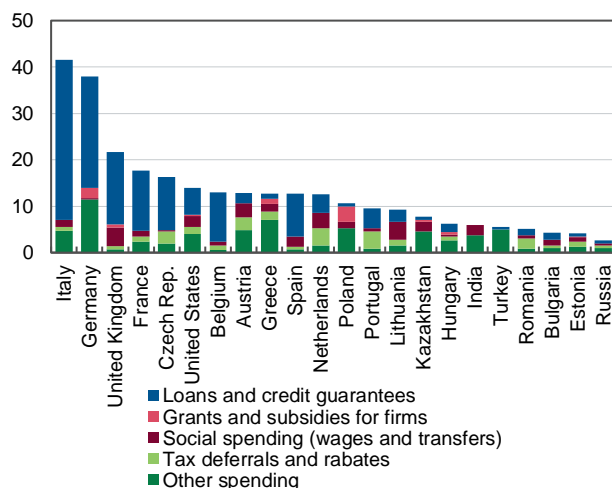
Figure 1.2. Real GDP of selected countries and UA wGDP, %, yoy



● - Previous forecast of NBU.

Source: National statistical offices, NBU staff estimates.

Figure 1.3. Fiscal Stimuli by Category, % of 2019 GDP



* If it is impossible to classify a fiscal stimulus package under categories, it goes to "Other spending".

Source: IMF, official web-pages of national governments, NBU estimates.

As quarantine restrictions remain in place in some countries, the recovery in the global economy will be slower

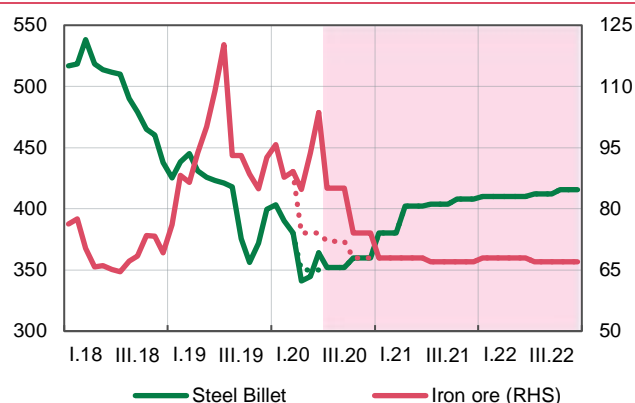
As expected, Q2 2020 has proved to be the most difficult period for the global economy since World War II, due to the negative impact of quarantine measures imposed in response to the spread of COVID-19. At the same time, a weak economic recovery had started even in May as restrictions were eased in a number of countries. The [global business confidence](#) index had improved significantly as of the end of June, and the [global manufacturing PMI](#) showed record monthly growth, although both indicators were below their neutral mark, pointing to a decline in economic activity.

The decline in global trade deepened in Q2 (to 18.5% yoy according to preliminary WTO estimates) through a notable decline in the automotive industry and a further drop in new export orders. The fall in the latter indicates that global trade will remain sluggish in the periods ahead. An additional factor behind this weakness is the adoption of protectionist measures, – both those introduced last year and those aimed at addressing the current crisis – in particular limitations on [the supply of certain food products](#).

Global demand also remained low, as evidenced by record-high unemployment in a number of countries and the decline in the Global Services PMI (although its fall slowed at the end of the quarter). In the context of global economic weakness, the overall inflationary pressure from Ukraine's MTPs decreased markedly (read more in Box 1 *Impact of COVID-19 Pandemic on Inflation in Ukraine's Main Trading Partners* on page 10). The monetary and fiscal stimuli that have been introduced are expected to support domestic demand and economic activity as a whole. However, the recovery in the global economy will be slower than previously anticipated, as the epidemiological situation worsened in a number of countries at the end of Q2 and some quarantine restrictions remained in place. In 2021–2022, global economic growth will accelerate, but it will not compensate for the losses caused by the crisis due to the current unprecedented restrictive measures, internal imbalances in individual countries, and uncertainty constraining investment decisions.

The economy of the United States is currently among the most vulnerable due to the rapid spread of the epidemic, despite significant liquidity injections by the government and the Fed. Although leading indicators broadly improved, new export orders continued to decline, and the unemployment

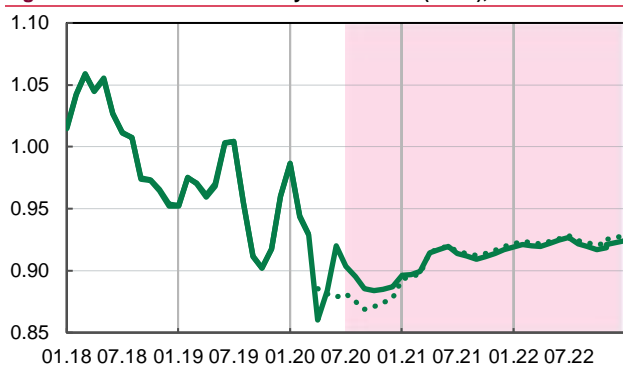
Figure 1.4¹. World price of ferrous metals and iron ore*, USD/MT, quarterly average



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

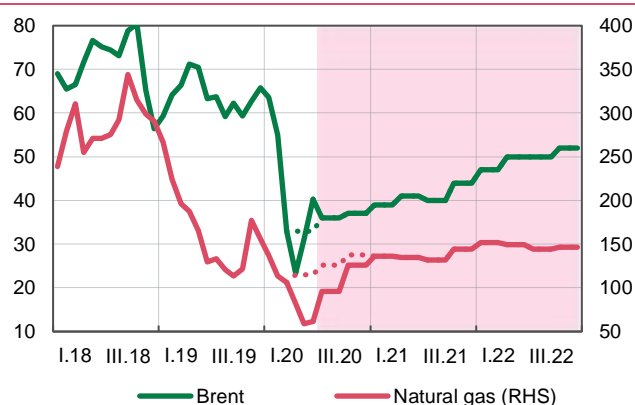
Source: Refinitiv Datastream, NBU staff estimates.

Figure 1.5. External Commodity Price Index (ECPI), Dec 2004=1



Source: NBU staff estimates.

Figure 1.6. World crude oil prices (USD/bbl) and German Hub natural gas prices (USD/kcm)



Source: Refinitiv Datastream, NBU staff estimates.

rate remained high, at 11.1% in June. Therefore, the recovery of the US economy will be slower than expected, and the positive effect of fiscal and monetary stimuli will mostly manifest themselves only from 2021.

The economy of the euro area declined more rapidly in Q2, at the fastest pace recorded since the union was established. The decline was driven by lockdown measures, decreased foreign trade, and lower demand. With favorable financial conditions and fiscal support, the euro area's economy will recover as quarantine restrictions are lifted. However, the recovery will be restrained by accumulated weakness caused by the negative impact of trade wars in previous periods, and debt problems in some countries.

GDP of the emerging markets - MTPs of Ukraine will contract substantially this year as foreign and domestic demand drops due to global financial markets being less accessible. China will remain the exception, showing positive economic performance despite the slowdown, thanks to the sizeable government support. Further on, the growth in both emerging-market and advanced economies will gradually accelerate on the back of loose financial conditions and fiscal stimuli.

A gradual recovery in economic activity will improve the situation on the global commodity markets, but terms of trade will deteriorate due to rapid growth in energy prices

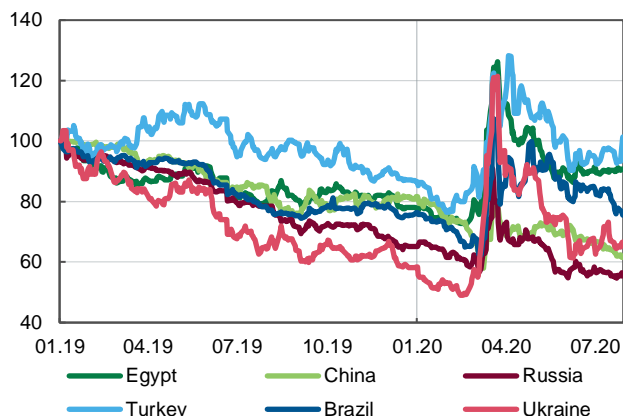
The rapid decline in global demand caused by quarantine restrictions has kept global commodity prices relatively subdued. However, with the easing of quarantine measures in May and the effect of supply factors, weak price growth resumed.

Having reached a three-year low in April, global steel prices began to increase gradually. Prices were supported by China stepping up its infrastructure projects and economic activity recovering in other regions. An additional factor was the rise in iron ore prices due to lower supplies from Brazil. However, the increase in China's steel production (up by 16.8% in April–May alone, to a record 92.3 million tons per month) restrained the accelerated growth in prices. Steel prices are expected to rise gradually on the recovery of economic activity (demand for steel will increase by 3.8% yoy in 2021 according to the WSA) and due to relatively high prices of iron ore (due to the prolonged effect of lower supply from Brazil). Iron ore prices, however, will gradually decline due to increased production in Australia and in other smaller producers, particularly Guinea.

Global wheat and corn prices seesawed in Q2. Specifically, after a sharp rise fueled by high demand and the introduction of export restrictions by some countries, wheat prices fell as a large new harvest was expected to come to the market. On the other hand, following a plunge caused by lower demand, mainly from bioethanol producers, there was a correction in corn prices due to the depletion of previous harvest inventories. Grain prices are projected to fluctuate around current levels: the expected high yield in the 2020/2021 MY will be offset by a gradual increase in demand.

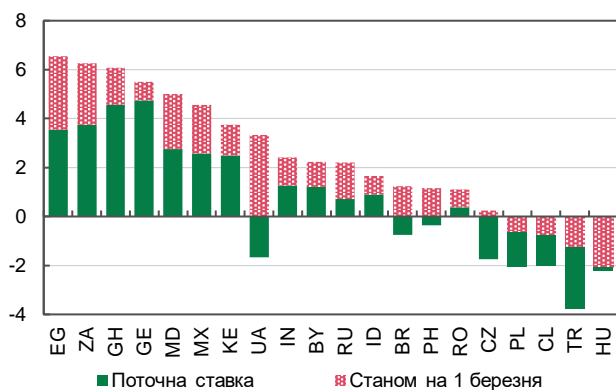
¹ Unless specified otherwise, the dashed line in the figures indicates the previous forecast.

Figure 1.7. J.P.Morgan EMBI+, 01 Jan 2019=100



Source: Bloomberg.

Figure 1.8. Key Policy Rates in Selected EM* in Real Terms** and change since March 2020, %

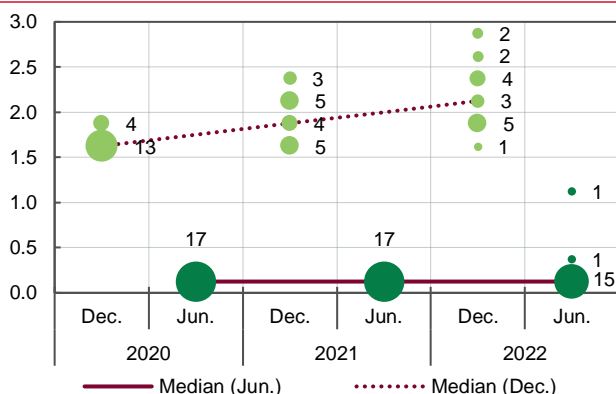


* As of 29.07.2020

** Excluding projected inflation at the end of 2020.

Source: official web-pages of central banks, IMF WEO June 2020.

Figure 1.9. Number of FOMC participants expecting particular fed funds rate



* Light green color indicates previous meeting (December), gark green - current (June).

Source: Federal Reserve.

In general, in 2020 the weighted average index of changes in global prices for Ukraine's main exports (ECPI) will remain lower compared to the last year, due to a substantial decrease in foreign demand. However, the forecast improved compared to previous expectations in view of higher iron ore prices in the short run. Over the next two years prices will recover slowly, driven by a gradual pickup in global trade .

Energy prices, in particular for crude oil and natural gas, also increased on the back of the implementation of the OPEC+ agreement and mild economic recovery, although weighed down by large inventories and relatively high production relative to current demand. Given the high sensitivity of energy prices, especially crude oil prices, to any geopolitical and geoeconomic developments, energy prices are expected to start growing sooner than prices for other goods in response to any pickup in the global economy. At the same time, the acceleration of shale oil production will somewhat restrain this growth.

The global financial market conditions will remain benign for EMs

After a number of countries announced monetary and fiscal measures to support their economies, the situation in the global financial markets improved, and investors' appetite for risky assets resumed. This led to a gradual reduction in the risk premium on EM sovereign bonds and an easing of depreciation pressures on the currencies of these countries. However, the high vulnerability of EMs to external shocks, against the background of increasing uncertainty over the further spread of COVID-19, made investors' interest volatile and selective.

The leading central banks and those of many EMs will pursue extremely loose monetary policies over the forecast horizon. In countries where there is no room to cut the key interest rate (the Fed and ECB rates are expected to remain at current levels for at least the next two years, while in some EMs rates do not currently exceed 1.0%), quantitative easing programs will remain the main monetary support tool.

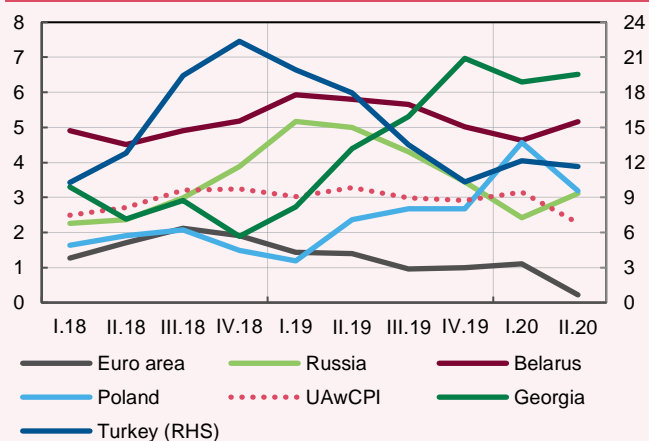
As a result, yields on the sovereign debt securities of leading countries will remain low, and the shortage of high-yielding financial assets in global financial markets may increase the attractiveness of risky assets to investors. However, demand for risky assets may be unstable due to the weakness in the global economy, a lack of steady growth in global trade, and the uneven impact of lockdown measures on economic activity. Therefore, each EM country's access to the market will depend on its ability to support macrofinancial stability measures and carry out structural reforms.

Box 1. Impact of COVID-19 Pandemic on Inflation in Ukraine's Main Trading Partners

A sizeable drop in global demand amid low energy prices led to an overall reduction in inflationary pressures from Ukraine's MTPs. However, in a number of countries, including Russia, Turkey, and Georgia, the prices of goods accelerated on the back of currency depreciations and the panic buying of certain foods, which prompted some countries to restrict exports. With the panic buying over and demand continuing to be sluggish, the inflationary pressure from Ukraine's MTPs will remain weak. Afterwards, it will rise gradually as the global economy picks up on the back of expansionary monetary and fiscal policies.

The rapid spread of COVID-19 forced some countries to take unprecedented safety measures, such as shutting down businesses and closing borders. This resulted in a significant decrease in global demand and a sharp decline in global commodity prices, especially energy prices. Subsequently, the overall inflationary pressure from Ukraine's MTPs eased, as shown by changes in the UAwCPI index, which fell to 2.3% yoy in Q2.

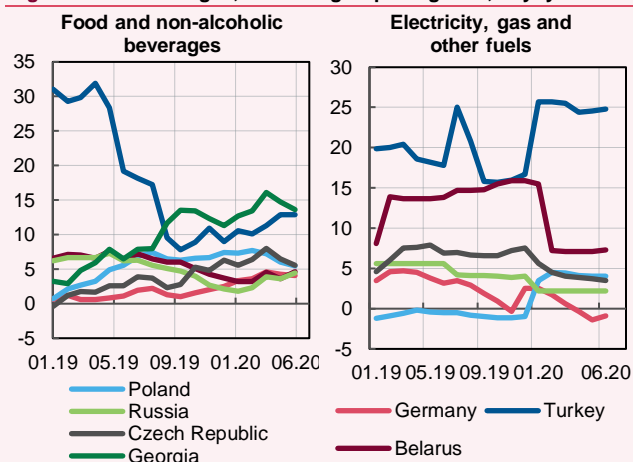
Figure 1. Consumer Price Indexes of selected Ukraine's MTP and Weighted Average of Ukraine's MTP' CPI (UAwCPI), % yoy



Source: National statistical agencies, NBU staff estimates.

However, inflationary pressures remained significantly higher at the start of the year, even increasing compared to the previous quarter.

Figure 2. Price changes, selected groups of goods, % yoy



Source: National statistical agencies, Eurostat.

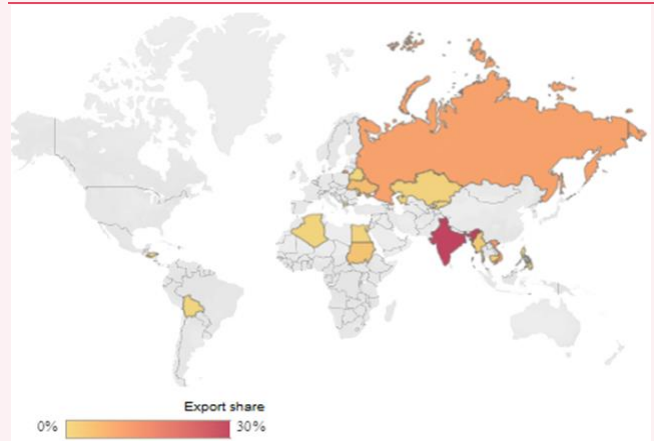
Accelerated growth in energy prices in late 2019 and prices for raw foods, primarily pork and fruit, created inflationary pressures in the EU. Although inflation in the euro area overall remained below its target, in CEE countries (in particular, the Czech Republic, Hungary, and Poland) it

nevertheless exceeded the upper bound of the target range in Q1. It received additional impetus from a notable increase in consumer demand last year due to rising wages, government programs (for example, the expansion of the Family 500+ program in Poland), and consumer lending. Under such conditions, monetary policies were tightened gradually: in particular, the Czech National Bank was raising its key interest rate until and including February 2020.

The rapid spread of the pandemic across the globe, including in Europe, caused a major contraction in aggregate demand due to the introduction of quarantine restrictions. As a result, economic activity declined to its lowest level in the past 70 years, and depreciation pressures dampened inflation as expected, particularly in the euro area and CEE.

In contrast, price growth accelerated in some countries, namely in Russia, Turkey, Georgia, and Belarus. This was largely driven by a temporary spike in demand for staple goods, which usually include cereals (primarily buckwheat), products with antiseptic properties (lemons, garlic, and onions), oils and fats, and by pass-through effects from the depreciation of national currencies in previous periods.

Figure 3. Temporary measures on exports of food products, as of 02.07.2020



Source: World bank.

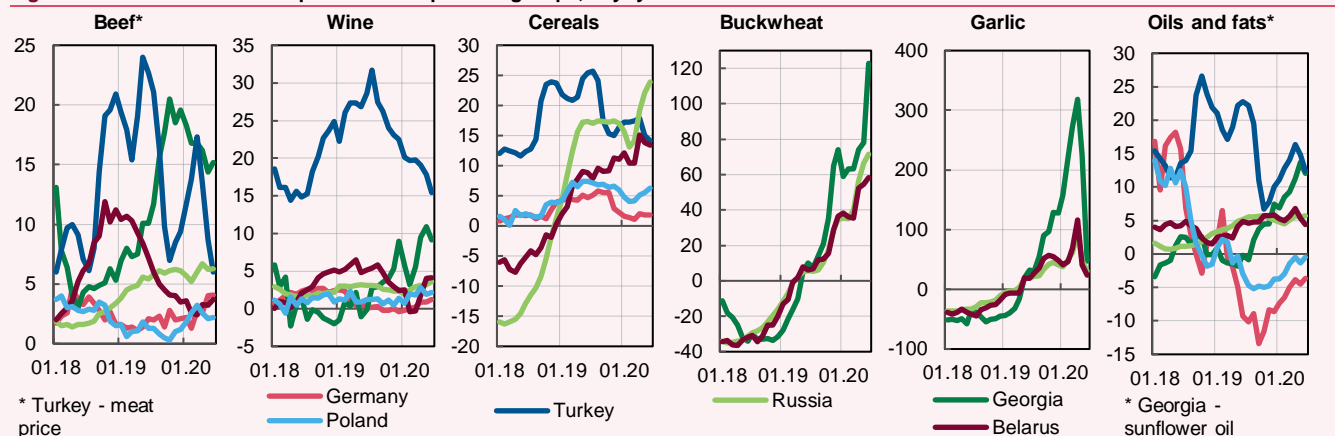
As panic surged, a number of countries imposed export restrictions in order to protect their domestic markets, ensure food security, and quell high demand. According to the WTO, in the G20 countries alone, 93 export restrictions were introduced after the start of the pandemic, although 36% of them had been canceled by mid-May. A large portion of these measures concerned medical supplies and food products. Overall, the International Trade Center estimates the share of countries that have imposed temporary export restrictions was almost 50% at the end of Q2. That said, restrictions on food exports were introduced by those countries that experienced a rush of domestic demand for certain goods,

namely the countries of the Eurasian Economic Union (EAEU), Turkey, and even temporarily Romania (in April).

A strong depreciation effect on prices from the weakening of the Russian ruble in Q1 (by 25.8%), coupled with a surge in panic buying, resulted in a sharp increase in prices for staple goods not only in Russia but also in other EAEU countries. In

keeping prices high. Lemon prices also remain high due to robust demand for products with antiseptic properties. In order to curb the growth in lemon prices, Turkey restricted exports of this fruit for the period from April to the end of August 2020. This had a positive effect on the domestic market, but made prices rise in countries that import lemons, including Ukraine.

Figure 1.4. Prices for selected products and product groups, % yoy



Source: National statistical agencies, Eurostat, latest data for June 2020.

order to curb price growth and support the domestic market within the EAEU, exports of a number of staple goods to other countries was banned, including exports of onions, garlic, and cereals. This helped stabilize and even reduce prices in the internal market for certain groups of goods, in particular garlic. Georgia faced a similar situation, with inflation remaining significantly above its target (6.1% yoy in June versus the targeted 3%). However, unlike most EMs, which are using monetary stimuli, the central bank of Georgia is keeping its policy tight (despite a slight reduction in the key rate) in order to bring inflation back to its target level.

Turkey has one of the highest inflation rates among Ukraine's MTPs – 12.6% yoy in June. Along with the negative effect of the Turkish lira depreciation in previous periods, major contributors to the inflation were prices of alcohol and tobacco products, cereals, and certain fruit (especially lemons). Amid closed borders and stricter controls over smuggling, the demand for legal alcoholic drinks increased,

With relatively sluggish demand and rather low energy prices, the inflationary pressure from Ukraine's MTPs is expected to remain weak. These factors will prevail over possible logistical problems related to the still existing, albeit eased, quarantine restrictions, and the reduced supply of certain goods. In addition, low energy prices will bring down production costs.

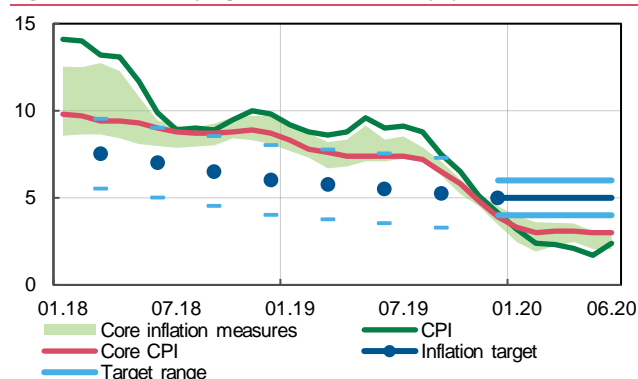
Over the next two years, the recovery in the global economy, supported by expansionary monetary and fiscal policies, will lead to an increase in external inflationary pressures. However, despite increasing, these pressures will remain limited, primarily due to low [core inflation](#). Evidence of this low anticipated level of external inflationary pressures is that leading central banks are keeping their monetary policies ultra-loose in order to bring inflation to targeted levels, against the background of an unprecedented decline in the global economy and deteriorating labor market conditions, which have made incomes drop.

Part 2. Economy of Ukraine: Current Trends

2.1. Inflation Developments

- In Q2, consumer inflation was below the $5\% \pm 1$ pp target range and lower than forecast in the [April 2020 Inflation Report](#).
- Inflationary pressures remained weak, primarily due to shrinking consumer demand, lower energy prices, and a benign FX market. This outweighed the pressure from rising production costs, smaller supplies of certain animal husbandry products, and unfavorable weather.
- This period was marked with a halt in the supply of certain goods and services due to the introduction of quarantine restrictions, which had a slight downward pressure on inflation according to the NBU.

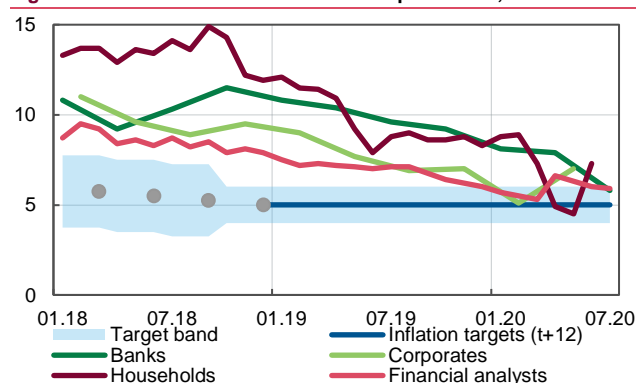
Figure 2.1.1. Underlying inflation trends*, % yoy



* Read more in the [January 2017 Inflation Report](#) (pages 20–21).

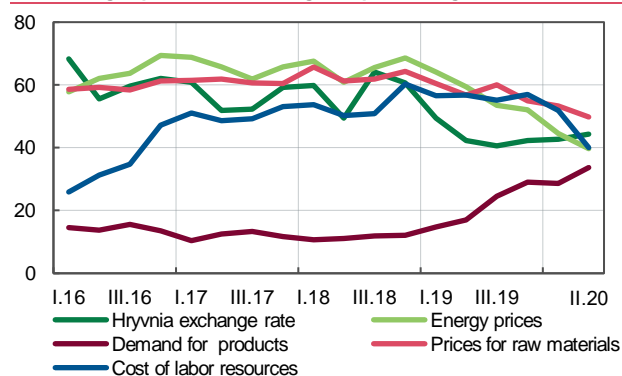
Source: NBU staff estimates.

Figure 2.1.2. 12-month-ahead inflation expectations, %



Source: NBU, GfK Ukraine, Info Sapiens.

Figure 2.1.3. Respondents' assessment of the influence of factors determining expectations of changes in prices for goods and services, %



Source: NBU.

³ According to NBU staff estimates, the correlation between the inflation expectations of households and the annual change in prices for raw foods, with a one-month lag, is around 60%.

⁴ The factor impact assessment question does not specify the direction of the "demand for your products" factor. However, answers to other questions in the questionnaire (for example, "insufficient demand" in the question about the increase in profits and expectations of changes in prices for the company's products) allows this factor to be interpreted as a restraining one.

Consumer inflation was below the $5\% \pm 1$ pp target range

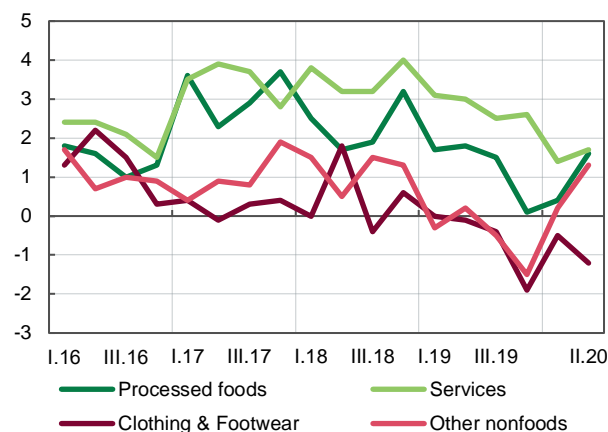
At the end of Q2 2020, consumer inflation somewhat accelerated (to 2.4% yoy in June), but remained below the target range and was much lower than the forecast published in the [April 2020 Inflation Report](#).

Changes in inflation expectations were mixed across different groups of respondents. At the start of the quarter, the expectations of some respondent groups worsened due to a temporary weakening of the hryvnia in March and gloomier economic sentiment, but they mostly improved in May–June. Household expectations remained at the level of the previous quarter, although the figures were significantly lower in April and May. The deterioration in households' inflation expectations in June can be explained by a change in the polling method (telephone interviews were used instead of in-person interviews for the duration of quarantine restrictions) and by an increase in raw food prices.³

Weak demand restrained growth in underlying inflationary pressures

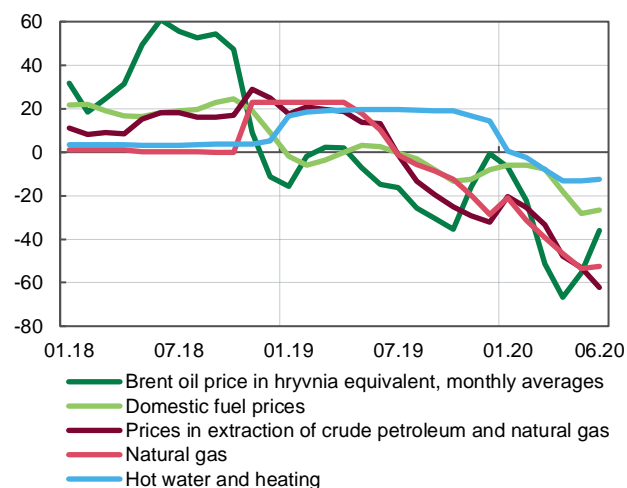
Core inflation remained virtually unchanged, at around 3.0% yoy, which was also lower than the NBU forecast. This period was marked by the unavailability of prices for some goods and services in those sectors that temporarily ceased operations during the quarantine (read more in [Box 2 Specifics of Price Collection during Quarantine](#) on page 14). In addition, prices of most services grew more slowly due to weaker consumer demand. This factor, together with the limited supply and residual effects from last year's strengthening of the hryvnia, led to a further decline in the prices of clothing and footwear, and a deeper fall in the prices of electronic devices. The increased impact of demand on the prices of goods and services is also evident from [Business Outlook Surveys](#). In particular, in Q2 2020, almost half of the surveyed companies did not expect prices for their products to increase (compared to 44.6% in Q1 and 37.4% last year), while their assessment of the impact of the demand factor increased markedly⁴.

Figure 2.1.4. Main components of core CPI, sa, % qoq



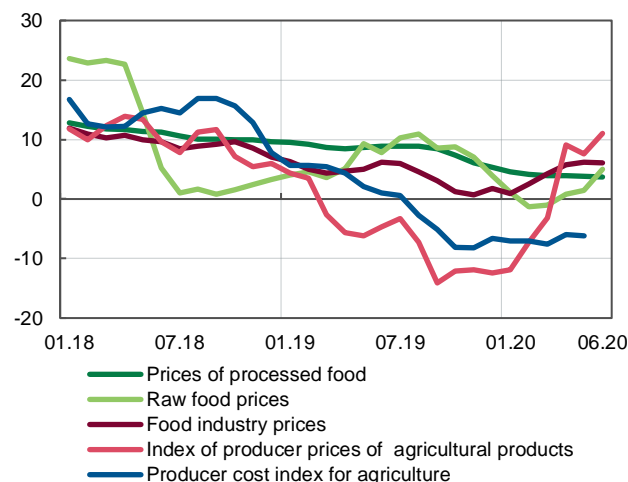
Source: SSSU, NBU staff estimates.

Figure 2.1.5. Prices for energy resources, % yoy



Source: NBU staff estimates, SSSU, Refinitiv Datastream.

Figure 2.1.6. Raw and processed food prices in food industry and agricultural production, % yoy



Source: SSSU, NBU staff estimates.

Energy prices had a significant disinflationary effect

Following a drop in global prices for natural gas and crude oil, prices for domestically produced oil and gas also declined. An additional factor was the buildup of large stocks of energy resources due to the warm winter and weaker economic activity. These factors made natural gas prices for households and industrial producers fall deeper. Cheaper natural gas also contributed to lower prices for heating and hot water supplies. Fuel prices falls deepened as global oil prices plunged.

Lower energy prices also impacted adjacent links in the production chain, in particular the production of coke and petroleum products and the chemicals industry. However, the prices of chemicals declined at a slower pace, which may be attributed to higher foreign demand, particularly demand from India for Ukrainian carbamide.

Raw food prices returned to growth on the back of stronger supply factors

Fruit prices grew more rapidly, particularly the prices of apples and strawberries, due to the depletion of last year's inventories and less favorable weather conditions than last year. Hot weather and the faded comparison base effect slowed the decline in vegetable prices, although most vegetables remained much cheaper than last year thanks to ample supply. The weaker performance of the animal husbandry sector pushed up prices of eggs and spurred growth in milk prices.

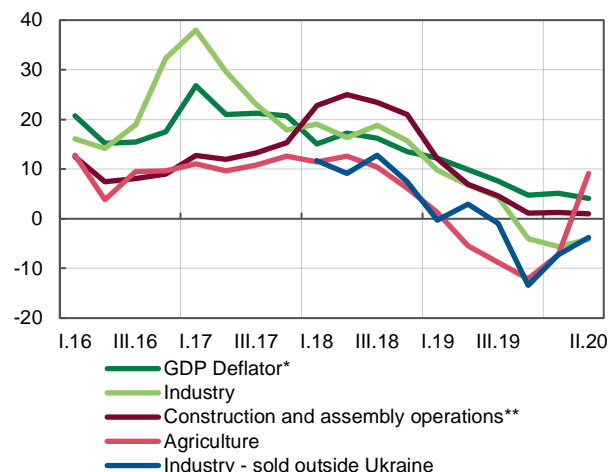
The introduction of the quarantine in mid-March provoked the panic buying of some foods (mostly long-term storage products), although the impact of this waned quickly. Together with a reduction in logistical problems and a deterioration of consumers' financial standing, this led to slower price growth (for garlic, bread, and flour products) and lower prices for some goods (lemons and meat).

An increase in production costs restrained the slowdown in inflation

According to the *Business Outlook Survey*, in Q2 2020 the input costs were the main factor behind the growth in prices. As a result, tariffs for postal and communication services for businesses and prices of telecommunication services for households continued to grow rapidly. In addition, disinfection costs increased (for more details, see Figure 4 in Box 3 *Impact of Quarantine Restrictions on Business in Ukraine: Findings of Business Outlook Survey* on page 18). Higher production costs and the lasting effect of an increase in excise taxes supported rapid growth in the prices of tobacco products.

Moreover, faster growth of electricity prices buoyed the growth of prices, for example, for cold water supply and sewerage services. The higher electricity prices were primarily due to a decrease in the share of nuclear electricity (down to 52.4% in Q2 from 56.6% in Q1), which was replaced by more expensive electricity generated by thermal power plants and renewable energy facilities.

Figure 2.1.7. Other inflation measures, quarterly averages, % yoy



* Data for Q2 2020 represent the NBU staff estimates.

** Data for Q2 2020 cover two months.

Source: SSSU.

The NBU expects the GDP deflator to grow more slowly in Q2 2020

The growth in the GDP deflator will slow, due to weak inflationary pressures in the consumer market and in most sectors of the economy. In particular, producer prices continued to fall (by 4.1% yoy in Q2 2020), reflecting global trends in energy prices, due among other things to lower production costs, as well as the unfavorable price environment for goods sold outside Ukraine. The growth of prices in construction slowed as investment demand decreased. In contrast, the slowdown in the deflator was restrained by the resumed growth in prices for agricultural products and the related accelerated price growth in the food industry, in particular for dairy and oil and fat products.

Box 2. Specifics of Price Collection during Quarantine

The spread of COVID-19 forced many countries, including Ukraine, to introduce strict quarantine measures, which included movement restrictions and a de facto ban on the trade in non-staple goods and the operation of service providers. This made it difficult to monitor prices, both due to some goods and services being unavailable, and due to recommendations price collectors representing the State Statistics Service of Ukraine (SSSU) limit visits to collect data. Although the SSSU actively uses other methods of data collection (by phone or from online stores), the data sample for individual representative goods or even entire groups of goods was either insufficient, or there was no possibility at all to record some prices. Widely used methods in such cases are to apply the growth rates of goods or groups of goods with similar properties, or to fix prices at the latest observed level.⁵ One of the main disadvantages of these methods is that, under normal circumstances, the dynamics of price changes for missing goods and services could differ significantly from the general consumer basket. However, the NBU estimates the application of these methods generally had a minor downward effect on the overall annual inflation rate (up to 0.1 pp in June 2020 and up to 0.15 pp in April).

Like the majority of statistical agencies in the world, the SSSU relied on the existing methodology in order to solve the problem of calculating the CPI during quarantine. In particular, one of the main documents, [Consumer Price Index Manual: Theory and Practice](#)⁶, contains detailed recommendations on what to do when price data are missing.

A significant number of prices of goods and services being missing due to quarantine restrictions became a challenge for statistical agencies. However, price collectors constantly face this problem, as some products disappear or change over time, and the supply of some goods is seasonal. Therefore, the statistical methodology provides several methods for determining prices in such cases:

1) choosing another way to collect information. For example, clothing and footwear stores were closed, but many chains offered their products online, which made it possible to collect price data. The same method was probably used to determine prices for some services. In particular, restaurant menus and hotel accommodation prices are available online. Finding information on the internet was also a useful way for price collectors to comply with quarantine restrictions. Some prices can be collected via telephone surveys. However, this is often not sufficient to create a sample, and even impossible for some goods and services that were limited because of the quarantine restrictions. For example, this applied to travel services and air tickets. In addition, changing the method of price collection creates the risk of there being distortions in

⁵ Many countries and international organizations provided additional explanations on how to improve the quality of price statistics during the quarantine. For example, the IMF introduced a [Special Series on Statistical Issues in Response to COVID-19](#), and Eurostat supplemented its harmonized CPI calculation methodology with calculation approaches to be used during the pandemic. Similar documents were published by statistical organizations in the Czech Republic, the United States, Latin America, and other countries.

⁶ The main provisions of this manual are briefly outlined in the [SSSU's methodology for calculating the inflation rate](#).

price trends, as the supply structure and price level may differ significantly and change more frequently.

2) fixing prices at the level observed in the previous period. This method is used when there are grounds to believe that the price of a missing product has remained unchanged and its sales will resume at the old prices.

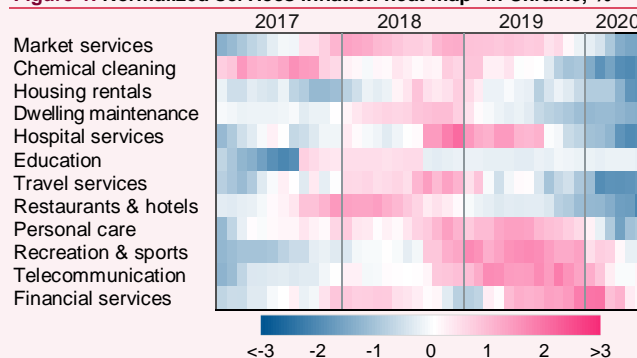
3) imputation of prices by multiplying the price observed in the previous month by an individual index calculated on the basis of the prices of available products. This approach is commonly used for prices of some fruit that are sold for only a few months a year. A variation of this method is the use of a seasonal factor. In particular, this method was applied to travel services and rail and air transportation.

The application of these methods is aimed at bringing estimates as close as possible to actual inflation rates, but their use over a prolonged period can lead to biases in the the CPI performance. According to the international methodology, an imputed price can be applied for one or two months, although exceptions are possible in nonstandard cases. Due to the easing of quarantine measures, the use of imputed prices did not exceed the recommended period for most goods and services. However, for some goods and services this period lasted longer, as restrictions were eased in stages, although the share of these was insignificant. The NBU estimates that imputation methods were applied to around 80 out of 328 representative goods, which accounted for only 10-15% of goods and services in the consumer

basket of the overall CPI. In other countries, this figure reached 30%. The NBU estimates the application of imputed prices had a minor downward effect on the inflation rate, which did not exceed 0.1 pp in June (the strongest effect of up to 0.15 pp was seen in April).

It is important that most prices, including those in the most volatile groups of food and fuel, were available for collection. As a result, the CPI indices for this period reflected the change in inflation without seasonal distortions and represented the actual inflation trend.

Figure 1. Normalized services inflation heat map* in Ukraine, %



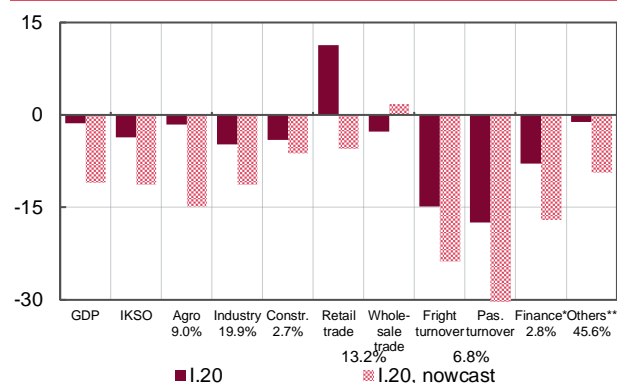
* A cool blue color indicates that prices for this type of service were rising at a slower pace than the normalized average, while warm red indicates faster growth. Data are normalized by subtracting the mean change and dividing by standard deviation, excluding data for 2015. See more at stlouisfed.org.

Source: SSSU, NBU staff estimates.

2.2. Demand and Output

- Full-scale quarantine limitations in certain types of activities led to a drop in domestic demand and were the main factor behind real GDP declining further in Q2, to around 11% yoy. An additional negative contribution came from a decrease in agricultural production due to the late start of the harvesting campaign.
- With the easing of the quarantine, economic activity started to recover gradually, albeit sluggishly, as some restrictions remained in place under the adaptive quarantine regime, and as households' financial standings and the financial performance of businesses deteriorated.

Figure 2.2.1. Output in selected types of activities in 2020 (in % of 2019 GDP), quarterly averages, % yoy

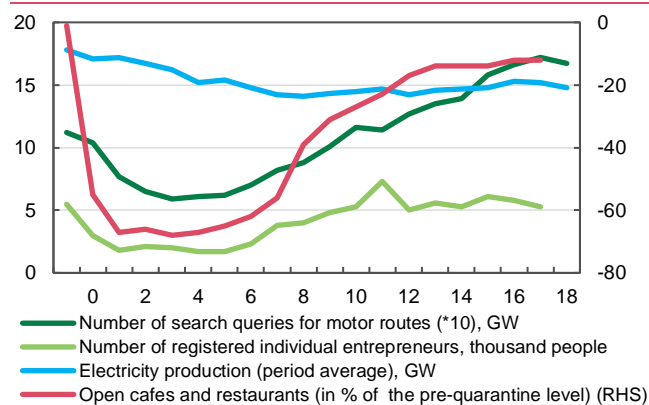


* GVA for finance, II.20 – NBU staff estimates.

** GVA for other types of activities, II.20 – NBU staff estimates.

Source: SSSU, NBU staff estimates.

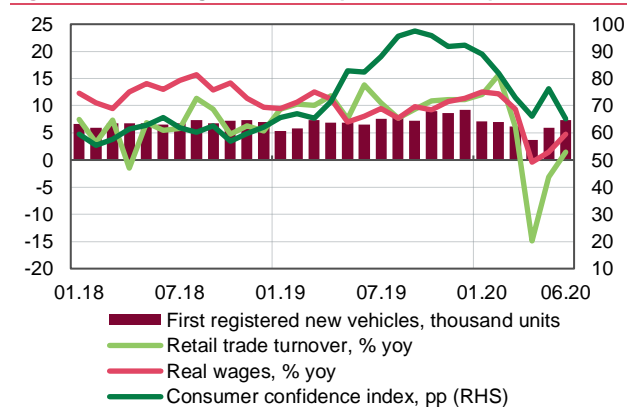
Figure 2.2.2. High-frequency indicators of economic activity



* 0 (week from 09 to 15 March 2020).

Source: opendatabot.ua, NPC Ukrenergo, Apple Inc., NBU staff estimates.

Figure 2.2.3. Leading indicators of private consumption*



Source: SSSU, Ukravtoprom, NBU staff estimates.

⁷ The Business Expectations Index (BEI) reached its minimum in April (29.9%) and gradually recovered in May and June (to 35.9% and 45.5% respectively), although it is still below 50%, which is the neutral level for this index (values below 50% point to a deterioration, and values above 50% imply an improvement).

The decline in real GDP in Q2 deepened because of quarantine restrictions and lower demand

The quarantine introduced in the second half of March was already having a negative impact on Ukraine's economy in Q1. The fall in real GDP (by 1.3% yoy) exceeded the NBU's estimates.

In Q2, the economic downturn deepened to around 11% yoy according to NBU estimates. As quarantine restrictions were introduced, passenger transportation, hotels and restaurants and food service activities, and arts and entertainment activities practically ceased to provide services. After the restrictions were eased in late May and supply chains were restored, economic activity started to recover, and businesses' outlooks improved⁷. There was a gradual increase in the number of operating cafes and restaurants and their sales, and in the use of cars and public transport.

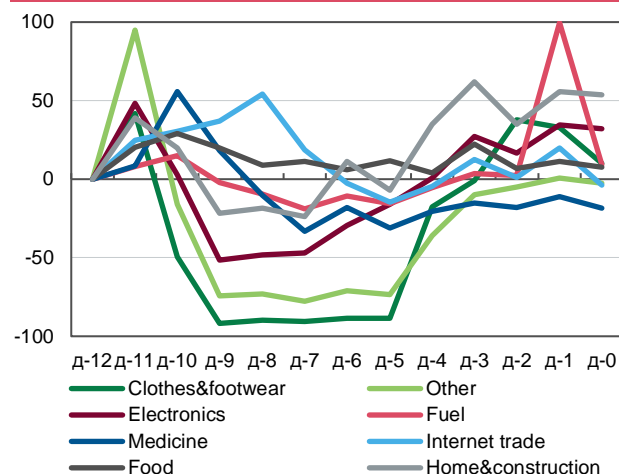
However, economic activity did not rebound to the pre-quarantine level, being restrained by the worsened financial standing of households and businesses, and the uncertainty about the duration of the adaptive quarantine regime. This was reflected in still weak domestic and foreign demand, and thus in a sizable decline in industrial production, construction, the wholesale trade, and transportation. The performance of sectors that are mainly financed from the budget (education, public administration, etc.) remained moderate. However, an increase in demand for internet access services, in particular due to burgeoning remote employment, supported the performance of the information and communication sector.

Agriculture made a major negative contribution to the decline in GDP in Q2. Unfavorable weather affected wheat yields, especially in the southern oblasts (where harvesting starts first), and resulted in a late start to the harvesting campaign compared to last year. The situation in animal production also remained difficult because of low profitability and weaker demand.

Consumer demand made a major contribution to the deeper fall in real GDP in Q2

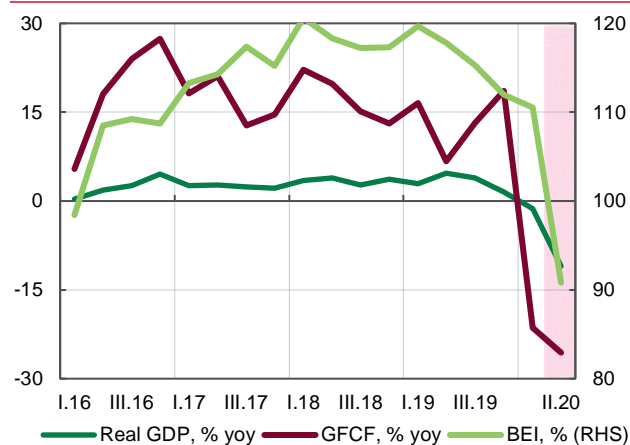
Quarantine restrictions affected consumption via two main channels. First, the consumption of some goods and services was physically limited due to a de facto ban on operations in a number of sectors. Second, consumption was restrained by a deterioration in households' financial standing and

Figure 2.2.4. Retail trade by goods, %, 21-29.02.20 = 0%



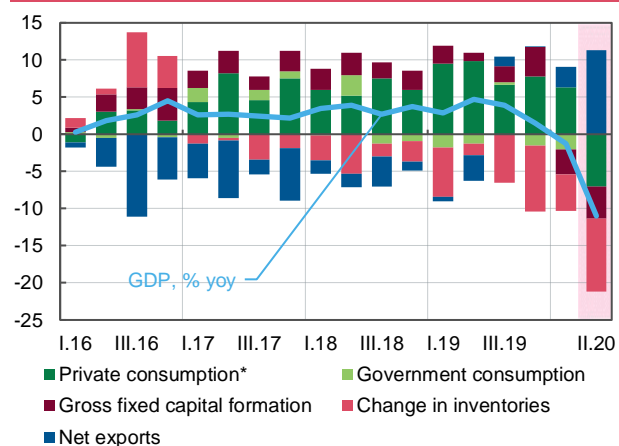
Source: q.rating.zone.

Figure 2.2.5. Real GDP, gross fixed capital formation, business expectations index



Source: SSSU, NBU staff estimates.

Figure 2.2.6. Contributions to annual GDP growth by final use, pp



*Including non-profit institutions serving households.

Source: SSSU, NBU staff estimates.

consumer sentiment. Many companies shifting to remote work (read more in Box 3 *Impact of Quarantine Restrictions on Business in Ukraine: Findings of Business Outlook Survey* on page 18) meant households spent less on public transport and some non-staple and durable goods.

To some extent, the decline in consumer spending was curbed by the spread of the online trade (however, its volumes remain relatively small⁸), as well as by panic buying of some foods and medical and pharmaceutical products at the start of the quarantine. The easing of restrictions and reopening of shops, shopping malls, and markets improved retail trade performance indicators in May and June.

Investment continued to decline due to uncertainty over the situation with the coronavirus

The significant decline in investment activity in Q1 2020 was mainly explained by the net losses of large and medium-sized enterprises, as businesses' own funds are the main source of investment financing. In turn, the deterioration in financial performance of enterprises was the result of weaker foreign demand, an unclear legal framework for certain business projects (in particular for renewable energy facilities), the global epidemiological situation, and the unprecedented quarantine measures introduced in some countries.

According to NBU estimates, the decline in investment demand continued in Q2 2020, driven by the high uncertainty over developments with the COVID-19 pandemic and the strong probability of a further decline in corporate profits. Companies' business outlooks also deteriorated markedly – in particular their investment expectations.⁹ Businesses pointed to low demand as the main factor restraining growth in their sales. Against the background of this pessimism, some large enterprises temporarily suspended planned investment projects.

The continued decline in investment demand in Q2 2020 was reflected in weak construction performance, although it was buoyed somewhat by higher budget expenditures on road infrastructure.

On the other hand, the positive contribution of net exports to the change in real GDP in Q2 increased, as imports dropped more than exports (read more in Section 2.5 *Balance of Payments* on page 24).

⁸ In 2019, the share of retail trade via the internet was less than 2% according to the SSSU, and 9% according to market participants.

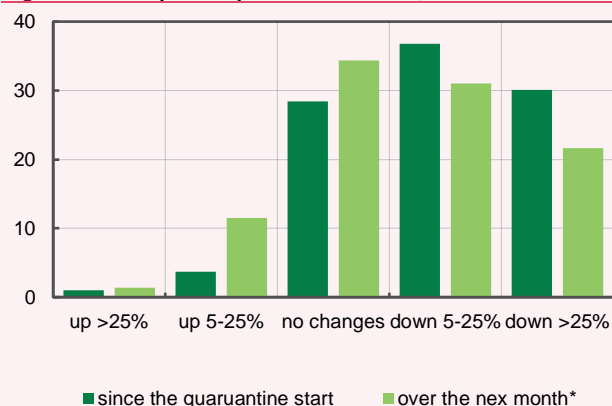
⁹ In Q2, 26.5% of companies assessed their current financial and economic standing as "bad" (compared to 13.9% in Q1), and the share of companies expecting a further deterioration in the next 12 months increased to 22%. The share of companies, which expect an increase in investment expenditures in the next 12 months, decreased to 12.1%.

Box 3. Impact of Quarantine Restrictions on Business in Ukraine: Findings of Business Outlook Survey¹⁰

A characteristic feature of the current crisis is its exogenous nature across the entire world – it is not associated with the overheating of any particular economy of a country or region, or with miscalculations in their macroeconomic policies. Rather, the root cause of the crisis was the introduction of quarantine restrictions in response to the spread of the COVID-19 pandemic. For Ukraine, this crisis is also non-typical because it has not been accompanied by an exchange rate depreciation and inflationary pressures. However, this does not make the consequences for economic activity any less painful, and sometimes they are even more serious. The answers to the additional questions that the NBU included in the regular quarterly survey of businesses indicated a major decrease in production and sales, weaker demand, and higher additional expenses. At the same time, the share of enterprises that laid off employees was relatively small: the vast majority of companies reported having shifted to remote employment and having put employees on idle mode. This may have longer-term effects, such as structural changes in the economy due to the spread of digitalization and changes in consumer behavior.

A complete ban on operations in some sectors, a decrease in foreign and domestic demand, and problems with transporting products and workers led to a sharp decline in sales and revenues, almost 70% of the companies surveyed said. The sectors that underwent the largest quarantine restrictions – retail trade, transportation, and the services sector – were hit the hardest. The losses of small enterprises that are mainly service providers were also relatively larger¹¹.

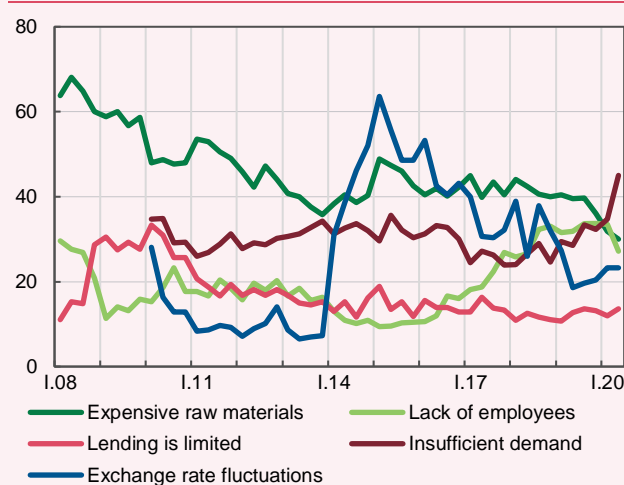
Figure 1. The impact of quarantine on sales, % of answers



*average according to weekly survey results.
Source: NBU.

This led to a major deterioration in the current condition of companies and a drop in the Business Expectations Index (BEI), which fell below 100% for the first time since 2015 (90.8% in Q2 due to a deterioration in all expectations – investment, employment, and sales). The scale of the deterioration in businesses' assessments and expectations was broadly comparable to previous crises. However, in contrast to previous crises, companies named weak demand as the main factor holding back growth in production, while the impact of exchange rate fluctuations, price pressures, and limited access to credit was significantly weaker.

Figure 2. Assessment of factors, affecting production expansion, % of answers



Source: NBU.

The biggest concern was the impact of the quarantine on employment – with declining revenues, the cost of staff retention could be too high for businesses. But in reality, companies were not inclined to lay off their staff (75%–85% did not plan to change their staff numbers during the quarantine). This might be partly due to employment being informal. Another factor could be the hope for a rapid resumption of operations after the quarantine is lifted. Revised approaches to the organization of work also allowed businesses to retain their employees. Remote employment was introduced where possible (reported by more than 40% of companies). And as typical in times of crisis, some companies put all or part of their staff on idle mode or reduced working hours. At the same time, remote employment was more often used by large enterprises, while small businesses and construction, transportation, and manufacturing companies preferred to put employees on idle mode. In contrast, almost half of agricultural companies did not change or even increased the number of their staff amid the ongoing

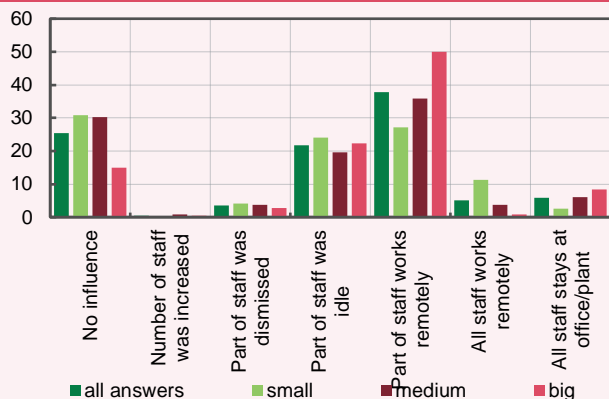
¹⁰ In Q2 2020, the NBU conducted its quarterly *Business Outlook Survey* from 5 May through 3 June 2020. A total of 691 companies in 22 oblasts of Ukraine were polled. A representative sample was generated on the basis of all of the main economic sectors and business lines, and on company sizes in terms of staff numbers. Large enterprises accounted for 31.8% of the sample, while 39.4% were medium-sized enterprises and 28.8% were small enterprises. In addition, from 23 March to 6 May 2020, the NBU conducted weekly surveys among approximately 100 medium- and large-sized enterprises (around 20% of the sample were agricultural companies, 36% manufacturing companies, and 41% trade companies) in order to quickly assess the impact of quarantine restrictions on their performance. Sampling differences, among other things, explain some of the discrepancies in the results obtained.

¹¹ According to the SSSU, by sales, small enterprises account for 15% of the services sector, compared to around 10% in the economy as a whole, while another 46% of small enterprises operate in the trade sector.

sowing campaign, which coincided with the strictest phase of the quarantine.

However, according to the NBU, the increase in unemployment will be considerable in Q2, both due to weak economic activity and pressure from migrant workers, who could turn to searching for jobs in Ukraine because of quarantine restrictions on foreign travel.

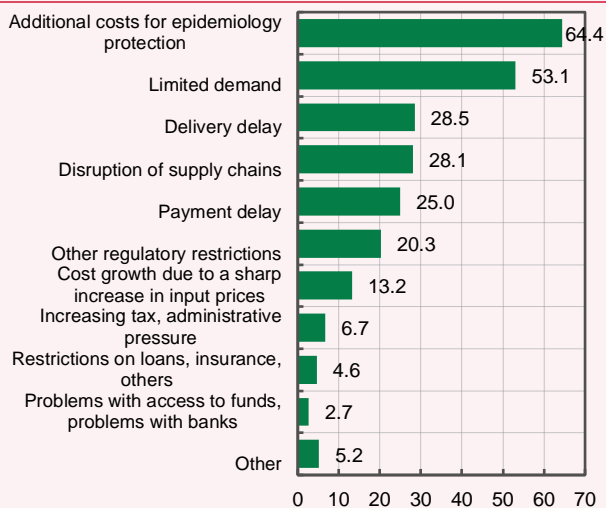
Figure 3. The impact of quarantine on staff, % of answers



Source: NBU.

In addition to limited demand and logistical barriers, the coronavirus crisis made businesses incur additional costs on sanitization measures.

Figure 4. The impact of quarantine on other performance indicators, % of answers

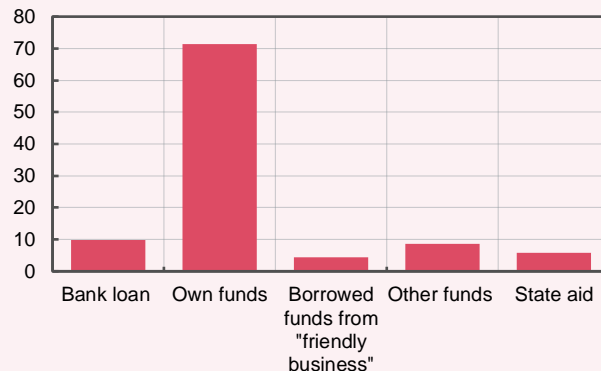


Source: NBU.

The government has provided some assistance to businesses: companies reported using relief on land and commercial real estate tax, benefits on rent of municipal property, and payments for staff retention (payment of two thirds of the amount of salaries for forced idle mode and partial unemployment benefits). However, only 13% of respondents reported that they had received government support. As the assistance was largely designed to support small businesses and individual entrepreneurs, this could also be a factor behind more positive employment expectations of small enterprises.

Companies' own funds or support from related companies will be the main source of financing needed to restore activity after the quarantine. Only 10% of companies plan to take out bank loans, and around 6% said they would not be able to recover without government support.

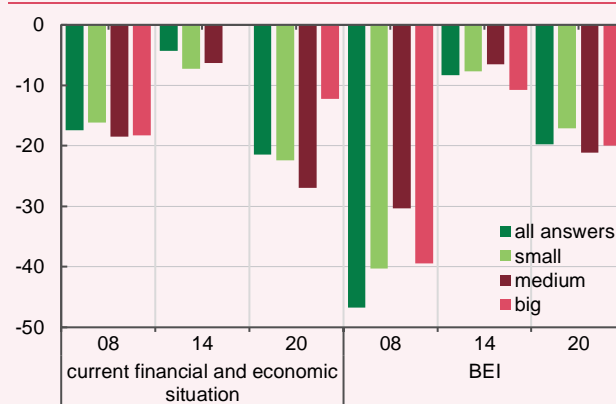
Figure 5. Sources of funds to restore activity after the quarantine ends, % of answers



Source: NBU.

As the quarantine restrictions were eased, business expectations gradually improved, confirming the NBU's assumption that economic recovery in Ukraine, as in other countries, would start once the quarantine is over.

Figure 6. Changes of BEI and assessment of current economic standing, p.



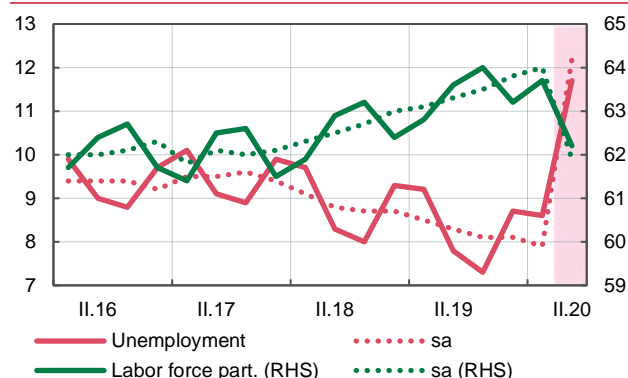
Without Crimea, Donetsk and Lugansk region since 2014.. Changes for 2008 crisis – a difference between Q3 and Q4; for 2014 – between Q2 and Q3; for 2020 – between Q1 and Q2. Source: NBU.

However, there are currently no clear estimates of the time needed to overcome the disease and/or to develop effective vaccines. Therefore, the world will have to get used to new realities that are already influencing, and will continue to influence, approaches to doing business. A number of studies (IMF, FP, VOX), suggest that approaches to globalization and production links will change due to transport restrictions, infrastructure requirements, and the spread of online services due to the shift to remote working, changes in consumer behavior due to further social distancing, and so on.

2.3. Labor Market and Household Income

- After improving further in Q1, the unemployment rate rose sharply in Q2 as the authorities imposed quarantine, according to available data. However, labor supply and demand began to recover as early as late Q2 after some quarantine restrictions were lifted.
- Income growth decelerated significantly in Q2, weighed down by lower wages, including from abroad, according to NBU estimates. Wages in Ukraine fell, primarily driven by a reduction in hours worked. The lower incomes from wages were partially offset by various types of social support.

Figure 2.3.1. ILO unemployment* and labor force participation rate, %/#**



* As a % of population aged 15–70 in the labor force.; ** As a % of total population aged 15–70;
 # Q2 2020 – NBU estimates based on InfoSapiens data.
 Source: SSSU, NBU staff estimates.

As expected, quarantine restrictions significantly worsened employment trends in Q2

In Q1 2020, the unemployment rate continued to decline, according to ILO methodology (to 7.9% in seasonally adjusted terms and 8.6% in unadjusted terms). Against the backdrop of weaker economic activity, the favorable employment dynamics at the beginning of the year are partly explained by the fact that the data were mainly collected before the quarantine was imposed. The rapid growth in labor force participation continued, driven, among other things, by women and persons of preretirement age (50–59). As before, this resulted from the continuing effects of pension legislation amendments adopted at the end of 2017, which tightened the requirements for years of pensionable service.

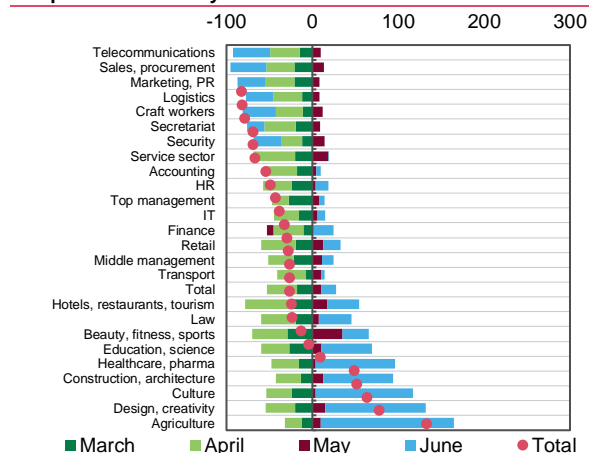
In Q2, quarantine restrictions had a sweeping impact on the labor market, causing a significant decline in employment and a sharp increase in unemployment, according to NBU estimates based on available high-frequency indicators. The number of individuals registered as unemployed also increased significantly. This increase was driven not only by job losses, but also by a simplified registration procedure and a shorter waiting period for being officially designated as unemployed. In the meantime, as expected, the rising unemployment level restrained the decline in labor force participation, in particular due to self-isolation measures to avoid contracting the virus.

The main factor in reducing labor demand was the quarantine-related closures of businesses in some sectors, and the consequent economic slump. Meanwhile, with the announcement in mid-May of a plan to relax quarantine restrictions, labor demand began to gradually recover, as evidenced by the weekly dynamics of vacancies. However, as a number of quarantine restrictions were still in force amid weak economic activity, labor demand remained below its pre-quarantine level, in particular in sales, transport, and services.

The temporary decline in the labor force participation rate was evidenced by a plunge in job search indices and in the number of resumes posted on job search sites during the period of strictest quarantine restrictions. The temporary decline in labor supply was a result of both social distancing and restrictions on public transport, and thus affected incentives to look for work.

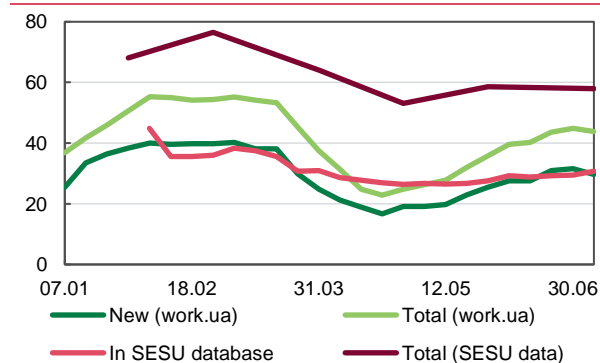
The easing of quarantine restrictions led to a rapid recovery in labor supply as early as May, returning it to pre-quarantine levels in June, according to weekly data on resumes. Interest

Figure 2.3.2. Work.ua vacancies by sector, % mom and % compared to February



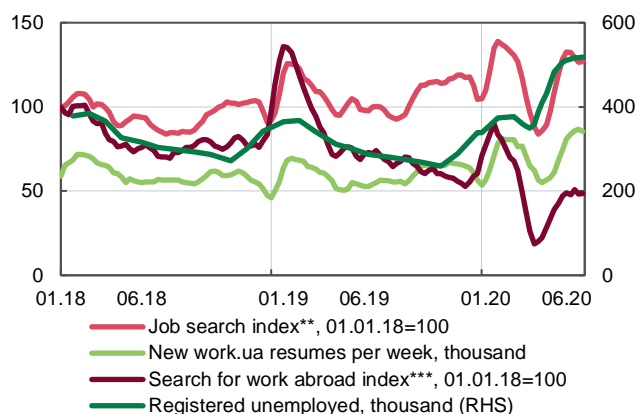
Source: work.ua, NBU staff estimates

Figure 2.3.3. Labor demand indicators: number of vacancies, thousand



Source: work.ua, SESU, NBU staff estimates

Figure 2.3.4. Labor supply indicators*



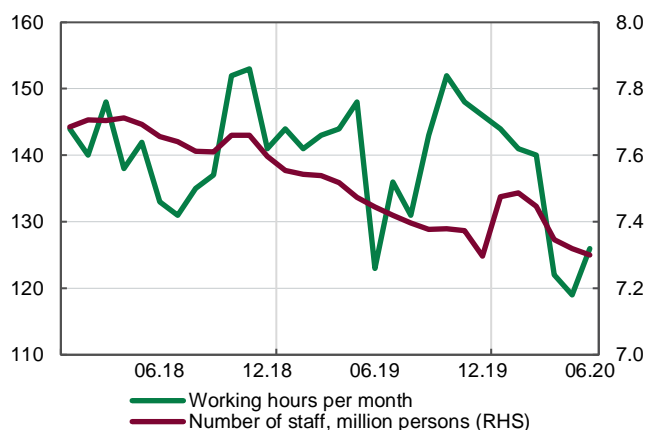
* 1 month moving average, except monthly data on registered unemployed.

** includes job search queries in Ukrainian and Russian.

*** includes queries in work in Poland, Czechia, Russia and Germany in Ukrainian and Russian from the territory of Ukraine.

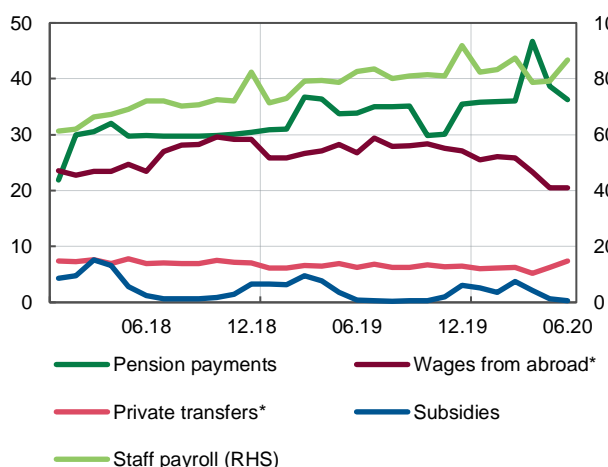
Source: work.ua, Google Trends, NBU staff estimates.

Figure 2.3.5. Staff number and working time, % yoy



Source: SSSU.

Figure 2.3.6. Selected categories of household income, UAH billion



* Wages from abroad and private transfers were derived from BOP data and were translated into hryvnia using official exchange rate to USD in the respective month.

Source: SSSU, PFU, NBU staff estimates.

in seeking employment revived not only in the domestic labor market, but also abroad, which was facilitated by the partial opening of state borders for employment purposes.

The growth in household incomes decelerated significantly

The imposition of the quarantine in late March affected wages in Ukraine as early as Q1. More specifically, the growth in the staff payroll¹² slowed to 10% yoy in March (down from 14% yoy in February), while its volume remained unchanged in April and May compared to the same period last year. This was due to a rapid reduction in hours worked in all types of activities, but especially in the hotel and restaurant business. At the same time, the contribution of the drop in employment to the change in the staff payroll remained subdued.

As expected, profits, and mixed incomes and wages of those working for small businesses, declined as the [financial standing of these companies deteriorated](#). In addition, wages earned by employees abroad fell as some migrants returned to Ukraine and restrictions on travel from the country were imposed.

The decrease in certain types of income was partially offset by an increase in social support

For the duration of the quarantine, the authorities increased existing types of social support and introduced new ones. The largest amount of support was provided in the form of pension benefits. In April, the government paid out [one-off pension supplements](#), [increased pension benefits for pensioners over the age of 80](#), and [authorized an indexation of pensions](#) starting in May. Going forward, the growth in pensions will support the increase in the subsistence level starting 1 July.

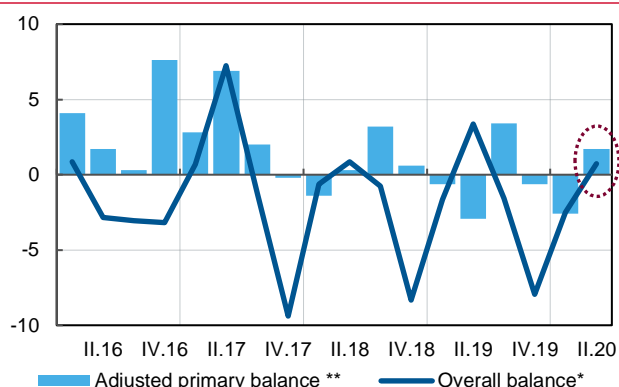
To support those who have lost their jobs, planned expenditures on unemployment benefits were [increased](#). To mitigate the impact of the quarantine on employment, a mechanism for providing [partial unemployment benefits](#) was introduced. To support individual entrepreneurs, benefits were introduced for children under the age of 10.

¹² According to the SSSU methodology, the staff payroll is calculated for full-time employees, i.e. those employed by institutions with 10 or more workers.

2.4. Fiscal Sector

- Fiscal policy in Q2 was unexpectedly restrained due to the high degree of uncertainty over budget revenues and financing seen during most of the quarter.
- The available resources were primarily allocated to social initiatives, health care, and the road sector, and were mainly aimed at supporting domestic demand. Other expenditures were only modestly financed.
- By late Q2, thanks to external financing and domestic borrowing, the state had accumulated significant budget resources with which to support the economy and to finance future debt repayments.

Figure 2.4.1. General government fiscal balance, % of GDP* and % of potential GDP**

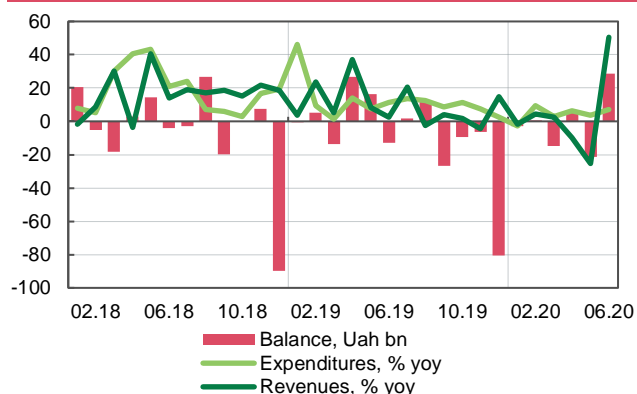


*Overall balance (% of GDP) is the consolidated budget balance and outstanding loans to the Pension Fund from the STA.

**Cyclically adjusted primary fiscal balance (CAPB) of the general government (% of potential GDP). CAPB is the difference between seasonally adjusted revenues, in the structure of which tax revenues are adjusted for cyclical changes in GDP, and seasonally adjusted primary expenditures.

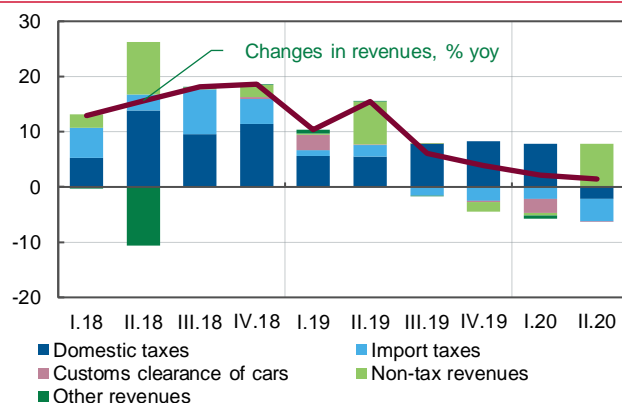
Source: STSU, NBU staff estimates.

Figure 2.4.2. The main indicators of consolidated budget



Source: STSU, NBU staff estimates.

Figure 2.4.3. Contributions to annual changes in revenues of the consolidated budget, pp



Source: STSU, NBU staff estimates.

Fiscal policy was restrained due to uncertainty over budget revenues and financing during most of the quarter

The consolidated budget moved into surplus (of almost UAH 14 billion) in Q2, despite expectations of a policy easing following the approval of significant expenditures, including to combat the COVID-19 outbreak and to support the economy while under quarantine. The cyclically-adjusted primary balance has become positive, indicating a restrained policy. With the exception of some priority areas, expenditures were financed rather sparingly, given the uncertainty over revenues and funding.

To support the economy, available resources were nevertheless allocated to social initiatives, healthcare, and the road sector, and were mainly aimed at supporting domestic demand and employment. In addition, the introduction of tax breaks supported the activities of some entrepreneurs and small businesses, thus providing a boost to aggregate demand.

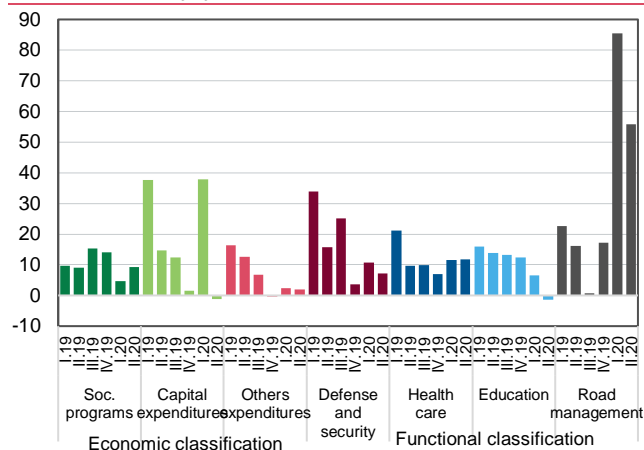
Tax revenues declined in response to narrowing economic activity and falling imports, but were offset by significant dividends from state-owned companies at the end of the quarter

The strict quarantine restrictions in place until mid-May, weaker demand, and the poorer financial standing of households and businesses led to a significant reduction in tax revenues. Taxes on imported goods continued to fall (by almost 17% yoy) due to a decline in the physical volume of imports and the stronger nominal effective exchange rate of the hryvnia compared to the same quarter of the previous year.

Revenues from direct taxes on income and profit also declined after the financial condition of companies worsened in Q1, household income fell, and certain categories of workers were exempt from income taxes. Sustained low global prices for energy continued to affect proceeds from royalties, which remained well below last year's levels. The introduction of the tax cuts primarily reduced local budget revenues, but supported economic activity and certain categories of households.

In contrast, the lifting of some quarantine restrictions and the gradual recovery of consumer demand, coupled with improved [tax administration](#), led to an increase in domestic VAT receipts. Meantime, the production of tobacco products stabilized, contributing to an increase in revenues from the

Figure 2.4.4. Growth in consolidated budget expenditures by selected areas, % yoy



Defense and security includes defense and public order, security and the judiciary.

Source: STSU, NBU staff estimates.

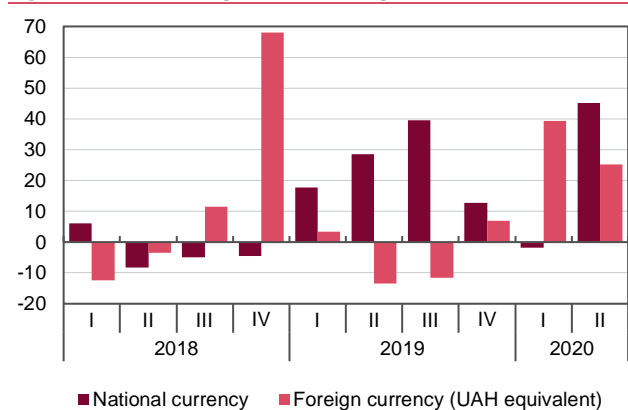
excise tax on these goods. However, this was not enough to offset the reduction in other domestic tax revenues.

However, large transfers of portions of profit by the NBU and state-owned companies compensated for the reduction in tax revenues, making it possible to accumulate a record amount of hryvnia funds in the STA at the end of the quarter.

Expenditures on social initiatives, healthcare, and the road sector took precedence over other expenditures

Expenditures grew at a relatively modest pace amid the shortage of budget resources that lasted throughout most of the quarter. Even the receipt of official funding and the anticipation of significant dividends from state-owned companies in June did not lead to a sizable increase in budget expenditures.

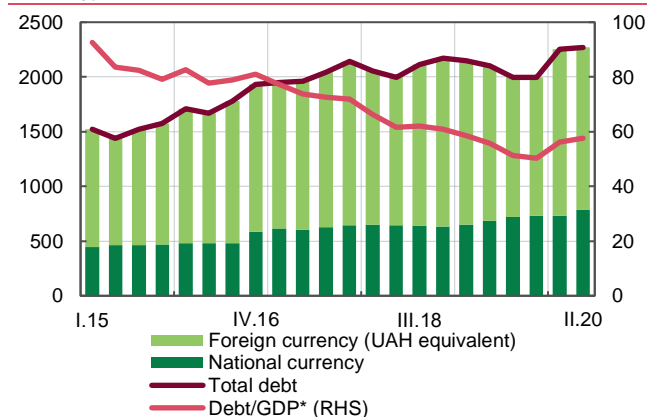
Figure 2.4.5. State budget net borrowings, UAH billion



Source: STSU, NBU staff estimates.

There was a strong emphasis on social programs in the financing of expenditures: transfers to the Pension Fund increased, the Unemployment Fund received support, while certain categories of entrepreneurs (e.g., those with children under the age of 10) received additional payments. The increase in employees' wages continued. All of these measures bolstered private consumption during the crisis. Priority expenditures continued to include road infrastructure and collective services such as defense and security, and healthcare. These expenditures buoyed a number of other industries, including construction, the production of other nonmetallic mineral products, the mechanical engineering sector, etc., thus contributing to employment.

Figure 2.4.6. Public and publicly guaranteed debt (by repayment currency), UAH bn and % of GDP**



* In the absence of detailed information on debt repayment by currency as of 30 September 2015 and 30 September 2016, the currency structure was approximated based on data for 31 October 2015 and 31 August 2016, respectively.

** GDP for 2020 - NBU estimates.
Source: MFU, SSSU, NBU staff estimates.

The financing of other areas, primarily humanitarian and sociocultural ones, was limited. Among other factors, this was due to there being lengthy decision-making procedures for distributing funds between managers. Some expenditures were also curtailed for objective reasons, such as a reduction in the cost of utilities. With inflation being low and the hryvnia continuing to be stronger than envisaged in the budget, the state saved on debt servicing expenditures.

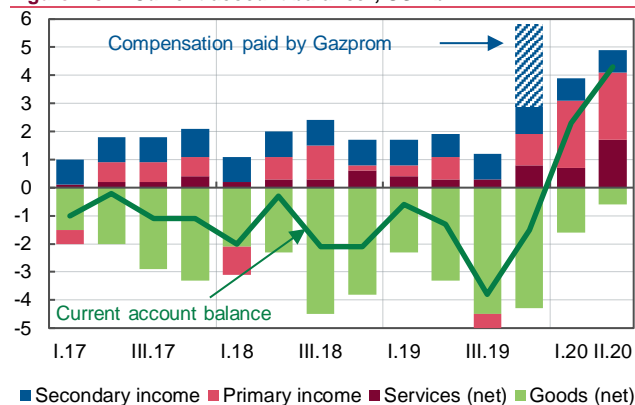
By late Q2, the state had accumulated significant resources with which to support the economy and to finance future debt repayments

At the end of April, demand for government securities in the domestic market recovered, while in the first ten days of June official financing also came from the IMF and other international partners. Together with the restrained financing of expenditures, this led to an accumulation of significant amounts of both hryvnias and foreign currency in government accounts, despite there also being significant repayments on current debt. Despite active borrowing, the amount of public and publicly guaranteed debt as of the end of June was little changed from the end of March, both in absolute terms and relative to GDP. The exchange rate revaluation due to the strengthening of the hryvnia compared to the end of March was an important factor.

2.5. Balance of Payments

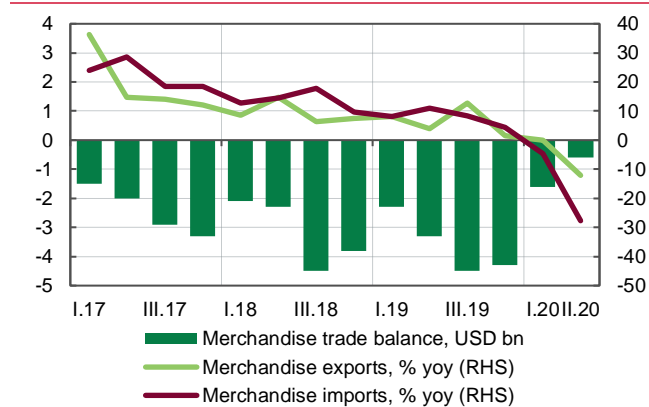
- Q2 2020 saw a record high surplus in the current account. Such current account performance was better than had been anticipated in the [previous forecast](#). The reasons for this were the higher resilience of exports of goods and a more pronounced drop in imports compared to exports, due to, among other things, the temporary halt in tourist activity.
- The trade deficit narrowed on the back of slumping domestic demand, ongoing falls in global energy prices, and taking advantage of the window of opportunity for some food exports resulting from restrictions imposed by other countries on exports of certain foods.
- Capital outflows continued, primarily due to significant payments related to external liabilities. Despite that, a significant current account surplus, together with loans from the IMF, pushed up gross reserves markedly.

Figure 2.5.1. Current account balance*, USD bn



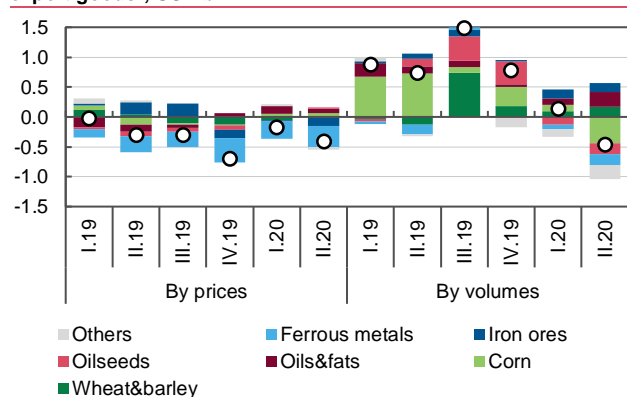
* In IVQ 2019 without compensation paid by Gazprom.
Source: NBU.

Figure 2.5.2. Merchandise trade



Source: NBU staff estimates.

Figure 2.5.3. Annual change in volumes and prices of selected export goods*, USD bn



* 79% of goods exports.
Source: SCSU, NBU staff estimates.

Exports of goods and services showed some resilience to crisis events

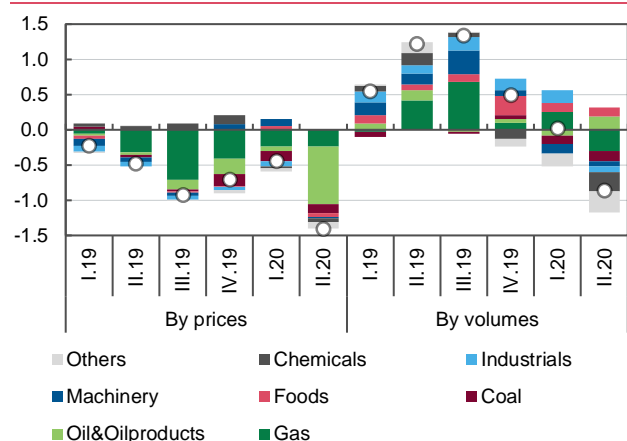
The decline in exports of goods (by 12.1% yoy), caused by weaker global economic activity, the depletion of certain grain stocks, and low global prices for metals and corn, was smaller than expected. This was mainly due to the opening of a window of opportunity for exports of certain foods resulting from the [introduction of export restrictions by the EAEU countries](#). More specifically, sunflower oil exports hit a record high for this period, while exports of wheat and barley continued to grow rapidly. In the 2019/2020 marketing year, Ukrainian grain exports hit a new all-time high of 56.7 million tons. Overall, however, Q2 2020 witnessed a reduction in food exports due to corn and soybean stocks being depleted more quickly than last year (because of larger volumes of these foods being exported in previous periods), strong competition on the grain market from South American countries, and weaker demand from biofuel producers. The introduction of an [antidumping duty on corn imports](#) by EU countries was an additional factor behind the fall in corn exports.

The decline in metallurgical exports deepened due to a further narrowing in external demand and falling global prices. In addition, the growth in exports of Ukrainian iron ore slowed significantly due to weaker demand from European metallurgists, and it was only partly offset by increased exports of cheaper ore to China. Exports of pipes also continued to contract on the back of falling interest in energy production, due to, among other things, low global energy prices. Despite further increases in exports of fertilizers and plastics, chemical exports contracted in the wake of worsening external price conditions. Machinery exports also declined, in part due to a decrease in external orders for railway wagons.

Imports slumped on the back of a significant narrowing in domestic demand and closed borders

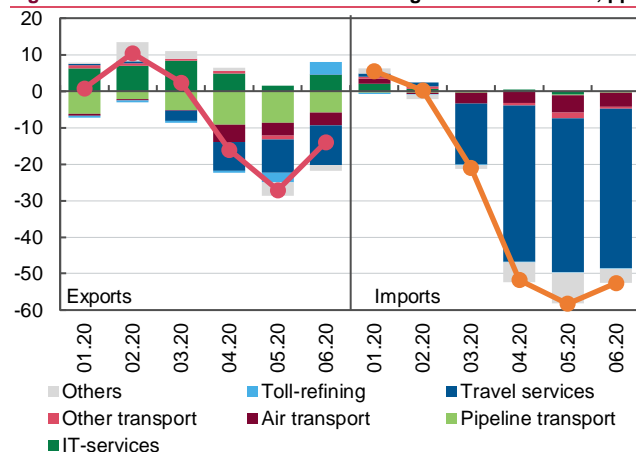
Imports of goods declined further (to 27.7% yoy), dragged down by drops in imports of a broad range of investment and consumer goods. Machinery imports dropped noticeably (imports of vehicles, household appliances, and industrial equipment). There was a further decrease in imports of components for alternative energy generation due to uncertainty as to whether or not laws affecting the sphere will be changed. Industrial imports shrank amid falling consumer demand. Meanwhile, food imports continued to grow.

Figure 2.5.4. Annual change in volumes and prices of selected import goods*, USD bn



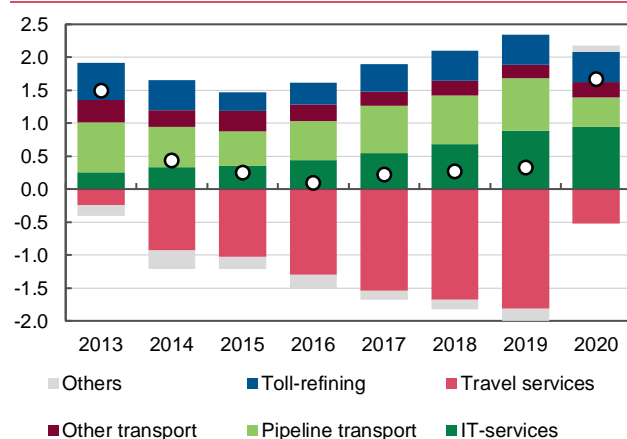
* 51% of goods imports.
Source: SCSU, NBU staff estimates.

Figure 2.5.5. Contributions to annual change in services trade, pp



Source: NBU staff estimates.

Figure 2.5.6. Services trade balance in Q2, USD bn



Source: NBU staff estimates.

Chemical imports also declined due to the stepped-up production of domestic fertilizers, a drop in imports of household chemicals, and lower energy prices – the basis of the industry's intermediate consumption. Energy imports declined further (almost to 50% yoy) mostly as a result of falling prices, but also due to a reduction in volumes. Although extremely low oil prices brought about an increase in oil import volumes, this increase was outweighed by a drop in gas and coal import volumes.

The closure of the country's borders markedly reduced informal imports of goods, while also significantly affecting the trade in services. The halt in tourism had a more pronounced effect on imports of services compared to exports, because the share of travel services in imports is considerably larger than it is in exports. Although decelerating, exports of IT services continued to rise, partly offsetting the drop in exports of pipeline transportation services. This markedly widened the surplus in the trade in services.

While remittances decreased as expected, their decline (by 15.3% yoy) was less pronounced than had been predicted (read more in the Box *Evaluation of the Impact of Quarantine Measures on Remittances to Ukraine* in the [April 2020 Inflation Report](#) on pages 46-47). Among other things, this resulted from the more active return of Ukrainian workers to their foreign jobs, and more resilient demand for migrant workers from host countries (such as Poland).

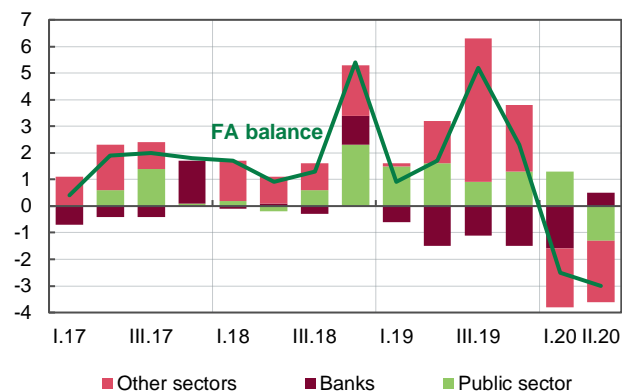
Another important factor behind the substantial current account surplus was a reduction in primary income payments due to foreign-invested companies incurring losses (read more in Box 4 *Companies' Reinvested Earnings: Impact on Balance of Payments* on page 27).

Financial account outflows increased, driven by large payments related to Ukraine's external obligations

The public and real sectors were responsible for the capital outflow recorded in Q2. More specifically, external debt repayments by the general government sector (over USD 1 billion) exceeded the amount of the [second tranche of macrofinancial assistance Ukraine received from the EU](#) (EUR 500 million). In addition, the large-scale outflow of capital from emerging markets has also affected the Ukrainian market: the amount of hryvnia domestic government debt securities held by non-residents decreased by 14% or USD 800 million over the quarter.

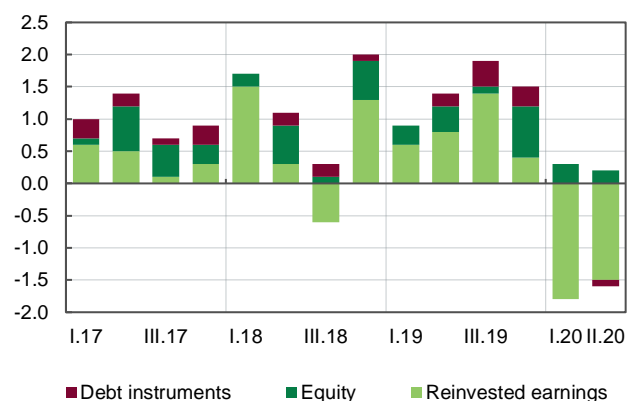
The real sector showed a net outflow of FDI as the financial performance of companies with foreign investment worsened. Moreover, more foreign currency remained in Ukraine due to a reduction in the financing of informal trade and tourism (this means an increase in external assets and is recorded as a capital outflow from the real sector). Meanwhile, the banking sector recorded a capital inflow as a result of the banks receiving long-term loans and households converting noncash foreign currency into cash, thus reducing the sector's assets.

Figure 2.5.7. Financial account: net external liabilities, USD bn



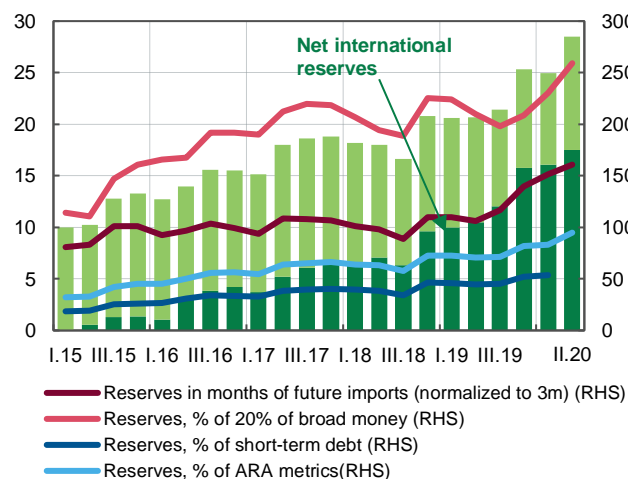
Source: NBU.

Figure 2.5.8. Ukraine FDI inflows, USD bn



Source: NBU.

Figure 2.5.9. Gross international reserves, USD bn



Source: NBU.

Despite there being an improvement in Ukraine's external position, maintaining macrofinancial stability in the country requires continued cooperation with international financial institutions

Current account inflows significantly exceeded capital outflows in Q2. As a result, the balance of payments recorded a sizable surplus of USD 1.3 billion. In addition, Ukraine received the first tranche of USD 2.1 billion under its new financial assistance program with the IMF. This enabled Ukraine to increase its international reserves to USD 28.5 billion by late June 2020, even despite the economic crisis. The reserves cover 4.9 months of future imports, and according to the IMF ARA metric criteria reserves have hit 95% of the required minimum.

The performance of debt sustainability indicators was also good. More specifically, in Q1 2020, gross external debt dropped by 1.2%, to USD 120.3 billion or 76% of GDP. Repayments of real sector loans exceeded purchases of Eurobonds by some corporations. In addition, the NBU repaid IMF loans. Meanwhile, the government sector's liabilities increased, mainly due to the [issuance of Eurobonds](#). Short-term debt by remaining maturity decreased by USD 1.9 billion, hitting 29.3% of GDP – the lowest figure since 2009.

Nevertheless, the debt burden remains significant: in Q2 2020 the general government sector is to pay about USD 3 billion on its external obligations, with another USD 5 billion due in 2021. Together with Ukraine's payments related to its liabilities to the IMF, the total amount to be repaid exceeds USD 10 billion. Despite loose global financial conditions, Ukraine's access to the international capital markets will depend on its ability to continue structural reforms and to conduct a prudent macroeconomic policy. Continued cooperation with its international partners will not only ensure that Ukraine receives the financial resources it needs during this period, but will also ease its access to the international capital markets.

Box 4. Companies' Reinvested Earnings: Impact on Balance of Payments

In late June 2020, the NBU published revised BoP data to reflect a further improvement in the accounting of FDI by including the reinvested earnings of companies with foreign direct investment in the BOP. Although having no impact on the overall BoP, this increased the amount of FDI, while widening the current account deficit by the same amount. A retrospective analysis has revealed large amounts of reinvested earnings in the real sector, which could have resulted either from the maturity of FDI's life cycle or from the country's development specifics. Overall, these changes improved the quality of the statistics, making them more comparable with those of other countries, while also providing opportunities for an analysis of the BoP.

Scheduled improvements in the quality of statistics. The NBU is constantly striving to improve the quality of BoP statistics, among other things by deepening cooperation with the SSSU. As scheduled, in 2018 the SSSU transferred the function of compiling data on FDI in the banking sector to the NBU, while in early 2020 it transferred the authority to publish all FDI statistics. The extended cooperation between the institutions enabled the NBU to start accounting the reinvested earnings of banks from 2018, and those of the real sector from 2020. BoP data starting from 2015 were revised to reflect the new methodology.

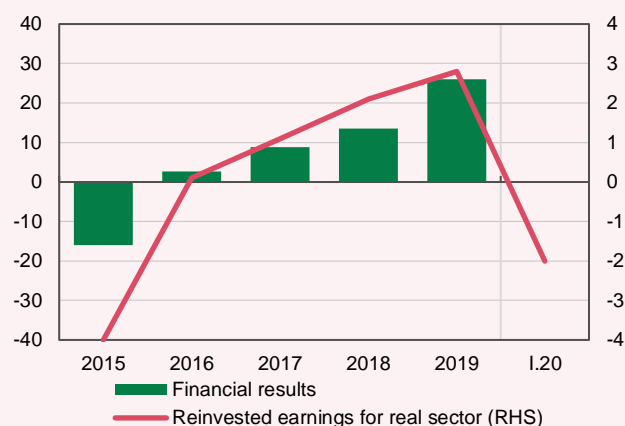
Reinvested earnings: the lifecycle of FDI and the specifics of the country's development. Most companies aim to generate and maximize profits. Profits can be used to pay dividends or be invested again (reinvested) in the company. According to a theory put forth by [Brada and Tomšík](#) (2009), the life cycle of FDIs has three stages. At the stage of entering the market, most projects are usually unprofitable. Later, at the growth stage, while generating profits, a company still needs further investment in order to develop, increase its market share, and so on. For this reason, a larger portion of profit is reinvested. Finally, at the maturity stage, the focus shifts towards profit repatriation, either in the form of dividends or in the form of investment in other markets where investment is still at an early stage. According to [Novotny](#) (2015), the life cycle of FDI profitability is 15 to 16 years, with profitability peaking in the 7th to 8th year after the initial investment.

A company's decision over whether to reinvest its earnings or to pay dividends is determined by many factors. Among other things, an investor's decision could be influenced by a comparison of investment opportunities in other countries. [Oseghale and Nwachukwu](#) (2010) have empirically proved that highly developed corporate governance, a market's size and rate of growth, macroeconomic stability, labor quality and the profitability of operations have a direct effect on reinvested earnings. In addition, an investor's choice of a further strategy is very sensitive to whether or not there is political stability in the country ([Polat](#), 2017).

The impact of the revision on FDI inflows. According to the Sixth Edition of the IMF's Balance of Payments and International Investment Position Manual (BPM6), the reinvestment made by a foreign investor in a company's equity, despite the fact that these profits, unlike dividends, are not actually transferred, is included into FDI. Reinvested earnings can be negative in sign. Negative reinvested earnings could indicate that a company has incurred losses due to worsening economic standings in the sector where it

operates, or due to more global economic challenges in the host country.

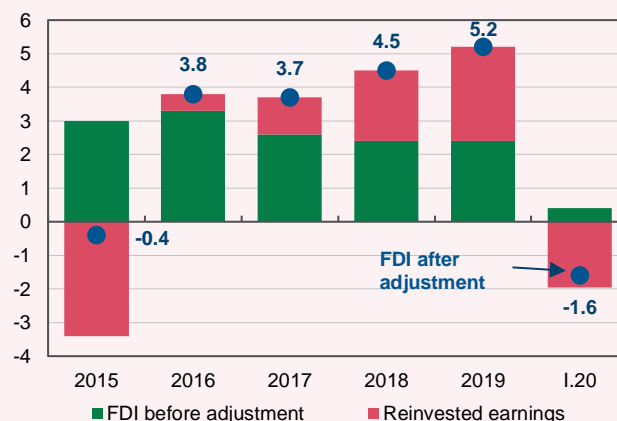
Figure 1. Financial results and reinvested earnings for real sector, USD bn



Source: SSSU, NBU staff calculations.

The deep crisis seen in 2014–2015 resulted in many companies generating negative financial results in 2015. However, since 2016 macroeconomic stability, prudent fiscal and monetary policies, the gradual implementation of structural reforms and positive business expectations have helped improve financial performance and, accordingly, increase companies' reinvested earnings. In 2020, the coronavirus crisis worsened companies' financial performance, leading to the formation of retained losses by companies.

Figure 2. FDI (net) before and after adjustment, USD bn

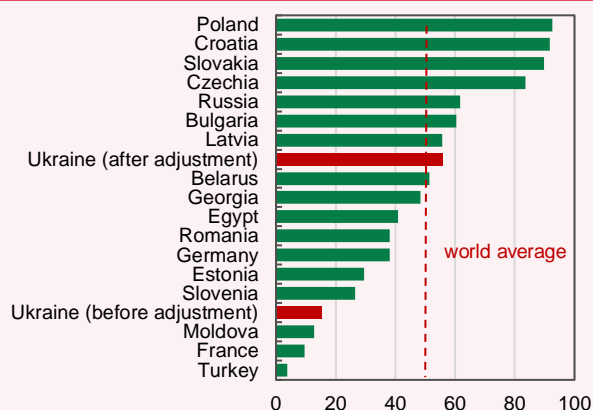


Source: NBU.

In this light, the inclusion of reinvested earnings decreased the amount of FDI inflows in 2015 and Q1 2020, while significantly increasing these inflows in 2016–2019. The

share of reinvested earnings in total FDI inflows in 2019 hit almost 50%, which was [in line with global trends](#).

Figure 3. Reinvested earnings in FDI in 2019, %



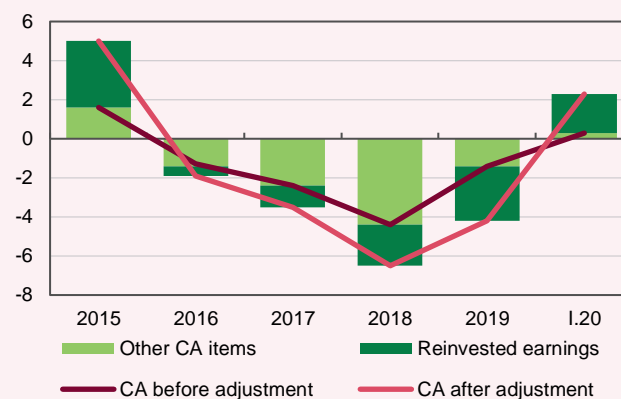
Source: IMF, UNCTAD, NBU.

The revision had a neutral impact on the overall balance of payments. As any other BoP transaction, reinvested earnings are represented by two entries: as a direct investment item in the financial account, and as a debit entry recorded under a new row within direct investment income in the current account. As a result, any change in the accounting of the real sector’s reinvested earnings has no effect on the overall balance of payments, as the current and financial account data change by equal amounts. More specifically, the revision increased the 2017–2019 current account deficit from USD 1.1 billion (1% of GDP) in 2017 to USD 2.8 billion (1.8% of GDP) in 2019 – the amount by which FDI inflows increased.

Analytical consequences and opportunities. Revisions of BoP data, such as a widening in the current account deficit, in general do not change previous analytical conclusions on how stable Ukraine’s external position is and what the country’s economic conditions are – factors that guide the NBU’s monetary and exchange rate policies. This is due to the fact that these revisions change foreign direct investment – a reliable and sustainable source of financing current account deficits – by the corresponding amount. In addition, reinvestment does not involve money actually crossing borders, as the transaction takes place in the country that receives the investment.

Reinvested earnings benefit the economies of recipient countries in several ways. Parent companies reinvest their earnings with a view to boosting the competitiveness of their subsidiaries, and, as a consequence, their productivity, which also affects macroeconomic indicators. Some [studies](#) show that reinvested earnings increase the chance that FDI stays in the country in which it was made, as larger amounts of FDI increase the opportunity cost of transferring this investment abroad. This also encourages companies to invest in the local economy. An analysis of the factors on the basis of which investors decide whether to pay dividends or reinvest their earnings could have a profound influence on the government’s policies on attracting and retaining investment.

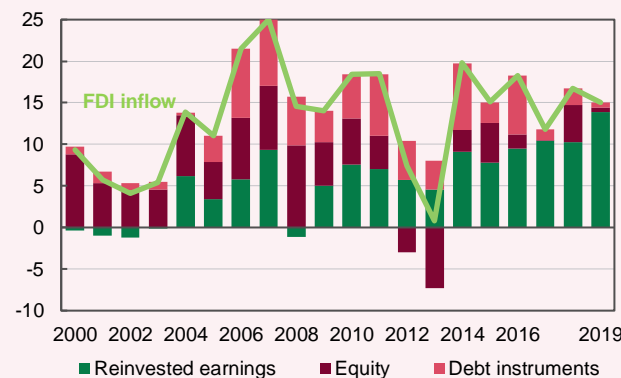
Figure 4. CA before and after adjustment, USD bn



Source: NBU.

The experience of Poland and the Czech Republic in attracting investment. The political and economic development of the CEE-4¹³ countries in the early 1990s, rapid and profound structural reforms, which were very painful at the beginning, a strong focus on European integration and the creation of favorable conditions for attracting foreign investment, including through the tax environment (albeit on equal terms for all businesses), led to a significant influx of FDI in these countries. At the initial stages, capital came into these countries through the acquisition of a portion of shares in existing companies. During this period, the profitability of investment projects at their initial stages was low. In Poland, for example, companies recorded retained losses after paying dividends abroad. In the early 2000s, invested capital moved to the profit stage. Starting in 2004, on the back of macroeconomic stability, the [rate of return on FDI in equity in some countries, such as Poland, exceeded the rate of return on debt instruments](#). After their accession to the EU in 2004, the prospects for the convergence of the CEE-4 countries with the developed Eurozone countries made reinvested earnings the main FDI instrument. In particular, the share of reinvested earnings in total FDI inflows in the Czech Republic rose from 46% in 2004 to 84% in 2019, while that in Poland increased from 45% to 93%.

Figure 5. FDI into Poland, USD bn



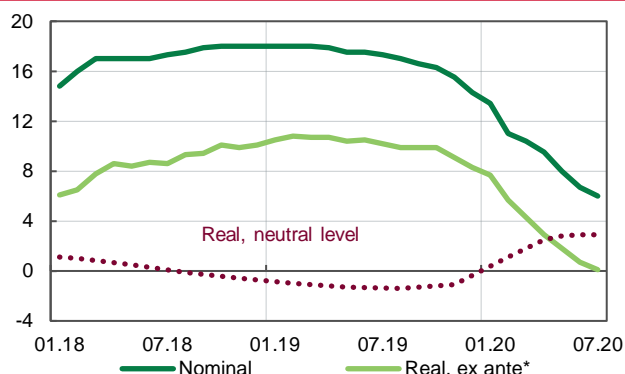
Source: IMF.

¹³ The Czech Republic, Poland, Slovakia and Hungary.

2.6. Monetary Conditions and Financial Markets

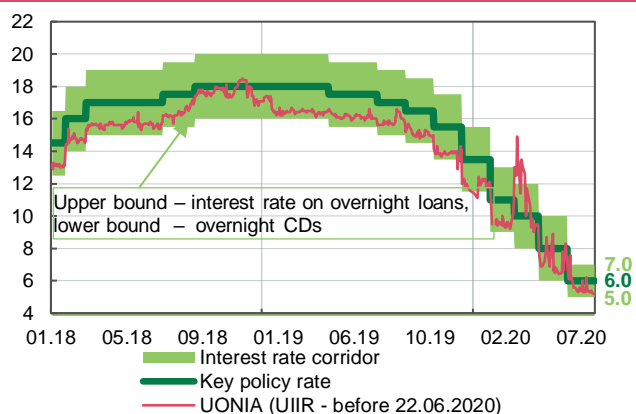
- In Q2 2020, the NBU Board accelerated interest rate cuts, bringing the key policy rate to 6% – an all-time low in nominal terms.
- Key policy rate cuts and an expansion of the NBU's measures to support banking system liquidity helped reduce the cost of funding on the market. Demand for hryvnia domestic government debt securities rebounded, and the short end of the yield curve moved below its pre-crisis level as the situation stabilized.
- Revaluation pressures prevailed on the FX market amid declining demand for foreign currency and the persistence of a large FX supply.

Figure 2.6.1. Key Policy Rates, average, %



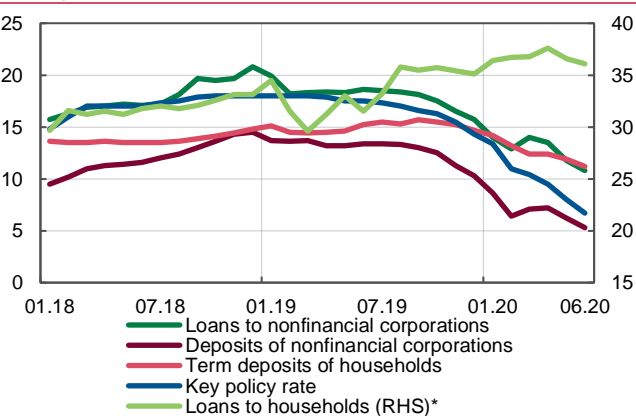
* Deflated by 12-month ahead inflation expectations of financial analysts.
Source: NBU staff estimates.

Figure 2.6.2. NBU policy rates and UIIR/UONIA*, %



* As of 29.07.2020.
Source: NBU.

Figure 2.6.3. Weighted average interest rates on new hryvnia loans and deposits, %



* Excluding overdrafts.
Source: NBU.

¹⁴ On 23 June 2020, the NBU stopped calculating the UIIR, and replaced it with a new indicator of the cost of interbank loans – the Ukrainian OverNight Index Average (UONIA).

Monetary policy became accommodative in Q2 2020 as cuts in the key policy rate accelerated

In Q2 2020, the NBU Board lowered the key policy rate two times, by a total of 400 bp, to 6.0% – an all-time low in nominal terms. The more rapid easing of monetary policy was motivated by the high probability that consumer and investment demand would remain subdued for longer than had been expected earlier. The NBU's active easing of monetary policy aims to support the economy as quarantine restrictions are gradually lifted. The NBU also narrowed its interest rate band on standing facilities to ± 1 pp (from ± 2 pp) with a view to enhancing the transmission mechanism of the key policy rate cuts.

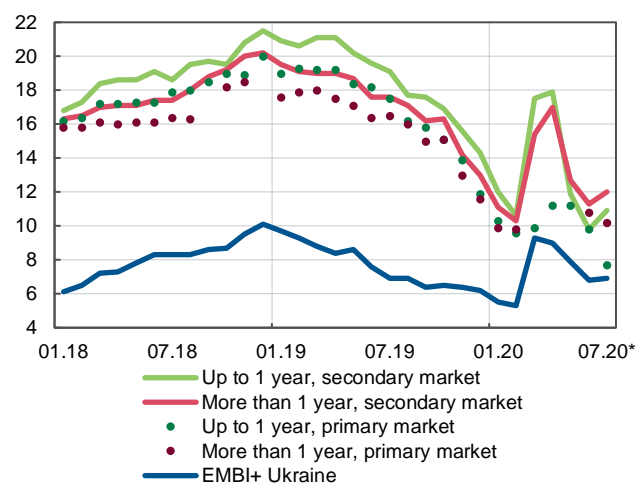
The NBU's consistent policy of lowering the key policy rate also helped bring it down in real terms, even in the face of further improvements in financial analysts' inflation expectations. What is more, the real key policy rate reached its neutral level in May and fell further, almost hitting zero in July. The decrease in the key policy rate below its neutral level indicates that monetary policy has become accommodative (i.e. aims to bolster consumer demand and create new jobs – read more in [Box 5 Revised Estimates of the Neutral Interest Rate](#) in the *January 2020 Inflation Report* on page 48).

The banks are lowering their hryvnia interest rates both on the interbank and on transactions with customers

The prompt anti-crisis measures taken by the NBU, including those aimed at enhancing the banks' ability to manage their liquidity, contributed to the stable functioning of the interbank credit market. As a result, following the high volatility seen in March, starting in April the movements in the UIIR/UONIA¹⁴ and the key policy rate have again become correlated. The UIIR/UONIA tended to hover around the lower bound of the NBU's interest rate band, driven by the rapid cuts in the key policy rate and a persisting liquidity surplus in the banking system.

Interest rates on new hryvnia loans and deposits also dropped in Q2 2020, reflecting a general downward trend in market interest rates. Persistently high liquidity in the banking system and the banks' confidence that they would be able to refinance temporary liquidity gaps encouraged the banks to actively reduce their deposit rates. In Q2, interest rates on

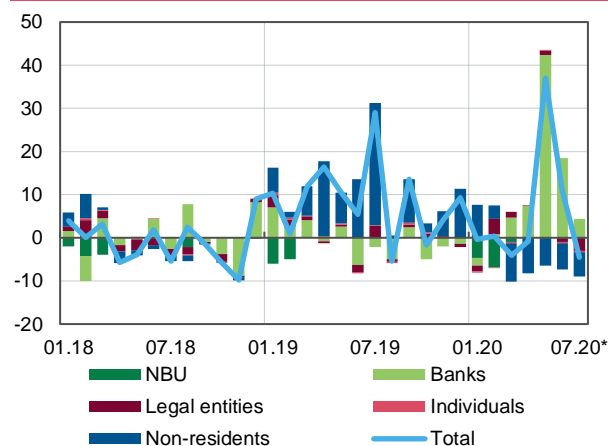
Figure 2.6.4. Yields on hryvnia domestic government debt securities by maturity and yields on Ukraine's eurobonds (EMBI+), %



* As of 29.07.2020.

Source: NBU.

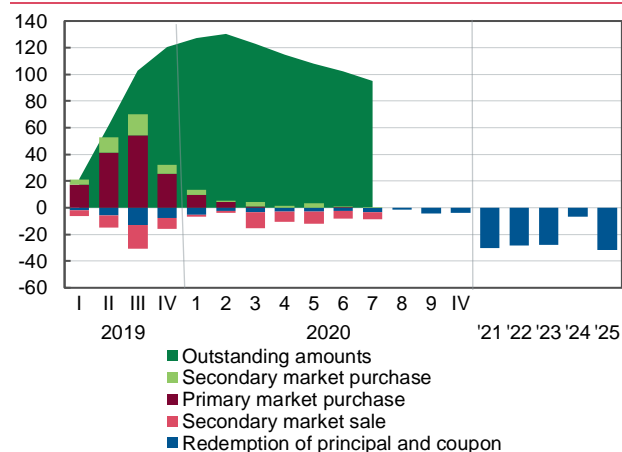
Figure 2.6.5. Change of outstanding hryvnia domestic government debt securities in circulation by holders, UAH bn



* As of 29.07.2020.

Source: NBU.

Figure 2.6.6. Transactions with domestic government debt securities by non-residents and their scheduled redemptions*, bn UAH



* As of 29.07.2020.

Source: NBU.

term household deposits on average dropped the most, while interest rates on demand deposits remained practically at the level of the previous quarter. Interest rates on term and demand deposits from nonfinancial corporations both decreased, while the yields of these instruments fell below the key policy rate in June. Interest rates on loans to nonfinancial corporations dropped to 10.8% in June – a low not seen since 2000. This was a response to the rapid cuts in the key policy rate and the measures taken to support businesses. Meanwhile, interest rates on household loans were little changed on Q1 2020. Their sluggishness was due to the persistence of considerable risks in the consumer lending segment.

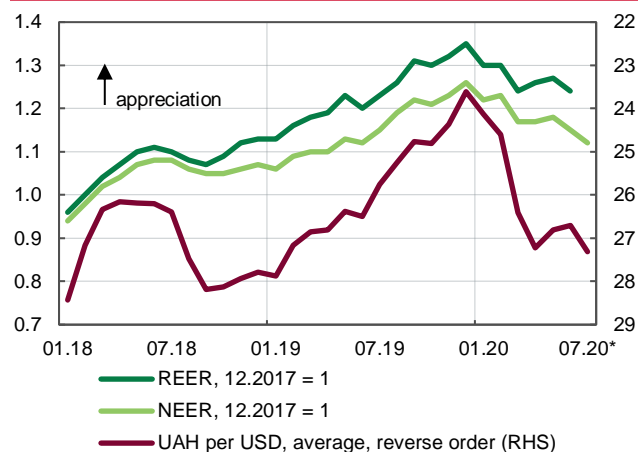
The yields of hryvnia domestic government debt securities dropped on the back of rebounding demand and an eased monetary policy

In late April, the Ukrainian financial market began to gradually recover from the stress caused by the quarantine. Demand for hryvnia domestic government debt securities recovered, while in May the yields of these securities dropped to their pre-crisis levels. Yields also dropped on the secondary market – although continuing throughout the quarter, the monthly non-resident outflows were less pronounced than in March and decreased further in June–July. In addition, in June, the short end of the yield curve of domestic government debt securities moved below its pre-crisis level. The slight rise in yields on the secondary market seen in the first half of July was caused by situational psychological factors.

The financial market recommenced normal operation in Q2 2020, mainly due to the NBU taking measures to support banking system liquidity, and to the market adapting to operating under quarantine restrictions. Banks were the main buyers of government securities in Q2 2020, with the growth in hryvnia domestic government debt securities in their portfolios exceeding the non-resident outflows of by more than three times over that period. This enabled the MFU to make a large placement of hryvnia domestic government debt securities in Q2 2020 – the size of the placement was second only to the record high one of Q3 2019. Maturities also increased gradually.

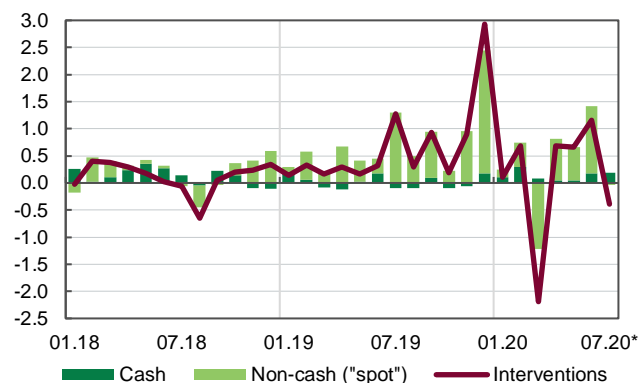
Since April, appreciation pressures have largely prevailed, as demand for foreign currency fell amid persistently high supply

The official UAH/USD exchange rate had by the end of Q2 2020 strengthened by 4.9% compared to the end of Q1 2020. The appreciation pressures seen on the FX market in Q2 2020 resulted from the large supply of foreign currency, which was produced by receipts from traditional export-oriented sectors (such as the agricultural sector) and from Naftogaz, which at the same time saw more moderate import payments. This enabled the NBU to resume foreign currency purchases, while not counteracting the prevalent market trends, and to recover the large amount of foreign currency that the NBU sold in March to stop panic buying. On average, however, the UAH/USD exchange rate weakened in Q2 2020, while the currencies of most of Ukraine's MTPs

Figure 2.6.7. Official exchange rate, hryvnia REER and NEER indices

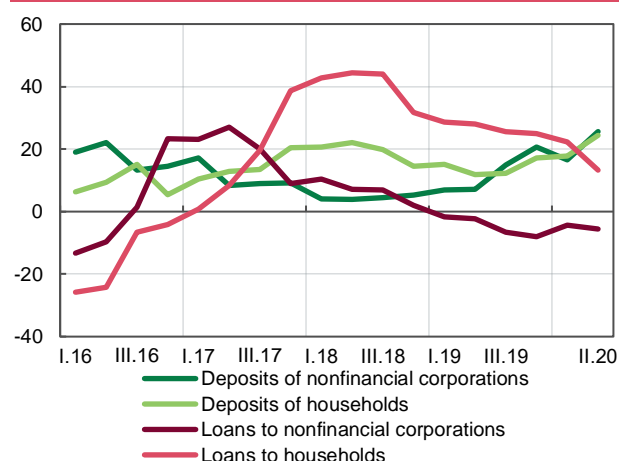
* NEER as of 29.07.2020.

Source: IFS, NBU staff estimates.

Figure 2.6.8. Net foreign currency sales by banks' clients and NBU's interventions, USD bn

* As of 28.07.2020.

Source: NBU.

Figure 2.6.9. Hryvnia deposits and loans, % yoy

Source: NBU.

strengthened. As a result, the hryvnia's NEER also weakened.

Despite the fact that the supply of foreign currency exceeded demand, in April 2020 the NBU decided to cut back on its daily scheduled purchases of foreign currency to replenish international reserves (from USD 50 million to USD 20 million) until the end of Q3 2020. This decision was motivated by a decrease in the depth of the interbank FX market, resulting from the adverse impact of the pandemic on the volume of FX transactions.

The NBU net purchases of foreign currency made up USD 2.5 billion in Q2 (USD 1.1 billion year-to-date). These operations were the main source of banking system liquidity. In spite of that, liquidity shrank in Q2 2020 due to the accumulation of funds in government accounts and an increase in cash in circulation. Nevertheless, the level of liquidity, as expressed by the amount of balances in the banks' correspondent accounts and NBU certificates of deposit, remained high, with average daily balances amounting to UAH 190 billion.

The temporary increase in turbulence on the FX market and the depreciation of the hryvnia seen in July were caused by situational psychological factors. As before, the NBU smoothed out market fluctuations – in July, the central bank was a net seller of foreign currency.

Hryvnia deposits have already exceeded their pre-crisis levels

Q2 2020 continued to witness deposit inflows to the banking system, with hryvnia deposits already exceeding their pre-crisis levels. The buoyant growth in hryvnia deposits was mainly driven by growth in household deposits. Among other things, this growth resulted from households' rising propensity to save, bolstered by the uncertainty as to when quarantine will be lifted and whether social payments will be increased. In contrast, lending to nonfinancial corporations remained sluggish due to the fall in economic activity. Meanwhile, the significant slowdown in the growth in hryvnia household loans resulted from reduced consumption by households.

In order to boost lending, the NBU introduced [interest rate swaps](#) in Q2 2020 with the aim of not only promoting lending to businesses and households, but also helping to decrease interest rates in the economy further. The NBU also signed an [FX swap](#) agreement with the EBRD, with the first transactions already settled under this agreement. The EBRD will use the hryvnias it received to lend to Ukrainian businesses, while the swap FX purchases will increase international reserves. The NBU also [took other measures](#) to support the banking sector. These measures envisage that the NBU, until June 2021, will impose no penalties against banks and banking groups for their failure to comply with the existing capital adequacy, liquidity, credit risk ratios, and so on.

Box 5. Monetary Policy Measures to Support the Banking System and the Economy during the Crisis

Like most other central banks, the NBU took a broad range of measures in response to the spread of COVID-19 to reduce turbulence on the Ukrainian financial market and to support the real and financial sectors of the economy. Given the greater preparedness of the Ukrainian economy for this crisis (read more in Box 5 *Macroeconomic Conditions at the Start of the Current Crisis* in the [April 2020 Inflation Report](#) on page 34) and low inflation, the first set of measures enabled the NBU to normalize the financial market reasonably quickly during the acute phase of crisis, while the second set created the right conditions for the resumption of business activity.

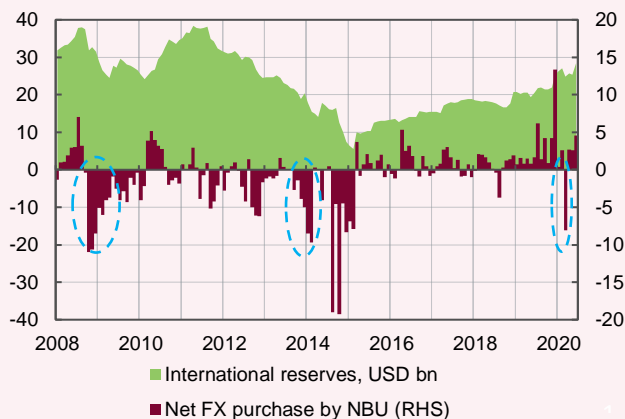
Most central banks promptly responded to the unfolding crisis caused by the spread of the coronavirus disease by conducting expansionary monetary policies. These policies were mainly aimed at:

- providing cheaper financing for businesses, households and governments by cutting key policy rates, and, where key policy rates could not be reduced any further, by expanding quantitative easing programs
- supporting liquidity and expanding the funding base of banks, and other financial and even nonfinancial institutions and
- encouraging financial institutions to ramp up lending through relaxing regulatory and supervisory requirements.

The NBU also responded to the challenges posed by the coronavirus crisis and, taking into account best world practice, deployed a broad range of orthodox and new tools in order to calm the financial market and support the real and financial sectors of the economy.

More specifically, in the first few weeks after the introduction of quarantine measures, the NBU managed to effectively curb the panic buying of foreign currency caused by psychological factors. Despite the fact that the scale of the FX market shock in March 2020 was comparable to that seen in 2008–2009 and in 2014, the central bank was also able to allay exchange rate anxiety. Among other things, the NBU increased its presence on the FX market during that period. In March, net sales of foreign currency by the NBU amounted to USD 2.2 billion.

Figure 1. Net FX Purchases by NBU and International Reserves*



* As of 30.06.2020.
Source: NBU.

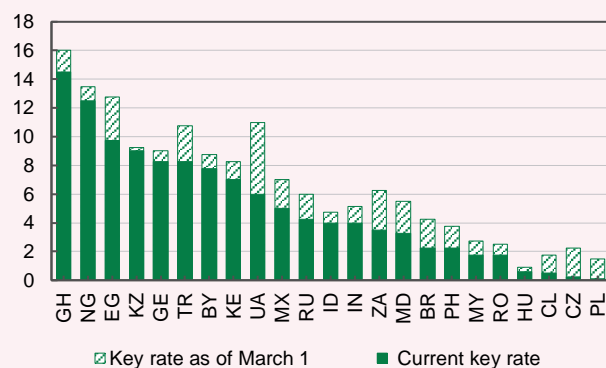
In March–April, the NBU supplied the banks with foreign currency cash in order to eliminate the difficulties that the

banks were facing due to disruptions in air travel. As a result, the panic quickly subsided, and the NBU later recovered its international reserve losses and decreased its presence on the FX market.

The stabilization of the FX market enabled the NBU to support the economy with the use of monetary instruments, without causing a surge in inflation.

First of all, the NBU created the conditions for household and corporate loans to become more affordable, by markedly easing its monetary policy. Today, the NBU is taking the lead among emerging markets in cutting the key policy rate.

Figure 2. Key Policy Rates in Selected EM*, %



* As of 29.07.2020.
Source: official web-pages of central banks.

Many leading central banks (such as the Bank of Japan and the ECB) had exhausted the room for using their key policy rates to support their economies long before the pandemic struck, having already reduced these rates to almost zero or even below. These banks therefore had to resort to a non-traditional monetary tool – a significant expansion in their quantitative easing programs. However, for central banks in emerging markets (including Ukraine), the macrofinancial risks from quantitative easing could significantly exceed any potential benefits. This is because quantitative easing will be effective and will not create any excessive risks to macrofinancial stability only if a number of preconditions are met, such as:

- the room for cutting the key policy rate to stimulate the economy has been exhausted
- the domestic currency has the status of a reserve currency, or a country has large international reserves to sterilize excess money supply and offset depreciation pressures

- inflation expectations have been anchored, and the central bank and the domestic currency enjoy high confidence
- there is a developed secondary market for government securities.

Thus, taking into account Ukrainian realities, the introduction of quantitative easing would most likely have weakened confidence in the NBU, destabilized economic expectations, and increased the portfolio outflows, while also increasing devaluation and inflationary pressures.

Apart from cutting the key policy rate, the NBU introduced new instruments that support lending and provide banks with flexibility in their liquidity management. These are:

- [long-term financing for banks for a term from one to five years](#) at an interest rate that equals the key policy rate. This will enable the banks to obtain long-term funds at affordable rates and to use them to lend to large-scale, long-term projects, such as infrastructure projects.
- [interest rate swaps](#), which enable banks to manage their interest rate risk.

The introduction of [zero reserve requirements](#) for hryvnia deposits and a [change in the method for determining bank liabilities subject to reserve requirements](#) also helped increase liquidity in the banking system that could be used for lending.

With a view to enabling the banks to focus on supporting the economy during the most acute period of the crisis, the NBU for the duration of the crisis eased some regulatory and supervisory requirements, among other things, by putting off the requirement that banks create capital buffers, postponing the submission and publication of financial statements, and suspending all on-site inspections and stress tests of banks. The NBU also recommended that the banks refrain from paying dividends at least until October 2020, so that they could use all the released funds to support the economy.

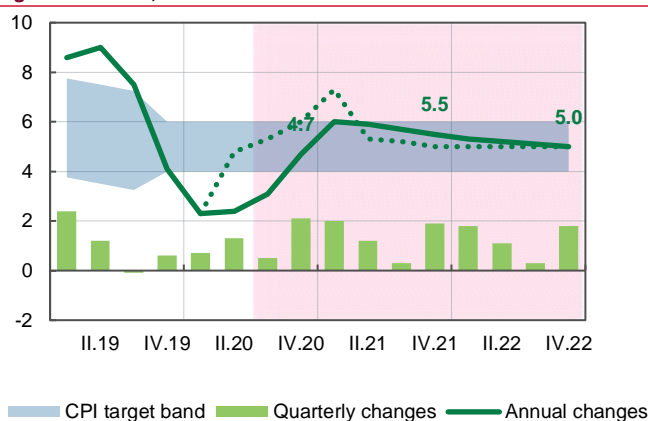
The NBU's active efforts to ease monetary conditions and measures to increase the banks' ability to manage their liquidity helped bring down the cost of hryvnia interbank funding and interest rates on new hryvnia loans and deposits (for more details, see Section 2.6 *Monetary Conditions and Financial Markets* on page 29).

Part 3. Economy of Ukraine: Forecast

3.1. Inflation Developments

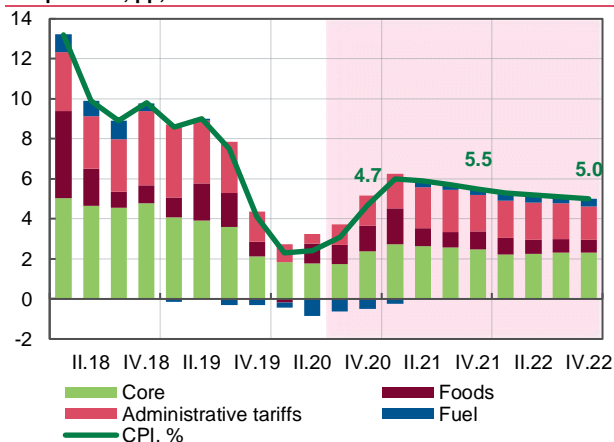
- Inflation will continue to rise gradually and return to its target range in Q4 2020, driven by the resumption of economic activity and the recovery of aggregate demand on the back of loose monetary and fiscal policies.
- In 2021–2022, inflation will be within its target range of $5\% \pm 1$ pp, thanks to a prudent monetary policy.

Figure 3.1.1. CPI, %



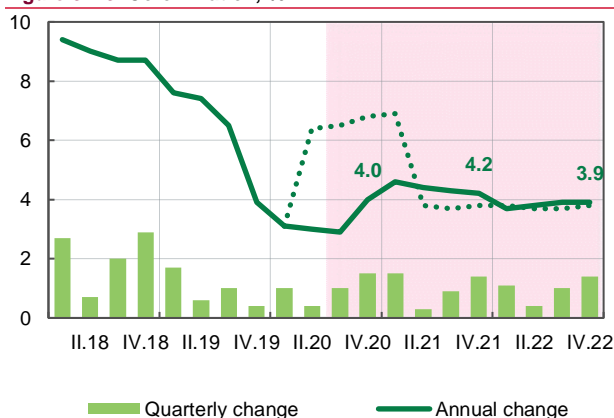
Source: SSSU, NBU staff estimates.

Figure 3.1.2. Contributions to annual CPI growth by main components, pp, %



Source: SSSU, NBU staff estimates.

Figure 3.1.3. Core inflation, %



Source: SSSU, NBU staff estimates.

Inflation will return to its target range of $5\% \pm 1$ pp, driven by monetary and fiscal stimulus

After the rapid slowdown of inflation seen in H1 resulting from economic recession, inflation will speed up gradually, returning to its target range by the end of 2020. This will be, among other things, due to accommodative fiscal and monetary policies that aim to restore economic activity and consumer demand. Prices will be also affected by higher energy prices and a poorer fruit harvest.

Growth in real household income and a corresponding improvement in purchasing power will be important inflation drivers in 2021. Inflationary pressures will have the strongest impact on the services sector, especially small businesses. In light of this, monetary policy will aim to keep inflation close to its 5% target.

Core inflation will accelerate, propelled by the resumption of economic activity, and will hover around 4% during the entire forecast period

Underlying pressures will increase somewhat in Q4 of the current year, pushed up by fiscal and monetary stimulus aimed at overcoming the crisis.

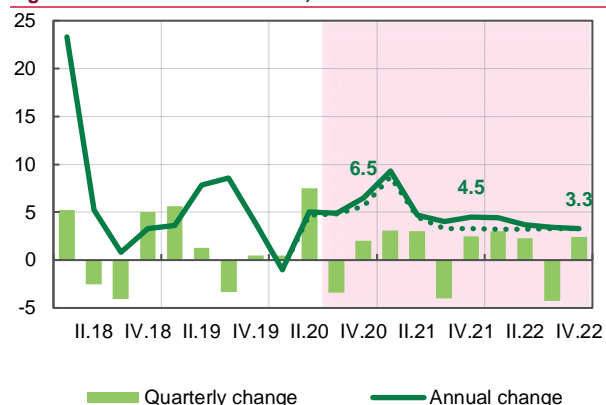
The recovery of the Ukrainian and global economy in 2021 will contribute to further wage growth, thus intensifying fundamental inflationary pressures, which will be primarily reflected in the higher cost of market services. The gradual transition of monetary conditions from accommodative to neutral will also decrease inflationary pressures.

Food price inflation will accelerate in early 2021, propelled by rising demand, but the expected sufficient supply of fruit and vegetables will reduce it to 3% to 5% in 2021–2022

Raw food price inflation will by late 2020 remain close to its current level of 5% to 6.5%. In early 2021, it will temporarily accelerate, to approximately 9%, driven by growing consumer demand and labor costs. The resumption of economic activity and the complete lifting of quarantine restrictions will push up demand for food.

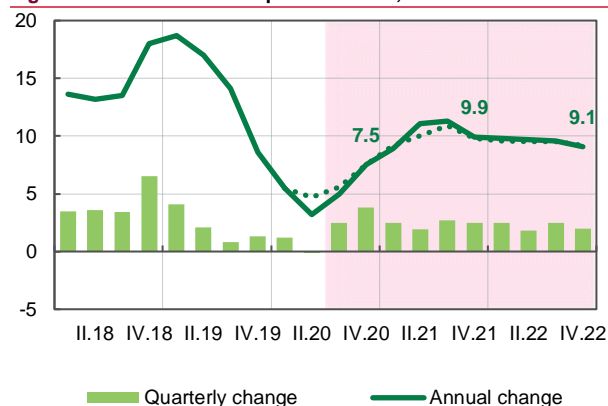
After newly harvested food enters the markets, food price inflation will stabilize at a level below 5% from mid-2021. Looking ahead, this moderate growth in prices will be supported by a rise in nominal and real household incomes. At the same time, price growth will be restrained by a larger food supply thanks to increased production in agriculture.

Figure 3.1.4. Raw food inflation, %



Source: SSSU, NBU staff estimates.

Figure 3.1.5. Administered price inflation, %



Source: SSSU, NBU staff estimates.

Administered price inflation will start to accelerate in the current year, hitting 9% to 10% in 2021–2022

An increase in the excise tax on tobacco products will push up the prices of these products by 14% to 16% every year, making the largest contribution to administered price inflation throughout the forecast period. Wage growth in the economy in 2021 will also cause an upward wage revision in the utilities sector, driving up the prices of some utilities.

In H1 2020, gas and heating prices for households fell markedly, due to low prices on European trading platforms and large reserves of gas in storages. In future, however, these prices will grow again, buoyed by the gradual recovery of global demand and the approaching heating season.

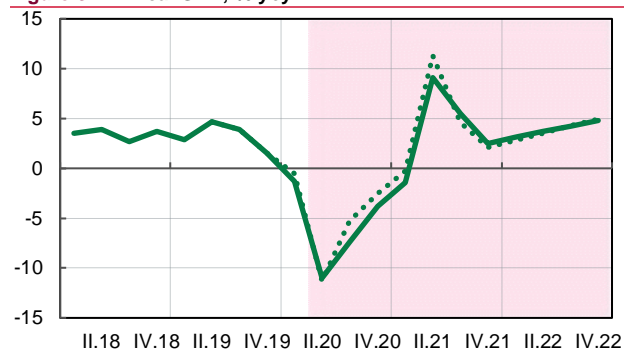
Fuel prices in 2020 will fall by almost 16%, due to oil being considerably cheaper than last year, which will be a significant disinflationary factor for many other goods and services in the economy. However, the recovery of the global economy, together with more robust demand for oil products, will push up fuel prices in Ukraine in 2021–2022.

The changes in the inflation forecast compared to the previous *Inflation report* resulted mainly from reassessments of the development of the crisis and future recovery. These changes had the strongest impact on core inflation – a component of headline inflation – which was little affected by the depreciation of the hryvnia and the expected shortages of some goods in Q2 due to falling domestic demand. The slower-than-expected economic recovery in 2020 also affected the forecast for core inflation, which was revised downwards, from 6.8% to 4.0%. Consequently, the forecast for headline inflation was also revised downwards, from 6.0% to 4.7%.

3.2. Demand and Output

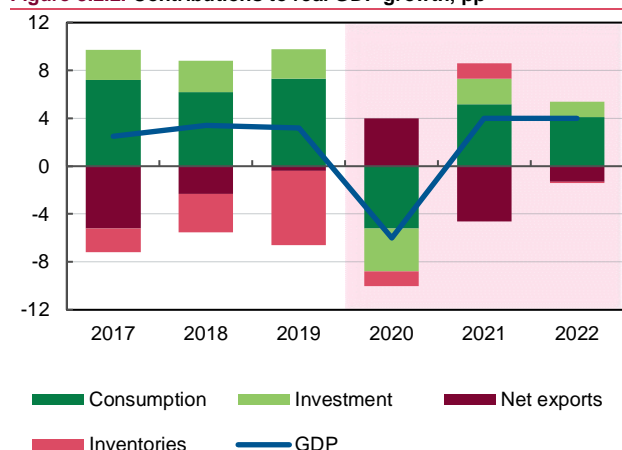
- Economic activity will start to rebound in H2. Nevertheless, for 2020 as a whole real GDP will decline by 6% due to the dramatic fall seen in Q2.
- In the years to come, GDP will grow by about 4%, propped up by monetary and fiscal stimulus and rebounding external demand. Private consumption will be the main driver of economic growth.

Figure 3.2.1. Real GDP, % yoy



Source: SSSU, NBU staff estimates.

Figure 3.2.2. Contributions to real GDP growth, pp



Source: NBU staff estimates.

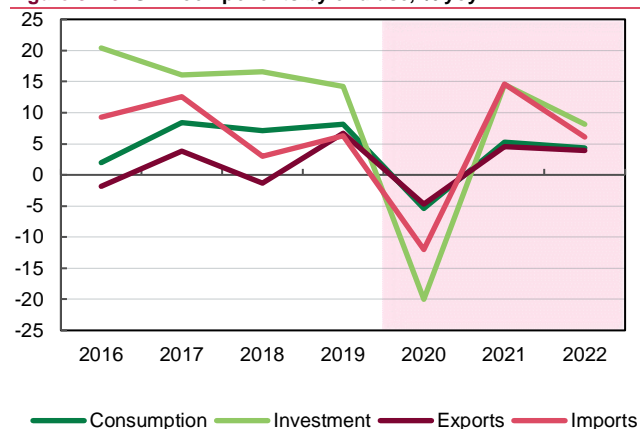
Despite the extension of the adaptive quarantine, economic activity will pick up in H2 2020. Many quarantine restrictions have already been lifted, but some regional restrictions could remain, depending on the epidemiological situation in a given region. Most companies in the services sector, which suffered the most from the coronavirus crisis, have already recommenced full-time operations. Although remaining in a worse state than before the crisis, the labor market is showing some signs of stabilization. The accommodative monetary policy measures taken by the NBU, loan repayment holidays, tax breaks, and expanded budget-financed unemployment benefits provided additional support for business activity and private consumption. The remaining restrictions will not ban the operation of companies in most economic activities, but will only require the application of enhanced anti-epidemiological measures during interactions with consumers. Accordingly, they will no longer be the main factor limiting business activity.

That said, the pace of economic recovery will be restrained by the still depressed consumer and investment demand. During the crisis, households significantly cut back on their spending on non-staple goods, while businesses suspended their development plans and revised their payrolls and wage bills. Given the high level of uncertainty over how the coronavirus will spread, households and businesses are likely to continue to be quite restrained in their consumer and investment decisions. What is more, other countries' slow emergence from the crisis is narrowing the opportunities for a quick pick-up in exports.

The 2020 GDP forecast has been revised downwards to a more substantial fall of about 6%. In the coming years, the economy will return to growth of 4%

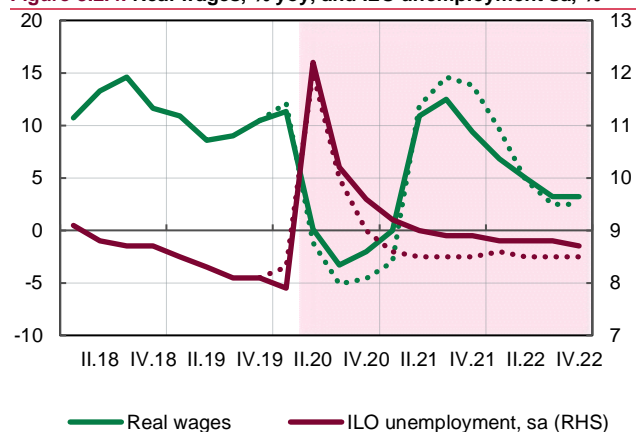
The economic crisis caused by quarantine restrictions and depressed demand both domestically and globally peaked in Q2 of the current year (GDP will drop by about 11% yoy). As the main restrictions were lifted, the economy has been gradually recovering since Q3, on the back of accommodative fiscal and monetary policies. That said, the pace of recovery will vary across economic activities. The services sector, trade and transportation, which were hit the most by quarantine restrictions, will partly recover as early as Q3. However, the performance of these sectors will not return to pre-crisis levels for a long time, as consumer sentiment will remain depressed. International passenger carriage services will be limited for a long time, and will only recover completely when the pandemic subsides globally. Export-oriented industries, such as the metals industry, will fully recover with the rebounding of global demand next year. Although agriculture is expected to be among the sectors that will be least affected by the quarantine restrictions, this year's

Figure 3.2.3. GDP components by end use, % yoy



Source: NBU staff estimates.

Figure 3.2.4. Real wages, % yoy, and ILO unemployment sa, %



Source: SSSU, NBU staff estimates.

harvest is expected to be slightly lower due to poorer weather conditions.

In 2021–2022, the Ukrainian economy will grow, propped up by monetary and fiscal stimulus and rebounding external demand. Economic recovery after the quarantine will be accompanied by a change in certain consumer preferences and business models in the economy. More specifically, there will be an increase in the role of IT infrastructure for remote work communications, which, among other things, will decrease demand for offices. Restrictions on international flights will also give some impetus to the development of domestic tourism and related services, and so on.

After a significant fall during the coronavirus crisis, private consumption will be the main driver of GDP growth in 2021–2022

Private consumption will drop by 6% in the current year. Domestic quarantine restrictions and the global crisis halted activity in many sectors of the economy, and also led to wage cuts or reduced demand for labor. As a result, the unemployment rate peaked in Q2, and real wages for the whole year will decline even amid low inflation. This, in turn, will curtail household consumer spending. Total consumption is expected to fall slightly less – by 5.4%, as it will be partially supported by government spending.

Once the main quarantine restrictions are lifted, the Ukrainian economy will be able to benefit from monetary and fiscal stimulus, which will be one of the factors behind the emergence of the economy from the crisis and a pick-up in consumer activity.

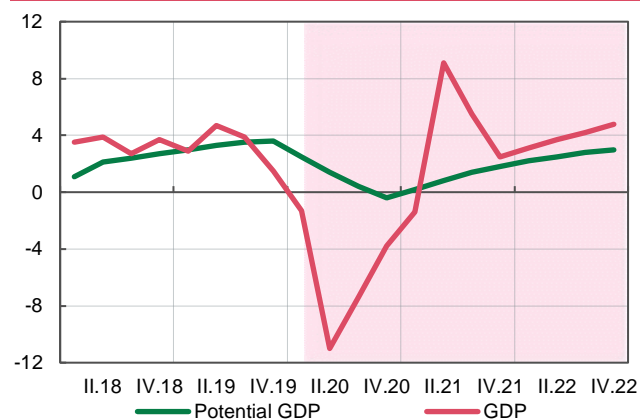
In 2021, private consumption (+6%) will be the main driver of GDP growth. Private consumption will be mainly buoyed by the resumed growth in real household income, and improved consumer sentiment amid loose monetary conditions. In 2022, growth in both wages and private consumption will slow somewhat, but will still remain the main driver of GDP growth.

Investment activity will decline by 20% in 2020, due to businesses naturally curtailing investment and spending money on more urgent needs on the back of their worsening financial performance and rising uncertainty. Investment will be supported in part by government road construction projects, and projects that have already been launched.

Investment activity is expected to grow in 2021, driven by the emergence of the global economy from the crisis, the resumption of lending, rising corporate income, and reduced uncertainty. Higher wage costs on the back of stronger competition for labor will restrain more active growth in business investment.

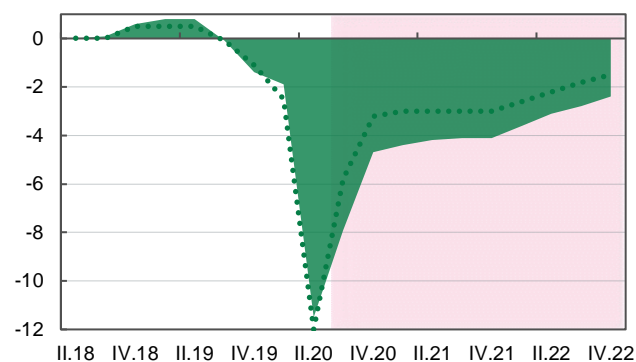
In 2020, net exports will make a positive contribution to GDP, due to a more significant reduction in the volume of imports compared to exports. In the current year, exports will drop by 5% in real terms. The drop will be mainly attributed to a lower harvest caused by poorer weather conditions and the resulting decline in grain exports, as well as to rather

Figure 3.2.5. Actual and potential GDP, % yoy



Source: SSSU, NBU staff estimates.

Figure 3.2.6. Output gap, % of potential GDP



Source: NBU staff estimates.

depressed external demand for metallurgical products. Exports of other goods and services will also shrink in the wake of falling global demand.

Imports are expected to decrease by 12% in the current year. Demand for imported goods will decline markedly, dragged down by depressed investment activity and gloomier consumer sentiment because of the crisis. Large gas stocks in storages carried over from the previous heating season will reduce the need for energy imports. Imports of services will also decline due to the impact of quarantine restrictions on international tourism.

Both exports and imports are expected to return to growth in 2021, propelled by the recovering domestic and global economy. The contribution of net exports to GDP will turn negative again, as imports will increase more quickly than exports. Consumer imports will be driven by rising real household income, improved consumer sentiment, and the low volatility of the hryvnia REER. The need to increase investment following a sharp fall will push up investment imports. Growth in the volume of exports will be driven by rebounding global demand – and consequently prices – for raw materials, such as metallurgical products, as well as by an increase in agricultural output.

The forecast for the fall in real GDP in 2020 has been raised, to 6.0% (from 5.0% in the previous *Inflation report*) as a result of a revision in the pace of recovery in H2, which will be slower due to a longer period of restrictions on economic activity under adaptive quarantine, and due to a deeper fall in the global economy.

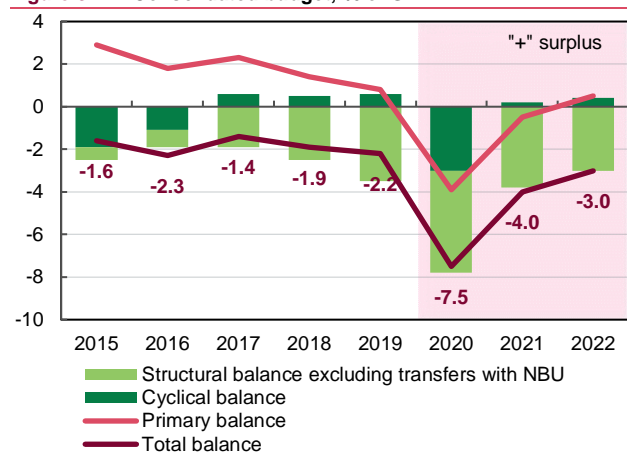
After peaking in Q2 2020, the negative GDP gap will start to narrow thanks to rebounding domestic and external demand

Potential GDP temporarily stopped growing in 2020 amid falling capital contributions and declining productivity in the wake of the imposition of quarantine restrictions. Manufacturing productivity will decline for a number of companies, while production facilities will be partially decommissioned due to their underutilization.

Potential GDP will gradually return to growth in 2021–2022, buoyed by the lifting of quarantine restrictions and the commissioning of additional production facilities. The post-crisis optimization of business processes and the convergence of the domestic economy with that of more advanced neighboring countries will ensure productivity growth.

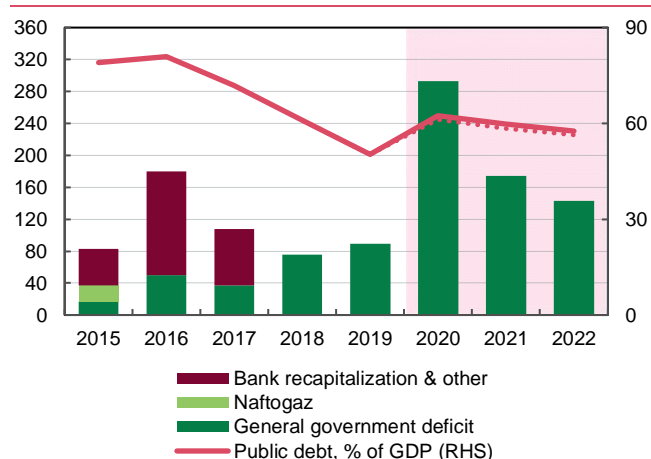
The decline in economic activity in Ukraine and in its MTPs caused by the introduction of quarantine restrictions generated a significant negative GDP gap in Q2 2020. This gap will gradually narrow in future, as domestic aggregate demand recovers and investors' interest in emerging markets returns.

Figure 3.2.7. Consolidated budget, % of GDP



Source: STSU, NBU staff estimates.

Figure 3.2.8. Broad public sector deficit, UAH bn, and public debt, % of GDP



Source: IMF, STSU, MFU, NBU staff estimates.

Fiscal policy will be expansionary in 2020

A positive fiscal impulse of about 2% of GDP will be given to the economy with a view to counteracting the negative effects of the crisis. As a result, the consolidated budget deficit will widen to 7.5% of GDP in the current year. The budget funds will be used to stimulate economic activity (in the form of capital expenditures), and to support businesses and households in the face of declining consumer activity and employment.

The economic crisis will reduce budget revenues – general government revenues will decline by about 10%, dragged down by falling tax and nontax revenues. Among tax revenues, the largest decrease will be seen in income tax revenues due to a significant deterioration in companies' financial results. In spite of that, the government will have to increase its social spending to support households during the economic crisis, spending on preventing the spread of the epidemic, while also refraining from saving on capital expenditures (including road construction) to support the economy.

This loose fiscal policy will generate a budget deficit that will be one of the largest in the history of Ukraine. With low proceeds from privatization, the deficit will be financed through official and market borrowing. Continued cooperation with the IMF will play a key role here – apart from ensuring that Ukraine receives official financing from the IMF, this cooperation will ease Ukraine's access to the international capital markets at reasonable interest rates.

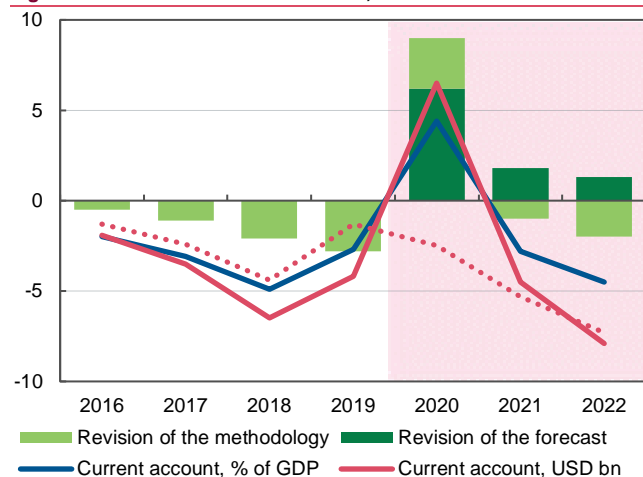
Once Ukraine is put on the track to steady economic growth, the need for significant fiscal stimulus from the government will decrease. This will gradually reduce the deficit of the general government, to 4% of GDP in 2021, and to 3% of GDP in 2022.

Public and publicly guaranteed debt will increase to 62% of GDP in 2020, driven mainly by a sizeable increase in the budget deficit, a decline in nominal GDP, and an appreciation of the UAH/USD exchange rate compared to the end 2019. Looking ahead, this figure will decrease by 2 to 3 pp each year, due to economic growth, a prudent fiscal policy, and low exchange rate volatility.

3.3. Balance of Payments

- In 2020, the current account will record a surplus, due to a certain resilience of exports to the crisis, and a drop in imports caused by falling domestic demand and the number of trips.
- In 2021–2022, the current account is expected to return to a deficit, which will widen gradually, driven by pent-up demand and recovering economic activity.
- Continued cooperation with the IMF will enable Ukraine by the end of 2020 to expand its international reserves to almost 100% of the adequacy criterion (100%-150% of the IMF criterion is considered sufficient), and to ensure that reserves grow further. In addition, the persistence of loose financial conditions in the world will increase investors' interest in Ukraine.

Figure 3.3.1. Current account balance, USD bn



Source: NBU.

The current account will record a surplus in 2020, driven by narrowing domestic demand. In 2021–2022, the current account is expected to switch to a deficit again as economic activity recovers

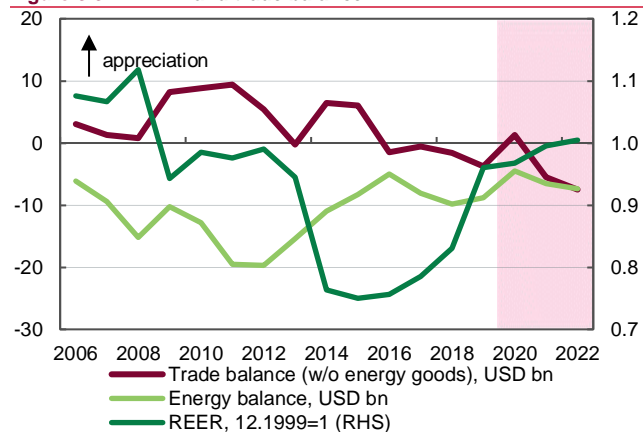
The current account figure has been raised significantly, to a surplus of 4.4% of GDP [in contrast to 2.7% of GDP before the methodology for calculating FDI was revised (see Box 4 *Companies' Reinvested Earnings: the Impact on Balance of Payments* on page 27) compared to the deficit of 1.7% of GDP forecast in the *April 2020 Inflation Report*. The surplus will result, among other things, from a sizeable decrease in imports. Falling demand for durable goods, borders closed to travel, and low prices and demand for energy have considerably reduced the need for imports. Simultaneously, the pandemic had a less pronounced effect on exports due to the strong demand for food and the fact that Ukraine is weakly involved in global production chains – it exports mainly unprocessed foods, the demand for which has remained relatively stable. In addition, the amount of remittances from labor migrants was larger than expected, as most migrants kept their jobs abroad.

In 2021–2022, the current account is expected to return to a deficit, driven by pent-up investment demand, the resumption of travel, rebounding household demand for imports, and a decrease in gas transit.

In 2020, Ukrainian exports showed some resilience to crisis events. This was due to the fact that the bulk of Ukrainian exports are either agricultural or mining and smelting products, which remained in demand even during the pandemic. Exports of goods will drop by 5% on the back of lower commodity prices and a poorer harvest of grains as a result of less favorable weather. In 2021–2022, exports will grow by 4%–5%, buoyed by increased productivity in agriculture, higher prices and a rise in metallurgical exports.

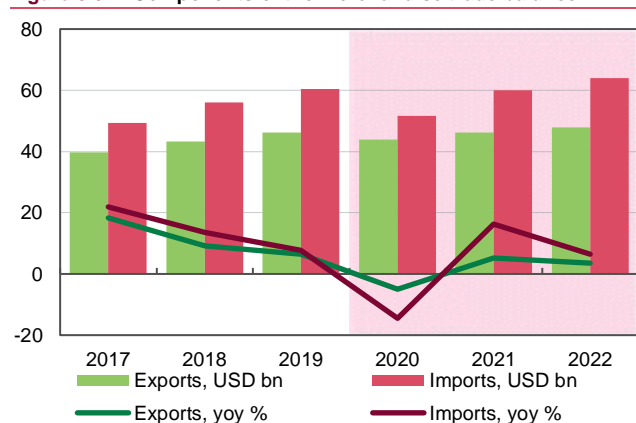
The 15% decline in imports of goods in 2020 will primarily be driven by the energy component, which will decrease by 40%. The decrease in energy imports will result from a record fall in energy prices and a drop in the volume of gas imports on the back of large storage inventories. Non-energy imports will also drop, by 8%, as result of lower household income and weaker economic activity. In 2021–2022, imports of goods will expand (by 7%–16%) as demand bounces back and the hryvnia REER strengthens.

Figure 3.3.2. REER and trade balance



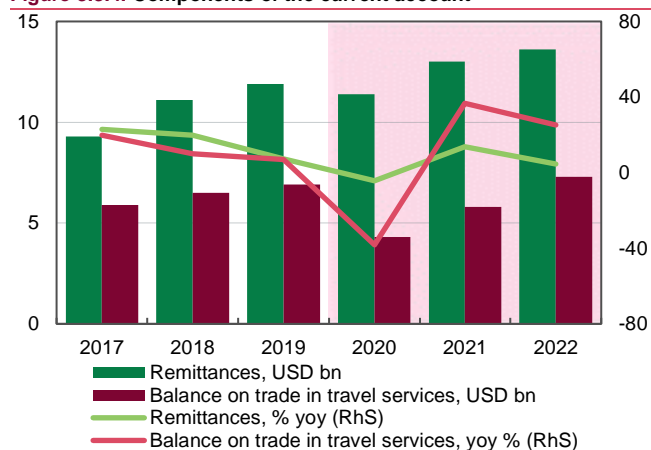
Source: NBU.

Figure 3.3.2. Components of the merchandise trade balance



Source: NBU.

Figure 3.3.4. Components of the current account



Source: NBU.

In 2020, a widening in the surplus in the trade in services will be mainly attributed to a decline in imports of travel services, by one third, in the wake of restrictions on travel. In 2021, tourism activity is expected to return to its pre-crisis level.

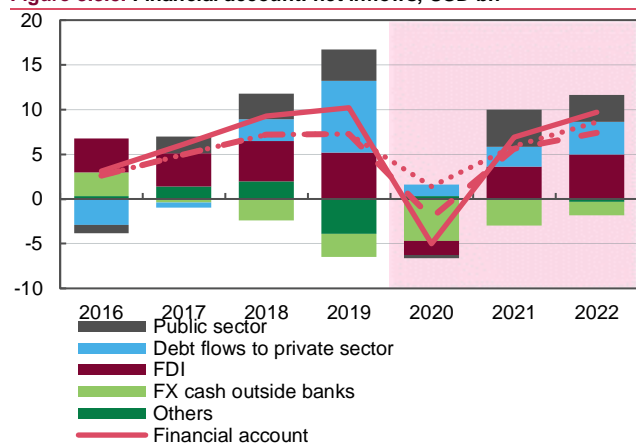
Remittances from labor migrants will shrink only slightly in 2020, by 4%, thanks to continued strong demand for labor in the sectors in which most Ukrainian workers abroad are employed. By the end of the current year, migrant numbers will return to their pre-crisis levels, as a result of which in 2021 remittances will reach the level of 2019 and will continue to grow.

The current account deficit will be financed through resumed debt inflows and borrowing by the government sector

Continued cooperation with the IMF will facilitate other government borrowing. In 2020, Ukraine expects to receive official financing from the EU, the World Bank, the IBRD, as well as through new placements of Eurobonds by the government. Investors' interest in emerging markets will gradually recover by the end of the current year as loose financial conditions persist globally. This will help finance an increase in the state budget deficit in 2020–2022, enabling Ukraine to successfully move through the period of large external debt repayments and counter a widening in the trade deficit.

Financing from the IMF and other international partners will help Ukraine to significantly increase its international reserves. International reserves are expected to rise to about USD 30 billion in 2020, growing to USD 33 billion in the coming years.

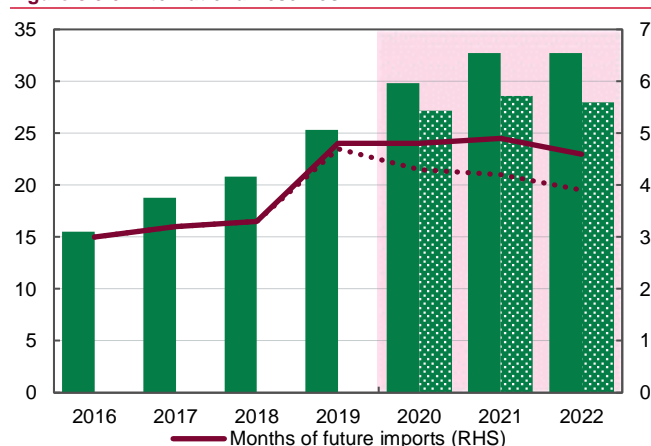
Figure 3.3.5. Financial account: net inflows, USD bn



Source: NBU.

The improvement in the current account forecast for 2020 resulted from the revision in the methodology for calculating FDI (see Box 4 *Companies' Reinvested Earnings: the Impact on Balance of Payments* on page 27), and from a revision in the forecast itself. Assumptions about a significant fall in demand for metallurgical products during the global crisis proved unfounded because infrastructure projects and production processes were halted more slowly than expected. As a result, the decline in exports has been revised downwards, to 5%, compared to 12% in the *April 2020 Inflation Report*. At the same time, the reduction in non-energy imports has been revised upwards, to 8% (compared to 4% in the *April 2020 Inflation Report*) on the back of a larger fall in demand for imported goods, in part due to the increased production of fertilizers by domestic producers. Remittances from labor migrants also proved to be more resilient to the crisis.

Figure 3.3.6. International reserves



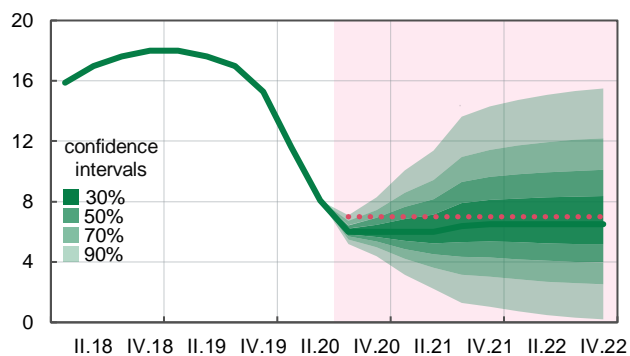
Source: NBU.

In part, this revision of the current account was offset by a decrease in financial account inflows, primarily due to larger accumulation of foreign currency cash outside banks.

3.4. Monetary Conditions and Financial Markets

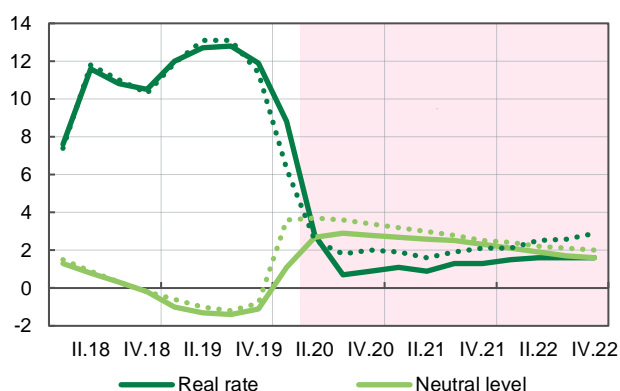
- Keeping the key policy rate below the neutral level will provide the monetary stimulus needed for economic recovery. As a result, inflation will rise gradually, reaching its target range in Q4 2020.
- The banking system will continue to maintain a significant liquidity surplus as the government converts its FX borrowings to finance the budget deficit and the NBU makes FX purchases to replenish international reserves.

Figure 3.4.1. Key policy rate, average, %



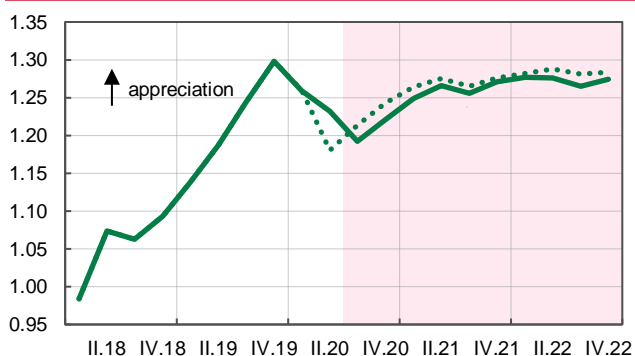
Source: NBU staff estimates.

Figure 3.4.2. Real interest rate* and its neutral level, %



* Deflated by inflation expectations that are based on the QPM.
Source: NBU staff estimates.

Figure 3.4.3. Hryvnia REER index, IV.2017 = 1



Source: NBU staff estimates.

Keeping the key policy rate low this year will help stimulate demand and economic recovery

In 2020, the key policy rate will remain below its neutral level. This loose monetary policy will stimulate the revival of economic growth after quarantine restrictions are lifted. In 2021, the key policy rate will rise in response to mounting inflationary pressures amid a recovery in consumer and investment demand. However, monetary conditions will remain stimulating up until mid-2022, given the relatively low key policy rate.

Interest rates in the financial markets have yet to fully reflect previous key policy rate cuts. The banks are expected to continue to lower interest rates on loans and deposits. However, continuing the consistent monetary policy and maintaining a reasonable balance between curbing inflation and providing monetary stimulus will help keep rates at single-digit levels.

The transmission effect of the key policy rate will be enhanced through the improved access of the banks and IFIs to financing following the introduction of new liquidity support instruments, as well as through the stimulation of real sector lending.

Estimates of the neutral interest rate level have been revised downwards in line with the decline of the estimated global neutral rate. The real neutral interest rate will gradually decrease.

The REER of the hryvnia will depreciate in Q3 2020 amid the loose monetary policy, but will strengthen afterwards thanks to domestic inflation outpacing that of Ukraine's MTPs. The REER will stabilize as inflation returns to target. The NBU will continue to smooth out excessive exchange rate fluctuations, while not counteracting market trends.

The banking system is expected to maintain a large liquidity surplus over the forecast horizon. In H2, the liquidity surplus will mainly be driven by the government converting its foreign currency borrowings in order to finance the budget deficit. Moreover, liquidity will be supported through long-term refinancing instruments. The NBU's purchases of foreign currency to replenish international reserves will be the main source of liquidity in 2021–2022.

Box 6. Estimating the REER Trend for Ukraine: BEER Approach

The degree of deviation of the REER from the trend (the REER gap) is of interest to central banks, as this metric is indicative of economic imbalances. Applying one of the standard REER trend estimation methods (known as BEER) to data for Ukraine has shown a moderate positive REER gap for 2019, an outcome that is consistent with bringing inflation to its target in accordance with the NBU's inflation targeting policy. Given the accelerated reduction of the NBU's key policy rate, which started in late 2019, the REER will approach its equilibrium level in the near future.

The real effective exchange rate (REER) is a major macroeconomic variable that indicates a tightening of monetary conditions and measures the price competitiveness of domestic producers in global markets¹⁵. An increasing (appreciating) REER can occur either due to a strengthening of the nominal exchange rate of the national currency, or because of higher relative inflation in the economy. In either case, real appreciation means an increase in prices for goods made by domestic producers relative to prices for similar goods produced by the country's trading partners.

Fluctuations in the REER may be due to the influence of fundamental and/or temporary effects. The former shape the indicator's trend and determine its long-term dynamics. The latter cause a REER gap – a short-term deviation of the actual indicator from its trend. Conventional macroeconomic theory says that monetary policy has no effect on economic trends. Rather, monetary policy is intended to bridge gaps, including the REER gap, to keep the economy on an equilibrium trajectory. This can be achieved by maintaining low inflation and a floating exchange rate. Under these conditions, the economy has the ability to return to the equilibrium, and deviations of the REER from its trend are only short-lived.

For research and modeling purposes, central banks use a number of standard approaches to REER trend estimation, which can be divided into three major groups:

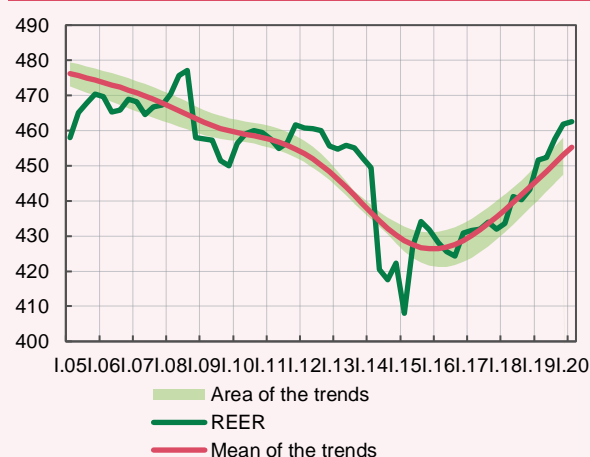
- FEER (Fundamental Equilibrium Exchange Rate) – [Williamson \(1994\)](#)
- NATREX (Natural Equilibrium Exchange Rates) – [Stein \(1994\)](#)
- BEER (Behavioral Equilibrium Exchange Rate) – Clark and MacDonald ([1997](#), [2000](#)).

The third approach is the most popular and easiest to implement. Under the BEER approach, the long-term relationship between the REER and relevant fundamentals is estimated directly by running a regression. At the same time, the REER trend can only be calculated when the explanatory variables themselves are at their trend levels. The difference from the first two approaches is that all trends are calculated independently of each other, making it impossible to take into account structural relationships between them.

The BEER approach is one of the alternative methods the NBU has used to estimate the REER trend. Its application envisages the use of variables that are usually used for such calculations as long-term fundamentals for Ukraine (see Table 1).

A special algorithm makes it possible to verify the models that best describe the REER, and hence identify the most significant economic factors. As the verification process involves choosing a certain group of regressions with the best statistical characteristics, Figure 1 highlights the area covered by the trends derived from such models, as well as their average value. Figure 2 presents the contributions of the most significant economic factors to variations in the REER trend.

Figure 1. Ukraine's REER¹⁶ and its trend



Source: NBU staff estimates.

Applying the BEER approach to Ukrainian data produces the outcome shown in Figure 1. These estimates indicate that up until 2016, the exchange rate trended towards depreciation. Contributions from all components were negative. The biggest negative contribution was the drawdown of net foreign assets in an effort to keep the nominal exchange rate overvalued. Since 2016, the REER trend has been moving towards appreciation. Factors that have strengthened the REER trend in recent years have been an increase in net external assets and favorable conditions in the global commodity markets. Meantime, real appreciation was constrained by a relatively tight fiscal policy. The latter slowed the increase in domestic demand and thus the growth in domestic prices. However, this effect had faded by the end of 2019. Combined with a gradual reduction in the productivity gap, this will lead to a further appreciation of the REER trend.

During the fixed exchange rate regime, the REER was characterized by significant deviations from the trend, reflecting an accumulation of imbalances in the economy – in particular volatile inflation. These imbalances materialized during the crises of 2008–2009 and 2014, when the REER

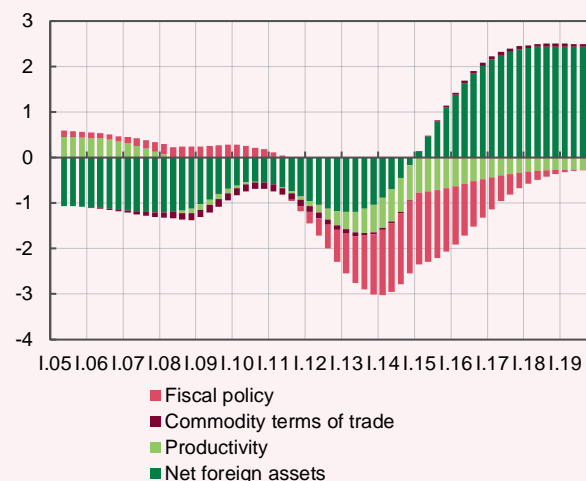
¹⁵ The real exchange rate shows the ratio between consumer basket prices in different countries. The effective exchange rate is a weighted average for one country in relation to its trading partners.

¹⁶ Natural logarithm of the REER index multiplied by 100, base period 2Q 2012, s.a.

became undervalued. After Ukraine shifted to a floating exchange rate regime and the economy stabilized, the REER of the hryvnia fluctuated around the trend, with the exception of 2015, when the Ukrainian economy experienced a positive REER gap, primarily due to relatively high inflation. The positive gap widened somewhat at the end of 2019, primarily driven by the nominal appreciation of the hryvnia. However, this appreciation put the brakes on inflation, which led to a narrowing of the REER gap. That is, the economy reached a low-inflation equilibrium, which is the purpose of the inflation-targeting regime.

The accelerated reduction of the NBU's key policy rate, which started in late 2019, will help the REER approach its equilibrium level in the near future, provided inflation continues to stay close to the 5% target.

Figure 2. Contributions of fundamentals to changes of the REER trend, %



Source: NBU staff estimates.

Table 1. Variables for estimating the REER trend for Ukraine

Variable	Specification	Expected sign
Net foreign assets	International investment position to GDP	(+) ¹⁷ – debtor's position of a country should be compensated for by improved trade balance, implying REER depreciation
Interest rate differential	Relative ¹⁸ money market interest rates, deflated by consumer inflation of the previous 4 quarters	(+) – hot capital inflows exert appreciation pressure on the REER
Degree of openness of the economy	(Exports + Imports)/GDP relative to MTPs	(-) – increased competition in the international markets leads to lower prices for tradable goods, reducing overall inflation and causing the REER to depreciate
Terms of trade index	This index reflects price ratios for Ukraine's exports and imports	(+) – a higher terms of trade index should lead an appreciation of the REER due to the real income effect
Labor productivity difference	Relative GDP per capita	(+) – reflection of the Balassa-Samuelson effect
Fiscal Policy	Relative general government expenditures to GDP	(+) – loose fiscal policy stimulates additional demand, which increases inflation and promotes real appreciation

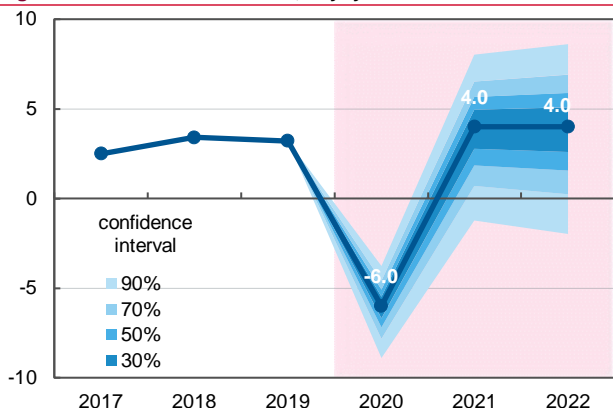
¹⁷ In this model, the REER appreciates when it increases.

¹⁸ Indicators estimated against weighted average indicators of 39 countries that are Ukraine's MTPs. The weights are floating and correspond to the weights for estimating the REER.

3.5. Risks to the Forecast

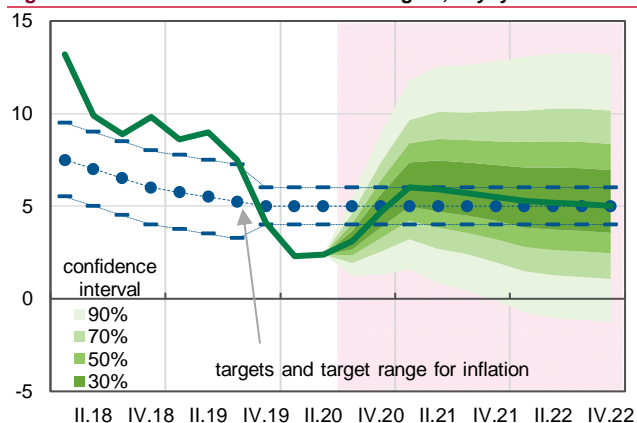
- The macroeconomic forecast relies on the key assumption that Ukraine's cooperation with the IMF continues.
- The main risk to the realization of the forecast is a continuation of the coronavirus pandemic and the measures imposed to combat it. The duration of the lockdown will determine how fast the global and Ukrainian economies can recover.

Figure 3.5.1. Real GDP forecast, % yoy



Source: NBU staff estimates.

Figure 3.5.2. CPI forecast and inflation targets, % yoy



Source: NBU staff estimates.

The forecast is given in a fan chart. This chart type is used to illustrate uncertainty with regard to predicted future values. For instance, the probability that the inflation rate will be in the range of the darkest shaded area in the chart (around the central line) is 30%. The same applies to other chart areas, implying the 90% probability that the inflation rate will be in the range of the lightest shaded area.

The key assumption of this forecast is that Ukraine continues to cooperate with the IMF, as set forth in the Memorandum of Economic and Financial Policies. Complying with the terms of a new Stand-By Arrangement with the IMF, including those that require that Ukraine conduct consistent fiscal and monetary policies, will safeguard macroeconomic stability, which is required for a steady and sustained economic recovery. Cooperation with the IMF has been growing increasingly important, as both the global and Ukrainian economies have grappled with the crisis and Ukraine will need to borrow from the international capital markets. IMF support is important in terms of financing budget expenditures to combat the fallout from the pandemic, making timely and complete repayments on public debt, preserving access to the global capital markets, and maintaining international investors' interest in Ukrainian assets.

A significant risk to the outlined forecast is a worsening of epidemiological conditions in Ukraine, in particular due to the probable increase in the incidence of COVID-19 in the fall or winter, and the need to impose more severe and longer-lasting quarantine measures. This could lead to a deeper slump in the Ukrainian economy this year. As a result, it may be necessary to further ease fiscal and monetary policies to support the economy and households.

The final scale and timing of steps to raise social standards, which were not known when the forecast was being prepared, creating an additional element of uncertainty for future monetary policy. On one hand, rising social standards can have a stimulating effect on economic growth, budget deficits, and inflation. On the other hand, this increase in social standards will be taking place while aggregate demand is still weak and the economy is recovering from the crisis. Future monetary policy will take into account the entire range of these factors and their impact on the economy. Accordingly, the key policy rate forecast could be altered as more certainty emerges about the scope and timing of the revision of social standards and the assessment of their economic impact.

From the external environment perspective, the duration of the coronavirus pandemic and restrictive measures are also a major source of risk. Should the pace of recovery of MTPs' economies be slower than currently projected, the Ukrainian economy will likely suffer the negative impact of low global demand for Ukrainian exports and continued capital outflows from EM countries. In such a scenario, the NBU's monetary policy will be a balancing act between the need to reduce inflationary pressures caused by weakening the hryvnia, and the need to support the economy.

Degree of impact on the baseline scenario

		Probability that a risk will materialize		
		Low <15%	Medium 15%–25%	High 25%–50%
Degree of impact on the baseline scenario	Weak	Higher volatility of global food prices		
	Moderate	Lower production of major agricultural crops		
	Strong	Escalation of the military conflict	Suspension of the program with the IMF Judicial decisions on the financial system	The coronavirus pandemic lasting longer Deep global economic recession Rapid increase in social standards

Reductions in grain, oilseed, and fruit crops in Ukraine due to adverse weather conditions remain a risk. Crop shortages could lead to higher-than-expected food inflation and a deepening fall in GDP due to lower agricultural output. An increase in export prices would partially offset a decline in the volume of grain exports. However, the decline in export proceeds would raise the depreciation pressure on the hryvnia and thus on inflation. The monetary policy response will reflect a tradeoff between the need to reduce inflationary pressures and the need to mitigate the loss of economic growth.

From the perspective of food price inflation, there is a risk of elevated volatility in global food prices amid accelerating climate change. With food products accounting for a large share of the CPI, the sensitivity of inflation dynamics to temporary food price shocks is rather high, meaning they can cause headline inflation to deviate from the target. How monetary policy responds will be determined by the impact of supply shocks on inflation expectations.

The continued risk of escalation of the military conflict in the east of Ukraine have the potential to significantly worsen the nation's investment attractiveness and the expectations of all economic agents.

Box 7. Global Climate Change: Impact on Ukraine's Economy

An increasing number of central banks¹⁹ are considering the option of factoring climate change into their monetary policies. For Ukraine, these issues are becoming increasingly important given that agriculture accounts for 10% of GDP, while exports of agricultural products and their derivatives account for 48% of total merchandise exports. Climate change can create both benefits and challenges, according to research. The benefits include potential crop yield increases and reduced ripening times. The challenges include increased volatility of crop yields and more volatile domestic and global prices for these crops. This volatility can also affect the prices of assets, including those pledged as collateral against bank loans. In these circumstances, the role of the central bank is to mitigate the impact of price shocks, including by developing financial markets, in particular the insurance market, and by introducing asset valuation practices that take into account the potential fallout from climate change.

Climate change affects all areas of our lives: finance, macroeconomics, international development, labor economics, agriculture, and so on. However, its impact varies widely between countries, depending on their geographical location ([Puaschunder, 2019](#)). Specifically, in regions close to the equator, corn and wheat yields are expected to decline. In contrast, regions located closer to the poles are expecting to see increases in the yields of these crops, and of sugar beet. In addition, crops are likely to ripen faster, which reduces harvesting times, but potentially decreases their nutritional quality. In addition, changes in the habitats of pests and pollinating insects could have an impact ([Mbow et al., 2019](#)).

[Batten et al. \(2020\)](#) distinguish between two major groups of risks to the economy:

1. Risks arising directly from climatic events. These can be prolonged and gradual (e.g., flooding or, conversely, desertification, making land unsuitable for agriculture; other areas may require additional investment to finance the construction of dams, irrigation systems, and the breeding/introduction of new crops). The risks in this group may also be the result of one-off events such as floods, droughts, hail storms, etc., which are likely to increase in power and frequency.
2. Risks that stem from current and future national climate policies. Plans to transition to green energy may lead to higher electricity prices and the need to create energy storage capacities. The imposition of taxes on carbon and/or methane and other greenhouse gas emissions may drive a decline in global agricultural output, especially that of livestock farming, which is responsible for 14.5% of greenhouse gas emissions, [according to FAO estimates](#). Another example is possible limits on extraction of hydrocarbons (e.g., a ban on cracking).

Based on long-term studies of the effects of climate change, Germanwatch and the University of Notre Dame have (independently) ranked countries based on how climate change has affected them. Based on annual data since 1999, Germanwatch has estimated the losses from climatic events for every given year and cumulatively since the time series began, as well as how effectively the country has fought climate change each year. The University of Notre Dame

launched a program in 1997 that annually estimates country-specific vulnerabilities to climate change in six life-sustaining sectors (food, water, health, ecosystem services, human habitat, and infrastructure) and the readiness of these countries to counter these vulnerabilities through investment. Table 1 below shows a brief description of these rankings and Ukraine's place in them. The rankings are not directly comparable, as they focus on different parameters.

Ukraine has mainly occupied the first (better) halves of these rankings, and has even led the way among 181 countries in one of them (ND-GAIN Vulnerability Index, adjusted for GDP). This is due to the fact that Ukraine has a generally temperate continental climate, so the negative impact of climate change over the next decade will be smaller compared to countries located closer to the equator. Furthermore, a warmer climate could lead to higher crop yields in Northern Ukraine (Polissia), while an increase in the amount of carbon in the air and rising temperatures could shorten ripening times.

However, climate change will present Ukraine with a number of challenges, some of which we discuss next.

Higher yield volatility. As the climate warms, problems associated with reduced annual rainfall in the fertile areas of the south and east may increase, making their already significant water shortages worse. In the meantime, areas in the west could face a higher likelihood of devastating floods. Higher carbon content and elevated average daily temperatures can accelerate ripening, while also reducing the nutritional value of grains. Although agriculture is highly water-intensive, [only 6% of Ukraine's arable land is irrigated](#). Droughts occurring in 2003, 2006, 2007, 2010, and 2012 reduced wheat yields in Ukraine by 10%–30%. Crop yields can also be adversely impacted by extreme weather conditions, including storms, hail, heavy rain, droughts, and sharp temperature swings, [the probability of which increases as climate changes](#).

More volatile global prices. Elevated crop yield volatility will cause significant fluctuations in supply and demand, which determine global prices. Prices will also be affected by developed countries' policies on the use of biofuel use and reducing livestock numbers.

¹⁹ One of the regulators leading the way in this regard is the Bank of England, which has released separate studies on the impact of climate change on [insurance companies](#), [central bank goals](#), and the [banking system](#). In the United States, the Fed in 2019 held a conference called The Economics of Climate Change. In December 2017, at the United Planet summit in Paris, eight central banks established the Network of Central Banks and Supervisors for Greening the Financial System (NGFS). [As of 23 June 2020, 66 institutions and 13 observers had joined the network.](#)

Tighter competition. Weather conditions do not respect state borders, meaning that weather factors usually affect entire regions rather than specific countries. As a result, the growth in average annual temperatures may contribute to higher yields in Ukraine's neighbors, including Russia. A higher supply of grain from one region can reduce prices for it globally.

Weaker demand from livestock farming. Livestock farming is one of the largest producers of greenhouse gases, primarily methane. Demand for fodder grains may weaken as the fight against emissions progresses. However, this reduction in demand is likely to be gradual, as the agricultural sector in the EU is traditionally protected by governments. The emergence of new technologies, including "artificial meat," may also affect grain demand.

Ukraine can maintain its export position by taking advantage of higher productivity and proximity to sea ports, launching river transport development programs, and improving existing infrastructure. Droughts can be partially mitigated through artificial irrigation and a transition to crop varieties developed for a drier climate. For this to occur, however, Ukraine needs to have a functioning land market that can incentivize land owners to maintain and increase the value of their land.

To alleviate the impact of extreme weather conditions, it is necessary to improve infrastructure, from restoring/expanding areas under forest to constructing drainage channels that

reduce soil erosion by water. Ukraine can maintain its total exports through greater geographical diversification. Some positive changes, such as the introduction of the land market, have already been set in motion, but a more systematic and proactive approach is needed to prepare the nation for changes that are already taking place.

Central bank's role

The anticipated higher volatility of domestic and external prices for agricultural products may affect whether inflation targeting succeeds, especially given the significance of food as a share of the CPI (nearly 45%). One of the methods to mitigate the negative impact is to develop the financial markets, especially the insurance market and the forward market.

Climate change and accompanying extreme weather conditions can adversely affect the value of assets, including land, real estate, production capacity, etc. As these assets are often pledged as collateral against loans, changes in their prices pose risks to the banking system. Also, a significant number of insurance companies calculate their premiums based on past data without assuming that conditions could change significantly over time. Among its other goals, the NBU pursues financial stability, including the stability of the banking system, and so the regulator needs to pay attention to possible changes in asset quality assessments to take into account the impact of climate change.

Table 1. Country ranking by impact of climate change

Name	Methodology	Ukraine's rank	Top 3	Bottom 3
Long-term climate risk index (CRI) , (higher is worse)	Average annual losses (death toll and direct GDP losses) from climate emergencies	94 out of 180	Qatar Singapore Bahrain	Porto Rico Myanmar Haiti
Climate Change Performance Index (higher is better)	Four categories: reduction in greenhouse gas emissions, development of RES, reduction in energy consumption, national climate policy	17 out of 61	Sweden Denmark Morocco	United States Saudi Arabia Chinese Taipei (Taiwan)
ND-GAIN (Notre Dame Global Adaptation Initiative) , (higher is better)	Comprises ND-GAIN Vulnerability Index and ND-GAIN Readiness Index (see below)	68 out of 181	Norway, New Zealand, Finland	Somalia Chad, Eritrea
ND-GAIN Vulnerability Index (higher is better)	Total vulnerabilities in six life-sustaining sectors: food, water, health, ecosystem services, human habitat, infrastructure	19 out of 181 based on GDP size	-- New Zealand Georgia, Dominica	-- Qatar, Kuwait Brunei
ND-GAIN Readiness Index (higher is better)	Country's ability to invest in adaptation actions in three components: economic, institutional, and social readiness	39 out of 181 1 out of 181 based on GDP size	Switzerland Norway, Luxembourg -- Ukraine, Belarus, Kyrgyzstan	Somalia, Niger, Solomon Islands -- Qatar, Singapore Niger
		92 out of 181	New Zealand, Singapore, Norway	Somalia Eritrea, CAR
		58 out of 181 based on GDP size	-- New Zealand, Tuvalu, Republic of Korea	-- Qatar, Kuwait Equatorial Guinea

Indicators	Macroeconomic forecast (July 2020)														
	2020				2021				2022						
	2017	2018	2019	I	II	III	IV	current forecast	forecast 04.2020	I	II	III	IV	current forecast	forecast 04.2020
REAL ECONOMY, % yoy, unless otherwise stated															
Nominal GDP, UAH bn	2984	3561	3975	846	864	1073	1126	3910	3970	884	998	1199	1218	4300	4360
Real GDP	2.5	3.4	3.2	-1.3	-11.0	-7.4	-3.8	-6.0	-5.0	-1.4	9.1	5.5	2.5	4.0	4.3
GDP Deflator	22.1	15.4	8.1	5.1	4.1	4.3	5.0	4.7	5.1	6.0	5.9	5.6	5.5	5.7	5.3
Consumer prices (end of period)	14.4	10.9	7.9	-	-	-	-	2.9	4.3	-	-	-	-	5.8	5.8
Core inflation (end of period)	13.7	9.8	4.1	2.3	2.4	3.1	4.7	4.7	6.0	6.0	5.9	5.7	5.5	5.5	5.0
Non-core inflation (end of period)	9.5	8.7	3.9	3.1	3.0	2.9	4.0	4.0	6.8	4.6	4.4	4.3	4.2	4.2	3.8
raw foods (end of period)	23.5	3.3	3.9	-1.0	5.0	4.9	6.5	6.5	5.6	9.3	4.7	4.0	4.5	4.5	3.3
administrative prices (end of period)	16.1	18.0	8.6	5.5	3.2	5.0	7.5	7.5	7.5	8.9	11.1	11.3	9.9	9.9	9.9
Producer prices (end of period)	16.5	14.2	-7.4	-4.2	-4.6	-3.6	6.4	6.4	7.1	3.8	8.0	6.8	5.3	5.3	5.3
Nominal wages (period average)	37.1	24.8	18.5	14.3	2.1	-0.6	1.8	4.1	4.3	5.7	17.5	19.1	15.5	14.4	15.6
Real wages (period average)	19.1	12.5	9.7	11.3	0.1	-3.3	-2.0	1.3	0.0	0.0	10.9	12.5	9.4	8.1	9.1
Unemployment (ILO)	9.5	8.8	8.2	-	-	-	-	10.0	9.5	-	-	-	-	9.0	8.6
FISCAL SECTOR															
Consolidated budget balance, UAH bn	-42.1	-67.8	-87.3	-	-	-	-	-292	-316	-	-	-	-	-174	-124
% of GDP	-1.4	-1.9	-2.2	-	-	-	-	-7.5	-8.0	-	-	-	-	-4.0	-2.8
Public sector fiscal balance (IMF methodology), UAH bn	-37.0	-75.4	-89.2	-	-	-	-	-294	-319	-	-	-	-	-174	-124
% of GDP	-1.2	-2.1	-2.2	-	-	-	-	-7.5	-8.0	-	-	-	-	-4.0	-2.8
BALANCE OF PAYMENTS (NBU methodology)															
Current account balance, USD bn	-3.5	-6.5	-4.2	2.3	4.3	0.4	-0.6	6.5	-2.5	-0.8	-1.3	-1.8	-0.6	-4.5	-5.3
Exports of goods and services, USD bn	53.9	59.2	63.5	15.3	13.3	15.1	16.4	60.1	57.0	15.2	14.7	15.8	17.3	62.9	61.6
Imports of goods and services, USD bn	62.7	70.6	76.0	16.2	12.3	16.2	18.6	63.3	64.8	17.0	18.2	19.5	20.3	75.0	75.3
Financial account, USD bn	-6.1	-9.3	-10.2	2.5	3.0	0.4	-0.8	5.0	-1.4	-1.4	-1.7	-2.3	-1.6	-6.9	-5.9
BOP overall balance, USD bn	2.6	2.9	6.0	-0.1	1.3	0.0	0.3	1.5	-1.1	0.6	0.4	0.5	0.9	2.4	0.6
Gross reserves, USD bn	18.8	20.8	25.3	24.9	28.5	28.8	29.8	29.8	27.2	29.9	30.9	30.8	32.7	32.7	28.6
Months of future imports	3.2	3.3	4.8	4.7	4.9	4.7	4.8	4.8	4.3	4.7	4.7	4.7	4.9	4.9	4.2
MONETARY ACCOUNTS (Cumulative since the beginning of the year)															
Monetary base, %	4.6	9.2	9.6	0.9	11.6	18.0	20.7	20.7	7.5	-3.1	-0.6	0.2	3.5	3.5	3.8
Broad money, %	9.6	5.7	12.6	5.5	12.1	16.0	19.5	19.5	3.5	-0.2	3.6	6.7	10.7	10.7	9.9
Velocity of broad money (end of year)	2.5	2.8	2.8	-	-	-	-	2.3	2.7	-	-	-	-	2.3	2.7

Terms and Abbreviations

Core CPI	Core consumer price index	OPEC	Organization of the Petroleum Exporting Countries
GDP	Gross domestic product	MTP	Main trading partner
GVA	Gross value added	VAT	Value-added tax
STSU	State Treasury Service of Ukraine	PIT	Personal income tax
CD	Certificate of deposit	FDI	Foreign direct investment
SESU	State Employment Service of Ukraine	CIT	Corporate income tax
SSSU	State Statistics Service of Ukraine	PF	Pension fund
SCSU	State Customs Service of Ukraine	REER	Real effective exchange rate
STA	Single Treasury Account	U.S.A	United States of America
EU	European Union	Fed	Federal Reserve System
ECB	European Central Bank	CEE	Central and Eastern Europe
FX	Foreign exchange, foreign currency	NIIP	Net international investment position
BOI	Business Outlook Index	COVID-19, coronavirus	Coronavirus disease COVID-19
BoP	Balance of Payments	ECPI	External Commodity Price Index
BAOI	Business Activity Outlook Index	EM	Emerging Markets
CPI	Consumer price index	EMBI	Emerging Markets Bond Index
IT	Information technologies	IIF	Institute of International Finance
CMU	Cabinet of Ministers of Ukraine	PMI	Purchasing Managers' Index
QPM	Quarterly projections model	UAwCPI	Weighted average of Ukraine's MTP countries' CPI
IMF	International Monetary Fund	UAwGDP	Weighted average of economic growth in Ukraine's MTP countries
ILO	International Labour Organization	UIIR	Ukrainian Index of Interbank Rates
MY	Marketing year		
IFI	International financial institutions		
MFU	Ministry of Finance of Ukraine		
NJSC	National Joint-Stock Company		
NBU	National Bank of Ukraine		
NEER	Nominal effective exchange rate		
m	million	pp	percentage point
bn	billion	bbl	barrel
UAH	Ukrainian hryvnia	yoy	in annual terms; year-on-year change
USD	US dollar	qoq	in quarterly terms; quarter-on-quarter change
p.	paragraph	sa	seasonally adjusted
bp	basis point	mom	in monthly terms; month-on-month change
bcm	billion cubic meters	RHS	right-hand scale