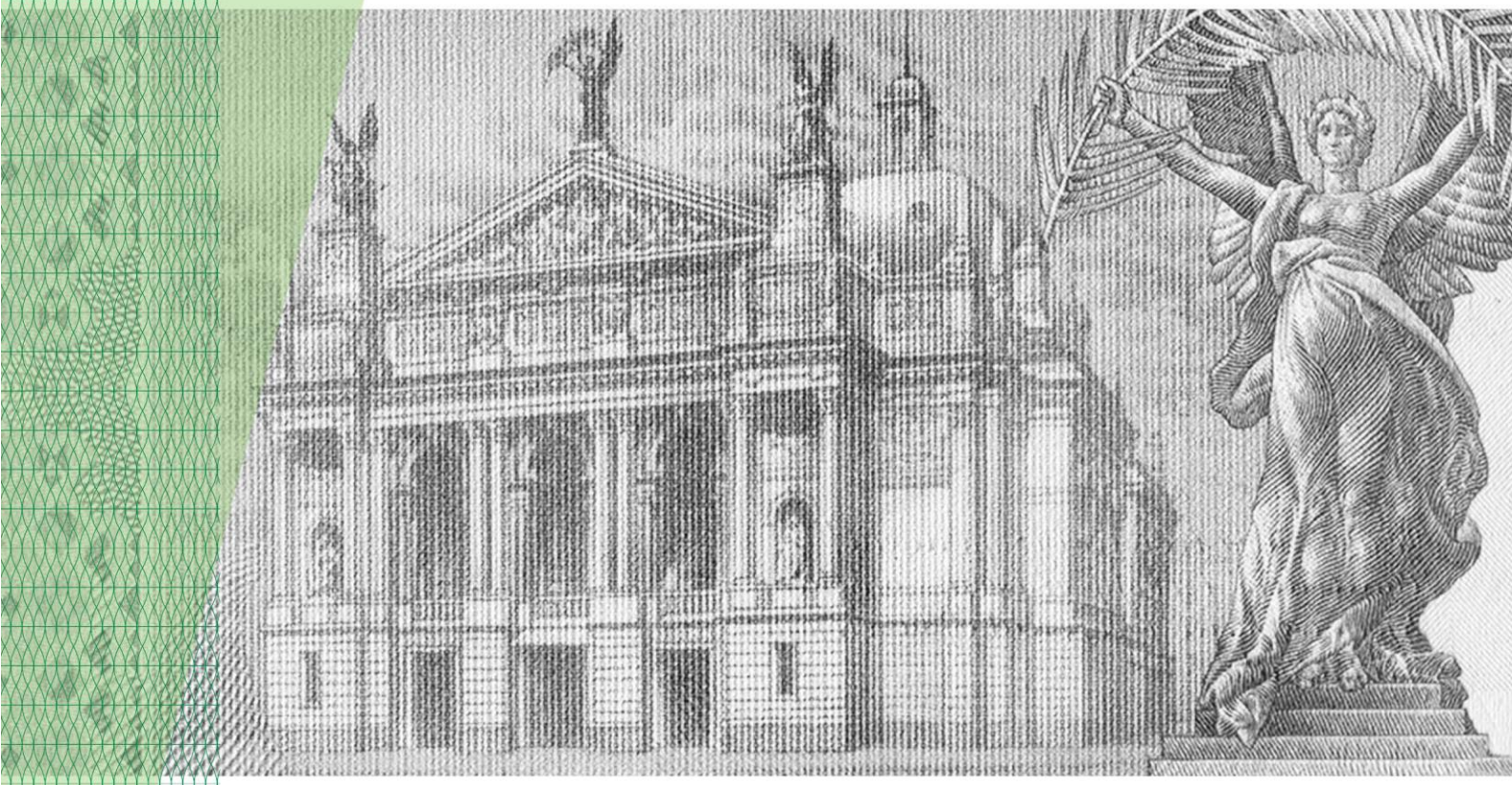
National Bank of Ukraine

Inflation Report

April 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 April 2020, for some data – 30 April 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 23 April 2020[1].

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. 290-D *On Approval of the Inflation Report* dated 23 April 2020.

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Summary

In March - April 2020, inflation was lower than expected, despite temporary price increases during the first weeks of quarantine measures

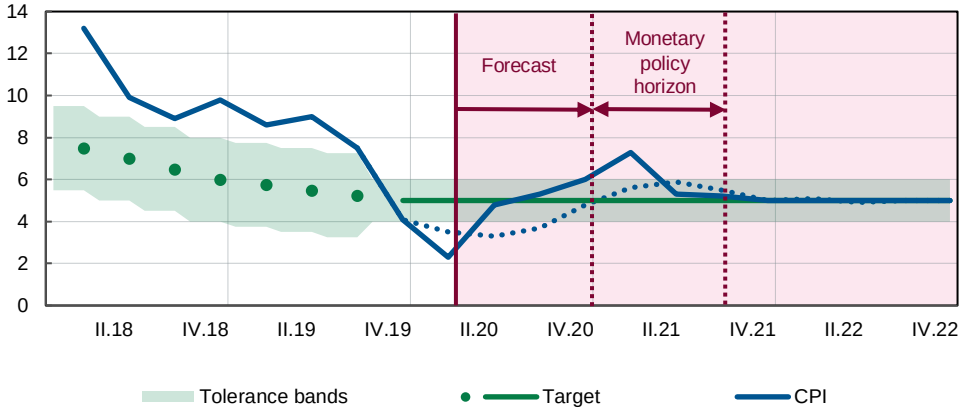
In Q1 2020, the growth in consumer prices decelerated to 2.3% yoy. As expected, consumer inflation was below the 5% ± 1 pp target range and the forecast published in the January 2020 Inflation Report. Underlying inflationary pressures eased as well, with core inflation slowing to 3.1% yoy. Price growth was primarily held back by lower global energy prices, the lagged effects of the hryvnia's strengthening last year, and a higher supply of raw foods. These factors outweighed the upward pressure on prices from the hryvnia's weakening in March and panic demand for some goods in the first weeks of the quarantine restrictions imposed to contain the COVID-19 outbreak.

Inflation in April will continue to be low – below 3% yoy – according to the NBU's early estimates. The heightened demand for essential goods faded rather quickly. The FX market stabilized in response to the NBU's measures, while the hryvnia became slightly stronger compared to March, enabling the NBU to resume FX purchases to clear excess foreign currency off the market and to replenish international reserves.

In 2020, inflation will remain in the target range. This will not be impeded by monetary and fiscal stimulus measures

Inflation in 2020 will stay within the 5% ± 1 pp target range. Price growth will pick up in the coming months, to end 2020 at 6%, primarily due to the hryvnia's recent depreciation passing through to prices.

Figure 1[2]. CPI (eop, % yoy) and inflation targets



Source: SSSU, NBU staff estimates.

The fiscal and monetary stimulus measures to aid Ukrainian businesses and households will partially offset the drop in consumer demand, which nevertheless will remain depressed long after the lockdown has been lifted. This will prevent inflation from rising beyond the target range this year. Inflation will also be constrained by a decline in global energy prices, which will continue to affect fuel prices in the domestic market.

After temporarily exceeding the upper bound of the target range at the beginning of 2021, consumer inflation will return into the target range as soon as Q2 2021 due to the effect of a low comparison base, and will remain there. The NBU's prudent monetary policy and restrained fiscal policy will help keep inflation at that level after the pandemic has ended and the economy has begun to recover.

Economic activity weakened in early 2020, following steady growth in 2019. In Q1, the quarantine had a moderate impact

According to NBU estimates, real GDP in Q1 2020 decreased by 0.5% yoy, mainly driven by the decline in investment and external demand, as well as the expected reduction in gas transit

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

volumes. The introduction of quarantine measures halfway into March 2020, with an effective ban on certain activities, primarily affected the service sectors (in particular, tourism and entertainment), trade, and transportation (directly contributing a negative 0.4 pp to the change in real GDP, the NBU estimates). The impact on employment and household income in Q1 was also moderately negative.

External demand was constrained by a sharp decline in economic activity in the world amid the spread of COVID-19. However, the current account in Q1 2020 recorded a surplus. The spread of the coronavirus had a neutral impact on goods exports, but coupled with a decrease in global energy prices, led to a decline in imports of goods and services. Capital outflows recorded in March were mainly due to a surge in domestic demand for foreign currency. As a result, international reserves as of late March returned to where they ended 2019 – USD 24.9 billion – covering 4.5 months of future imports.

Due to quarantine restrictions to combat the pandemic and the global crisis, the Ukrainian economy in 2020 will decline by 5.0%, but will return to the growth of about 4% in the following years

The negative impact of the lockdown on the Ukrainian economy will be relatively short-lived, though rather strong, and will manifest itself in a decrease in external demand and a drop in business activity, consumption, and employment. The impact of these factors on the economy will be most noticeable during Q2 2020, according to NBU estimates. The lifting of quarantine restrictions will lead to a rather rapid recovery of the Ukrainian economy in H2 2020. This will be facilitated by loose fiscal and monetary policies. Increased government spending to overcome the crisis, as well as the NBU's measures to aid borrowers and to ramp up business lending, will mitigate the economic fallout of the pandemic.

The NBU has revised downwards its forecast for the current account deficit in 2020

This year, the current account deficit will be 1.7% of GDP. Imports of goods and services to Ukraine will decline more significantly than exports. With quarantine restrictions imposed worldwide and global prices falling, Ukraine will cut back on purchases of energy and most non-staple goods. The pandemic's adverse effects on exports will be weaker, given expectations of steady demand for food. At the same time, the decline in remittances from labor migrants will be more than offset by the reduction in foreign travel expenses of Ukrainians.

The current account deficit will widen again once economic activity rebounds in Ukraine and the rest of the world. This will be due to the expected decrease in gas transit revenues, as well as the pent-up demand of households for consumer goods, and that of businesses for investment imports. However, the deficit will remain at 3%–4% of GDP, as predicted by the NBU's January forecast.

The NBU is stepping up efforts to ease its monetary policy to further support the economy amid the pandemic and quarantine measures

In Q1 2020, the NBU Board cut the key policy rate twice, by a total 350 bp, to 10%, in response to a weakening in underlying inflationary pressures. In April 2020, the central bank reduced the key policy rate by another 200 bp, to 8%. The continuation of the monetary policy easing cycle will involve cutting the key policy rate to 7% by the end of 2020.

An additional set of tools to support the economy (giving the banks greater flexibility in how they manage liquidity, introducing long-term refinancing and interest rate swaps, and widening the list of eligible collateral) will help to reduce interest rate risks and liquidity risks for the banks, improve their resource potential, and enhance the transmission of key policy rate cuts to interest rates on banking transactions. This will ultimately stimulate the expansion of lending for projects that require long-term investment, including infrastructure projects.

Cuts to the key policy rate, combined with other measures taken by the NBU, will help the economy by providing households and businesses a necessary support in this challenging time and enabling business activity to recover fast and reduce unemployment once the quarantine is over.

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

Ukraine is entering the current crisis on a more solid footing than before, but cooperation with the IMF is urgently needed to mitigate losses and risks. The forecast assumes that the IMF Board will approve a new cooperation program with Ukraine and that it will disburse the first tranche of about USD 2 billion in financing as soon as Q2 2020. The establishment of a new IMF cooperation program is a major prerequisite for maintaining macrofinancial stability in Ukraine during the global crisis.

First, the funding will cover the state budget deficit, which has increased to 7.5% of GDP. The program will tide Ukraine over the peak of its debt repayments and enable it to aid businesses and at a time when business activity is slowing down, employment and tax revenues are falling, and foreign investors are leaving emerging markets., Second, funding from the IMF and other official international partners will help maintain Ukraine's international reserves at a level between USD 27 billion and USD 29 billion this year and in the years ahead.

The main risk to the outlined forecast is the absence of an IMF program

If it were to materialize, this risk could affect exchange-rate and inflation expectations and make it harder for Ukraine to access the international capital markets. This would significantly impair the government's financial capacity to support the economy in times of crisis, and hamper the country's debt-refinancing capability.

Another major risk is a continuation of the coronavirus pandemic and the quarantine measures imposed to combat it. The duration of the lockdown will directly determine how fast the global and Ukrainian economies can recover. In a negative scenario, the economic downturn will significantly deepen this year, leading to the need to strengthen the fiscal and monetary incentives aimed at mitigating the economic fallout.

Other relevant risks:

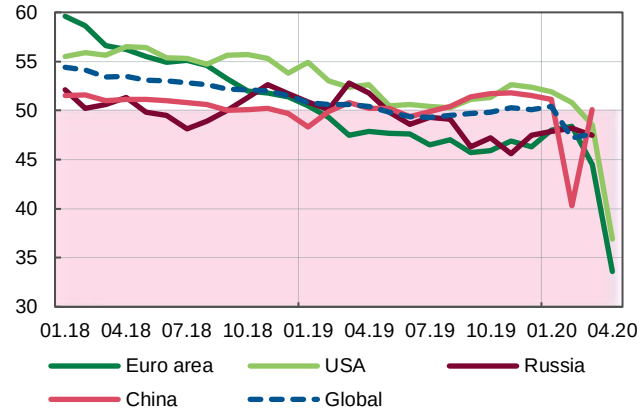
- escalation of the military conflict in eastern Ukraine
- reduction of grain and fruit crops in Ukraine due to adverse weather conditions
- higher volatility of world food prices due to global warming
- stronger protectionist measures worldwide.

The materialization of these risks (both internal and external) would require the NBU to respond, first and foremost, by using its primary monetary instrument – the key policy rate. More specifically, the central bank in 2020 may ease its monetary policy more significantly if the decline in consumer demand amid quarantine measures and the weakening of business activity put greater downward pressure on inflation than is currently projected.

Part 1. External Environment

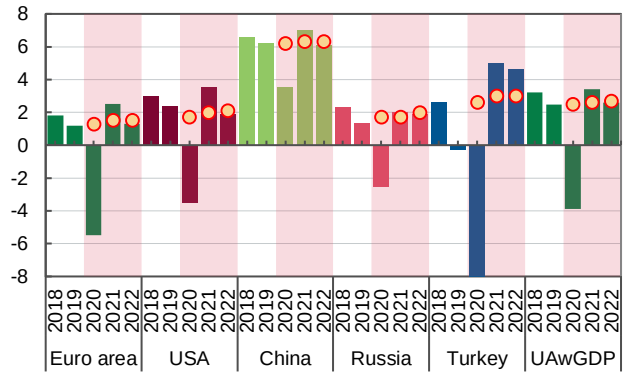
- The introduction of quarantine restrictions in response to the spread of COVID-19 has led to a sharp decline in global economic activity. Economists expect that after the 2020 recession, the global economy will return to growth, but that it will fail to fully offset this year's losses, given how unprecedented this crisis has been.
- In the global commodity markets, the narrowing of demand was the defining factor triggering downward pressure on prices in 2020. Going forward, a global economic recovery will support prices.
- Driven by economic uncertainty, heightened volatility in the global financial markets has provoked massive capital flight into safe assets. Despite the easing of monetary policy by the leading central banks, investors' risk appetite will remain weak.

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



Source: IHS Markit.

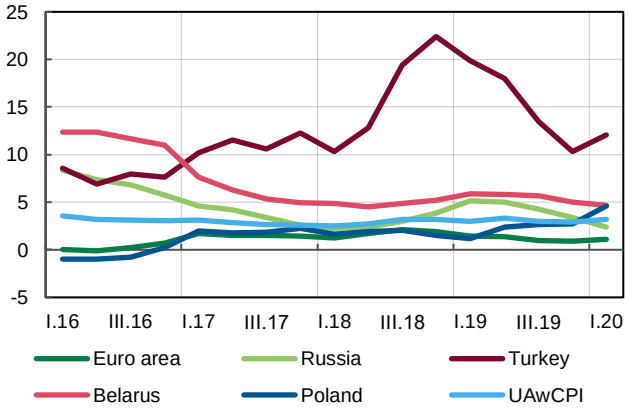
Figure 1.2. Real GDP of selected countries and Weighted Average of annual GDP growth of Ukraine's MTP countries (UAwGDP), % yoy



- Previous forecast of NBU.

Source: National statistical offices, NBU staff estimates.

Figure 1.3. CPI of selected Ukraine's MTP countries and Weighted Average of Ukraine's MTP countries' CPI (UAwCPI), % yoy



Source: National statistical offices, NBU staff estimates.

After a plunge in economic activity in 2020, growth in Ukraine's MTPs will resume, but it will not compensate for the current year's losses

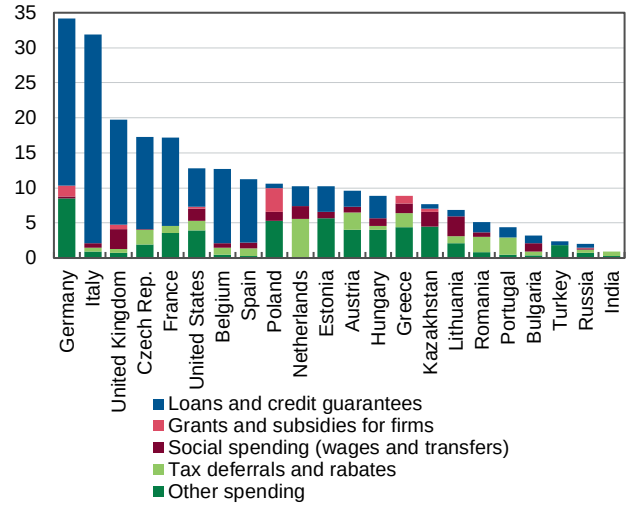
The global economy has been under pressure since the beginning of the year from the following unanticipated factors: the escalation of the standoff between the United States and Iran, the oil-price war between Saudi Arabia and Russia, and the global spread of the coronavirus. It was the rapid spread of the COVID-19 pandemic and the unprecedented restrictive measures taken by countries – from business shutdowns to border closures – that set off the global crisis. Global business confidence in April fell to its lowest since the end of 2008, indicating a plunge in new orders and thus a contraction in world trade. This reduction affected all components of the supply chain from producers to consumers, and led to a drop in investment and the number of employees.

The decrease in global demand and employment has been the fastest in more than ten years, the dynamics of the Global Services PMI in late Q1 showed. At the same time, governments and central banks in both developed countries and emerging markets pledged to support their economies. Unlike in the crisis of 2007–2009, however, monetary instruments are having a rather limited impact amid persistent low interest rates. Therefore, to support domestic demand and economic activity in general, countries have shifted their priorities to fiscal measures. Economists expect that the global economy will drop the most in Q2 2020. As quarantine restrictions are lifted, the world economy will recover quickly, but it will not reach pre-crisis levels immediately.

Production and employment in the United States have seen their steepest declines since August 2009 amid partial shutdowns of businesses, currently available indicators show. Inflation declined under these conditions, and some companies, struggling to retain customers, even reduced their prices below cost. With the coronavirus outbreak in the United States spreading at some of the highest rates in the world, economists project that an economic recovery will take place only in late 2020 through early 2021. Significant fiscal stimulus amid the Fed's loose monetary policy will mitigate the effects of the shock.

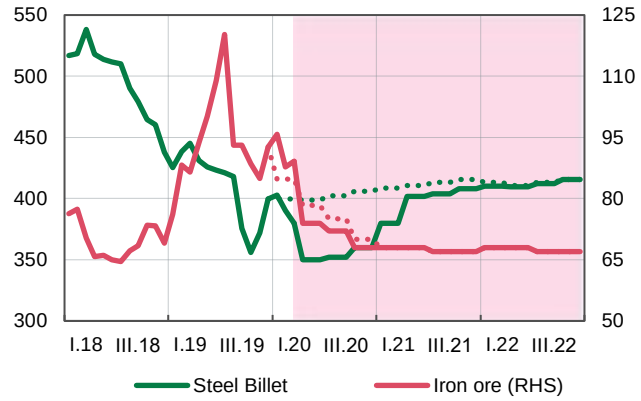
Following a slight recovery at the end of 2019, economic growth in the eurozone decelerated significantly due to restrictive measures, declining foreign trade (primarily with China, one of Ukraine's largest MTPs), and waning consumer

Figure 1.4. Fiscal Stimuli by Category, % of 2019 GDP



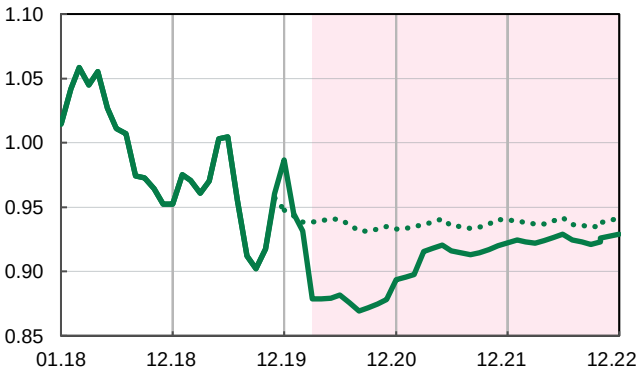
* If it is impossible to classify a fiscal stimulus package under categories, it goes to "Other spending".
Source: IMF, official web-pages of national governments, NBU estimates.

Figure 1.5. 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 1.6. External Commodity Price Index (ECPI), Dec 2004 = 1



Source: NBU staff estimates.

demand. As demand faded and energy prices plunged, inflation remained far below the target range. Experts project that the eurozone economy will take longer to recover than in other developed countries, considering its internal imbalances – such as the debt problems of individual member states. The eurozone's recovery will be supported by benign financial conditions, a loose fiscal policy, and a faster recovery of the Chinese economy.

With the exception of China, the GDP of the emerging markets that are Ukraine's MTPs will fall sharply this year due to their heavy reliance on external demand and the global financial markets. According to leading indicators, China has been slowly recovering since March thanks to significant governmental support after its COVID-19 outbreak peaked in February. In its turn, the weakness of the eurozone economy will weigh on economic activity in CEEs and Turkey. While CEE countries will draw some support from their commercial ties with China, Turkey's downturn will be significantly more severe, considering the additional negative impact of another of its MTPs – the United States. Economic growth in emerging markets will gradually accelerate due to loose financial conditions and fiscal stimulus, as will that in developed countries.

The drop in demand will exert downward pressure on global prices for most commodities. Subsequently, prices will be supported by a global economic recovery[3]

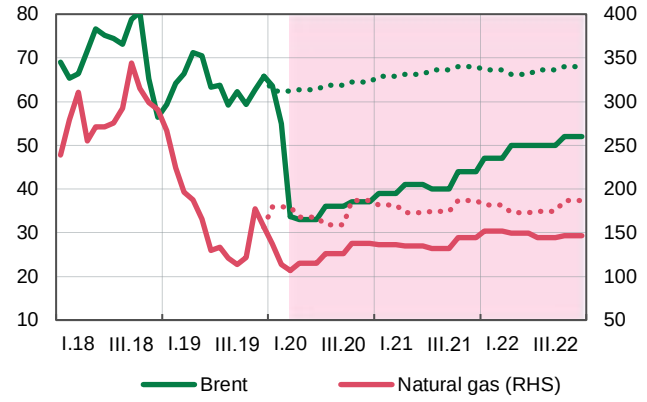
The coronavirus pandemic, which began to spread around the globe in early 2020, has forced governments to impose restrictive measures that have significantly depressed demand in the global commodity markets. As a result, prices for most commodities have declined. The plunge in oil prices was another contributor to this decrease. At the same time, the depth of the fall in commodity prices was constrained by the level of production costs. When prices approach production costs, producers cut back on output, and supply shrinks, preventing prices from falling further.

The world's deepest falls in production occurred in metallurgy, the automotive industry, and mining in February, according to Global Sector PMI data. As a result, steel prices have fallen by an average 10% to 15% since the beginning of the year, depending on the type of product. In March–April, the recovery of demand from several Asian countries, especially China, kept steel prices from falling even further. An additional factor was the narrowing of the supply of iron ore due to adverse weather in Brazil and Australia. Steel prices will slowly rise from 2021 as the global economy recovers.

World prices for wheat and corn were relatively low thanks to high yields. Only logistical problems due to quarantine measures and export restrictions by a number of countries caused increased demand and thus a rise in prices in late March through early April. Economists expect that the additional supply from Latin America amid declining bioethanol production in the United States and Brazil will drive prices lower. In the coming years, the recovery of global

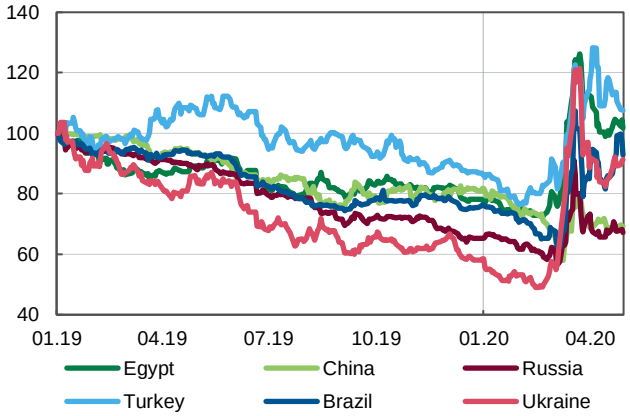
[3] Unless specified otherwise, the dashed line in the figures indicates the previous forecast.

Figure 1.7. World crude oil prices (USD/bbl) and German Hub natural gas prices (USD/kcm)



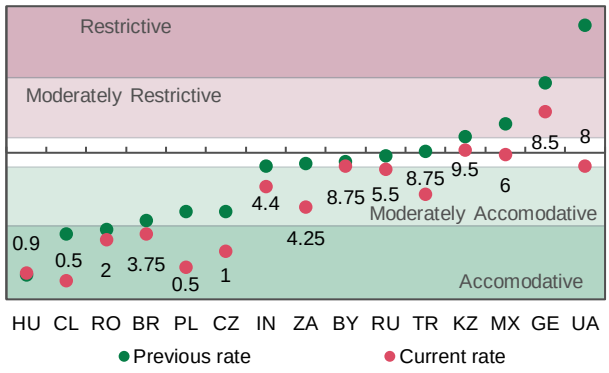
Source: Refinitiv Datastream, NBU staff estimates.

Figure 1.8. J.P.Morgan EMBI+, 01 Jan 2019 = 100



Source: Bloomberg, as of 29.04.2020.

Figure 1.9. Key Policy Rates in Selected EM, %



* As of 29.04.2020, year-to-date change. NBU estimates based on studies of respective central banks and other reserchers on estimates of the neutral rate.
Source: official web-pages of central banks, NBU staff estimates.

demand amid restrained supply will lead to a gradual rise in prices.

Overall, the decrease in the global prices for the goods that predominate in Ukrainian exports will deepen in 2020 compared to the previous year as external demand falls. Over the next two years, world prices will slowly adjust as global trade picks up.

Global oil and natural gas prices have fallen sharply since the beginning of the year due to a significant decline in demand and because of large accumulated reserves. Another contributor to the plunge in energy prices was the escalation of the oil-price war between Saudi Arabia and Russia, which pushed prices below production costs. The signing of a new OPEC+ agreement to reduce production is encouraging, but its effects will be weak, as experts project that supply will fall by about 10% by volume, while demand is currently expected to fall by 15% to 30%. Significant accumulated reserves, which in late April made oil futures tumble to an all-time low, will exert additional pressure on the market. As a result, world oil and natural gas prices will remain low.

Global financial conditions for emerging markets will improve after the active stage of the crisis ends

The upbeat sentiment at the beginning of the year, when the United States and China signed a trade agreement, was completely wiped out by the global spread of the coronavirus. Volatility in the global financial markets increased, while international investors' appetite for risky assets declined. Capital outflows from emerging markets since the beginning of 2020 equaled total capital inflows for the whole of 2019 (as of 23 March, according to IIF data), while stock indices had lost an average 30% of their value by the same day. Only the announcement of fiscal stimulus plans, as data showed a slowing of the spread of the pandemic, has supported the markets since late March.

With risks to economic growth rapidly materializing, the leading central banks eased their monetary policies. However, given the lack of room to lower interest rates further, policymakers have primarily been expanding their quantitative easing programs. For instance, the Fed on 23 March actually removed all restrictions on the volumes of repurchase agreement operations. The ECB has launched an additional, "pandemic" quantitative easing program, which relaxes restrictions on the repurchase of a single issuer's securities.

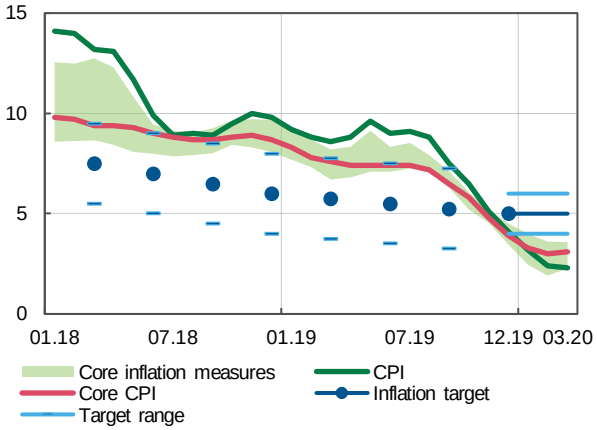
Despite the depreciation of national currencies, central banks in most emerging markets have lowered interest rates to sustain economic growth and have started buying back securities in the secondary market to inject liquidity into the economy. Given the uneven impact of restrictive measures on economic activity, internal imbalances within individual countries, and their vulnerability to external shocks, investor interest in risky assets has been restrained. However, the recovery of EM economies, amid relatively low global interest rates, will attract investors to this group of countries.

Part 2. Economy of Ukraine: Current Trends

2.1. Inflation Developments

- As expected, consumer inflation in Q1 2020 was below the 5% ± 1 pp target range, but it fell further (to 2.3% yoy in March) and was lower than forecast in the January 2020 Inflation Report.
- The disinflation was driven by lower energy prices, a greater supply of raw foods, and the sustained impact of last year's appreciation of the hryvnia on the prices of goods. These factors outweighed pressure from the significant growth in consumer demand, fueled in part by a bout of panic buying that started in March, when the authorities imposed quarantine.

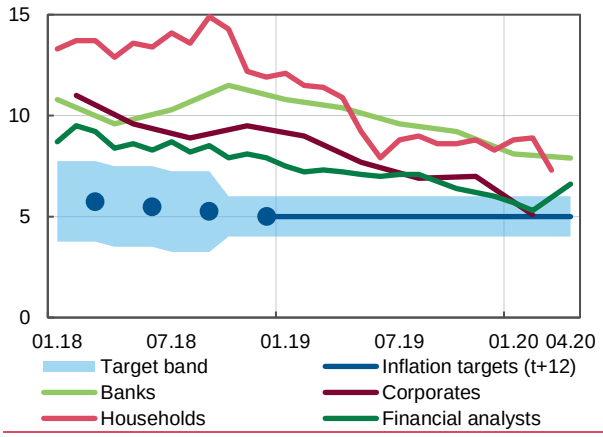
Figure 2.1.1. Underlying inflation trends*, % yoy



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

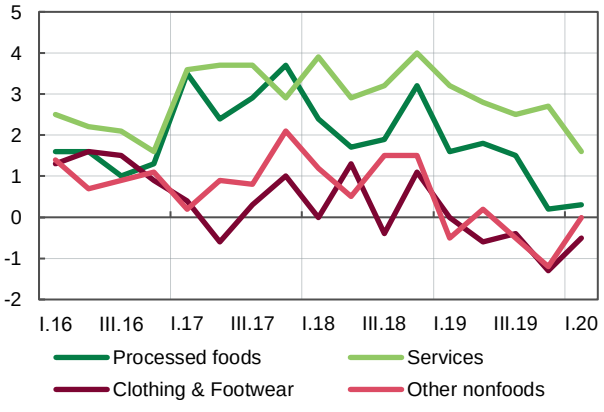
Source: NBU staff estimates.

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



Source: NBU, GfK Ukraine, Info Sapiens.

Figure 2.1.3. Main components of core CPI, sa, % qoq



Source: SSSU, NBU staff estimates.

As expected, consumer inflation was below the 5% ± 1 pp target range

In Q1 2020, consumer inflation continued to slow (to 2.3% yoy in March). As the NBU projected, consumer inflation slipped below the lower bound of the 5% ± 1 pp target range as early as January, and remained below it for the rest of Q1. However, the slowdown was slightly more significant than predicted according to the projected trajectory published in the January 2020 Inflation Report.

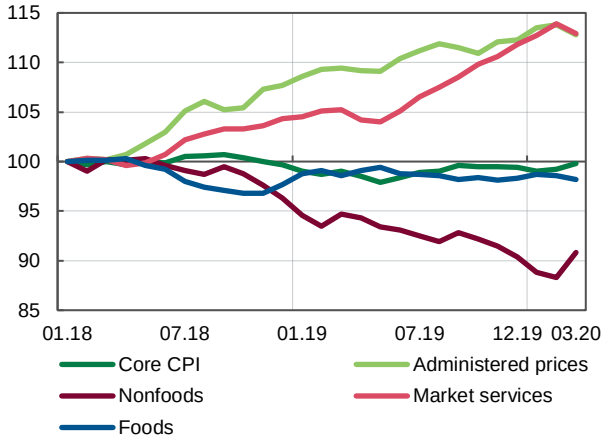
Underlying inflationary pressures also eased as core inflation slowed to 3.1% yoy, in line with NBU projections. The effects of last year's strengthening of the hryvnia (for more details, see Box 2 "Exchange Rate Pass-Through to Consumer Prices in Ukraine: Updated Estimates" on page 14) continued to primarily affect imported goods or goods with a large share of imported inputs. In addition, the hryvnia was, on average, 1.7% stronger against the dollar in March 2020 than a year earlier, despite depreciation pressure, which was particularly strong in late Q1. As a result, prices for clothing and footwear, electronic devices, household appliances, and certain foods (such as rice and olive oil) continued to fall. Overall, nonfood prices were lower than a year ago (by 1.9% yoy), although the rate of decline decreased slightly from the 2.2% yoy seen in December 2019.

An improvement in inflationary expectations among most groups of respondents also supported a weakening in underlying inflationary pressures. Specifically, the inflation expectations of financial analysts and businesses came close to the NBU's inflation target. In March–April, inflation expectations changed in various ways. Due to slightly greater inertia compared to other groups of respondents, household expectations improved in response to low inflation. In contrast, the expectations of banks and financial analysts have deteriorated as a result of turbulence in the FX market and worsening economic sentiment after quarantine restrictions were imposed.

The introduction of quarantine restrictions is highly likely to have affected certain prices even in March, but had a mixed impact

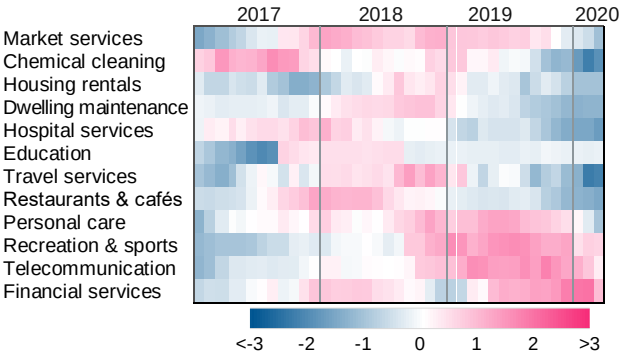
The weakening of consumer demand amid transport constraints, social distancing, and worsened expectations for future revenues due to the imposition halfway into March of quarantine restrictions on certain activities, led to a slowdown in price growth for most services. This primarily affected businesses in recreation, sports, personal care, and travel,

Figure 2.1.4. CPI deflated inflation components, 01.2018 = 100



Source: SSSU, NBU staff estimates.

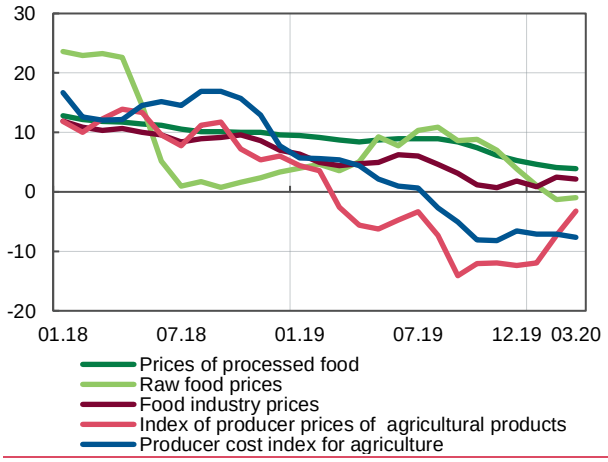
Figure 2.1.5. Normalized services inflation heat map* in Ukraine, %



* 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.

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



Source: SSSU, NBU staff estimates.

which struggled to stay afloat as demand fell, and/or almost completely suspended their operations.

On the other hand, the growth in prices for health insurance services and pharmaceuticals accelerated due to the threat, and then the actual spread, of COVID-19, and depreciation pressure. As the pandemic progressed, demand increased, as did prices for hygiene items like soap and toilet paper, and foods that strengthen the immune system, such as garlic and lemons. Demand for foods like cereals, including buckwheat, vegetables with relatively long shelf lives such as potatoes, and other products soared after the authorities placed the nation under quarantine in mid-March. The growth in prices for these vegetables may also reflect a fall in supply in big cities due to transportation restrictions and the closures of wholesale markets. At the same time, the impact of panic demand has faded since the beginning of April (for more details, see Box 1. “Price Dynamics Under the Quarantine,” on page 13).

Price pressures from supply factors continued to ease for most of Q1 2020

Prices for raw foods declined (by 1.0% yoy in March after rising by 3.9% yoy in December), driven by a higher supply of these goods due to large harvests of agricultural crops last year, warm weather conditions, and increased imports. More specifically, the fall in vegetable prices deepened (to 14.9% yoy) despite high demand and logistical problems in March. In addition to these factors, last year’s high comparison base had a strong impact. In particular, a shortage of most borshch vegetables last year caused a surge in prices. As a result, prices for these foods in March 2020 were actually lower than last year (by 22.5% yoy). Prices for greenhouse vegetables also fell thanks to energy savings amid warm weather conditions.

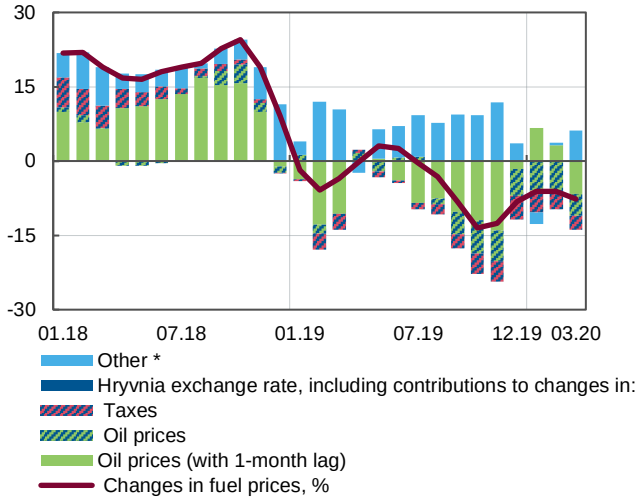
Price growth also decelerated for dairy products, weighed down by an increase in the supply of imports. Due to the high grain harvest, producer prices for crop products were still lower than last year (by 3.2% yoy in March), while the rise in prices for bread and flour products decelerated. Due to the reduction in the cost of feed and export restrictions (the EU and some other countries banned imports of certain poultry products due to bird flu fears), prices for animal products continued to fall (by 3.6% yoy). In particular, prices for eggs and chicken meat fell further.

The relatively warm weather also contributed to lower inflationary pressures

With higher temperatures in Europe and a significant supply, global natural gas prices continued to fall. Prices for domestically produced crude oil and natural gas also declined. This deepened the decline in natural gas prices for households and industry (down by 39.2% yoy and 43%–46% yoy in March, respectively). As a result of the change in the price of natural gas, prices for heating and hot water fell (by 8.1% yoy).

The plunge in global oil prices remained the main reason for the decline in fuel prices. As prices for both domestic and

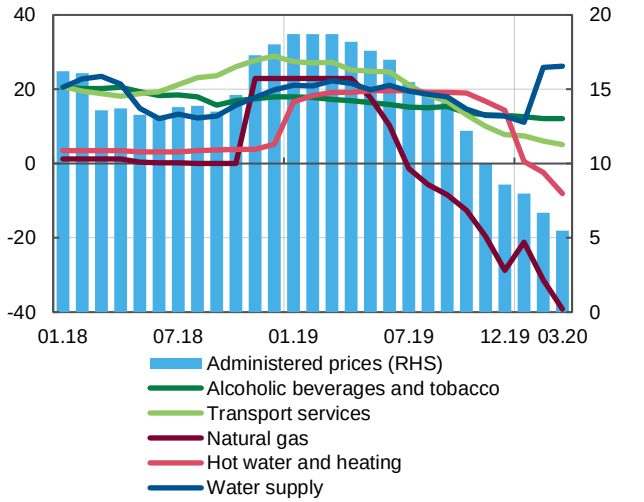
Figure 2.1.7. Factor decomposition of annual changes in fuel prices, pp



* Includes administrative costs, logistics services, trade margins, etc.

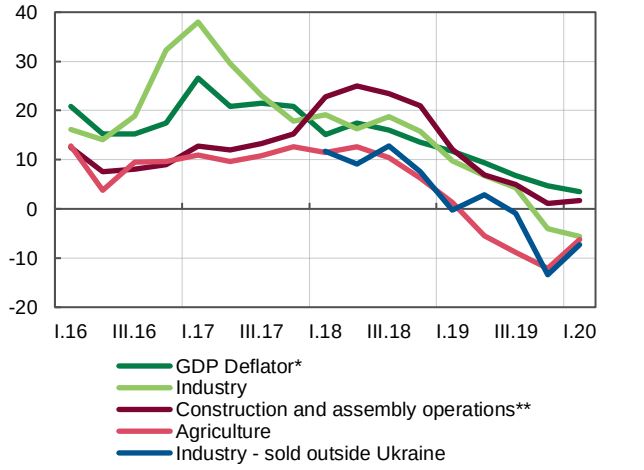
Source: Nefterynok, Refinitiv Datastream, minfin.com.ua, SSSU, NBU staff estimates.

Figure 2.1.8. Components of administered price index, % yoy



Source: SSSU.

Figure 2.1.9. Other inflation measures, quarterly averages, % yoy



* Data for Q1 2020 represent the NBU staff estimates.
** Data for Q1 2020 cover two months.

Source: SSSU.

imported hydrocarbons tumbled, prices for coke and petroleum products also fell, as did prices in the chemical industry, which were below last year's levels.

The increase in production costs restrained the slowdown in inflation

But the growth in services prices remained high, including due to rising production costs. In Q1 2020, the cost of labor and other inputs remained the most important contributor to the rise in prices, according to data from *Business Outlook Surveys*. Prices for telecommunications services and tariffs for postal and communication services for businesses grew rapidly (by 16.3% yoy in Q1).

Rising electricity prices for industry and the growth in other production costs, including those of labor and other inputs, were key factors in accelerating the rise in prices for water supplies and sewage services. More specifically, prices grew rapidly in the day-ahead market and the intraday market in March 2020 (by 12.2% compared to December 2019), driven by a surge in power generation from renewable energy sources[4]. Held back by competition and surplus capacity, however, electricity prices continued to be 15.5% lower than in July 2019, when the new market for electricity went into operation. Electricity tariffs for households remained unchanged.

The NBU expects the GDP deflator to have grown slightly more slowly in Q1 2020

The slowdown was driven by weak inflationary pressures in the consumer market and in most sectors of the economy. In particular, the decline in producer prices deepened (to a quarterly average of 5.6% yoy in Q1 2020), reflecting global trends in energy prices, in part due to lower production costs. In contrast, the slowdown in the deflator was restrained by a slower decline in prices for industrial goods sold outside Ukraine (primarily mining and metallurgical products) and agricultural products, as well as a slight acceleration in construction costs.

[4] The share of renewable energy sources in Q1 2020 stood at 4.3%, up from a mere 1.6% in the same period of 2019.

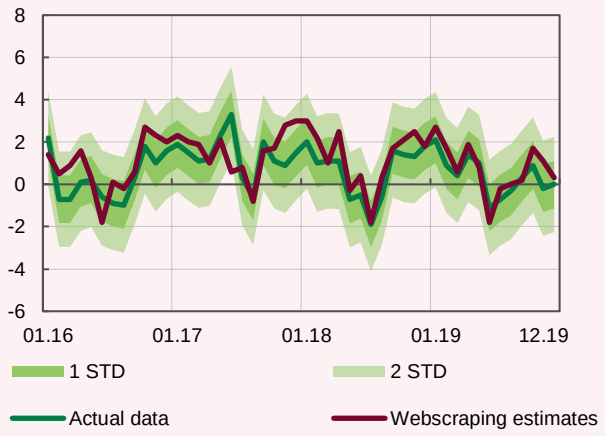
Box 1. Price Dynamics during the Quarantine

The introduction of restrictions to contain the spread of the COVID-19 has led to significant fluctuations in prices for goods and services. Prices for some foods and certain personal care products indeed rose quite sharply in response to a surge in demand in the second half of March, as shown by a high-frequency analysis of price conditions conducted using a data collection method known as web-scraping. However, the price growth has eased since April, and prices for some goods have even declined.

To analyze the rapid movements of prices, the NBU used price data for goods and services sold by online-supermarkets, pharmacies, delivery services, and other online services. The sample included only the goods and services in the CPI consumer basket.

For reference: The NBU has been monitoring prices for consumer goods online since the end of 2015, and for certain services since the end of 2019. Of course, this method has certain shortcomings (for more details, see Box "Measuring inflation using online price indices" in the October 2018 Inflation Report, pages 16–17), which may mean price dynamics differ slightly from the official results published by the SSSU. But several years' experience in using this data collection method for advanced assessment of inflation shows that in general, online inflation correlates closely with official data. Differences in individual representative products may be due to differences in the range of goods, the days on which data is collected, variations in geographical coverage, and so on. In addition, online prices can adapt more quickly to new economic conditions, as the cost of repricing is extremely low.

Figure 1. Changes in food prices, % mom

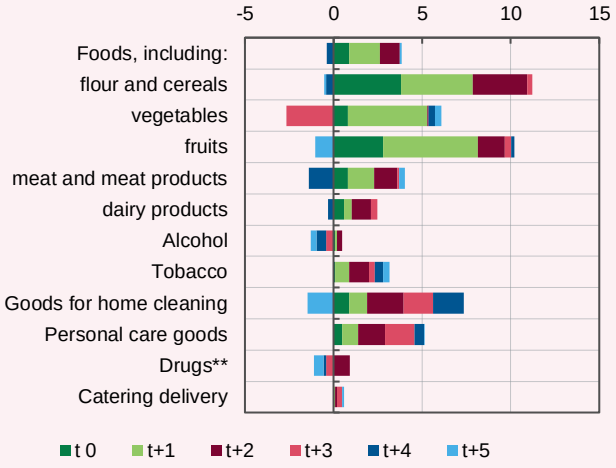


Source: online supermarkets, SSSU, NBU staff estimates.

The lockdown had the strongest impact in its first weeks, as prices for essentials rose in response to a surge in demand. Those include buckwheat, a staple food item in Ukraine, and toilet paper, which has also been in high demand elsewhere in the world. Prices for lemons, garlic, and onions – products that have antiseptic properties – also grew rapidly. Prices for vegetables with a relatively long shelf life, such as potatoes and carrots, also increased more quickly. The main reasons for this growth were not only stronger consumer demand, but also logistical problems due to transportation restrictions. Meanwhile, prices for greenhouse cucumbers and tomatoes fell even faster than last year as their supply expanded amid warm weather.

The weakening of the hryvnia in March was also a factor in the rise in prices. As a result, goods that are mostly imported, or products with a large share of imported inputs, increased in price. In particular, prices for small household appliances and pharmaceuticals were quick to respond to the fall in the hryvnia. Price growth was also driven by panic buying, fueled by fears of these goods running out or growing further in price.

Figure 2. Week to week changes in prices for selected goods since the introduction of quarantine*, %



* Week t 0 - period between 13 and 19 March, t+1 - between 20 and 26 March, t+2 - between 27 March and 2 April, t+3 - between 3 and 9 April, t+4 - between 10 and 16 April, t+5 – between 17 and 23 April. ** Data are available only from 26 March.

Source: online supermarkets, delivery services, NBU staff estimates.

However, price growth for most of these products waned in the first weeks of April. Buckwheat prices rose more slowly, while borshch vegetables and medicines actually fell in price. This was driven by both a weakening of demand from households and a strengthening of the hryvnia that began in late March.

As for service prices, some of these rose, while some fell. Dry-cleaning prices were little changed – a likely consequence of the failure of the rate of depreciation to be fully translated into the cost of the imported inputs used in the provision of this service (including cleaning agents). Prices for restaurant food delivery remained almost unchanged until the end of March. However, these prices began to grow after the authorities extended the lockdown and demand for such services rose.

The quarantine had a pro-inflationary impact overall, but price growth decelerated as panic demand faded and FX market conditions improved. As a result, inflation in April will also continue to be low – below 3% yoy – according to the NBU's preliminary estimates.

Box 2. Exchange Rate Pass-Through to Consumer Prices in Ukraine: Updated Estimates

Since 2014, the NBU has been pursuing a floating exchange rate policy, which means that the hryvnia can either weaken or strengthen, depending on the fundamentals. Understanding how exchange rate fluctuations affect consumer prices is a prerequisite for pursuing an effective inflation-targeting policy in a small open economy, while making impactful monetary policy decisions requires the constant reassessment of the pass-through effect, based on updated data. This box also discusses revised estimates.

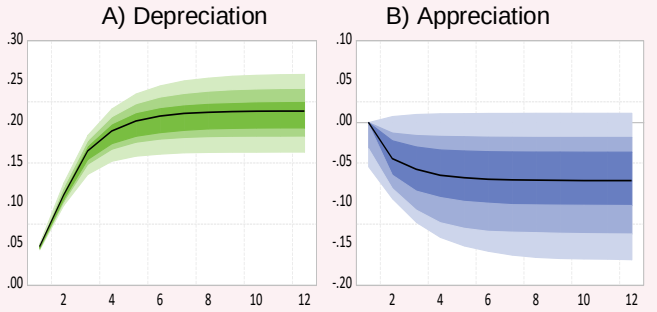
The experience of other countries, as well as currently available estimates for Ukraine (for more details, see Box "Nonlinear Exchange Rate Pass-Through to Headline Consumer Inflation" in the October 2016 Inflation Report, page 17) show that the pass-through effect (hereinafter – the PE) may be asymmetric in nature, as the impact of the exchange rate on prices may differ during periods of depreciation and appreciation. Economic studies attribute the asymmetry of PE to imperfect competition. Under strong competition, appreciation has a greater impact than depreciation. Businesses lower their markups to maintain or increase market share. On the other hand, when competition is low, depreciation tends to have a stronger effect on prices than appreciation. Firms keep markups unchanged in the case of depreciation or increase them in the case of appreciation without losing demand.

A common problem with traditional methods for estimating the dependence of inflation on the exchange rate for emerging markets is the small number of observations and the high volatility of time series. As a result, estimated coefficients are volatile and sensitive to the choice of explanatory variables and the lag length of the exchange rate impact on inflation. In order to make effective monetary policy decisions, PE estimates are updated as the sample size increases and new methodological approaches emerge.

The estimates were updated for the period between January 2014 and December 2019, enabling researchers to take into account the effects of both the weakening and the strengthening of the hryvnia. To take into account the shortcomings of the standard approaches, the analysis strategy was divided into two stages. In stage one, about 30,000 versions of the inflation equation with various explanatory variables were estimated.[5] In stage two, researchers picked from the stage-one versions about 1,000 versions that demonstrated the best characteristics and that were in line with economic laws[6]. Separately for each equation and for depreciation and appreciation, a dynamic PE was estimated, reflecting the impact of exchange rate changes on inflation over time.

Figure 1 shows the percentage change in the level of consumer prices (cumulatively) over 12 months due to the depreciation of the hryvnia (panel A) and appreciation (panel B) against the dollar by one percent. The average value corresponds to the median of the distribution of the estimated pass-through coefficients after filtering. Shaded areas on the graph show variances of the middle 25%, 50%, and 75% of the distribution. This shows how the estimated PE values depend on the choice of inflation equation.

Figure 1. Dynamic exchange rate pass-through to consumer prices from depreciation and appreciation



Source: NBU staff estimates.

A depreciation of 1% causes an increase in consumer prices by an average 0.22%, according to the estimation results. A 1% appreciation, on the other hand, pushes prices down by 0.08%. The effect is already almost completely obvious after six months. The confidence intervals of the estimates for appreciation are much wider in comparison with the intervals for depreciation, which may be because the periods of the hryvnia's strengthening were relatively short, making the estimates sensitive to equation specifications.

In other results, several observations should be noted. In the case of excessive depreciation, such as in the period from February to April 2015, the pass-through effect increased to 0.45%–0.50%. Inflation expectations, which in Ukraine are heavily reliant on exchange rate dynamics, may be one of the factors behind the asymmetry and nonlinearity of the pass-through mechanism. For example, when there are depreciation expectations, an actual appreciation of the hryvnia may not put significant downward pressure on prices.

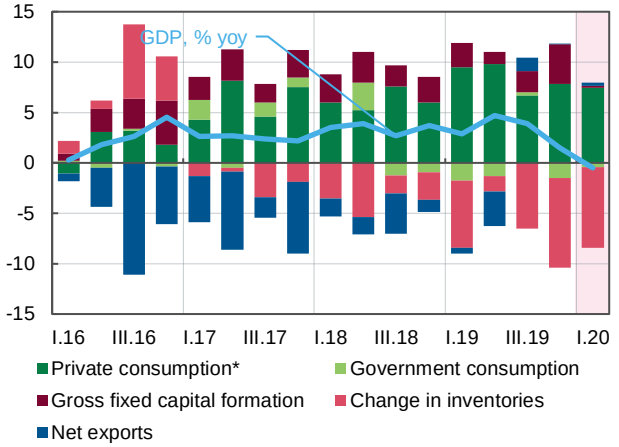
Thus, in order to moderate the impact of exchange rate fluctuations on price stability , the NBU maintains its presence in the FX market to smooth out excess volatility.

[5] In particular, the different equation variants had different factors of demand, indicators of inflation expectations, factors of global price shocks, and different lag lengths of inflation inertia and exchange rate.
[6] For example, only the models with the best predictive properties were selected. In contrast, models with coefficient signs that contradicted economic theory were rejected.

2.2. Demand and Output

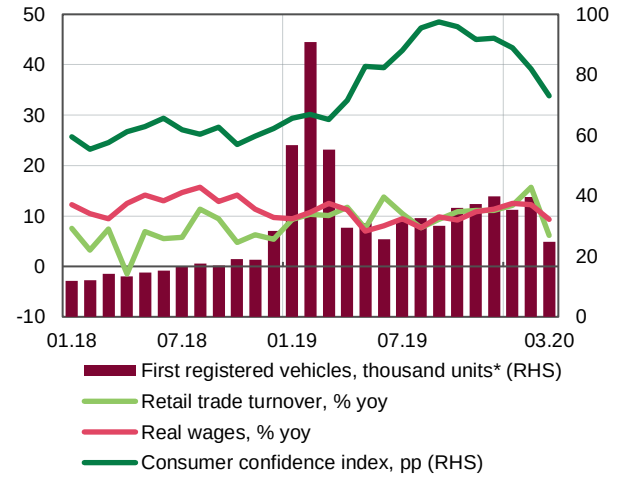
- After growing steadily in 2019, real GDP declined in Q1 in the wake of declining investment and external demand, and the expected drop in gas transit volumes. The decline was restrained by continued consumption growth.
- While the effective ban on certain activities due to the introduction of the quarantine in mid-March 2020 because of the spread of COVID-19, also affected GDP, it had the strongest impact on the services sector (such as tourism and entertainment), as well as on trade and transportation.

Figure 2.2.1. Contributions to annual GDP growth by final use, pp



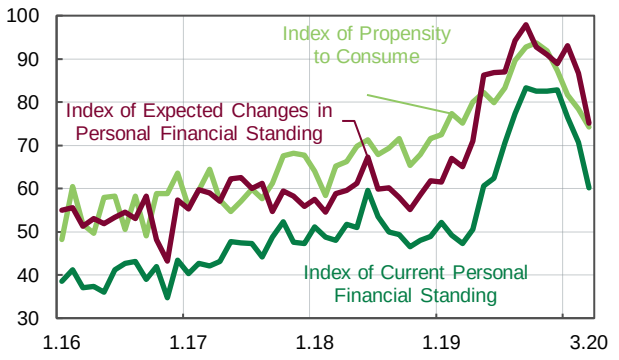
* Including non-profit institutions serving households.
**Pink field represents NBU forecast.
Source: SSSU, NBU staff estimates.

Figure 2.2.2. Leading indicators of private consumption



*Calculated as the sum of new and used cars.
Source: SSSU, Ukravtoprom, NBU staff estimates.

Figure 2.2.3. Consumer Confidence Index (by Components), points



Source: GfK Ukraine, Info Sapiens.

The decline in real GDP seen in early 2020 was restrained by continued consumption growth

The NBU estimates that real GDP dropped by 0.5% yoy in Q1 2020. Apart from the weakening of GDP growth momentum in late 2019 (real GDP growth slowed to 1.5% yoy in Q4 2019), other reasons for the decline were lower investment and external demand, as well as the expected drop in gas transit through Ukraine. Meanwhile, at the beginning of the year, growth was supported by rapidly rising private consumption, which, however, also decelerated.

More specifically, hitting an eight-year high in 2019 of 11.9% yoy, private consumption growth remained healthy in Q1 2020. It was buoyed by favorable labor market conditions, income growth and strong consumer sentiment. Although falling compared to the high figures seen in H2 2019, consumer sentiment remained significantly higher than its average over the last six years.

That said, the quarantine imposed in March due to the spread of COVID-19 seriously disrupted this trend. More specifically, after rising steadily in January and February, the growth in retail trade slowed markedly, to 6.1% yoy in March. Real wage growth also slowed significantly (to 9.3% yoy), despite the fact that the effects of quarantine restrictions have not yet fully affected the labor market (for more details, see Section 2.3 “Labor Market and Household Income” on page 18).

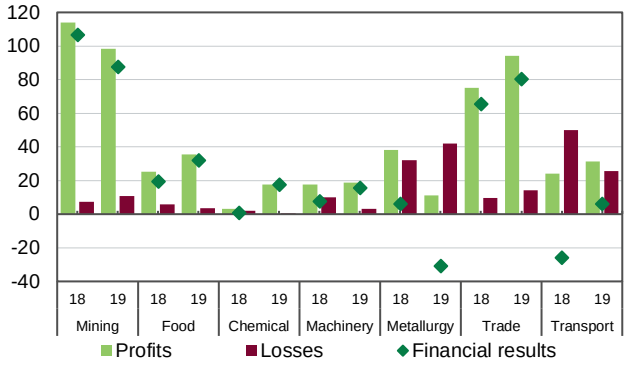
The reason for the decline in private consumption growth was that the sectors most affected by quarantine restrictions reduced or altogether curtailed their output. According to NBU estimates, these were mainly services related to temporary accommodation and catering, cultural and sports facilities, passenger transportation, and so on. An additional factor was the narrowing of consumption of nonstaple goods and services for precautionary reasons, amid rising economic and epidemiological uncertainty and deteriorating expectations. In particular, March saw a dramatic fall in the Index of Propensity to Consume, and in the Index of Expected Changes in Personal Financial Standing.

The NBU estimates that despite the easing in fiscal policy seen in Q1 2020, the government consumption continued to make a negative contribution to GDP growth, due to current budget expenditures increasing at a rather moderate pace.

Investment demand also slowed, among other things due to uncertainty over the legal environment

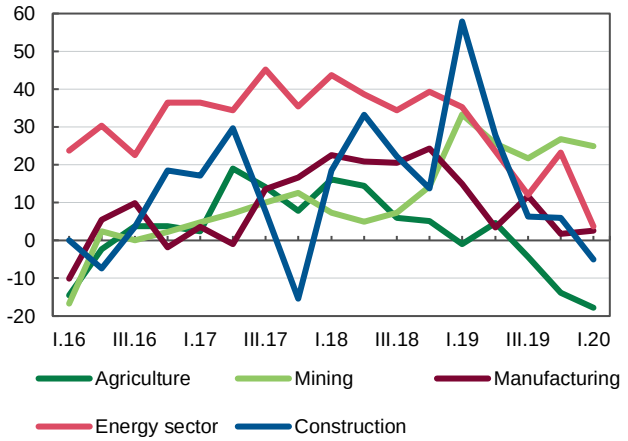
After being robust in 2019 (14.2%), the growth in gross fixed capital formation (“investment”) also weakened in Q1 2020

Figure 2.2.4. Pre-tax financial results of small and medium enterprises in 2018-2019, bn UAH



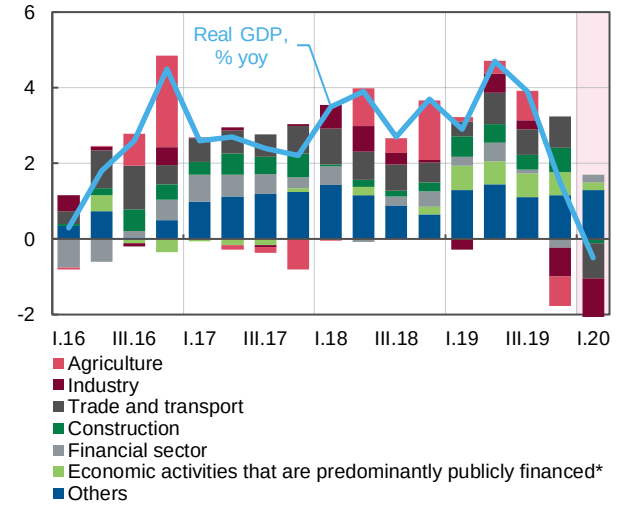
Source: SSSU, NBU staff estimates.

Figure 2.2.5. Expectations regarding changes in investment spending for the execution of construction work in the next 12 months



Source: NBU.

Figure 2.2.6. Main sectors' contributions to the annual percent change in real GDP, pp



*Including professional, scientific and technical activities; administrative and support service activities; public administration and defense, compulsory social security; education; human health and social work activities; arts, entertainment and recreation.

**Pink field represents NBU forecast.

Source: SSSU, NBU staff estimates.

according to NBU estimates, despite the improvement in financial performance of companies[7] seen last year, and still reasonably high business expectations.[8] The main reasons for the slowdown were a drop in investment in green energy facilities due to uncertainty over the legal environment for that type of activity, and companies' lower capital expenditures, in particular those of agricultural companies ahead of the expected opening of the land market, as evidenced by findings of the NBU's quarterly surveys. The weak performance of construction in spite of an increase in budget capital expenditures and the early start of construction work on the back of favorable weather provided yet more proof of the slower growth in investment demand in Q1. Since the end of 2019, the expectations of companies in the manufacturing sector have been weak due to falling external demand and a further worsening in the external price environment.

The NBU estimates that the contribution of net exports to real GDP growth was close to zero in Q1 2020. The volumes of exports remained practically unchanged – growth in agricultural (mainly grain) exports and exports of IT services was offset by a drop in the volume of metallurgical exports and gas transited through Ukraine. The volume of imports declined on the back of a decrease in energy imports and imports of cars, including used ones (due to a high comparison base resulting from the preferential customs clearance of used cars at the beginning of the previous year), as well as quarantine restrictions (for more details, see Section 2.5 "Balance of Payments" on page 27).

From a sector-wise perspective, the performance of the industrial sector remained weak, while that of transport, construction and most services worsened

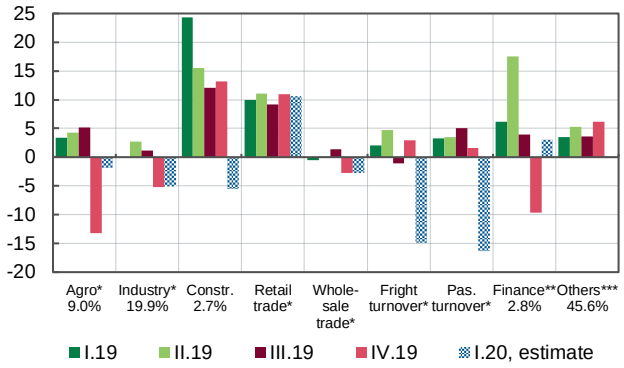
In Q1 2020, the industrial sector made the largest contribution to the fall in GDP due to narrowing external demand, unfavorable external price conditions, shrinking investment demand, and warm weather. More specifically, the downturns in the metals industry, the mechanical engineering sector, the energy sector, and the mining industry remained significant. That said, the worsening performance of the industrial sector was tempered by growth in the chemical and pharmaceutical branches, as well as in the production of food and tobacco products.

Freight turnover dropped dramatically in Q1 2020 compared to 2019. Given the substantial decrease in gas transit through Ukraine, this was largely expected. Declining imports and weaker exports were additional factors. That said, their impact was only moderate, as evidenced by the relatively restrained rate of decline in wholesale turnover (by 2.8% yoy).

The volume of construction work dropped by 5.5% yoy in Q1 2020, reflecting weaker investment activity. Agricultural output declined further, by 1.8% yoy, amid the deepening

[7] In 2019, the profits of large- and medium-sized companies before taxes rose by 10.3% yoy, while their losses dropped by 15.3% yoy.
[8] In Q1 2020, the BOI was 110.5%.

Figure 2.2.7. Output in selected types of activities in 2020 (in % of 2019 GDP), quarterly averages, % yoy



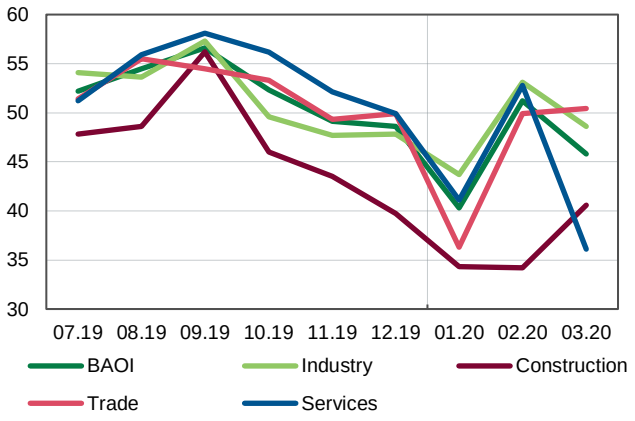
* Cumulative over the period January-March 2020.

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

*** GVA for others, I.20 – NBU staff estimates.

Source: SSSU, NBU staff estimates.

Figure 2.2.8. Dynamics of NBU's business activity outlook index*



* A level above 50 indicates an expansion or growth compared to the previous month; values below 50 represent a contraction; the level of 50 indicates no change.

Source: NBU.

downturn in animal production – primarily cattle production – and the weaker performance of poultry production.

The introduction of quarantine measures in Ukraine since mid-March 2020 has had a moderately negative impact on the industrial and agricultural sectors and construction. Conversely, the impact of these measures on transport and most other services sectors was already significant in March. More specifically, passenger turnover dropped by 16.3% yoy in Q1 2020, while remaining at the level of the same quarter of the previous year in January–February. The NBU estimates that the tourism, entertainment and personal services sectors incurred the largest losses, due to the almost complete cessation of these activities. The number of real estate leasing transactions decreased. Meanwhile, demand for healthcare, delivery, telecommunications and communications services rose as the epidemiological situation deteriorated. The financial and insurance sector was almost unaffected by the quarantine. According to NBU estimates, the sector's GVA grew, pushed up by a rise in the banks' fee and commission income. Overall, the impact of the quarantine measures introduced since mid-March on real GDP is estimated to have been (-0.4 pp) in Q1 2020.

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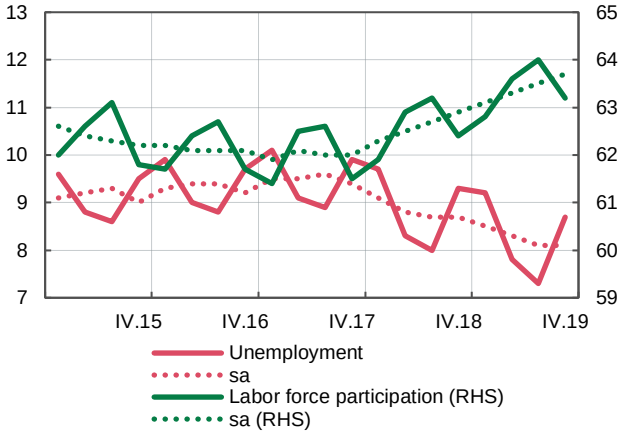
2.3. Labor Market and Household Income

- The introduction of the quarantine and restrictions on various types of activities had a moderate impact on labor market performance and incomes in Q1 2020, according to NBU estimates. However, these indicators are expected to deteriorate sharply in Q2 2020.
- An expansion of social programs is aimed at mitigating the effects of declining wages and entrepreneurial income.

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

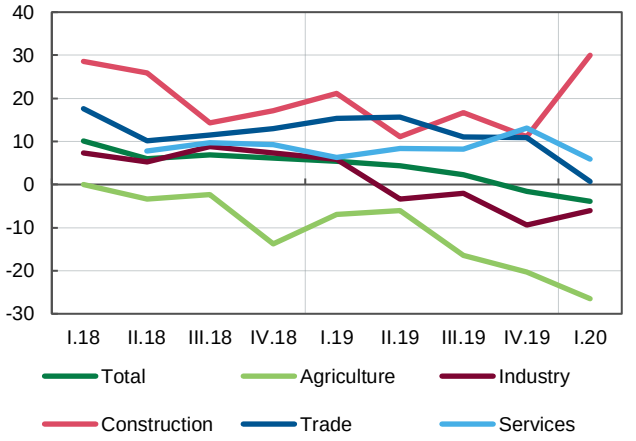


* As a % of population aged 15–70 in the labor force.

** As a % of total population aged 15–70.

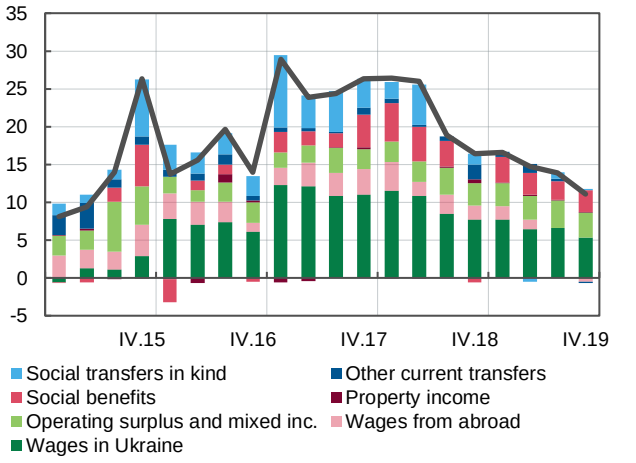
Source: SSSU, NBU staff estimates.

Figure 2.3.2. Expectations of enterprises as to the change in the number of employees 12-month ahead (balance of answers), pp



Source: Business outlook survey of Ukraine (NBU).

Figure 2.3.3. Contributions to annual change in nominal household income, pp



Source: SSSU, NBU staff estimates.

The introduction of the quarantine had a moderate impact on employment in Q1 2020…

In late 2019 through early 2020, labor market conditions remained favorable. Although GDP growth decelerated, the seasonally adjusted unemployment rate did not change compared to the previous quarter (8.1%). The significant number of vacancies during most of Q1 2020 indicated that labor demand at the beginning of the year was relatively stable.

Labor supply continued to grow, as evidenced by the increase in the labor force participation rate, although the total population aged 15–70 declined further (by 0.6% in 2019) due to natural causes. As before, the largest contribution to the increase in labor force participation was made by persons of preretirement age (50–59). This was driven by the continued effect of the pension legislation amendments adopted at the end of 2017, which tightened the requirements for years of pensionable service.

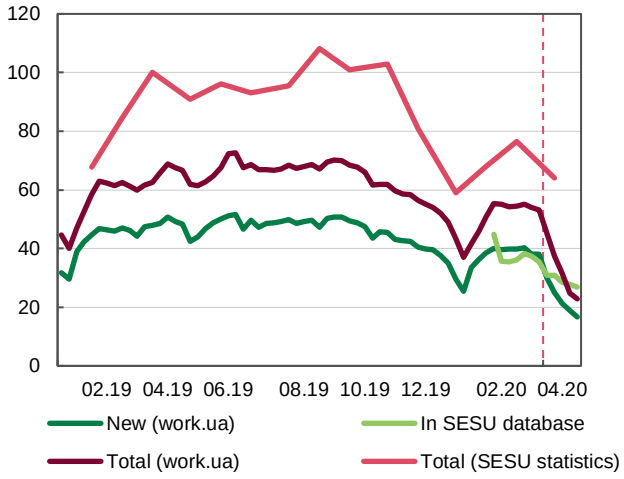
Halfway into March 2020, the authorities imposed a quarantine in Ukraine to contain the spread of the novel coronavirus. Restrictions on trade, transport, and services, growing uncertainty, and deteriorating economic expectations led to lower demand for labor. Companies are mostly focused on retaining staff, but are also adjusting their plans to recruit new employees, NBU express business surveys found. When the authorities extended the quarantine, however, expectations of staff changes began to deteriorate, and so the NBU projects a significant increase in unemployment in Q2 2020 (for more details, see Box 3. "Impact of the Quarantine on the Labor Market, " on page 20).

…and weighed on the growth in nominal and real household incomes

The average nominal wage, which made a major contribution to the further increase in nominal incomes in 2019 (by 14%), continued to grow rapidly In January–February 2020 (by 16% yoy). However, its growth rate fell to 12% yoy as early as March, and in the activities hardest hit by quarantine restrictions – hotel and restaurant business, air transport – average nominal wages even fell. In addition, the lockdown is likely to affect informally employed workers (in 2019, the level of informal employment was 21%). According to Info Sapiens survey conducted in late March, 44% of respondents did not receive either the full amount or part of their March wages.

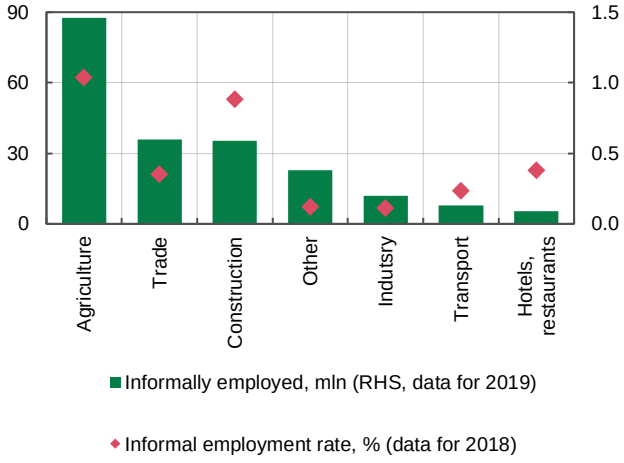
The growth in pensions at the beginning of Q1 remained high (17% yoy) although it slowed in March due to the comparison base effect (In March last year a part of a one-off pension supplement was paid out, and pensions were indexed). Real

Figure 2.3.4. Number of vacancies, thousand



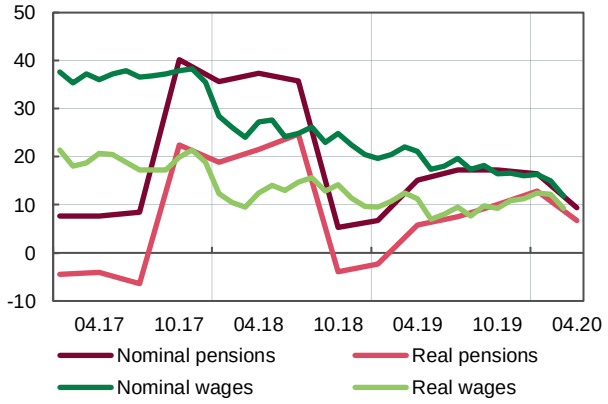
Source: SESU, work.ua.

Figure 2.3.5. Informal employment indicators by types of activity



Source: SSSU, NBU staff estimates.

Figure 2.3.6. Staff wages and pensions (start of the month), nominal and real, % yoy



Source: SSSU, PF, NBU staff estimates.

disposable income continued to grow quickly in Q1, in part due to a further slowdown in inflation.

In Q2 2020, lower income from wages will be partially offset by an increase in social benefits

Wage growth will decelerate in Q2 2020 due to both slower growth in average wages and lower employment (for more details, see Box 3. "Impact of the Quarantine on the Labor Market" on page 20). The planned expansion of social security programs, however, will make it possible to mitigate the negative effects of the crisis. For the duration of the quarantine, the government has eased the requirements for granting unemployed status, and the State Employment Service has switched to a remote mode of operation. Parliament also passed the *Law On the Provision of Social and Economic Guarantees in Connection with the Spread of the Coronavirus*, which allocates partial unemployment benefits to employees of small- and medium-sized enterprises. In addition, authorities increased the minimum amount of unemployment benefits for as long as quarantine is in effect, and for one month after it is lifted. These benefits can be claimed, in particular, by persons who worked informally before losing their jobs.

Additionally, the Cabinet of Ministers strengthened the social protection of pensioners, passing a resolution that increases pension benefits for pensioners over the age of 80, authorizes an indexation of pensions starting 01 May, and provides for other individual increases. This will support a high growth rate of pensions in Q2.

The NBU estimates the total value of these initiatives to be roughly 8% of the average quarterly disposable income of the population in 2019. Social support will thus provide some compensator for income lost in Q2.

Apart from that, the government introduced salary supplements, for the duration of the quarantine, for medical workers directly engaged in fighting the coronavirus outbreak. The crisis will likely have a milder impact on activities for which demand increased during the lockdown, including delivery, telecommunications, and communication services. In Q2 overall, however, nominal and real disposable incomes of the population will decline.

Box 3. Impact of the Quarantine Measures on the Labor Market

The introduction of the quarantine led to significant changes in the labor market. Companies began to operate remotely where possible, and most were determined not to furlough employees. But their plans to retain staff have lost viability amid multiple quarantine extensions, mounting uncertainty, and deteriorating economic expectations. As a result, unemployment is expected to increase significantly in Q2.

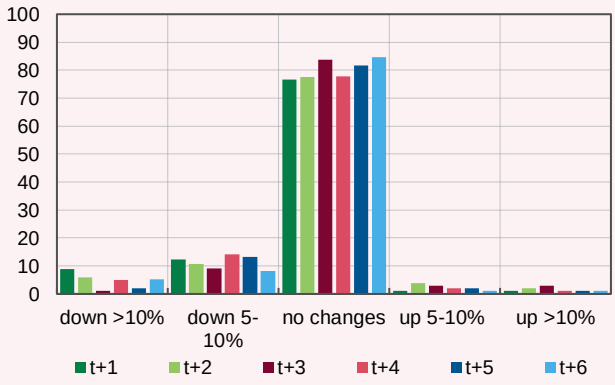
Quarantine measures, which took effect 16 March, include the following:

- closure of educational institutions
- restrictions on public and long-distance transport and air travel
- closure of public catering (except delivery), cultural, and entertainment establishments
- closure of retail outlets, except for the sale of food, fuel, and medical supplies.

According to NBU surveys and open-source information, companies have reported using various strategies for working with staff: retaining employees and wages, reducing the number of work days per week, switching to remote operations, providing paid and unpaid leave, and furloughing some employees.

Some 80% of respondents in the NBU's[9] express surveys said their companies had not expected changes in staff numbers.

Figure 1. Expectations for changes in the number of staff in the next 4 weeks, % of answers*[10]

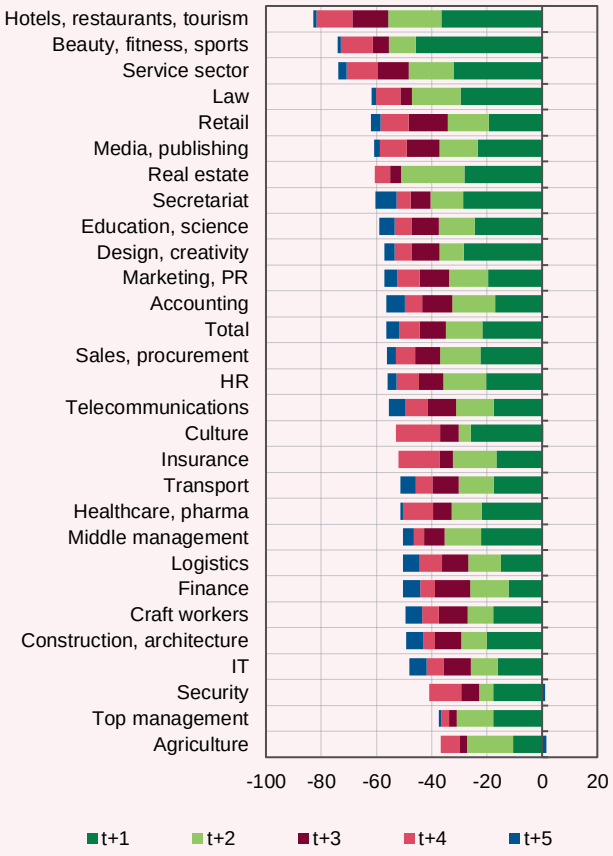


* t+1 (25.03), t+2 (01.04), t+3 (08.04) – compared to 4 weeks before quarantine, t+4 (15.04), t+5 (22.04), t+6 (29.04) – compared to previous 4 weeks.

Source: Express business survey of Ukraine (NBU).

In the meantime, the number of vacancies has plunged during the quarantine, which could indicate that companies are altering their plans to hire new workers. The number of new vacancies halved in the first five weeks of the quarantine, according to data compiled by work.ua. Furthermore, existing new vacancies may indicate that businesses have searched for job candidates for the time after the quarantine is over, according to recruitment agencies. The number of new vacancies has decreased the most in services and retail – the sectors most affected by the quarantine. But demand for labor has declined in other sectors as well amid an overall deterioration in economic conditions and growing uncertainty. The sectors that have seen the smallest declines in vacancies include IT, which is best equipped to operate remotely (the share of remote workers in this field rose from 10% to 90%), and agriculture, which experiences traditional increases in labor demand during sowing campaigns. As of the end of March, the number of vacancies declined for all types of activities, according to data compiled by the SSSU.

Figure 2. Work.ua vacancies by sector, % compared to start of quarantine

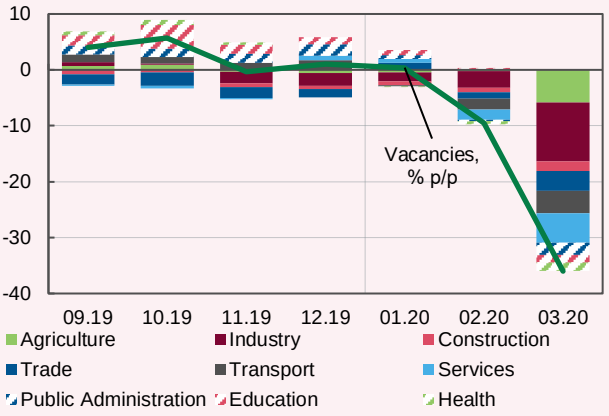


Source: work.ua, NBU staff estimates.

Job search activity in the labor market has also decreased since quarantine measures were imposed. The number of new resumes fell by 20% in the six weeks following the start of quarantine, but the quantity of new vacancies declined more significantly. As a result, the number of applications per vacancy increased, reflecting the significant difficulties that candidates might encounter as they looked for jobs.

[9] To monitor economic conditions under the quarantine, the central bank launched weekly surveys of managers of large- and medium-sized businesses.
[10] In this Box, week t 0 stands for the beginning of quarantine, 11 to 17 March, t+1, t+2, etc. stand for the weeks to follow.

Figure 3. Contributions to Annual Change in SESU Vacancies, pp (end of period)

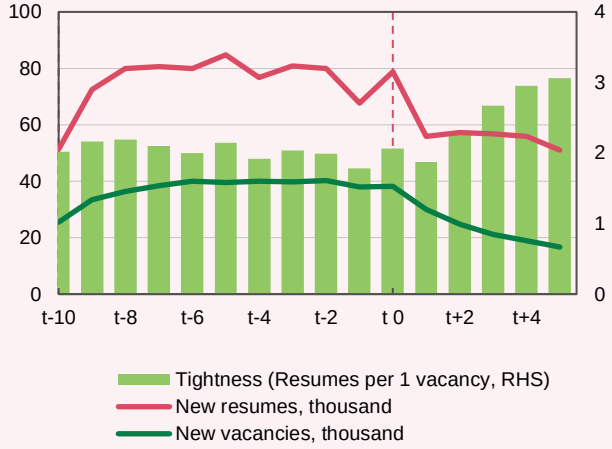


Source: SESU, NBU staff estimates.

Sociological surveys of households also reflected changes in the labor market. Among Ukrainians who held a job before the quarantine, 35% continued to work as usual, 29% were working remotely, 32% were on unpaid leave, while the remaining 4% had lost their jobs, a 25–30 March survey found. According to another survey conducted during the same period, 10% of those who were working before the quarantine lost their jobs after it was imposed.

The quarantine, introduced halfway into March, will not have a significant impact on unemployment in Q1, the NBU estimates. In contrast, unemployment in Q2 will rise to 11.5%, or to 12% in seasonally adjusted terms. This projection is based on the NBU's forecast that real GDP will decline in Q2, and on the results of opinion polls concerning the number of people who were previously working but who lost their jobs due to quarantine measures. However, these estimates were adjusted to reflect the assumptions that companies faced with increased demand for their goods and services hired more staff, and that some of the people who lost their jobs or were looking for work before the quarantine started will give up their job search efforts and leave the labor force. This could happen for a number of reasons: technical difficulties preventing remote interviews, the need to self-isolate, and so on. This assumption is backed up by the decline in the number of new resumes one week into the quarantine, and the lack of growth in new resumes afterwards.

Figure 4. New work.ua Vacancies and Resumes and Labor Market Tightness

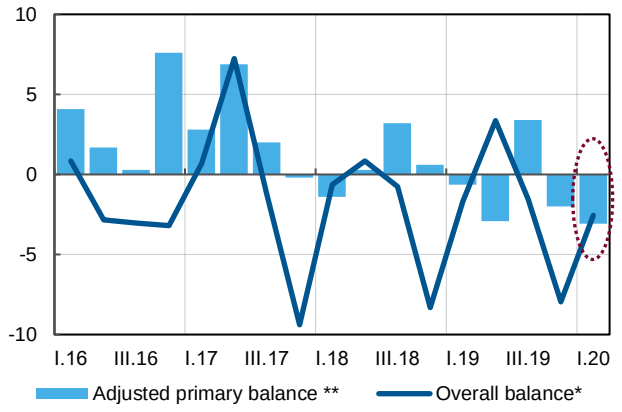


Source: work.ua, NBU staff estimates.

2.4. Fiscal Sector

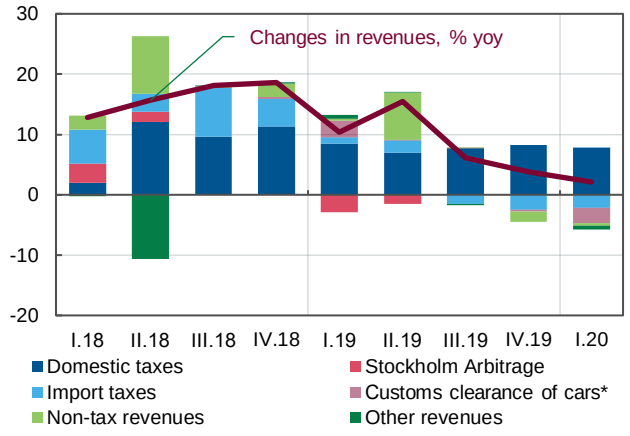
- At the start of the year, fiscal policy remained loose, stimulating aggregate demand.
- The revenues generated by the economy were lower than expenditures as a result of a drop in imports, low prices for some imported goods, and the effect of the quarantine restrictions, which became felt at the end of the quarter.
- The widening of the deficit had practically no impact on the dynamics of the public debt, with the main reason for the increase in the latter being an exchange rate valuation effects driven by a temporary depreciation dip.

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



*The customs clearance of cars transported into the customs territory of Ukraine which fall under the customs regime of transit or temporary imports (according to Law of Ukraine *On Amendments to the Tax Code of Ukraine Concerning the Excise Tax on Cars* dated 8 November 2018).
Source: STSU, NBU staff estimates.

At the start of the year, fiscal policy remained loose and stimulated aggregate demand

The consolidated budget recorded a large deficit in Q1 (UAH 17.3 billion), which exceeded the levels seen in the same period of previous years both in absolute terms and relative to GDP. According to the NBU's estimates, fiscal policy remained loose at the start of the year, as evidenced by a widening in the negative cyclically adjusted primary balance, with expenditures on debt servicing being practically unchanged year-on-year.

Growth in revenues was weak (2.1% yoy) due to a slowdown in economic growth, a decline in energy prices (on both the foreign and domestic markets), and because of certain revenue management decisions – in particular the catching up at the start of the year with VAT refunds for the previous period. Quarantine restrictions also had an impact at the end of the quarter, particularly on the own revenues of budget institutions and on some tax revenues of local budgets.

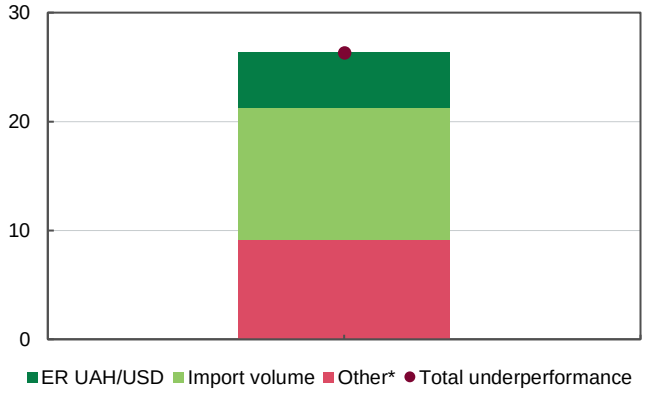
On the other hand, notwithstanding the scarcity of budget resources, the growth in expenditures (5.1% yoy) outpaced the growth in revenues, although this was slower than planned. Rapid growth was seen in employee wages, which supported private consumption, and in the financing of public investments. Collective services were also a priority at the start of the year, particularly defense and security, joined by healthcare at the end of the quarter.

The slow growth in revenues is a result of a significant reliance on import taxes and royalties

Taxes on imported goods accounted for 35% of total tax revenues in 2019. Lower physical volumes of imports, aggravated by a decline in global energy prices and the hryvnia remaining strong at the start of the year – both year-on-year and compared with the level envisaged in the budget – caused revenues from imported goods to drop by 14% yoy. This was also a key factor behind the substantial underperformance in the revenues plan in Q1 2020. Moreover, falling world prices for energy, natural gas and oil, amid declining domestic production and declining demand for energy due to warm weather conditions, led to a significant reduction in proceeds from royalties and affected domestic excise duties. In particular, revenues from the excise tax on electricity almost halved as domestic electricity prices dropped markedly.

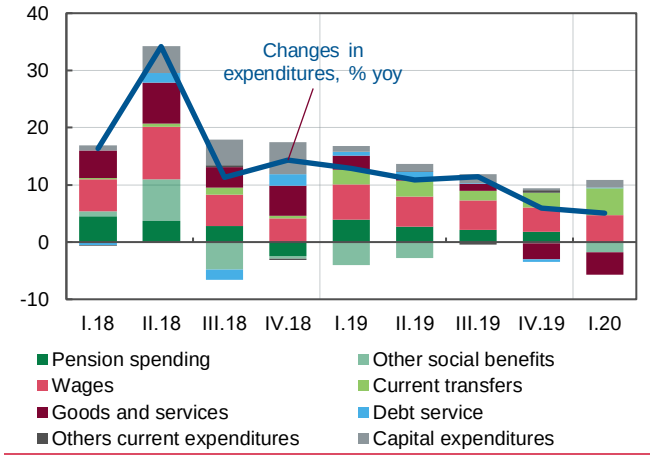
Instead, growth in tax revenues was supported by robust growth in private consumption and household income. In addition, compared with the previous year, production of

Figure 2.4.3. Decomposition of underperformance in tax proceeds to the general fund of the state budget in Q1 2020, UAH bn



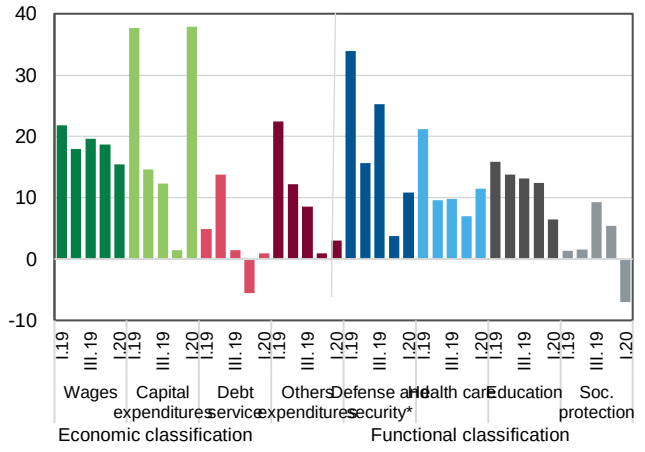
*Other includes nominal GDP, nominal wage, etc.
Source: STSU, NBU staff estimates.

Figure 2.4.4. Contributions to annual changes expenditures of the consolidated budget, pp



Source: STSU, NBU staff estimates.

Figure 2.4.5. Growth in consolidated budget expenditures by selected areas, % yoy



*Includes defense and public order, security and the judiciary
Source: STSU, NBU staff estimates.

tobacco products grew at a fast pace in Q1 (10.6% yoy), which led to an increase in revenues from the excise tax on these goods. However, these revenues were insufficient to compensate for the weak contribution from proceeds related to imports and royalties.

Another important factor that has had a significant impact on budgetary policy over the past two years is the mismatch between actual and expected revenues – due to the inaccuracy of the macroeconomic assumptions that underlie the budget. The former factor resulted in a 13% underperformance in tax revenues to the general fund of the state budget. This has led to increased reliance on windfall revenues, which cannot be a source of systemic expenditures, or to making expenditures arbitrarily, which reduces their efficiency, especially through the underfunding of development, or programs aimed at reforming socially important areas.

Expenditures grew more slowly, but remained significant compared with generated revenues

Traditionally, social programs aimed at supporting private consumption have been the main appropriation area. At the start of the year, growth rates of employee wages remained high, including allowances for military personnel. At the same time, social spending decreased owing to the high comparison base, including due to the partial disbursement of a one-off pension supplement in March 2019, and warm weather coupled with lower utility tariffs.

Capital expenditures grew rapidly, in particular to finance road infrastructure. The growth in public investment was also evidenced by a significant increase in transportation expenditures[11], including rail transportation.

Such public expenditures as defense and public order (excluding allowances for military personnel) and healthcare also grew at a relatively high pace. The latter could be related both to preparations for the implementation of the second stage of healthcare reform, and to combating the spread of COVID-19. At the same time, some other sectors received less financing due to the streamlining of government-supported programs, in particular agriculture.

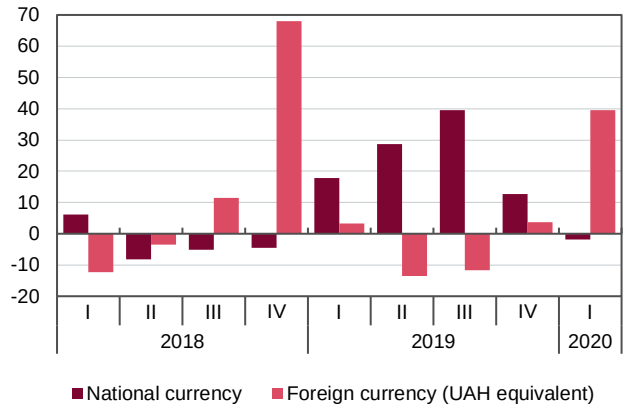
However, there were also objective factors for the slower growth in expenditures, such as reduced utility tariffs, low inflation, and the stronger hryvnia exchange rate at the start of the year compared with the previous year. The latter two factors were reflected in practically unchanged debt servicing expenses compared to last year, with savings on debt servicing amounting to more than UAH 4 billion.

The increase in the public and publicly-guaranteed debt as of the end of Q1 is almost entirely the result of a temporary surge in devaluation pressure in March

The widened deficit was covered with debt, mainly denominated in foreign currency. The foreign currency debt was sourced in almost equal proportions from foreign and

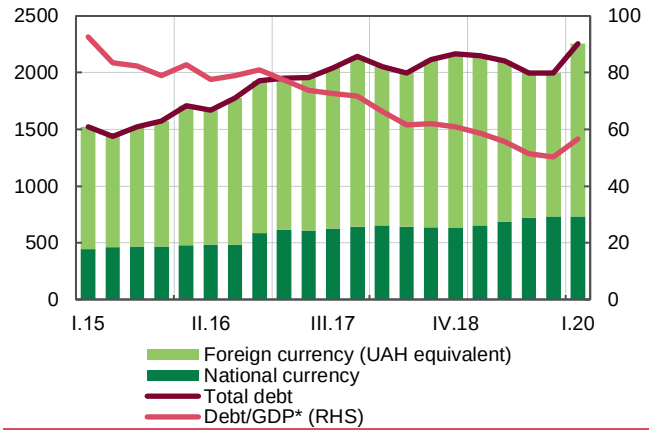
[11]By functional classification

Figure 2.4.6. State budget net borrowings, UAH billion



Source: STSU, NBU staff estimates.

Figure 2.4.7. 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: STSU, NBU staff estimates.

domestic markets. Borrowing in the national currency was relatively insignificant due to the weakening of foreign investors' interest and, from late February, due to turbulence in the global financial markets and increased risk aversion. Apart from financing the deficit, the government used its available resources to repay current debt liabilities, as well as accumulating foreign currency resources for future payments. Taking into account payments on guaranteed debt, the increase in public and publicly guaranteed debt as a result of these transactions was minor.

At the same time, the amount of public and guaranteed debt had increased significantly in relation to GDP as of the end of Q1, by 6 pp, up to more than 56%. The increase was mainly due to the exchange rate valuation effects driven by a temporary depreciation surge in March. The sensitivity of the public and publicly-guaranteed debt to foreign exchange fluctuations is due to the still-high share of debt denominated in foreign currency (63.4% as of the end of 2019), despite the reduction seen last year resulting from the de-dollarization strategy and the strengthening of the hryvnia.

Box 4. Revision of the Ukrainian State Budget for 2020

In early April, parliament approved amendments to the Law of Ukraine *On the State Budget for 2020*, which significantly widened the budget deficit – from 2.1% to 7.5% of GDP. The need to amend the law and widen the budget deficit emerged after macroeconomic realities changed. The lawmakers reduced budget revenues by 11% and increased expenditures by 7% compared to the previous budget law, in part due to the need to take measures to combat the spread of COVID-19 and to support businesses and vulnerable groups. A significant increase in the budget deficit under current conditions will not create threats to macrofinancial stability, but rather will help support the economy, provided that the government returns to a prudent fiscal policy in the coming years, according to NBU estimates. However, there are a number of risks to meeting budget targets, primarily arising from a possible deviation of certain macroeconomic indicators from projections, including consumer inflation, and from potential difficulties in financing the budget deficit if cooperation with the IMF is delayed.

Parliament adjusted the 2020 budget to the new macroeconomic conditions. As expected, revenues were cut by reducing tax receipts (by UAH 145 billion, or by 15.7% compared to the previous budget law) to allow for a decrease in nominal GDP, a drop in imports of goods, and a downward revision of assumptions about both domestic and external prices of natural gas (these affect planned proceeds from royalties). However, the NBU estimates that the decrease in budget revenues may turn out to be slightly more significant, given the NBU's reduced projections for inflation and imports of goods and other factors

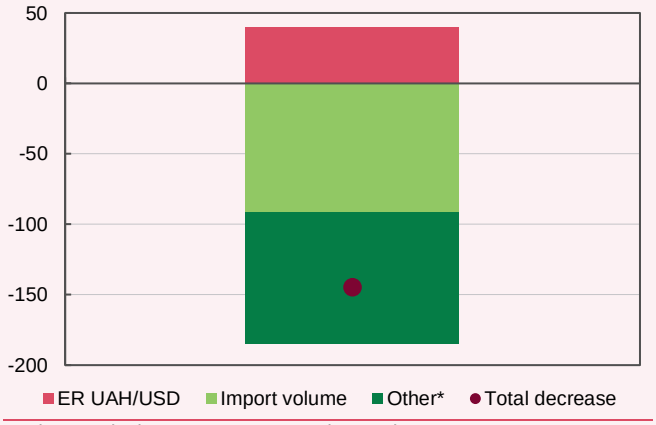
Table 1. Main macroeconomic variables

	2019	2020	
		CMU	NBU
Nominal GDP, UAH bn	3975	3986	3970
GDP real, %	3.2	-4.8	-5.0
Deflator, %	8.1	5.5	5.1
CPI, % eop	4.1	11.6	6.0
Exports of goods and services, USD bn	63.4	59.9	57
Imports of goods and services, USD bn	75.5	68.2	64.8
ER, UAH/USD avg	23.7	29.5	-
Nominal average wage,% yoy	18.5	1.9	4.3

Source: STSU, VRU, NBU staff estimates.

The significant tax losses were compensated for by larger transfers of parts of net profit and dividends by state-owned companies, which are to transfer UAH 26.7 billion more than previously planned, and the NBU, which is to transfer UAH 2 billion more.

Figure 1. Factors of revision of tax revenue forecast compared to the previous forecast in 2020, UAH bn



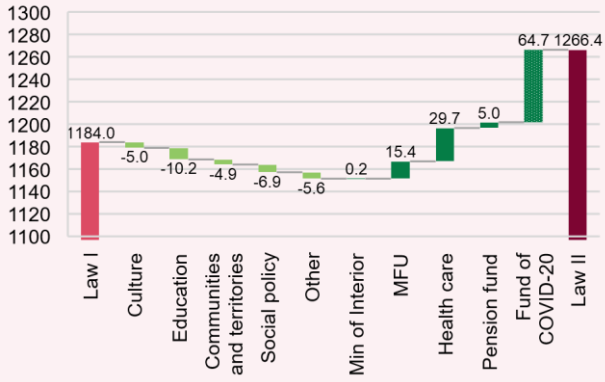
* Other nominal GDP, wages, natural gas prices.

Source: VRU, NBU staff estimates.

Budget expenditures increased by UAH 82.4 billion, primarily due to establishing the UAH 64.7 billion Fund to Combat the Spread of COVID-19 and expanding social protection programs to mitigate the impact of crises on vulnerable socioeconomic groups and to support entrepreneurship. In particular, the budget provided funding for salary supplements to healthcare professionals, financial aid to the elderly, and compensation payments to partially unemployed workers.

Compared to the previous budget law, however, expenditures in many other areas were reduced. Specifically, given the reduction in the cost of natural gas and related tariffs for heating and hot water supplies, expenditures on utility benefits and subsidies to the public were cut. Spending on education, culture, and a number of regional programs was slashed.

Figure 2. Changes in state budget expenditures, UAH bn



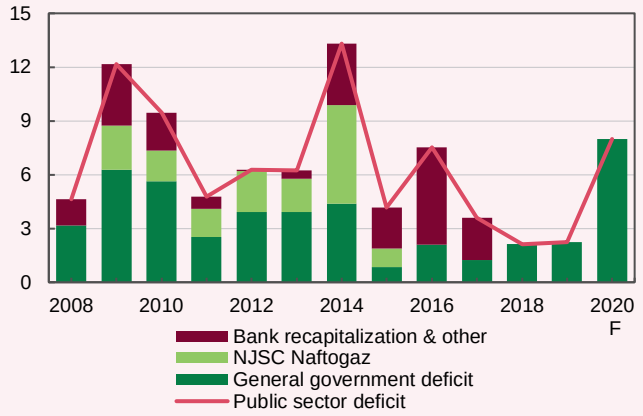
*For comparability convenience, the Ministry of Culture and Information Policy and the Ministry of Youth and Sports were combined.
**Ministry of Community and Territorial Development.

Source: VRU, NBU staff estimates.

As a result of these changes, the state budget deficit increased to UAH 298.4 billion (or 7.5% of GDP). The sharp increase in the budget deficit under current conditions will support the economy without posing a threat to macrofinancial stability, in the NBU's view. In previous crisis periods, room for supporting the economy through fiscal measures was limited due to the need to recapitalize Naftogaz NJSC and the banking system. Bringing tariffs for housing and communal services in line with market prices, reforming the corporate governance of Naftogaz NJSC, and cleaning up the banking system made it possible to eliminate the significant quasi-fiscal deficits of previous years. As a

result, the broad general government deficit in terms of GDP will remain significantly smaller in 2020 than in previous crises.

Figure 3. Broad public sector deficit, % GDP



Source: Treasure, MFU, IMF, SSSU, NBU staff estimates.

The deficit and debt repayments are almost entirely financed from debt sources, which will lead to an increase in the ratio of public and publicly guaranteed debt to GDP, which will slightly exceed 60%, according to the NBU. This level is seen as being sustainable, provided there is a return to prudent fiscal policy in the following periods.

In addition, risks to meeting budget targets continue to exist because of a potential lack of financing. Funding from official partners (the IMF, World Bank, European Commission) remains the primary source of financing. Apart from there being a significant need for financial support, the cost of borrowing is substantially lower compared to that of market instruments, especially now that the global and domestic financial markets are tight. Given that funding from the World Bank and the European Commission is closely tied to the implementation of the IMF program, delaying cooperation with the IMF will increase fiscal risks and jeopardize the financing of budget programs, among other things. In addition, inflation and exchange rate expectations will worsen, and access to the global capital markets will remain limited even after the situation stabilizes.

Table 2. The main parameters of the state budget

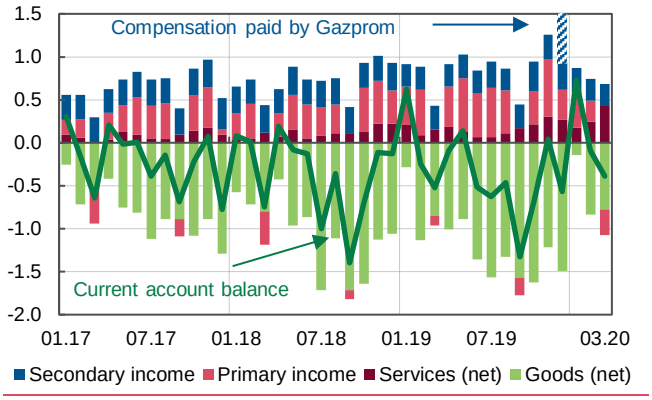
	2020		Deviation from Law I		% yoy		% GDP (NBU forecast)	
	Law I	Law II	UAH bn	%	Law I	Law II	Law I	Law II
Revenues, total	**1095.6**	**975.8**	**-119.8**	**-10.9**	**9.7**	**-2.3**	**25.5**	**24.6**
Tax revenues	926.6	781.1	-145.4	-15.7	15.9	-2.3	21.6	19.7
PIT	129.4	110.8	-18.5	-14.3	17.7	0.8	3.0	2.8
CIT	118.9	98.2	-20.7	-17.4	11.0	-8.3	2.8	2.5
Royalties	55.3	32.5	-22.8	-41.2	18.4	-30.4	1.3	0.8
Excise tax	141.0	128.5	-12.4	-8.8	14.3	4.2	3.3	3.2
Domestic excise tax	87.8	75.2	-12.7	-14.4	25.7	7.6	2.1	1.9
VAT	446.3	379.2	-67.1	-15.0	17.9	0.1	10.4	9.6
Domestic VAT, incl refund	96.8	75.4	-21.4	-22.1	8.9	-15.2	2.3	1.9
Imported VAT	349.5	303.8	-45.7	-13.1	20.6	4.9	8.2	7.7
Non-tax revenues, other revenues	169.0	194.7	25.7	15.2	-14.9	-2.0	3.9	4.9
Expenditures incl. net lending	**1191.9**	**1274.2**	**82.4**	**6.9**	**10.4**	**18.1**	**27.8**	**32.1**
Balance (- deficit)	**-96.3**	**-298.4**	**-202.1**	**-**	**-**	**-**	**-2.2**	**-7.5**

* Law I – the Law of Ukraine *On the State Budget of Ukraine for 2020* version of 3 April 2020.
** Law II – the Law of Ukraine *On the State Budget of Ukraine for 2020* of 13 April 2020.

2.5. Balance of Payments

- The current account recorded a surplus in Q1 2020 in contrast to the deficit seen in the same period last year – a narrowing in the deficit in the trade in goods offset an increase in dividend payments.
- The merchandise trade deficit narrowed mainly due to a drop in the value of energy imports on the back of falling global prices and weaker demand for machinery. While having a neutral impact on exports of goods, the spread of COVID-19 caused imports of goods and services to fall.
- In March, Ukraine witnessed a capital outflow, which mainly resulted from a rise in domestic demand for foreign currency. Meanwhile, the outflow of nonresidents' capital from the domestic government debt securities market was minor. Although Ukraine was somewhat more resilient when it entered the current crisis compared to previous crises, it still needs cooperation with the IMF to minimize any losses it might incur and any risks that could arise.

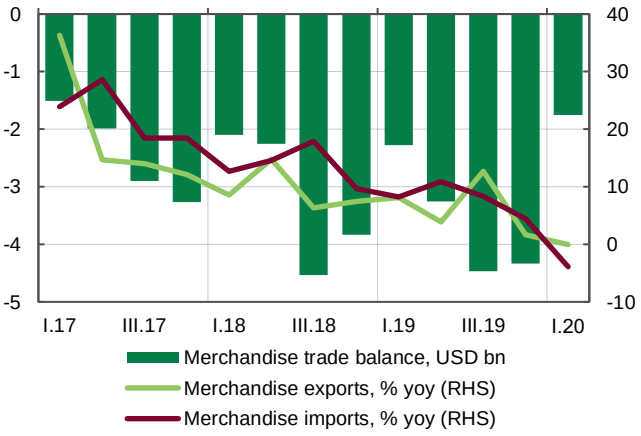
Figure 2.5.1. Current account balance*, USD bn



Source: NBU.

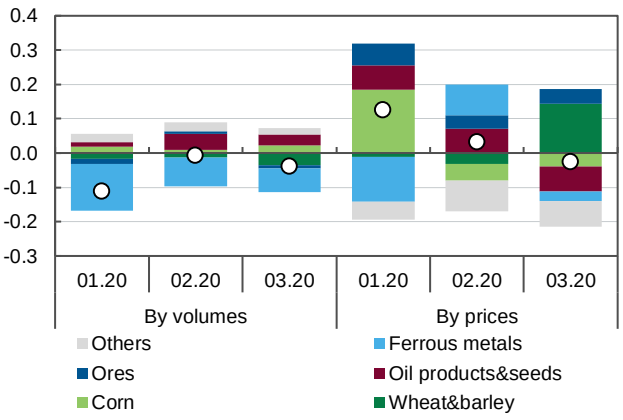
* - in December 2019 without compensation paid by Gazprom.

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.

The current account showed a surplus primarily due to a fall in energy prices. While having a limited impact on exports of goods, the spread of COVID-19 caused imports of goods and services to decrease

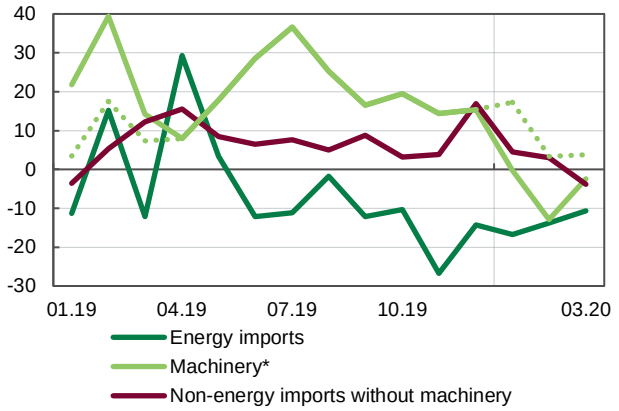
In Q1, exports of goods were at the level of the previous year, as they continued to be supported by the bumper harvest of grain crops and oilseeds. In Q1 (mainly in the first two months of the year), exports of corn, barley and sunflower seed oil reached a new high for that period of the year. In addition, growth in exports of iron ores (in particular those to China) has rebounded since the start of the year, propped up by a fall in exports from Argentina and Brazil. The resumption of fertilizer production by some plants over the past year contributed to an increase in exports of chemical products.

This was offset by the continued worsening in the global price environment and irregular machinery supplies. Metallurgical exports declined further in the wake of falling prices and weaker global demand. This was to some extent caused by falling demand for pipes, resulting from weaker drilling activity on the back of a slump in oil prices. In contrast to last year, when significant deliveries of engines and freight wagons were made, machinery exports dropped by 12% yoy in March due to irregular orders.

Although affecting export performance in March, the spread of COVID-19 had a neutral effect on export volumes overall. Panic buying by some countries led to a significant rise in wheat exports. Falling demand due to the introduction of the quarantine measures and low oil prices (which negatively affected the production of bioethanol) decreased exports of sunflower oil and oilseeds.

In Q1, imports of goods declined for the first time since 2016 (by 3.9% yoy) due to a high comparison base resulting from the preferential terms of customs clearance of previously imported motorcars that were in place at the beginning of last year. However, even after factoring out this effect, the growth in imports of goods halted – it remained almost at the level of last year (-0.2% yoy) due to declining demand for machinery and low energy prices. More specifically, there was a decrease in imports of components for alternative energy generation due to uncertainty as to whether or not laws affecting the sector will be changed. There were also no imports of nuclear fuel and gas production equipment. In addition, the spread of COVID-19 in China and some

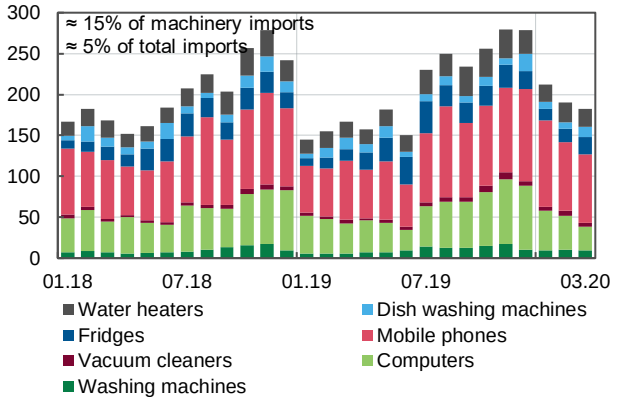
Figure 2.5.4. Merchandise imports, % yoy



* Dotted line – without customs clearance of previously imported motorcars.

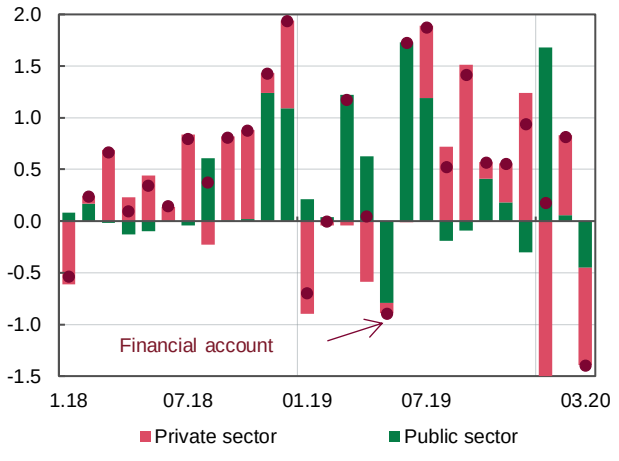
Source: NBU staff estimates.

Figure 2.5.5. Imports of selected machinery, USD bn



Source: SCSU.

Figure 2.5.6. Financial account: net financial liabilities, USD bn



Source: NBU.

narrowing of domestic demand for non-staple goods may have slowed the growth in imports of mobile phones and computers in February–March. The introduction of quarantine measures in connection with the spread of COVID-19 stimulated imports of foods and pharmaceuticals, while restraining the growth in imports of certain industrial goods in March. In addition, the closure of the borders in late March resulted in a certain decline in informal imports. Overall, the spread of COVID-19 adversely affected imports of goods.

A further fall in global gas prices offset an increase in gas purchases (the volumes of gas imports rose by 1.8 times yoy in Q1). As a result, the value of gas imports only slightly exceeded last year's level. Imports of other fuels declined – falling global oil prices decreased imports of petroleum products. Shortages of raw materials at Belarus oil refineries were an additional factor. Warm weather and large stocks contributed to a drop in coal imports, while weaker demand from the metallurgical industry led to a decline in coke imports.

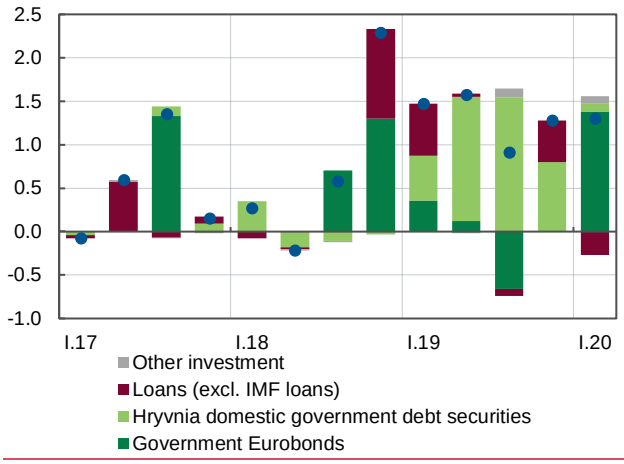
The continued increase in exports of IT services and a fall in imports of travel services due to the spread of COVID-19 outweighed the expected decrease in receipts from gas transit. This widened the surplus in the trade in services in Q1 compared to last year.

Following a capital inflow at the beginning of the year, March saw a capital outflow, which resulted mainly from domestic demand for foreign currency

The financial account continued to record a capital inflow in January–February. The inflow was mainly generated by the public sector, among other things, by the placement of sovereign Eurobonds and nonresidents' demand for hryvnia domestic government debt securities (USD 0.4 billion in January–February). The dramatic capital outflow from emerging markets seen in March had a minor impact on the Ukrainian market – the amount of domestic government debt securities held by nonresidents decreased by only USD 0.3 billion. Hence, the public sector remained a net borrower in Q1.

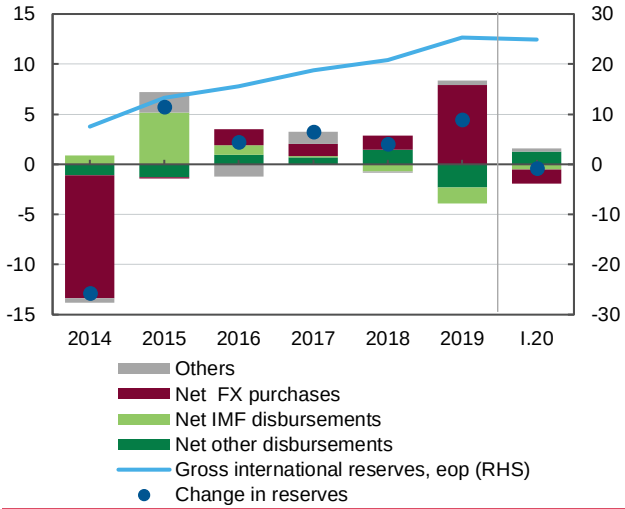
Meanwhile, the private sector recorded a significant capital outflow, despite the placement of Eurobonds by Vodafone and an increase in FDI inflows. Foreign direct investment, which exceeded last year's figures by 22.3%, was mainly channeled into equity. The main recipients of foreign investment were the financial and insurance sectors, as well as the wholesale and retail trades. In addition, trade credit borrowings continued to grow. Despite that, they were only slightly higher than last year's figure, and remained at an acceptable level. Capital outflow mainly resulted from an increase in FX cash outside the banking system on the back of stronger demand for foreign currency in March. The NBU arranged deliveries of foreign currency cash into the country in order to stabilize demand for foreign currency. In addition, in January–February, the banking sector's external assets increased due to Naftogaz receiving a payment for the minimum guaranteed volume of gas transit, and the government repaying its FX domestic government debt

Figure 2.5.7. General government net borrowings, USD bn



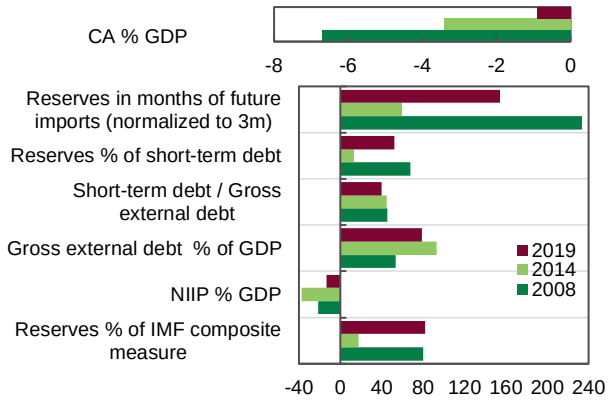
Source: NBU.

Figure 2.5.8. International reserves and their change by instruments, USD bn



Source: NBU staff estimates.

Figure 2.5.9. Selected adequacy criteria, %



Source: NBU staff estimates.

securities.

As a result, the financial account recorded a capital outflow in Q1, which was generated by the private sector. This deficit exceeded the current account surplus, resulting in a slight deficit in the overall balance of payments. Consequently, after surging in January–February, international reserves shrank in March, returning to the level of late 2019 – USD 24.9 billion or 4.5 months of future imports.

Although Ukraine was somewhat more resilient when it entered the current crisis compared to the previous crisis, it still remains vulnerable without cooperation with the IMF

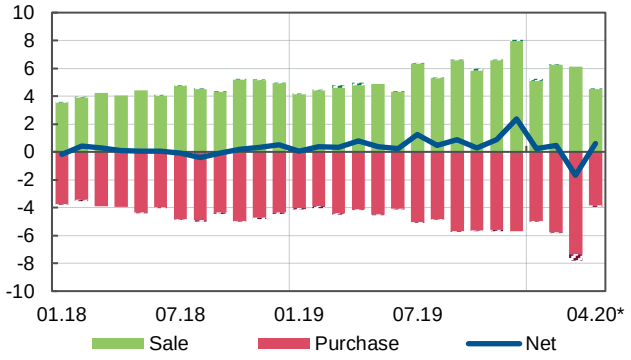
Ukraine's high level of international reserves provides it with a robust safety margin ahead of the expected crisis. More specifically, the economic growth seen in previous years helped bring down relative external and short-term debt ratios, while the growth in economic productivity narrowed the current account deficit. In turn, a stable macroeconomic environment improved international investors' perception of Ukraine, decreased risk premiums, and raised the country's ratings. This pushed up debt and equity capital inflows, while also improving reserve adequacy. However, one of the most important positive differences for Ukraine compared to previous periods is its transition to a floating exchange rate, with the introduction of inflation targeting. Under this regime, reserves are used to smooth out excessive exchange rate fluctuations, as the FX market adjusts to establish a new equilibrium level, rather than being used to maintain a stable exchange rate artificially.

That said, a significant narrowing of access to the international financial markets amid a major crisis in the global economy, along with the drop in economic activity in Ukraine, together pose considerable challenges to the Ukrainian economy. These challenges will become especially significant when Ukraine enters the period of peak external debt repayments and when its budget deficit spikes. In this light, further cooperation with international financial organizations continues to be needed to minimize any risks and losses.

2.6. Monetary Conditions and Financial Markets

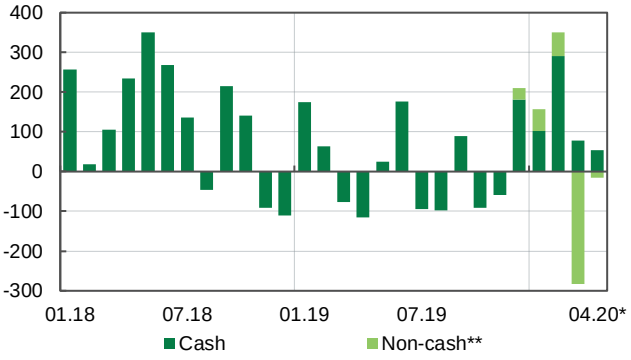
- Panic on the global markets due to the rapid spread of the coronavirus pandemic in March increased turbulence on the Ukrainian financial market, including in its FX segment.
- Stronger demand for foreign currency was mainly generated by domestic bank customers and households, and was primarily caused by psychological factors. Meanwhile, demand from nonresidents was relatively moderate.
- With a view to stabilizing the money market, the NBU took measures to expand the banks' ability to manage their own liquidity, and to prevent the spread of panic on the foreign exchange market, while also not imposing any restrictions. These measures had already stopped the panic buying of foreign currency by late March.

Figure 2.6.1. Non-cash transactions of banks` clients with FX#, USD bn



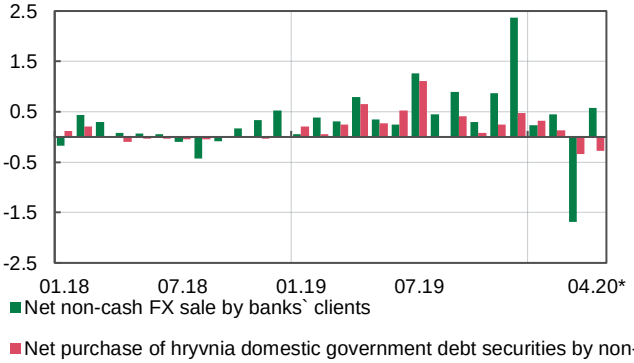
Shaded columns correspond to "forward" transactions.
* As of 29.04.2020.
Source: NBU.

Figure 2.6.2. Net FX sale by individuals, USD mn



* As of 29.04.2020.
** Data is available since December 2019.
Source: NBU.

Figure 2.6.3. FX transactions by banks` clients and purchase of hryvnia domestic government debt securities by non-residents, USD bn



* As of 29.04.2020.
Source: NBU staff estimates.

The growing turbulence on the Ukrainian foreign exchange market resulted from worsening sentiment on the back of uncertainty over the spread of the virus and panic on the global markets

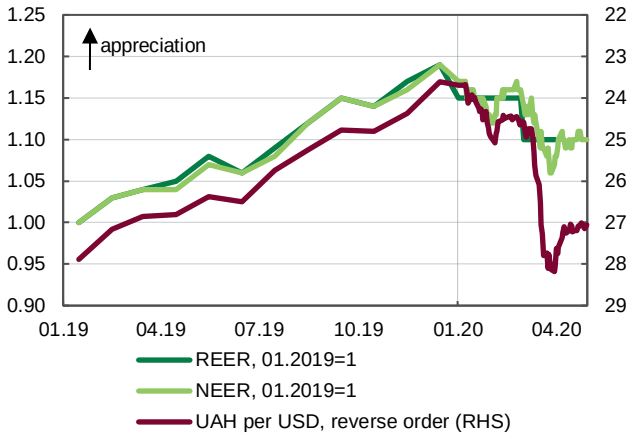
The rapid spread of the coronavirus pandemic in March caused panic on the global commodity and financial markets (for more details, see Part 1 "The External Environment" on page 7). This, combined with heightened uncertainty on the domestic market, triggered a surge in turbulence on the Ukrainian FX market, while also putting depreciation pressures on the hryvnia.

The main factor behind the increasing depreciation pressures on the hryvnia was heightened demand for foreign currency from domestic businesses and households. Meanwhile, the impact of nonresidents' transactions with hryvnia domestic government debt securities did not play a decisive role. In March, these transactions accounted for 20% of total net purchases of noncash foreign currency by bank customers. The supply of foreign currency also remained high, exceeding last year's figures. Fearing the negative impact of quarantine restrictions and the possible introduction of other restrictions, including those on the purchase of foreign currency, households and businesses bought foreign currency "just in case." This was also evidenced by a noticeable increase in forward purchases of foreign currency. Later on, some of these agreements were canceled, indicating that the heightened demand for foreign currency was caused by psychological rather than fundamental factors.

In response to the stress on the foreign exchange market, the NBU increased its presence by smoothing out excessive exchange rate fluctuations, but not changing market trends. In March, net sales of foreign currency by the NBU amounted to USD 2.2 billion. In order to eliminate the difficulties in meeting households' demand for foreign currency cash that the banks were facing due to flight disruptions, the NBU supplied the banks with US dollar and euro cash totaling EUR 41 million and USD 550 million. Households also had the option of buying foreign currency online.

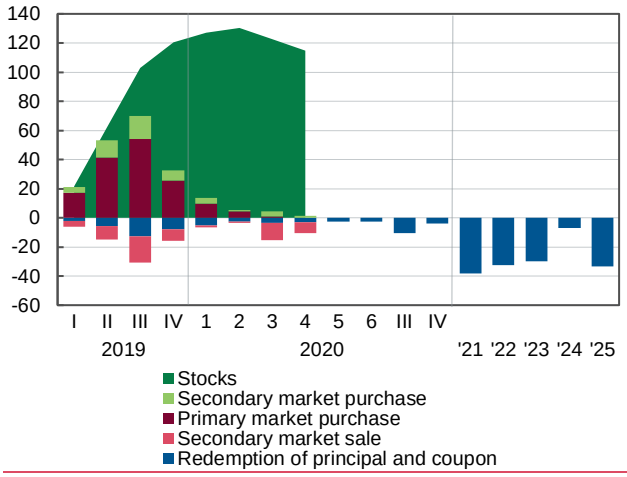
These preventive measures, taken promptly by the NBU, helped markedly decrease the panic buying of foreign currency. As a result, the FX market had already stabilized by late March. The hryvnia exchange rate began to strengthen, and the market started to witness an excess supply of foreign currency. This enabled the NBU to resume its foreign currency purchases in late March. In April, the NBU was a net buyer of USD 0.7 billion (since the year start, the NBU has

Figure 2.6.4. Official exchange rate, hryvnia REER and NEER indices *



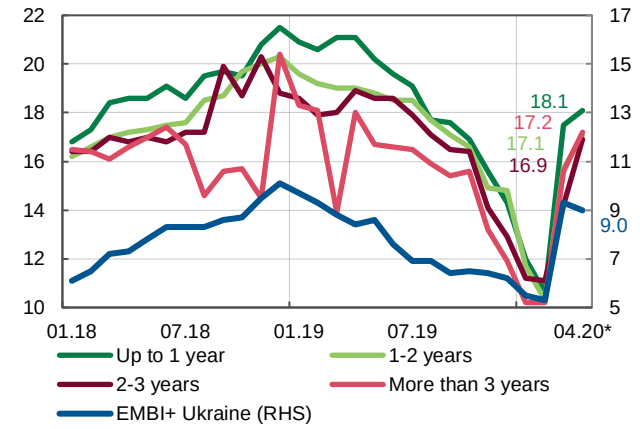
* Monthly average in 2019; Daily NEER and UAH per USD since 2020, as of 29.04.2020.
Source: NBU staff estimates, Bloomberg.

Figure 2.6.5. Transactions with domestic government debt securities by non-residents and their scheduled redemptions*, bn UAH



* As of 30.04.2020.
Source: NBU.

Figure 2.6.6. Yields on hryvnia domestic government debt securities by maturity and yields on Ukraine`s eurobonds (EMBI+), %



* As of 29.04.2020.
Source: NBU.

sold USD 0.7 billion net). The NBU also no longer needed to supply the market with foreign currency cash – the last time such an operation was conducted, USD 40 million remained unpurchased.

The weakening of the official exchange rate of the hryvnia against the US dollar seen in Q1 2020 also resulted in a depreciation of the hryvnia NEER. However, given that most of the currencies of Ukraine's main trading partners also depreciated during that period, the weakening of the NEER of the hryvnia was more moderate than its weakening against the US dollar. The strengthening of the hryvnia seen in April slowed this process. As a result, the hryvnia NEER (its monthly average) remained stronger in April than that last year. The REER of the hryvnia also strengthened, thanks to the appreciation of the hryvnia seen last year.

An increase in the yields of hryvnia domestic government debt securities and a drop in demand for these securities were the market's response to the uncertainty over the spread of the coronavirus

The panic on the global financial markets, which led to a massive capital outflow from emerging markets, also affected the Ukrainian financial market. These trends were exacerbated by domestic uncertainty arising from a government reshuffle. In March–April (by 30 April) outstanding hryvnia domestic government debt securities held by nonresidents had dropped by USD 0.6 billion (by USD 0.2 billion since the start of the year). Along with that, the cost of borrowing and the yields of government securities that are traded on the secondary market also increased. A simultaneous increase in weighted average interest rates on both hryvnia and FX domestic government debt securities showed that investors were more concerned about credit risks than FX risks. Meanwhile, the more rapid growth in hryvnia interest rates reflected low liquidity on the secondary market. Under such conditions, the MFU mainly placed FX domestic government debt securities in March, and suspended auctions altogether in April until after the market has stabilized.

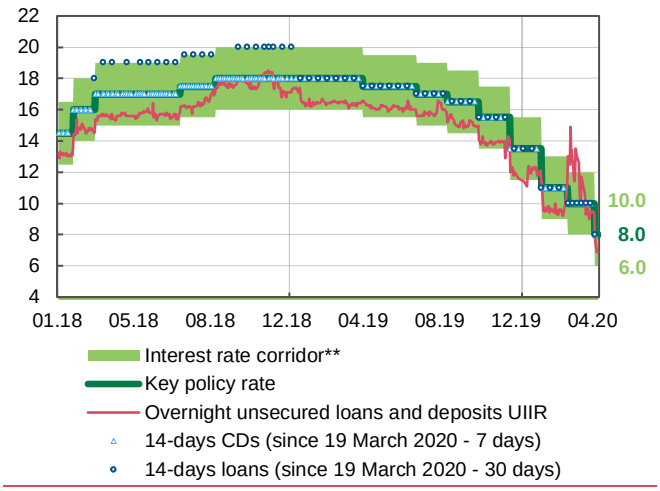
In order to address the negative consequences arising from the difficulties in raising funds on the global capital markets, the NBU put off the introduction of risk weights for foreign currency government securities.

The UIIR[12] increased temporarily due to some banks experiencing liquidity shortages

In March, the liquidity of the banking system shrank on the back of the NBU's significant interventions in the interbank market to sell foreign currency, and an increase in cash outside the banking system, which is a typical response by households to negative economic or political shocks. The decrease in liquidity created temporary liquidity gaps at some banks. This drove up demand for interbank and refinancing loans. As a result, the UIIR increased and overshot the NBU's interest rate range for standing facilities in the latter half of

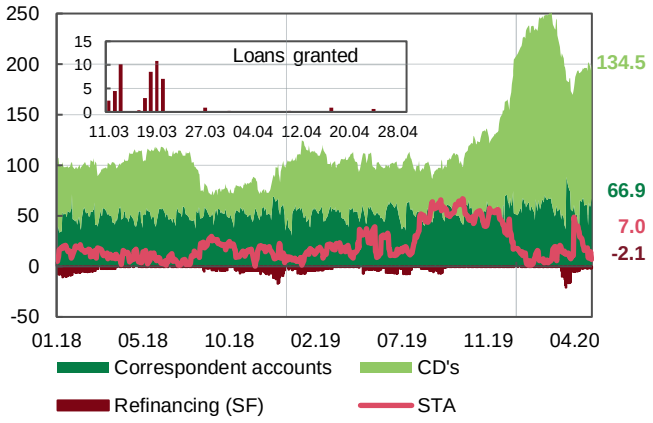
[12] The indicator of hryvnia interbank interest rates for the purposes of interest rate policy.

Figure 2.6.7. NBU policy rates and UIIR*, %



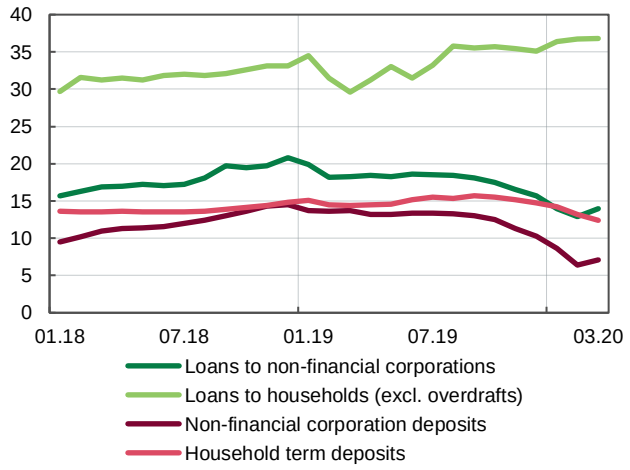
* As of 29.04.2020.
** Upper bound – interest rate on overnight loans of the NBU, lower bound – overnight CDs of the NBU.
Source: NBU.

Figure 2.6.8. Banking system liquidity, select indicators*, UAH bn



* As of 30.04.2020.
Source: NBU.

Figure 2.6.9. Weighted average interest rates on new hryvnia loans and deposits, %



Source: NBU.

March. In March, most hryvnia interest rates for bank customers also increased in response to higher rates on interbank loans. Despite that, weighted average interest rates on household deposits, which are more inert, continued to decline.

With a view to easing financial conditions, the NBU took some steps to give the banks more flexibility in managing their own liquidity by:

- adapting the operational design of its monetary policy to the new financial market conditions
- postponing the introduction of capital buffers and buffers for systemically important institutions
- optimizing the calculation of required reserve ratios.

In addition, in 2020, with a view to supporting banking system liquidity and stimulating bank lending, the NBU decided:

- to hold tenders to provide long-term refinancing of up to five years (from May)
- to extend the term of refinancing loans granted through weekly tenders (from 30 to 90 days)
- to include municipal bonds and government-guaranteed bonds in the list of eligible collateral
- to launch FX swaps with IFIs, with the NBU guaranteeing liquidity provision through these instruments. These swaps involve the purchase of foreign currency from IFIs for short-term lending to businesses and municipalities
- to introduce interest rate swaps.

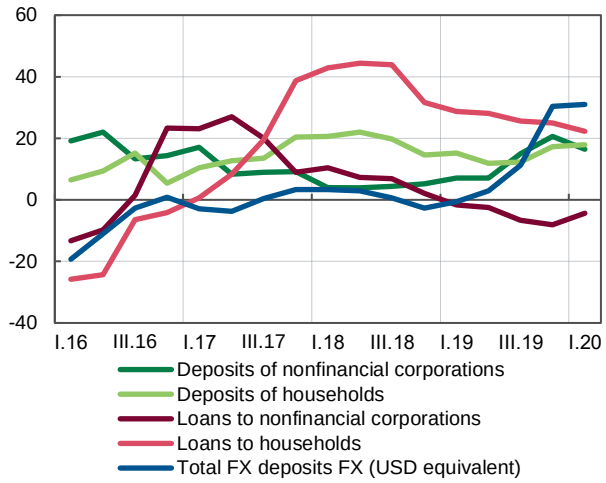
The active measures taken by the NBU to mitigate the effects of the panic, together with the banks' adaptation to operations under quarantine, helped stabilize the interbank market. As a result, in April, the UIIR hovered around the lower bound of the NBU's interest rate corridor.

The annual growth of deposits and consumer loans remained robust

Hryvnia and FX deposits continued to grow in Q1 2020 in annual terms, albeit more slowly mainly due to significant tax payments in March. This decreased hryvnia deposits from nonfinancial corporations compared to previous months. The growth in FX deposits from nonfinancial corporations also decelerated, due to these corporations buying FX domestic government debt securities. The growth in hryvnia household deposits also declined on the back a gradual drop in interest rates on these deposits, and a rush to buy some goods caused by the spreading panic in March.

Hryvnia household loans – mainly car loans and other consumer loans – continued to rise at a fast pace. In contrast, lending to nonfinancial corporations remained sluggish. A pick-up in bank lending was curbed by a number of structural impediments (such as a large percentage of nonperforming loans, despite provisions being made for practically all of these loans). In order to improve the banks' management of nonperforming loans the NBU set the criteria for writing off impaired assets using provisions for such loans. This will enable the banks to get rid of some nonperforming loans.

Figure 2.6.10. Deposits and loans, % yoy



Source: NBU.

Loan stocks were also influenced by banks in liquidation no longer submitting reports, and by banks' repayments and write-offs of previously provisioned assets.

Part 3. Economy of Ukraine: Forecast

Box 5. Macroeconomic Conditions at the Start of the Current Crisis

The economy of Ukraine was much more resilient on entering the global economic crisis caused by the virus pandemic, compared to previous such events, and the reasons for the current economic downturn are completely different. The depth and duration of the economic recession are determined by restrictions on economic activity, and not by macroeconomic imbalances, so a faster recovery following the cancellation of the quarantine is expected. Current macroeconomic conditions indicate that this recession will be less damaging than previous crises, which were accompanied by foreign exchange and banking crises.

The implementation of inflation targeting and the prudent fiscal policy of recent years have eliminated main macroeconomic imbalances that caused crises in the past. The following key factors make current conditions different from those in 2008 and 2014, and will reduce the adverse consequences of the crisis:

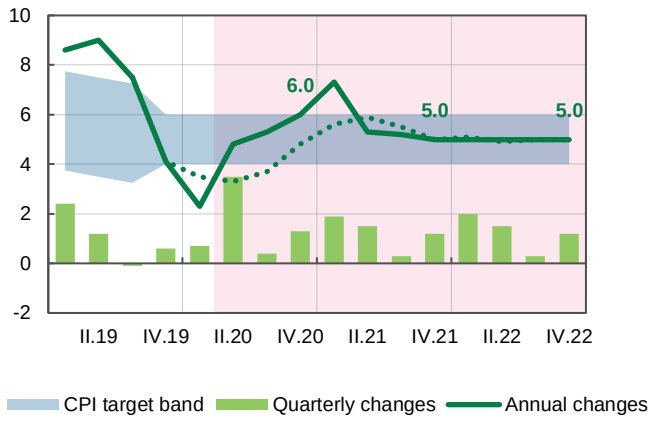
- Thanks to a restrained monetary policy, Ukraine for the first time entered a crisis with a moderate inflation rate and low inflation expectations, which provides room for monetary policy easing.
- FX market liberalization and transition to a flexible exchange rate regime allowed the buildup of FX imbalances to be avoided. In contrast to 2008 and 2014, the current account deficit is sustainable, implying that the hryvnia exchange rate is close to its equilibrium level.
- The implementation of the Foreign Exchange Intervention Strategy allowed enough international reserves to be accumulated to meet all obligations in time and smooth out excessive fluctuations on the FX market. The adequacy of international reserves is much better than in 2014 (read more in section 2.5 "Balance of Payments" on page 27, in particular see figure 2.5.9 "Selected External Sustainability Indicators").
- A low debt load enables the government to increase the budget deficit in order to provide fiscal stimulus to the economy. Unlike in previous crises, when debt was used to cover the deficit in the balance sheet of Naftogaz of Ukraine or to increase capital of problem banks, these funds can instead be allocated to support households and businesses.
- The banking sector, which used to trigger crises by itself, is now transparent and profitable, and its capital greatly exceeds the minimum requirement. Moreover, banks have enough spare liquidity to issue loans to the real sector. Regular stress testing also shows that the majority of financial institutions have a capital cushion sufficient to continue lending, even in an adverse scenario.

A lasting period of macroeconomic stability makes it possible to conduct an accommodative policy and to smooth out negative shocks. However, taking into account the deteriorated sentiment on global financial markets, a new IMF cooperation program will be crucial in order to provide additional resources to overcome the consequences of the pandemic.

3.1. Inflation Developments

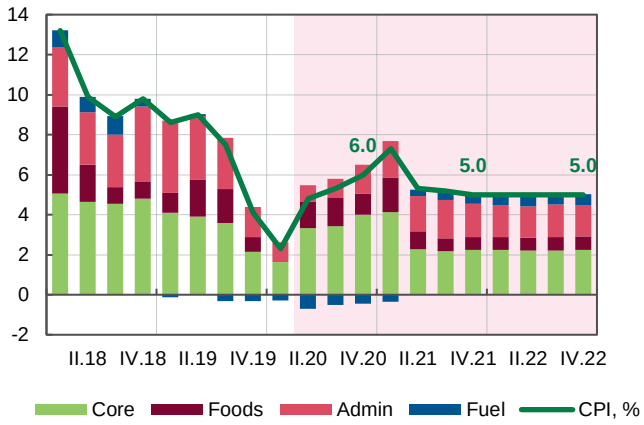
- The major shocks caused by the global crisis will impact inflation as early as Q2, spurring the price growth in 2020. Afterwards, their effect will fade quickly.
- The crisis-driven acceleration in inflation will be moderate – it will be 6.0% by the end of 2020, as a decrease in demand and lower fuel prices will offset the effects of a weaker exchange rate.
- Consumer inflation will temporarily exceed the upper bound of its target range in early 2021, but will then return to its target range in Q2 2021.

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.

In 2020, inflation will remain within the target range of 5% +/- 1 pp. It will not be adversely affected by monetary and fiscal support to the economy

The Ukrainian and global economies falling into recession and capital fleeing emerging markets led to a significant deterioration in exchange rate and inflation expectations, and changed the trajectory of the inflation forecast for the coming year.

Inflation will accelerate moderately in the coming months, reaching 6% at the end of 2020, while remaining within the target range. The increase in inflation will be primarily driven by a pass-through effect from the recent depreciation of the hryvnia. High demand for some food products amid temporary export limitations imposed in a number of countries will put upward pressure on prices in Q2. This effect, however, will disappear on the lifting of the main quarantine restrictions in Ukraine and in the majority of its MTPs.

A substantial drop in consumer demand will offset most of the effect on prices from the fiscal and monetary stimuli that were provided to support businesses and households during the period of quarantine.

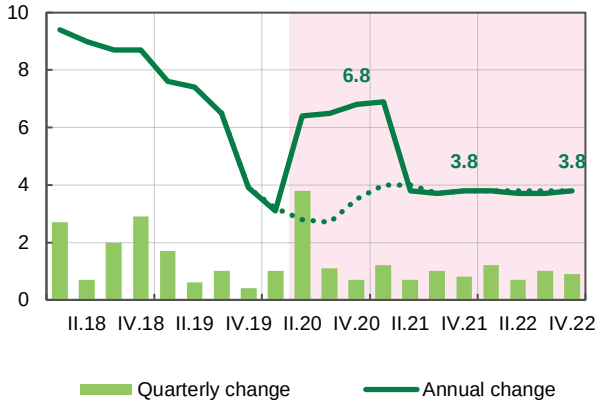
Inflation will also be contained by declining global energy prices, which will continue to influence domestic fuel and natural gas prices.

In Q1 2021, inflation will temporarily deviate from the target range due to the effect of a low comparison base. Afterwards, it will decrease and stabilize at the medium-term target of 5%. This level will be achieved thanks to the NBU's prudent monetary policy and a more restrained fiscal policy after the pandemic ends and economic activity recovers.

Core inflation will accelerate, mainly due to growth in prices of imported goods

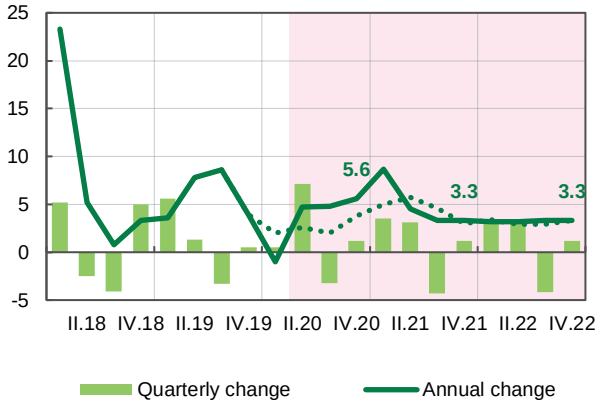
Underlying price pressures will increase in the coming year. The depreciation of the hryvnia, deterioration in inflation expectations, and fiscal and monetary stimuli aimed at mitigating the consequences of the crisis will push up core inflation to 6.8% in 2020. The largest growth (around 8% yoy) is expected in prices of durable goods, especially goods with a large share of imported inputs. At the same time, the growth in prices of market services, which have the highest share of labor costs, will decelerate noticeably as real wages stop growing and unemployment rises.

Figure 3.1.3. Core inflation, %



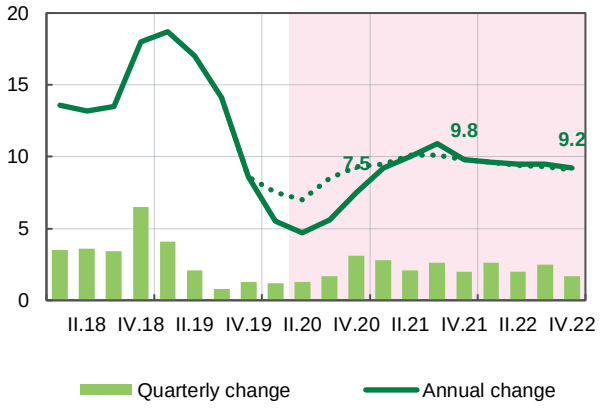
Source: SSSU, NBU staff estimates.

Figure 3.1.4. Raw food inflation, %



Source: SSSU, NBU staff estimates.

Figure 3.1.5. Administered price inflation, %



Source: SSSU, NBU staff estimates.

The recovery of the Ukrainian and global economies, which will start in 2021, will support resumed growth in real household income. This factor will thus become the main driver of core inflation. On the other hand, core inflation will be restrained by import prices due to moderate inflation in Ukraine's MTPs and lower exchange rate volatility. Therefore, core inflation will stabilize at approximately 4% in mid-2021.

Food price inflation will rise temporarily in Q2, but then, after negative factors vanish, it will decline gradually on the back of sufficient supplies of fruit and vegetables

In Q2 2020, raw foods prices will be impacted by supply shocks caused by quarantine restrictions, logistical difficulties, and a temporary increase in demand for some goods.

This will drive growth in raw food prices. However, in Q3, after the main quarantine restrictions are lifted and products from the new harvest come to market, food price inflation will stabilize at 5%–6%.

In the coming years, food price inflation is expected to decline to 3%–4%. Price growth will be supported by further increases in nominal and real household incomes, but restrained by a larger food supply resulting from higher agricultural sector productivity.

Administered price inflation will slow to 7.5% in 2020, due to lower energy prices. However, it will accelerate to 9%–10% in 2021–2022

Over the forecast horizon, the largest contribution to administered price inflation will come from further increases in excise duties on tobacco products, which will grow by 14%–15% annually. Starting in 2021, the resumption in wage growth will be an additional factor behind higher prices for some utility services.

Lower prices of natural gas and central heating supplied to households, driven by low prices on European trading platforms and large storage inventories, will be the major factor for administered price inflation slowing to 5% in the middle of 2020. However, gas prices will resume their growth when the next heating season starts.

Fuel prices will drop by more than 15% this year due to the slump in crude oil prices. This will be an important disinflation factor restraining headline inflation, including through its pass-through to prices in other inflation components. However, a recovery in global demand will cause fuel prices to grow in Ukraine in 2021–2022.

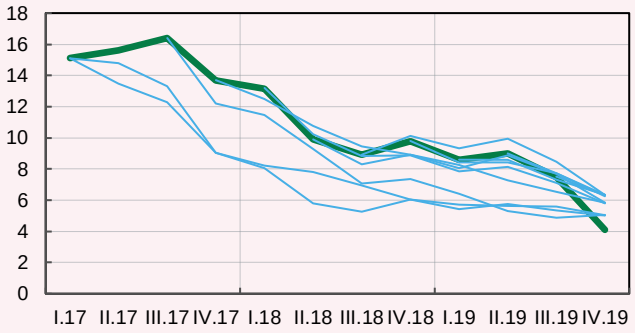
Box 6. Estimating the Accuracy of the NBU's Macroeconomic Forecasts

Consistent and accurate macroeconomic forecasts are a prerequisite for an effective monetary policy under an inflation targeting regime, as monetary instruments affect inflation and other macroeconomic indicators with a significant time lag. The NBU analyzes accuracy of its forecasts every year and compares them with forecasts made by other organizations and central banks. The accuracy of NBU forecasts of the main macroeconomic indicators is similar or somewhat better than consensus forecasts (which are usually more accurate than individual ones). Forecast errors are usually caused by exogenous shocks, which are impossible to forecast a priori.

In this box, the NBU continues its practice, started in 2019, of carrying out annual assessments of its macroeconomic forecasts. In particular, the assessments aim to identify any bias or systematic errors, check the NBU's ability to forecast a trend reversal, check the consistency of a forecast, and see how accurate a forecast is over time, and compared to those produced by other organizations. This year, along with assessments of forecasts for variables such as the CPI, GDP, and the current account of the balance of payments, the NBU started to assess its key policy rate forecast, which it has been publishing since mid-2019.

The central bank's inflation forecasts have a high accuracy. The forecast profiles from 2018−2019, broken down by quarters, accurately reflected the actual trajectory of the annual change in the CPI (Figure 1), except for a sharp drop in Q4 2019, which was driven by a number of exogenous factors. Another record harvest of grains and oilseeds, a deepening of the fall in global energy prices, and large inflows of debt capital into the public and private sectors pushed inflation down: both directly and through the exchange rate channel. At the same time, although actual inflation as of the end of 2019 was below the NBU forecast, other organizations forecast higher inflation (Figure 2).

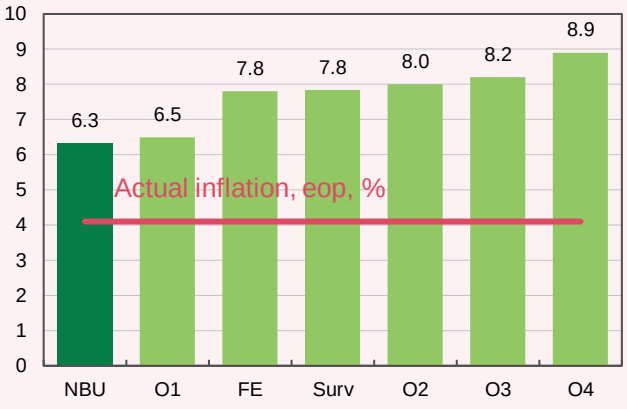
Figure 1. Forecast history: CPI (2017-2019), % yoy



Source: NBU.

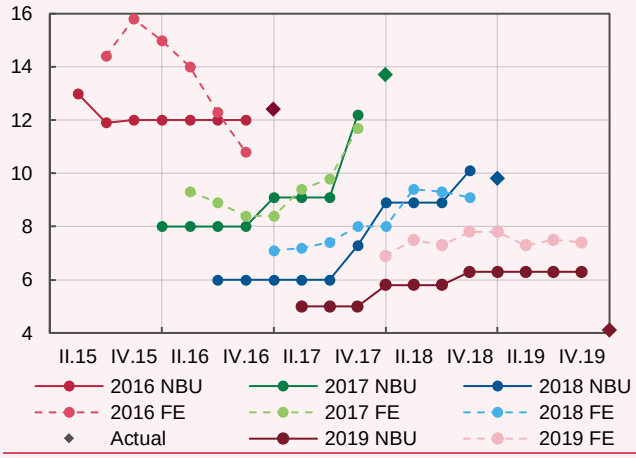
The NBU also analyzed the accuracy of its forecasts compared to consensus forecasts and forecasts made by other organizations (Figure 3). It is worth noting that there were almost no revisions to the NBU's inflation forecast for 2016, and it was much more accurate than consensus forecasts. That said, the NBU's forecasts and the Focus Economics (FE) consensus forecasts for 2017−2018 were rather close to each other and turned out to be below the actual level of inflation, which means that the shocks were unexpected for the majority of forecasters. Forecasts for 2017–2018 were revised upwards several times, which was due to faster growth in some administered prices and domestic consumer demand.

Figure 2. Comparison of the CPI forecasts at the beginning of the 2019, %



Source: NBU.

Figure 3. Forecast history: CPI (2016-2019), eop, %



Source: NBU.

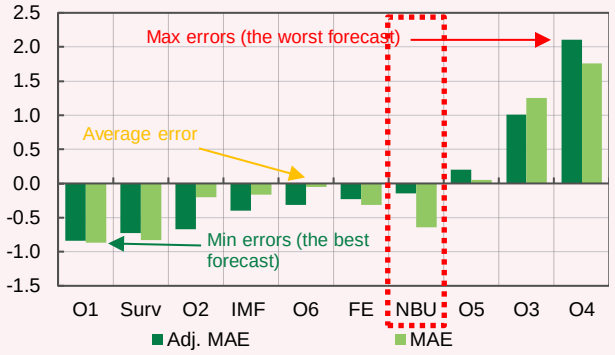
While the NBU's CPI forecasts for 2019 exceeded actual inflation by 2 pp on average, the consensus forecasts were another 1–1.5 pp above the forecasts made by the central bank. This indicates that other organizations underestimated the NBU's ability to ensure stronger disinflation in 2019.

The NBU also compared its forecasts with those made by other leading institutions (such as the Ministry of Economics, Alfa Bank Ukraine, ICU, Dragon Capital, Raiffeisen Bank Aval, J.P. Morgan, OTP Bank, Goldman Sachs, the IMF), consensus forecasts [produced by FE and Consensus Economics (CE)[13]], and the central bank's surveys of financial analysts. The forecasts were rated using the mean

[13] Consensus Economics is a leading global company that conducts macroeconomic surveys.

absolute errors (MAE[14]) and adjusted mean absolute errors (Adj. MAE[15]) of individual forecasts. The adjusted mean absolute errors were calculated by multiplying these errors by specific weights that increase as the period of time between the making of a forecast and the release of the actual data decreases[16]. Thus, the time factor was taken into account: the earlier a forecast was made, the greater its error could be. The accuracy of an organization's forecast was calculated as the difference between the mean error of that organization's forecast and the mean error of forecasts produced by all organizations. Zero values in the figures indicate that the accuracy of a forecast corresponds to the average accuracy of all forecasts; positive values indicate above-average errors, and negative values show below-average errors.

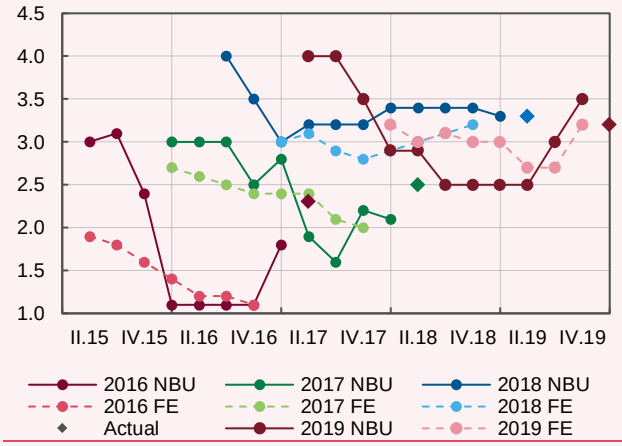
Figure 4. Forecast rating: CPI (2016-2019), eop, %[17]



Source: NBU.

The accuracy of the NBU's inflation forecasts for 2016–2019 is higher than average. The NBU's CPI forecasts in terms of unadjusted forecast error were among the best. As the accuracy of the NBU's forecast for 2019 was the best among the forecasts of all organizations, the average quality of the NBU's forecasts (cumulatively for the past four years) improved compared with last year's assessments: last year its adjusted forecast errors were slightly above the average level.

Figure 5. Forecast history: GDP (2015-2019), %

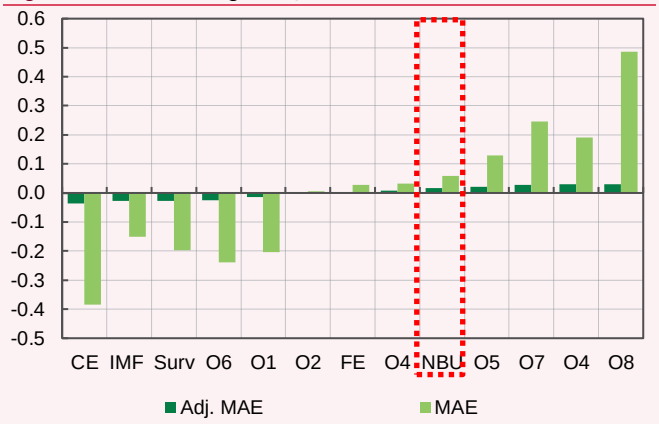


Source: NBU.

The NBU's real GDP forecasts were also quite accurate, and close to consensus forecasts (Figure 5). The forecasts for 2016–2017 were considerably revised due to a number of external and internal shocks. The forecast for 2018 was close to actual figures, and turned out to be more correct than the more pessimistic consensus forecast.

The central bank's GDP forecast for 2019 was somewhat more pessimistic than the consensus forecast practically over the entire forecast horizon, as the NBU expected grain crop yields to decline following the bumper crops in the previous year, which would make the negative contribution of agriculture to GDP growth. The forecast also envisaged a tighter monetary policy aimed at bringing inflation back to the target range at a time when the country's risk premium was rather high (in a year in which both presidential and parliamentary elections were held). In H2, the GDP forecast was revised upwards thanks to more favorable terms of trade, expectations of another record harvest of grain, increased domestic demand, and better investment activity, which was less affected by the election cycle than previously expected.

Figure 6. Forecast rating: GDP, %



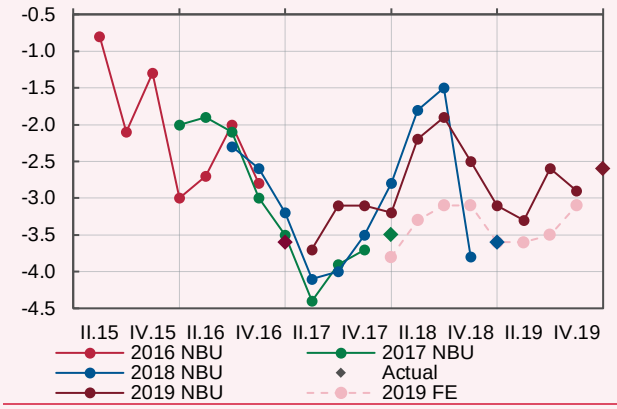
Source: NBU.

The accuracy of the NBU's GDP forecast is average compared to the forecasts produced by all organizations covered (Figure 6), in terms of both adjusted and unadjusted errors. The adjusted errors for the forecasts by all organizations do not differ greatly, with the consensus forecasts being the most accurate.

Current account forecasts were rather volatile, due to the Ukrainian economy being open, commodity-based, and vulnerable to external shocks and changes in market conditions (Figure 7). Such events as Brexit and trade tensions between China and the United States had a significant impact on the economies of Ukraine's MTP and global commodity prices, which consequently caused upward and downward revisions of Ukraine's balance of payments forecast.

[14] Mean Absolute Error.
[15] Adjusted Mean Absolute Error.
[16] For more details about the calculation of this indicator, see the following articles by Michael K. Andersson, Ted Aranki, and André Reslow. Adjusting for Information Content when Comparing Forecast Perfomance, 2016; Evaluation of the Riskbank's forecast, 2018.
[17] Here and further on titles of organizations, except IMF, were depersonified and encoded as O1-O8 (Ministry of Economy, Alfa bank of Ukraine, ICU, Dragon Capital, Raiffeisen Bank Aval, J.P. Morgan, OTP bank, Goldman Sachs). Other forecasts mentioned are consensus forecasts (Focus Economics [FE]), Consensus Economics [CE]) and surveys of financial analytics, made by NB

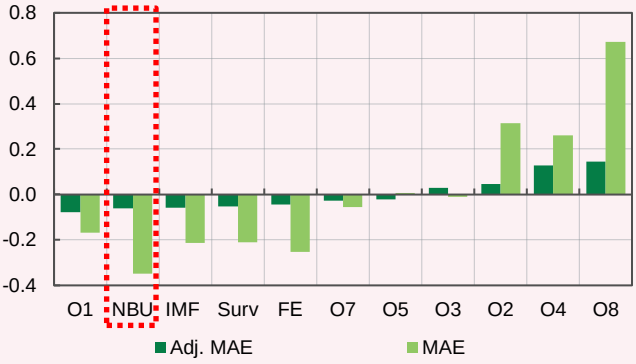
Figure 7. Forecast history: Current account balance (2015-2019), % GDP



Source: NBU.

In 2016–2018, the actual figures of the current account deficit exceeded the forecasts in most cases. This was mainly due to larger volumes of machinery imports (particularly investment goods), consumer imports (primarily food products), and fertilizers due to higher demand from farmers.

Figure 8. Forecast rating: current account balance, % GDP



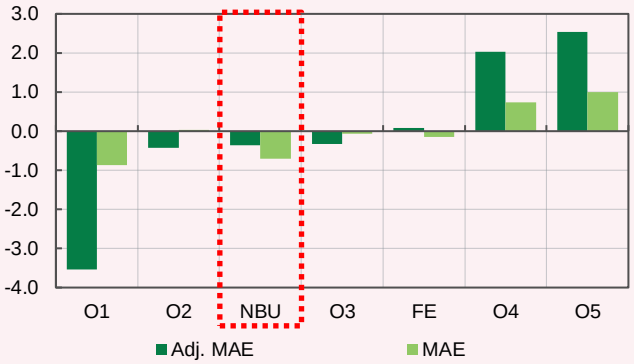
Source: NBU.

The forecast for 2019 was also volatile, but more accurate than the consensus forecast. The actual current account deficit came in lower[18] compared with the latest NBU forecasts as a result of better terms of trade, in particular persistently high iron ore prices, and lower natural gas prices thanks to the warm winter in Europe.

The accuracy of the NBU's forecasts of the current account balance for 2016–2019 is among the best when compared to the forecasts produced by other organizations (Figure 8). Unadjusted errors of the NBU forecasts are the smallest when compared with other organizations. The quality of the current account forecast also improved compared with last year's assessments: the errors in the NBU's forecasts became smaller than the errors of the IMF and financial analysts.

In mid-2019, the NBU started to publish its key policy rate forecast and a history of these forecasts (starting 2016). The NBU's forecasts for the key policy rate are more accurate than those produced by the majority of other market participants (Figure 9). After the NBU shifted to a tighter monetary policy starting mid-2017, the central bank forecast a faster increase in the key policy rate in 2017–2018 than foreseen in the consensus forecast (Figure 10), taking into account its priority of maintaining price stability.

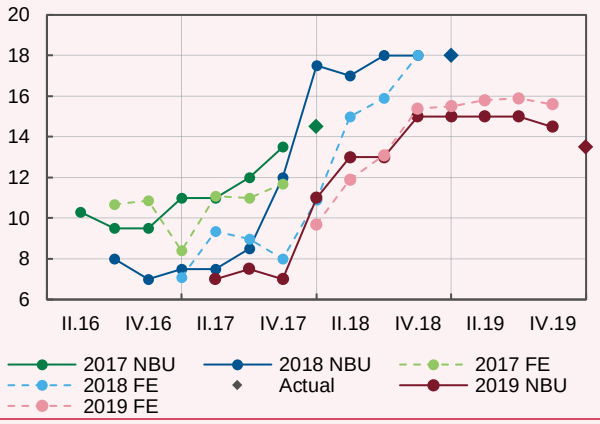
Figure 9. Forecast rating: interest rate, % eop



Source: NBU.

In 2019, market participants expected the situation to be the opposite. After the start of the monetary policy easing cycle, consensus forecasts pointed to a slower reduction in interest rates than projected in the NBU's forecast. The actual decrease in the key policy rate in late 2019 was even faster than forecast by the NBU, due to rapid disinflation on the back of the stronger exchange rate and favorable macroeconomic environment.

Figure 10. Forecast history: key interest rate (2017-2019), eop, %



Source: NBU.

Compared to last year's assessments, the accuracy of the NBU forecasts versus those of the central banks of other countries in the region (the Czech Republic, Poland, Serbia, Hungary, and Romania)[19] remained almost unchanged: the NBU continues to show average results. In particular, the accuracy of the NBU's GDP forecast is higher than the average accuracy of all other countries. The accuracy of the NBU's current account forecast is the same as the accuracy of the other countries' forecasts, while its inflation forecast is slightly less accurate than average.

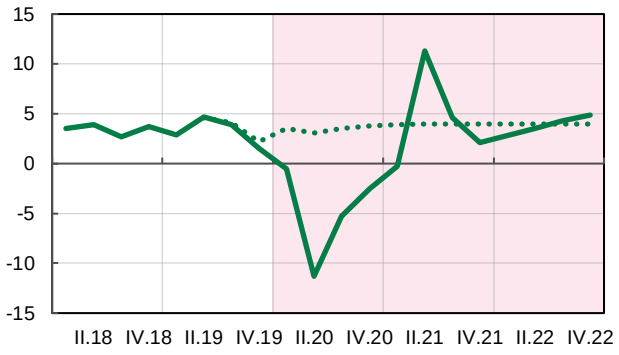
[18] A one-time payment that Gazprom made to Naftogaz of Ukraine under a Stockholm arbitration court ruling (USD 2.9 billion) was deducted from the actual figure for 2019.
[19] In order to compare the errors of CPI and GDP forecasts, the forecasts were normalized to the average indicators for each of these countries.

3.2. Demand and Output

- Real GDP will decline by 5.0% this year as foreign and domestic demand drops due to the quarantine restrictions.
- After these restrictions are lifted, activity will recover in most economic sectors, aided by a significant fiscal impulse and looser monetary conditions.

Scheme 3.2.1. Assumptions about the quarantine

Figure 3.2.1. Real GDP, % yoy



Source: SSSU, NBU staff estimates.

The NBU has the following forecast assumptions about the quarantine:

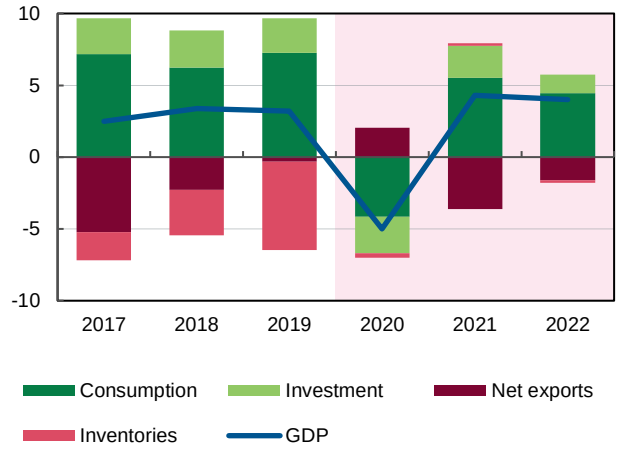
- The current forecast is based on the assumption that the quarantine will be lifted at the end of June 2020. Restrictions will be lifted gradually in order to retain control over the epidemiologic situation.
- The first step will be the easing of restrictions from mid-May. This will include allowing such activities as: trade in nonfood goods, some personal care services, cafes and restaurants, and public transport in and between cities. However, mass events (sports and entertainment, cinema showings), foreign travel, and air transport will remain banned.
- The second step envisages the lifting of almost all restrictions at the end of June. That said, restrictions may last longer for some events, such as large concerts, sports championships, etc. At the same time, these remaining restrictions will not have much influence on the economy, while still being a barrier to the epidemic.

The economy of Ukraine will contract by 5.0% in 2020 in the wake of the quarantine imposed to overcome the pandemic and due to the global crisis. However, it will resume growth at around 4% in the subsequent years.

The adverse impact of the pandemic on the Ukrainian economy will be relatively short-term, but rather severe. The quarantine has already affected business activity, consumption, and employment. The decrease in global demand has also limited export opportunities for Ukraine. The economic effect of these factors will be the most pronounced in Q2 2020 (GDP will decline by 11% yoy). Nevertheless, after the main restrictions are lifted in Ukraine and around the world, the economy is expected to start a V-shaped recovery in late Q2. Loose fiscal and monetary policies will contribute to the economic recovery. An increase in budgetary spending by the government to overcome the crisis, along with the NBU's actions to support borrowers and business lending, will mitigate the negative impact that the pandemic has had on the economy.

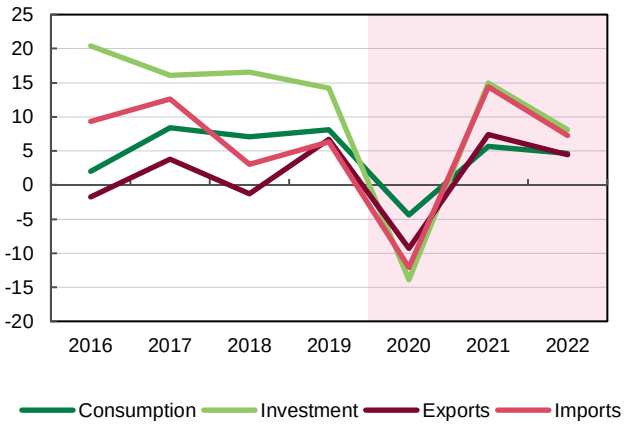
However, the recession and the recovery will not be even across economic sectors. In particular, the services sector, retail trade, and transportation will incur the largest losses due to the quarantine in Ukraine. These sectors will recover after the quarantine is over, but will still be affected by the halted growth in household income. The travel services sector and related air transportation services will fully recover only next year. At the same time, some export-oriented industries, particularly the metals industry, will incur losses as foreign demand decreases amid the global economic crisis. Demand will remain high (both domestic and foreign) for

Figure 3.2.2. Contributions to real GDP growth, pp



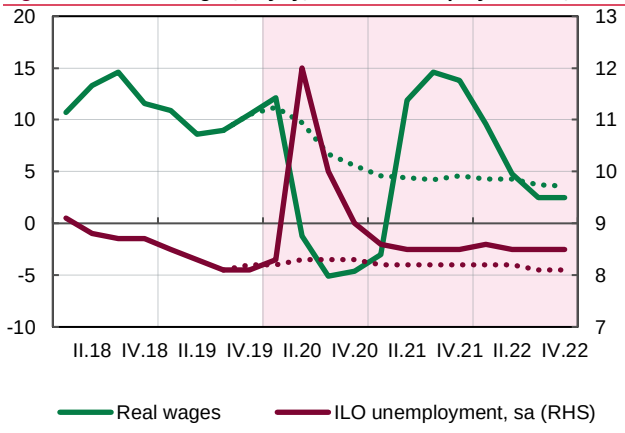
Source: NBU staff estimates.

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.

agricultural products, although the grain harvest is expected to be lower due to worsened weather conditions.

Among GDP components, the largest decline is expected in investment, while private consumption will decrease in parallel with GDP

In the face of an economic crisis, the majority of global economies typically reduce their investment spending substantially to allocate limited resources to more urgent needs. In such a way, the quarantine restrictions, logistical difficulties, decreased global demand, and lower corporate earnings will make investment activity decline most in 2020 (by 14%). Investment will be supported by the completion of launched investment projects, as well as by the program to reconstruct road infrastructure, which will remain state-funded.

Investment activity is expected to resume growth starting in 2021 as the global economy overcomes the crisis, lending resumes, corporate earnings rise, and uncertainty decreases.

Private consumption will drop by 4.9% in 2020. The curtailment of business activity in many economic sectors that started in late March will either lead to wage decreases or to staff reductions. A portion of Ukraine's labor migrants have returned to the country, creating additional supply on the labor market. Real wages will therefore stop growing in Q2, and the unemployment rate will rise. Consumer spending will decrease, and overall consumption will largely be supported by the government's budgetary spending and households' savings.

Monetary policy easing will help mitigate the adverse consequences of the crisis, but it cannot be a driver of economic recovery and consumption until the quarantine is lifted.

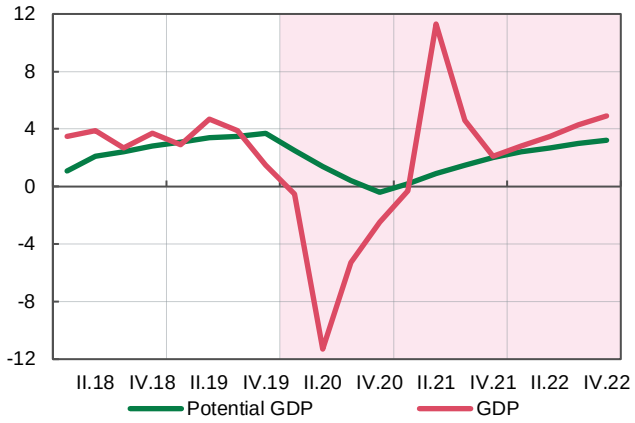
As the economy recovers in 2021, wages will resume their growth, and unemployment will return to a level close to neutral. Consumer confidence is expected to recover fully, and private consumption will grow by 5%–7% annually in 2021–2022.

In 2020, the contribution of net exports to GDP will be positive for the first time in five years, owing to a larger decrease in volumes of imports compared with exports.

Weak foreign demand for metal products, a poorer harvest, and the subsequent decrease in grain exports will be the main factors behind the decline in exports. Other exports will also drop because of the global recession.

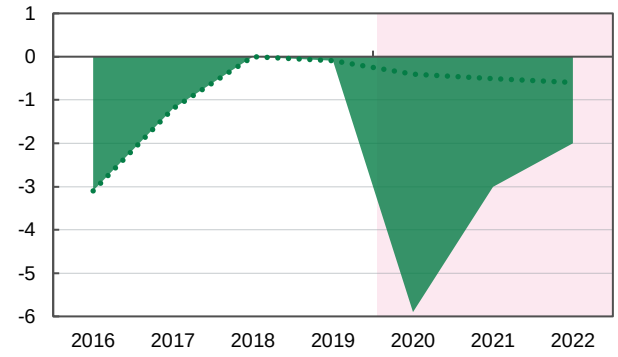
Physical volumes of imports will be lower this year by more than 12% compared to 2019. This will mainly be due to the decline in investment and consumer demand caused by the economic crisis, which will reduce demand for imported goods (particularly for machinery). Moreover, the large storage inventories of natural gas will result in lower needs for imports.

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.

The recovery of the Ukrainian and global economies starting in 2021 will support growth in exports and imports. Needs for investment imports will rise, and imports of consumer goods will be bolstered by the growth in real household income and low volatility of the hryvnia REER. Growth in exports will be supported by higher labor productivity in the agricultural sector and the recovery in the global demand for metal products. Consequently, the contribution of net exports to GDP will once again be negative starting from 2021.

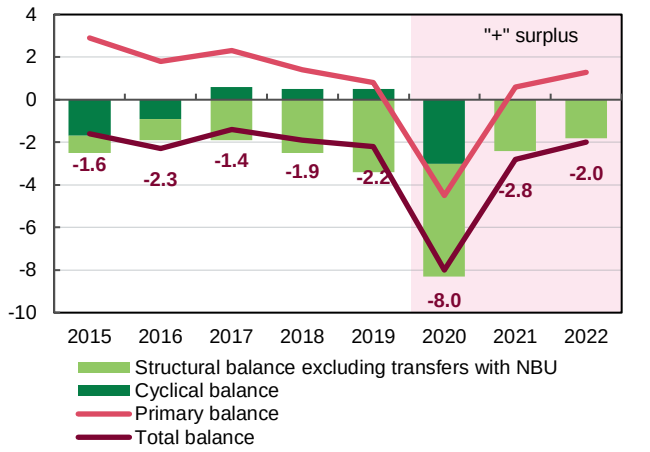
In 2020, potential GDP will stop growing, and a negative output gap will develop. The recovery will depend on structural adaptation and a favorable external environment.

In 2020, potential GDP will stop growing due to lower contributions from capital and productivity. The quarantine will put the brakes on the growth in productivity, leading to a reduction in production capacity at some companies.

The growth in potential GDP will resume in 2021, albeit slower than previously projected in the January Inflation Report. The largest contribution will come from productivity, which will increase on the back of the economy converging to the levels of more developed neighboring countries, and due to business processes being optimized after the crisis. In addition, capital investment is expected to grow against the backdrop of the economic recovery. Labor migrants returning to foreign countries after quarantine restrictions are lifted will prevent potential GDP from growing faster.

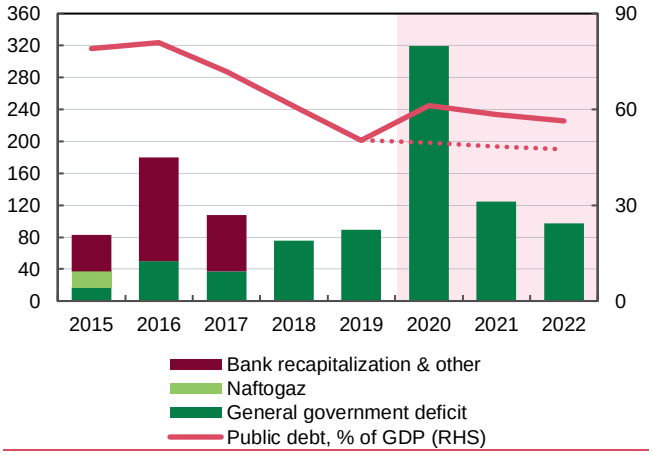
The sharp increase in the output gap in 2020 will be a result of economic activity both in Ukraine and abroad being subdued by the quarantine restrictions. The decline in aggregate demand will be accompanied by growth in unemployment to more than 11% according to ILO methodology. The output gap will gradually narrow in 2021–2022. The recovery in aggregate demand will be determined by the pace of economic growth in Ukraine's trading partners, and by a revival of investor interest in developing markets. Prudent fiscal and monetary policies will also contribute to the decline in the output gap. An increase in budgetary spending by the government to overcome the crisis, along with actions to support borrowers and provide loans to businesses, will allow GDP to reach its potential level more quickly.

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 loose in 2020

The economy is expected to get a strong fiscal impulse this year: the structural deficit will widen, as the government will increase the general government deficit to around 8% of GDP in order to address the negative consequences of the crisis. Financing will be provided for measures to support businesses and households, amid slower business activity, decreased employment, lower tax revenues to the budget, and foreign investors exiting EMs. The NBU estimates the effect of these fiscal measures on GDP growth at around 2 pp.

During the recession, revenues of the general government will decline even in nominal terms, with both tax and nontax revenues decreasing. At the same time, needs are rising for increased social spending on supporting households during the economic crisis, and spending on fighting the virus epidemic. The significant deficit occurring due to the absence of proceeds from privatization will be financed with borrowings. IMF loans and other official financing will play a major role.

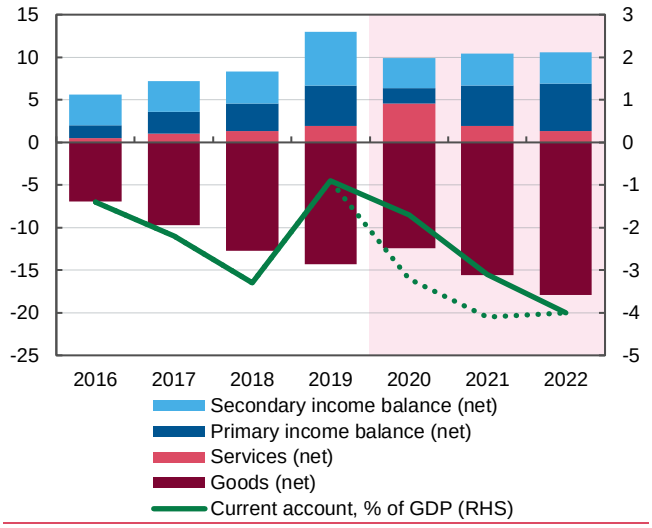
When economic growth resumes, strong fiscal stimuli will no longer be needed, allowing the general government deficit to gradually decline to 2.8% of GDP in 2021, and to 2.0% in 2022.

The public and publicly guaranteed debt will exceed 60% of GDP this year due to the substantial increase in the budget deficit, the drop in nominal GDP, and a weaker hryvnia compared to the end of 2019. That said, the resumption of economic growth starting in 2021, a prudent fiscal policy, and low exchange rate volatility will gradually drive the ratio of public and publicly guaranteed debt to GDP down by 2–3 pp annually.

3.3. Balance of Payments

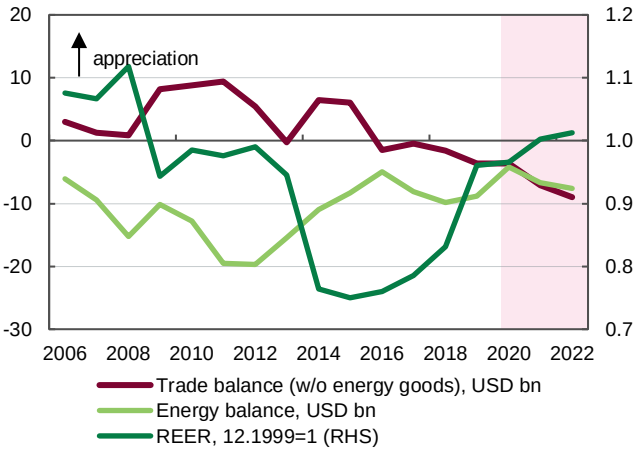
- In 2020, the current account deficit will remain small: imports of goods and expenses on travel will decrease more than exports and remittances.
- Later the deficit will widen as a result of the stronger REER of the hryvnia and the realization of pent-up demand, although it will remain sustainable (3%–4% of GDP).
- Thanks to the new IMF cooperation program and the gradual recovery of investor interest in EM, international reserves will rise to USD 27–29 billion in 2020–2022.

Figure 3.3.1. Current account balance, USD bn



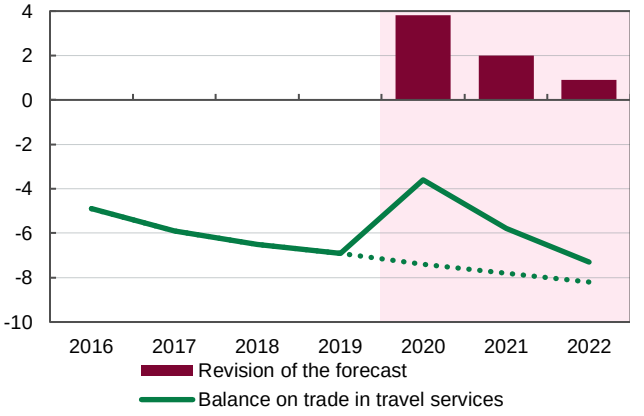
Source: NBU.

Figure 3.3.2. REER and trade balance



Source: NBU.

Figure 3.3.2. Trade travel service balance



Source: NBU.

The current account deficit will gradually widen in 2020–2022, but will still remain sustainable

The NBU has revised downwards the forecast for the current account deficit for 2020, to 1.7% of GDP (versus 3.2% in the January forecast). In 2020, the trade balance will improve thanks to favorable terms of trade and lower imports of goods and services. Amid the worldwide quarantine and lower global prices, Ukraine will reduce its purchases of energy and most nonstaple goods. The pandemic will affect exports less, as demand for food products is expected to be maintained. At the same time, the decline in remittances from labor migrants will be more than offset by Ukrainians spending less on foreign travel.

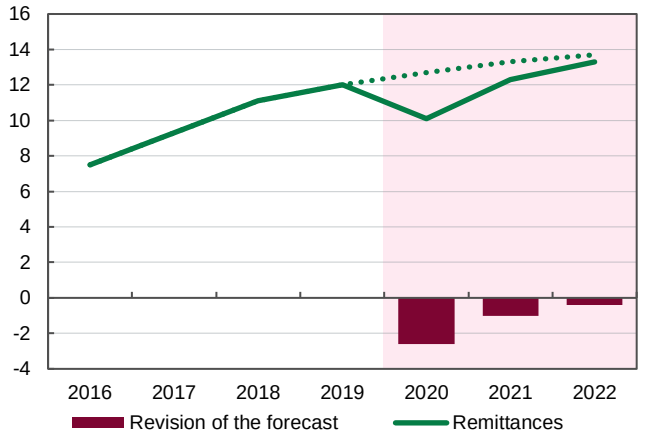
After economic activity recovers in Ukraine and across the globe, the current account deficit will widen again. This will be driven by the realization of deferred demand from households for imported goods, resumed investment imports by businesses, and the anticipated decline in proceeds from gas transit. However, the deficit will remain at around 3%–4% of GDP, as projected in the NBU's January forecast.

In 2020, exports of goods will drop by 12% on the back of lower foreign demand and commodity prices, and a poorer harvest of grains as a result of less favorable weather. In 2021–2022, exports will grow by 6%–10% thanks to the recovery of economic activity, higher ferrous metals prices, and continued productivity growth in the agricultural sector.

The 12% decline in imports of goods in 2020 will primarily be driven by the energy component that will practically halve. Both energy prices and volumes of gas imports will drop (down to 6 bcm, from 14.4 bcm in 2019), due to large storage inventories. Non-energy imports will also decrease (by 4%) as result of lower real disposable income and weaker economic activity. At the same time, the decline in non-energy imports will be limited by additional demand for medical equipment and pharmaceutical products. Growth in imports will resume in 2021–2022 (by 8%–14%), fueled by the realization of pent-up demand, a revival in investment imports by businesses, growth in energy prices, a pickup in economic activity, and the strengthening of the REER of the hryvnia.

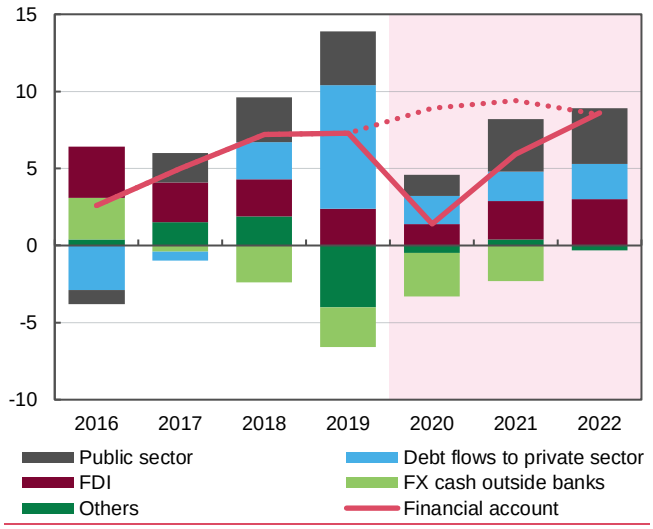
The surplus in the trade in services will rise markedly in 2020 as a result of a decrease in foreign travel, due to travel restrictions and lingering fears of infection. After the travel sector recovers in 2021–2022, imports will grow faster, but the balance of trade in services will remain positive.

Figure 3.3.4. Remittances, USD bn



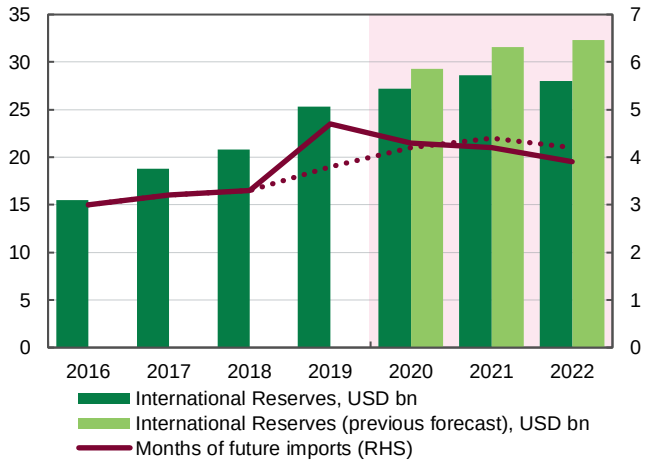
Source: NBU.

Figure 3.3.5. Financial account: net inflows, USD bn



Source: NBU.

Figure 3.3.6. International reserves



Source: NBU.

Remittances from labor migrants will decrease in 2020, as their number declines due to the closing of borders, the loss of jobs, or forced part-time employment driven by the quarantine, as well as due to lower wages being paid in recipient countries (for more details, see box 7 'Impact of Quarantine Measures on Remittances Sent to Ukraine" on page 46). This will lead to lower proceeds under primary and secondary income items. In 2021–2022, the majority of labor migrants (over 90%) are expected to return abroad again as the economies of neighboring countries recover and demand for labor rebounds.

The establishment of a new IMF program is the prerequisite for maintaining macrofinancial stability in Ukraine during the global crisis

The approval of the new program of cooperation with Ukraine by the IMF Executive Board and the receipt of the first tranche of financing worth USD 2 billion by the end of spring will create favorable conditions for accessing other official borrowing. This would allow Ukraine to cover the increased state budget deficit and to pass through the period of peak debt repayments without difficulty.

The outflow of the debt capital from the private sector will stop in H2 2020, but demand for government securities will not recover until the end of the year. In 2021–2022, investors are expected to become interested in emerging markets once again, supporting capital inflows into the private and public sectors – including into hryvnia domestic government debt securities. The outflow of FX cash from the banks will decelerate on the back of improved inflation and exchange rate expectations.

The financing from the IMF and other international official partners will allow Ukraine to maintain its international reserves at the level USD 27–29 billion in 2020 and in subsequent years. At the end of 2022, the ratio of reserves to the IMF's composite measure for reserve adequacy will stand at 90%, covering 3.9 months of future imports.

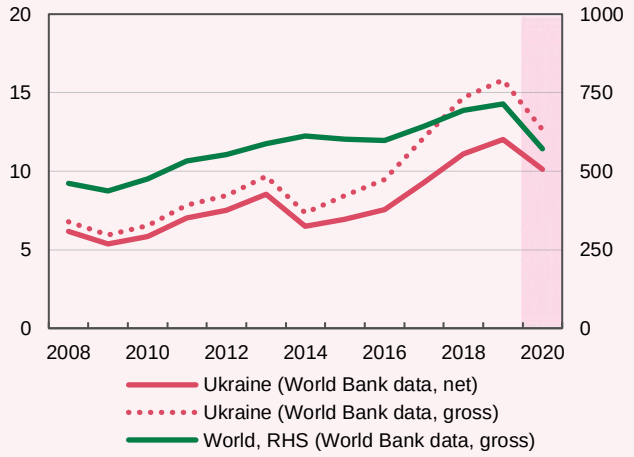
Box 7. Evaluation of the Impact of Quarantine Restrictions on Remittances to Ukraine

The borders of many countries being closed and global economic activity dropping due to the spread of the coronavirus will have a direct impact on remittances received from Ukrainian labor migrants. Based on projections of economic development in the countries that host Ukrainian migrants and a decrease in labor migration, the forecast of remittances for 2020 was revised downwards compared to the previous forecast – by USD 2.6 billion (by 20%), to USD 10 billion.

It was previously a consensus opinion that the large amounts of remittances received from labor migrants mitigate the consequences of crises for migrants' home countries. In contrast to other financial inflows, remittances are quite stable, as labor migrants try to support their close relatives during difficult times. In addition, such inflows recover quickly after a crisis is over.

Naturally, during previous crises, a decline in the economies of migrant host countries also resulted in lower wages abroad, the loss of jobs by some labor migrants, or a deterioration in working conditions, thus leading to a reduction in remittances. For example, at the time of the global financial crisis of 2009, world's total remittances decreased by 6%, and to Ukraine – by 12%.

Figure 1. Remittances to Ukraine and to other countries, USD bn*



* Since 2015 the methodology has been revised by incorporating mirror statistics (see the explanation here). Net remittances exclude migrants' expenditures in the host country. Data for 2020 represent NBU and World Bank forecasts.

Source: World Bank, NBU.

However, the current global recession is having a particular impact on remittances through the closure of the borders of a large number of countries. Many labor migrants returned home, and others will not go abroad to work as planned.

In view of the above, the current remittances forecast takes into account the assumed decrease in the number of labor migrants as well as the effects of economic cooling and quarantine restrictions in labor migrant host countries.

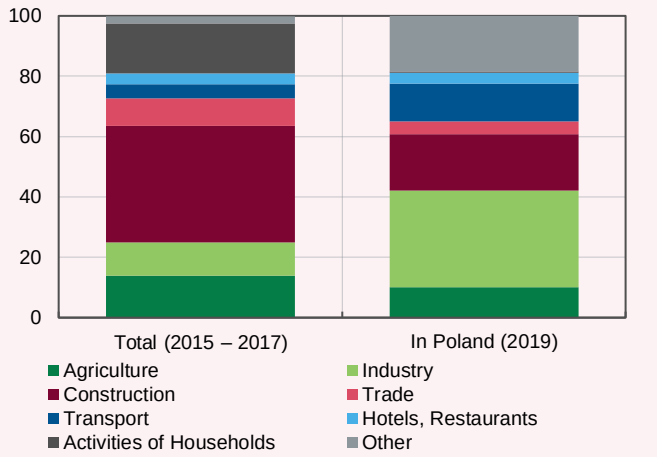
Effects Resulting from Decreased Number of Migrants

According to public information (in particular information provided by the State Border Guard Service, expert estimates, etc.), around 10% of labor migrants returned to Ukraine during the quarantine. Furthermore, restrictions on foreign travel will be an additional factor driving the decline in remittances in Q2, as seasonal workers will stay at home (another 10%). Overall, the effect of the decrease in the number of migrants on the amount of remittances has been estimated at USD 0.6 billion in 2020.

Effects Resulting from Economic Cooling and Quarantine Restrictions in Host Countries for Labor Migrants

To estimate these effects two approaches were used: (1) a deterioration in the situations in the sectors in which labor migrants who stayed abroad are employed; (2) a decrease in their wages or the loss of their jobs.

Figure 2. Ukrainian migrants' employment structure, %

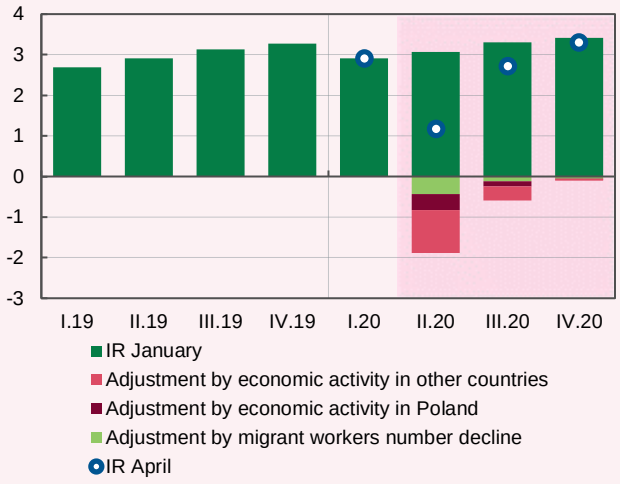


Source: SESU Survey on Labor Migration (2017), Ministry of Labor and Social Policy of Poland.

Labor migrants who stayed abroad despite there being quarantine restrictions will send remittances, but their amount depends on economic activity in the labor migrant host countries. Under the first approach, the decline in economic activity will not be even across sectors. Therefore, the foreign income of labor migrants will decrease depending on which sector they are employed in. The incomes of those working in hotels, restaurants, culture, art, and education will be affected the most. However, although activity in construction and manufacturing will be relatively less hit, the decline in incomes in these sectors will have the greatest impact due to a large number of migrants engaged in these sectors.

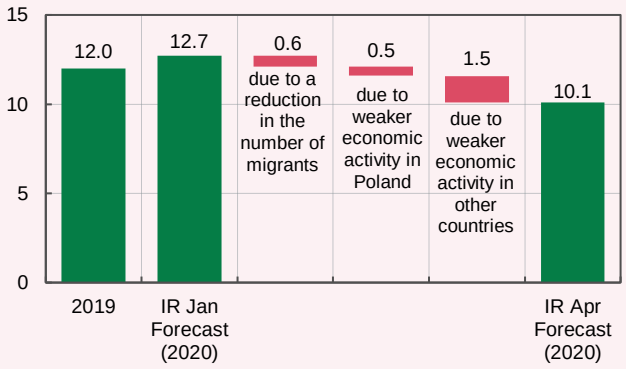
In general, due to weaker economic activity abroad, the amount of remittances will drop by USD 2.0 billion.

Figure 3. Remittances to Ukraine and decomposition of forecast revision for 2020, USD bn



Source: NBU, NBU staff estimates.

Figure 4. Remittances to Ukraine and decomposition of forecast revision for 2020, USD bn

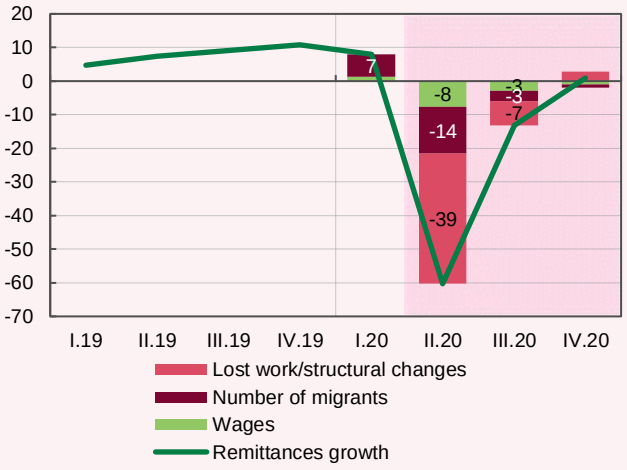


Source: NBU, NBU staff estimates.

The second approach is based on estimating a decline in wages, the complete or partial loss of jobs, and a deterioration in the working conditions of those who remained abroad. It uses aggregated estimates made individually for Poland, the Czech Republic, Russia, and other countries. The effect of the forced shift to part-time work or loss of job was estimated at USD 1.2 billion. Estimated losses from reductions in labor migrants' wages stood at USD 0.8 billion.

Overall, remittances to Ukraine were estimated to decline by USD 2.5 billion, to USD 10 billion. The NBU's updated forecast is based on the assumption that most of the quarantine restrictions will be lifted by the end of Q2 2020. As a result, the adverse effect of the current crisis will be unevenly distributed across quarters: remittances are expected to drop the most in Q2, with the effect gradually weakening by the end of the year.

Figure 5. Remittances to Ukraine, % yoy, and decomposition of forecast revision for 2020, pp

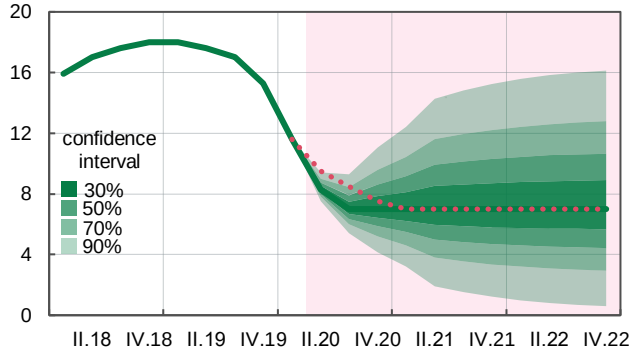


Source: NBU, NBU staff estimates.

3.4. Monetary Conditions and Financial Markets

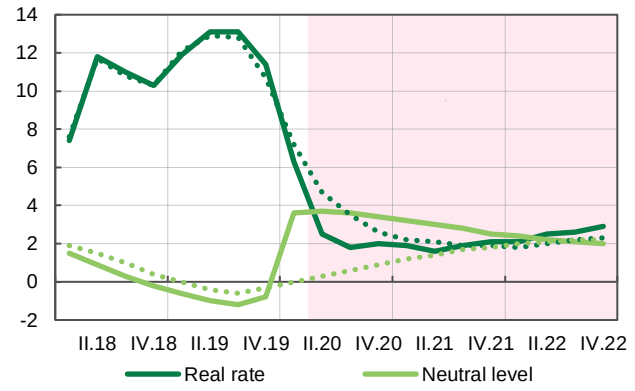
- The easing of monetary policy will help restore economic growth. Inflation remains under control and will approach its target level over the policy horizon. The key policy rate will decline to its medium-term neutral level of 7% this year.
- A large liquidity surplus in the banking system will be maintained as the government converts its foreign currency borrowings to finance the budget deficit, and as the NBU purchases foreign currency from the market to replenish international reserves.

Figure 3.4.1. Key policy rate, average, %



Source: NBU staff estimates.

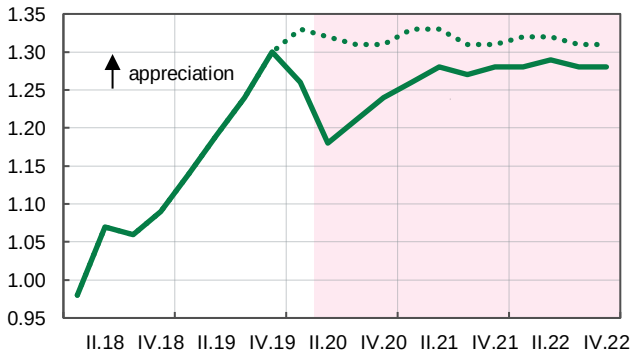
Figure 3.4.2. Real interest rate* and its neutral level, %



* 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.

The cut in the key policy rate will make monetary conditions looser and lessen the adverse effects of the crisis.

The cycle of monetary policy easing is based on a forecast for key policy rate cuts to the level of 7% in Q2 2020. This will provide the economy with the impulse required to support households and businesses and to quickly restore business activity after the quarantine is over. The transmission effect of the key policy rate will be enhanced through the banks' improved access to financing following the introduction of new liquidity support instruments, as well as through encouraging real sector lending (for more details, see Section 2.6. "Monetary Conditions and Financial Markets" on page 30).

Real monetary conditions will become looser in Q2 2020, and will remain stimulative until the end of 2021. Such a change in monetary conditions will result from both the lower key policy rate and the higher forecasted rate of inflation, as well as the increased estimate of the current level of the neutral interest rate. The latter is due to the lower estimate of the hryvnia's equilibrium REER, which is consistent with the effect a structural shock has on potential GDP (for more details, see Section 3.2. "Demand and Output" on page 40). The real neutral interest rate grew to approximately 4%, but later it will gradually fall to its long-term level of 2%.

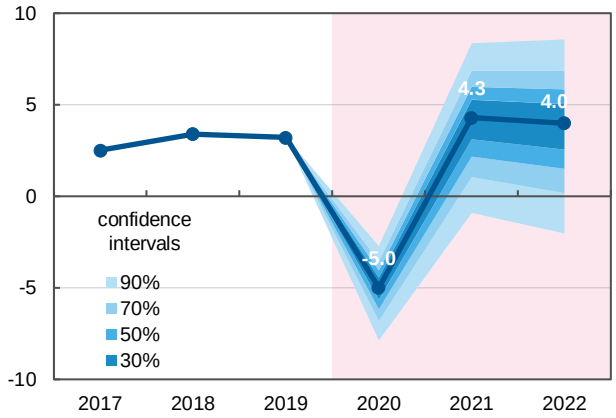
Having depreciated at the start of 2020, the REER of the hryvnia will strengthen in H2, and stabilize afterwards, thanks to the lower volatility of the nominal exchange rate and weak inflationary pressure. The NBU will continue to smooth out excessive exchange rate fluctuations, without interfering with market trends.

The banking system is expected to maintain a large liquidity surplus over the forecast horizon. In particular, this year 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 from the market in order to replenish international reserves will be the main source of liquidity in 2021–2022. These factors will be partially offset by growth in the volume of cash in circulation. At the same time, the panic hoarding of cash, triggered by uncertainty about the coronavirus and the quarantine, is expected to wane gradually.

3.5. Risks to the Forecast

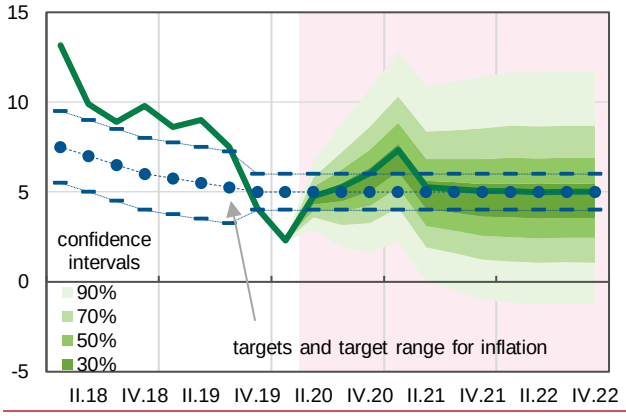
- **A delay in entering into a new cooperation agreement with the IMF** remains the key risk to the forecast.
- Another important risk is a longer coronavirus pandemic and the longer duration of the restrictive measures needed to overcome it. This will directly impact the speed of economic recovery both in Ukraine and across the globe.

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.

Continued cooperation with the IMF is the key assumption in the macroeconomic forecast. Therefore, one of the main risks to this forecast is a postponement of the new cooperation agreement with the IMF and increased threats to macrofinancial stability, which is primarily related to Ukrainian court rulings on the responsibility and liability of the former owners of insolvent banks to the state. If the new program is delayed for a long time, the government will have considerably less financial resources to support the economy during the crisis, and will be less able to refinance debts, having limited access to the international capital markets. This will lead to a deterioration in exchange rate and inflation expectations, forcing the NBU to tighten its monetary policy.

The baseline scenario of the macroeconomic forecast is based on the assumption that the main quarantine restrictions that restrain economic activity will be lifted as early as the end of Q2. The need to retain the quarantine restrictions for a longer time (among other things, due to the probability of a new wave of infection in autumn or winter) is the key risk to the said forecast. Under this scenario, the economic recession will deepen significantly this year, and fiscal and monetary stimuli will have to be increased in order to lessen the adverse effect that the drop in aggregate demand has on the economy.

The main external risks are also related to overcoming the pandemic, at the global scale. A deeper global crisis or a slower economic recovery in Ukraine's main trading partners after the quarantine is lifted would negatively impact the Ukrainian economy through lower global demand, continued capital outflows from emerging markets, and lower prices for Ukrainian export goods. That said, this scenario envisages that the governments and central banks of other countries will take active anti-crisis measures. Thus, the NBU's monetary policy will reflect the balance between the need to reduce inflationary pressures by means of hryvnia depreciation, and the need to support the economy.

Risks to food price inflation are rising due to the higher volatility of global food prices caused by climate change. The continued high share of food products in the CPI structure renders the inflation trend susceptible to such temporary food price shocks, which may cause headline inflation to deviate from the target. The monetary policy response to this will depend on the negative effect a supply shock has on inflation expectations.

A drop in the harvest of grain, fruit, and vegetables in Ukraine caused by unfavorable weather poses a significant risk. Under these conditions, food price inflation will increase and GDP will fall further on the back of lower agricultural output.

Degree of impact on the baseline scenario	Probability that a risk will materialize: Low <15%	Medium 15%–25%	High 25%–50%
Weak	Higher volatility of global food prices		
Moderate		A decline in the grain harvest A deep global economic recession	
Strong	An escalation of the military conflict	Delays in cooperation with the IMF	The coronavirus pandemic lasting longer

This will lead to a decrease in grain exports and a decline in foreign currency proceeds, accompanied by depreciation pressures on the hryvnia and, consequently, a rise in inflation. However, growth in grain prices will partially offset losses from decreased exports.

Any escalation of the military conflict in the east of the country could significantly worsen Ukraine's investment attractiveness, and markedly worsen the expectations of all economic agents. Conversely, any progress achieved in reestablishing Ukrainian control over the temporarily occupied areas will noticeably improve Ukraine's investment climate, while also reducing the country's risk premiums.

Macroeconomic forecast (April 2020)

Indicators	2017	2018	2019 actual	2019 forecast 1.2020	2020 I	2020 II	2020 III	2020 IV	2020 current forecast	2020 forecast 1.2020	2021 I	2021 II	2021 III	2021 IV	2021 current forecast	2021 forecast 1.2020	2022 I	2022 II	2022 III	2022 IV	2022 current forecast	2022 forecast 1.2020
REAL ECONOMY, % yoy, unless otherwise stated																						
Nominal GDP, UAH bn	**2984**	**3561**	**3975**	3975	832	870	1110	1158	**3970**	4290	875	1022	1222	1241	**4360**	4682	945	1112	1336	1367	**4760**	5113
Real GDP	**2.5**	**3.4**	**3.2**	3.3	-0.5	-11.3	-5.3	-2.5	**-5.0**	3.5	-0.3	11.3	4.6	2.1	**4.3**	4.0	2.8	3.5	4.3	4.9	**4.0**	4.0
GDP Deflator	22.1	15.4	8.1	8.0	2.6	5.2	6.1	6.5	5.1	4.3	5.5	5.5	5.1	5.0	5.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Consumer prices (period average)	14.4	10.9	7.9	7.9	-	-	-	-	4.3	3.6	-	-	-	-	5.8	5.5	-	-	-	-	5.0	5.0
Consumer prices (end of period)	**13.7**	**9.8**	**4.1**	4.1	2.3	4.8	5.3	6.0	**6.0**	4.8	7.3	5.3	5.2	5.0	**5.0**	5.0	5.0	5.0	5.0	5.0	**5.0**	5.0
Core inflation (end of period)	9.5	8.7	3.9	3.9	3.1	6.4	6.5	6.8	6.8	3.5	6.9	3.8	3.7	3.8	3.8	3.8	3.8	3.7	3.7	3.8	3.8	3.8
Non-core inflation (end of period)	19.4	10.7	4.8	4.8	1.5	2.4	3.4	5.0	5.0	6.4	7.8	7.3	7.3	6.9	6.9	6.7	6.8	6.8	6.8	6.7	6.7	6.5
raw foods (end of period)	23.5	3.3	3.9	3.9	-1.0	4.7	4.8	5.6	5.6	3.8	8.7	4.5	3.3	3.3	3.3	3.0	3.2	3.2	3.3	3.3	3.3	3.3
administrative prices (end of period)	16.1	18.0	8.6	8.6	5.5	4.7	5.6	7.5	7.5	9.3	9.2	10.0	10.9	9.8	9.8	9.8	9.6	9.5	9.5	9.2	9.2	9.1
Producer prices (end of period)	**16.5**	**14.2**	**-7.4**	-7.4	-4.2	-0.6	-1.4	7.1	**7.1**	5.4	4.5	4.5	5.0	5.3	**5.3**	5.1	5.1	5.1	5.0	5.0	**5.0**	5.0
Nominal wages (period average)	37.1	24.8	18.5	18.5	15.2	2.3	-0.1	0.8	4.3	12.1	3.9	18.5	20.5	19.5	15.6	10.1	15.1	10.0	7.6	7.7	9.9	9.2
Real wages (period average)	19.1	12.5	9.7	9.7					0.0	8.2					9.1	4.5					4.7	4.0
Unemployment (ILO)	9.5	8.8	8.3	8.3	-	-	-	-	9.5	8.3	-	-	-	-	8.6	8.2	-	-	-	-	8.6	8.2
FISCAL SECTOR																						
Consolidated budget balance, UAH bn	**-42.1**	**-67.8**	**-87.3**	-84.3	**-**	**-**	**-**	**-**	**-315.9**	-85.4	**-**	**-**	**-**	**-**	**-124.0**	-92.6	**-**	**-**	**-**	**-**	**-97.5**	-101.2
% of GDP	-1.4	-1.9	-2.2	-2.1	-	-	-	-	-8.0	-2.0	-	-	-	-	-2.8	-2.0	-	-	-	-	-2.0	-2.0
Public sector fiscal balance (IMF methodology), UAH bn	**-37.0**	**-75.4**	**-89.2**	-84.3	**-**	**-**	**-**	**-**	**-319.4**	-84.0	**-**	**-**	**-**	**-**	**-124.2**	-92.3	**-**	**-**	**-**	**-**	**-97.2**	-100.1
% of GDP	-1.2	-2.1	-2.2	-2.1	-	-	-	-	-8.0	-2.0	-	-	-	-	-2.8	-2.0	-	-	-	-	-2.0	-2.0
BALANCE OF PAYMENTS (NBU methodology)																						
Current account balance, USD bn	-2.4	-4.4	-1.3	-1.1	0.2	-1.1	-0.7	-1.0	-2.5	-5.7	-0.7	-1.9	-1.8	-0.9	-5.3	-7.9	-1.4	-2.4	-2.4	-1.1	-7.3	-8.0
Exports of goods and services, USD bn	53.9	59.1	63.4	63.4	15.3	11.8	14.0	16.0	57.0	65.5	14.9	13.9	15.5	17.4	61.6	67.0	15.9	14.9	16.3	18.3	65.4	69.1
Imports of goods and services, USD bn	62.5	70.5	75.8	75.5	16.2	13.3	16.0	19.4	64.8	79.9	17.3	18.3	19.4	20.3	75.3	84.2	19.1	19.9	21.1	22.0	82.0	86.9
Financial account, USD bn	-5.0	-7.2	-7.3	-7.0	0.4	-1.3	2.3	-2.8	-1.4	-8.9	-1.3	-2.1	-1.8	-0.8	-5.9	-9.4	-2.0	-3.0	-2.5	-1.1	-8.6	-8.5
BOP overall balance, USD bn	**2.6**	**2.9**	**6.0**	6.0	**-0.1**	**0.2**	**-3.0**	**1.8**	**-1.1**	3.2	**0.5**	**0.2**	**-0.1**	**-0.1**	**0.6**	1.6	**0.6**	**0.7**	**0.1**	**0.0**	**1.3**	0.4
Gross reserves, USD bn	**18.8**	**20.8**	**25.3**	25.3	**24.9**	**27.3**	**24.6**	**27.2**	**27.2**	29.3	**27.2**	**28.3**	**27.7**	**28.6**	**28.6**	31.6	**28.5**	**28.9**	**28.3**	**28.0**	**28.0**	32.3
Months of future imports	3.2	3.3	4.7	3.8	4.5	4.6	4.0	4.3	4.3	4.2	4.2	4.3	4.1	4.2	4.2	4.4	4.0	4.0	4.9	3.9	3.9	4.2
MONETARY ACCOUNTS (Cumulative since the beginning of the year)																						
Monetary base, %	**4.6**	**9.2**	**9.6**	9.6	0.9	7.8	4.8	7.5	**7.5**	6.1	-3.9	-1.9	-0.6	3.8	**3.8**	6.1	-4.0	0.8	2.0	4.3	**4.3**	5.6
Broad money, %	**9.6**	**5.7**	**12.6**	12.3	5.6	5.2	3.6	3.5	**3.5**	10.1	1.6	4.8	7.1	9.9	**9.9**	9.5	0.4	4.7	5.8	9.8	**9.8**	9.4
Velocity of broad money (end of year)	**2.5**	**2.8**	**2.8**	2.8	-	-	-	-	**2.7**	2.7	-	-	-	-	**2.7**	2.7	-	-	-	-	**2.6**	2.7

Terms and Abbreviations

Core CPI	Core consumer price index
GDP	Gross domestic product
GVA	Gross value added
STSU	State Treasury Service of Ukraine
CD	Certificate of deposit
SESU	State Employment Service of Ukraine
SSSU	State Statistics Service of Ukraine
SCSU	State Customs Service of Ukraine
STA	Single Treasury Account
EU	European Union
ECB	European Central Bank
FX	Foreign exchange, foreign currency
BOI	Business Outlook Index
BAOI	Business Activity Outlook Index
CPI	Consumer price index
IT	Information technologies
CMU	Cabinet of Ministers of Ukraine
QPM	Quarterly projections model
IMF	International Monetary Fund
ILO	International Labour Organization
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
OPEC	Organization of the Petroleum Exporting Countries
MTP	Main trading partner
VAT	Value-added tax
PIT	Personal income tax
FDI	Foreign direct investment
CIT	Corporate income tax
PF	Pension fund
REER	Real effective exchange rate
U.S.A	United States of America
Fed	Federal Reserve System
CEE	Central and Eastern Europe
NIIP	Net international investment position
COVID-19, coronavirus	Coronavirus disease COVID-19
ECPI	External Commodity Price Index
EM	Emerging Markets
EMBI	Emerging Markets Bond Index
IIF	Institute of International Finance
PMI	Purchasing Managers' Index
UAwCPI	Weighted average of Ukraine's MTP countries' CPI
UAwGDP	Weighted average of economic growth in Ukraine's MTP countries
UIIR	Ukrainian Index of Interbank Rates

m	million
bn	billion
UAH	Ukrainian hryvnia
USD	US dollar
p.	paragraph
bp	basis point
bcm	billion cubic meters
pp	percentage point
bbl	barrel
yoy	in annual terms; year-on-year change
qoq	in quarterly terms; quarter-on-quarter change
sa	seasonally adjusted
mom	in monthly terms; month-on-month change
RHS	right-hand scale